

Appendix B Environmental Permits

Appendix B Environmental Permits



California Coastal Commission

COASTAL DEVELOPMENT PERMIT

CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 1 of 11

Coastal development permit (CDP) number A-3-SLO-09-055/069 was approved by the California Coastal Commission on June 11, 2010. CDP A-3-SLO-09-055/069 provides for the construction and operation of a community sewer system, including a treatment plant, collection/disposal/reuse facilities, and all associated development and infrastructure (all as more specifically described in the Commission's CDP file). CDP A-3-SLO-09-055/069 is subject to certain terms and conditions, including the standard and special conditions beginning on page 2 of this CDP.

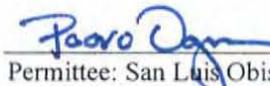
By my signature below, the CDP is issued on behalf of the California Coastal Commission:

 9/7/2010

Dan Carl, Central Coastal District Manager for Peter M. Douglas, Executive Director

Acknowledgement

The undersigned Permittees acknowledge receipt of this coastal development permit and agree to abide by all terms and conditions thereof. The undersigned Permittees acknowledge that Government Code Section 818.4 (that states in pertinent part that "a public entity is not liable for injury caused by the issuance of any permit") applies to the issuance of this coastal development permit.

 9/17/2010
Permittee: San Luis Obispo County Public Works Department Date

CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 2 of 11

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.** The permit will expire on June 11, 2012 if development has not commenced by that date. 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. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **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.
5. **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.

Special Conditions

1. **Final Project Plans.** PRIOR TO CONSTRUCTION, the Permittee shall submit two copies of Final Project Plans to the Executive Director for review and approval. The Final Project Plans shall include and shall be substantially in conformance with the plans associated with the proposed project description (see Section B.3. of this report) except that they shall be revised and supplemented to comply with the following requirements:
 - a. **Treatment Plant Site Approved Development Envelope.** All development (including but not limited to buildings, tanks, infrastructure, parking, walkways, fences, etc.) shall be located within the development envelope and in the general configuration shown on Exhibit 2 (*Exhibit 1-3, Treatment Plant Site Plan*; last dated revised on April 13, 2010, and dated received in the Commission's Central Coast District Office on April 19, 2010). Development shall be prohibited outside of the approved development envelope except for habitat restoration and enhancement related development (see special condition 3(b) below) and access road related development (see special condition 1(b) below). Development shall be arranged so that activity and direct light that may be visible from outside of the development envelope is limited to the maximum extent feasible, and so that any activity that is unavoidably visible is minimized in its intensity. All development shall be identified on the Final Project Plans.
 - b. **Treatment Plant Site Access Road.** The access road shall be located along the existing unpaved access road alignment extending from Los Osos Valley Road to the approved development envelope along the eastern property line of the Los Osos Mortuary and Memorial Park site and the western property line of the Andre site in such a manner as to limit its width and overall length as much as possible. The access road shall include measures to effectively screen noise



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 3 of 11

and activity associated with access road traffic and activity from adjacent properties so long as such screen does not itself degrade public views from along Los Osos Valley Road. If the Permittee conclusively demonstrates that the above access road location is infeasible, then the access road shall be located as shown on Exhibit 2 (*Exhibit 1-2 Overall Project Site Plan, New Access Road*, last dated revised on April 13, 2010, and dated received in the Commission's Central Coast District Office on April 19, 2010) subject to all the same siting and design criteria, and subject to the additional requirement that a mitigation plan for impacts to the agricultural use and development of the property located between the access road, Los Osos Valley Road, and the Los Osos Mortuary and Memorial Park site shall be submitted for Executive Director review and approval.

- c. **Treatment Plant Site Design.** The design and appearance of all development shall reflect a rural agricultural theme (i.e., simple and utilitarian lines and materials, including use of board and bats, corrugated metal, muted earth tone colors, etc.). The plans shall clearly identify all measures that will be applied to ensure such design aesthetic is achieved, including with respect to all structures and all other project elements within view of Los Osos Valley Road (including the access road itself, all drainage facilities, curbs, landscaping, screens, signs, etc.). Development shall be sited and designed so as to reduce its visibility from Los Osos Valley Road to the maximum extent feasible. At a minimum, the plans shall clearly identify all structural elements, materials, and finishes (including through site plans and elevations, materials palettes and representative photos, product brochures, etc.).
- d. **Pump Station and Related Development.**
 1. **Pump Station Design.** All pump stations and all related development, including all power boxes and buildings, shall be sited and designed to limit impacts on habitat areas and public views, including through limiting their footprint and proximity to habitat areas as much as possible, siting elements below ground where feasible, minimizing the scale of above ground elements as much as possible, limiting above-ground access components (including manhole/hatch entries) as much as possible, using surface treatment and structural design consistent with and compatible with the immediately surrounding environment, limiting lighting to that necessary for public safety, and removing non-native invasive plant species on each site and landscaping with appropriate native plant materials (see also special condition 3(d)) including so that landscaping can help soften the appearance of any elements that are unavoidably above ground and to ensure seamless connectivity to surrounding habitat and vegetation as much as possible.
 2. **Midtown Pump Station.** The Midtown pump station shall be sited and designed to limit its footprint and depth (from the road). The Midtown pump station power building shall be relocated across Palisades Avenue to an already disturbed area of Los Osos Community Park in a location where it will have the least impact on Park use and aesthetics.
 3. **Lupine Street Pump Station.** The Lupine Street pump station and standby power building shall be set back a minimum of 75 feet from the edge of wetlands located to the south and west of the pump station site.



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 4 of 11

- e. **Lupine Street Force Main.** The force main that conveys sewage from the Lupine Street Pump Station towards the treatment plant shall be routed from the Lupine Street Pump Station east on Lupine Street, then south on Fearn Avenue, then east on Binscarth Road, and then south on Pine Avenue, terminating at Los Osos Valley Road.
- f. **Recycled Water Re-use Infrastructure.** All recycled water reuse pipelines and related development shall be clearly identified, including all such development noted on the overall project site plan submitted to the Commission (titled *Exhibit 1-2, Overall Project Site Plan*, last dated revised April 13, 2010; dated received in the Commission's Central Coast District Office April 19, 2010) and also including connecting segments to each of the receiver sites identified there.
- g. **Lighting.** All interior lighting shall be located so as to minimize the potential for light and glare to be visible from within adjacent habitat areas, including adjacent restoration and enhancement areas. All exterior lighting shall be shielded and be of the lowest intensity feasible in order to avoid artificial light pollution from project facilities into adjacent areas and the night sky. All exterior lighting elements adjacent to habitat areas, including adjacent to restoration and enhancement areas, shall be avoided where possible and where unavoidable for safety purposes shall be the minimum necessary to meet safety requirements, shall be shielded, and shall be directed downward and away from such habitat areas.
- h. **Landscaping.** Final Plans shall include landscape and irrigation parameters that shall identify all plant materials (size, species, quantity), all irrigation systems, and all proposed maintenance for landscaping at both the treatment plant site (including along the access road) and at all pump station locations. All plant materials shall be native and non-invasive species selected to be complimentary with the mix of native habitats in the project vicinity, prevent the spread of exotic invasive plant species, and avoid contamination of the local native plant community gene pool. The landscape and irrigation plans shall be designed to protect and enhance native plant communities on and adjacent to the development locations, including required restoration and enhancement areas, and to provide a transitional buffer between native habitat areas and authorized development. Landscaping (at maturity) shall also be capable of partial/mottled screening and softening the appearance of new development as seen from public viewing areas as much as possible. All landscaped areas shall be continuously maintained by the Permittee in a litter-free, weed-free, and healthy growing condition. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be so identified from time to time by the State of California, and no plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be planted or allowed to naturalize or persist at the treatment plant site (including along the access road) and at all pump station locations.
- i. **Sign Plan.** All signs associated with the approved project and identifying any component of it as seen from public viewing areas shall be identified and details showing the location, materials, design, and text of all signs shall be provided. The signs shall be sited and designed so as to provide clear information without adversely impacting public views and/or the character of the area in which the sign is located. At least three public education/interpretation signs and/or



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 5 of 11

displays related to the project shall be installed at appropriate locations (e.g., at the Broderon site, at the Midtown site, and at the Giacomazzi site) easily accessible by the public, including in relation to the treatment plant site and at individual pump stations with significant above ground features.

- j. Street Reconstruction.** The Plans shall require that all public roadway work, including and up to complete roadway reconstruction, following installation/construction of approved project elements that impact public roadways shall be conducted in a manner that incorporates low impact development (LID) techniques and water quality protection systems to the maximum amount feasible.
- k. Walker Site.** The 6-acre Walker site (see Exhibit 2), although restoration of this area is not required until after it is no longer being used as the primary construction staging site for the approved project, shall be to be returned to its pre-project condition, or better (from a habitat perspective).
- l. Construction.** All construction staging and related areas shall be identified, and all development associated with such areas shown on a site plan. All such areas within which construction staging are to take place shall be minimized to the maximum extent feasible in order to minimize impacts on resources (e.g., terrestrial habitat, wetlands, creeks, riparian areas, or other sensitive resource areas, etc.). All measures to be taken to minimize impacts associated with construction staging and related areas shall be identified, including but not limited to screening, fencing, landscaping, signage, and designation of various activity and storage areas on the site. If additional construction staging and related areas are needed following approval of Final Plans, such areas shall be identified in a plan and submitted for Executive Director review and approval. The Final Plans shall require that copies of the signed CDP be maintained in a conspicuous location at the construction staging area at all times, and that such copies be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP, and the public review requirements applicable to them, prior to commencement of construction. The Final Plans shall also require that a primary construction coordinator be designated for public inquiries regarding the construction, and that their contact information (i.e., address, phone numbers, etc.) including, at a minimum, a telephone number available 24 hours a day for the duration of construction, be conspicuously posted at the construction staging area and at individual construction sites where such contact information is readily visible from public viewing areas, along with indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

The Permittee shall undertake development in accordance with the approved Final Project Plans.

- 2. Septic System Decommissioning Plan.** PRIOR TO ANY CONNECTION TO THE APPROVED WASTEWATER PROJECT, the Permittee shall submit two copies of a Septic System



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 6 of 11

Decommissioning Plan to the Executive Director for review and approval. The Septic System Decommissioning Plan shall clearly identify all measures to be taken to appropriately decommission existing septic tank systems and to connect such users to the approved project. The Plan shall provide a process for evaluating septic systems for possible on-site reuse, including for on-site filtration and percolation of stormwater to the degree feasible and appropriate, and a process for implementing such conversion or for implementing appropriate abandonment measures depending on which measure property owners choose. The Permittee shall undertake development in accordance with the approved Septic System Decommissioning Plan.

3. **Habitat Management Plan.** PRIOR TO CONSTRUCTION, the Permittee shall submit two copies of a Habitat Management Plan to the Executive Director for review and approval. The Habitat Management Plan shall provide for restoration and enhancement of the following areas to self-sustaining natural habitat states, and for management and protection of such areas as habitat areas in perpetuity:
 - a. **Broderson Site.** The 80-acre Broderson site, of which up to 8 acres is allowed to be used for the project leach field provided this area too is subject to Plan requirements designed to ensure habitat value in this 8-acre area as much as possible while recognizing the underlying leach field infrastructure and its ongoing use and maintenance requirements.
 - b. **Giacomazzi Site.** The 8.3 acres of the Giacomazzi site that is located outside of the approved development envelope and that includes identified wetland and related resources and their buffer (see Exhibit 8).
 - c. **Midtown Site.** The 12.24-acre Midtown site (see Exhibit 2), of which a small area (approximately 0.10 acres, subject to special condition 1 requirements) is allowed to be used for the Midtown pump station and related development, provided this area, too, is subject to Plan requirements designed to ensure habitat value at the pump station location as much as possible while recognizing the underlying pump station infrastructure and its ongoing use and maintenance requirements.
 - d. **Pump Station Sites.** The roughly 0.1-acre Sunny Oaks site, the 0.4-acre Solano site, and the 0.3-acre East Ysabel site (see Exhibit 2), a total of almost one acre, of which a small area at each site (approximately 0.32 total acres, subject to special condition 1 requirements) is allowed to be used for pump station and related development, provided these areas, too, are subject to Plan requirements designed to ensure habitat value at the pump station locations as much as possible while recognizing the underlying pump station infrastructure and its ongoing use and maintenance requirements.

The Habitat Management Plan shall require and provide for the Broderson site to be acquired prior to construction and granted by June 10, 2012 to an appropriate agency or conservation organization approved by the Executive Director, where such grant shall include funding adequate to implement the Habitat Management Plan over time. The Habitat Management Plan shall require and provide for the use of the Broderson, Giacomazzi, Midtown, and Pump Station sites each to be restricted through recordation of a deed restriction, prohibiting all non resource-dependent development on each site, other than that associated with the approved project and consistent with the approved



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 7 of 11

Habitat Management Plan. The required deed restriction shall be in a form and content acceptable to the Executive Director and recorded free of prior liens and any other encumbrances that the Executive Director determines may affect the enforcement of the deed restriction.

The Habitat Management Plan shall be prepared by qualified restoration ecologists, shall be submitted with evidence of USFWS and CDFG review (or evidence that no review is required), and shall take into account the specific condition of each restoration and enhancement site (including soil, exposure, water flows, temperature, moisture, wind, etc.), as well as restoration and enhancement goals and success criteria. The Habitat Management Plan shall explicitly allow for potential public access interpretive facilities (including trails, signs/displays, etc.) even if such facilities are not part of initial Habitat Management Plan implementation activities, but rather will be a part of subsequent Plan implementation. At a minimum, the Plan shall provide for the following:

- a. **Baseline.** A baseline assessment, including photographs, of the current physical and ecological condition of the restoration and enhancement areas. All existing topography, habitat types, and vegetation shall be depicted on a map.
- b. **Goals.** A description of the goals of the plan, including in terms of topography, hydrology, vegetation, sensitive species, wildlife usage, and potential public interpretive access.
- c. **Planting and Invasive/Non-Native Plant Provisions.** Except that the mature eucalyptus trees, and the mature cypress trees on the Broderson site shall remain and be managed as part of the Plan, all invasive and/or non-native plant species shall be removed from all restoration and enhancement areas, and native species of local stock appropriate to the habitats and the Los Osos area shall be planted. A planting plan including the planting palette (seed mix and container plants), planting design, source of plant material, plant installation, erosion control, irrigation, and remediation shall be included. The planting palette shall be made up exclusively of native taxa that are appropriate to the habitats and the Los Osos region. Seed and/or vegetative propagules shall be obtained from local natural habitats so as to protect the genetic makeup of natural populations. Horticultural varieties shall not be used. Non-native and/or invasive plant species shall be prohibited. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be so identified from time to time by the State of California, and no plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be planted or allowed to naturalize or persist in the restoration and enhancement areas.
- d. **Hydrology.** Ensuring that existing hydrological inputs, if applicable (e.g. for wetland areas at the Giacomazzi site), are maintained and if possible improved in favor of enhanced habitat value. To the extent there may be hydrological issues related to the habitat that is being restored and monitored overtime, these issues shall be considered and dealt with appropriately.
- e. **Success Criteria.** A description of the measurable success criteria of the plan, including, at a minimum, the requirement that success be determined after a period of at least three years in which the sites have been subject to no remediation or maintenance activities other than weeding, and that this condition be maintained in perpetuity. Success criteria shall be defined for each habitat type, including in terms of species diversity, percent cover, invasive control, wildlife



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 8 of 11

usage, and hydrology, and for potential public interpretive access. Interim and long-term success criteria shall be identified, with final success criteria required to be maintained in perpetuity.

- f. **Monitoring.** Monitoring and maintenance provisions including a schedule of the proposed monitoring and maintenance activities to ensure that interim and long-term success criteria are achieved, and including a plan for documenting and reporting the physical and biological “as built” condition of the restoration and enhancement areas within 30 days of completion of the initial Habitat Management Plan implementation activities (i.e., a simple report to describe field implementation of the approved plan in narrative and photographs, and to report any implementation problems and their resolution). Monitoring shall be appropriate to habitat type, and shall at a minimum include identification of field sampling protocols (including specific field sampling techniques to be employed), study sites (including experimental/revegetation sites and reference sites), data analysis methods (including descriptive and inferential statistics with specified acceptable variance and significance levels to examine sample size, univariate and multivariate comparisons, and/or other parameters as appropriate and necessary to assess progress toward and meeting of success criteria), and assessment of progress toward meeting identified success criteria.
- g. **Reporting.** Provision for submission of annual monitoring reports (two copies each time) to the Executive Director for review and approval beginning the first year after completion of initial Habitat Management Plan implementation activities and shifting to an every five-year reporting cycle once long-term success criteria have been achieved. Each report shall document the condition of each restoration and enhancement area based on monitoring data (including with photographs taken from the same fixed points in the same directions), shall describe the progress towards reaching and/or maintaining the success criteria of the plan, and shall make recommendations, if any, on changes necessary to achieve success. Necessary changes, including identified remediation steps, shall be completed per the timetable identified in any approved report, or within 30 days of report approval where no such timetable is specified.

The Habitat Management Plan shall be implemented concurrent with construction of the approved project, shall be directed by qualified restoration ecologists, and initial Habitat Management Plan implementation activities (including at a minimum initial planting and non-native/invasive plant removal pursuant to the Plan) shall be completed prior to commencement of operation of the approved project.

The Permittee shall undertake development in accordance with the approved Habitat Management Plan.

- 4. **Agricultural Property Protection.** PRIOR TO CONSTRUCTION OF THE TREATMENT PLANT, the Permittee shall submit evidence to the Executive Director for review and approval indicating that an agricultural conservation easement(s) burdening off-site agricultural property have been granted in perpetuity to the County or another qualifying entity approved by the Executive Director along with adequate funding to compensate for reasonable administrative costs incurred by the easement holder. The easement shall provide agricultural conservation acreage at a ratio of at least 2:1 for the loss of agricultural land associated with the approved project, shall apply to



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 9 of 11

agricultural land within reasonable proximity of the project site that is of a quality that is reasonably similar to that of the agricultural land lost, and shall be submitted with evidence clearly showing and calculating the amount of agricultural land lost due to the project in closed polygons on site plans and all supporting documentation demonstrating compliance with the requirements of this condition.

5. **Los Osos Basin Recycled Water Management Plan.** PRIOR TO CONSTRUCTION, the Permittee shall submit two copies of a Los Osos Basin Recycled Water Management Plan (Basin Plan) to the Executive Director for review and approval. The objective of the Basin Plan shall be to ensure that implementation of the project, including the sites designated for disposal of the treated effluent, is accomplished in a manner designed to maximize long-term ground and surface water and related resource (including wetlands, streams, creeks, lakes, riparian corridors, marshes, etc.) health and sustainability, including with respect to offsetting seawater intrusion as much as possible, within the Los Osos Groundwater Basin. The Basin Plan shall be structured so as to allow its programs to be developed, and any physical development underlying the implementation of such programs constructed, concurrent with construction of the approved project, and for it to be implemented concurrent with commencement of operation of the approved project. The Basin Plan may be structured to allow phasing if necessary to better achieve Basin Plan objectives. The Basin Plan shall include the following main components:
 - a. **Recycled Water Reuse Program.** As reflected in County condition 97, the Recycled Water Reuse Program shall ensure that all tertiary treated recycled water is disposed of in locations within the Los Osos Groundwater Basin that will maximize its ability to meet Basin Plan objectives, where the highest priority for reuse shall be replacing existing potable water use with recycled water use where feasible and appropriate, including with respect to both urban and agricultural reuse. The Reuse Program may include recycled water application at the Broderon leach field (not to exceed 448 afy on an average annual basis) and at the Bayridge leach field (approximately 33 afy or the amount shown to be necessary for maintaining Willow Creek and downstream resources in their pre-project state or better), but it shall prioritize beneficial reuse through (a) developing and installing recycled water connections and entering into delivery/use agreements with urban and agricultural property owners as much as possible, and (b) developing and installing other recycled water delivery systems, in both cases with a priority for locations where such beneficial reuse will go the furthest toward meeting Basin Plan goals. The Reuse Program may include other areas that may be beneficial to the Los Osos Groundwater Basin.
 - b. **Water Conservation Program.** The Water Conservation Program required by the County project, which limits indoor water use to no more than 50 gallons per person per day on average within the Basin, shall be incorporated into the Recycled Water Management Plan. The Program shall be designed to help Basin residents to reduce their potable water use as much as possible through measures including but not limited to retrofit and installation of low water use fixtures, and grey water systems. The Program shall include enforceable mechanisms designed to achieve its identified goals, including the 50 gallons per person per day target, and shall include provisions for use of the \$5 million committed by the Permittee to initiate water conservation measures pursuant to the Basin Plan as soon as possible following CDP approval. The Permittee shall coordinate with water purveyors to the maximum extent feasible to integrate this conservation program with purveyor implemented outdoor water use reduction measures.



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 10 of 11

- c. **Monitoring Program.** The Monitoring Program shall be designed to quantitatively and qualitatively assess the effectiveness of the Basin Plan over time to ensure its objectives are achieved, and shall include: a baseline physical and ecological assessment of ground and surface water and related resources to be monitored; measurable goals and interim and long-term success criteria for those resources, including at a minimum clear criteria that demonstrate that the health and sustainability of Plan area resources are steadily improving over time, including with respect to seawater intrusion; monitoring provisions, including identification of appropriate representative resource monitoring locations and data types (e.g., groundwater levels and quality; wetland, stream, creek, riparian, and marsh plant and animal abundance, hydrology, and water quality; etc.) and a schedule for proposed monitoring activities. The Monitoring Program shall also include measures to clearly document the manner in which recycled water is being reused and water is being conserved pursuant to the Recycled Water Reuse and Water Conservation Programs.
- d. **Reporting and Adaptive Management Program.** Annual reports (two copies) documenting implementation and effectiveness of the Basin Plan shall be submitted to the Executive Director for review and approval by December 31st of each year that the project operates. Each report shall include all monitoring data (including documenting all recycled water reuse for the preceding year, all water conservation efforts and effects, and all resource changes identified), shall describe the progress towards achieving the success criteria of the plan, and shall make recommendations, if any, on changes necessary to better meet Basin Plan objectives and achieve success. On the latter, the annual reports shall be premised upon the concept of adaptive management that responds to information developed and effects better understood over time in association with the project, and is intended to allow for project changes covered by this CDP, unless the Executive Director determines that a CDP amendment is necessary, through the annual report approval process provided that such changes result in better resource protection and better means to achieve Basin Plan objectives over the long-term. Changes, including identified remediation steps, shall be completed per the timetable identified in any approved annual report, or within 30 days of report approval where no such timetable is specified.

The Permittee shall undertake development in accordance with the approved Los Osos Basin Water Recycling Management Plan.

6. **Wastewater Service to Undeveloped Properties.** Wastewater service to undeveloped properties within the service area shall be prohibited unless and until the Estero Area Plan is amended to identify appropriate and sustainable buildout limits, and any appropriate mechanisms to stay within such limits, based on conclusive evidence indicating that adequate water is available to support development of such properties without adverse impacts to ground and surface waters, including wetlands and all related habitats.
7. **Amendment.** All future changes to the approved project, including changes in service area, shall be processed as amendments to this CDP. Any such amendment shall clearly demonstrate the manner in which the amendment would lead to better coastal resource protection, including at a minimum the manner in which it would help to better achieve the goals and meet the success criteria of the approved Los Osos Basin Resource Management Plan (see special condition 5).



CDP A-3-SLO-09-055/069 (Los Osos Wastewater Project)

Issue Date: September 7, 2010

Page 11 of 11

8. **Conflict Resolution.** Any differences, conflicts, and/or questions of interpretation between elements of the proposed project description and these conditions shall be resolved in favor of these conditions and in the manner most protective of coastal resources as determined by the Executive Director.

9. **Liability for Costs and Attorneys Fees.** The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys fees (including but not limited to such costs/fees that are: (1) charged by the Office of the Attorney General; and (2) required by a court) that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit. The Permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.



**County of San Luis Obispo, Board of Supervisors
Development Plan / Coastal Development Permit DRC2008-00103
Los Osos Wastewater Project
CONDITIONS OF APPROVAL, November 24, 2009**

Approved Development

1. This approval authorizes construction and operation of a community-wide sewer system for the portion of Los Osos described in Resolution No. 83-13 issued by the Regional Water Quality Control Board (see Attachment 1) and as described by application materials, supplemental materials made a part of the record, and shown in the EIR, including:
 - a. A wastewater treatment facility, including all appurtenant structures, landscaping and site access to be located on the Giacomazzi site (APN 067-011-022);
 - b. A wastewater collection system, including lateral lines from individual structures to the street, connection lines at each property, sewer mains, back-up power facilities and pump stations;
 - c. Construction staging areas;
 - d. Wastewater disposal facilities, distribution lines for urban and agricultural re-use, and monitoring wells;
 - e. Wastewater sludge handling facilities at the wastewater treatment plant to enable the hauling of sludge to a disposal, recycling facility or co-generation facility;
 - f. Primary staging areas at East Paso Robles Street including minor and temporary staging areas in the project area including the Giacomazzi site;
 - g. Construction activities associated with the installation of approved facilities, including dewatering operations;
 - h. A program for the mitigation of direct impacts to habitat for endangered species and agricultural resources;
 - i. Construction of an underground pump station located at 3rd Street and the intersection of Paso Robles Avenue (unimproved), within 75' of a coastal wetland;
 - j. Construction of harvesting wells and their associated piping and facilities are NOT authorized by this approval; and
 - k. A water conservation program allowing a maximum water usage of 50 gallons per day / person for indoor water usage.
2. Except as otherwise required by the conditions of this permit, all development shall be substantially consistent with the site plan attached as Attachment 2, as well as with all final architectural elevations, color boards and landscape plans to be reviewed and approved by the Planning Director.
3. All development shall be consistent with the conditions contained herein. Prior to final design / layout of the East Paso Robles Avenue pump station and the Doris Avenue / Lupine Street pump station, the applicant shall provide verification to the satisfaction of the Planning Director, that the required 75 foot wetland setback will be met with the redesign / layout of said pump stations.
4. The approved service area for the wastewater treatment facilities corresponds to the area shown on the Service Area Map attached (see Attachment 1)

Future additions to the wastewater treatment service area shall require a separate coastal development permit, and must be preceded or submitted concurrently with an Local Coastal Plan (LCP) amendment that incorporates the proposed service area expansion within the Urban Service Line designated by the LCP.

5. **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 County 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 of the new development, including the 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 construction, the County shall prepare 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.

Prior to the commencement of construction, 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.

6. **Tertiary Treatment.** The treatment plant shall provide Disinfected Tertiary Recycled Water as defined at Section 60301.230 of Title 22 of the California Code of Regulations, which means a filtered and subsequently disinfected wastewater that meets the following criteria:

- (a) The filtered wastewater has been disinfected by either:

- (1) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow; or

- (2) A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.

- (b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

Prior to providing tertiary treated water for agricultural uses the applicant shall develop a Recycled Water Management Plan for Agricultural Re-use. The use of tertiary treated water shall be consistent with resource protection strategies including but not limited to those designed to protect on and off site soils, and surface and groundwater resources through the use of appropriate site-specific management practices. The applicant shall consult with technical resource providers such as the University of California Cooperative Extension and USDA Natural Resources Conservation Service. The Plan shall be reviewed and approved by the Director of Planning and Building in consultation with the Agricultural Commissioner's Office prior to providing tertiary treated water for agricultural uses.

Prior to Construction

Permits

7. [Mitigation 5.5-C1] Prior to construction, an application for a Nationwide or Individual Permit shall be submitted by the County to the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA). If required, the County shall obtain a Nationwide or Individual Permit from the USACE for any impacts, temporary and permanent, to any areas within the proposed project which are determined to qualify as jurisdictional waters and wetlands of the U.S. The County shall implement all required conditions and special considerations stipulated within the Nationwide or Individual Permit during all relevant phases of development / construction.
8. [Mitigation 5.5-C2] Prior to construction, an application for a Water Quality Certification shall be submitted by the County to the Central Coast RWQCB pursuant to Section 401 of the Clean Water Act and the State Porter-Cologne Water Quality Act. If required, a Water Quality Certification shall be obtained from the Central Coast RWQCB for any impacts, temporary and permanent, to any areas within the proposed project which are determined to qualify as jurisdictional waters of the State. The County shall implement all required conditions and special considerations stipulated within the Water Quality Certification during all relevant phases of development / construction.
9. [Mitigation 5.5-C3] Prior to construction, a Notification of Lake or Streambed Alteration shall be submitted by the County to the CDFG pursuant to CFG Code Section 1602. If required, a Streambed Alteration Agreement shall be obtained from the CDFG for any impacts, temporary and permanent, to any areas within the proposed project which are determined to qualify as jurisdictional streambed or riparian habitat. The County shall implement all required conditions and special considerations stipulated within the Streambed Alteration Agreement during all relevant phases of development / construction.
10. Prior to construction, an NPDES Construction Activity Storm Water Permit shall be obtained. Appropriate BMPs, as established in the project NPDES Construction Storm Water Permit, shall be employed during project construction, which may include, but are not limited to, temporary sand bagging; construction of berms; installation of geofabric, and revegetation of areas by hydroseeding and mulching; actions for control of potential fuel or drill tailing release; the use of trench stabilizing and de-watering and requirements for disposal (i.e., location, quality) of water from dewatering activities. The NPDES permit shall apply to all proposed facilities, and shall address 50 to 100-year precipitation events to the extent feasible. Any erosion and sedimentation control netting or other

erosion and sedimentation control devices used for temporary or permanent erosion and sedimentation control, shall be limited to biodegradable mesh or other biodegradable products.

11. Prior to construction, the applicant shall provide an approved Fire Safety Plan from CalFire (consistent with their letter dated February 5, 2009) and prior to operation of the waste water treatment facility shall implement the requirements of the plan.
12. [Mitigation 5.9-C3] Prior to initiating grading activities, if it is determined that portable engines and portable equipment would be utilized, the contractor shall contact the SLOAPCD and obtain a permit to operate portable engines or portable equipment, and such engines or equipment shall be registered in the statewide portable equipment registration program. The SLOAPCD Compliance Division shall be contacted in order to determine the implementation requirements of this mitigation measure.
13. Prior to construction, the applicant shall obtain an encroachment permit from the County Department of Public Works for all work to be done in the County rights-of-way.
14. The project shall comply with the requirements of the National Pollutant Discharge Elimination System General Discharge, the Industrial Stormwater Program, and the County's Stormwater Pollution Control and Discharge Ordinance 3143. All discharges and dewatering activities shall be authorized by the Regional Water Quality Control Board.

Facility Design

15. Building heights for structures shall conform to the following, as measured in accordance with CZLUO 23.04.122:
 - a. Treatment Plant. The buildings at the wastewater treatment facility will not exceed the following:
 - i. Administrative Building: 28 feet
 - ii. Maintenance Building: 35 feet
 - iii. Bio-Air Building: 30 feet
 - iv. Solids Building: 35 feet
 - v. RAS WAS Station and Storage Tank: 31 feet
 - vi. Secondary Clarifier (A): 25 feet
 - vii. Secondary Clarifier (B): 23 feet
 - viii. Electrical Building: 35 feet
 - ix. Tertiary Treatment Building: 26 feet
 - b. Standby Power Stations. Buildings shall not exceed 14 feet.
16. All facilities shall be designed to provide adequate and safe parking for facility operations personnel.
17. Signs shall conform to LUO 23.04.300. Prior to completion, the County shall provide signage at the treatment plant site indicating the facility and public amenities. Signs shall be approved by the Planning Director.

18. Buildings shall be designed to conform to energy efficiency requirements outlined in Title 24 of the California Code. Additional measures to be shown on construction plans include:
 - a. Provide an on-site lunch room with refrigeration and food preparation (i.e., microwave) appliances to reduce daily trips to and from the treatment facility;
 - b. Use of double paned windows in office area where interior heating/air conditioning will occur; and
 - c. Use of energy efficient interior lighting where applicable.

Geologic Hazards

19. [Mitigation 5.4-E1] Prior to commencement of grading activities for each facility, erosion control measures shall be incorporated into the grading plans to minimize the potential for erosion or loss of top soil during grading to the satisfaction of the Planning Director. Any erosion and sedimentation control netting or other erosion and sedimentation control devices used for temporary or permanent erosion and sedimentation control, shall be limited to biodegradable mesh or other biodegradable products.
20. [Mitigation 5.4-E2] Prior to commencement of grading activities for each facility, vegetation/landscaping shall be provided on the graded cut and fill slopes to reduce the long-term potential for soil erosion or loss of topsoil to the satisfaction of the Planning Director.
21. [Mitigation 5.4-E3] Prior to commencement of grading activities for each facility, the plans shall provide for the control of surface water away from slopes to the satisfaction of the Planning Director in consultation with the Public Works Department.
22. All proposed facilities shall be designed and constructed in accordance with UBC Seismic Zone 4 regulations.
23. [Mitigation 5.4-B1] Prior to the commencement of construction for buildings at each proposed facility, the design of each facility shall be based on a facility-specific geotechnical report prepared by a California registered geotechnical engineer and professional geologist. The geotechnical report shall provide seismic data for use with at least the minimum requirements of the California Building Code (2007), as adopted by the County of San Luis Obispo.
24. [Mitigation 5.4-C1] Prior to completion of the improvement plans for the proposed project, a geotechnical report that addresses liquefaction hazards shall be prepared and approved by the Planning Director. The geotechnical report shall state the recommended actions for the collection system, effluent disposal system, treatment plant site, and all appurtenant facilities so that potential impacts from seismically-induced liquefaction would be reduced to less than significant. These recommendations shall be incorporated into the design of all proposed facilities that are part of the collection system and at the treatment plant site.
25. [Mitigation 5.4-C2] Prior to completion of improvement plans, an Emergency Response Plan (ERP) shall be prepared as part of the operation and maintenance plan for the proposed collection system. The ERP shall recognize the potential for liquefaction, seismic hazards and ground lurching, to impact the pipeline or other proposed facilities,

and specific high hazard areas shall be inspected for damage following an earthquake. "Soft Fixes" shall be incorporated in the ERP. Soft fixes typically consist of having a plan in-place to address the hazards, such as can be achieved by storing supplies and equipment for repair.

26. [Mitigation 5.4-F1] Prior to completion of the improvement plans for the proposed facilities, a geotechnical report that addresses the potential for lateral spreading, ground subsidence, and ground lurching and provides measures to reduce potential impacts to less than significant shall be prepared and approved by the Planning Director. These recommendations shall be incorporated into the design of the improvement plans for the proposed facilities.
27. [Mitigation 5.4-G1] Prior to completion of improvement and building plans for the proposed project, a design-level geotechnical report shall be prepared that addresses and reduces potential expansive soil impacts to less than significant. The expansive soil data shall be used with the requirements of the California Building Code (2007), as adopted by the County of San Luis Obispo. These recommendations shall be incorporated into the design of all proposed facilities that are part of the collection system and at the treatment plant site.

Cultural Resources

28. [Mitigation 5.6-B1] Avoidance of cultural resources is the paramount mitigation measure to protect cultural resources potentially impacted during project development. Avoidance of all known and unknown cultural resources shall be the primary and preferred mitigation. If avoidance is infeasible, then work shall only continue when it has been determined to be consistent with the required Treatment Plan and testing requirements.
29. [Mitigation 5.6-B2] A Treatment Plan shall be prepared that would detail the extensive scope of the proposed project, establish site types with corresponding levels of effort for mitigation, and detail data recovery and monitoring plans for the extent of the proposed project. The former Treatment Plan (Far Western 2001) prepared for the wastewater project shall be adapted and modified where appropriate for the current project.
30. [Mitigation 5.6-B4] If avoidance of recorded archaeological sites within any portion of the approved project design is not possible through project redesign, a phased program of site testing shall be undertaken to establish boundaries and evaluate the resources' potential eligibility to the California Register of Historical Resources under CEQA and the National Register of Historic Places under NEPA. If a site is determined ineligible, no further work is required. If a site is determined eligible, data recovery excavations shall be required to mitigate adverse effects incurred from project development.
31. [Mitigation 5.6-B6] Preconstruction monitoring shall occur in areas ranked as high in sensitivity for buried deposits. The area subject to this requirement is located along Los Osos Valley Road from Los Osos Creek east to the Cemetery Parcel. Mechanical backhoe trenching shall be conducted within the sensitive areas where any construction impacts will occur and shall be monitored by a qualified geo-archaeologist. Any identified intact deposits will be evaluated, and any deposits determined to be eligible to

the California Register and/or National Register shall require project redesign to avoid impacts, or data recovery to mitigate unavoidable impacts.

Traffic

32. [Mitigation 5.8-A1] Prior to construction, a traffic management plan shall be prepared for review and approval by the County of San Luis Obispo Traffic Department in consultation with the Planning Director. The traffic management plan shall be based on the type of roadway, traffic conditions, duration of construction, physical constraints, nearness of the work zone to traffic and other facilities (bicycle, pedestrian, driveway access, etc.). The traffic management plan shall include:
- a) **Advertisement.** An advertisement campaign informing the public of the proposed construction activities should be developed. Advertisements should occur prior to beginning work and periodically during the course of project construction. The advertising shall include notification of changes to bus schedules and potential changes to bus stop locations, potential impacts during school drop-off and pick-up times, and major intersections that may be impacted during construction.
 - b) **Property Access.** Access to parcels along the construction area shall be maintained to the greatest extent feasible. Affected property owners shall receive advance notice of work adjacent to their property access and when driveways would be potentially closed.
 - c) **Schools.** Any construction adjacent to schools shall ensure that access is maintained for vehicles, pedestrians, and bicyclists, particularly at the beginning and end of the school day.
 - d) **Buses, Bicycles and Pedestrians.** The work zone shall provide for passage by buses, bicyclists and pedestrians, particularly in the vicinity of schools.
 - e) **Intersections.** Traffic control (i.e. use of flag men) shall be used at intersections that are determined to be unacceptably congested due to construction traffic.

Access

33. Prior to commencement of grading activities, the applicant shall submit driveway construction plans to Public Works Encroachment for review and approval in consultation with the Planning Director. The plans shall show the reconstruction of the project driveway approach(es) at the Giacomazzi site in accordance with County Public Improvement Standard Drawing Numbers B-1e and A-5a (sight distance). The applicant shall secure an encroachment permit from Public Works prior to commencing any work within the public right-of-way.
34. If environmental permits from the Army Corps of Engineers or the California Department of Fish and Game are required for any public improvements that are to be maintained by the County, the applicant or his engineer, prior to the approval of the plans by the Department of Public Works in consultation with the Planning Director shall:
- a) Submit a copy of all such permits to the Department of Public Works and Planning Department; OR
 - b) Documentation that the regulatory agencies have determined that said permit is not required.

Air Quality

35. [Mitigation 5.9-C1] Prior to commencement of grading activities, the applicant shall submit a Construction Activities Management Plan for the review and approval of the SLOAPCD. This plan shall include but not be limited to the following Best Available Control Technologies for construction equipment:
- a. Minimize the number of large pieces of construction equipment operating during any given period.
 - b. Schedule construction related truck/equipment trips during non-peak hours to reduce peak-hour emissions and overall daily and quarterly emissions.
 - c. Properly maintain and tune all construction equipment according to manufacturer's specifications.
 - d. Fuel all off-road and portable diesel powered equipment including but not limited to: bulldozers, graders, cranes, loaders, scrapers, backhoes, generators, compressors, auxiliary power units, with ARB certified motor vehicle diesel fuel.
 - e. All diesel construction equipment shall meet ARB's Tier 3 standard for off-road heavy duty diesel engines.
 - f. All on-road heavy-duty trucks shall meet the ARB's 2007 or newer certification standard for on-road heavy-duty diesel engines.
 - g. All on and off-road diesel equipment shall not be allowed to idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit.
 - h. Electrify portable equipment where possible throughout the project area.
 - i. All diesel powered portable equipment used shall have tier 2 or tier 3 engines and retrofitted with an ARB level 3 verified diesel emissions control strategy (VEDEC).
 - j. Locate construction staging areas at least 1000 feet from sensitive receptors.
36. The Construction Activity Management Plan (CAMP) should include but not be limited to the following elements:
- a. Schedule construction truck trips during non-peak hours to reduce peak hour emissions;
 - b. Limit the length of the construction work-day period, if necessary;
 - c. Phase construction activities to minimize overlapping emissions; and
 - d. Construction Equipment composition and schedule including:
 1. Equipment Type

2. Equipment Model
 3. Equipment Year
 4. Engine Type
 5. Engine Model
 6. Engine Year
 7. Engine Horsepower
 8. Schedule of use
37. APCD and the County will establish an off-site mitigation program based on the ozone precursor, PM exceedence, and greenhouse gas emissions. The County may use the funding of this program to implement APCD approved emission reduction projects near the project site or may pay that funding level plus a 15 percent administration fee to the APCD for the APCD to implement emission reduction projects in close proximity to the project. The County will provide the funding at a time or schedule approved by the APCD to help facilitate emission offsets that are as timely.
38. Prior to commencement of grading activities, an updated air quality emissions analysis consistent with the CAMP and mitigation measures above will be submitted to determine if additional measures (e.g. off-site mitigation) are required to reduce the air quality impact below the levels of significance.
39. Prior to any grading activities associated with the project, the project proponent shall ensure that a geologic evaluation is conducted to determine if Naturally Occurring Asbestos (NOA) is present within the area that will be disturbed. If NOA is not present, an exemption request must be filed with the District. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program for approval by the APCD. Please refer to the APCD web page at <http://www.slocleanair.org/business/asbestos.asp> for more information or contact the APCD Enforcement Division at 781-5912.
40. An Odor Control Plan shall be submitted for review and approval of the San Luis Obispo County Air Pollution Control District prior to commencement of grading activities which shall be incorporated as conditions of the permit issued by the County for the construction and operation of the Los Osos wastewater project. The Odor Control Plan shall contain a Complaint Response Plan to address at least the following:
- a. A public outreach plan, including operator training in the handling of complaints; a program for informing the public regarding the complaint process; periodic neighborhood surveys of performance and responsiveness to complaints; and, a complaint hotline phone number. This public outreach plan shall be in place upon startup;
 - b. An odor point identification map, which will aid the wastewater system operators and the SLOAPCD by identifying potential odor sources, a description of the odor point. This identification map and related information shall be completed within the first 3 months of startup;
 - c. A list of immediate responses or actions to be taken to complaints, including, but not limited to:

1. The upstream addition of ferrous chloride (or other) injection system adjustments;
 2. On-site odor checks to identify odor sources or system malfunctions, neighborhood complaint patrol and actions to be taken;
- d. A Contingency Action Plan detailing the methods to which odor sources will be studied and a response action plan to control odors over the long term. This Plan shall be in place upon startup. Possible responses include, but are not limited to, the following:
1. Providing additional "negative air" containment or recovery system areas;
 2. Additional treatment containment enclosure;
 3. Additional or improved odor control, dispersal and/or air movement at pump stations, wet wells and the wastewater treatment plant;
 4. Additional study of odor sources and possible solutions, which may include a dilution to threshold measurement for each potential odor source using the Bay Area Air Quality Management District's procedure outlined in their Regulation 7 "Odor Substances" 7-400 et seq and "Manual for Procedures", Volume IV, ST-I, ST-8, ST-ii, 51-16 and ST-22 or SLOAPCD equivalent.

Noise

41. [Mitigation 5.10-A1] The County shall require that the treatment plant be designed so that the mechanical aeration system is located a minimum of 250 feet away from the nearest residence.
42. [Mitigation 5.10-A2] The County shall require that the treatment plant be designed so that the backup diesel generator is enclosed in a structure and is located a minimum of 250 feet away from the nearest residence.
43. Operation and maintenance plans for the treatment facility will ensure that all pumps and aerators are kept in proper working order.
44. [Mitigation 5.10-A3] The County shall require that the backup power facility structures for the in-town collection system be designed so that the noise created from the backup diesel generator that would be located inside the structure would not exceed 45 dBA Leq at the nearest property line. The noise from the backup diesel generator may be attenuated through the use of a "manufacturer enclosure" or through incorporation of noise attenuation design features into the backup power facility structure.

Hazards

45. [Mitigation 5.7-A1] Prior to any onsite construction activities at the proposed treatment plant sites, soils shall be sampled and analyzed by a licensed engineer or geologist approved by the County of San Luis Obispo Health Department to determine the level of residue for pesticides, herbicides, chemicals, and associated metals. If residues are found to be within acceptable amounts in accordance with the San Luis Obispo County Health Department (SLOCHD) and Environmental Protection Agency/Department of

Toxic Substance Control (DTSC) standards, then grading and construction may begin. If the residue is found to be greater than the SLOCHD and DTSC standards, all contaminated soils exceeding the acceptable limits shall be remediated and/or properly disposed of in accordance with SLOCHD and DTSC requirements. An appropriate verification closure letter from SLOCHD and DTSC shall be obtained and submitted to the County of San Luis Obispo Planning Department. Depending on the extent of contaminated soils, a verification closure letter from the California Regional Water Quality Control Board may also need to be submitted to the County of San Luis Obispo Planning Department. Site remediation can occur by the use of onsite transportable thermal treatment units or bio-remediation. The soil can also be excavated and shipped offsite to fixed incineration or bio-remediation facilities.

46. [Mitigation 5.7-B1] Prior to operation of the wastewater treatment system, a Hazardous Materials Management Plan shall be developed and submitted to the County of San Luis Obispo Environmental Health Services Division for approval. The plan shall identify hazardous materials utilized at the proposed wastewater facilities and their characteristics, storage, handling, training procedures, and spill contingency procedures. Additionally, the Hazardous Materials Management Plan shall identify procedures in the event of accidents such as the release of raw wastewater or secondary treated water into watercourses such as Los Osos Creek. These procedures shall include immediate response personnel to limit public access to spill areas, potentially shutting down pump stations, creating berms, use of vacuum trucks, and use of water booms to contain spills within open water areas. Furthermore, the Plan shall address response and containment of fuel at pump station sites.
47. [Mitigation 5.7-D1] To reduce the potential temporary loss of water for firefighting that may occur as a result of construction activities, the project shall compensate for the potential temporary loss of water through means determined by the County Fire Chief.
48. All contractors shall comply with relevant provisions of CAL-OSHA CAC Title 8 regarding the provision of safety and rescue equipment, to the satisfaction of the County Department of Public Works in consultation with the Planning Director.

Aesthetics

49. At the time of construction, walls, roofs, and other building components shall be constructed in colors and tones compatible with the surrounding environment. Landscaping that will either screen from in front or grow over from above any fencing shall be established prior to operation of the facility.
50. [Mitigation 5.12-D1] A final lighting plan shall be prepared for the treatment and disposal facilities in accordance with Estero Area Plan AES-5. The lighting plan shall meet County design standards. This shall include proper shielding, proper orientation, and applicable height standards. All lighting fixtures shall be shielded so that neither the lamp nor the related reflector interior surface is visible from adjacent properties or public areas. Light hoods shall be dark-colored. Lighting associated with all project components shall be the minimum needed for plant/pump station operations which require lighting for operations and/or during emergency situations.
51. [Mitigation 5.12-C3] Any buildings associated with collection facilities at the Broderson and Mid-Town parcels shall be designed in such a manner so they are architecturally compatible with other buildings in the vicinity.

52. [Mitigation 5.12-F1] Any building (equipment areas, pumping stations) associated with treatment and disposal facilities shall be designed to conform to an agricultural / rural landscape. Buildings shall be designed to appear as barns or other farm related structures.
53. Prior to construction, the applicant shall submit architectural elevations of all proposed structures to the Department of Planning for review and approval in consultation with the Environmental Coordinator. The elevations shall show exterior finish materials, colors, and height above the existing natural ground surface. Colors shall minimize the structure massing of new development by reducing the contrast between the proposed development and the surrounding environment. Colors shall be compatible with the natural colors of the surrounding environment, including vegetation, rock outcrops, sand dunes, etc. Darker or neutral, non-reflective, earth tone colors shall be selected for walls and buildings, and darker green, gray, slate blue, or brown colors for the roof structures.
54. [Mitigation 5.12-C1] Construction staging areas shall conform to Estero Area Plan AES-1 and be located away from sensitive viewing areas to the extent feasible. Before construction activities begin, an area of construction equipment storage away from direct views of sensitive viewing corridors (e.g. residences and major roads in the project area) shall be designated.
55. [Mitigation 5.12-C2] A final landscaping plan shall be prepared for the entire project site and approved by the County prior to commencement of construction activities. Said landscaping plan shall emphasize native plant materials and shall include sufficient planting to screen views of the project from nearby roads, public areas, and residential developments. The landscaping plan shall be designed to visually integrate the project into the rural landscape, while preserving and enhancing existing views.

Biological Resources

56. Prior to the initiation of any vegetation clearing, soil disruption, grading, or any other construction related activities, the County shall formalize a "no take agreement" with the CDFG for the Morro Bay kangaroo rat. The "no take agreement" shall outline a monitoring and contingency plan for the Broderson leach field, as on-going maintenance of the leach field may create suitable Morro Bay kangaroo rat habitat.
57. Where construction will necessitate disturbance in undeveloped lots and other potentially sensitive areas, a pre-construction survey will be conducted to assess and minimize any potential impacts to sensitive resources in these areas.
58. [Mitigation 5.5-A9] The proposed project shall avoid Monarch butterfly winter roost habitats where feasible. If the proposed project will impact potential winter roost habitat, a qualified biologist with expertise in positively identifying the Monarch butterfly and winter roosting behavior shall conduct preconstruction surveys within all suitable habitat that occurs within the proposed impact area during the months of October through February. All potential roost sites that have a potential to be impacted as a result of construction activities shall be fenced and avoided. No construction activities shall be permitted in the vicinity (within 500 feet) of potential roost sites during the winter roosting months.

59. [Mitigation 5.5-A10] Prior to construction activities on the Broderson and Mid-town properties, a qualified biologist shall be retained to identify and demarcate all host silver dune lupine (*Lupinus chamissonis*) shrubs that occur within the impact area. The qualified biologist shall inspect each host lupine for the presence of any Morro blue butterfly eggs, larvae, or pupae. In an effort to avoid mortality of butterfly eggs, larvae, or pupae prior to the onset of adult emergence, any host lupine specimens determined to contain eggs, larvae, or pupae shall be considered for relocation outside of the impact area and within suitable coastal dune scrub habitat on either the Broderson or Mid-town properties. To avoid take of the Morro shoulderband snail (*Helminthoglypta walkeriana*) while conducting Morro blue butterfly survey activities, any person conducting such surveys shall be a qualified biologist knowledgeable in the general habitat requirements of the Morro shoulderband snail and familiar with the diagnostic features of all native and introduced snail species. Any planting and restoration efforts proposed as mitigation for the project shall include silver dune lupine within the plant palette to encourage the species to continue to use the area.
60. [Mitigation 5.5-A15] Prior to project construction, land containing coastal dune scrub and maritime chaparral habitat shall be acquired on the Broderson property that is sufficient to compensate the loss of habitat for the Morro shoulderband snail and other sensitive species on the Broderson and Mid-town properties, and sensitive areas in the collection system. Seventy-three acres of the Broderson property not used for the proposed leachfields shall be preserved in perpetuity and granted to an appropriate agency or conservation organization with the responsibility of management and monitoring the preserve as determined during agreements with USFWS, CDFG, and the County. A long-term management and monitoring program shall be prepared for the area to be preserved. The County shall be responsible for the allocation of appropriate funding for the long-term management and monitoring of the mitigation land. Such funding expense may be recouped through fees imposed upon wastewater system users and others.
61. [Mitigation 5.5-A16] Immediately following construction of the leachfields within the Broderson property, the disturbance area and all existing and unaffected coastal sage scrub (or coastal dune scrub) within the property shall be restored, enhanced, and maintained to promote the land's function and value as suitable habitat for sensitive plants and wildlife that are local or endemic to the area. Restoration and enhancement efforts, including at minimum, seeding with native plant species and eradication of exotic non-native plant species, shall be repeated immediately following all long-term maintenance activities resulting in temporary disturbance of the leachfields. This shall be applied to the ripping and backfilling activities that will be required every 5 to 10 years to maintain the leachfield function.

Restoration activities shall be conducted according to a Restoration Plan or similar plan specifically prepared for the effort and approved by USFWS, CDFG, and/or the CNPS. The Restoration Plan shall require at minimum, a description of the prescribed restoration and methodology, feasibility and likelihood for success, and a schedule and program for maintenance, monitoring and reporting the progress of the restoration effort. All restoration activities shall be conducted by qualified personnel with expertise in restoration ecology and knowledge of sensitive plant and wildlife species in the area. The restoration effort shall include the implementation of a seed collection program to gather seeds to be used during restoration from native sources. The seed collection program shall be prepared for approval by the County prior to project construction activities. The seed collection program shall include the use of native plants that will be

removed as a result of the project, including but not limited to: mock heather (*Ericameria ericoides*), silver dune lupine (*Lupinus chamissonis*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), bush monkey flower (*Mimulus aurantiacus*), and deerweed (*Lotus scoparius*). Collection shall take place by qualified personnel with expertise in botanical resources during the appropriate time of year for seed production and harvesting.

Unless otherwise determined during consultation with the USFWS, the restoration effort shall be monitored against performance standards for a minimum of five years, or until the first ripping event for the restored areas within the leachfield area, after which the maintenance and monitoring of the restored areas shall be covered within specific management directives contained within a Resource Management Plan. The performance standards shall include, at minimum, at least 80 percent native plant species coverage and no greater than 1 percent coverage of invasive non-native plant species (e.g. pampass grass, veldt grass). At minimum, the restored areas must demonstrate a continued ability to support the functions and values necessary to sustain the Morro shoulderband snail. Quarterly monitoring shall be conducted for the first two years of the restoration effort, with annual monitoring efforts to follow for the remaining three years. All monitoring and maintenance of restoration areas shall be conducted by qualified personnel with expertise in botanical resources and knowledge of sensitive species that occur in the local area, including the Morro shoulderband snail, Morro Bay kangaroo rat, and Morro blue butterfly.

The County shall provide annual reports to the USFWS documenting the results of all restoration and monitoring activities. Annual reports shall be provided to the USFWS for a minimum of five years or until it is determined by the USFWS that requisite performance criteria have been met. These reports should include any noted changes in the plant community structure or composition or surface hydrology down-slope of the Broderson leachfields, in addition to other requirements as determined through USFWS consultation and stipulated within permit conditions.

All on-going and long-term restoration, enhancement, and maintenance of preserved lands on the Broderson property shall be implemented according to a Resource Management Plan or similar mitigation and monitoring plan that may be developed during consultation with the USFWS. The Resource Management Plan shall include management directives that are specific to the preserve and the resources present. The Resource Management Plan shall include measures for the removal and eradication of invasive exotic plant species known to occur in the local area, including veldt grass and pampas grass. Activities that involve the removal of invasive species should not result in unnecessary trampling or removal of native species, and techniques for invasive removal shall be least damaging to native species.

62. [Mitigation 5.5-A1] The proposed project may affect federally-listed species (including Morro shoulderband snail and California red-legged frog) and as such, the EPA shall initiate formal consultation with USFWS pursuant to Section 7(a)(2) of the federal ESA. All mandatory terms and conditions, and reasonable and prudent measures pertaining to incidental take prescribed within the Biological Opinion and Nationwide Permit for the project shall be fulfilled and implemented.
63. [Mitigation 5.5-A4] Prior to construction, a biologist authorized by the USFWS shall conduct intensive surveys to identify and relocate all Morro shoulderband snails within

the proposed impact area on the Broderson and Mid-town properties, and all suitable habitat areas within the proposed collection system. Only USFWS authorized biologists shall survey for, monitor, handle, or relocate Morro shoulderband snails.

A biologist authorized by the USFWS shall be retained to monitor all construction activities that will take place within suitable habitat for the Morro shoulderband snail. Monitoring activities shall be required daily until completion of initial disturbance at each construction area. The monitoring biologist shall be granted full authority to stop work at his or her discretion. The monitoring biologist shall be responsible for implementing avoidance and minimization measures during construction. The monitoring biologist shall stop work if project-related activities occur outside the demarcated boundaries of the construction footprint. The monitoring biologist shall stop work if any Morro shoulderband snails are detected within the proposed construction footprint, and shall implement measures to relocate them to suitable habitat out of harms way prior to construction activities resuming. If no suitable habitat opportunities are available in the immediate vicinity of the construction footprint, salvaged and relocated specimens may also be transported to an offsite location approved by the USFWS.

The County shall provide a written report to USFWS within 90 days following the completion of the proposed project. The report must document the number of Morro shoulderband snails removed and relocated from project areas, the locations of all Morro shoulderband snail relocations, and the number of Morro shoulderband snails known to be killed or injured. The report shall contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys, observations, and any other pertinent information such as the acreages affected and restored, or undergoing restoration, of each habitat type.

64. [Mitigation 5.5-A8] Prior to project construction, the County shall retain a qualified biologist to conduct pre-construction surveys for the California red-legged frog according to protocol approved by the USFWS. Surveys shall be conducted within all areas that are determined to contain suitable habitat for this species and that occur within 100 feet of proposed construction, or at a distance determined through USFWS consultation.

To avoid potential timing conflicts with the California red-legged frog breeding period, construction activities in the vicinity of California red-legged frog habitat shall be completed between April 1 and November 1. This measure shall apply to construction activities at the Los Osos Valley Road bridge and Los Osos Creek crossing, and all other areas determined during pre-construction surveys to contain suitable habitat for the species, including areas that occur within 100 feet of proposed construction, or at a distance determined through USFWS consultation.

Prior to construction, the County shall retain a USFWS-approved biologist to permanently remove any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The USFWS-approved biologist will be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.

Prior to construction, the County shall retain a USFWS-approved biologist to conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, the general measures that are being

implemented to conserve the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished.

Prior to construction, the County shall retain a USFWS-approved biologist responsible for monitoring construction activities. Ground disturbance shall not be authorized to begin until written approval is received from the USFWS that the biologist is qualified to conduct the work. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frog. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force shall be followed at all times. A USFWS-approved biologist shall be present at the active work sites until such time that the initial survey for California red-legged frogs, instruction of workers, and (upland) habitat disturbance have been completed. After this time, the contractor or County shall designate a qualified person to monitor on-site compliance with all minimization measures. The USFWS-approved biologist shall ensure that this individual receives appropriate training as to the identification of frogs, potential hazards to the species, inappropriate and allowable work activities, and appropriate contacts for immediate, professional biological support. During work activities, all trash that may attract predators shall be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

All fueling and maintenance of vehicles and other equipment and staging areas shall occur a minimum of 100 feet from all open water, stream, wetland, and riparian habitat. The County shall ensure that contamination of habitat does not occur during such operations. Prior to the onset of work, the EPA shall ensure that the County has prepared a plan to allow a prompt and effective response to any accidental spills. A copy of this plan shall be provided to the Department of Planning and Building. Wet weather storage ponds shall be maintained as to not attract bullfrogs. This will include allowing the ponds to go dry during the summer to disrupt any breeding activity by bullfrogs. The County shall monitor wet weather storage ponds for bullfrog activity.

65. [Mitigation 5.5-A13] Prior to project construction and within all areas on the Broderson property that contain suitable habitat for the Monterey spineflower, a qualified biologist shall be retained to conduct botanical surveys for Monterey spineflower presence. Surveys shall be conducted during the local blooming period for the species, which typically occurs between April and June, and according to recommendations and guidelines prepared by the USFWS, CDFG, and CNPS. If positively identified, all specimens shall be clearly demarcated with flagging, and avoided to the maximum extent feasible during construction. A qualified monitoring biologist shall be retained to monitor all construction activities in the immediate vicinity (within 25 feet) of any flagged specimens that will not be removed as a result of construction activities. If specimens are positively identified within the leachfield impact area, the seeds of those specimens shall be collected and sown within suitable habitat located outside of the leachfield impact area and within the Broderson property.

The County shall provide a written report to USFWS within 90 days following the completion of the project. The report shall document the number of Monterey spineflower specimens removed from project areas, the locations of areas seeded with Monterey spineflower seeds, and the number of Monterey spineflower specimens found to be dead or damaged as a result of construction activities. The report shall contain a

brief discussion of any problems encountered in implementing minimization measures, results of biological surveys, observations, and any other pertinent information such as the acreages affected and restored, or undergoing restoration, of each habitat type.

66. [Mitigation 5.5-A14] The proposed project shall minimize to the maximum extent feasible any potential impacts to non-listed plant and lichen species designated as sensitive by the CNPS, including Blochman leafy daisy, saint's daisy, San Luis Obispo wallflower, curly-leafed monardella, dune almond, spiraled old man's beard, Los Osos black and white lichen, long-fringed parmotrema, and splitting yarn lichen. The County shall retain a qualified biologist to conduct botanical surveys within suitable habitat on the Broderson and Mid-town properties to identify all sensitive plant and lichen species within and in the immediate vicinity of the impact areas. Surveys shall be conducted during the local blooming periods for each species, where applicable, and according to recommendations and guidelines prepared by the USFWS, CDFG, and CNPS. All specimens shall be clearly demarcated with flagging and avoided to the maximum extent feasible during construction.
67. [Mitigation 5.5-A5] Prior to construction, the County shall formalize a "no take agreement" with the CDFG for the Morro Bay kangaroo rat. The "no take agreement" shall outline a monitoring and contingency plan for the Broderson leachfield, as on-going maintenance of the leachfield may create suitable Morro Bay kangaroo rat habitat.
68. [Mitigation 5.5-A3] A worker education program and clearly defined operations procedures shall be prepared prior to project construction. The worker education program and operations procedures shall be implemented by the County throughout the duration of construction. A biologist approved by the USFWS shall be retained to provide construction personnel specific instruction on general detection and avoidance of sensitive resources during construction. The worker education program shall include: descriptions and pictures of listed species; the provisions of the Endangered Species Act; those specific measures being implemented to avoid and minimize take or impacts to listed or otherwise sensitive species (e.g. conserve listed and sensitive species as they relate to the project); and the project boundaries within which the work will occur.
69. [Mitigation 5.5-A11] If any construction activities are proposed during the general bird breeding season (February 1 through August 31), a pre-construction survey shall be conducted by a qualified biologist within 10 calendar days prior to the onset of construction activities to identify any active non-raptor bird nests within 250 feet of the proposed impact area. If an active nest is identified during the pre-construction survey, a minimum no-disturbance buffer of 250 feet shall be delineated around active nests until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. For sensitive species, including Allen's hummingbird, yellow warbler, and loggerhead shrike, the distance and placement of the construction avoidance shall be a minimum of 250 feet unless otherwise determined through consultation with the CDFG.
70. [Mitigation 5.5-A12] If any construction activities are proposed during the general raptor breeding season (February 1 through August 31), a pre-construction survey shall be conducted by a qualified biologist within 10 calendar days prior to onset of construction to identify any active raptor nests within 500 feet of the proposed impact area. If an active raptor nest is identified during the pre-construction survey, a minimum no-disturbance buffer of 500 feet shall be delineated around active nests until the breeding

season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

Pursuant to Section 2050 of the CFG Code, the CDFG will not permit any impacts to the California state fully protected white-tailed kite. If an active nest or breeding territory is detected during preconstruction surveys for nesting birds, no construction activities shall take place within 500 feet of the location of the active nest. The area shall be completely avoided and fenced to allow for an adequate buffer from construction activities. A qualified biologist shall be retained to monitor the activity of the nest during the breeding season until it is determined that the nest is no longer active (i.e., all young have fledged the nest and there are no individual kites that are dependent on the nest).

During Construction

71. [Mitigation 5.6-D1] A draft Memorandum of Agreement has been prepared for the treatment and disposition of human remains and associated burial items. This document lays out the procedures agreed upon by interested local Native Americans and stipulated under State law, including proper and respectful handling of remains, identification of reburial areas, acceptable analyses, and resolution of conflicts. It includes a list of Most Likely Descendants approved by the Native American Heritage Commission; these individuals are signatories on the Agreement.
72. [Mitigation 5.6-D2] For sites with known human remains or which have a potential for human remains, pre-construction excavations shall take place within the direct impact areas to insure that no human remains are present.
73. [Mitigation 5.6-D3] If human remains are encountered within the project area, the County shall be responsible for complying with provisions of Public Resources Code Sections 5097.98 and 5097.99, and 7050.5 of the California Health and Safety Code, as amended by Assembly Bill 2641. Restrictions or procedures for excavation, treatment, or handling of human remains shall be established in consultation with the individuals designated by the Native American Heritage Commission as the Most Likely Descendants.
74. [Mitigation 5.6-C1] Although unlikely, should any vertebrate fossils or potentially significant finds (e.g., numerous well-preserved invertebrate or plant fossils) be encountered by anyone working on the site, all activities in the immediate vicinity of the find are to cease until a qualified paleontologist evaluates the find for its scientific value. If deemed significant, the paleontological resource(s) shall be salvaged and deposited in an accredited and permanent scientific institution where they will be properly curated and preserved for the benefit of current and future generations.
75. [Mitigation 5.9-C2] Prior to initiating grading activities, the proponent's contractor or engineer shall:
 - a. Include the following specifications on all project plans: One catalyzed diesel particulate filter (CDPF) shall be used on the piece of equipment estimated to generate the greatest emissions. If a CDPF is unsuitable for the potential equipment to be controlled, five diesel oxidation catalysts (DOC) shall be used.
 - b. Identify equipment to be operated during construction as early as possible in order to place the order for the appropriate filter and avoid any project delays.

This is necessary so that contractors bidding on the project can include the purchase, proper installation, and maintenance costs in their bids.

- c. Contact the SLOAPCD Compliance Division to initiate implementation of this mitigation measure at least two months prior to start of construction.

76. [Mitigation 5.9-C4] Project contract documents would include the following dust control measures:

- a. Reduce the amount of the disturbed area where possible,
- b. Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency will be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.
- c. All dirt stockpile areas will be sprayed daily as needed,
- d. Permanent dust control measures identified in the revegetation and landscape plans will be implemented as soon as possible following completion of any soil disturbing activities.
- e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading will be sown with a fast germinating native grass seed and watered until vegetation is established.
- f. All disturbed soil areas not subject to revegetation will be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD. Any erosion and sedimentation control netting or other erosion and sedimentation control devices used for temporary or permanent erosion and sedimentation control, shall be limited to biodegradable mesh or other biodegradable products.
- g. All roadways, driveways, sidewalks, etc. to be paved will be completed as soon as possible. In addition, building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- h. Vehicle speed for all construction vehicles will not exceed 15 mph on any unpaved surface at the construction site.
- i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or will maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
- j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.

manual adjustable alarms on lower settings, 3) use of observers, 4) scheduling of activities so that alarm noise is minimized, and 5) construction site access designed such that deliveries and trucks move through the site in a forward manner without the need to back up.

- g. Construction staging and heavy equipment maintenance activities shall be performed a minimum distance of 300 feet from the nearest residence, unless safety or technical factors take precedence.
 - h. Stationary combustion equipment such as pumps or generators operating near any noise sensitive receptor shall, if necessary, be shielded with a noise protection barrier. Leq values at the property line of receiver locations shall not exceed 65 dB.
79. [Mitigation 5.10-C2] The construction contractor shall notify all property owners and tenants adjacent to the proposed pile driving activities of the days and hours of operation. The construction contractor shall also require that a noise damper be utilized between the pile driver and the object that is being driven into the ground.
80. [Mitigation 5.10-B1] Prior to initiation of construction of the collection system, the contractor/designer shall identify all areas where pile driving, or other construction methods that would result in severe ground vibrations, could occur. Deep pile foundation designs shall favor techniques that can be constructed with minimal vibration effects. Prior to construction, using technology and standards recommended in the Caltrans Transportation and Construction Induced Vibration Manual, the contractor shall calculate the vibration effects of pile driving and other high vibration activities using the Peak Particle Velocity (PPV) metric, and shall ensure that the PPV does not exceed the following thresholds at any affected building: 0.5 at modern industrial/commercial or residential buildings; 0.3 for any building composed of masonry, unreinforced concrete, lath & plaster interiors or of similar construction; and 0.25 for any building identified as particularly sensitive to vibration impacts. Alternative design and/or construction methods shall be used to meet these limits. In addition, the construction contractor shall notify all property owners and tenants adjacent to the proposed pile driving or other vibration inducing activities of the days and hours of operation. Prior to construction activities associated with this type of work, the construction contractor shall inspect all structures within the area predicted to experience vibration in excess of 0.25 PPV to document existing characteristics of the structures. During construction, vibration shall be monitored and recorded and adjustments made to operation or to the radius of concern if the level of vibration differs from estimates. If a post construction survey indicates that damages to structures (e.g., residences, pools) occurred during the work, the property owner shall be fairly compensated for the cost of remediating damages.
81. Control Introduction of Invasive Exotic Plants. To control introduction of invasive exotic plants on site, implement the following measures during construction and incorporate into the design guidelines of the proposed percolation fields, as appropriate.
- 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. Remove existing stands of invasive exotic plants, including but not limited to veldt grass, pampas grass and ice plants, in order to limit their spread.

82. [Mitigation 5.5-A6] All construction activities across Los Osos Creek shall be restricted to low-flow periods of June 15 through November 1. If the channel is dry, construction can occur as early as June 1. Restricting construction activities to this work window will minimize impacts to migrating adult and smolt steelhead, if present.

Prior to construction, the County shall retain a qualified biological monitor to be on site during all stream crossing activities associated with Los Osos Creek. The biological monitor will be authorized to halt construction if impacts to steelhead are evident. Prior to construction, a spill prevention plan for potentially hazardous materials shall be prepared and implemented. The plan shall include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms shall be constructed to prevent spilled materials from reaching the creek channel.

Prior to construction, silt fencing shall be installed in all areas where construction occurs within 100 feet of known or potential steelhead habitat. All silt fencing, erosion control and landscaping specifications shall only include natural-fiber, biodegradable products for meshes and coir rolls to minimize impacts to species and the environment during use.

During construction, spoil sites shall be restricted to upland locations so they do not drain directly into Los Osos Creek. If a spoil site drains into a water body, catch basins shall be constructed to intercept sediment before it reaches the channels. If required, spoil sites shall be graded to reduce the potential for erosion.

During construction, equipment and materials shall be stored at least 50 feet from Los Osos Creek. No debris such as trash and spoils shall be deposited within 100 feet of waterways. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be restricted to locations outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream shall be positioned over drip pans at all times. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles shall be moved away from the stream prior to refueling and lubrication.

During construction, proper and timely maintenance for all vehicles and equipment used shall be provided to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creek. Maintenance and fueling shall be restricted to safe areas away from Los Osos Creek that meet the criteria set forth in the spill prevention plan.

Immediately following construction, all construction work areas shall be restored to pre-construction channel conditions, including streambed composition, compaction, and

gradient. If required, channel banks shall be returned to original grade slope and appropriate bank stabilization techniques shall be implemented to reduce the potential for erosion and sedimentation. A plan describing pre-project conditions and restoration methods shall be prepared prior to construction.

Immediately following construction, all appropriate construction work areas will be revegetated with an appropriate assemblage of native upland vegetation, and if necessary, riparian vegetation, suitable for the area. A plan describing pre-project conditions, restoration and monitoring success criteria shall be prepared prior to construction.

83. [Mitigation 5.5-A7] Implementation of trenchless technologies shall be considered as a feasible option for the installation of conveyance pipelines within and adjacent to areas containing wetlands, streams, and riparian vegetation. Trenchless technologies that are feasible for all Proposed Projects include microtunneling and horizontal directional drilling (HDD) within all areas along the proposed conveyance routes, and pipe suspension at areas supporting existing bridge crossings along the proposed conveyance routes (at the Los Osos Creek crossing).

Microtunneling and HDD entrance and exit locations shall be set back as far away from wetlands, streams, and riparian vegetation as feasible and consistent with the setback requirements of the CZLUO and Estero Area Plan. Implementation of microtunneling and HDD methodologies shall incorporate a frac-out contingency plan and all relevant Best Management Practices during construction.

Maintenance activities associated with pipe suspension that may result in activity within the streambed of Los Osos Creek shall be restricted to periods when the streambed is dry and does not support any flowing water or pooling water in the proposed maintenance area.

Post Construction

84. Prior to operation of the wastewater treatment system, the applicant shall:
- a) Obtain final inspection approval of all required fire/life safety measures.
 - b) Prior to operation of the wastewater treatment system, all Public Works Encroachment permit provisions shall be completed to the satisfaction of the Department.
85. Rehabilitation of disposal percolation fields shall be rotated so that no more than one field is under re-construction at a time.
86. Consistent with condition of approval # 34 is for Coastal Development Permit (CDP A-3-SLO-03-113 / D020283). To prevent the wastewater treatment system from inducing growth that cannot be safely sustained by available water supplies, the sewer authority is prohibited from providing service to existing undeveloped parcels within the service area, unless and until the Estero Area Plan is amended to incorporate a sustainable buildout target that indicates that there is water available to support such development without impacts to wetlands and habitats.

87. Concurrent with the operation of the facility, the County shall implement the Groundwater Level Monitoring and Management Plan that details methods for measuring and responding to changes in groundwater levels that could affect wetland hydrology and habitat values. The Plan includes provisions for monitoring groundwater levels, surveys for wetland plant and animals, monitoring wetland hydrology and water quality, appropriate response procedures should impacts be identified, annual reporting, and an education program to encourage property owners to convert septic systems into areas capable of groundwater recharge.
88. In order to maintain existing levels of groundwater recharge and protect coastal water quality, the County shall evaluate and, where appropriate, assist property owners in the implementation of opportunities to re-use existing septic tank effluent disposal systems (e.g., leach fields) to filter and percolate stormwater runoff. Prior to the connection of individual properties the County shall, at the consent of the landowner, evaluate whether existing on site wastewater disposal facilities have adequate capacity and depth to groundwater to accommodate and percolate stormwater runoff, and if so, provide site-specific recommendations on how to connect such a system.
89. The Los Osos wastewater project (including collection, treatment and disposal) shall be operated in a manner that prevents the emission of nuisance odors that are perceptible at or beyond the property lines of the project site, consistent with the requirements of Health and Safety Code Section 41700. Nuisance odors, problems with the operation of the wastewater treatment plant or dust complaints shall be directed to the operators of the wastewater treatment plant. The San Luis Obispo County Air Pollution Control District (SLOAPCD) will also respond to complaints and communicate immediately with the operators of the wastewater treatment plant. All complaints, breakdowns, or parameter exceedence shall be reported to the SLOAPCD within four (4) hours of receipt or event.
90. **Condition eliminated**
91. Screen Planting - Trees and shrubs shall be planted along the perimeter of the wastewater treatment facility prior to facility operation or at the earliest time feasible after completion grading activities. To provide effective screening, the size and variety of evergreen trees shall be planted which will reach a minimum height of 25 feet within five years. Large shrubs shall be included to provide lower height screening. Italian Cypress and other distinctly-shaped non-native plants shall not be used. The screen planting shall be designed to appear as a naturally appearing swath of vegetation. Evidence shall be submitted to the Department of Planning and Building to show that 75% screening has been achieved within 5 years. Landscape must be maintained to provide the required or better screening in perpetuity.
92. Prior to providing wastewater treatment service to undeveloped parcels, the County, in coordination with the California Department of Fish and Game (CDFG), the US Fish and Wildlife Service (USF&WS), San Luis Obispo County and the California Coastal Commission shall prepare and implement a Habitat Conservation Plan (HCP) for the long-term preservation of habitat remaining within the Los Osos Greenbelt, including habitat remaining on individual vacant lots. The HCP shall:
- a. identify the habitat resources and the quality of those resources on the remaining vacant properties within the South Bay Urban Area and Los Osos Greenbelt;

- b. specify measures to avoid and minimize impacts to ESHA from buildout of the Service area, and to mitigate unavoidable impacts through acquisition, protection, and/or restoration of equivalent habitat within the planning area; and
- c. implement such measures through an amendment to the Estero Area Plan that integrates the HCP, as approved by the US Fish and Wildlife Service and Department of Fish and Game, with LCP standards for development in the South Bay Urban Area. This LCP amendment must become fully effective, and all permits required by state and federal Endangered Species Acts shall be issued, before County makes any final commitment to provide wastewater treatment service to undeveloped properties.

The range of potential conservation programs to be considered in the HCP shall include, but not be limited to the following:

- a. New development programs and standards that maximize preservation of sensitive biological resources in the Los Osos area, such as:
 - i. Transfer of development credits
 - ii. Clustering
 - iii. Avoidance of sensitive resources in site design
 - iv. Changes in density and land use
 - v. Incorporation of open space into the design of new development
- b. Programs aimed at facilitating coordination among agencies and organizations involved in management and conservation/preservation of sensitive resources, including USF&WS, CDFG, California Coastal Commission, San Luis Obispo County, MBNEP, Land Conservancy of San Luis Obispo County, and others;
- c. The creation of a land bank program to facilitate the purchase of properties with high quality habitat within the Greenbelt, to be repaid over time from fees on new building permits; and
- d. Programs for the acquisition of properties within the Greenbelt that contain significant habitat resources.

The County may apply for amendment to this permit condition at, or prior to the time that the treatment plant is operational, to authorize the County to issue Will Serve letters to properties that would otherwise qualify.

93. Condition eliminated

94. Installation of lateral lines will conform to the mitigation procedures contained in the "Lateral Line Installation — Biological Resources & Mitigation" report dated 10-16-02.

95. [Mitigation 5.11-A1] Prior to operation of the wastewater treatment system, the County Department of Public Works shall provide evidence to the County Planning and Building Department that a farmland conservation easement, a farmland deed restriction, or other farmland conservation mechanism burdening an off-site agricultural mitigation parcel has

been granted in perpetuity to the County or a qualifying entity approved by the County Agricultural Commissioner (or designee). The easement shall provide conservation acreage at a ratio of not less than 2:1 for the loss of agricultural land. Additionally, the project proponent shall provide appropriate funds (as determined by the County Planning Department) to compensate for reasonable administrative costs incurred by the easement holder. The area conserved shall be at least 32 acres (to offset direct impacts from the treatment plant facility), and shall be of a quality that is reasonably (as determined by the County Agricultural Commissioner or designee) similar to that of the farmland within the project limits. The area to be conserved shall be located within San Luis Obispo County within reasonable proximity to the project site.

96. Site Management Plan. Prior to operation of the facility, the County, in consultation with resource agencies, will develop a Site Management Plan for the remainder of the new public lot to be created out of the Giacomazzi property. The Site Management Plan will provide for the continued operation of agricultural activities on those portions of the property not used for the project and/or associated mitigation consistent with the affirmative agricultural easement requirements described herein. Implementation of the Plan will ensure that uses or land stewardship practices do not impede adjacent agricultural uses and practices and may include, but not be limited to:
- (a) Maintenance of fences sufficient to clearly delineate property lines, contain livestock, prevent trespass, and manage non-native invasive species.
 - (b) Prevention and management actions to avoid the proliferation of weeds and noxious plants that are incompatible with adjacent agricultural practices.
 - (c) Management of all on-site water features, including springs, streams, and ponds in a manner that does not result in erosion or sedimentation impacts on downstream properties.

The Site management will be reviewed and approved by the Director of Planning and Building in consultation with the Agricultural Commissioner prior to implementation.

97. Disposal of treated effluent shall be reserved for the following sites/uses in the Los Osos Groundwater Basin:
- a. Broderon (not to exceed 448 AFY on an average annual basis),
 - b. Urban re-use within the urban reserve line (as identified in the Effluent Re-Use and Disposal Tech Memo, July 2008),
 - c. Agricultural re-use overlying the Los Osos Groundwater Basin,
 - d. Environmental reservations (not less than 10% of the total volume of treated effluent).

Total agricultural re-use shall not be less than 10% of the total treated effluent. Disposal shall be prioritized to reduce seawater intrusion and return/retain water to/in the Los Osos groundwater basin. Highest priority shall be given to replacing potable water uses with tertiary treated effluent consistent with Water Code Section 13550.

No amount of treated effluent may be used to satisfy or offset water needs that result from non-agricultural development outside the Urban Reserve Line of the community of Los Osos.

98. Where the collection system pipes will be located in areas of high groundwater, or areas subject to future 5 foot sea level rise, as shown on the June 29 and 30, 2009 PC Memo – page: 1-16 (see Attachment 3), and as identified in the field during construction; the applicant shall utilize fusion welded pipes or chemically sealed pipes. In areas of high groundwater, additional inspections to ensure proper installation shall be completed prior to backfilling the trenches. All laterals to individual residences shall utilize fusion welded pipes or chemically sealed pipes. Lateral connections at the property line shall utilize fusion welded pipes, chemically sealed pipes, or collars.
99. Within one year of adoption of a due diligence resolution by the Board of Supervisors, electing to proceed with a wastewater project, a water conservation program shall be developed by the applicant in consultation with the local water purveyors within the prohibition zone for the community of Los Osos, that meets the goal of 50 gallons per day / per person for indoor use. The applicant shall provide 5 (five) million dollars of funding towards a water conservation program for indoor water conservation. Incentives shall be provided to homeowners and other property owners who install conservation measures within the first year.
100. Prior to operation of the wastewater treatment system, the applicant shall provide a new on-site well for facility operations in accordance with California Well Standards and County Ordinances and to the satisfaction of the Environmental Health Department.
101. The applicant shall utilize the existing Bayridge leach field (APN 074-491-033) to dispose of approximately 33 acre feet per year of treated effluent upon decommissioning of the existing leach field and connection to the community sewer system. The applicant shall consult with the Los Osos Community Services District (LOCSD) prior to the design phase of the project regarding use of said facilities to ensure all their concerns are addressed.
102. The applicant shall design the layout of the proposed sewer treatment facility to allow for structures to have roofs with “due south orientation” to maximize solar orientation for future solar photovoltaic and / or solar water panel installation, as feasible. No evergreen trees (with mature heights over 12 feet) shall be planted near structure that could potentially block the sun to these portions of the roofs unless necessary for visual screening. This shall be reflected in any landscape plans prepared / required. As a part of roof design / construction, these portions of the roofs shall be designed to be able to handle the “dead” loads associated with the weight of these panels. To further maximize solar efficiency, where possible, roof pitch of this portion of roof shall be as close to 20 degrees as practical. The applicant shall provide verification to the satisfaction of the County Planning and Building Department that the above measures have been incorporated into the project.
103. Prior to individual property connections to the waste water system, each property owner shall provide verification to the satisfaction of the Planning Director that all toilets, showerheads and faucets have been replaced with high efficiency versions of the same.

104. Agriculture irrigation lines and other wastewater effluent disposal lines shall be located within existing right-of-ways (including agricultural field access ways) and other areas known to not include, or that can be demonstrated to not include, cultural or biological resources. Use of the effluent shall be consistent with all other local, State, and Federal regulatory requirements including but not limited to the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands requirement of the Central Coast Regional Water Quality Control Board.
105. Bio-solids shall be disposed of at the closest approved facility within the San Luis Obispo County region. The San Luis Obispo County region shall be limited to the northern San Luis Obispo county line and south to the Santa Maria area within Santa Barbara County. If an approved facility is not available within the San Luis Obispo County region at the time of project start-up, then the closest approved facility shall be utilized. If an approved facility becomes available for disposal of bio-solids within the San Luis Obispo County region, that facility shall be utilized for disposal of bio-solids.
106. If the County acquires more land area than is necessary to site the treatment facility and appurtenant facilities, then prior to transferring title of the surplus area, the County shall record an affirmative agricultural easement over such surplus land. This easement shall take into consideration biological, cultural, sedimentation and erosion constraints on the project site. Agricultural activities chosen to take place on the remainder of the wastewater treatment facility site shall be consistent with the long term protection of the identified resources.
107. The applicant shall apply for and record a public lot prior to commencement of construction activities at the wastewater treatment site.
108. Prior to individual property connections to the wastewater treatment project, each property owner shall provide verification to the satisfaction of the Public Works Department (in consultation with the Planning Director) that a water meter meeting American Water Works Association (AWWA) standards, and approved by the water company serving the individual property, has been installed or is existing on the connection site. A water meter shall be installed on each legally established residential / commercial unit prior to connection to the wastewater treatment project. Water usage information shall be made available to the sewer authority on a quarterly basis or on a schedule agreed to by the water purveyors and the County to verify the water savings derived from the water conservation program.
109. Prior to commencing construction activities at the Giacomazzi site, the applicant shall submit to the Department of Public Works for review and approval a Roadway Safety Analysis (RSA) for the intersection of the treatment plant access road with Los Osos Valley Road. The RSA shall be prepared by a registered civil engineer with expertise in transportation design and familiarity with the Los Osos Valley Road corridor, and shall include but not be limited to the following:
 - a) Evaluate the proximity of the cemetery access road with the project access road and discuss corrective options including realignment, road mergers (sharing) and alternative project access road locations;
 - b) Analyze the project access road sight distance with respect to Los Osos Valley Road and recommend improvements, if required;

- c) Analyze Los Osos Valley Road left turn lane warrants and traffic queuing at the project access road and recommend improvements, if required;
- d) Evaluate Los Osos Valley Road traffic safety a minimum of 1-mile either side of the treatment plant access road and provide recommendations for improvements, if required;
- e) Evaluate erosion control measures such as gravel pads, rumble strips and wheel washers to avoid the tracking of dirt and sediment onto adjacent private and public roadways during construction, and recommend best management practices to be implement; and
- f) Evaluate onsite circulation with specific emphasis on truck maneuvering, access for emergency vehicles, onsite parking, and all-weather roadbed materials, provide recommendations and an implementation plan.

All RSA recommendations shall be implemented prior to commencing construction activities.

- 110. The aboveground facilities for the mid-town pump station shall be re-located to Palisades Avenue (south of the Library) on APN 074-229-017.
- 111. Routine flushing of sewer system lines shall utilize recycled water. In the event of an emergency situation, potable water may be used to flush the sewer system if non-potable water is determined to be infeasible.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
81440-2011-F-0053

February 9, 2011

Pete Yribarren
Community Programs Specialist
U.S. Department of Agriculture
3530 West Orchard Court
Visalia, California 93277-7360

Subject: Biological Opinion for the Los Osos Wastewater Project, San Luis Obispo County, California (8-8-11-F-5R)

Dear Mr. Yribarren:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the revised proposed Los Osos Wastewater Project (LOWWP), San Luis Obispo County, California and your request for re-initiation dated November 24, 2010. The U.S. Department of Agriculture (USDA) has determined that the proposed action is likely to adversely affect the federally endangered Morro shoulderband snail (*Helminthoglypta walkeriana*) and its critical habitat. Your request was received in our office on November 29, 2010. Our response is made in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act)(16 U.S.C. 1531 et seq.).

As part of the request to reinitiate consultation with the Service for biological opinion 8-08-2010-F-14, you determined that the current proposed action is not likely to adversely affect the federally endangered Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*), the federally threatened California red-legged frog (*Rana aurora draytonii*), or designated critical habitat for either species. Built into the project description are measures that would ensure avoidance of adverse effects to Morro Bay kangaroo rat and California red-legged frog. Based upon our review of these measures, we concur with your determination that the proposed project is not likely to adversely affect these two species. Additionally, you determined that the proposed action would have no effect on the federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), and Indian Knob mountainbalm (*Eriodictyon altissimum*) and the federally threatened Morro manzanita (*Arctostaphylos morroensis*) and Monterey spineflower (*Chorizanthe pungens* ssp. *pungens*). The project would also have no effect on critical habitat designated for the southwestern willow flycatcher, least Bell's vireo, or Monterey spineflower.

While willow flycatchers (*Empidonax traillii*) occur in San Luis Obispo County, the subspecies of willow flycatcher that receives protection under the Act (*E. t. extimus*) does not. For this



reason, the proposed action would have no effect on this taxon or its designated critical habitat. Migrant solitary least Bell's vireos have been observed within the area of the proposed action; however, no breeding pairs have been observed anecdotally or documented. Coastal San Luis Obispo County is not within the historical breeding range for the taxon; however, in response to recovery efforts, least Bell's vireos have been expanding their range and recolonizing areas unoccupied for years (Service 1998a). While the subspecies is not expected to be breeding within the proposed action area, seasonal restrictions are included in the project description that would allow for avoidance of any adverse effects. No critical habitat has been designated for least Bell's vireo within the proposed action area. While both Morro manzanita and Indian Knob mountainbalm are known to occur in the proposed action area and, specifically, on the Broderson parcel (CNDDDB 2010, County of San Luis Obispo Public Works Department 2010a), neither is present in areas where project activities would affect either species (County of San Luis Obispo Department of Public Works 2009, 2010e). As such, there would be no effect to either of these plant species. At one time, an occurrence of Monterey spineflower was recorded for the Los Osos area (CNDDDB 2009). Subsequent taxonomic work conducted by Dr. James Reveal determined this occurrence to be *Chorizanthe angustifolia* (County of San Luis Obispo Department of Public Works 2010a,e) and, as such, the proposed action would have no effect on the listed entity. Additionally, no critical habitat for Monterey spineflower was designated in San Luis Obispo County. Based upon this information, we concur with your determination that the proposed action would have no effect on the southwestern willow flycatcher, least Bell's vireo, Indian Knob mountainbalm, Morro manzanita, or Monterey spineflower. There would also be no effect to any designated critical habitat for these species. As such, these five species are not addressed further in this opinion.

This biological opinion is based on information relevant to your November 24, 2010, request, including the revised biological assessment (County of San Luis Obispo Department of Public Works 2010e), results of a habitat assessment and protocol visual survey for Morro Bay kangaroo rat at the Mid-Town site (Villablanca 2010), results of Morro shoulderband snail surveys at the Mid-Town Site (County of San Luis Obispo Department of Public Works 2010f), and clarification of actions that could occur on private property (e.g., lateral connections; County of San Luis Obispo Department of Public Works 2010g). We also reviewed information that was used in the preparation of biological opinion 8-08-2010-F-014: the biological assessment (County of San Luis Obispo Department of Public Works 2010b); Rare Plant Survey Report for the Los Osos Wastewater Project – Broderson Leach Field (County of San Luis Obispo Department of Public Works 2010c); General Biological Survey and Habitat Assessment for the Los Osos Wastewater Project – Giacomazzi and Andre Sites (County of San Luis Obispo Department of Public Works 2010d); Morro Bay Kangaroo Rat Habitat Assessment for Tonini Ranch (Villablanca 2009a); Protocol Visual Survey for Morro Bay Kangaroo Rat, Los Osos Wastewater Project, Tonini Ranch (Villablanca 2009b); Appendix G of the Draft Environmental Impact Report for the Los Osos Wastewater Project (Michael Brandman Associates 2008); Appendix Q.8 of the Final Environmental Impact Report for the Los Osos Wastewater Project (Michael Brandman Associates 2009), resumes for County personnel submitted on April 12, 2010; biological opinion 1-8-04-F-48; and other information contained in Service files housed at our Ventura Fish and Wildlife Office (VFWO). In a conference call between you; Julie M.

Vanderwier and Rick Farris, staff biologists in the VFOW; and representatives from the County Department of Public Works (DPW) and State Water Resource Control Board, held on December 8, 2010, the USDA committed to extended discretionary authority onto private lands for the installation of laterals and septic tank decommissioning. A complete record for this consultation can be made available at the VFOW.

CONSULTATION HISTORY

On March 30, 2000, the Service issued a biological opinion to U.S. Environmental Protection Agency (EPA) for geotechnical field exploration activities that included soil borings and sounding holes at the Broderson and Morro Shores sites (Service 2000). On August 15, 2001, the EPA initiated formal consultation on the wastewater project proposed at that time; however, the EPA and the Service agreed to mutually withdraw from formal consultation for the project on October 18, 2002, because the Service had not yet completed the biological opinion on the leach field testing activities at the Broderson site. On January 10, 2003, the biological opinion for the leach field testing was issued (Service 2003) and concluded that both the geotechnical field operations and leach field testing activities were not likely to jeopardize the continued existence of the Morro shoulderband snail. The EPA reinitiated formal consultation for the wastewater project on February 25, 2004, and biological opinion 1-8-04-F-48 was issued on April 20, 2005 (Service 2005).

After work on the former wastewater project was halted and the bankruptcy of the Los Osos Community Services District (LOCSO) occurred in 2005, legislation (Assembly Bill 2701) to authorize transfer of wastewater authority from the LOCSO to the County of San Luis Obispo (County) was approved. The DPW began work on the design of a new wastewater project in 2006 using many of the elements of the previously-approved LOCSO project, including the gravity sewer system, pump stations, and use of the Broderson parcel for leach fields. Pre-consultation electronic mail and telephone conversations between VFOW and County DPW staff were conducted to exchange information regarding the new elements of the project and for us to provide guidance on endangered species issues. As part of the County's compliance with the California Environmental Quality Act (CEQA), we submitted a comment letter on the Draft Environmental Impact Report (DEIR) to provide guidance regarding potential endangered species issues (USFWS 2009).

A number of measures and project conditions set forth in the 2001 Final Environmental Impact Report (FEIR) and 2004 Coastal Development Permit (CDP) for the LOWWP included in the project description for biological opinion 1-8-04-F-48, have yet to be fulfilled although take of Morro shoulderband snail and impacts to its habitat did occur. The CDP expired on August 11, 2007, and the FEIR and BO were rendered moot because the former project was not completed and the Federal nexus (funding via EPA and the California State Water Resources Control Board's [SWRCB] State Revolving Fund [SRF]) was lost when the LOCSO defaulted on the loan. Information regarding how the County will resolve these issues is contained in the Project Description section of this opinion.

A portion of project costs are funded through the USDA's Rural Utilities Program using Federal stimulus funds provided by the American Reinvestment and Recovery Act (ARRA). The project's eligibility to apply was made possible by a Congressional waiver. The County is also anticipating participation in the State Water Resource Control Board's SRF Program and will likely receive additional Federal funds through the Water Resources Development Act.

A pre-consultation meeting with staff from the VFWO, USDA, EPA, U.S. Army Corps of Engineers, SWRCB, and County DPW was held on December 10, 2009, at the VFWO office. Attendees heard a description of the current LOWWP project and how it compares to the former LOCSD project. Also discussed were agency roles and responsibilities and the County DPW's proposed approach to resolve outstanding issues from the previously approved project. Subsequent to this meeting, we received a request to expedite the consultation from the County Board of Supervisors on February 22, 2010, to allow the County to apply for USDA Rural Utilities Development ARRA funds.

On April 14, 2010, the Service issued Biological Opinion 8-08-10-F-14 as part of our interagency consultation with the USDA regarding the County of San Luis Obispo's LOWWP. As part of the California Coastal Commission's approval of the CDP for the current LOWWP, several measures were added during their June 11, 2010 meeting. Relevant to this consultation is the requirement to stabilize and restore environmentally sensitive habitat values (ESHA) at the Mid-Town site (formerly known as the Tri-W site). This will be accomplished through site stabilization and habitat restoration activities that would result in adverse effects to Morro shoulderband snail not identified or analyzed in the biological opinion 8-08-10-F-14; thus triggering the need to reinitiate consultation.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Los Osos is an unincorporated coastal community of approximately 15,000 residents located in western San Luis Obispo County at the southern end of Morro Bay, approximately 12 miles west of the City of San Luis Obispo, California. The community is bounded by Morro Bay and its estuary and Morro Bay State Park to the north, Montaña de Oro State Park to the west and southwest, rural open space to the southeast, and production agricultural lands to the east. The City of Morro Bay lies approximately 2 miles to the north. The LOWWP is a proposal by the County of San Luis Obispo to develop a wastewater collection/treatment and recycled water reuse system to serve the majority of the community of Los Osos (which includes an area known as Baywood Park).

Water quality degradation in the community Los Osos has been an issue of concern to the California Regional Water Quality Control Board (CRWQCB) since the 1970s. Septic systems are the sole method of wastewater treatment and disposal throughout the community. As many of the existing parcels are considered to be too small for conventional leach fields, deeper

seepage pits have frequently been used for wastewater disposal. In areas where the depth to groundwater is shallow, many of these seepage pits discharge directly into the upper aquifer with no separation. Contaminated groundwater sometimes reaches the surface, especially during the rainy season (CRWQCB 2001).

Elevated levels of fecal coliform are present in Morro Bay and indicate that other pollutants such as bacterial, viral, or cyst forming pathogens may be present (CRWQCB 2002). Human and animal illnesses can result from eating seafood that has been contaminated by these pathogens. Illness can also result from coming in contact with water or accidentally ingesting water in contaminated areas. Portions of the commercial oyster beds in Morro Bay have been closed for harvest by the California Department of Health Services per the United States Food and Drug Administration's National Shellfish Sanitation Program standards because of high fecal coliform levels. Based on the level of fecal coliform bacteria, seasonal restrictions have been imposed on commercial shellfish harvesting in other portions of Morro Bay; however, no restrictions are in place on non-commercial shellfish harvesting related to these levels (CRWQCB 2002).

In 1983, the CRWQCB adopted Resolution 83-13 that prohibits (effective November 1, 1988) discharges of waste from individual and community sewage systems within portions of the community (i.e., the prohibition zone). This resolution restricts the use of existing septic systems and additional discharges that would occur from new septic systems. Since 1988, existing septic systems in the prohibition zone have been considered to be discharging illegally (CRWQCB 2001).

To remedy these issues, the County proposes to develop a wastewater collection, treatment, and recycled water reuse system to serve the majority of the community of Los Osos. Key objectives of the LOWWP are to develop a community wastewater project that will comply with CRWQCB Waste Discharge Requirements and alleviate groundwater contamination (primarily nitrates) that has occurred partially because of septic system use throughout the community. Other objectives include the incorporation of measures to avoid and minimize potential environmental impacts on the community and surrounding areas; to meet water quality requirements while minimizing costs to mitigate affordability impacts on the community; to comply with all applicable local, State of California, and Federal ordinances, laws, and permitting requirements (e.g., ESHA standards, cultural resource concerns); to address water resource issues by mitigating project impacts on saltwater intrusion; and to maintain a diversity of options for beneficial re-use of recycled water. Project construction is anticipated to commence in fall 2011 and expected to take between 16-36 months. Figure 1 depicts the action area along with proposed project components that are also discussed below.

Treatment Plant Facility

The wastewater treatment plant facility would be sited on approximately 38 acres of a 100-acre parcel known locally as the Giacomazzi property. This parcel is located north of Los Osos Valley Road and west of Clark Valley, just east of the community of Los Osos. The Giacomazzi site contains both prime soils and soils of statewide importance with the western 62 acres

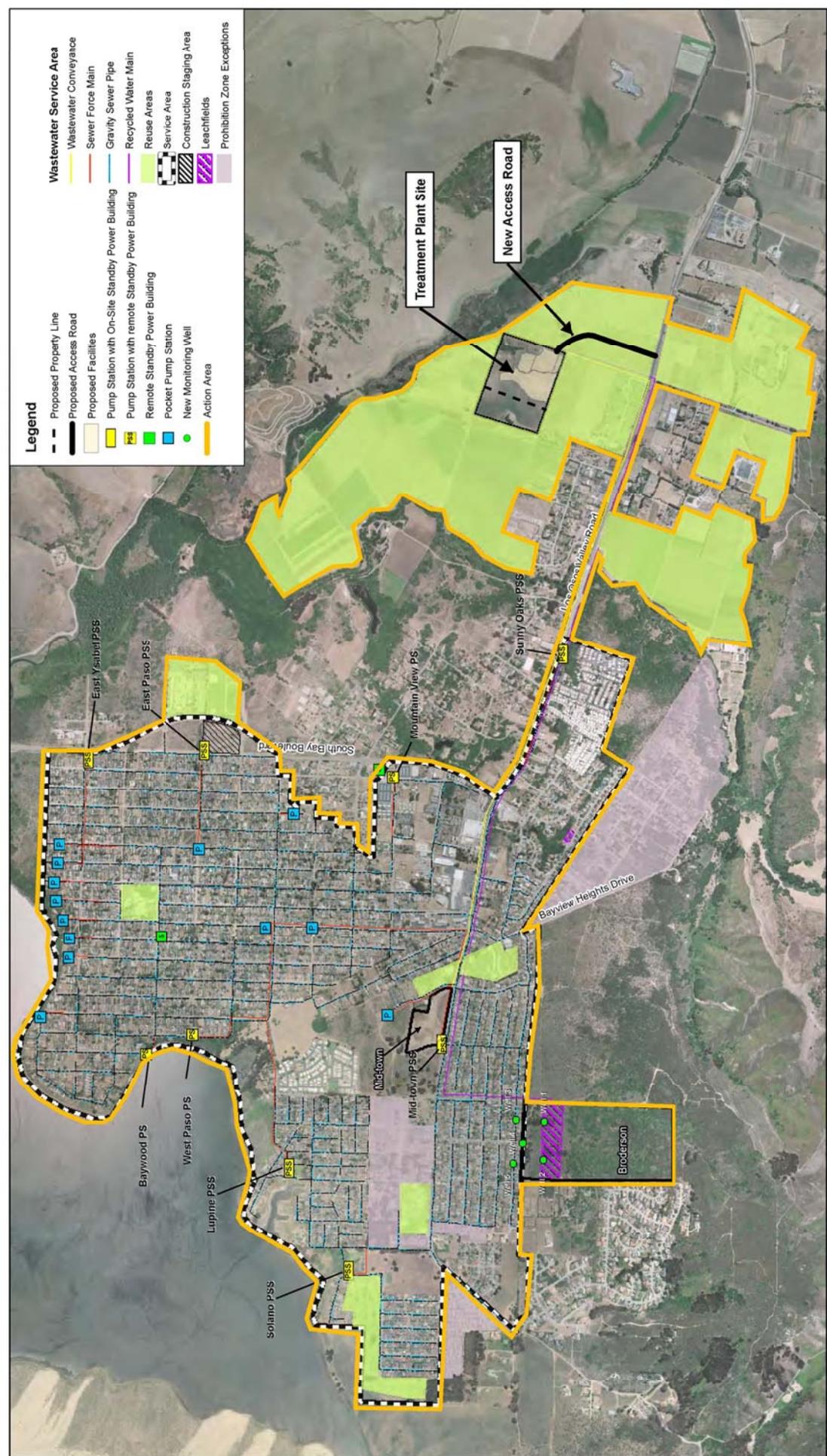


Figure 1
Overall Project Site Plan
Los Osos Wastewater Project 2010
 COUNTY OF SAN LUIS OBISPO • LOS OSOS WASTEWATER PROJECT

Source: 2007 Digital Globe aerials, San Luis Obispo County GIS Data, Carollo Engineers, and MBA GIS Data.



consisting of prime agricultural soils with a long history of production agriculture (e.g., irrigated row crops). These 62 acres are currently contract-farmed to a mix of high value vegetable crops and would not be developed as part of the proposed action. Development would be restricted to the easternmost 38 acres. A former farmhouse complex is present to the west outside of the proposed development area. All of the original farm buildings have been removed and have been replaced by a modular residence. A 30-acre rectangular public lot would surround the treatment facility and the existing modular would remain as part of the larger parcel. This would allow the row crop operation to continue in private ownership with a buildable area located outside of prime soils. The 38-acre project site was historically cultivated; however, crop production ceased at some point in the past 20 years. Cultivation still occurs regularly for weed control purposes; however, no crop is produced. The wastewater treatment plant facility is expected to occupy approximately 22 acres of the 38-acre portion, with the undeveloped balance being found in ESHA. The treatment facility would consist of an extended aeration wastewater treatment system with tertiary filtration. Extended aeration relies primarily on the acceleration of natural biodegradation of waste by aerobic bacteria to treat collected wastewater. Extended aeration would be accomplished either with an oxidation ditch or Biolac® secondary process; the abundance of oxygen and carbon also results in de-nitrification of the waste. This wastewater treatment technology is employed in hundreds of locations worldwide and have demonstrated the ability to remove nitrates from wastewater to achieve those levels required by the Regional Water Quality Control Board for the community of Los Osos. Treatment components include:

- Headworks - to screen out inorganics, de-grit, and measure the wastewater inflow. A small septage receiving station would be included to accept septage from that portion of the community that is not included in the wastewater collection area and would remain on septic systems.
- Oxidation ditch/Biolac® - to treat the wastewater to secondary treatment levels.
- Secondary Clarification - to settle out the suspended solids in the treated wastewater.
- Tertiary treatment to provide “disinfected tertiary recycled water” as defined at Section 60301.230 of Title 22 of the California Code of Regulations for unrestricted reuse.
- Biosolids management to process and dispose of biosolids removed from the treated wastewater on an ongoing basis.
- An odor control system to control odors by using an inorganic media system to trap and scrub foul air from within the buildings enclosing the headworks and the biosolids dewatering equipment.

The treatment plant facility would be designed with a capacity to treat a maximum average annual dry weather flow of approximately 1.1 million gallons per day (mgd) that takes into account the implementation of a water conservation program that is expected to conserve between 150,000 and 330,000 gallons per day for the projected build out population of 18,428

residents within the collection zone. At current indoor water use rates, 14,428 persons would generate wastewater flows of 1.25 mgd; the project has a goal of reducing indoor water use to below 50 gallons per day per person which would equate to 0.92 mgd wastewater flows at build-out.

Collection System

The collection system consists of the installation of approximately 235,000 linear feet of pipe (195,000 feet of gravity pipe; 26,000 feet of force mains; and 14,000 feet of conveyance line to the treatment plant site at Giacomazzi from the Mid-Town site). Within the collection area, all of the septic tanks would be abandoned or re-purposed for rainwater storage and all wastewater would be collected through a series of gravity and pressurized (pumped) pipe lines that would convey wastewater to the treatment plant. The collection system would serve a build-out population of 18,428 within the service area. The collection system components include main lines; piping connections to property lines; laterals to connect the building to the system, pumps, force mains; and back-up power generators. Nine pump stations and 13 pocket pump stations would be constructed to provide continuous pressure in the force mains that would enable the transfer of wastewater to the treatment plant from areas that cannot be served by gravity. Pump stations would be located on vacant lots purchased by the project or within public rights-of-way. These stations would generally be required in low-lying areas and where pipeline depths approach 11 feet in depth. The stations would use electrically driven submersible pumps set in precast concrete vaults with two to four pumps per station. Also mounted close to the pump station would be a weather proof and vandal resistant electrical control panel to control the operation of the pumps. A dedicated stand-by power facility would be located at the Lupine, East Ysabel, East Paso, Sunny Oaks, and Mid-Town pump station sites. The stand-by power facility for the Mountain View pump station would be located at the nearby LOCSD well site at the intersection of South Bay Boulevard and Nipomo Avenue. A single standby power facility located at the LOCSD's Eighth and El Moro Avenue Water Operations Maintenance Yard would serve both the West Paso and pump stations.

Recycled Water and Reuse Sites

The project would reuse recycled water in a number of ways. Recycled water would be returned directly to the upper aquifer at two leach field sites: the Broderson property and the existing Bayridge leach field. The Broderson property consists of an approximately 81-acre rectangular shaped parcel located south of Highland Drive. Approximately 8 acres would be used to construct a conventional leach field; the remainder of the site would be placed in permanent biological open space. The leach lines would be placed in trenches 5 to 6 feet deep and parallel to Highland Drive. Following construction, the leach field would be revegetated with local native coastal dune scrub plant species; however, the leach lines would need to be excavated and replaced periodically. Maintenance and replacement of the leach lines would occur on a rotational basis so that the entire leach field would not be excavated at one time. The existing Bayridge leach field currently serves the Bayridge neighborhood with common septic tanks and a leach field. These tanks would be abandoned or repurposed to collect rainwater and the leach

field would be used for recycled water instead of septic tank leachate. In addition, the project includes a suite of re-use options aimed at optimizing options to compensate for seawater intrusion. These re-use options include agriculture and urban reuse, as well as environmental reservations to handle the remainder of the recycled water depending on the season. Due to its key role in reducing seawater intrusion, the Broderson site is the primary recycled water reuse element. Approximately one-third of the recycled water (up to 448 acre feet on an average annual basis) would be placed at the Broderson site, primarily during the wet winter months. During the summer, the majority of recycled water would be directed to urban and agricultural reuse (e.g., irrigation). Urban re-use focuses on existing turf areas at 4 schools, the community park, and a golf course. Agricultural re-use focuses on existing irrigated lands that draw from the Los Osos groundwater aquifer. The Bayridge leach field would provide subsurface flows to Willow Creek in order to support existing willow riparian habitat. Willow Creek is outside of the wastewater service area so existing septic tanks and leach fields would remain; however, the Bayridge leach field is intended to offset any losses of underflow from nearby newly collected areas. A system of new monitoring wells would be installed down-gradient of the Broderson site. These, along with other existing wells in the community, would be used to track the movement and behavior of percolated water to maximize the efficiency of the site.

Water Conservation

The project would implement a comprehensive water conservation program designed to reduce flows into the wastewater treatment plant as well as reduce the community's contribution to seawater intrusion currently occurring in the Los Osos Groundwater Basin. Because of the reduction and eventual halt of construction in the wastewater service area beginning in the 1980's, many of the homes and businesses in the community were built before current water conservation requirements. Consequently, the per capita indoor water use rate is considered moderately high for the area. The latest calculations from the two water companies serving the wastewater service area indicate indoor water use rates near 66 gallons per day. Information regarding other California central coast communities indicates that indoor use rates below 50 gallons per day per capita are achievable with the use of modern technology, including low flush toilets, low flow showerheads, and under sink hot-water circulators. Retrofit to low-flow plumbing fixtures prior to project hook-up would be required.

Restoration and Enhancement

Special Condition #3 developed as part of the Coastal Commission's June 11, 2010 approval requires that the Broderson, Mid-Town, treatment plant, and pump station sites be restored and enhanced to self-sustaining natural habitat and that these areas be managed and protected in perpetuity. Although only a small portion of the Mid-Town site is proposed for LOWWP facilities (0.25 acre), approximately 6.5 acres will need to be graded to create a stable landform such that erosion and sedimentation do not threaten the long-term restoration and enhancement efforts. In order to facilitate a return to native coastal scrub habitat more quickly after necessary site grading at Mid-Town, and to provide Morro shoulderband snail habitat and sanctuary during all phases of restoration activities, the County DPW will maintain several areas in their current

state. These areas either were not graded during the 2005 work on the site or have experienced significant natural plant establishment since that time. The Mid-Town restoration plan would then identify these areas as “Environmentally Sensitive Areas” on plans and activities in these areas would be limited to removal of invasive, non-native plant species.

Early Initiation of Restoration Work at the Mid-Town Site

Restoration of site stability of the Mid-Town site is a priority for the County DPW. Erosion onsite may compromise the integrity of Los Osos Valley Road located at its southern boundary. Two large gullies are rapidly headcutting through the disturbed sands toward the roadway. A combination of concentrated stormwater flows off of Los Osos Valley Road and the unstable landform post-2005 grading created this erosion. Such erosion could cut into the shoulder and threaten the road resulting in safety issues. If future run-off events begin to endanger the road and shoulder before the Mid-Town site can be stabilized as part of the overall LOWWP, the County DPW proposes to address the issue in two ways, depending on the erosion pattern. If the erosion is concentrated at one of the culvert outlets, a combination of filter fabric and angular rock from 0.5 to 1 ton in size would be installed at the outlet to prevent further head-cutting. If less concentrated sheet flow threatens the integrity of the road or shoulder, native soil would be placed and compacted to restore the shoulder. This early restoration work would be conducted incorporating identified minimization measures discussed in subsequent text. A portion of project costs will be funded through the USDA’s Rural Utilities Program using Federal stimulus funds provided by the ARRA. The LOWWP’s eligibility to apply was made possible by a Congressional waiver. The County is also anticipating participation from the SWRCB’s SRF program.

Construction Activities

Both the County’s contractor and individual property owners are responsible for portions of the LOWWP as described below.

Contractor Responsibilities

Construction of the collection system and the raw wastewater and recycled water conveyance systems involves the installation of collection pipes within easements and public rights-of-way using trenching techniques. Because of the predominance of sandy soils in the Los Osos area, a sheeting and shoring system will be used to comply with California Occupational Safety and Health Administration regulations. Trenching also requires dewatering in shallow groundwater areas, as well as stabilizing measures. Baker tanks will be moved from one temporary location to another as needed during construction to contain the water pumped during dewatering operations. In general, construction activities will have multiple pipe-runs excavated at a time for project efficiency. The collection system construction also involves installing submersible pump stations that, in turn, involve excavation and construction of underground vaults. These vaults could be pre-cast or cast-in-place concrete. Once the collection system is installed in each area, the roadway will be repaved. A construction yard will be located within the Los Osos

community to support collection system construction by providing a lay down yard for pipeline, a storage yard for materials and equipment, and trailers for construction administration. The previous LOCSD wastewater project included a 5- to 8-acre construction yard at the northwest corner of Pismo Avenue and South Bay Boulevard. The site was cleared of vegetation at that time. This location has been tentatively identified as the LOWWP collection system construction yard; however, a final location will be selected during the project final design. Other potential staging locations have been identified on the Mid-Town site. Construction of the treatment plant, biosolids processing facilities, and storage ponds involve grading, excavation for facility construction, and construction of the buildings and facilities. The Broderson leach field site will be excavated, backfilled with gravel for drainage, and then covered first by a geotextile fabric and then by native soil backfill. Percolation piping will be installed about one foot below the geotextile fabric layer (Crawford, Multari and Clark Associates 2000).

Property Owner Responsibilities

Property owners have the responsibility to install a lateral that connects from their building to the sewer lateral stub out that ends at their property line. Responsibility for retrofitting plumbing fixtures to ensure all fixtures are low-flow, in accordance with the water conservation measures, also belongs to the property owner (Crawford, Multari and Clark Associates 2000). If the existing septic tank does not need to be removed, the property owner will have the responsibility to decommission their existing septic tank. Decommissioning involves pumping out the tank, removing the top of the tank, and back-filling the tank with sand. There are other methods to abandon the existing septic tanks that will increase their usefulness for returning recycled water to the upper aquifer; however, use of these options is at the property owner's discretion and expense. For properties that currently have a septic tank in the backyard (approximately 25 percent), the property owner has the responsibility to install a new lateral line from the structure's backyard or front yard to the property line. The LOWWP project engineers anticipate that property owners with low-elevation backyard septic tanks (approximately 5 percent), will also need to install and maintain a low pressure grinder pump to move the sewage from their backyard to the front yard (Carollo Engineers 2007).

Lateral connections and septic system abandonment activities on private property are considered a part of the Federal action proposed by the USDA and they will extend their discretionary authority as the lead Federal action agency onto private lands for these purposes (Vanderwier pers. comm. 2010). The County DPW will implement the terms and conditions of the biological opinion on behalf of USDA.

Effects resulting from private property activities related to connecting to the wastewater system are considered to be interdependent and interrelated for two reasons. First, the USDA and SRF programs require any project proposed for funding to be a complete and functioning facility. In the case of the LOWWP, the overall project purpose can only be met if private property owners connect to the wastewater collection system. Although the USDA may not provide funding for these activities in all cases, they require the connections to be made. Those funding agreements executed between the USDA and the County require that the County adopt and enforce a

mandatory hook-up ordinance. Consequently, connection to the collection system by private property owners is a requirement of the Federal lead agency. Second, the County, through its existing land use and construction permit authorities can and will fully enforce all terms and conditions of USDA and SRF funding agreements that pertain to affected private properties. Funding agreements in turn require compliance with all Federal environmental requirements, including all minimization measures and those reasonable and prudent measures, and terms and conditions of the biological opinion. The County's authority to require implementation of Federal requirements on private properties stems from both the County's Coastal Zone Land Use Authority and building code authority. The CDP issued for the LOWWP includes the laterals on private property. As none of the existing developments in the community have been previously permitted for connection to a wastewater collection system, it therefore functions for these connections. As the CDP is issued to the County (i.e., not to individual property owners), the County can and will require compliance with all State of California and Federal requirements. To ensure implementation of environmental and permit requirements, a construction (i.e., plumbing) permit issued by the County will be required for each connection to the sewer main. Using the County's database of parcels that contain potential habitat for Morro shoulderband snail, those applicable parcels will be flagged for inspection and/or monitoring by a federally permitted County biologist or consulting biologist to minimize adverse effects to the species. For these reasons, compliance is considered to be assured.

Measures to Minimize Adverse Effects

The USDA has proposed to include measures in the proposed action to minimize adverse effects to the Morro shoulderband snail, as well as measures to avoid adverse effects to other federally listed species not addressed in this biological opinion. The measures constitute a portion of the total commitments being made to by the County to reduce impacts to biological resources during the construction and operation phases of the LOWWP. The full complement of minimization measures are presented in Appendix C of the Biological Assessment (County of San Luis Obispo Public Works Department 2010e) and all are incorporated by reference into the project description for the proposed action.

Morro Shoulderband Snail

- A Service-authorized biologist will conduct training sessions for all project-related personnel immediately prior to the start of vegetation removal, grading, and ground-disturbing construction-related activities.
- Construction areas will be clearly marked with high visibility flagging or barrier fencing. Construction equipment and personnel will be restricted to the marked areas.
- A Service-authorized biologist will be retained to monitor all vegetation removal, grading, and ground-disturbing construction-related activities that will take place within habitat suitable (inclusive of private property for purposes of lateral installation and/or septic tank decommissioning) for the Morro shoulderband snail. Monitoring activities will be required

daily until completion of initial disturbance at each location and to ensure appropriate minimization measures are implemented during construction. The monitor will be granted full authority to stop work at his or her discretion and will stop work if project-related activities occur outside the demarcated boundaries of the construction footprint. The monitoring biologist will stop work if Morro shoulderband snails are detected within the proposed construction footprint and will capture and relocate them to suitable habitat out of harm's way prior to construction activities resuming. If no suitable habitat opportunities are available in the immediate vicinity of the construction footprint, salvaged and relocated specimens may also be transported to an off-site location approved by the Service.

- Prior to the initiation of project-related activities that would result in vegetation removal, soil disruption, or any construction, the approximately 73 acres of the Broderson property not part of the proposed leach fields will be secured and granted, in perpetuity, to an appropriate agency or conservation organization who will assume the responsibility for its management. A long-term management and monitoring program will be prepared and approved by the Service and the California Department of Fish and Game (Department). The County will be responsible for the allocation of appropriate funding necessary to implement the management and monitoring of the conserved lands.
- The existing degraded coastal dune scrub at the Broderson property will be restored and maintained to promote its function as habitat for Morro shoulderband snail and sensitive plants and wildlife species that are local or endemic to the area. Restoration activities will be conducted by qualified personnel with expertise in restoration ecology and knowledge of local sensitive plant and wildlife species. Restoration activities will be conducted in accordance with a Restoration Plan specifically prepared for the effort and approved by the Service and the Department. Similarly, habitat restoration and maintenance will be implemented according to a Habitat Mitigation and Monitoring Plan to evaluate the progress and success of this effort.
- Habitat restoration activities will include measures for the removal and eradication of competitive, invasive, and/or non-native (i.e., target) plant species known to occur in the local area, including veldt grass (*Ehrharta calycina*) and pampas grass (*Cortaderia* spp.). Activities that involve the removal of invasive species will be employed so as not to cause unnecessary trampling or removal of native species. Techniques used in the removal of target plant species will result in the least damage to native species. Any disturbed portions of the acquired Broderson acreage will be evaluated for their restoration potential to coastal dune scrub habitat that could support Morro shoulderband snail, Morro Bay kangaroo rat, and other locally sensitive coastal dune scrub species.
- The restoration effort will include the implementation of a seed collection program to gather materials from native sources. The seed collection program will be prepared for approval by the County, Service, and Department prior to the commencement of vegetation removal, soil disruption, and/or grading and other construction-related activities. The focus of collection will be plant species that will be affected by project implementation.

Collection will be conducted by personnel with demonstrated expertise in seed collection and storage techniques and occur during the appropriate time of year for seed production and harvesting for each species.

- The County will provide annual reports to the USDA and Service documenting the results of all restoration and monitoring activities. Annual reports will be provided for a minimum of 5 years or until it is determined that the requisite performance criteria have been met. The County will provide a written report to the USDA and Service within 90 days following the completion of the proposed project. The report must document the number of Morro shoulderband snails captured and relocated from project areas, the locations of all Morro shoulderband snail relocations, and the number of Morro shoulderband snails known to have been killed or injured. The report will contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys, observations, and any other pertinent information.

Morro Bay Kangaroo Rat

- Prior to the initiation of any vegetation clearing, revegetation/habitat restoration, soil disruption, grading, and/or ground-disturbing construction-related activities within the leach field area on the Broderson parcel or any other location within the action area that has potential for occurrence of the species (as determined in coordination with the Service and Department), the County will work with the Service and Department to develop and implement a “no take” strategy for the Morro Bay kangaroo rat. This strategy will include specific take avoidance measures and provide a survey, monitoring, and contingency plan should the identified required periodic maintenance of the leach field area create suitable habitat for the species. Prior to its implementation, the strategy will be reviewed and approved by the Service and the Department and made part of a formal agreement to be signed by all parties.

California Red-Legged Frog

- All staging areas, as well as those areas where fueling and maintenance of vehicles and other equipment would occur, will be located at least 20 meters from riparian habitat or water bodies. The contractor or County will ensure that contamination of habitat does not occur during such operations.
- Prior to the onset of work near any riparian habitat, the USDA will ensure that the contractor or County has prepared a plan to allow a prompt and effective response to any accidental spills.
- To avoid potential timing conflicts between construction and the breeding season for the California red-legged frog, work activities adjacent to Los Osos Creek will only commence after March 31 and be completed by October 31, annually.

- Night-time illumination at the treatment plant site will meet the following requirements of the County's Estero Area Plan in order to be shielded from riparian areas and creeks (i.e., all lighting fixtures will be shielded so that neither the lamp nor the related reflector interior surface is visible from adjacent properties and light hoods will be dark-colored). No night lighting will be used unless necessary for active maintenance activities at the plant, or under emergency conditions.
- Tributaries to Warden Creek on the Giacomazzi property will be restored to provide improved habitat for the California red-legged frog. Drainages currently devoid of riparian vegetation will be revegetated with native riparian canopy and emergent species to provide additional shade, cover, and breeding habitat. The current practice of removing all vegetation within and adjacent to Los Osos Creek and tributaries to Warden Creek will cease.

Least Bell's Vireo

- Construction in and around riparian habitat associated with Los Osos Creek will occur only between September 15 and October 31. If surveys are conducted by a Service-authorized biologist from March 15 through June 15 and least Bell's vireo breeding activity is not detected, this construction window may be expanded to include the months of July and August.

Outstanding Issues from the Previous LOCS D LOWWP

The following paragraphs discuss issues from the LOWWP FEIR, CDP, and biological opinion 1-8-04-F-48.

LOCS D 2001 Final Environmental Impact Report

Mitigation measure BIO-4 required the purchase of the "single largest remaining privately held undeveloped parcel within the Los Osos greenbelt (Broderson), which totals 80 acres" and its donation to "a resource agency or organization for long term stewardship and protection." In addition to the land acquired, the LOCS D was to allocate \$10,000 per year (indexed to an inflation multiplier), in perpetuity, for the management of the property, even though it would eventually be owned by a different party. While the Broderson parcel was acquired by the LOCS D, it was never transferred to a conservation or management entity as required, and no funding has been provided for the management of the property.

Mitigation measure BIO-16 required the LOCS D (in conjunction with the Department, the Service, the County, and the California Coastal Commission Commission to prepare and execute an implementing agreement for a habitat conservation plan (HCP) or Natural Community Conservation Plan (NCCP) for the long-term preservation of habitat remaining within the community of Los Osos. A preliminary draft HCP was prepared and submitted to the Service in 2005. While the Service reviewed the draft HCP and submitted comments to the LOCS D in

November 2005, there has been no action on the part of the LOCSD to address these comments or make progress towards completion of the HCP process.

Coastal Development Permit

For the former wastewater project, mitigation measures provided in the FEIR were incorporated as conditions in the CDP. Similar to FEIR mitigation BIO-4, Condition 68(c)(i) of the CDP required that, prior to construction, approximately 40 acres be acquired as mitigation for impacts to coastal scrub and its constituent species and that, pursuant to Condition 68(c)(v), this land be granted to an appropriate agency or conservation organization in perpetuity with deeded guarantees of non-development or transfer. While the Broderson parcel was purchased by the LOCSD to fulfill Condition 68(c)(i), the acreage was never granted as required in Condition 68(c)(v). In addition, Condition 68(e) required that the LOCSD contribute \$10,000 per year towards the maintenance and restoration of the Broderson mitigation site. As noted above, no funds have been allocated or set aside by the LOCSD for this purpose. Condition 76 incorporated the intent of FEIR mitigation BIO-16.

Biological Opinion 1-8-04-F-48

Take of Morro shoulderband snail and impacts to its habitat occurred as part of the former, uncompleted wastewater project. By the incorporation of both mitigation measures from the 2001 FEIR and conditions of the 2004 CDP into the project description and minimization measures, the Service exempted this take and concurred with the EPA's determination that take associated with the former project would not result in jeopardy for Morro shoulderband snail or destroy or adversely modify its critical habitat.

Resolution of Issues

Because the current LOWWP proposes many of the same facilities within the same area, it is physically comparable to the previous project impacts to Morro shoulderband snail and its habitat. Take of the species at the Mid-Town site would be substantially less (0.25 acre vs. 11 acres) than occurred as part of site preparation for the former project. The current County FEIR and CDP contain the same measures as the former project relative to Morro shoulderband snail and these have again been included as minimization measures in the project description. As stated above, the County would ensure that 73 acres of the Broderson site not needed for the leach fields is conveyed to an agency or conservation entity along with monies to ensure that the long-term management and enhancement of habitat prior to the initiation of project-related activities that would result in vegetation removal, soil disruption, or construction. The balance of the currently vacant portion of the Mid-Town site will be restored to functioning native habitat and effects to Morro shoulderband snail associated with this action are analyzed as part of this opinion. Any future projects at the site would be required to obtain separate exemption from or authorization of take for this species before there could be use and/or reliance on the sewer system.

Monitoring and Reporting Plan

Annual Reports

Annual reports will be submitted by the County to the USDA and Service by January 31 of each year to document project progress, compensation activities, and results of pre-construction surveys required. Each report would address project sites scheduled for the following construction season and state whether effects at the sites would be within the limits set forth in this biological opinion. These reports would include photographs of all phases of the Project (preconstruction, during, and post construction), monitoring logs and training session reports, as well as a summary of all minimization and avoidance measures and how they were implemented. Any issues encountered during the project, and recommendations made to address them, would be provided.

The annual reports would document the presence of any sensitive or listed species encountered during project activities and the avoidance measures taken. Any take incidental to project activities would be documented. The Service shall be notified immediately by facsimile or telephone and in writing within one (1) working day of any unanticipated take of Morro shoulderband snails and the take or suspected take of listed wildlife species not authorized in this biological opinion. If such take occurs, the report and agency notification would include the date, time, and location of the incident or of the finding of a dead or injured animal, and any other pertinent information. Notification should be directed to the U.S. Fish and Wildlife Service, VFWO, Attention Diane K. Noda, 2493 Portola Road, Suite B, Ventura, California 93003; phone (805) 644-1766; and fax (805) 644-3958.

Biological Monitoring Reports

Annual biological monitoring reports will be submitted by the County to USDA and the Service by January 31 of each year for the duration of project construction. These reports will include a discussion of the status and progress of all minimization measures implemented. If monitoring results indicate that additional measures are necessary to meet the goals set in the biological opinion, additional recommendations will be made and next steps agreed upon with appropriate agencies.

Final Report

A final report would be submitted by the County to the USDA and Service within 60 days of the end of project activities. This report will provide a summary of all annual reports and include a discussion regarding project activities and those minimization measures implemented.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

The jeopardy analysis in this biological opinion relies on four components: (1) the *Status of the Species*, which describes the range-wide condition of the Morro shoulderband snail, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the condition of the Morro shoulderband snail in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the Morro shoulderband snail; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the Morro shoulderband snail; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on the Morro shoulderband snail.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the current status of the Morro shoulderband snail, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the Morro shoulderband snail in the wild.

The jeopardy analysis in this biological opinion places an emphasis on consideration of the range-wide survival and recovery needs of the Morro shoulderband snail and the role of the action area in the survival and recovery of the species as the context for evaluation of the significance of the effects of the proposed federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Adverse Modification Determination

This biological opinion does not rely on the regulatory definition of “destruction or adverse modification” of critical habitat at 50 CFR 402.02. Instead, we have relied on the statutory provisions of the Act to complete the following analysis with respect to critical habitat.

In accordance with policy and regulation, the adverse modification analysis in this biological opinion relies on four components: (1) the *Status of Critical Habitat*, which describes the range-wide condition of designated critical habitat for the Morro shoulderband snail in terms of primary constituent elements, the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the *Environmental Baseline*, which analyzes the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the primary constituent elements and how that will influence the recovery role of the affected critical habitat units; and (4) *Cumulative Effects*, which evaluates the effects of future non-Federal activities in the action area on the primary

constituent elements and how that will influence the recovery role of affected critical habitat units.

For purposes of the adverse modification determination, the effects of the proposed Federal action on the critical habitat of the Morro shoulderband snail are evaluated in the context of the range-wide condition of the critical habitat, taking into account any cumulative effects, to determine if the critical habitat range-wide would remain functional (or would retain the current ability for the primary constituent elements to be functionally established in areas of currently unsuitable but capable habitat) to serve its intended recovery role for the Morro shoulderband snail.

The analysis in this biological opinion places an emphasis on using the intended range-wide recovery function of critical habitat for the Morro shoulderband snail and the role of the action area relative to that intended function as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the adverse modification determination.

STATUS OF THE SPECIES

Morro Shoulderband Snail

The Morro shoulderband snail was federally listed as endangered on December 15, 1994 (Service 1994) and a recovery plan for the species and four plants from western San Luis Obispo County was published in September 1998 (Service 1998). A 5-year status review for the Morro shoulderband snail was completed in 2006 (Service 2006) and will be updated in 2011. Critical habitat for the Morro shoulderband snail was designated on February 7, 2001 (Service 2001). The majority of information provided below is summarized from these documents.

The Morro shoulderband snail is a member of the land snail family Helminthoglyptidae. The genus *Helminthoglypta*, the shoulderband snails of California, is a complex of many species, each with a relatively small range and, therefore, relatively vulnerable to extinction (Burke et al. 1999). The Big Sur shoulderband snail (*Helminthoglypta umbilicata*) occurs sympatrically with Morro shoulderband snail (Walgren 2003). The Chorro shoulderband snail (*H. morroensis*) was once thought not to occur sympatrically with, the Morro shoulderband snail (Roth and Tupen 2004); however we now know that these two species do occasionally co-occur (Tenera 2006).

The recovery plan for the Morro shoulderband snail describes its current distribution as areas south of Morro Bay, west of Los Osos Creek, and north of Hazard Canyon (Service 1998). The species occurs throughout the community of Los Osos and in the dunes north of Morro Bay. Although the exact geographic range of the Morro shoulderband snail is uncertain, we do not expect it to extend much beyond the region it is now known to inhabit (Walgren 2003).

The Morro shoulderband snail is found in the accumulated leaf litter and on the undersides of lower shrub branches in coastal dune scrub vegetation, particularly mock heather (*Ericameria*

ericoides), seaside golden yarrow (*Eriophyllum staechadifolium*), deerweed (*Lotus scoparius*), and dune almond (*Prunus fasciculata* var. *punctata*). Morro shoulderband snails have been found in introduced iceplant (*Mesembryanthemum* spp. and *Conicosia puginoniformis*), fig-marigold (*Carpobrotus edulis*), and veldt grass (*Ehrharta calycina*). Morro shoulderband snails appear to prefer coastal dune scrub shrubs species that exhibit dense, low growth with ample contact to the ground. Based on this observation, favorable microclimate for the species may depend on these species continuing to provide partial shading and structure to serve as windbreaks to moderate temperatures and moisture loss within accumulated plant litter.

Most active or non-aestivating Morro shoulderband snails are observed during environmental conditions when increased moisture availability likely facilitates the species' ability to find food, disperse, and find mates. In the dry season, Morro shoulderband snails typically aestivate in accumulated litter or attach to low-lying branches of shrubs. The microclimate under shrubs provides the necessary moist and moderated environment for Morro shoulderband snails to survive the drier months of the year. Although no studies have been conducted to determine how Morro shoulderband snails are affected when disturbed during aestivation, aestivating Morro shoulderband snails may suffer physiological stress or even death upon disturbance of shrubs and accumulated leaf litter if subsequently exposed to drier, hotter, or otherwise more desiccating conditions. Snails in this genus aestivate by producing an epiphragm (a seal of dried mucus in the aperture of the shell) to reduce water loss during the dry season.

The greatest threat to the Morro shoulderband snail is loss of habitat through partial or complete removal of native vegetation. Habitat loss, fragmentation, and degradation can result from urban development and invasion of habitat by non-native plant species, particularly veldt grass. Although the Morro shoulderband snail has been found in iceplant and veldt grass, non-native plant species can dominate to the exclusion of native plant species and substantially reduce the suitability of habitat for the species. As dehydration is a major threat to all terrestrial mollusks, shrub species function to provide shade and windbreaks to reduce the drying effects of wind at ground level. Woody debris also provides shelter for Morro shoulderband snails and may act as a source of nutrients for fungi, a potential food source for Morro shoulderband snails.

Other threats to the species include direct trampling, soil disturbance, and soil compaction. Morro shoulderband snails are likely also threatened by the application of pesticides and/or herbicides. The aging structure of dune vegetation is also believed to play a role in reducing habitat suitability as older shrubs that no longer make contact with the ground may not provide the necessary microclimate in terms of temperature and moisture.

Critical Habitat for Morro Shoulderband Snail

Critical habitat for the Morro shoulderband snail was designated on February 7, 2001 (66 *Federal Register* 9233; Service 2001). The primary constituent elements of critical habitat for the Morro shoulderband snail include the following: sand or sandy soils needed for reproduction; a slope not greater than 10 percent to facilitate movement of individuals; and the presence of native coastal dune scrub vegetation. A total of 2,566 acres of critical habitat for

Morro shoulderband snail was designated in three units. All were considered to be occupied and subject to threats identified in the listing rule. Primary constituent elements of critical habitat for the Morro shoulderband snail include the following: sand or sandy soils needed for reproduction; a slope not greater than 10 percent to facilitate movement of individuals; and the presence of native coastal dune scrub vegetation. Each critical habitat unit represents a core population of Morro shoulderband snail and considered to be essential for maintenance of the species' geographic distribution and genetic variability (Service 2001).

As we consider each Critical Habitat Unit to be essential to the species' conservation (recovery) as a whole, we will focus on the individual units that would be affected by the proposed project and make our determination regarding the effects of the proposed action to critical habitat for the Morro shoulderband snail. Various project activities would occur within Critical Habitat Units 2 and 3; however, none are proposed in Critical Habitat Unit 1.

ENVIRONMENTAL BASELINE

Action Area

The implementing regulations for section 7(a)(2) of the Act define the "action area" as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 *Code of Federal Regulations* 402.02).

The project will provide wastewater treatment for properties within the Wastewater Service Area, including all the properties within the RWQCB-designated Prohibition Zone except for the Martin Tract and Bayview Heights subdivisions and open space properties. The RWQCB decided to allow these two excluded large-lot subdivisions to remain on septic systems rather requiring them to join the LOWWP Wastewater Service Area. Another subdivision, the Monarch Grove subdivision, will discontinue using their package wastewater treatment plant and connect their existing wastewater collection system to the new LOWWP collection system. Some LOWWP project components for wastewater collection, treatment, and effluent reuse will be contained within the prohibition zone; other potential components are located outside the Wastewater Service Area. The proposed project areas are at several locations within and outside the Los Osos Community.

Treatment Plant Site: The Giacomazzi property consists of an approximate 38-acre rectangular shaped parcel approximately 1,500 feet north of the intersection of Los Osos Valley Road and Clark Valley Road. Access to the site is provided from Los Osos Valley Road through the adjacent 43-acre Andre property. Current uses on these sites include one single-family residence on each property and high voltage power lines and towers owned by Pacific Gas & Electric on the western portion of the Andre property.

Pump Station Sites: These consist of both the Mid-Town collection site and the collection system pump stations:

- **Collection System Pump Stations --** The gravity collection system is considered a hybrid gravity collection system since it includes a limited number of low pressure grinder pumps to pump wastewater from low-lying residences. In addition, several small pump stations of varying capacities pump wastewater collected from low-lying collection system subareas to higher elevations so that the wastewater can flow by gravity to the main pump station at the Mid-Town site. The low-pressure grinder pumps and small pump stations are proposed at key locations within the collection system.
- **Mid-Town Collection Site --** The Mid-Town site was the location of the wastewater treatment facility proposed by the LOCSD in 2001. The LOCSD started construction and partially cleared and graded the Mid-Town site, but halted construction in 2005. Since then, the vegetation is returning to native scrub habitat suitable for the Morro shoulderband snail. The site is an 11.7-acre irregularly shaped parcel adjacent to the north side of Los Osos Valley Road. The property is currently “dual-zoned” with allowed uses in the Office/Professional and Commercial Retail or Public Facilities Land Use Categories. An area of approximately 0.25 acre at the southwest corner of the site will be used to construct an underground central pump station to pump wastewater collected from the Los Osos Wastewater Service Area to the treatment plant. Standby power for this pump station will be on an approximately 0.10 acre site across Palisades Avenue to an already disturbed area of Los Osos Community Park.

Recycled Water Leach Fields and Re-use Sites: These include the Broderson, Bayridge, and agricultural and urban re-use sites.

- **Broderson --** The Broderson property consists of an approximately 81-acre rectangular shaped parcel located south of Highland Drive. Approximately 8 acres of the site will be used to construct a recycled water leach field; 0.25 acre used to improve the access road, and the remainder of the site will be placed in permanent open space and added to the greenbelt surrounding the Los Osos Community.
- **Bayridge --** The Bayridge leach field is on the north side of Las Encinas Drive, approximately 300 feet west of Oak Ridge Drive in the southeast portion Los Osos. The leach field occupies three parcels totaling approximately 0.7 acre. The site has been graded and is now covered by non-native vegetation, with iceplant the dominant species present.
- **Agricultural and Urban Re-Use --** All urban re-use sites are fully developed; the only physical change is the conversion of irrigation systems to reclaimed water use, as allowed by California law and encouraged by numerous State resource agencies. Any excavation needed to physically make plumbing connections will occur in areas already fully developed and previously disturbed. All urban re-use sites are within the areas to be served by the wastewater collection system and all pipeline routes previously surveyed as part of the wastewater project. All agricultural reuse sites are currently developed with agricultural uses. The primary physical change is the conversion of irrigation systems to

reclaimed water use. Any excavation needed to physically make plumbing connections will occur in areas previously disturbed by agricultural operations.

Staging Areas: The Paso Robles staging site is located at the southeast corner of Paso Robles Avenue and 18th Street. This area will be used for storage of construction materials and equipment prior to and during construction of the LOWWP. A Morro shoulderband snail survey was conducted in December 2002 on the southeast corner of this site. The survey located two empty snail shells in the coastal sage scrub near the perimeter of the property. The 4.7 acre site was graded in 2005 and the coastal sage scrub habitat was removed. The entire site now consists of ruderal/disturbed vegetation. This property was used as staging during the 2005 LOWWP effort, and some materials remain on-site today. Staging on the Giacomazzi site and possibly the Andre site will take place outside of environmentally sensitive areas. Staging on the Mid-Town site, prior to complete site restoration, may also occur. Staging areas would be graded to restore site contours, and after staging activities cease, would be planted with coastal dune scrub species.

Status of Morro Shoulderband Snail in the Action Area

Morro shoulderband snails are known to occur throughout the action area wherever suitable cover, food sources, and moisture regimes exist. The following discussion provides information regarding species presence or absence at locations considered to be major project components.

Treatment Plant Site: No live Morro shoulderband snails or shell were identified at the location for the treatment plant at the Giacomazzi site (County of San Luis Obispo Public Works Department 2010d). The species is typically restricted to areas west of Los Osos Creek; however, the species was detected east of Los Osos Creek at Warden Creek on the Lee property, approximately 1 mile northwest of the northern boundary of the Giacomazzi property (Tenora 2006). Both Morro shoulderband and Chorro shoulderband snails were found on this property with the Morro shoulderband snails being associated with coastal scrub habitat and Baywood fine sands.

Andre Property: The portion of the Andre site that would serve as an access road to the treatment facility site is dominated by non-native annual grassland, with small stands of coyote brush (*Baccharis pilularis*). Soils are mapped as Concepcion loam. A biological constraints analysis prepared for the previous LOCSD project determined that because of the soils onsite, Morro shoulderband snail was unlikely to inhabit the area but that the Chorro shoulderband snail may be present near coastal scrub (Morro Group 2004). Biological surveys conducted in December 2009 did not reveal any species of snails. Numerous pieces of scrap lumber and plywood are scattered through the grassland and appear to have been undisturbed for at least a few years. As part of the 2009 surveys, biologists carefully lifted many of these pieces of wood; however, no snails were present.

Mid-Town Site: Live individuals and empty shells of Morro shoulderband snail were found on the Mid-Town site as part of site preparation activities for the former wastewater project. Live individuals were captured and relocated to the North Coast Audubon's Sweet Springs Preserve.

While the Mid-Town site is currently in a fairly disturbed condition, much of it is recovering to coastal dune scrub and other habitats that are being re-occupied by the species (Tenera 2010). The 0.25 acre pump station site is situated on parts of the parcel where plant regeneration has been lowest (between 10-15 percent cover of native coastal dune scrub species including: deerweed (*Lotus scoparius*), beach bush lupine (*Lupinus chamissonis*), and California croton (*Croton californicus*). Approximately 70 percent is bare soil and the remainder is iceplant and veldt grass. The 0.10 acre stand-by power site is located in an area of the parcel that has experienced more robust vegetation establishment with about 50 percent cover by deerweed, veldt grass, and beach bush lupine, with lesser amounts of other native and non-native plants. The Mid-Town site was again surveyed during the month of October 2010 with all areas examined to determine the presence/absence and distribution of live Morro shoulderband snails, empty shells, suitable habitat, or other resources considered to be sensitive (County of San Luis Obispo 2010f). As this survey effort was considered to be an update of known information, only two surveys were performed (USFWS 2010). During the first survey conducted on October 7, 2010, 4 Morro shoulderband snails were observed along with one Class A shell. In addition, approximately 300 European garden snails were observed. During the second survey conducted on October 30, 2010, 7 Morro shoulderband snails were observed along with dozens of European garden snails. Distribution of Morro shoulderband snail appears to be light and fairly uniform throughout the Mid-Town site, with a greater number occurring on the northern and eastern portions of the property.

Other Pump Station Locations: The potential exists for Morro shoulderband snail to be present in varying densities at the location of the other 8 pump stations and 13 pocket stations particularly where coastal scrub is present (e.g., East Santa Ysabel Avenue and South Bay Boulevard, East Paso Robles Avenue and 18th Street, and Lupine Street and Donna Avenue).

Collection System: The collection system will primarily be constructed in the street rights-of-way and in ruderal, disturbed or ornamental areas in and along road shoulders and on private residential parcels (e.g., the lateral connections). Some Morro shoulderband snails may be associated with landscaping and fragmented coastal scrub on the private parcels. Twenty lots with quality habitat have been identified and will be subject to pre-construction survey and relocation of any identified Morro shoulderband snails. The identified receptor site is anticipated to be those protected portions of the Mid-Town property where there is extant or recovering coastal dune scrub and small recovering populations of Morro shoulderband snail.

Leach Fields and Re-use Sites: The lower portions of the Broderson site that would be used as leach fields for recycled water have supported high densities of Morro shoulderband snails in the past. The species has also been documented on the upper slopes of the Broderson site in open areas containing coastal dune scrub (County of San Luis Obispo Public Works Department 2010a). A number of the re-use areas (shown on Figure 1) are known to provide habitat for, or be occupied by, the Morro shoulderband snail; notably those in the western region of the action area, immediately east of South Bay Boulevard and immediately east of the Los Osos Oaks

Preserve south of Los Osos Valley Road (Service files, County of San Luis Obispo Public Works Department 2010a).

Staging Areas: Morro shoulderband snails are expected to occur at the Paso Robles staging site, particularly in those areas where the coastal dune scrub is present. Use of the Mid-Town site as a staging area would not result in additional effects not already discussed.

Critical Habitat for the Morro Shoulderband Snail

As previously stated, a total of 2,566 acres of critical habitat in three units was designated for Morro shoulderband snail on February 7, 2001 (66 *Federal Register* 9233). Unit 1 contains 1,830 acres (or 72 percent) of the total area designated, and encompasses areas managed by the California Department of Parks and Recreation (Montaña de Oro State Park) and the City of Morro Bay. This unit includes the length of the spit and the foredune areas extending south toward Hazard Canyon. No portion of Critical Habitat Unit 1 is within the identified action area.

Critical Habitat Unit 2 consists of 320 acres (12 percent of the total) found on the north-facing slopes of the Irish Hills. The 204-acre Morro Ecological Reserve (formerly known as the Bayview site) and the 80-acre Broderson site are the largest tracts of land in this unit. The ecological reserve is owned by the Department and the Broderson site is owned by the LOCSO. Primary constituent elements of critical habitat for the Morro shoulderband snail exist on the lower slopes of the Broderson site. While much of the coastal dune scrub present on lower portions of the unit has been heavily disturbed by the invasion of non-native plant species (e.g., veldt grass and *Eucalyptus globulus*), hikers, and equestrian use, Unit 2 contains a sustainable population of Morro shoulderband snails that could be expanded with appropriate management.

Critical Habitat Unit 3 is 420 acres (16 percent of the total) of high-quality coastal dune scrub habitat that includes the undeveloped areas between Los Osos Creek and the community of Baywood Park in northeast Los Osos. This unit supports the northernmost intact habitat for Morro shoulderband snail in Los Osos. This unit contains sustainable populations of the species. The proposed Paso Robles staging area occurs within the boundary of critical habitat Unit 3; however, this parcel is separated from the other preserved areas in the unit by South Bay Boulevard and the community of Baywood Park. Only limited areas containing the primary constituent elements are present. The protection of Unit 3 is essential to maintain the species genetic variability and geographic distribution. This unit has favorable habitat conditions for the expansion and persistence of sustainable populations of Morro shoulderband snail. With the reduction of threats through appropriate management, we expect Unit 3 to continue to support a large population that will contribute toward the recovery of the Morro shoulderband snail.

EFFECTS OF THE ACTION

Morro Shoulderband Snail

Due to the large action area, variety of action agents, and the cryptic nature of the Morro

shoulderband snail, we do not expect all individuals to be found, captured, and relocated. Furthermore, if the proposed construction occurs during the dry season, Morro shoulderband snails would likely be aestivating. Conducting surveys for snails when they are inactive substantially increases the difficulty in their location. Additionally, aestivating Morro shoulderband snails may also suffer physiological stress or even death upon disturbance of their shelter sites. These effects would be greatly reduced by minimizing handling time of individuals and by employing only persons experienced in handling the species and who are familiar with their habitat needs when relocation is required. Even with the incorporation of minimization measures, we anticipate that some Morro shoulderband snails would be killed as a result of the proposed action.

The text below first discusses those general effects that could happen throughout the project area dependent upon the action(s) performed at the site and then provides more specific information for specific project components.

Potential General Effects: As part of the proposed action Morro shoulderband snails may be injured or killed by vehicles, heavy equipment, foot traffic, or other activities associated with construction and restoration activities associated with the proposed action. To minimize adverse effects to Morro shoulderband snails and their critical habitat during construction of the wastewater project, the County would employ Service-authorized biologists to clearly delineate access routes and construction footprints, using flagging or construction fencing. These biologists would also conduct pre-construction surveys and relocate Morro shoulderband snails out of harm's way into adjacent suitable habitat.

Morro shoulderband snails may also be accidentally injured or killed during habitat restoration and management activities. The primary methods typically used to remove non-native invasive plant species in the Los Osos area include hand and mechanical removal in which target plants are pulled by hand or with hand tools, mowing, or solarization (placing black or clear plastic over the soil surface to increase soil temperature and block sunlight) and/or herbicide application. The hand pulling or mowing of weeds may cause damage to or loss of shelter sites which provide cover and appropriate microclimate for Morro shoulderband snails. Adverse effects would be reduced by limiting the number of access routes into the treatment area so that trampling native vegetation and disturbing accumulated plant litter underneath shrubs is kept to a minimum. Demarcating the treatment area would minimize disturbance to Morro shoulderband snail shelter sites outside of the designated treatment areas. Solarization has the potential to kill or injure Morro shoulderband snails if they are trapped beneath the plastic and subjected to the resultant high temperatures and lack of sunlight, however, surveying and relocating Morro shoulderband snails to adjacent suitable habitat prior to installation of plastic would minimize adverse effects from this method.

Morro shoulderband snails may be accidentally injured or killed during surveys or relocation activities. The County proposes to reduce the likelihood of injury or mortality by minimizing handling time and by ensuring that surveys and relocation efforts are conducted only by Service-authorized biologists. Mortality at relocation sites would be reduced by carefully placing the

snails under dense vegetation that would provide a suitable microclimate. Death or injury could occur if Morro shoulderband snails are accidentally crushed during survey efforts. However, Service-authorized biologists would slowly and carefully inspect the ground for the presence of Morro shoulderband snails and avoid stepping on or under shrubs in order to minimize the likelihood that individuals would be killed during surveys.

The potential effects of herbicides on Morro shoulderband snails are not known, although a study on aquatic snails exposed to glyphosate concluded the herbicide caused abnormalities in snail development and reproduction (Tate et al. 1997). Morro shoulderband snails could be exposed to herbicides by ingestion and absorption while living in, or migrating through, a recently treated area. Direct herbicide spray or drift from spray could contaminate soil; leaves, stems and branches of shrubs; leaves, mold, and fungi in plant litter; and potential shelter sites for Morro shoulderband snails, including downed wood, rocks, or debris piles. Surveying and relocating Morro shoulderband snails each day prior to beginning work activities would minimize direct contact with herbicide spray. Clearly demarcating all treatment areas would minimize herbicide spray from contacting Morro shoulderband snails outside of designated work areas. Shielding native plants with plastic sheeting, buckets, or tubs would minimize herbicide contamination of plant litter and soil, and would minimize contact with Morro shoulderband snails that are foraging or moving about.

Potential Effects by Location

- **Treatment Plant Site:** The treatment plant site at Giacomazzi does not have appropriate habitat for the Morro shoulderband snail and the species was not observed during surveys conducted in December 2009. As such, it is not anticipated that the species will be affected by construction and operations at this site.
- **Andre Property:** Similar to its neighbor, the Giacomazzi parcel, the Andre property lacks suitable habitat for the species and no Morro shoulderband snails were found as part of surveys conducted in 2009. As such, no adverse effects to the species are anticipated.
- **The Mid-Town Site:** The Mid-Town site is made up of scattered coastal dune scrub interspersed with disturbed grassland. As previously stated, this site was graded in 2005; however, native plant regeneration is naturally occurring. Surveys conducted in 2010 indicate that onsite distribution of Morro shoulderband snail appears to be light and fairly uniform throughout the property, with a greater numbers occurring on the northern and eastern portions of the property. The restoration and enhancement of approximately 6.5 acres of the Mid-Town site is expected to affect a limited number of Morro shoulderband snails as the October 2010 surveys revealed the presence of Morro shoulderband snails in portions of the Mid-Town site that will need to be graded for site restoration. Approximately 1.8 acres, some of which support Morro shoulderband snails, will remain undisturbed as they currently provide good habitat. These 1.8 acres will also serve as the receptor sites for relocated snails during work on the remainder of Mid-Town and also for work on private lands (e.g., laterals). The remainder of the site, 3.7 acres, will not be graded, but will be planted with native species to improve their habitat value. In

summary, those individuals present in areas that would require remedial grading necessary to stabilize the parcel and prepare it for restoration back to coastal dune scrub would be adversely affected in the short-term. In the long-term, effects to the species have the potential to be beneficial as the restoration efforts, if successful, would re-establish suitable habitat into which Morro shoulderband snails that remain onsite and those that may disperse from adjacent occupied habitat could establish and/or expand their populations. Because of the young age of the coastal dune scrub plant community in the 0.25-acre site for the underground pump station in the southwest corner, there is little duff under the plants to provide habitat for the Morro shoulderband snail. The likelihood of occurrence is low in this area, but based on the October, 2010 surveys, a few Morro shoulderband snails may be present. With both the restoration activities and the pump station construction, identified individuals present within the construction area would be affected by capture and relocation activities. An anticipated low number of undiscovered individuals would likely be killed.

- **Other Locations for Pump Stations:** Given the location of the other 8 pump stations and 13 pocket stations (see Figure 1), the potential exists for Morro shoulderband snail to be present in these areas particularly where coastal scrub is present (e.g., East Santa Ysabel Avenue and South Bay Boulevard, East Paso Robles Avenue and 18th Street, and Lupine Street and Donna Avenue). As with individuals present at the central pump station on the Mid-Town site, identified Morro shoulderband snails would be subject to the effects associated with capture and relocation and the anticipated low number of unidentified individuals would likely be killed.
- **Collection System:** The majority of the collection system would be constructed within the street rights-of-way that are generally highly disturbed and comprised of ruderal vegetation. Most of the length of the pipelines would be along Los Osos Valley Road in areas or habitat considered to be unsuitable for the species. It is anticipated that approximately 0.5 acre of impacts to coastal dune scrub associated with the collection system in these rights-of-way as this habitat would be completely removed for the construction of the collection system. Lateral connections to individual customers and abandonment of septic systems would also temporarily disturb land, some of which may support Morro shoulderband snails. Some parcels that contain better-quality coastal scrub habitat (approximately 20) will be affected during installation of laterals and decommissioning of septic systems. Low numbers of identified individuals would be subject to the effects associated with capture and relocation and an unknown but anticipated very low number of unidentified individuals would likely be killed.
- **Leach Fields and Re-Use Sites:** The construction of the leach field at the Broderson will result in the recurring, temporary loss of habitat for Morro shoulderband snail and direct mortality of those Morro shoulderband snails not identified and subject to capture and relocation activities. The Bayridge leach field site is expected to function without rehabilitation, so no disturbance is planned and so no adverse to Morro shoulderband snail or its habitat are anticipated.

- **Staging Areas:** The Paso Robles staging site was graded in 2005 and the small amount of habitat (0.1 acre) was removed; however, it is possible that Morro shoulderband snails could be present in extremely small numbers and those not identified for capture and relocation could be killed.

Critical Habitat for the Morro Shoulderband Snail

The Broderson leach field site is part of critical habitat Unit 2 for the Morro shoulderband snail. This unit includes both coastal dune scrub and maritime chaparral and is known to support substantial populations of the species.

The construction of the leach field and access road on the Broderson site would result in the direct removal of up to 8 acres of critical habitat for the Morro shoulderband snail. As previously stated, the area where the proposed leach field would be constructed has been subject to past disturbances including invasion by non-native plant species, hiking, and equestrian use. Although up to 8 acres of critical habitat within Unit 2 would be affected by construction of the proposed leach fields, the primary constituent elements would still exist throughout the majority of the 320-acre unit, both on the Broderson site and on the larger, contiguous Morro Dunes Ecological Reserve. Because the County would leave areas of native vegetation in place instead of excavating the entire leach field at once and would restore disturbed areas with suitable native habitat for the Morro shoulderband snail, primary constituent elements for the Morro shoulderband snail will not be completely lost at any one time within the 8-acre area. The amount of critical habitat that would be removed during construction is considered to be small relative to the amount that would still exist within Unit 2. The area to be disturbed constitutes only 2.5 percent of the 320 acres in Unit 2. Consequently, we do not expect construction of the leach field on the Broderson site to limit the ability of Unit 2 to support a sustainable population of Morro shoulderband snails. The conservation of approximately 73 acres on the Broderson site will benefit the Morro shoulderband snail and its critical habitat because it would result in on-going monitoring and habitat restoration that would not otherwise occur.

Within Unit 3, approximately 0.1 acre of coastal dune scrub at the Paso Robles staging area was affected by the actions associated with the former wastewater project. The overall disposition of the site is disturbed in nature; however, some primary constituent elements may be recovering. Because the amount of critical habitat that would be adversely affected within this unit is small and fragmented from other areas within the unit, we do not believe its loss will limit the ability of the 420-acre unit to support a sustainable population of Morro shoulderband snails in any way. Conserved lands that make up the majority of Unit 3 would continue to support the species and maintain genetic variability and geographic distribution of Morro shoulderband snails in the area.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future

Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Based upon the analysis in the previous biological opinion for the LOCSD wastewater project, we expect the CRWQCB to remove the building moratorium established by Resolution 83-13 when the proposed wastewater project is operational. This lifting of the moratorium would likely result in the build-out of those vacant lots that remain within the wastewater service area. Approximately 125 acres of degraded and fragmented Morro shoulderband snail habitat could be removed within this area as a result of the anticipated build-out. The wastewater service area consists primarily of parcels (approximately 500) that are less than 1 acre in size. These small parcels contain an estimated 25 acres of fragmented and degraded Morro shoulderband snail habitat. The remaining 40 or so lots within the wastewater service area that are greater than 1 acre in size contain approximately 100 acres of potential Morro shoulderband snail habitat that is, for the most part, also fragmented and degraded. None of the parcels in the wastewater service area are within designated critical habitat for the Morro shoulderband snail or identified in the recovery plan as important for the recovery of this species (Service 1998b).

The County is developing a Habitat Conservation Plan to address development both inside and outside the sewer service area. Other covered activities anticipated to be addressed in the plan include operation and maintenance, required hazard abatement (i.e., fuels reduction, creation of defensible space), and facility development. As part of this plan, the County is seeking authorization for incidental take of the Morro shoulderband snail pursuant to section 10(a)(1)(B) of the Act.

CONCLUSION

After reviewing the current status of the Morro shoulderband snail and its critical habitat, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that construction of the LOWWP, as proposed, is not likely to jeopardize the continued existence of the Morro shoulderband snail or destroy or adversely modify critical habitat for the Morro shoulderband snail. We have reached these conclusions for the following reasons:

1. The County will implement measures to minimize the adverse effects of the proposed project the Morro shoulderband snail and its critical habitat, inclusive of those contained in the FEIR and CDP;
2. Relatively few adult Morro shoulderband snails are likely be injured or subject to direct mortality because of the proposed pre-activity surveys that will afford the opportunity for capture/relocation activities and other protective measures included in the project description;
3. Habitat restoration activities incorporated into the project description would contribute to the conservation and recovery of Morro shoulderband snail;

4. Protection and management of 73 acres at the Broderson site (part of Critical Habitat Unit 2 for the Morro shoulderband snail) will contribute to the conservation and recovery of the species; and
5. The amount of critical habitat that would be affected as a result of the proposed project in Units 2 and 3 is very small relative to the amount that would still be available for the Morro shoulderband snail within each unit. Each Unit would continue to function to support sustainable populations of the Morro shoulderband snail and maintain the species' geographic distribution and genetic variability.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary and USDA must include them as binding conditions of any contracts associated with the proposed action, for the exemption in section 7(o)(2) to apply. The USDA has a continuing duty to regulate the activity covered by this incidental take statement. If the USDA fails to require its contractors to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to its authorization, or contracts, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the USDA must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

All Morro shoulderband snails found within the project area may be subject to take in the form of capture during relocation efforts. A subset of captured Morro shoulderband snails may experience a significant disruption of normal behavioral patterns to the point that reaches the level of harassment. Any Morro shoulderband snails that remain in the project area may be subject to increased predation, crushed or entombed during construction activities, or be otherwise injured or killed.

We cannot determine the precise number of Morro shoulderband snails that may be killed, injured, harassed, or harmed as a result of the proposed action. Numbers and locations of Morro shoulderband snails within a population vary from year to year. Incidental take of Morro shoulderband snails would be difficult to detect because of their small body size and finding dead or injured specimens is unlikely. Take by predation as a result of exposure due to project activities would likely be impossible to detect. As the County has proposed to use those minimization measures described in the project description section of this document, we anticipate that relatively few Morro shoulderband snails are likely to be killed or injured during this work in compared to those that would be moved out of harm's way.

This biological opinion does not exempt any activity from the prohibitions against take contained in section 9 of the Act that is not incidental to the action as described in this biological opinion. Take that occurs outside of the action area or from any activity not described in this biological opinion is not exempted from the prohibitions against take described in section 9 of the Act.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the take of Morro shoulderband snails:

1. Worker education programs and clearly-defined operational procedures must be implemented by the USDA and County.
2. Only Service-authorized biologists may survey for, monitor, handle, capture, and/or relocate Morro shoulderband snails.
3. Service-authorized biologists must have the authority to stop work if project-related activities occur outside the demarcated project boundaries if Morro shoulderband snails are detected.
4. The USDA must ensure that the amount and form of incidental take is commensurate with the analysis contained within this biological opinion.

The Service's evaluation of the effects of the proposed actions includes consideration of the measures proposed by the USDA to minimize the adverse effects of the waste water project on the Morro shoulderband snail and critical habitat. Any subsequent changes to these measures may constitute a modification of the proposed action and warrant reinitiation of formal consultation, as specified at 50 CFR 402.16. These reasonable and prudent measures are intended to clarify or supplement the protective measures included in the description of the proposed action.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the USDA must ensure that the

County complies with the following terms and conditions, which implement the reasonable and prudent measures described above.

1. The following term and condition implements reasonable and prudent measure 1:

The worker education program must be presented by a Service-approved biologist with experience in the identification of Morro shoulderband snail and its habitat. The program must include descriptions and pictures of the Morro shoulderband snail, relevant provisions of the Endangered Species Act, specific measures being implemented to conserve the Morro shoulderband snail as they relate to the project and the project boundaries within which the work will occur and identify a chain-of-command for all operational activities that would occur in Morro shoulderband snail habitat.

2. The following terms and conditions implement reasonable and prudent measure 2:

- a) Only Service-authorized biologists may survey for, monitor, capture, handle, or relocate Morro shoulderband snails. Eric Wier, Kate Ballantyne, and John Farhar are hereby authorized to independently conduct these activities as described in this biological opinion. Katie Drexhage, Kelly Sypolt, and Trevis Warner are authorized to conduct such activities only under the direct supervision of Eric Wier, Kate Ballantyne, and/or John Farhar. The USDA must request the Service's authorization of any other biologists it wishes to employ to conduct these activities relative to the proposed project. This request must be in writing and received by the Service at least 21 days prior to the intended start date.
- b) Any areas not identified (e.g., staging areas) in the project description and biological assessment for the proposed action must be surveyed for the presence of Morro shoulderband snail. Survey results must be provided to the Service to ensure that any effects to Morro shoulderband snail do not exceed that identified and analyzed in this biological opinion.

3. The following term and condition implements reasonable and prudent measure 3:

A Service-authorized biologist must monitor the proposed project area(s) daily during work activities until completion of initial site disturbance at each project site and have the authority to stop project activities that occur outside the demarcated boundaries of the construction footprint and access road until such time as identified Morro shoulderband snails can be relocated to suitable habitat out of harm's way or the Service is contacted regarding how to proceed regarding the presence of an unanticipated federally listed species within the work area.

4. The following term and condition implements reasonable and prudent measure 4:

If more than 15 adult Morro shoulderband snails are found dead or injured during project

implementation, the USDA or County must contact the VFWO as soon as possible so that we can review the project activities and effects analysis to determine if additional protective measures are needed.

REPORTING REQUIREMENTS

The County must provide a written report to the Service within 90 days following completion of the proposed project. The report must document the number and size of any Morro shoulderband snails relocated from the action area, the date and time of relocation, and a description of relocation sites. The report must also state the number of Morro shoulderband snails killed or injured, describing the circumstances of the mortalities or injuries if known. The report must contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys and sighting records, and any other pertinent information such as the acreage affected and restored or undergoing restoration of each habitat type.

In addition, the County must submit the results of any habitat restoration or enhancement activities conducted in relation to the proposed project. This timeframe may be modified with approval from the Service. We encourage you to submit recommendations regarding modification of or additional measures that would improve or maintain protection of the Morro shoulderband snail and simplify compliance with the Act.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The USDA should encourage the County to prepare and seek publication of an article in a peer reviewed journal that describes the restoration program implemented as part of the LOWWP in order to contribute to the body of knowledge regarding similar activities being undertaken for the recovery of listed species and to allow others to benefit from those lessons learned such that we may increase the success of similar, future habitat restoration efforts.

The USDA should encourage the County to prepare and seek publication of an article or note in a peer-reviewed journal that describes all of those habitat types in which Morro shoulderband snails are found during the course of the project to provide a greater understanding of the diversity of habitats in which the species occurs.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the request for consultation. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions, please contact Julie M. Vanderwier at (805) 644-1766, extension 222.

Sincerely,

/s:/ Diane K. Noda

Diane K. Noda
Field Supervisor

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APPENDIX B

SUMMARY OF MITIGATION

This section provides a summary of all proposed mitigation measures as described in Section 3.0 of this document.

Mitigation Number [CEQA number]	Mitigation Measure
Section 3.4: Historic Properties	
3.4-1	Prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, the Section 106 process will be completed. This process will include the finalization of the Historic Properties Evaluation and Treatment Plan and the acceptance of the project's Memorandum of Agreement by the appropriate federal signatories.
3.4-2	An Historic Properties Evaluation and Treatment Plan has been prepared for the LOWWP, and details the extensive scope of the proposed project; establishes site types with corresponding levels of effort for mitigation, and details data recovery and monitoring plans for the extent of the proposed project. This Treatment Plan will be executed in full throughout the course of the project.
3.4-3 [5.6-B4]	As detailed in the Treatment Plan, if avoidance of recorded archaeological sites within any portion of the approved project design is not possible through project redesign, a phased program of site testing will be undertaken to establish boundaries and evaluate the resources' potential eligibility to the California Register of Historical Resources or the National Register of Historic Places. If a site is determined ineligible, no further work is required. If a site is determined eligible, data recovery excavations will be required to mitigate adverse effects incurred from project development.
3.4-4 [5.6-B6]	Preconstruction monitoring will occur in areas ranked as high in sensitivity for buried deposits. Mechanical backhoe trenching will be conducted within the sensitive areas where any construction impacts will occur and will be monitored by a qualified geoarchaeologist. Any identified intact deposits will be evaluated, and any deposits determined to be eligible to the California Register and/or National Register will require project redesign to avoid impacts, or data recovery to mitigate unavoidable impacts.
3.4-5 [5.6-B7]	While prior survey, excavation, and monitoring have been conducted for the majority of the collection system in the community of Los Osos, redesign in the placement of pipelines and location of pump stations and other facilities requires additional consideration. Areas of high archaeological sensitivity, including the locations of human burials, have been identified. Continued avoidance or additional testing, monitoring, and/or data recovery will be required to reduce impacts to a less-than-substantial level.
3.4-6 [5.6-B8]	Full analysis, processing, documentation, curation, and reporting of the project collections was not achieved because of the stop-work order on the 2005 wastewater project. These tasks will be completed by qualified archaeologists as an

Mitigation Number [CEQA number]	Mitigation Measure
	important mitigation effort for overall project impacts and to fulfill requirements associated with past Section 106 consultations. Study findings will be made available to the general public and local Native Americans, as well as to the scientific community.
3.4-7 [5.6-D1]	A draft Memorandum of Agreement has been prepared for the treatment and disposition of human remains and associated burial items. Although not required by law, this document lays out the procedures agreed upon by interested local Native Americans and stipulated under State law, including proper and respectful handling of remains, identification of reburial areas, acceptable analyses, and resolution of conflicts. It includes a list of Most Likely Descendants approved by the Native American Heritage Commission; these individuals would be signatories on the Agreement.
3.4-8 [5.6-D2]	For sites with known human remains or which have a potential for human remains, pre-construction excavations will take place within the direct impact areas to insure that no human remains are present.
3.4-9 [5.6-D3]	If human remains are encountered within the project area, the County will be responsible for complying with provisions of Public Resources Code Sections 5097.98 and 5097.99, and 7050.5 of the California Health and Safety Code, as amended by AB 2641. Restrictions or procedures for excavation, treatment, or handling of human remains will be established in consultation with the individuals designated by the Native American Heritage Commission as the Most Likely Descendants.
Section 3.5: Biological Resources Information	
3.5-1*	All staging areas, as well as those areas where fueling and maintenance of vehicles and other equipment would occur, will be located at least 20 meters from riparian habitat or water bodies. The contractor or County will ensure that contamination of habitat does not occur during such operations.
3.5-2*	Prior to the onset of work near any riparian habitat, the USDA will ensure that the contractor or County has prepared a plan to allow a prompt and effective response to any accidental spills.
3.5-3*	To avoid potential timing conflicts between construction and the breeding season for the California red-legged frog, work activities adjacent to Los Osos Creek will only commence after March 31 and be completed by October 31, annually.
3.5-4*	Night-time illumination at the treatment plant site will meet the following requirements of the County's Estero Area Plan in order to be shielded from riparian areas and creeks: "all lighting fixtures will be shielded so that neither the lamp nor the related reflector interior surface is visible from adjacent properties. Light hoods will be dark-colored." No night

Mitigation Number [CEQA number]	Mitigation Measure
3.5-5*	<p>lighting will be used unless necessary for active maintenance activities at the plant, or under emergency conditions.</p> <p>Tributaries to Warden Creek on the Giacomazzi property will be restored to provide improved habitat for the California red-legged frog. Drainages currently devoid of riparian vegetation will be revegetated with native riparian canopy and emergent species to provide additional shade, cover, and breeding habitat. The current practice of removing all vegetation within and adjacent to Los Osos Creek and tributaries to Warden Creek will cease.</p>
3.5-6 [5.5-A3]	<p>A worker education program and clearly defined operations procedures will be prepared prior to project construction. The worker education program and operations procedures will be implemented by the County throughout the duration of construction. A biologist approved by the USFWS will be retained to provide construction personnel specific instruction on general detection and avoidance of sensitive resources during construction. The worker education program will include: descriptions and pictures of listed species; the provisions of the Endangered Species Act; those specific measures being implemented to avoid and minimize take or impacts to listed or otherwise sensitive species (e.g. conserve listed and sensitive species as they relate to the project); and the project boundaries within which the work will occur.</p>
3.5-7 [5.5-A8]	<p>Prior to project construction, the County will retain a qualified biologist to conduct pre-construction surveys for the California red-legged frog according to protocol approved by the USFWS. Surveys will be conducted within all areas that are determined to contain suitable habitat for this species and that occur within 100 feet of proposed construction, or at a distance determined through USFWS consultation.</p> <p>To avoid potential timing conflicts with the California red-legged frog-breeding period, construction activities in the vicinity of California red-legged frog habitat will be completed between April 1 and November 1. This measure will apply to construction activities at the LOVR bridge and Los Osos Creek crossing, and all other areas determined during pre-construction surveys to contain suitable habitat for the species, including areas that occur within 100 feet of proposed construction, or at a distance determined through USFWS consultation.</p> <p>Prior to construction, the County will retain a USFWS- approved biologist to permanently remove any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes from the project area, to the maximum extent possible. The USFWS-approved biologist will be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.</p> <p>Prior to construction, the County will retain a USFWS-approved biologist to conduct a training session for all construction personnel. At a minimum, the training will include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, the general measures that are being</p>

Mitigation Number [CEQA number]	Mitigation Measure
	<p>implemented to conserve the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished.</p> <p>Prior to construction, the County will retain a USFWS-approved biologist responsible for monitoring construction activities. Ground disturbance will not be authorized to begin until written approval is received from the USFWS that the biologist is qualified to conduct the work. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frog. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. A USFWS-approved biologist will be present at the active work sites until such time that the initial survey for California red-legged frogs, instruction of workers, and (upland) habitat disturbance have been completed. After this time, the contractor or permittee will designate a qualified person to monitor on-site compliance with all minimization measures. The USFWS-approved biologist will ensure that this individual receives appropriate training as to the identification of frogs, potential hazards to the species, inappropriate and allowable work activities, and appropriate contacts for immediate, professional biological support.</p> <p>During work activities, all trash that may attract predators will be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.</p> <p>All fueling and maintenance of vehicles and other equipment and staging areas will occur a minimum of 100 feet from all open water, stream, wetland, and riparian habitat. The permittee will ensure that contamination of habitat does not occur during such operations. Prior to the onset of work, the EPA will ensure that the permittee has prepared a plan to allow a prompt and effective response to any accidental spills.</p> <p>Recycled water storage ponds will be maintained as to not attract bullfrogs. This will include allowing the ponds to go dry during the summer to disrupt any breeding activity by bullfrogs. The County will monitor recycled water storage ponds for bullfrog activity.</p>
3.5-8**	All construction activities across Los Osos Creek will occur when the channel is dry.
3.5-9**	Silt fencing will be installed in all areas where construction occurs within 100 feet of known or potential steelhead habitat.
3.5-10**	Spoil sites will be located so they do not drain directly into Los Osos Creek. If a spoil site drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channel. Spoil sites will be graded to reduce the potential for erosion.

Mitigation Number [CEQA number]	Mitigation Measure
3.5-11**	A spill prevention plan for potentially hazardous materials will be prepared and implemented. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching the creek channel.
3.5-12**	Equipment and materials will be stored at least 50 feet from Los Osos Creek. No debris such as trash and spoils will be deposited within 100 feet of waterways. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, will be located outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream will be positioned over drip pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream will be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles will be moved away from the stream prior to refueling and lubrication.
3.5-13**	Proper and timely maintenance for vehicles and equipment used during construction will be provided to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creek. Maintenance and fueling will be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e., away from the creek).
3.5-14**	A qualified biological monitor will be on site during all stream crossing activities. The biological monitor will be authorized to halt construction if impacts to steelhead habitat are evident.
3.5-15**	Project sites will be restored to pre-construction channel conditions, including streambed composition, compaction, and gradient.
3.5-16**	Project sites, if disturbed, will be revegetated with an appropriate assemblage of native upland vegetation, and if necessary, riparian vegetation, suitable for the area. A plan describing pre-project conditions, restoration and monitoring success criteria will be prepared prior to construction.
3.5-17 [5.5-A6]	All construction activities across Los Osos Creek will be restricted to low-flow periods of June 15 through November 1. If the channel is dry, construction can occur as early as June 1. Restricting construction activities to this work window will minimize impacts to migrating adult and smolt steelhead, if present. Prior to construction, the County will retain a qualified biological monitor to be on site during all stream crossing activities associate with Los Osos Creek. The biological monitor will be authorized to halt construction if impacts to steelhead are evident.

Mitigation Number [CEQA number]	Mitigation Measure
	<p>Prior to construction, a spill prevention plan for potentially hazardous materials will be prepared and implemented. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching the creek channel.</p> <p>Prior to construction, silt fencing will be installed in all areas where construction occurs within 100 feet of known or potential steelhead habitat. All silt fencing, erosion control and landscaping specifications will only include natural-fiber, biodegradable products for meshes and coir rolls to minimize impacts to species and the environment during use.</p> <p>During construction, spoil sites will be restricted to upland locations so they do not drain directly into Los Osos Creek. If a spoil site drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channels. If required, spoil sites will be graded to reduce the potential for erosion.</p> <p>During construction, equipment and materials will be stored at least 50 feet from Los Osos Creek. No debris such as trash and spoils will be deposited within 100 feet of waterways. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, will be restricted to locations outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream will be positioned over drip pans at all times. Any equipment or vehicles driven and/or operated within or adjacent to the stream will be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life. Vehicles will be moved away from the stream prior to refueling and lubrication.</p> <p>During construction, proper and timely maintenance for all vehicles and equipment used will be provided to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creek. Maintenance and fueling will be restricted to safe areas away from Los Osos Creek that meet the criteria set forth in the spill prevention plan.</p> <p>Immediately following construction, all construction work areas will be restored to pre-construction channel conditions, including streambed composition, compaction, and gradient. If required, channel banks will be returned to original grade slope and appropriate bank stabilization techniques will be implemented to reduce the potential for erosion and sedimentation. A plan describing pre-project conditions and restoration methods will be prepared prior to construction.</p> <p>Immediately following construction, all appropriate construction work areas will be revegetated with an appropriate assemblage of native upland vegetation, and if necessary, riparian vegetation, suitable for the area. A plan describing pre-project conditions, restoration and monitoring success criteria will be prepared prior to construction.</p>
3.5-18	Maintenance activities associated with pipe suspension that may result in activity within the streambed of Los Osos

Mitigation Number [CEQA number]	Mitigation Measure
[5.5-A7 Revised]	Creek should be restricted to periods when the streambed is dry and does not support any flowing water or pooling water in the proposed maintenance area.
3.5-19*	A Service-authorized biologist will conduct training sessions for all project-related personnel immediately prior to the start of vegetation removal, grading, and ground-disturbing construction-related activities.
3.5-20*	Construction areas will be clearly marked with high visibility flagging or barrier fencing. Construction equipment and personnel will be restricted to the marked areas.
3.5-21*	A Service-authorized biologist will be retained to monitor all vegetation removal, grading, and ground-disturbing construction-related activities that will take place within habitat suitable for the Morro shoulderband snail. Monitoring activities will be required daily until completion of initial disturbance at each location and for ensuring appropriate minimization measures are implemented during construction. The monitor will be granted full authority to stop work at his or her discretion and will stop work if project-related activities occur outside the demarcated boundaries of the construction footprint. The monitoring biologist will stop work if any Morro shoulderband snails are detected within the proposed construction footprint and will implement measures to relocate them to suitable habitat out of harm's way prior to construction activities resuming. If no suitable habitat opportunities are available in the immediate vicinity of the construction footprint, salvaged and relocated specimens may also be transported to an off-site location approved by the Service.
3.5-22*	Prior to the initiation of project-related activities that would result in vegetation removal, soil disruption, or construction, the approximately 73 acres of the Broderson property that will not be used for the proposed leach fields will be secured and granted, in perpetuity, to an appropriate agency or conservation organization who will assume the responsibility for its management. A long-term management and monitoring program will be prepared and approved by the Service and the Department. The County will be responsible for the allocation of appropriate funding necessary to implement the management and monitoring of the conserved lands.
3.5-23*	The existing degraded coastal dune scrub at the Broderson property will be restored and maintained to promote its function as habitat for Morro shoulderband snail and sensitive plants and wildlife species that are local or endemic to the area. Restoration activities will be conducted by qualified personnel with expertise in restoration ecology and knowledge of sensitive plant and wildlife species in the area. Restoration activities will be conducted in accordance with a Restoration Plan specifically prepared for the effort and approved by the Service, and the Department. Similarly, habitat restoration and maintenance will be implemented according to a Habitat Mitigation and Monitoring Plan that will evaluate the progress of the restoration effort.

Mitigation Number [CEQA number]	Mitigation Measure
3.5-24*	<p>Habitat restoration activities will include measures for the removal and eradication of competitive, invasive, non-native plant species known to occur in the local area, including veldt grass (<i>Ehrharta calycina</i>) and pampas grass (<i>Cortaderia spp.</i>). Activities that involve the removal of invasive species will not result in unnecessary trampling or removal of native species, and techniques employed for the removal of non-native plant species will be those that will result in the least damage to native species. Any disturbed portions of the acquired 73 acres of the Broderson parcel should be evaluated for their potential to be restored as coastal dune scrub habitat that would have the potential to support the functions and values necessary for the Morro shoulderband snail, the Morro Bay kangaroo rat, and other coastal dune scrub species.</p>
3.5-25*	<p>The restoration effort will include the implementation of a seed collection program to gather seeds to be used during restoration from native sources. The seed collection program will be prepared for approval by the County, Service, and Department prior to the commencement of vegetation removal, soil disruption, grading or other construction-related activities and focus on those native plant species that will be affected by project implementation. Collection will be conducted by personnel with demonstrated expertise in seed collection and storage and occur during the appropriate time of year for seed production and harvesting.</p>
3.5-26*	<p>The County will provide annual reports to the USDA and Service documenting the results of all restoration and monitoring activities. Annual reports will be provided for a minimum of five years or until it is determined that the requisite performance criteria have been met. The County will provide a written report to the USDA and Service within 90 days following the completion of the proposed project. The report must document the number of Morro shoulderband snails removed and relocated from project areas, the locations of all Morro shoulderband snail relocations, and the number of Morro shoulderband snails known to be killed or injured. The report will contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys, observations, and any other pertinent information such as the acreages affected and restored, or undergoing restoration, of each habitat type.</p>
3.5-27*	<p>A final report would be submitted by the County to the USDA and VFWO within 60 days of the end of project activities. This report would summarize the Annual Reports and include a discussion regarding Project activities, compensation activities, and minimization and avoidance measures implemented.</p>
3.5-28*	<p>Worker education programs and clearly-defined operational procedures must be implemented by the USDA and County.</p>
3.5-29*	<p>Only Service-authorized biologists may survey for, monitor, handle, and/or relocate Morro shoulderband snails.</p>
3.5-30*	<p>Service-authorized biologists must have the authority to stop work if project-related activities occur outside the demarcated boundaries of the construction footprint.</p>

Mitigation Number [CEQA number]	Mitigation Measure
3.5-31*	The USDA must ensure that the level of incidental take that occurs is commensurate with the analysis contained within this biological opinion.
3.5-32*	The worker education program must include descriptions and pictures of the Morro shoulderband snail, relevant provisions of the Endangered Species Act, specific measures being implemented to conserve the Morro shoulderband snail as they relate to the project and the project boundaries within which the work will occur.
3.5-33*	The USDA and the County must minimize the removal of, or damage to, native vegetation during project activities to the maximum extent possible.
3.5-34*	Only Service-authorized biologists may survey for, monitor, capture, handle, or relocate Morro shoulderband snails. Eric Wier, Kate Ballantyne, and John Farhar are hereby authorized to independently conduct these activities as described in this biological opinion. Katie Drexhage, Kelly Sypolt, and Trevis Warner are authorized to conduct such activities only under the direct supervision of Eric Wier, Kate Ballantyne, and/or John Farhar. The USDA, in conjunction with the County, must request the Service's authorization of any other biologists it wishes to employ to conduct these activities relative to the proposed project. This request must be in writing and received by the Service at least 30 days prior to the intended start date.
3.5-35*	A Service-authorized biologist must monitor the proposed project area(s) daily during work activities, for up to two weeks or until completion of initial site disturbance at each project site, and have the authority to stop project activities that occur outside the demarcated boundaries of the construction footprint and access road and to relocate Morro shoulderband snails to suitable habitat out of harm's way.
3.5-36*	If more than 28 Morro shoulderband snails are found dead or injured during implementation of the project, the USDA or County must contact the VFWO immediately so we can review the project activities to determine if additional protective measures are needed.
3.5-37 [5.5-A1]	The project may adversely affect federally listed species and their habitat. Prior to project approval, the lead Federal agency will enter into formal consultation with the USFWS and/or NMFS. A BO will be prepared by the USFWS and/or NMFS for any action which may result in take of a listed species and its habitat. Pending the determinations made by the USFWS and/or NMFS in a forthcoming BO, the project will be required to fulfill all mitigation obligations and conservation measures conditioned in the BO regarding federally listed species and their habitat.
3.5-38	Prior to the onset of construction activities, a biologist authorized by the USFWS will conduct intensive surveys to

Mitigation Number [CEQA number]	Mitigation Measure
<p>[5.5-A4]</p>	<p>identify and relocate all snail specimens within the impact area on the Broderson and Mid-Town properties, and all suitable habitat areas within the collection system. Only USFWS authorized biologists will survey for, monitor, handle, or relocate Morro shoulderband snails.</p> <p>A biologist authorized by the USFWS will be retained to monitor all construction activities that will take place within suitable habitat for the Morro shoulderband snail. Monitoring activities will be required daily until completion of initial disturbance at each construction area. The monitoring biologist will be granted full authority to stop work at his or her discretion. The monitoring biologist will be responsible for implementing avoidance and minimization measures during construction. The monitoring biologist will stop work if project-related activities occur outside the demarcated boundaries of the construction footprint. The monitoring biologist will stop work if any Morro shoulderband snails are detected within the construction footprint, and will relocate them to suitable habitat out of harm's way prior to construction activities resuming. If no suitable habitat exists in the immediate vicinity of the construction footprint, salvaged specimens may also be transported to an offsite location approved by the USFWS.</p> <p>The County will provide a written report to the USFWS within 90 days following the completion of the project. The report must document the number of Morro shoulderband snails removed and relocated from project areas, the locations of all Morro shoulderband snails' relocations, and the number of Morro shoulderband snails known to be killed or injured. The report will contain a brief discussion of any problems encountered in implementing minimization measures, results of biological surveys, observations, and any other pertinent information such as the acreages affected and restored, or ongoing restoration, of each habitat type.</p>
<p>3.5-39 [5.5-A15]</p>	<p>Prior to project construction, land containing coastal sage scrub habitat and/or other habitat will be acquired on the Broderson property that is sufficient to compensate the loss of habitat for the Morro shoulderband snail, the Morro Bay kangaroo rat, and other sensitive species on the Broderson and Mid-Town properties, and areas in the community of Los Osos that will be served by the collection system. Mitigation lands for the project will be acquired within the remaining acres of land on the Broderson property that will not be impacted by the leachfields.</p> <p>Mitigation lands within the Broderson property will include land that is designated as Critical Habitat for the Morro shoulderband snail; contiguous with existing preservation lands within the Morro Dunes Ecological Reserve and areas studied for the Greenbelt Program by the Land Conservancy; currently supports appropriate soils to accept native plantings for restoration; is capable of being cleared of unfavorable debris and structures; supports primarily windblown sand deposits that are in a stabilized condition (i.e. not mobile dune habitat); is characterized by habitat types with an open canopy; contains appropriate slopes to accommodate snail mobility to and from adjacent lands; and is of appropriate aspect and meteorological conditions.</p>

Mitigation Number [CEQA number]	Mitigation Measure
<p>3.5-40 [5.5-A16]</p>	<p>Within two years of project operation all mitigation land will be preserved in perpetuity and granted to an appropriate agency or conservation organization with the responsibility of management and monitoring the preserve, as determined during agreements between the USFWS, CDFG, and the County. A long-term management and monitoring program will be prepared. The County will be responsible for the allocation of appropriate funding for the long-term management and monitoring of the mitigation land, as determined through agreements between the USFWS, CDFG, and the County.</p> <p>Immediately following construction of the leachfields within the Broderson property, the disturbance area and all existing and unaffected coastal sage scrub (or coastal dune scrub) within the property will be restored, enhanced, and maintained to promote the land's function and value as suitable habitat for sensitive plants and wildlife that are local or endemic to the area. Restoration and enhancement efforts, including at minimum, seeding with native plant species and eradication of exotic non-native plant species, will be repeated immediately following all long-term maintenance activities resulting in temporary disturbance of the leachfields. This will be applied to the ripping and backfilling activities that may be required every 5 to 10 years to maintain the leach field function.</p> <p>Restoration activities will be conducted according to a Restoration Plan or similar plan specifically prepared for the effort and approved by the USFWS, CDFG, and/or the CNPS. The Restoration Plan will require at minimum, a description of the prescribed restoration and methodology, feasibility and likelihood for success, and a schedule and program for maintenance, monitoring and reporting the progress of the restoration effort. All restoration activities will be conducted by qualified personnel with expertise in restoration ecology and knowledge of sensitive plant and wildlife species in the area.</p> <p>The restoration effort will include the implementation of a seed collection program to gather seeds to be used during restoration from native sources. The seed collection program will be prepared for approval by the County prior to project construction activities. The seed collection program will include the use of native plants that will be removed as a result of the project, including but not limited to: mock heather (<i>Ericameria ericoides</i>), silver dune lupine (<i>Lupinus chamissonis</i>), California sagebrush (<i>Artemisia californica</i>), black sage (<i>Salvia mellifera</i>), bush monkey flower (<i>Mimulus aurantiacus</i>), and deerweed (<i>Lotus scoparius</i>). Collection will take place by qualified personnel with expertise in botanical resources during the appropriate time of year for seed production and harvesting.</p> <p>Unless otherwise determined during consultation with the USFWS, the restoration effort will be monitored against permanence standards for a minimum of five years, or until the first ripping event for the restored areas within the leach field area, after which the maintenance and monitoring of the restored areas will be covered within specific management directives contained within a Resource Management Plan. The performance standards will include, at minimum, at</p>

Mitigation Number [CEQA number]	Mitigation Measure
	<p>least 80 percent native plant species coverage and no greater than 1 percent coverage of invasive non-native plant species (e.g. pampas grass, veldt grass). At minimum, the restored areas must demonstrate a continued ability to support the functions and values necessary to sustain the Morro shoulderband snail. Quarterly monitoring will be conducted for the first two years of the restoration effort, with annual monitoring efforts to follow for the remaining three years. All monitoring and maintenance of restoration areas will be conducted by qualified personnel with expertise in botanical resources and knowledge of sensitive species that occur in the local area, including the Morro shoulderband snail, Morro Bay kangaroo rat, and Morro blue butterfly.</p> <p>The County will provide annual reports to the USFWS documenting the results of all restoration and monitoring activities. Annual reports will be provided to the USFWS for a minimum of five years or until it is determined by the USFWS that requisite performance criteria have been met. These reports should include any noted changes in the plant community structure or composition or surface hydrology down-slope of the Broderson leachfields, in addition to other requirements as determined through USFWS consultation and stipulated within permit conditions.</p> <p>All on-going and long-term restoration, enhancement, and maintenance of preserve lands on the Broderson property will be implemented according to a Resource Management Plan or similar mitigation and monitoring plan that may be developed during consultation with the USFWS. The Resource Management Plan will include management directives that are specific to the preserve and the resources present. The Resource Management Plan will include measures for the removal and eradication of invasive exotic plant species known to occur in the local area, including veldt grass and pampas grass. Activities that involve the removal of invasive species should not result in unnecessary trampling or removal of native species, and techniques for invasive removal will be least damaging to native species.</p> <p>Mitigation lands within the Broderson property will include land that is designated as Critical Habitat for the Morro shoulderband snail; contiguous with existing preservation lands within the Morro Dunes Ecological Reserve and areas studied for the Greenbelt Program by the Land Conservancy; currently supports appropriate soils to accept native plantings for restoration; is capable of being cleared of unfavorable debris and structures; supports primarily windblown sand deposits that are in a stabilized condition (i.e. not mobile dune habitat); is characterized by habitat types with an open canopy; contains appropriate slopes to accommodate snail mobility to and from adjacent lands; and is of appropriate aspect and meteorological conditions.</p> <p>Within two years of project operation all mitigation land will be preserved in perpetuity and granted to an appropriate agency or conservation organization with the responsibility of management and monitoring the preserve, as determined during agreements between the USFWS, CDFG, and the County. A long-term management and monitoring program will be prepared. The County will be responsible for the allocation of appropriate funding for the long-term management</p>

Mitigation Number [CEQA number]	Mitigation Measure
3.5-41*	<p>and monitoring of the mitigation land, as determined through agreements between the USFWS, CDFG, and the County.</p> <p>Prior to the initiation of any vegetation clearing, revegetation/habitat restoration, soil disruption, grading, and/or ground-disturbing construction-related activities within the leach field area on the Broderson parcel or any other location within the action area that has potential for occurrence of the species (as determined in coordination with the Service and Department), the County will work with the Service and Department to develop and implement a "no take" strategy for the Morro Bay kangaroo rat. This strategy will include specific take avoidance measures and provide a survey, monitoring, and contingency plan should required periodic maintenance of the leach field area create suitable habitat for the species. Prior to its implementation, the strategy will be reviewed and approved by the Service and the Department and made part of a formal agreement to be signed by all parties.</p>
3.5-42*	<p>Construction in and around riparian habitat associated with Los Osos Creek will occur only between September 15 and October 31. If surveys are conducted by a Service-authorized biologist from March 15 through June 15 and least Bell's vireo breeding activity is not detected, this construction window may be expanded to include the months of July and August.</p>
3.5-43*	<p>Annual Biological Monitoring Reports would be submitted by the County to USDA and the VFWO Office by January 31 of each year. Reports would be submitted for the duration of project construction. These reports would discuss the status and progress of compensation measures implemented. Photographs of mitigation/compensation sites would be included to document progress. If monitoring results indicate that additional measures are necessary to meet the goals set in the biological opinion, additional recommendations would be made and next steps would be agreed upon with appropriate agencies.</p>
Section 3.9: Air Quality	
3.9-1 [5.9-C1]	<p>Prior to initiation of construction, the County will submit a Construction Activities Management Plan for the review and approval of the SLOAPCD. This plan will include but not be limited to the following Best Available Control Technologies for construction equipment:</p> <ul style="list-style-type: none"> a. Minimize the number of large pieces of construction equipment operating during any given period. b. Schedule construction related truck/equipment trips during non-peak hours to reduce peak-hour emissions. c. Properly maintain and tune all construction equipment according to manufacturer's specifications. d. Fuel all off-road and portable diesel powered equipment including but not limited to: bulldozers, graders, cranes, loaders, scrapers, backhoes, generators, compressors, auxiliary power units, with CARB motor vehicle diesel fuel. e. Use 1996 or newer heavy duty off road vehicles to the extent feasible.

Mitigation Number [CEQA number]	Mitigation Measure
	<ul style="list-style-type: none"> f. Use Caterpillar pre-chamber diesel engines (or equivalent) together with proper maintenance and operation to reduce emissions of NOX. g. Electrify equipment where possible. h. Use CNG, LNG, biodiesel, or propane for on-site mobile equipment instead of diesel- powered equipment.
<p>3.9-2 [5.9-C2]</p>	<p>Prior to initiating grading activities, the project will:</p> <ul style="list-style-type: none"> a. Include the following specifications on all project plans: One CDPF will be used on the piece of equipment estimated to generate the greatest emissions. If a CDPF is unsuitable for the potential equipment to be controlled, five diesel oxidation catalysts will be used. b. Identify equipment to be operated during construction as early as possible in order to place the order for the appropriate filter and avoid any project delays. This is necessary so that contractors bidding on the project can include the purchase, proper installation, and maintenance costs in their bids. c. Contact the SLOAPCD Compliance Division to initiate implementation of this mitigation measure at least two months prior to start of construction.
<p>3.9.3 [5.9-C3]</p>	<p>Prior to initiating grading activities, if it is determined that portable engines and portable equipment will be utilized, the contractor will contact the SLOAPCD and obtain a permit to operate portable engines or portable equipment, and will be registered in the statewide portable equipment registration program. The SLOAPCD Compliance Division will be contacted in order to determine the requirements of this mitigation measure.</p>
<p>3.9-4 [5.9-C4]</p>	<p>Project contract documents will include the following dust control measures:</p> <ul style="list-style-type: none"> a. Reduce the amount of the disturbed area where possible, b. Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency will be required whenever wind speeds exceed 15 mph. Recycled (non-potable) water should be used whenever possible. c. All dirt stockpile areas will be sprayed daily as needed, d. Permanent dust control measures identified in the revegetation and landscape plans will be implemented as soon as possible following completion of any soil disturbing activities. e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading will be sown with a fast germinating native grass seed and watered until vegetation is established. f. All disturbed soil areas not subject to revegetation will be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD. g. All roadways, driveways, sidewalks, etc. to be paved will be completed as soon as possible. In addition, building