

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CA 92108-4421
(619) 767-2370



Thu 16d

Filed: April 5, 2006
49th Day: May 24, 2006
180th Day: October 2, 2006
Staff: Gary Cannon-SD
Staff Report: July 20, 2006
Hearing Date: August 8-11, 2006

REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-06-38

Applicant: City of Solana Beach

Agent: Dudek and Associates

Description: Replacement of an existing 12-inch diameter sewer forcemain within San Elijo Lagoon with an approximately 4,040 ft. long, 16-inch diameter sewer forcemain involving approximately 1,040 ft. of trenching within an existing gravel access road and approximately 3,000 ft. of horizontal directional drilling approximately 45 ft. under San Elijo Lagoon.

Site: From Solana Beach Pump Station on the south side of San Elijo Lagoon north approximately 1,040 ft. along an access road and then northeast under San Elijo Lagoon for approximately 3,000 ft. to the south side of Manchester Avenue, Cardiff, Encinitas, San Diego County. APN 261-010-13-01, 02.

STAFF NOTES:

Summary of Staff's Preliminary Recommendation: Staff is recommending approval of the project, with special conditions. The applicant has indicated that the existing 1.1 mile long sewer forcemain is very old and could fail at any time. Given its location within San Elijo Lagoon, the impacts on lagoon resources of a major sewage spill should the existing pipe fail could be significant. As proposed, the trenching and horizontal directional drilling (HDD) operation for installation of the pipeline will not have any direct or indirect impacts to environmentally sensitive habitat. While the project does not include the fill of coastal waters or wetlands, the new sewer forcemain will be placed under San Elijo Lagoon and it has been determined that the project is an incidental public service use which is one of the permitted uses for fill of coastal waters and wetlands. Because there is a potential for accidental spill of drilling fluids during HDD operation, the project has been conditioned to require a Monitoring and Spill Contingency Plan so that any accidental spill of drilling fluid (bentonite) is immediately cleaned up and the site restored. Other conditions include the submission of final plans that include grading and erosion control plans, identification of where any exported spoils will be deposited, the submission of permits or authorization from other agencies and an assumption of risk.

As condition, the proposed project will not have an adverse impact on the environmentally sensitive habitat of San Elijo Lagoon.

Standard of Review: Chapter 3 policies of the Coastal Act.

Substantive File Documents: “Mitigated Negative Declaration for City of Solana Beach Pump Station Forcemain Replacement Project” dated May 2005 by Dudek and Associates, Inc.; “Geotechnical Date Report Solana Beach Force Main Replacement Project” by Allied Geotechnical Engineers, Inc. dated May 4, 2006; CDP Nos. 3-01-113 and A-3-SLO-02-068/Cayucos Sanitary Dist.; 1-05-003/Crescent City;

I. PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

MOTION: *I move that the Commission approve Coastal Development Permit No. 6-06-38 pursuant to the staff recommendation.*

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Final Plans. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit to the Executive Director for review and written approval, final construction plans for the permitted development that have been approved by the City of Solana Beach. Said plans shall be in substantial conformance with the plans submitted by Dudek and Associates, dated received June 28, 2006

The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

2. Drilling Fluid Monitoring and Spill Contingency Plan.

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit for Executive Director approval a project-specific horizontal directional drilling (“HDD”) fluid monitoring and spill contingency plan that includes: (a) an estimate of a reasonable worst case release of drilling fluids into San Elijo Lagoon caused by project operations; (b) a clear protocol for monitoring and minimizing the use of drilling fluids during HDD operations, including criteria for identifying an unanticipated drilling fluid release and proposed fracture sealants; (c) a response and clean-up plan in the event of a spill or accidental discharge of drilling fluids; (d) a list of all clean-up equipment that will be maintained on-site; (e) the designation of the onsite person who will have responsibility for implementing the plan; (f) a telephone contact list of all regulatory and public trustee agencies having authority over the development and/or the project site and its resources to be notified in the event of a spill or material release; and (g) a list of all fluids, additives, and sealants that will be used or might be used, together with Material Safety Data Sheets for each of these materials.

B. In the event that a spill or accidental discharge of drilling fluids occurs during horizontal directional drilling operations, all construction shall cease and shall not recommence except as provided in subsection (C) below:

C. Following discovery of the spill or accidental discharge of drilling fluids, the permittee shall submit to the Executive Director a revised project and restoration plan prepared by qualified professional(s) that provides for: (1) necessary revisions to the proposed project to avoid further spill or accidental discharge of drilling fluids; and (2) restoration of the area(s) affected by the spill or accidental discharge to pre-project conditions. The revised project and restoration plan shall be consistent with any applicable requirements of the USFWS, DFG and/or SDRWQCB. The revised project and restoration plan shall be processed as an

amendment to the coastal development permit. Construction may not recommence until after an amendment to this permit is approved by the Commission, unless the Executive Director determines that no amendment is legally required.

The permittee shall undertake horizontal directional drilling activities in accordance with the approved final plan. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

3. Grading/Erosion Control. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, final grading and erosion control plans and grading schedule that are in substantial conformance with the plans submitted with this application by Dudek and Associates, dated received June 28, 2006. The plans shall first be approved by the City of Solana Beach and shall contain written notes or graphic depictions demonstrating that all permanent and temporary erosion control measures will be developed and installed prior to or concurrent with any on-site grading activities and include, at a minimum, the following measures:

- a. Placement of a silt fence around the project anywhere there is the potential for runoff. Check dams, sand bags, straw bales and gravel bags shall be installed as required in the City's grading ordinance. Hydroseeding, energy dissipation and a stabilized construction entrance shall be implemented as required. All disturbed areas shall be revegetated after grading.
- b. The site shall be secured daily after grading with geotextiles, mats and fiber rolls; only as much grading as can be secured daily shall be permitted. Concrete, solid waste, sanitary waste and hazardous waste management BMP's shall be used. In addition, all on-site temporary and permanent runoff and erosion control devices shall be installed and in place prior to commencement of construction to minimize soil loss from the construction site.
- c. If grading is to occur during the rainy season (October 1st to April 1st) of any year, the applicant shall submit to the Executive Director for review and written approval, a program for monitoring the condition of erosion control devices and the effectiveness of the erosion control program. The monitoring program shall include, at a minimum, monthly reports beginning November 1st of any year continuing to April 1st which shall be submitted to the Executive Director for review and written approval at the end of each month. The reports shall be completed by a licensed engineer and shall describe the status of grading operations and the condition of erosion control devices. Maintenance of temporary erosion control measures is the responsibility of the applicant, including replacement of any devices altered or dislodged by storms.

The permittee shall undertake development in accordance with the approved grading plans. Any proposed changes to the approved grading plans shall be reported to the Executive Director. No changes to the grading plans shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. Disposal of Graded Spoils. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall identify the location for the disposal of graded spoils. If the site is located within the coastal zone, a separate coastal development permit or permit amendment shall first be obtained from the California Coastal Commission.

5. Other Permits. **PRIOR TO THE COMMENCEMENT OF CONSTRUCTION**, the applicant shall provide to the Executive Director, copies of all other required federal, state or local permits for the development. The applicant shall inform the Executive Director of any changes to the development required any of these other permits. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

Additionally, the applicant shall comply with all of the requirements of the following permits, as submitted and attached to this staff report: U.S. Fish and Wildlife Service Informal Consultation #FWS-SDG-4741.1 (Ref. Exhibit #3); California Department of Fish and Game 1603 Streambed Alteration Agreement Notification #1600-2006-0175-R5 (Ref. Exhibit #4)

6. Assumption of Risk, Waiver of Liability and Indemnity Agreement.

A) By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from “frac-outs” and flooding; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission’s approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

B) **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

7. Construction Impacts/Restoration. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit for Executive Director approval a detailed revegetation plan indicating the type, size, and extent of all

plant materials, any irrigation system and other landscape features to revegetate inadvertent temporary wetland impacts. The program shall be developed in consultation with the California Department of Fish & Game and at a minimum shall include:

- a. Post-Construction Survey. The existing condition of the wetland vegetation and substrate at the project site has been documented. The extent of impacts to the vegetation and substrate shall be assessed and documented after completion of the project to determine actual impacts. Temporary wetland impacts shall be revegetated at a 1:1 ratio. If the post-construction survey identifies that permanent wetland impacts have occurred, a permit amendment is required to address the identified impacts. Mitigation shall be provided for any identified permanent wetland impacts at a ratio of not less than 4:1.
- b. Any temporary upland impacts shall be revegetated at a 1:1 ratio. Drought tolerant, non-invasive native plants shall be utilized to re-establish the area consistent with historic conditions.
- c. The following goals, objectives, and performance standards for the restoration sites:
 1. Full restoration of all wetland impacts that are identified as temporary. Restoration of temporarily impacted areas shall include at a minimum, restoration of before-impact hydrology, removal of all non-native plant species, and replanting with locally collected native wetland plant species.
 2. Success criteria and final performance monitoring shall provide at least a 90% coverage of areas disturbed by construction activities within 1 year of completion of construction activities.
 3. The final design and construction methods that will be used to ensure the restoration sites achieve the defined goals, objectives, and performance standards.
 4. Submittal, within 30 days of completion of initial restoration work, of post-restoration plans demonstrating that the revegetated areas have been established in accordance with the approved design and construction methods.
 5. A survey taken one year after revegetation identifying the quantity and quality of the restored plants. If the survey demonstrates the revegetation has been unsuccessful, in part or in whole, the survey shall include a plan for remediation and further surveys/reports until the sites are fully restored.

6. All surveys, reports or other documentation of the revegetation effort shall be submitted to the San Diego office of the Coastal Commission within 30 days of completion.

The permittee shall undertake the development in accordance with the approved plans. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description. The proposed project involves the installation of an approximately 4,040 ft. long, 16-inch diameter sewer forcemain that will convey wastewater from the City of Solana Beach across San Elijo Lagoon to the San Elijo Water Reclamation Facility in Encinitas. The project is necessary in order to replace an existing approximately 1.1 mile-long, 12-inch diameter sewer forcemain within San Elijo Lagoon that is approximately 40-years old and is at risk of failure. The existing forcemain is proposed to be capped on both ends with concrete and abandoned in place beneath the surface of the lagoon. The existing and proposed forcemain convey approximately 90% of the city's wastewater. The proposed development represents a portion of the proposed sewer forcemain replacement that lies within the Commission's original jurisdiction. An additional approximately 1,090 lineal ft. of pipeline will be installed north of San Elijo Lagoon beneath Manchester Avenue and within the San Elijo Reclamation Facility within the City of Encinitas' coastal development permit jurisdiction. The first 300 ft. from of this 1,090 ft. long pipeline lies within the Commission's appeals jurisdiction since it is within 300 ft. of the Mean High Tide Line (MHTL). The City has issued a coastal development permit for this section of the pipeline and no appeal was filed (Ref. 06-037 CDP/City of Solana Beach).

The installation of the approximately 4,040 ft. long forcemain within the Commission's jurisdiction involves approximately 1,040 feet of pipeline that will be constructed using an open trench method within an existing 10 to 15-ft. wide unvegetated access road and an additional 3,000 ft. of pipeline that will be installed approximately 45 ft. underneath San Elijo Lagoon using a Horizontal Directional Drilling (HDD) technique. In addition, two approximately 3,000 ft. long guide wires will be placed by hand on the ground across San Elijo Lagoon to be used for electronic guidance of the HDD operation. The pipeline material will consist of High Density Polyethylene with heat fused (welded) joints. The system capacity will be increased from approximately 2,250 gallons per minute (gpm) to 2,750 gpm.

The proposed development will be located within San Elijo Lagoon seaward of the mean high tide line. As such, the development will be located within the Commission's

original jurisdiction such that the standard of review is Chapter 3 Policies of the Coastal Act.

2. Biological Resources/Water Quality. The following Chapter 3 policies of the Coastal Act are applicable and state:

Section 30230

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

Section 30231

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

Section 30233

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary

navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines. (Emphasis added)

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

[. . .]

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division. . . .

Section 30240

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

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

The proposed replacement sewer forcemain will be located entirely within and below San Elijo Lagoon, an environmentally sensitive habitat area and Regional Park that is managed jointly by the California Department of Fish and Game and the San Diego County Parks and Recreation Department. In addition, San Elijo Lagoon is one of the 19 priority wetlands listed by the State Department of Fish and Game for acquisition. The

lagoon provides habitat for at least five State or Federal-listed threatened or endangered birds that include the California least tern, the light-footed clapper rail, Belding's savannah sparrow, the brown pelican and the western snowy plover. As such, potential adverse impacts on sensitive resources as a result of activity in the lagoon could be significant.

The proposed project involves the installation of approximately 4,040 ft. of sewer pipeline that will extend from the Solana Beach Pump Station (SBPS) which is located near the southwest side of San Elijo Lagoon to the San Elijo Water Reclamation Facility (SEWRF) which is located on the north side of San Elijo Lagoon in the City of Encinitas. The pipeline is approximately 16-inches in exterior diameter and 13-inch interior diameter. The installation of the pipeline will involve traditional open trenching methods and horizontal directional drilling (HDD). The open trench construction will commence from the SBPS within an existing 10 to 15-ft. wide gravel road for a distance of approximately 1,040 feet ending at the abandoned Solana Beach Oxidation Treatment Plant that lies within the lagoon. At the abandoned treatment plant, the applicant proposes to remove the existing abandoned structures and install an HDD drilling rig. Boring for the HDD will commence from the drill rig site for a distance of 3,000 ft. at a depth of 45 ft. underneath San Elijo Lagoon. The boring will surface at the San Elijo Wastewater Treatment Facility which is on the north side of Manchester Avenue (outside of San Elijo Lagoon). Following completion of the bore, the approximately 3,000 ft.-long section of pipeline will be pulled through the bore from the SEWTF (where it will have been assembled) in one continuous operation to the abandoned treatment plant location. Although drilling of the bore is expected to take several months, the installation of the 3,000 ft. of pipeline is anticipated to take from six to 24 hours. Except potentially for the final installation of the 3,000 ft. of pipeline, all work will occur during daylight hours.

As cited above, the Coastal Act requires that environmentally sensitive habitat areas be protected from the adverse impacts associated with new development. However, in this case, the proposed project has been designed to avoid all direct impacts to environmentally sensitive habitat areas and work is proposed to only occur during the avian non-breeding season (September 1 to February 14). In addition, the project has been conditioned by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (DFG) to avoid or minimize any temporary indirect impacts. The applicant's Biological Resources Constraints Analysis identifies the approximately 3.51 acre project footprint area as consisting of 1.1 acres of developed area, 1.1 acres of disturbed non-native habitat and 1.31 of ornamental plantings. Therefore, all impacts are anticipated to occur within the project footprint which does not contain environmentally sensitive habitat. As previously described, approximately 1,040 ft. of the pipeline will be trenched within an existing gravel roadway and approximately 3,000 ft. of the pipeline will be placed approximately 45 ft. under San Elijo Lagoon using the HDD process. The depth of 45 ft. will accommodate future dredging of the lagoon by others if that should ever occur. The project also involves the manual placement (by foot) of two guide wires across the surface of the lagoon to electronically guide the pipeline alignment during the HDD operation. The placement of the guide wires will

have negligible impact to the resources of the lagoon and the wires will be removed following completion of the HDD operation. Staging areas for construction will occur at the Solana Beach Pump Station, the abandoned Solana Beach Oxidation Pond Treatment Facility, the existing gravel road and at the San Elijo Water Reclamation Facility. A total of 20 to 30 truck trips are anticipated to occur each day of the estimated 6-month construction period to deliver and remove heavy equipment, spoils and other materials.

Horizontal Direction Drilling (HDD) is a widely used trenchless method of installing buried pipelines with a minimum of environmental impact. HDD is a process whereby the hole is bored using electronic guidance equipment to provide continuous, accurate monitoring of the drill bit position. The HDD process also involves the use of a drilling fluid that lubricates the drill, transports the spoils and stabilizes the drilled hole.

The HDD process uses fluid jet or mechanical cutting, or both with a low, controlled volume of drilling fluid flow to minimize the creation of voids during initial boring or back-reaming operations. The drilling fluid helps stabilize the bore hole, remove cuttings, provide lubricant for the drill string and cool the drill head. The resultant bentonite and native soil slurry surrounds the pipe, filling the annulus between the pipe and the bored cavity.

The drilling fluid is utilized to carry cuttings back to the drill rig during the initial pilot bore. After completion of the pilot bore, drilling fluid and cuttings will be recovered and managed at the drill-side and pipe-side of the crossing. Drilling fluid and cuttings will be separated at the drill-side staging area with the bentonite slurry being reused and cuttings removed for approved off-site disposal. The staging area will be cleaned and restored to original, or better than original, conditions.

(“Application for Section 1602 Streambed Alteration Agreement” p. 8-9, by Dudek and Associates, dated February 6, 2006)

Although the project has been designed to avoid impacts to the environmentally sensitive habitat, there is a potential for the HDD to cause inadvertent return of drilling fluids into the lagoon:

Although the purpose of the HDD techniques is to avoid open trench impacts, there is potential to impact biological resources through hydrofracture and inadvertent returns (“frac-outs”) of bentonite drilling fluid and cuttings, which could impact aquatic resources during construction. Please note that drilling fluids are typically composed of 97% water and 3% bentonite, a naturally occurring, non-toxic clay mineral commonly found in food products. However, in the event a hydrofracture or frac-out occurs, best management practices (BMPs) will be employed in accordance with the project’s Storm Water Pollution Prevention Plan (SWPPP) to ensure proper cleanup and containment of all drilling fluid. (Ibid. p. 9)

During what is referred to as a “frac-out”, the drilling fluid can reach the surface when the fluid follows a vertical fracture that comes close to the surface and the drilling pressure is sufficient to release the fluid to the surface. The Streambed Alteration

Agreement prepared by the DFG for the subject project identifies that the discharge of bentonite during the HDD operation may “produce a coating on aquatic invertebrates, aquatic plants, and other features of the stream channel; potentially smothering organisms (causing direct mortality), embedding the interstitial spaces in gravel, and filling rearing pools, which may decrease available habitat upon which these fish may depend.” The USFWS and DFG have each required the applicant to incorporate specific BMP’s into their construction to prevent inadvertent returns and to quickly contain and clean up any inadvertent returns. These conditions include requirements that the area above the drilling bit be visually monitored at all times for signs of frac-out and that borehole pressure levels be constantly monitored. In addition, these conditions require the applicant to monitor and quantify any impacts resulting from frac-outs (Ref. Exhibits #3 and #4). In addition, other federal, state or local agencies may require review of the subject development (e.g., Army Corps of Engineers, Regional Water Quality Control Board, State Lands Commission) and may require changes to the proposed project. Special Condition #5 requires the applicant to notify the Executive Director of any changes to the development required by any of these other permits and advises the applicant that an amendment to the subject coastal development permit may be required before such changes can occur.

Although the applicant is required by these resource agencies to monitor the operation of the HDD and be prepared for potential surface release of the bentonite drilling fluid into the lagoon, the applicant has not yet prepared such a specific monitoring and spill contingency plan. Special Condition #2 has been attached which requires the applicant to submit for Executive Director review and approval an HDD Fluid Monitoring and Spill Contingency Plan which identifies a) an estimate of the a worst case scenario resulting from inadvertent returns; b) a protocol for using and minimizing the use of drilling fluids; c) a response and clean-up plan for an accidental release of drilling fluid; d) a listing of all clean-up equipment and material to be kept onsite; e) a designated individual onsite to be responsible for the plan; f) a telephone contact list of all responsible agencies to be contacted in the event of a release of drilling fluid and; g) a list of all fluids, additives and sealants to be used. In addition, the condition requires in the event of a spill or accidental discharge of the drilling fluid that all construction stop and not continue until the Commission has approved an amendment for a revised project and restoration plan unless the Executive Director determines an amendment is not necessary. While it is not anticipated to occur, if a frac-out does occur resulting in the release of the drilling fluid into San Elijo Lagoon, the Monitoring and Spill Contingency Plan will assure that any spill will be immediately cleaned-up and the site restored to its pre-spill condition. This special condition is similar to the conditions placed by the Commission on similar HDD projects in Northern California (Ref. CDP Nos. 3-01-113 and A-3-SLO-02-068/Cayucos Sanitary Dist. and; 1-05-003/Crescent City).

In addition to the HDD operation, approximately 1,040 feet of pipeline will be installed using open trench construction within an existing 10 to 15-ft. wide gravel road adjacent to the lagoon. While the applicant has identified that this activity will not adversely affect environmentally sensitive habitat, if the open trench grading operation occurs during the rainy season (October 1st to April 1st) there remains the potential for sediment

to pollute the lagoon during winter storms. To mitigate this potential, Special Condition #3 has been attached which requires submission of final grading and erosion control plans, a grading schedule, and a monitoring program that demonstrates all permanent and temporary erosion control measures will be developed and installed prior to or concurrent with any on-site grading activities and that repairs will be conducted in a timely way. In addition, Special Condition #5 has been attached which requires the applicant to identify the location of the disposal site for spoils and other debris to assure that it is either outside of the coastal zone or is at a permitted location within the coastal zone.

Incidental Public Purpose.

Section 30233 of the Act prohibits diking, filling or dredging of open coastal waters, wetland or estuaries unless it is one of eight permitted uses. In addition, if it is one of the eight permitted uses, it must also be the least environmentally damaging alternative and must minimize any adverse environmental impacts. In this case, the proposed project involves the installation of a replacement sewer pipeline for the City of Solana Beach. The existing approximately 1.1 mile long section of pipeline that crosses through San Elijo Lagoon is over 40 years old and is at risk of failing. Failure of this aged pipeline within the lagoon could result in thousands of gallons of raw sewage entering into the lagoon and ocean waters. As further explained in Section 4 below, the slight expansion in diameter size of the new pipeline is designed to accommodate existing and planned for development. The expansion will also prevent future sewer spills at SBPS that have been caused by overflow from the existing undersized pipe. The proposed new section of pipeline is considered maintenance of an existing sewer intake line consistent with Section 30233(a)(5) of the Act which allows for fill of coastal waters and wetlands for an incidental public service project. Section 30233(c) limits fill in certain wetlands identified by the Department of Fish and Game, including San Elijo Lagoon, to very minor incidental public facilities, restorative measures, and nature study. In this case, however, no fill of coastal waters or wetlands is proposed. The City is proposing to install the pipeline approximately 45 feet below San Elijo Lagoon using the HDD process without disruption to coastal waters or wetlands. It is unclear whether drilling this far under wetlands, constitutes “diking, filling or dredging” of wetlands as described in Section 30233 of the Coastal Act. However, in this particular case, the proposed development meets the above requirements. As discussed previously, no portion of the proposed sewer pipe would be installed directly within wetlands or any other environmentally sensitive habitat area. Section 30233 of the Coastal Act allow for the installation of incidental public service purposes, including, but not limited to burying pipe within wetlands.

However, if an unintended frac-out should occur during the HDD operation resulting in the release of the bentonite drilling fluid to surface above, then fill in wetlands will have occurred. Although the project is an acceptable use as an incidental public service project, any such fill of wetlands or the waters of the lagoon with bentonite fluid will need to be cleaned-up, removed and the site restored because 30233 also requires mitigation measures be provided to minimize adverse environmental effects. As cited above, Special Condition #2 requires the applicant to submit a Drilling Fluid Monitoring

and Spill Contingency Plan for Executive Director approval before the permit can be released.

In addition, since the project site lies in close proximity to sensitive habitat, if any inadvertent temporary or permanent impacts to wetlands or other environmentally sensitive habitat should occur Special Condition #7 has been attached. Special Condition #7 requires the applicant to perform a post construction survey of the subject site and if any temporary wetland impacts have occurred, the area shall be restored pursuant to an approved restoration plan developed in consultation with DFG. The restoration plan must be submitted for Executive Director approval and must incorporate specific performance standards, goals and objectives. If permanent impacts to wetlands occur, the condition requires the applicant to submit an amendment to the subject coastal development permit.

Alternatives.

Section 30233 also requires that the project be the least environmentally damaging alternative. The City considered several alignment alternatives including installing the pipeline through surface streets instead of through the lagoon. The surface street alternative would require approximately 12,826 ft. of pipeline which would be installed within Highway 101, across the mouth of San Elijo Lagoon and along surface streets within the Cardiff community of Encinitas to the SEWTF. In addition to the added cost of pipeline, the alignment would require the installation of larger pumps, electrical upgrades and increased electrical costs for the lifetime of facility. Traffic impacts were identified as significant in that Highway 101, the primary coastal access roadway between Solana Beach and Encinitas, would need to have at least two lanes of traffic closed for approximately 5 months. This stretch of Highway 101 also provides access to South and North Cardiff State Beaches and numerous restaurants along what is called "Restaurant Row". Disruption to beachgoers and restaurant customers would be significant. In addition, the extension within surface streets in Cardiff would require these streets be closed for approximately 2 months. One of these streets is Manchester Avenue which is one of two major east/west coastal access routes within the Cardiff community that connect Interstate 5 to Highway 101. Closure of this access route would also be significant. Finally, the applicant identified that this stretch of Highway 101 which crosses the mouth of San Elijo Lagoon is under study for modification including the potential creation of a bridge across the mouth of the lagoon to establish permanent tidal opening to the ocean. If that were to occur, the forcemain would have to be replaced. Thus, the applicant has determined that this alternative is not feasible.

Another alternative identified by the applicant involves a different alignment of the pipeline through the lagoon using trenching and HDD methods. The alignment would involve open trenching for a distance of approximately 2,050 ft. north of the Solana Beach Pump Station and then approximately 1,500 ft. of HDD northeast under San Elijo Lagoon and then east within Manchester Avenue to the SEWTF. This alignment is identified as "high risk" because it would require a very steep entry and exit angles of approximately 18 degrees in order to avoid hydrofracture as the hole passes through the

manmade embankment into the estuary deposits. In addition, this alignment would have significant traffic impacts to Manchester Avenue, a highly used coastal access route which would be required to be closed for up to two months. Thus, this alternative was also dismissed by the applicant as not feasible.

The preferred alternative as proposed by the applicant involves approximately 1,040 feet of pipeline that will be constructed using an open trench method within an existing 10 to 15-ft. wide unvegetated access road and an additional 3,000 ft. of pipeline that will be installed approximately 45 ft. underneath San Elijo Lagoon using HDD. This is the most feasible and cost effective alternative with the least potential for adverse environmental impacts. In addition, this proposed alternative will not adversely impact public access along Highway 101 and Manchester Avenue.

Finally, the no project alternative would result in the eventual failure of the existing approximately 1.1 mile long section of sewer pipeline resulting in not only significant wastewater pollution of the lagoon and ocean but potentially significant damage to the resources as emergency measures (heavy equipment and vehicles) are taken within the lagoon to repair any broken or damaged pipeline.

The Commission has received preliminary construction plans for the proposed project. Special Condition #1 requires that applicant to submit final plans that conform to the preliminary plans reviewed by the Commission and requires that the applicant undertake the development based on these approved plans. The condition also notifies the applicant that any changes to the plans can occur without an amendment to the subject coastal development permit unless the Executive Director determines an amendment is not necessary.

In summary, the applicant has identified that the proposed development is a necessary sewer pipeline replacement project which has been designed to avoid adverse impacts to environmentally sensitive habitats. The Commission thus finds that the proposed development is an allowable use under Section 30233. In addition, by drilling under wetlands, the proposed project presents a feasible less environmentally damaging alternative to having to directly fill wetlands, and therefore involves the least environmentally damaging alternative, avoiding all wetland impacts. As conditioned, feasible mitigation is required to minimize all significant adverse impacts that may occur as result of the accidental release of bentonite drilling fluid to the surface of the lagoon. Therefore, the Commission finds the proposed development, as conditioned, is consistent with Sections 30230, 30231, 30233 and 30240 of the Coastal Act.

3. Geologic Stability. The Coastal Act contains policies to assure that new development provides structural integrity, minimizes risks to life and property in areas of high flood hazard, and does not create or contribute to erosion:

Section 30253

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The project involves the construction of an approximately 4,040 ft. long replacement sewer pipeline within an existing dirt access path and subterranean approximately 45 ft. below San Elijo Lagoon using horizontal directional drilling (HDD) methods. To ensure that the construction of the pipeline is designed and undertaken in a manner to avoid any impacts to coastal resources associated with development within the inherently geologically unstable coastal settings, the applicant contracted civil and geo-technical engineering investigations for the project (Ref. "Geotechnical Data Report Solana Beach Force Main Replacement Project" by Allied Geotechnical Engineers, Inc. dated May 4, 2006).

The geo-technical report found the proposed alignment of the replacement sewer pipe to be underlain with artificial fill, estuarine deposits, and bedrock of the Delmar Formation. At the northern end of the boring, approximately 9 feet of artificial fill directly overlies the Delmar Formation (i.e., no estuarine deposits are present). The boring would be mostly in the Delmar formation, which at the depths at which the boring would occur, consists of dense sandy mudstone, very dense fine-grained sandstone, and minor siltstone. According to the Commission's staff geologist, these geologic materials should provide good drilling conditions, minimizing the risk of frac-out, or inadvertent return of drilling fluids to the surface. At the southern end of the alignment, a thin layer of fill is overlain by estuarine deposits, which extend to depths greater than 61 feet. At the depths that the boring would occur, the estuarine deposits consist of very dense silty sand. According to the Commission's staff geologist, this material also should provide good drilling conditions.

The Commission's staff geologist has reviewed the geo-technical report and has concluded that with the provisions for a drilling fluids release contingency plan in place as described above, the development's exposure to and instigation of geologic instability would be minimized consistent with Section 30253.

Additionally, the Commission attaches Special Condition #6, which requires the applicant to assume the risks of frac-outs, damage to the proposed pipeline, and other destruction or injury due to hazards from erosion, and geologic instability and waive any claim of liability on the part of the Commission. Given that the applicant has chosen to implement the project despite these risks, the applicant must assume the risks. In this way, the applicant is notified that the Commission is not liable for damage as a result of

approving the permit for development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand hazards.

Thus, the project as proposed and conditioned would assure stability and structural integrity, primarily because the sewer pipeline has been designed with site-specific conditions taken into account, utilizing established design principles to ensure the structure can adequately withstand the geophysical and hydraulic forces it would be exposed to during the economic lifespan of the facility. In addition, the suitability of the materials through which the bore would traverse was ascertained. Therefore, the Commission finds the project as designed and conditioned would minimize risks to life and property in areas of high flood hazard, and assure stability and structural integrity of the site and its surroundings, as required by Section 30253.

4. New Development/Growth Inducement.

Section 30250.

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

Given that the proposed development involves the replacement of existing 12-inch diameter sewer forcemain with one that is 16-inch exterior diameter and 13-inch interior diameter, there is a question as to whether the project will be growth inducing so as to accommodate new development. In this case, the proposed improvements are designed primarily to replace an existing forcemain that is at great risk of failure. The pipeline will only have a slightly larger interior diameter than the existing pipeline and will increase capacity from approximately 2,250 gallons per minute (gpm) to 2,750 gpm. However, the proposed increase in capacity is only designed to accommodate ultimate build-out of the City of Solana Beach consistent with existing land use and zoning requirements. Although the City of Solana is a relatively small city and is generally built-out without large tracks of undeveloped land, a certain level of increased capacity will be necessary to accommodate infill development on the few remaining undeveloped parcels. In addition, the expansion will prevent future spills from occurring at the SBPS. The existing 12-inch forcemain has on occasion become overwhelmed by flows resulting in wastewater spills at the SBPS. Based on this information, the proposed improvements to the sewer system should not have a significant overall inducement to growth. Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section 30250 (a) of the Coastal Act.

5. Public Access and Recreation. The Coastal Act emphasizes the need to protect and provide for public access to and along the coast, and to provide low cost recreational

facilities, particularly in new development projects. The following Coastal Act policies are applicable to the proposed development:

Section 30210

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30212.

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,

(2) adequate access exists nearby, or,

(3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

In addition, Section 30604(c) of the Coastal Act requires that a specific access finding be made in conjunction with any development located between the first coastal roadway and the sea, indicating that the development is in conformity with the public access and public recreation policies of Chapter 3. The proposed project will be located between the sea (San Elijo Lagoon) and the first coastal roadways (Manchester Avenue in Encinitas and Seabright Lane in Solana Beach). Public access to and along the shoreline to the north, south and west of the subject site will be generally unaffected by the proposed development with the exception of increased traffic along route resulting from the estimated 20 to 30 daily truck trips for disposal of the spoils and other materials from the development site. However, this increased traffic will only occur for an approximately 6-month period from September 1 to February 14 of any year and not during summer months. The proposed project will have temporary impacts to one public trail within San Elijo Lagoon. The gravel access road that leads from Solana Beach into the lagoon to the Solana Beach Pump Station and the abandoned Solana Beach Oxidation Treatment Plant currently is available to the public as an access path. Because of the trenching activities within the access road and constructed related activities, this section of trail will be temporarily closed until the end of construction which is estimated to be until February 14, 2007. This trail will be restored following construction to its pre-existing condition.

In addition, adequate public access exists along the shoreline and elsewhere within the lagoon such that it is not necessary to require additional public access at this location.

Additional trails at this location could also adversely affect fragile resources within the lagoon. Therefore, since no permanent adverse impacts to public access will occur as a result of this project and adequate access currently exists along the shoreline, the proposed project is consistent with the public access and recreation policies of the Coastal Act.

6. Local Coastal Planning. The proposed project lies within San Elijo Lagoon which is in the City of Encinitas. Although the City of Encinitas has a certified LCP, the proposed development described herein lies entirely within the Commission's original jurisdiction in an area that is not subject to the LCP, thus Chapter 3 policies are the standard of review.

Based on the preceding discussion in this report, the Commission finds that the proposed development, as conditioned, is consistent with all applicable Chapter 3 policies of the Coastal Act; thus, no adverse impacts to coastal resources are anticipated. The Commission also finds, that based on the above, the proposed development would not prejudice the ability of the City of Encinitas to continue to implement their local coastal program.

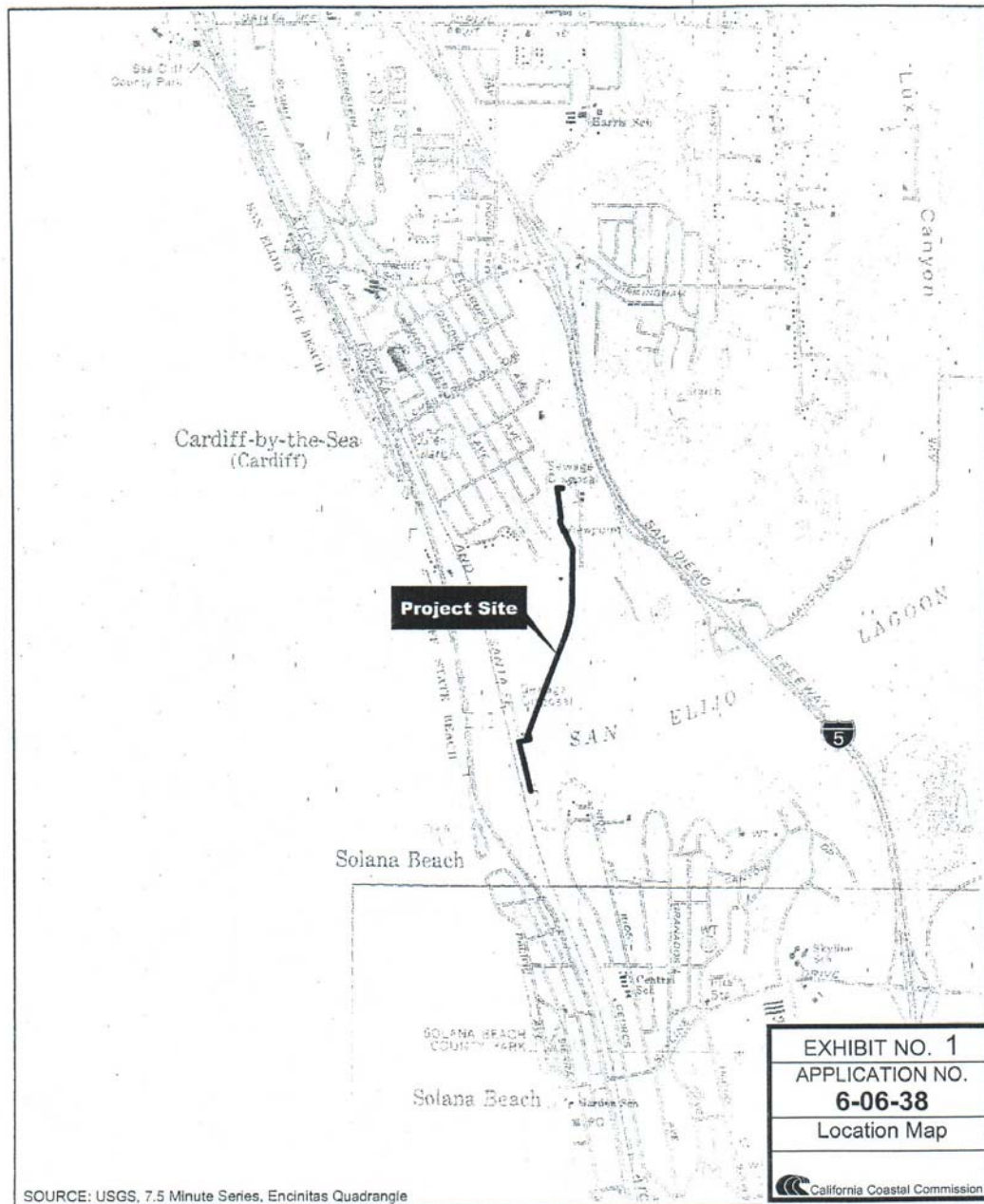
7. Consistency with the California Environmental Quality Act (CEQA). Section 13096 of the Commission's Code of Regulations requires Commission approval of coastal development permits to be supported by a finding showing the permit to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

As discussed herein, the proposed project will not cause significant adverse impacts to the environment. Specifically, the project, as conditioned, has been found consistent with the biological, marine resources, and water quality policies of the Coastal Act. There are no feasible alternatives or mitigation measures available which would substantially lessen any significant adverse impact which the activity might have on the environment. Therefore, the Commission finds that the proposed project is the least environmentally damaging feasible alternative and is consistent with the requirements of the Coastal Act to conform to CEQA.

STANDARD CONDITIONS:

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

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. 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.



Solana Beach Pump Station Forcemain Replacement Project
Coastal Development Plan Permit Application
Vicinity Map





United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011



In Reply Refer To:
FWS-SDG-4741.1

APR 26 2006

Ms. Elizabeth Goldmann, Environmental Specialist
United States Environmental Protection Agency
Region IX, Southwest Border Office
75 Hawthorne Street
San Francisco, California 94105-3901

Subject: Informal Consultation for the Solana Beach Pump Station Forcemain Replacement Project, San Diego County, California

Dear Ms. Goldmann:

This purpose of this letter is to provide the U.S. Fish and Wildlife Service's (Service) evaluation of your electronic mail, dated April 3, 2006, requesting our concurrence under the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) that the Solana Beach Pump Station Forcemain Replacement Project may affect but is not likely to adversely affect the federally-listed endangered light-footed clapper rail (*Rallus longirostris levipes*; clapper rail) and California brown pelican (*Pelecanus occidentalis californicus*; brown pelican), and the federally listed as threatened coastal California gnatcatcher (*Poliopitila californica californica*; gnatcatcher). The U.S. Environmental Protection Agency (EPA) is providing funding for the proposed project to the City of Solana Beach (City).

According to the Draft Environmental Assessment (EA), dated April 2006, submitted in support of your request, the proposed project is located in the City of Encinitas immediately north of the boundary of the City. The proposed project consists of replacing a 40-year old pipeline with a new forcemain pipeline under the San Elijo Lagoon. The Solana Beach Pump Station (SBPS) is located on the southern side of the San Elijo Lagoon, formally known as the San Elijo Lagoon County Park and Ecological Reserve, and immediately east and adjacent to the North County Transit District (NCTD) trail tracks.

The pipeline would be installed using both conventional trenching methods and Horizontal Directional Drilling (HDD). The portion of the pipeline to be installed using conventional trenching methods, approximately 1,040 feet, would be located within a 10- to 15-foot wide existing gravel access road from the SBPS to the abandoned Solana Beach Oxidation Pond Treatment Plant. The pipeline would then turn northeast under the lagoon using HDD for



EXHIBIT NO. 3
APPLICATION NO.
6-06-38
USFWS Informal Consultation Requirements
Page 1 of 8
California Coastal Commission

Ms. Elizabeth Goldmann (FWS-SDG-4741.1)

2

approximately 3,000 feet, under the San Elijo Water Reclamation Facility for another 1,010 feet, and terminate at the northern end of the Water Reclamation Facility. The pipeline would be installed 45 feet or more below the surface of the lagoon. Approximately 80 feet of pipeline within the Water Reclamation Facility would also be installed using the open trench method. Field construction of the project would last approximately six months between September 2006 and February 15, 2007.

Disruption of the lagoon would be minimal and would involve manual placement (on foot) of two guide wires across the lagoon surface to electronically guide the pipeline alignment during the HDD effort. The guide wires would be removed upon project completion. The HDD drill rig would be set up above ground at the abandoned Solana Beach Oxidation Pond Treatment Plant. During the drilling process, the entire length of the pipeline would be assembled at the San Elijo Reclamation Facility to be pulled back through the completed tunnel in one continuous operation. This may be conducted during one continuous 24-hour period.

Staging areas for equipment, vehicles and materials would be located at the SBPS, abandoned Solana Beach Oxidation Pond Treatment Plan, along the existing gravel access road, and at the San Elijo Water Reclamation Facility. The use of an HDD drill rig, delivery trucks, dump trucks, a crane loader, backhoe, an engine driven hydraulics pump, an engine driven generator, soil classified equipment, and forklift would be necessary for project construction. A total of 20 to 30 daily truck trips are anticipated to occur throughout the six-month construction period to deliver heavy equipment, remove spoils, debris and material. Access to and from the construction site would occur via I-5 on the east, and local access from Manchester Avenue, Lomas Santa Fe Drive, Rios Avenue, and Highway 101 to the north, south, and west.

According to the Biological Resources Constraints Analysis (Appendix A in the draft EA), seven habitat types or land covers were identified within the project area during the October 2003 field surveys: cismontane alkali marsh (4.53 acres), coastal salt marsh (0.26 acre), open water (0.04 acre), developed (4.67 acres), ornamental plantings (1.82 acres), and disturbed habitat (1.59 acres). The 3.51-acre project impact footprint consists of 1.1 acres of developed area, 1.1 acres of disturbed habitat, and 1.31 acres of ornamental plantings. A Cooper's hawk (*Accipiter cooperii*) was observed flying over the proposed project site; however, no suitable nesting habitat occurs within the project area. The clapper rail has the potential to occur within coastal salt marsh habitat which occurs adjacent to the staging areas and existing gravel road. Gnatcatchers may occur within the coastal sage scrub located adjacent to the proposed pipe lay-down areas to the north and south of the project's study area, and the brown pelican may occur in open water areas in the lagoon. However, no federally listed plant or animal species were detected or are expected to occur within the project impact footprint.

Clearing staging areas and trenching activities would directly impact a total of 3.51 acres of non-native habitat types; however, no direct impacts native habitats and/or federally listed species are planned or expected because direct impacts are restricted to developed lands, disturbed habitat, and ornamental vegetation. Direct impacts are not expected to result from HDD techniques or

Ms. Elizabeth Goldmann (FWS-SDG-4741.1)

3

placement and removal of the two guide wires. There is a low potential for HDD to cause surface heaving or hydrofracture and inadvertent returns of drilling fluids in the lagoon. Surface heaving could result from pressure increases due to continued pumping of drilling fluid after loss of circulation. Surface subsidence could result from over-excavation of the bore hole that would result in sloughing from the ground surface. Hydrofracture and inadvertent returns could result from sudden change in substrate density (e.g., from clay to sand) causing the release of pressurized drilling slurry to the surface. Best management practices (BMPs) will be implemented to reduce the potential for these events to occur.

Temporary indirect impacts to native habitats and/or jurisdictional wetlands and sensitive wildlife, including federally listed species, within the lagoon could potentially occur from project construction. Indirect impacts to native habitats would be avoided and/or minimized through the implementation of design and conservation measures given below.

The City, through its contractor, shall implement the following BMPs:

Hydrology and Water Quality

- Incorporate BMPs such as the use of silt fencing and direction of construction area drainage to existing storm drain facilities rather than toward waterways. Direction of construction area drainage would be accomplished through use of gravel bags, hay bales, or similar devices along all graded areas to minimize sediment transport.
- Upon project completion, revegetate disturbed areas.
- Conduct dewatering in accordance with the standard regulations of the RWQCB. A permit to discharge water from dewatering activities will be required.
- Obtain a National Pollution Discharge Elimination System (NPDES) General Storm Water Permit. The permit will require the City to outline all BMPs planned in order to reduce potential water quality impacts. At a minimum the BMPs would include discharging water through silt fencing or other pervious materials to remove silt prior to entry into the lagoon.

Noise

- Use construction vehicles or equipment with properly operating and maintained mufflers when operated within 1,000 feet of a dwelling or noise sensitive use.
- Locate all stockpiling and/or staging areas during construction as far as practical from dwellings and other noise sensitive receptors.

Biological Resources

- To reduce the potential for soil collapse or subsidence beneath San Elijo Lagoon:
 - a) Conduct the bore and forcemain installation at a depth that allows local buried sloughing, with in-fill of the borehole only in the immediate vicinity of the relatively deep borehole;
 - b) Avoid over-excavation by monitoring of material removed versus supply and theoretical volume required.

Ms. Elizabeth Goldman (FWS-SDG-4741.1)

4

- c) Avoid use of thin drilling fluids and high velocities. If working in soft or loose soils, confirm through materials monitoring and management, that the annulus is being filled as the bore progresses.
 - d) Pre-assemble and pressure test any carrier to be pressurized in normal service to confirm integrity of the pipeline.
 - e) Ensure sufficient earth cover over the bore.
- To reduce the potential for soil heaving beneath San Elijo Lagoon:
- a) Maintain circulation and drilling at a pace suitable for the soil conditions encountered;
 - b) If circulation is lost, retract to regain circulation before proceeding by slowing drill rates and careful monitoring.
 - c) Monitor borehole pressures, adjacent structures, and facilities when drilling or reaming without circulation.
- To reduce the potential for hydrofracture and inadvertent returns that could pollute San Elijo Lagoon:
- a) Use sufficient earth cover to increase resistance to hydrofracture;
 - b) Bore beneath areas of the lagoon with high groundwater above the bore to counterbalance drilling fluid pressures;
 - c) Use a drilling fluid adequately dense to avoid travel of drilling fluid in porous sands;
 - d) Conduct the bore in a manner that avoids collapse;
 - e) Maintain borehole pressures low enough to avoid hydrofracture;
 - f) Maintain reaming and pullback rates slow enough to avoid over-pressurization of the bore;
 - g) Visually monitor the ground surface above the vicinity of the drill head and/or reamer for surface evidence of hydrofracture;
 - h) Modify drilling methods to suit site conditions such that hydrofracture does not occur.

To avoid and/or minimize impacts to biological resources, including federally listed species, the following conservation measures will be employed during construction of the proposed project by the City or the City's contractor:

1. Immediate containment and/or clean-up of inadvertent returns of drilling fluids associated with HDD techniques shall occur, as well as monitoring and quantification of impact. Depending on the amount of material, the inadvertent return may be removed. If it needs to be removed, the material shall be removed by hand tools. The area shall be accessed by whatever means feasible (i.e., on foot, by boat, etc.). Since an inadvertent return would likely occur in the main body of the lagoon (areas of open water), it is not anticipated that further remediation would be necessary. The City shall obtain a Streambed Alteration Agreement from the California Department of Fish and Game prior to implementing the proposed project. The Service shall be notified immediately if surface heaving, hydrofracture and/or

Ms. Elizabeth Goldmann (FWS-SDG-4741.1)

5

inadvertent spills from the HDD occur to determine if initiation of formal consultation is warranted for the project.

2. The City or its contractor shall temporarily fence (with silt barriers) the limits of project impacts (including construction staging areas and access routes) to prevent habitat impacts and prevent the spread of silt from the construction zone into adjacent habitats to be avoided. Fencing shall be installed in a manner that does not impact habitats to be avoided. If work occurs beyond the fenced or demarcated limits of impact, all work shall cease until the problem has been remedied to the satisfaction of the Resource Agencies. Any riparian/wetland or upland habitat impacts that occur beyond the approved fenced shall be mitigated at a minimum 5:1 ratio. Temporary construction fencing shall be removed upon project completion.
3. The contractor shall not be allowed to discharge dewatering groundwater to the lagoon without a NPDES dewatering permit from the RWQCB.
4. During trenching activities, the contractor shall backfill at the end of each day or install a steel plate over night in order to prevent animals from falling into the open trench.
5. Light-footed clapper rail pre-construction surveys shall be conducted by a biologist permitted by the Service under section 10(a)1(A) of the Endangered Species Act. If coastal sage scrub habitat is determined to be present adjacent to proposed trenching activities, pre-construction gnatcatcher surveys shall be conducted by a biologist permitted by the Service under section 10(a)1(A) of the federal Endangered Species Act.
6. Night lighting of construction areas shall be of the lowest illumination necessary for human safety, selectively placed, shielded and directed away from natural habitats.
7. Construction of the proposed project shall occur outside of the avian breeding season (February 15 through August 31, or sooner if a qualified biologist demonstrates to the satisfaction of the USFWS that all nesting is complete). Pre-construction surveys shall be conducted for the light-footed clapper rail and gnatcatcher within sensitive habitat areas where it is present adjacent to trenching activities, and along the alignment of the two guide wires associated with the proposed project. If a light-footed clapper rail or gnatcatcher is detected, the Service will be contacted to develop measures that shall be implemented to minimize the noise and disturbance to those adjacent birds. Exceptions to this measure include cases where surveys for the light-footed clapper rail and gnatcatcher confirm that adjacent habitat is not occupied or where noise studies confirm that construction noise levels are no higher than ambient noise in adjacent sensitive habitat.
8. A monitoring biologist approved by the USFWS shall be onsite during project construction within 500 feet of sensitive habitat to ensure compliance with all conservation measures. The

Ms. Elizabeth Goldmann (FWS-SDG-4741.1)

6

biologist must be knowledgeable of light-foot clapper rail, brown pelican, and coastal California gnatcatcher biology and ecology. The biologist shall perform the following duties:

- a. Be on site during all project construction activities within 500 feet of sensitive habitat to be avoided;
 - b. Inspect the fencing and erosion control measures a minimum of once per week and daily during all rain events to ensure that any breaks in the fence or erosion control measures are repaired immediately. Inspect the project area for surface heaving, hydrofracture and/or inadvertent spills from the HDD;
 - c. Halt work, if necessary, and confer with the USFWS to ensure the proper implementation of species and habitat protection measures. The biologist will report any violation to the Service within 24 hours of its occurrence;
 - d. The biological monitor will also submit a final report to the USFWS within 60 days of project completion that includes: as-built construction drawings with an overlay of habitat that was impacted and avoided, photographs of habitat areas that were to be avoided, and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conditions of this consultation was achieved.
9. The City shall ensure that the following conditions are implemented during project construction:
- a. Employees or contractors shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint;
 - b. To avoid attracting predators of the light-footed clapper rail, brown pelican, and coastal California gnatcatcher, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site;
 - c. Pets of project personnel shall not be allowed on the project site;
 - d. Disposal or temporary placement of excess fill, brush or other debris shall not be allowed in waters of the United States or their banks;
10. For all on-site mobile and stationary equipment, the Contractor shall be required to prepare and submit for City of Solana Beach review and approval a pollution control plan for oil, grease, hydraulic fluid, solvents, fuel, and other hydrocarbon based materials for all mobile and stationary construction equipment. The plan shall include pollution awareness and control training of prime contractor and subcontractor personnel allowed on the site. As a

Ms. Elizabeth Goldmann (FWS-SDG-4741.1)

7

minimum, the pollution control plan shall include the following requirements for mobile and stationary equipment.

a. For mobile rubber-tired or tracked vehicles, the following requirements shall apply:

- i. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated fenced project staging area(s) remote from waters of the United States or in existing commercial fueling stations or maintenance business establishment.
- ii. Designated staging areas shall be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the United States, and shall be shown on the construction plans.
- iii. Fueling of equipment shall take place within existing paved areas greater than 100 feet from waters of the United States.
- iv. Discourage "topping-off" of fuel tanks.
- v. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary.
- vi. "No-fueling zones" shall be designated on the construction plans.

b. For non-tired motor driven equipment that remains stationary during the drilling operation, the following requirements shall apply:

- i. Onsite vehicle and equipment maintenance and refueling shall only be used where it is impractical to send equipment offsite for maintenance and repair.
- ii. Provide full-time secondary containment of a volume greater than the maximum stationary storage volume with drip pans or fuel resistant polyethylene-lined basin areas directly under all areas of potential grease, oil, hydraulic fluid, and fuel leakage or spills.
- iii. Vehicles and equipment shall be inspected each day of use for leaks. Leaks shall be repaired immediately or problem vehicles or equipment should be removed from the project site.
- iv. Keep ample supplies of spill cleanup materials on-site. Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.

Ms. Elizabeth Goldman (FWS-SDG-4741.1)

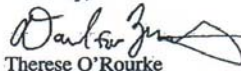
8

- v. All fueling trucks and fueling areas are required to have spill response kits and/or use other spill protection devices.
- vi. Inspect equipment every day at startup and repair equipment as needed, (i.e., worn or damaged hoses, fittings, and gaskets). Recheck equipment at shift changes and at the end of the day and make any needed repairs before continuing work.
- vii. Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
- viii. Segregate and remove from the site all oil, grease, hydraulic fluid, solvent, and fuel wastes immediately following maintenance and/or refueling for proper off-site disposal.
- ix. Inspect and verify that activity-based requirements are in place prior to the commencement of associated activities. Inspect contamination mitigation requirements on a daily basis during the course of work.

Based on the information provided, including the EPA and City's commitment to implement the BMPs and conservation measures given above, the Service concurs with your determination that the proposed project is not likely to adversely affect the clapper rail and gnatcatcher and will have no affect on the brown pelican. Any EPA funding agreement for the project should include a condition that requires the City to implement the BMPs and conservation measures, and state that failure to comply with the BMPs and conservation measures would constitute non-compliance with the EPA funding agreement and be subject to enforcement by the EPA in coordination with the Service. Based on the above information, the interagency consultation requirements of section 7 of the Act have been satisfied. Should project plans change; surface heaving, hydrofracture and/or inadvertent spills from the HDD occur; or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

We appreciate your efforts to comply with the requirements of the Act. If you have any questions regarding this letter, please contact Janet Stuckrath of my staff at (760) 431-9440 extension 270.

Sincerely,



Therese O'Rourke
Assistant Field Supervisor

cc: Sherri Miller, Dudek & Associates
Steve Deering, Dudek & Associates
Chandra Collure, City of Solana Beach

CALIFORNIA DEPARTMENT OF FISH AND GAME
4949 Viewridge Avenue
San Diego, California 92123

Notification No. 1600-2006-0175-R5

AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and Ms. Chandra Collure, representing the City of Solana Beach, 635 S. Highway 101, Solana Beach, CA 92075, Telephone (858) 720-2472, Fax (858) 720-2475, hereinafter called the Operator, is as follows:

WHEREAS, pursuant to Section 1602 of California Fish and Game Code, the Operator, on the 7th day of February, 2006, notified the Department that they intend to divert or obstruct the natural flow of, or change the bed, channel, or bank of, or use material from the streambed(s) of, the following water(s): San Elijo Lagoon, tributary to the Pacific Ocean, San Diego County, California, Section 34, Township 13S, Range 4W; USGS Map: Encinitas

WHEREAS, the Department has determined that such operations may substantially adversely affect those existing fish and wildlife resources within San Elijo Lagoon, tributary to the Pacific Ocean, specifically identified as follows: Birds: Beldings savannah sparrow (*Passerculus sandwichensis beldingi*), elegant tern (*Sterna elegans*), light-footed clapper rail (*Rallus longirostris levipes*), California brown pelican (*Pelecanus occidentalis californicus*), California coastal gnatcatcher (*Polioptila californica californica*), double-crested cormorant (*Phalacrocorax auritus*), great blue heron (*Ardea herodias*), great egret (*Casmerodius albus*), snowy egret (*Egretta thula*), Cooper's hawk (*Accipiter cooperii*), American kestrel (*Falco sparverius*), American coot (*Fulica americana*), black-necked stilt (*Himantopus mexicanus*), long-billed curlew (*Numenius americanus*), greater yellowlegs (*Tringa melanoleuca*), gull (*Larus* sp.), tern (*Sterna* sp.), rock dove (*Columba livia*), black phoebe (*Sayornis nigricans*), scrub jay (*Aphelocoma coerulescens*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), song sparrow (*Melospiza melodia*), California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), mallard (*Anas platyrhynchos*); Reptiles: western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*); Mammals: coyote (*Canis latrans*), raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyi*), brush rabbit (*Sylvilagus bachmani*), Botta's pocket gopher (*Thomomys bottae*); and all other aquatic and wildlife resources, including the cismontane alkali marsh, salt marsh, open water, ornamental vegetation and surrounding coastal sage scrub which provide habitat for such species in the area.

THEREFORE, the Department hereby proposes measures to protect fish and wildlife resources during the Operator's work. The Operator hereby agrees to accept the following measures/conditions as part of the proposed work.

If the Operator's work changes from that stated in the notification specified above, this Agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. Failure to comply with the provisions of this Agreement and with other pertinent code sections, including but not limited to Fish and Game Code Sections 5650, 5652, 5937, and 5948, may result in prosecution.

Nothing in this Agreement authorizes the Operator to trespass on any land or property, nor does it relieve the Operator of responsibility for compliance with applicable federal, state, or local laws or ordinances. A consummated Agreement does not constitute Department of Fish and Game endorsement of the proposed operation, or assure the Department's concurrence with permits required from other agencies.

This Agreement becomes effective the date of Department's signature and terminates February 15, 2007 for project construction only. This Agreement shall remain in effect for that time necessary to satisfy the terms/conditions of this Agreement.

EXHIBIT NO. 4
APPLICATION NO.
6-06-38
DFG Streambed Alteration Agreement
Page 1 of 7
 California Coastal Commission

STREAMBED ALTERATION CONDITIONS FOR NOTIFICATION NUMBER: 1600-2006-0175-R5

Pursuant to Section 1600 et. seq., the Operator may request one extension of the agreement; the Operator shall request the extension of this Agreement prior to its termination. The one extension may be granted for up to five years from the date of termination of the Agreement and is subject to Departmental approval. The extension request and fees shall be submitted to the Department's South Coast Office at the above address. If the Operator fails to request the extension prior to the Agreement's termination, then the Operator shall submit a new notification with fees and required information to the Department. Any construction/impacts conducted under an expired Agreement are a violation of Fish and Game Code 1600 et. seq. For complete information, see Fish and Game Code 1600 et. seq.

PROJECT LOCATION:

The project is located along the southern side and underneath the San Elijo Lagoon, City of Encinitas, San Diego County.

PROJECT DESCRIPTION:

The Operator proposes to construct a new forcemain pipeline underneath the San Elijo Lagoon. The pipeline will replace a 40 year old pipeline buried at separate location under the lagoon. The forcemain pipeline will be installed using both conventional trenching methods and Horizontal Directional Boring (HDD). Conventional trenching methods will be used for approximately 1,040 feet within a 10-15-foot wide existing gravel access road from the Solana Beach Pump Station to the abandoned Solana Beach Oxidation Pond Treatment Plant. The pipeline will then turn northeast under the lagoon using HDD for approximately 3,000 feet, under the San Elijo Water Reclamation Facility for another 1,010 feet, terminating at the northern end of the Water Reclamation Facility. The pipeline will be installed 45 feet or more below the surface of the lagoon. The open trench method will then be used again for an additional 80 feet of pipeline within the Water Reclamation facility. Disruption of the lagoon involves manual placement (on foot) of two guide wires across the lagoon surface to electronically guide the pipeline alignment during the HDD effort. The guide wires will be removed upon completion of the project. Construction will last approximately six months between September 2006 and February 15, 2007. Staging areas for equipment, vehicles and materials will be located at the Solana Beach Pump Station abandoned Oxidation Pond Treatment Plant, along the existing gravel access road and the San Elijo Water Reclamation Facility. Additional staging for assembling the pipeline will occur within the San Elijo Water Reclamation Facility and along existing road way leading into the Water Reclamation Facility. Access to and from the construction site will occur via I-5 on the east, and local access from Manchester Avenue, Lomas Santa Fe Drive, Rios Avenue, and Highway 101 to the north, south and west.

CONDITIONS:

The following provisions constitute the limit of activities agreed to and resolved by this Agreement. The signing of this Agreement does not imply that the Operator is precluded from doing other activities at the site. However, activities not specifically agreed to and resolved by this Agreement shall be subject to separate notification pursuant to Fish and Game Code Sections 1600 et. seq.

General:

1. The agreed work includes activities associated with the Project Location and Project work that is described above. Specific work areas and mitigation measures are described on/in the plans and documents submitted by the Operator (Notification of Lake or Streambed Alteration, and Mitigated Negative Declaration, dated May, 2005), and shall be implemented as proposed unless directed differently by this Agreement.
2. The Operator shall provide a copy of the Agreement to all contractors, subcontractors, and the Operator's project supervisors. Copies of the Agreement shall be readily available at work sites at all times during periods of active work and must be presented to any Department personnel, or personnel

STREAMBED ALTERATION CONDITIONS FOR NOTIFICATION NUMBER: 1600-2006-0175-R5

from another agency upon demand.

3. The Operator shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be sent to the Department at 4949 Viewridge Avenue, San Diego, CA 92123, Attn: Tamara A. Spear, SAA#1600-2006-0175-R5.

4. In the event that the project scope, nature, or environmental impact is altered by the imposition of subsequent permit conditions by an local, state or federal regulatory authority, the Operator shall notify the Department of any imposed project modification that interfere with compliance to Department conditions.

5. The disturbed portions of the stream channel within the normal high-water mark of the stream shall be restored to as near their original condition as possible. Stream grade, contour and meander shall be maintained.

IMPACTS:

6. The Operator shall not impact the bed, bank or channel of the San Elijo Lagoon. All work shall be conducted outside the bed, bank and channel of the stream with the exception of placing the two guide wires as described above.

MITIGATION:

7. The Operator shall mitigate at a minimum 5:1 ratio for impacts beyond those authorized in this Agreement. In the event that additional mitigation is required, the type of mitigation shall be determined by the Department and may include creation, restoration, enhancement and/or preservation.

BIOLOGICAL SURVEYS AND TIME RESTRICTIONS:

8. The Operator shall not conduct project activity from February 15th to August 31st, to avoid impacts to nesting birds.

HABITAT PROTECTION:

9. The Operator shall have a qualified biologist onsite daily during construction for the purpose of monitoring and enforcing conditions of this agreement.

10. Preparation shall be made so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.

11. The perimeter of the work site shall be adequately flagged to prevent damage to adjacent riparian habitat.

12. The work area shall be identified to all workers, as represented in plans. Native vegetation shall not be removed or intentionally damaged or beyond the designated work area.

13. Except where provided for within this agreement, the removal of soil and native vegetation from the streambed or streambanks is prohibited without prior written approval from the Department. The removal of soil, native vegetation and vegetative debris from the streambed or stream banks is prohibited, except as otherwise specified within this Agreement; however, the Operator may remove all human generated debris, garbage and trash.

STREAMBED ALTERATION CONDITIONS FOR NOTIFICATION NUMBER: 1600-2006-0175-R5

14. No direct or indirect impacts shall occur to any threatened or endangered species as a result of implementing the project or the project's mitigation activities. If any threatened or endangered species could be impacted by the work proposed, U.S. Fish and Wildlife Service (USFWS) protocol surveys shall be conducted prior to implementing the project, or the project's mitigation activities. If necessary, the Operator shall obtain the required state and federal threatened and endangered species permits. If there is no USFWS survey protocol for a particular listed species, the Department shall be consulted to determine appropriate survey procedures. The Department shall be provided copies of survey reports prior to project implementation, and prior to the implementation of mitigation activities. This agreement does not authorize the take of any federal or state threatened or endangered species.

DIRECTIONAL BORING PROTOCOL:

15. The Department is concerned regarding the potential impact an uncontrolled frac-out may have on sensitive resources (streams, wetlands, and associated threatened and endangered species) but agrees to the use of BENTONITE under the following Directional Drilling Protocol. This protocol is intended to provide an operating framework to avoid impact completely or reduce all temporary and short term construction impacts to a less than significant level for streams, wetlands, and associated threatened and endangered species. Directional Drilling sites where no sensitive resources are in close proximity and are not at risk of impact are not required to follow this protocol. Also, this protocol will not apply where the jack and bore method is used at stream/drainage crossings, as this action will not result in adverse affects to fish and wildlife resources. In the jack and bore method, no pressurized directional drilling fluids (such as BENTONITE) are used, only air pressure. The fiber optic cable will be placed a sufficient depth to preclude any likelihood of watercourse erosion exposing it.

If the Operator proposes to use BENTONITE as a drilling lubricant. The Department has found that this process may result unpredictably in the discharge of the BENTONITE into the stream by uncontrollable discharges through fissures and fractures (frac-out) in the stream channel substrate. When such discharges occur where water velocities are insufficient to transport and disperse the material, it may produce a coating on aquatic invertebrates, aquatic plants, and other features of the stream channel; potentially smothering organisms (causing direct mortality), embedding the interstitial spaces in gravels, and filling rearing pools, which may decrease available habitat upon which these fish may depend. In the event of a BENTONITE spill, clean-up efforts may result in increased disturbance to the stream channel banks, channel bed, riparian areas, and instream habitat as equipment, machinery, and personnel enter and conduct the clean-up work.

a. The Operator shall drill a minimum of forty-five (45) feet below the lowest point of the streambed or bottom of a wetland area. If the minimum depth is not possible, the Operator shall contact the Department and request, in writing, a site specific variance. The variance request shall include site location information and a brief statement as to why the minimum drill depth can not be obtained. The drilling operation may not commence until the variance has been approved in writing by the Department and the Operator has a copy of the approved variance at the drill site.

16. The Operator agrees to design and direct the drilling operation in such a way as to prevent spills of all types and frac-outs. In substrates where frac-outs are likely to occur, the Operator shall operate in a such a manner as to reduce the potential for a frac-out such as using lower pressure and nontoxic leak sealants (peat, mica, etc.).

17. The Operator shall have readily available plastic sheeting or visquine and will cover exposed spoil piles and exposed areas to prevent these areas from losing loose soil into the stream. These covering materials shall be applied when it is evident rainy conditions threaten to erode loose soils into the stream.

18. A written oil/toxic materials spill contingency plan shall be developed prior to commencement of

STREAMBED ALTERATION CONDITIONS FOR NOTIFICATION NUMBER: 1600-2006-0175-R5

operations. The plan shall identify the location of on-site containment and abatement materials, the list of telephone numbers for agencies required to be notified in the event of an oil or toxic/hazardous waste spill, a list of preferred spill clean-up companies, and clean-up procedures to be followed by Operator in the event of a spill.

19. Operator shall have spill control devices, such as oil absorbent pads and booms, on site at each construction site where stream/lake surface water is present. The Operator shall also have on-site personnel properly trained and licensed in spill containment/clean-up (HAZWOPER) to implement spill control devices in the event a spill occurs.

20. The clean-up of all spills shall begin as soon as it is safe to do so. The Department shall be notified immediately (within 24 hours) by the Operator, or an agent thereof, of any Federally reportable spill quantities of hazardous materials (listed in 40 CFR, Part 302.4) spills and shall be consulted regarding clean-up procedures.

INSTREAM STRUCTURES AND FLOW DIVERSIONS:

21. Installation of bridges, culverts, or other structures shall be such that water flow is not impaired. Bottoms of temporary culverts shall be placed at stream channel grade and bottoms of permanent culverts shall be placed at or below stream channel grade.

22. All temporary culverts shall be removed prior to the winter storm period (first winter rain).

23. Any temporary dam or other artificial obstruction constructed shall only be built from materials such as clean gravel which will cause little or no siltation, and shall be approved by the Department prior to construction.

24. When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, sufficient water shall at all times be allowed to pass downstream to maintain aquatic life below the dam pursuant to Fish and Game Code section 5937.

25. No equipment shall be operated in ponded or flowing areas. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the Department. Location of the upstream and downstream diversion points shall be approved by the Department. Construction of the barrier and/or the new channel shall normally begin in the downstream area and continue in an upstream direction, and the flow shall be diverted only when construction of the diversion is completed. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Diversion berms shall be constructed of onsite alluvium of low silt content, inflatable dams, sand bags, or other approved materials. Channel banks or barriers shall not be made of earth or other substances subject to erosion unless first enclosed by sheet piling, rock rip-rap, or other protective material. The enclosure and the supportive material shall be removed when the work is completed and removal shall normally proceed from downstream in an upstream direction. The Operator shall obtain all written approvals from the Department prior to initiation of construction activities.

26. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and which shall provide flows to downstream reaches. Flows to downstream reaches shall be provided during all times that the natural flow would have supported aquatic life. Said flows shall be sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Normal flows shall be restored to the affected stream immediately upon completion of work at that location.

27. Precautions to minimize turbidity/siltation shall be taken into account during project planning and shall be installed prior to construction. This may require that the work site be isolated and that water be diverted around the work area by means of a barrier, temporary culvert, new channel, or other means approved by the Department. Precautions may also include placement of silt fencing, straw bales, sand bags, and/or the construction of silt catchment basins, so that silt or other deleterious

STREAMBED ALTERATION CONDITIONS FOR NOTIFICATION NUMBER: 1600-2006-0175-R5

materials are not allowed to pass to downstream reaches. The method used to prevent siltation shall be monitored and cleaned/repared weekly. The placement of any structure or materials in the stream for this purpose, not included in the original project description, or Department approved water pollution/water diversion plan shall be coordinated with the Department. Coordination shall include the negotiation of additional Agreement provisions.

28. Silty/turbid water from dewatering or other activities shall not be discharged into the stream. Such water shall be settled, filtered, or otherwise treated prior to discharge. The Operator's ability to minimize turbidity/siltation shall be the subject of pre construction planning and feature implementation.

29. Upon Department determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.

30. Water containing mud, silt, or other pollutants from equipment washing or other activities, shall not be allowed to enter a lake or flowing stream or placed in locations that may be subjected to high storm flows.

31. If an off stream siltation pond/s is/are used to control sediment, pond/s shall be constructed in a location, or shall be designed, such that potential spills into the stream/lake during periods of high water levels/flow are precluded.

32. If silt catchment basin/s is/are used, the basin/s shall be constructed across the stream immediately downstream of the project site. Catchment basins shall be constructed of materials which are free from mud and silt. Upon completion of the project, all basin materials along with the trapped sediments shall be removed from the stream in such a manner that said removal shall not introduce sediment to the stream.

33. Silt settling basins shall be located away from the stream or lake to prevent discolored, silt bearing water from reaching the stream or lake during any flow regime.

34. Should a silt catchment basin be required, the following operational methods shall be employed:

- A silt catchment basin or basins (number and location to be determined by the Department) shall be constructed across the stream immediately below the project site. This catchment basin(s) shall be constructed of silt free gravel or other materials approved by the Department.
- Upon completion of the project and after all flowing water in the area is clear of turbidity, the gravel along with the trapped sediment shall be removed from the stream. The work area shall be secured from trespass when (as determined by the Department) fish or wildlife resources are vulnerable to damage from unsupervised public access.

35. Prior to commencing construction requiring diversion, the Operator shall submit to the Department for review and approval, the proposed water diversion plan for this project. The plan shall be consistent with the terms and conditions of this Agreement and the requirements of the U.S. Army Corps of Engineers and Regional Water Quality Control Board. Any terms and conditions in the final Agency approved water diversion, which are more restrictive than in this agreement shall be a part of this Agreement and shall be enforceable by the Department. Any changes in the original project description or Department approved water diversion plan shall be coordinated with the Department. Coordination shall include the negotiation of additional Agreement provisions.

EQUIPMENT AND ACCESS:

36. Staging/storage areas for equipment and materials shall be located outside of the stream.

37. Access to the work site shall be via existing roads and access ramps.

- ### POLLUTION, SEDIMENTATION AND LITTER:

- ## CONCURRENCE

CALIFORNIA DEPT. OF FISH AND GAME

(signature) (date)

Michael J. Mulligan, Deputy Regional Manager

2014100001 02/10/01 0007177100