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Staff: Tiffany S. Tauber  
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Hearing Date: October 17, 2008  
Commission Action:

## STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: **1-06-003**

APPLICANT: **Pacific Gas & Electric**

PROJECT LOCATION: In and adjacent to Gannon Slough, approximately 1.5 miles south of Arcata, on the east side of Highway 101, Humboldt County (APN 501-042-005).

PROJECT DESCRIPTION: Installation of erosion control measures to protect an existing natural gas line where it crosses under Gannon Slough, including (1) placement of a 30-foot-long x 75-foot-wide articulating grout-filled erosion control mattress on top of the gas line within Gannon Slough, and (2) construction of two 75-foot-long x 8-foot-high concrete revetment walls along the banks of the slough in the area of the gas line crossing.

LOCAL APPROVALS RECEIVED: Humboldt Bay Harbor District

OTHER APPROVALS RECEIVED: (1) NOAA Fisheries Endangered Species Act Section 7 Informal Consultation;  
(2) U.S. Fish and Wildlife Service Endangered Species Act Section 7 Formal Consultation;  
(3) U.S. Army Corps of Engineers Nationwide Permit (File No. 299810N)

OTHER APPROVALS REQUIRED: (1) Department of Fish and Game 1603 Streambed Alteration Agreement; (2) Regional Water Quality Control Board 401 Water Quality Certification

SUBSTANTIVE FILE DOCUMENTS: (1) *“Revised Biological Assessment for the Pacific Gas & Electric Company G/L 137B Gannon Slough Erosion Control Project, Humboldt County,”* prepared by PG&E Environmental Services, dated July 24, 2006;  
(2) *“Wetland Delineation Report for Pacific Gas & Electric Company’s Proposed Gannon Slough Crossing Gas Line Project,”* prepared by Natural Management Resources Corporation, dated September 28, 2005;  
(3) *“Wetland Mitigation Plan, PG&E Gas Line 137B Gannon Slough Erosion Control Project,”* prepared by Transcon Environmental, Inc., dated May, 2008;  
(4) *“Botanical Report for Pacific Gas & Electric Company’s Gannon Slough Crossing Gas Line Project,”* prepared by Natural Resources Management Corporation (NRM) dated July 14, 2006;  
(5) *“Lyngbye’s Sedge (Carex lyngbyei) Revegetation Plan, Pacific Gas & Electric Gas Line 137B Gannon Slough Erosion Control Project,”* prepared by Transcon Environmental, Inc., dated July 26, 2007.

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**SUMMARY OF STAFF RECOMMENDATION:**

Staff recommends that the Commission approve with conditions the coastal development permit for the proposed installation of erosion control measures to protect the structural integrity of an existing Pacific Gas and Electric Company (PG&E) gas line where it crosses under Gannon Slough by installing (1) a 30-foot-wide by 75-foot-long “ECRON” grout-filled erosion control mattress that would be placed over the gas line and buried beneath the bottom of the slough, and (2) two 75-foot-long by 8-foot-high concrete revetment walls along the banks of the slough on either side of the gas line crossing to prevent further erosion and subsequent exposure of the line. The gas line is crucial to the North Coast area’s natural gas supply and the proposed project would ensure the structural integrity and proper functioning of the gas line in its existing location.

The project site is located approximately 1.5 miles south of Arcata, adjacent to Highway 101 along an approximately 300-foot-long section of Gannon Slough. Gannon Slough is a tidally influenced watercourse that drains into Arcata Bay, the northern lobe of Humboldt Bay. Due to a combination of bank draw-down and channel scour caused by tidal influence and the release of trapped storm water within the slough, bank and channel erosion has caused a segment of the gas line that crosses underneath Gannon Slough to become exposed, subjecting the line to corrosion.

Placement of the erosion control mattress would be accomplished by first isolating and dewatering a segment of Gannon Slough by installing two sandbag cofferdams. Following dewatering activities, the slough bottom would be excavated to a minimum depth of twelve inches below the existing slough bottom to accommodate installation of the mattress. The mattress would then be laid over the gas line and the edges of the mattress would be sloped into the floor of the slough. The mattress would be pumped full of concrete from a cement truck located in an adjacent upland area. The excavated soil would be placed back on top of the mattress to reestablish the channel bottom, the cofferdams would be removed, and the water would be allowed to return to the isolated area. The revetment would consist of stacked concrete rap bags secured by rebar. The banks of the slough would be laid back to a 2:1 angle to accommodate the revetment wall.

The proposed project would result in 0.01 acres of wetland fill from the installation of the erosion control mat within the channel of Gannon Slough and the concrete revetment along the banks of the slough adjacent to the pipeline crossing. Proposed excavation within Gannon Slough is considered a form of dredging. The primary issue raised by the proposed project is the placement of fill and dredging in coastal waters and wetlands and the project’s consistency with Section 30233 of the Coastal Act. Staff believes that with the attachment of ten (10) special conditions, the proposed project would be consistent with the Coastal Act.

Coastal Act Section 30233 allows filling and dredging in wetlands only where there is no feasible less environmentally damaging alternative, where feasible mitigation measures have been provided to minimize adverse environmental effects, and where the project is limited to one of seven specified uses.

Staff recommends that the Commission find that the filling and dredging associated with the proposed project is for an incidental public service purpose, an allowable use pursuant to Section 30233(a)(4) of the Coastal Act. Depending on the manner in which the proposed project is conducted, the project could have potential adverse impacts to (1) wetland habitat, (2) tidewater goby, (3) sensitive salmonid species, (4) Lyngbye's sedge, (5) water quality, and (6) sensitive habitats from invasive plants. Therefore, staff recommends that the Commission attach several special conditions as described below.

To minimize potential adverse impacts to sensitive fish species, and to avoid work in the rainy season when the potential for erosion and sedimentation impacts is significant, Special Condition No. 1 requires that all development be performed between September 15 and October 15 as required by the National Marine Fisheries Service (NMFS).

Special Condition No. 2 requires implementation of several measures proposed by the applicant to minimize adverse impacts to sensitive fish species and water quality during dewatering and in-slough construction activities including: (1) installing silt fencing above and below the cofferdam locations prior to dewatering the slough channel, (2) filtering diverted water through a filter bag and allowing water to seep through natural vegetation before re-entering the slough; (3) employing a qualified aquatic biologist onsite to monitor dewatering activities and remove any fish trapped within the isolated area in addition to seining or dip netting the area to rescue trapped fish; (4) covering all pump intakes with a 1/16-inch mesh to prevent tidewater gobies and other fish and aquatic species from being sucked into the pump; and (5) replacing native soil excavated from the slough bottom following installation of the erosion control mattress to reestablish the slough bottom to pre-project conditions.

To minimize adverse impacts to the quality and biological productivity of coastal waters and wetlands, Special Condition No. 3 requires implementation of erosion control best management practices standard best management practices including: (1) installing silt fencing, (2) immediately removing and disposing of any excess excavated material and other construction debris at a disposal site outside the coastal zone or within the coastal zone pursuant to a valid coastal development permit; (3) maintaining on-site vegetation to the maximum extent possible during construction activities; (4) containing all on-site stockpiles of soil and construction debris at all times; and (5) staging and stockpiling construction equipment and materials in upland areas.

As noted above, the proposed project would result in 0.01 acres of wetland fill. The applicant proposes to mitigate wetland impacts by creating 0.02 acres of brackish and mixed marsh wetlands onsite by excavating fill from an upland area to create connectivity with adjacent wetland habitat. The applicant submitted a wetland mitigation

plan that is largely comprehensive and includes proposed success standards and mitigation site monitoring. To ensure that the mitigation site is successful and that the area of fill removal becomes fully established, Special Condition No. 4 requires the applicant to submit a final revised mitigation monitoring program that substantially conforms with the monitoring program submitted to the Commission, but is revised to include (1) a schedule for fill removal at the mitigation site that demonstrates the mitigation will occur prior to completion of the erosion control project, (2) provisions for submittal of wetland mitigation monitoring reports to the Executive Director, (3) provisions for achieving 100% vegetative cover after five years; and (4) provisions for the immediate removal and disposal all excavated material and other construction debris at a specifically identified authorized disposal site outside of the coastal zone or within the coastal zone pursuant to a specific valid coastal development permit.

The proposed project would also result in the direct impact to a 100-square-foot area of Lyngbye's sedge,( CNPS List 2) species located in an area that would be excavated for installation of the erosion control mat and revetment wall. To avoid adverse impacts to the Lyngbye's sedge, the applicant submitted a mitigation plan as part of the proposed project that involves removing the sedge from the area of project impact prior to construction, and replanting the sedge along the banks of Gannon Slough approximately 300 feet upstream of the project area. The proposed mitigation plan is largely comprehensive and includes proposed success standards and mitigation site monitoring. Special Condition No. 5 requires submittal of a revised plan that substantially conforms to the proposed revegetation plan, but provides for (1) monitoring reports to be submitted to the Commission on November 1 of each monitoring year, and (2) provisions for remediation if the success standard is not achieved after five years.

The proposed project involves the use of potentially hazardous materials on site near coastal waters, including fuels and oils associated with construction equipment. Potential adverse impacts to the water quality and biological productivity of Gannon Slough could occur in the form of the discharge of hazardous materials and debris from construction activities into the slough. Therefore, staff recommends Special Condition No. 3 that requires the applicant to submit for the review and approval by the Executive Director, a Hazardous Materials Management Plan that provides for the following: (a) equipment fueling is to occur only during daylight hours in designated fueling areas located in upland areas and otherwise outside of environmentally sensitive habitat areas; (b) oil absorbent booms and/or pads are required to be on site at all times during project construction; (c) all equipment used during construction shall be free of oil and fuel leaks at all times, (d) provisions for the handling, cleanup and disposal of any hazardous or non-hazardous materials used during the construction project including, but not limited to, cement, rebar, equipment fuel, and oil; and (e) reporting protocols to the appropriate public and emergency services agencies in the event of a spill.

The applicant is not proposing any planting or landscaping as part of the proposed project. However, should the applicant determine that active planting is necessary for erosion control purposes, or for mitigation remediation in the future, wetlands and other

environmentally sensitive habitat areas (ESHA) at and surrounding the project site could be adversely impacted if the plantings contained non-native, invasive plant species. Therefore, staff recommends Special Condition No. 10 that prohibits planting non-native, invasive plant species at the site.

Lastly, to ensure that the applicant obtains all necessary authorization for the proposed project, Special Condition Nos. 7, 8, and 9 require the applicant to submit evidence of other required approvals, including a Caltrans Encroachment Permit and a Department of Fish and Game 1603 Streambed Alteration Agreement.

As conditioned, staff believes that the project is fully consistent with the Chapter 3 policies of the Coastal Act.

**The Motion to adopt the Staff Recommendation of Approval with Conditions is found on page 6 below.**

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**STAFF NOTES:**

1. Standard of Review

The proposed project is located within the city limits of the City of Arcata in an area of the Commission's retained permit jurisdiction. The City of Arcata has a certified LCP, but the proposed project is within an area shown on State Lands Commission maps over which the state retains a public trust interest. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

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**I. MOTION, STAFF RECOMMENDATION, AND RESOLUTION:**

The staff recommends that the Commission adopt the following resolution:

**Motion:**

I move that the Commission approve Coastal Development Permit No. 1-06-003 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 feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment.

**II. STANDARD CONDITIONS: See Attachment A.**

**III. SPECIAL CONDITIONS:**

**1. Timing of Construction**

All development authorized by Coastal Development Permit No. 1-06-003 shall be performed between September 15 and October 15.

**2. Dewatering and In-Slough Construction Requirements**

The permittee shall comply with the following dewatering and in-slough construction requirements:

- (a) Silt fencing shall be erected above and below the cofferdam locations prior to dewatering the slough channel and shall be maintained throughout the construction period to contain runoff from construction areas, trap entrained sediment and other pollutants, and prevent discharge of sediment and pollutants to coastal waters and wetlands;
- (b) Water diverted from the slough channel during dewatering shall be filtered through a filter bag and allowed to seep through natural vegetation before re-entering the slough;
- (c) A qualified aquatic biologist shall be onsite to monitor dewatering activities and shall remove any fish trapped within the isolated area in addition to seining or dip netting the area to rescue trapped fish;

- (d) All pump intakes shall be covered with a 1/16-inch mesh to prevent tidewater gobies, and other fish and aquatic species from being sucked into the pump; and
- (e) Native soil excavated from the slough bottom shall be replaced following installation of the erosion control mattress to reestablish the slough bottom to pre-project conditions.

**3. Best Management Practices and Erosion Control Responsibilities**

The permittee shall comply with the following construction-related requirements:

- (a) Silt fencing shall be installed adjacent to the upland/wetland boundary at the wetland mitigation site as proposed prior to, and maintained throughout, the excavation of fill material contain runoff from construction areas, trap entrained sediment and other pollutants, and prevent discharge of sediment and pollutants to coastal waters and wetlands;
- (b) Any excess excavated material and other construction debris resulting from construction activities shall be removed immediately upon completion of construction and shall be disposed of at a disposal site outside the coastal zone or within the coastal zone pursuant to a valid coastal development permit;
- (c) On-site vegetation shall be maintained to the maximum extent possible during construction activities;
- (d) All on-site stockpiles of soil and construction debris shall be contained at all times; and
- (e) Staging and stockpiling of construction equipment and materials shall be limited to upland areas outside of wetland habitat areas shown on Exhibit No. 5 of the staff recommendation.

**4. Wetland Mitigation Monitoring**

**PRIOR TO ISSUANCE OF THE PERMIT**, the applicant shall submit, for review and written approval of the Executive Director, a final revised mitigation monitoring program that substantially conforms with the monitoring program submitted to the Commission entitled “*Wetland Mitigation Plan, PG&E Gas Line 137B Gannon Slough Erosion Control Project*,” prepared by Transcon Environmental, Inc., dated May, 2008 except that it shall be revised to include the following:

- (i) A schedule for fill removal at the mitigation site that demonstrates the mitigation will occur prior to completion of the erosion control project approved under CDP No. 1-06-003;
  - (ii) Provisions for submittal of wetland mitigation monitoring reports to the Executive Director by November 1 of each of the five monitoring years following completion of the fill removal at the Gannon Slough mitigation site;
  - (iii) Provisions for achieving 100% vegetative cover after five years; and
  - (iv) Provisions for the immediate removal and disposal all excavated material and other construction debris at a specifically identified authorized disposal site outside of the coastal zone or within the coastal zone pursuant to a specific valid coastal development permit.
- A. If the final report indicates that the mitigation project has been unsuccessful, in part, or in whole, based on the performance standard of achieving 100% ground cover of the wetland plant species composing the surrounding vegetation within five years, the applicant shall submit a revised or supplemental mitigation program to compensate for those portions of the original program which did not meet the performance standard. The revised mitigation program shall be processed as an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
- B. The permittee shall monitor and remediate the wetland mitigation site in accordance with the approved monitoring program. Any proposed changes from the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit.

**5. Lyngbye's Sedge Monitoring Plan**

- A. **PRIOR TO ISSUANCE OF THE PERMIT**, the permittee shall submit for the review and approval of the Executive Director, a revised final plan for monitoring Lyngbye's sedge (*Carex lyngbyei*) at the proposed transplant mitigation site. The final revised shall substantially conform with the revegetation plan prepared for the project entitled, "*Lyngbye's Sedge (Carex lyngbyei) Revegetation Plan, Pacific Gas & Electric Gas Line 137B Gannon Slough Erosion Control Project*," prepared by Transcon Environmental, Inc., dated July 26, 2007 except that it shall be revised to include the following:
- (i) Provisions for submittal of annual monitoring reports to the Executive Director by November 1 of each of the five monitoring years following completion of the Lyngbye's sedge revegetation at the Gannon Slough mitigation site; and

- (ii) Provisions for remediating the site if mitigation is not determined to be successful after five years.

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan 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 required.

**6. Hazardous Materials Management Plan**

A. **PRIOR TO ISSUANCE OF THE PERMIT**, the applicant shall submit, for the review and written approval of the Executive Director, a plan to reduce impacts to water quality from the use and management of hazardous materials on the site. The plan shall be prepared by a licensed engineer with experience in hazardous material management.

1. The plan, at a minimum, shall provide for the following:

- (a) Equipment fueling shall occur only during daylight hours in designated fueling areas;
- (b) Oil absorbent booms and/or pads shall be on site at all times during project construction;
- (c) All equipment used during construction shall be free of oil and fuel leaks at all times;
- (d) Provisions for the handling, cleanup and disposal of any hazardous or non-hazardous materials used during the construction project including, but not limited to, cement, rebar, equipment fuel, and oil; and
- (e) Reporting protocols to the appropriate public and emergency services agencies in the event of a spill.

B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan 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.

**7. Caltrans Encroachment Permit**

**PRIOR TO ISSUANCE OF THE PERMIT**, the applicant shall submit to the Executive Director a copy of the final, approved Encroachment Permit issued by Caltrans required to construct the proposed project, or evidence that no permit is required. The applicant shall inform the Executive Director of any changes to the project required by Caltrans. 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.

**8. Legal Interest**

**PRIOR TO ISSUANCE OF THE PERMIT**, the applicant shall submit, for the review and approval of the Executive Director, written documentation demonstrating that it has the legal ability, interest, or entitlement to undertake the development and comply with all conditions of CDP No. 1-06-003.

**9. Department of Fish and Game Approval**

**PRIOR TO COMMENCEMENT OF CONSTRUCTION**, the applicant shall submit a copy of any necessary Section 1603 Streambed Alteration Agreement or other approval required by the Department of Fish and Game for the project, or evidence that no approval is required. The applicant shall inform the Executive Director of any changes to the project required by the Department of Fish and Game. 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.

**10. Vegetation Planting Restrictions**

No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Exotic Pest Plant Council, or by the State of California shall be planted at the site of the proposed development. No plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be planted at the site of the proposed development.

**IV. FINDINGS AND DECLARATIONS**

**1. Site Description**

The project site is located approximately 1.5 miles south of Arcata, adjacent to Highway 101 along an approximately 300-foot-long section of Gannon Slough (see Exhibit Nos. 1-3). Gannon Slough is a tidally influenced watercourse that drains into Arcata Bay, the northern lobe of Humboldt Bay. Various creeks including Beith, Grotzman, and Ficklehill Creek from the Arcata-Sunnybrae area feed into Gannon Slough.

The project area is approximately at mean sea level and is surrounded by diked former tidelands that now function as grazed seasonal wetlands. Land uses in the area are primarily agricultural and livestock grazing with scattered rural residences. An existing Pacific Gas & Electric (PG&E) gas line traverses beneath the diked former tidelands and crosses under Gannon Slough east of Highway 101 and south of a Caltrans tidegate. An established gravel access road extends eastward off of northbound Highway 101, crosses over a tidegate, and continues inland. The slough is channeled in a north/south direction. A peninsula of land sits between the channel and a connecting slough overflow channel to the east, and terminates immediately south of the gravel access road. The peninsula is bordered on the west by Gannon Slough, on the north by the gravel access road, and on the east by the connecting slough overflow channel. (See Exhibit No. 3.)

A wetland delineation conducted at the project site determined the presence of two wetland habitat types, including Northern Coastal Marsh and Coastal Brackish Marsh (see Exhibit No. 5). Northern coastal salt marsh occurs at the project site immediately adjacent to the banks of Gannon Slough and is dominated by dense-flowered cordgrass (*Spartina densiflora*), a noxious weed. East of the peninsula, extending eastward to the slough overflow channel, is additional salt marsh habitat that is more diverse in species composition than the cordgrass-dominated salt marsh along the slough bank. Species in this area include pickleweed (*Salicornia virginica*), jaumea (*Jaumea carnosa*), arrowgrass (*Triglochin maritima*) alkali bulrush (*Scirpus maritimus*), salt rush (*Juncus lesueurii*), tufted hairgrass, and other species (Brooks 2005b).

Coastal brackish marsh habitat within the project area occurs along both the east and west sides of Gannon Slough. Along the east side, the marsh habitat occurs in an approximate 5 to 15-foot-wide strip extending nearly the length of the peninsula. On the west side of the slough, the marsh habitat varies from 5 to 25 feet outward from the slough bank for an approximate 200-foot linear stretch. In the vicinity of the project area the brackish marsh habitat generally varies from 5 to 10 feet wide. Vegetation characteristic of this habitat includes tufted hairgrass (*Deschampsia caespitosa*), salt grass (*Distichlis spicata*), spearscale (*Atriplex triangularis*), Pacific silverweed (*Potentilla anserina*), seacoast angelica (*Angelica lucida*, a CNPS List 4 species), and other species (Brooks 2005b).

The remainder of the vegetation in the project area can be classified as ruderal, common to roadsides and other areas of disturbance. Ruderal vegetation dominates the area west of the slough and also occurs in an isolated patch east of the slough on the peninsula immediately adjacent to the gravel access road. The plants of this area include bird's-foot trefoil (*Lotus corniculatus*), Himalayan blackberry (*Rubus discolor*), California aster (*Aster chilensis*), wild teasel (*Dipsacus fullonum*), wild carrot (*Daucus carota*), curly dock (*Rumex crispus*), and others. West of the slough the vegetation is a mowed grassy area abutting the highway shoulder (Brooks 2005b).

A rare plant survey was prepared for the project site by Natural Resources Management Corporation (NRM) dated July, 2006 and identified two sensitive plant species, including

Humboldt Bay owl's clover (*Castilleja ambigua ssp. humboldtiensis*), listed by the California Native Plant Society as being rare or endangered in California and elsewhere (List 1B), and Lyngbye's sedge (*Carex lyngbyei*), listed by the California Native Plant Society as rare or endangered in California, but more common elsewhere (List 2). Approximately 200 inflorescences of Humboldt Bay owl's-clover were observed in the marsh habitat to the east of the slough well outside the footprint of the proposed project. No impact to the Humboldt Bay owl's-clover would occur as a result of the proposed project. An approximately 110-square-foot area of Lyngbye's sedge (*Carex lyngbyei*) was identified along the west bank of the slough near the gas line crossing within the area of the proposed project construction.

The project site also provides potential habitat for several federally listed fish species, including tidewater goby (*Eucyclogobius newberryi*), Southern Oregon/Northern California Coast (SONCC) Coho salmon (*Oncorhynchus kisutch*), California Coastal (CC) Chinook salmon (*Oncorhynchus tshawytscha*), and Northern California (NC) steelhead trout (*Oncorhynchus mykiss*).

## **2. Project Description**

The proposed project involves installing erosion control measures to protect the structural integrity of an existing Pacific Gas and Electric Company (PG&E) gas line where it crosses under Gannon Slough. The gas line (known as Gas Line 137B) is located immediately downstream of a tide gate that limits tidewater from flowing upstream and traps fresh water behind the gate during high tide. Due to a combination of bank draw-down and channel scour caused by tidal influence and the release of trapped storm water within the slough, bank and channel erosion has caused a segment of the gas line that crosses underneath Gannon Slough to become exposed, subjecting the line to corrosion.

PG&E proposes to repair and protect the exposed segment of gas line located within Gannon Slough by installing a 30-foot-wide by 75-foot-long "ECRON" grout-filled erosion control mattress that would be placed over the gas line and buried beneath the bottom of the slough. The applicant also proposes to construct two 75-foot-long by 8-foot-high concrete revetment walls along the banks of the slough on either side of the gas line crossing to prevent further erosion and subsequent exposure of the line. The gas line is crucial to the North Coast area's natural gas supply and the proposed project would ensure the structural integrity and proper functioning of the gas line in its existing location.

### Erosion Control Mattress

The proposed ECRON erosion control structure resembles a pillow-like mattress consisting of a dual layer, fabric casing containing individual rectangular cells connected by grout tubes. The mattress is injected with a high-tensile strength grout that flows through the grout tubes and fills the individual cells resulting in the pillow-like mattress effect.

Placement of the erosion control mattress would be accomplished by first isolating and dewatering a segment of Gannon Slough by installing two sandbag cofferdams; one approximately 25-feet north of the gas line and one approximately 25-feet south of the gas line. The sandbag cofferdams would be installed by hand during periods of low tide. A 3-inch centrifugal pump would be used to remove the water within the isolated area during construction. The diverted water would be filtered through a filter bag and then allowed to seep through the natural vegetation and soil before re-entering the slough.

A qualified aquatic biologist would be onsite to monitor dewatering activities and would remove any fish trapped within the isolated area in addition to seining or dip netting the area to rescue trapped fish. All pump intakes would be covered with a 1/16-inch mesh to prevent tidewater gobies, and other fish and aquatic species from being sucked into the pump. Additionally, to prevent potential negative impacts to tidewater gobies that may pass through the tidegate and settle in the area between the upstream cofferdam and tidegate, this area would not be pumped completely dry. A sufficient amount of water would remain to provide a safe pool for potentially occurring tidewater gobies.

Following dewatering activities, the slough bottom would be excavated to a minimum depth of twelve inches below the existing slough bottom to accommodate installation of the mattress. The excavated soil would be temporarily stockpiled and secured to prevent runoff into the slough. The mattress would then be laid over the gas line and the edges of the mattress would be sloped into the floor of the slough. The mattress would be pumped full of concrete from a cement truck located in an adjacent upland area. Cement would be allowed the proper amount of time to cure. The excavated soil would be placed back on top of the mattress to reestablish the channel bottom, the cofferdams would be removed, and the water would be allowed to return to the isolated area.

#### Slough Bank Revetments

The banks of the slough directly adjacent to the pipeline crossing would be secured by installing two 75-foot-long by 8-foot-high concrete revetment walls. The revetment would consist of stacked concrete rap bags secured by rebar. The banks of the slough would be laid back to a 2:1 angle to accommodate the revetment wall. Once the concrete rap bags have completely cured (approximately two weeks time) crews would remove the paper wrapping from the blocks to prevent water quality degradation.

#### Construction Equipment

Equipment and vehicles to be used to excavate and install the erosion control mat and revetment walls include a tracked-hoe or excavator, cement truck, pumps, and various utility and crew vehicles. All proposed construction staging activities (including material lay-down and equipment/vehicle mobilization) would be confined to the upland work area along the eastern margin of Highway 101. Excavation equipment would access the

area from the west bank of the slough between Highway 101 and the slough. No access or construction activities would occur from the east side of the slough.

#### Wetland Mitigation

The proposed project would result in filling approximately 0.01 acres of wetland habitat. The applicant proposes to mitigate wetland impacts by creating 0.02 acres of brackish and mixed marsh wetlands onsite. The mitigation wetland would be constructed on the peninsula of land located between Gannon Slough and the overflow channel (see Exhibit No. 9). The proposed mitigation site is an area of historic wetlands now comprised of ruderal vegetation growing on compacted fill. The mitigation site was chosen due to its connectivity to existing marsh wetlands, proximity to the area of impact, and suitable access which allows construction equipment to easily remove the compacted fill while minimizing impacts to adjacent wetland habitat.

The existing fill and upland vegetation would be removed using a track-hoe or back-hoe. The fill would be immediately loaded into a dump truck to be carried offsite to a proper disposal location. Excavation would achieve a final elevation equal to adjacent wetlands or slightly lower with smooth grades exhibiting a level surface with a slight (less than 1 percent) slope trending towards the slough overflow channel. The applicant proposes to utilize erosion control best management practices as necessary to prevent onsite erosion and sedimentation of adjacent wetlands and waterways. The applicant proposes a passive revegetation approach for the mitigation site and proposes that the wetland mitigation objectives will be met when establishment of 60% cover of brackish marsh or mixed marsh vegetation has been achieved at the end of three years.

#### Lyngbye's sedge Mitigation

The proposed project would result in impacts to an approximately 110-square-foot area of Lyngbye's sedge, a CNPS List 2 species. The sedge is located in a small clump located directly over the gas line, which would be excavated for installation of the concrete mattress and revetment wall. The applicant proposes to transplant the Lyngbye's sedge to a location approximately 300 feet upstream from the area of project impact. The mitigation area was selected for revegetation because it is in close proximity to the proposed project and it exhibits similar habitat characteristics. The proposed goal of the revegetation effort is to maintain the number of Lyngbye's sedge transplanted at the revegetation site, which would be monitored over a three to five year period. The applicants propose that, if after three years the population of transplanted Lyngbye's sedge is stable or has increased, the mitigation would be deemed successful and no further monitoring would be required. If the population has declined after three years, the applicants propose an additional two years of monitoring.

### Project Schedule and Duration

The applicants propose to limit the construction of the proposed project to the period between September 15 and October 15 before the beginning of the rainy season and during the period of inactivity for salmonid migrations in the region. Total project construction time from crew mobilization to clean-up and site restoration would take approximately six to eight days with the exception of removing paper from the concrete rap bags, which cannot occur until the concrete has had time to harden. This would be done approximately two weeks following construction of the concrete revetment.

### **3. Filling and Dredging in Coastal Waters and Wetlands**

A wetland delineation prepared for the proposed project determined the presence of two wetland habitat types at the project site, including northern coastal marsh and coastal brackish marsh (see Exhibit No. 5). According to the wetland delineation report, the wetlands are considered high quality in terms of vegetative structure and diversity, native species composition, size, connectivity to other wetlands or waterways, and other factors.

The northern coastal salt marsh occurs at the project site immediately adjacent to the slough banks of Gannon Slough and east of the peninsula toward the slough overflow channel. Coastal brackish marsh habitat occurs at the project site along both the east and west sides of Gannon Slough. Along the east side, the marsh habitat occurs in an approximate 5 to 15 foot wide strip extending nearly the length of the peninsula. On the west side of the slough, the marsh habitat varies from 5 to 25 feet outward from the slough bank for an approximate 200-foot linear stretch. In the vicinity of the project area the brackish marsh habitat generally varies from 5 to 10 feet wide. Soils are classified as “Bayside”, which are hydric according to the Natural Resources Conservation Service (NRCS 2005). “Bayside” soils are characterized by poor drainage, slow permeability, and slow runoff (McLaughlin and Harradine 1965).

The proposed project would result in 0.01 acres of wetland fill from the installation of the erosion control mat within the channel of Gannon Slough and the concrete revetment along the banks of the slough adjacent to the pipeline crossing. Excavation of the slough bottom is considered a form of dredging in wetlands.

Coastal Act Section 30233 allows filling and dredging in wetlands only where there is no feasible less environmentally damaging alternative, where feasible mitigation measures have been provided to minimize adverse environmental effects, and where the project is limited to one of eight specified uses. Additionally, Coastal Act Sections 30230 and 30231 address protection of the biological productivity and water quality of the marine environment from the impacts of development.

Section 30233 of the Coastal Act provides as follows, in applicable part:

*(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:*

...

*(4) 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.*

Section 30230 of the Coastal Act states, in applicable part:

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

Section 30231 of the Coastal Act addresses the protection of coastal water quality and marine resources in conjunction with development and other land use activities. Section 30231 states:

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

The above policies set forth a number of different limitations on what development projects may be allowed in coastal wetlands. For analysis purposes, the limitations can be grouped into four general categories or tests. These tests are:

- a. that the purpose of the filling, diking, or dredging is for one of the eight uses allowed under Section 30233;

- b. that the project has no feasible less environmentally damaging alternative;
- c. that feasible mitigation measures have been provided to minimize adverse environmental effects; and
- d. that the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

**A. Permissible Use for Fill**

The first test set forth above is that any proposed filling, diking or dredging in wetlands must be for an allowable purpose as specified under Section 30233 of the Coastal Act. The relevant category of use listed under Section 30233(a) that relates to the proposed installation of erosion control measures to protect an existing gas line is subcategory (5), stated as follows:

*(4) 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.*

To determine if the proposed fill/dredging is for an allowable use, the Commission must first determine that the proposed filling/dredging is for a public service purpose. The project involves installing erosion control measures to protect an existing public utility natural gas line that delivers natural gas to the North Coast region. The erosion control measures are necessary to protect the structural integrity of the gas line and to ensure its proper and continued delivery of natural gas to PG&E customers. Therefore, since the proposed project would be undertaken by a public utility to ensure the continued delivery of natural gas along an existing gas line, the Commission finds that the fill/dredging expressly serves a public service purpose consistent with Section 30233(a)(4).

The Commission must next determine if the fill/dredging is for an “incidental” public service purpose. The proposed project would not result in an increase in natural gas transmission or result in an expansion of PG&E’s service area. Rather, the project would only repair and protect an existing natural gas supply line in a manner that would ensure the continued provision of existing natural gas service within the existing service area. Therefore, the Commission finds that the installation of the erosion control measures is incidental to the existing gas line, as the proposed project would protect and ensure the reliability of the existing natural gas supply system and would not expand service to areas not already served by the existing gas line.

Therefore, the Commission finds that for the reasons discussed above, the dredging (excavation) and filling for the proposed project is for an incidental public service purpose, and thus, is an allowable use pursuant to Section 30233(a)(4) of the Coastal Act.

**B. Alternatives Analysis**

The second test set forth by the Commission's fill policies is that the proposed fill project must have no feasible less environmentally damaging alternative. Coastal Act Section 30108 defines "feasible" as follows:

*'Feasible' means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.'*

Potential alternatives to the proposed project include (1) relocating the gas line out of Gannon Slough, (2) installing a smaller erosion control mat and revetment, (3) directionally boring the pipeline under Gannon Slough, and (4) no project. As explained below, each of these alternatives are infeasible and/or do not result in a project that is less environmentally damaging than the proposed project. The Commission finds, as discussed below, that there is no feasible less environmentally damaging alternative to the project as conditioned.

**(1) Relocating the Gas Pipeline**

Relocating the existing gas line out of Gannon Slough is an alternative to the proposed project that would potentially avoid the need to place fill in the slough in the form of an erosion control mat and concrete revetment. However, the existing gas line feeds Arcata, McKinleyville, and Blue Lake and is a critical supply source for natural gas along this portion of the North Coast. As the gas line traverses beneath a significant area of grazed seasonal wetlands adjacent to Gannon Slough and throughout the vicinity of the former diked tidelands of Humboldt Bay, relocating the pipe line would require extensive excavation in wetlands resulting in extensive habitat impacts. Relocating the entire gas line would also cost orders of magnitude more than maintaining the gas line in its existing location as proposed. Therefore, relocating the gas line is not a less environmentally damaging feasible alternative to repairing the pipeline in its existing location.

**(2) Installing Smaller Erosion Control Measures**

Installing a smaller erosion control mat and revetment is an alternative to the proposed project that would potentially result in less wetland fill. As described above, the proposed grout-filled mattress is 30-feet-long x 75-feet-wide which is significantly larger than the diameter of the pipe it is intended to cover. However, the erosion control mattress is sized to withstand erosion forces from tidal currents and streamflow around, and on top of, the pipeline. Additionally, because the pipeline crosses Gannon Slough at an angle, the erosion control mattress must be a sufficient size to cover the entire diagonal width of the crossing, rather than just the width of the pipeline itself. The proposed erosion control revetments have also been sized to ensure that erosion is not exacerbated behind or around the ends of the revetment in a manner that would continue

to threaten the structural integrity of the gas line. Therefore, installing a smaller mattress and revetment would not achieve the erosion control and pipeline protection objectives of the project and thus, would not be a less environmentally damaging feasible alternative.

**(3) Directionally Bore Under Gannon Slough**

The applicant also considered using directional boring techniques to place the gas line deeper beneath Gannon Slough to protect it from erosion. Directional boring would require setting up a bore machine on one side of the slough and laying the pipe (welded together in a string in order that it can be pulled into the bore hole) on the other side of the slough. This alternative was determined to be infeasible because there is not sufficient room on either side of the slough for the necessary construction activities due to the proximity of Highway 101 on the west and adjacent wetlands on the east. Therefore, in this case, use of directional boring technology is not a less environmentally damaging feasible alternative.

**(4) No Project**

The no project alternative would maintain the gas pipeline in its current condition and would perpetuate its susceptibility to damage and corrosion since the existing pipeline is exposed and subject to further impacts from slough erosion. The no project alternative would not meet the project goals of protecting the gas line from ongoing erosion. The no project alternative would create an increased risk of failure of the gas pipeline, which could have significant adverse impacts to the slough and surrounding wetlands should a leak, or complete break in the pipeline occur. Therefore, the Commission finds that the no project alternative is not a less environmentally damaging feasible alternative.

Therefore, the Commission finds that the proposed project, as conditioned, is the least environmentally damaging feasible alternative as required by Section 30233(a).

**C. Feasible Mitigation Measures**

The third test set forth by Section 30233 is whether feasible mitigation measures have been provided to minimize adverse environmental impacts. The proposed erosion control project would be located within and adjacent to the channel of Gannon Slough. Depending on the manner in which the proposed project is conducted, the project could have potential adverse impacts to (1) wetland habitat, (2) tidewater goby, (3) sensitive salmonid species, (4) Lyngbye's sedge, (5) water quality, and (6) sensitive habitats from invasive plants. The potential impacts and their mitigation are discussed in the following sections:

***(1) Wetland Habitat***

The proposed erosion control project would result in the direct fill of 0.01 acres of wetland habitat as a result of placement of the erosion control mat and concrete revetment

within and along Gannon Slough. To mitigate for the wetland fill, the applicant proposes to create approximately 0.02 acres of salt and mixed marsh habitat onsite.

The mitigation wetland would be constructed on the peninsula of land that the gas line intersects between Gannon Slough and the connecting slough overflow channel (see Exhibit No. 9). The proposed mitigation site was included in the wetland delineation conducted for the proposed project and was mapped as upland habitat comprised of compacted fill and ruderal vegetation (Exhibit No. 5). Vegetation on the peninsula is dominated by bird's foot trefoil (*Lotus corniculatus*), Himalayan blackberry (*Rubus discolor*), California aster, (*Aster chilensis*), wild teasel (*Dipsacus* sp.), and wild carrot (*Daucus carota*). Rare plant surveys were conducted in 2006 at the mitigation site and no rare, threatened, or endangered plants were observed at the mitigation site (Brooks 2005b).

The mitigation site was chosen due to its connectivity to existing marsh wetlands, proximity to the area of impact, and suitable access which allows construction equipment to easily remove the compacted fill while minimizing impacts to adjacent wetland habitat. The primary goal stated by the applicant's mitigation plan is to create an area of salt and brackish marsh or transitional marsh connected to adjacent wetlands with a diversity of plant species that requires minimal long-term intervention.

The existing fill and upland vegetation would be removed using a track-hoe or back-hoe. The fill would be immediately loaded into a dump truck to be carried offsite to a proper disposal location. Excavation would achieve a final elevation equal to adjacent wetlands or slightly lower with smooth grades exhibiting a level surface with a slight (less than 1 percent) slope trending towards the slough overflow channel.

Construction of the wetland mitigation portion of the proposed project is expected to take approximately two days to complete. The boundaries of the mitigation site would be flagged and an environmental monitor with experience in wetland creation would be onsite during construction. A silt fence would be erected along the boundary of the mitigation area with existing wetlands to serve as a boundary for construction as well as to prevent sedimentation of adjacent wetlands. To avoid impacts to existing wetlands, all access to the mitigation site would be from the existing gravel road located immediately north of the mitigation site. From the gravel road, equipment would travel over the compacted fill to the proposed wetland creation area. No construction access or mobilization would impact existing wetlands.

The applicant proposes a passive revegetation approach for the mitigation site. Given the proximity to established wetlands and abundant seed source available in adjacent wetlands, allowing the natural seed bank to colonize the newly created wetland area would be effective for establishing wetland vegetation following removal of the upland fill. The applicant is not proposing to actively plant or seed the site. Monitoring and maintenance would be used to control unwanted noxious weeds.

In past permit actions, the Commission has generally required that wetland mitigation proposals provide (1) mitigation on-site whenever possible; (2) in-kind habitat replacement whenever possible; (3) restoration of former wetlands that have been filled or diked as opposed to the more problematic creation of new wetlands out of purely upland habitat to ensure a greater chance of success; (4) habitat replacement adjacent to functioning wetland habitat of the same kind to increase the chances of success; (5) mitigation at ratios of habitat restoration or creation to habitat loss typically ranging from 2:1 to 4:1 or greater, in recognition that wetlands restoration projects are difficult to implement successfully and that there is often a significant lag time between the time when the wetlands are filled and the time when full habitat values are restored; and (6) that the mitigation proposal be adequately supported with appropriate success standards, a suitable monitoring program, and proposed remedial action. Wetland mitigation measures that more fully conform to these goals are more likely to provide adequate mitigation as required by the third test of Section 30233 of the Coastal Act, and better ensure that the biological productivity and the quality of coastal waters and wetlands are maintained and where feasible restored as is also required by Section 30233.

The applicant's proposed wetland mitigation plan conforms with the objectives above, as the proposed mitigation site is located very close to the project site where the permanent fill would occur and the proposed mitigation would restore an area of historic filled wetlands to functioning wetlands directly adjacent to an area where wetlands currently exist.

The applicant proposes a mitigation ratio of 2:1, which is an appropriate ratio for this project. Although the applicant proposes to perform the mitigation work at the same time as the construction of the line, the higher ratio would account for the temporal loss of habitat value, as it will take some time for the wetlands created at the mitigation site to develop habitat values that will compensate for the loss of wetland habitat caused by installation of the erosion control structures, especially given that the applicant proposes to allow plants to colonize the site naturally from surrounding areas rather than actively planting the site following excavation.

The applicant proposes that the wetland mitigation objective will be met with the establishment of 60% cover of brackish marsh or mixed marsh vegetation at the end of three years. Two reference sites located in adjacent wetlands (one in the brackish marsh and one in the mixed marsh) would be used to monitor the success of the wetland creation site (see Exhibit No. 9).

Due to the wet winter climate and the vigorous nature of the wetland vegetation growing contiguous to the proposed mitigation site, the site has a high likelihood of quickly establishing wetland vegetation. To ensure that natural colonization of wetland species occurs as proposed, the applicant's mitigation plan proposes to monitor and maintain the site for a five year period following creation of the mitigation wetland. Proposed monitoring would occur every two months for the first growing season and biyearly in the following years. Additional site visits would be implemented as dictated by site

conditions and would occur at the beginning and end of each growing season to most easily identify the plant species occurring at the site. The monitor would record site conditions and make remedial adjustments as necessary. An annual report would be prepared at the end of each year and is proposed to include the following information: (1) all identifiable plant species and their estimated relative frequency and percent cover at the created wetland and at each reference site using 10'x10' plots, (2) photographs depicting the mitigation site taken during the growing season; and (3) notation of any noxious weeds and documentation of removal.

The applicant proposes that if at the end of three years, 60 percent cover of wetland vegetation is not achieved, the mitigation site would be reevaluated and necessary corrective actions would be determined and implemented such as, planting or re-grading.

The Commission finds that to ensure that the mitigation site is successful and that the area of fill removal becomes fully established, functioning wetland habitat, the area must achieve 100% vegetative cover. Therefore, Special Condition No. 4 requires submittal of a revised mitigation plan to include provisions for monitoring the site for five years or until the site achieves 100% vegetative cover. Although as submitted, the applicant's mitigation plan calls for monitoring, the plan does not explicitly provide for the submittal of monitoring reports to the Commission to ensure the mitigation site becomes established with wetland vegetation as proposed. Therefore, Special Condition No. 4 also requires the revised mitigation plan to include provisions for submittal of monitoring reports to the Commission by November 1 of each monitoring year following removal of the fill at the site. If the final report indicates that the mitigation project has been unsuccessful, in part, or in whole, based on the approved performance standards, the applicant is required to submit a revised or supplemental revegetation program to compensate for those portions of the original program which did not meet the approved performance standards. The revised revegetation program shall be processed as an amendment to this coastal development permit. Furthermore, to ensure that the mitigation occurs in a timely manner, Special Condition No. 4 also requires the revised mitigation plan to include a schedule for fill removal at the mitigation site that demonstrates that the mitigation will occur prior to completion of the erosion control measures approved under CDP No. 1-06-003.

The proposed mitigation site is located in an area within the limits of the City of Arcata on property owned by the City. The applicant has been in contact with the City of Arcata regarding use of the site for wetland mitigation purposes and has indicated that the City has agreed to allow the applicant to use the site for the proposed wetland mitigation. However, there is no formal evidence that the City has granted authorization for use of the site. Therefore, the Commission attaches Special Condition No. 8 that requires the applicant to demonstrate that the applicant has obtained all legal right, interest, or entitlement to use the property for the proposed wetland mitigation.

The Commission finds that the proposed project, as conditioned, includes all feasible mitigation measures to minimize all significant adverse impacts to coastal wetland habitats consistent with Section 30233 of the Coastal Act.

**(2) Tidewater goby**

Gannon Slough and some of its lower tributaries that are subject to brackish conditions provide potentially suitable habitat for the tidewater goby (*Eucyclogobius newberryi*), a federally listed endangered species. The slough channel and associated marsh areas with coarser (sandy) substrates serve as potential spawning grounds while shallow, protected waters serve as potential juvenile rearing habitat.

A biological assessment was prepared for the proposed project and included, in part, an analysis of the effects of the proposed project on tidewater goby and its habitat (“*Revised Biological Assessment for the Pacific Gas & Electric Company G/L 137B Gannon Slough Erosion Control Project, Humboldt County,*” prepared by PG&E Environmental Services dated July 24, 2006). The section of Gannon Slough within the project area was determined to be poor quality habitat for gobies due to tidal influence, ongoing erosion, and lack of vegetative cover. No emergent vegetation and little submerged vegetation was found to be present, thus offering little refugia for tidewater gobies. This lack of cover and shallow, clear water conditions at the site increases the goby’s exposure to aquatic and avian predation. According to the habitat assessment, this increased predation potential in conjunction with the strong tidal influence, erosion of the site, and lack of the preferred coarse (sandy) spawning substrate, create suboptimal spawning and juvenile rearing habitat conditions. The goby likely uses the project reach of slough mostly for dispersal to more suitable up and downstream habitats.

In a formal biological opinion issued by the U.S. Fish and Wildlife Service (USFWS) dated October 16, 2006, which addressed the effects of the proposed project on the federally endangered tidewater goby in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, USFWS concurred with the information presented in the applicant’s biological assessment and determined that the proposed project is not likely to jeopardize the continued existence of the tidewater goby. The conclusion of the USFWS was based on the following reasons: (1) habitat within the project reach of Gannon Slough is of poor quality and suboptimal for tidewater goby spawning and juvenile rearing; (2) because of the suboptimal habitat in the project area, tidewater goby likely use this reach of the slough only for dispersal to more suitable habitat; (3) the spatial extent of the anticipated effects (at maximum 300 feet of channel) is small in comparison to the species’ current distribution in the project area; (4) most adverse effects are considered short-term; and (5) minimization measures incorporated into the project design avoid or minimize adverse effects on the species.

The measures proposed by the applicant to minimize potential adverse impacts to tidewater goby and its habitat include having a qualified aquatic biologist onsite to monitor dewatering activities and remove any fish trapped within the isolated area in

addition to seining or dip netting the area to rescue trapped fish. Additionally, all pump intakes would be covered with a 1/16-inch mesh to prevent tidewater gobies, and other fish and aquatic species from being sucked into the pump. To ensure that these measures are implemented as proposed, the Commission attaches Special Condition No. 2 that requires the applicant to adhere to these, and other dewatering and in-slough construction responsibilities discussed below.

The erosion control mat would not adversely affect tidewater goby habitat, or pose a barrier to goby passage, as it would be installed well below the existing grade of the slough channel. The applicant proposes to replace native slough spoils over the top of the mat, thereby essentially restoring the slough bottom to pre-project conditions. In its consultation, the USFWS states that the temporary impact to the slough bottom is not considered significant for goby spawning activity, as the slough mud bottom at the project site is not considered normal nesting substrate (coarse sand) and most likely experiences water velocities and salinities that are not conducive to goby spawning. Special Condition No. 2 requires the applicant to replace the excavated native slough soils on top of the erosion control mat following installation to restore the slough bottom to pre-project conditions.

Additionally, the measures set forth to protect water quality discussed in subsection (5) below, would further ensure that potential adverse impacts to the tidewater goby and its habitat are minimized.

Therefore, the Commission finds that the proposed project, as conditioned, includes all feasible mitigation measures to minimize all significant adverse impacts to tidewater goby and its habitat consistent with Section 30233 of the Coastal Act.

### **(3) *Salmonid species***

The project site also provides potential habitat for several federally listed threatened fish species, including Southern Oregon/Northern California Coast (SONCC) Coho salmon (*Oncorhynchus kisutch*), California Coastal (CC) Chinook salmon (*Oncorhynchus tshawytscha*), and Northern California (NC) steelhead trout (*Oncorhynchus mykiss*).

The existing habitats in Gannon Slough include the water column, subtidal habitat, and intertidal mudflat. These habitats provide rearing and migratory corridor functions for listed salmonids. In its Section 7 consultation on the proposed project, the National Marine Fisheries Service (NMFS) determined that juvenile salmonids are not expected to be rearing in, or migrating through, Gannon Slough because the majority of smolts will have completed outmigration from spawning tributaries through the Humboldt Bay estuary to the Pacific Ocean prior to construction of the project, which is proposed to be limited to the period between September 15 and October 15. Similarly, due to the proposed timing of the project NMFS also does not expect any spawning adults to be present. Therefore, as the timing of the construction of the proposed project is critical to ensure the protection of sensitive fish species that may be present in the project area, the

Commission imposes Special Condition No. 1 that limits construction activities to September 15 and October 15 as proposed.

In NOAA's National Marine Fisheries Service (NMFS) response to the US Army Corps of Engineers (Corps) request for consultation, pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, dated September 1, 2006, NMFS concurred with the Corps' determination that the project is not likely to adversely affect threatened SONCC Coho salmon, CC Chinook salmon, NC steelhead, or their designated critical habitats. NMFS states, "*Because of the timing of the project, the limited amount and short-term nature of the sediment release, and expected rapid recolonization of benthic invertebrates in the subtidal habitat, NMFS does not expect adverse effects to critical habitat or changes in its value for rearing or migration.*"

As noted above, the erosion control mat would not pose a barrier to fish passage, as it would be installed well below the existing grade of the slough channel. The applicant proposes to replace native slough spoils over the top of the mat, thereby essentially restoring the slough bottom to pre-project conditions. Special Condition No. 2 requires the applicant to replace the excavated native slough soils on top of the erosion control mat following its installation as proposed.

Additionally, the measures set forth to protect water quality discussed in subsection (5) below, would further ensure that potential adverse impacts to sensitive salmonid species are minimized.

Therefore, the Commission finds that the proposed project, as conditioned, includes all feasible mitigation measures to minimize all significant adverse impacts to e salmonid species consistent with Section 30233 of the Coastal Act.

#### ***(4) Lyngbye's sedge***

A rare plant survey and report was prepared for the proposed project entitled, "*Botanical Report for Pacific Gas & Electric Company's Gannon Slough Crossing Gas Line Project*," prepared by Natural Resources Management Corporation (NRM) and dated July 14, 2006. The survey identified a population of Lyngbye's sedge (*Carex lyngbyei*) at the project site. Lyngbye's sedge is listed on the California Native Plant Society List 2 indicating plants that are rare, threatened, or endangered in California, but are more common elsewhere. The proposed project would result in direct impacts to an approximately 110-square-foot area of Lyngbye's sedge located on two small clumps of earth that were formerly the slough bank but have slumped off the bank and fallen into the slough directly over the area that would be excavated for installation of the erosion control mat and revetment wall.

The applicant submitted a mitigation plan as part of the proposed project entitled, "*Lyngbye's Sedge (Carex lyngbyei) Revegetation Plan, Pacific Gas & Electric Gas Line 137B Gannon Slough Erosion Control Project*," prepared by Transcon Environmental,

Inc., dated July 26, 2007. To avoid adverse impacts to the Lyngbye's sedge growing in the project area, the applicant proposes to remove the sedge from the area of project impact prior to construction, and replant the sedge along the banks of Gannon Slough approximately 300 feet upstream of the project area. The mitigation area was selected for its close proximity to the area of impact and because the site exhibits similar habitat characteristics. The proposed revegetation area is a coastal brackish marsh type habitat where Lyngbye's sedge is currently growing, which indicates that it is suitable sedge habitat.

The goal of the proposed revegetation plan is to maintain the number of Lyngbye's sedge transplanted at the revegetation site, which would be monitored over a three to five year period. The applicants propose that if after three years the population of transplanted Lyngbye's sedge is stable or has increased, the project would be deemed successful and no further monitoring would be performed. If the population has declined after three years then an additional two years of monitoring would be conducted. The applicants propose that a decrease in the population of sedge by 20 percent or more at the end of the three to five year monitoring period will be deemed unsuccessful. All monitoring would be conducted between May and August when plants are most easily identified. A yearly monitoring report would be prepared.

A reference site would provide a comparison for data collected at the revegetation site during monitoring to determine whether trends (such as declining population trends) occurring at the revegetation site are endemic to the revegetation site, or a part of a broader regional trend. The reference site is similarly located along Gannon Slough approximately 50 feet from the revegetation area, is currently colonized by Lyngbye's sedge, and is similar in slope, aspect, and hydrologic regime as the revegetation site. The reference site would be clearly flagged with pin flagging at each corner so that it can be relocated for monitoring purposes.

The applicant proposes to conduct all revegetation work by hand, including digging up individual plant plugs using hand tools. Sedge plants would be collected at a minimum depth of six inches to allow adequate rootstock for regrowth. The transplants would be immediately transplanted at the revegetation site to ensure survival. Revegetation work would occur one week prior to construction, which is proposed between September 15 to October 15. This period is ideal for planting as it coincides with the fall rainy period. No soil amendments (fertilizer, mycorrhizae, etc.) would be used and no irrigation is required.

If data indicates that the revegetated area is exhibiting unexpected declines then adaptations will be considered. The applicants propose to submit the annual monitoring report to the Coastal Commission. A final monitoring report would be submitted at the end of the three year monitoring period if revegetation was successful, or after another two years if required. The proposed plan does not include proposed remedial measures in the event that the revegetation is unsuccessful after five years. Additionally, the plan does not provide date certain submittal of monitoring reports to the Commission.

Therefore, Special Condition No. 5 requires submittal of a revised plan that substantially conforms to the proposed revegetation plan, but provides for (1) monitoring reports to be submitted to the Commission on November 1 of each monitoring year, and (2) provisions for remediation if the success standard is not achieved after five years.

Therefore, the Commission finds that the project as conditioned, includes all feasible mitigation measures to minimize all significant adverse impacts to sensitive plant species consistent with Section 30233 of the Coastal Act.

#### *(5) Water Quality*

The proposed project involves construction in and adjacent to Gannon Slough. Potential adverse impacts to the water quality of the slough could occur in the form of sediment disturbance and transport and from the discharge of construction related debris and hazardous materials.

Placement of the erosion control mattress would be accomplished by isolating and dewatering a segment of the slough by installing two sandbag cofferdams; one approximately 25-feet north of the gas line and one approximately 25-feet south of the gas line. A 3-inch centrifugal pump would be used to remove the water within the isolated area during construction. The applicant proposes several measures to minimize sedimentation and turbidity during dewatering activities including, (1) directing diverted water through a filter bag where it would then be allowed to seep through the natural vegetation and soil before re-entering the slough, and (2) installing silt fences above and below the cofferdam locations to contain any sediment disturbed by construction activities. Special Condition No. 2 requires that these proposed construction measures be implemented during dewatering as proposed to ensure that adverse impacts to water quality and biological productivity are minimized. Special Condition No. 3 requires implementation of standard Best Management Practices to minimize erosion and sedimentation during construction, including (1) installing silt fencing adjacent to the upland/wetland boundary at the wetland mitigation site as proposed, (2) removing any excess excavated material and other construction debris immediately upon completion of construction and disposing of such debris outside the coastal zone or within the coastal zone pursuant to a valid coastal development permit; (3) maintaining on-site vegetation to the maximum extent possible during construction activities; (4) containing all on-site stockpiles of soil and construction debris at all times; and (5) staging and stockpiling of construction equipment and materials only in upland areas outside of wetland habitat areas as shown on Exhibit No. 5.

Additionally, the applicant proposes to construct the project between September 15 and October 15 to avoid the rainy season when stockpiled material would more likely become entrained in runoff. The Commission attaches Special Condition No. 1 to ensure that the construction season limitations are implemented as proposed.

The proposed project involves the use of potentially hazardous materials on site near coastal waters, including fuels and oils associated with construction equipment. Potential adverse impacts to the water quality and biological productivity of Gannon Slough could occur in the form of the discharge of hazardous materials and debris from construction activities into the slough. Special Condition No. 3 requires the applicant to submit for the review and approval by the Executive Director, a Hazardous Materials Management Plan. The plan is required to provide for the following: (a) equipment fueling is to occur only during daylight hours in designated fueling areas located in upland areas and otherwise outside of environmentally sensitive habitat areas; (b) oil absorbent booms and/or pads are required to be on site at all times during project construction; (c) all equipment used during construction shall be free of oil and fuel leaks at all times, (d) provisions for the handling, cleanup and disposal of any hazardous or non-hazardous materials used during the construction project including, but not limited to, cement, rebar, equipment fuel, and oil; and (e) reporting protocols to the appropriate public and emergency services agencies in the event of a spill.

The Commission finds that as conditioned, the proposed project would maintain the biological productivity and quality of coastal waters consistent with Sections 30230 and 30231 of the Coastal Act.

***(6) Invasive Exotic Plant Species***

The applicant is not proposing any planting or landscaping as part of the proposed project. However, should the applicant determine that active planting is necessary for erosion control purposes, or for mitigation remediation in the future, wetlands and other environmentally sensitive habitat areas (ESHA) at and surrounding the project site could be adversely impacted if the plantings contained non-native, invasive plant species.

Introduced invasive exotic plant species could physically spread into the ESHA and displace native wetland vegetation, thereby disrupting the values and functions of the ESHA. The seeds of exotic invasive plants could also be spread to nearby ESHA by wind dispersal or by birds and other wildlife. Therefore, to ensure that the biological productivity and functional capacity of the wetland habitat at and surrounding the site is not significantly degraded by any future planting that would contain invasive exotic species, the Commission attaches Special Condition No. 10 that prohibits planting non-native, invasive plant species at the site.

Therefore, the Commission finds that the proposed project, as conditioned, includes all feasible mitigation measures to maintain the biological productivity and functional capacity of sensitive habitat areas consistent with consistent with Section 30233 of the Coastal Act.

**D. Maintenance and Enhancement of Marine Habitat Values**

The fourth general limitation set by Section 30233 and 30231 is that any proposed dredging or filling in coastal wetlands must maintain and enhance the biological productivity and functional capacity of the habitat, where feasible.

As discussed above in the section of this finding on least environmentally damaging feasible alternatives and mitigation, the conditions of the permit will ensure that the project will not have significant adverse impacts on the water quality of Gannon Slough and adjacent wetlands and will ensure that the construction of the erosion control structures will not adversely affect the biological productivity and functional capacity of the wetland environments. Therefore, the Commission finds that the project, as conditioned, will maintain the biological productivity and functional capacity of the habitat consistent with the requirements of Section 30233, 30230, and 30231 of the Coastal Act.

**E. Conclusion**

The Commission thus finds that the proposed dredging and filling is an allowable use under Section 30233(a) of the Coastal Act, that there is no feasible less environmentally damaging alternative, that feasible mitigation is required to minimize all significant adverse impacts associated with the dredging and filling of coastal wetlands, and that wetland habitat values will be maintained or enhanced. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with Sections 30233, 30230 and 30231 of the Coastal Act.

**4. Visual Resources**

Section 30251 of the Coastal Act states that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance, and requires in applicable part that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas. Furthermore, Section 30240(b) of the Coastal Act states that development in areas adjacent to 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 recreation areas.

The project site is located within and adjacent to Gannon Slough on the east side of Highway 101 and is visible from the highway. The project site is located in an area characterized by agricultural land use, grazed seasonal wetlands, and rural residential development. The site is not within a designated highly scenic area.

The proposed erosion control mat would be located beneath the surface of the slough bottom and covered with native soil material and therefore, would not result in any visual

changes to the slough. The proposed concrete revetment on the banks of the slough would be largely screened from view from the highway. The slough cuts through the grazed seasonal wetlands at a lower elevation than the surrounding land, which makes the slough only minimally visible from the highway elevation. Additionally, existing vegetation along the banks of the slough will partially screen the development. Moreover, the gray color of the proposed cement blocks would cause any portion of the revetment that may be visible from the highway to blend into the character of the landscape. Although there may be temporary visual impacts associated with the project from the use of heavy equipment at the site and from soil and vegetation disturbance during construction of the proposed project, the project itself would not result in a permanent change to the site that would significantly adversely impact coastal views.

Therefore, the Commission finds that the proposed development is consistent with Section 30251 of the Coastal Act as the development would not block views to and along the coast, would not involve any permanent alteration of land forms, and the proposed line would not result in any change to the visual character of the Gannon Slough area.

## **5. Public Access**

Section 30210 of the Coastal Act requires that maximum public access shall be provided consistent with public safety needs and the need to protect natural resource areas from overuse. Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. Section 30214 of the Coastal Act provides that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. In applying Sections 30210, 30211, 30212, and 30214 of the Coastal Act, the Commission is also limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on public access.

Although the proposed project is located between the first public road and a tidal slough, an inlet of the sea, the project would not adversely affect public access. The project site is within a rural, agricultural area used primarily for cattle grazing. There are no trails or other public roads that provide shoreline access within the vicinity of the project that would be affected by the project. Furthermore, the proposed project would not create any new demand for public access or otherwise create any additional burdens on public access.

Therefore, the Commission finds that the proposed project does not have any significant adverse effect on public access, and that the project as proposed without new public

access is consistent with the requirements of Coastal Act Sections 30210, 30211, 30212, and 30214.

**6. Caltrans Encroachment Permit**

To ensure that the applicant obtains the necessary review and authorization from Caltrans for the proposed project, Special Condition No. 7 requires the applicant to submit a copy of the Encroachment Permit approved by Caltrans prior to commencement of construction, or evidence that no permit is required. The applicant shall inform the Executive Director of any changes to the project required by Caltrans and any such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

**7. State Lands Commission**

The project site consists of former tidelands that may be subject to the public trust, but is within the boundaries of a legislative grant of tidelands to the Humboldt Bay Harbor District. The Humboldt Bay Harbor District has issued a permit for the proposed project (Permit No. 06-03).

**8. Other Agency Approvals**

The applicant has completed Section 7 Endangered Species Act consultations with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) as part of the Army Corps of Engineers permit required for the project.

The project also requires a Section 1600 Streambed Alteration Agreement from the Department of Fish and Game. To ensure that the project incorporates any additional terms and conditions imposed by the DFG permit, Special Condition No. 9 requires the City to submit a copy of the Section 1603 agreement obtained from the Department of Fish and Game prior to commencement of construction. The condition requires that any project changes resulting from DFG approval not be incorporated into the project until the applicant obtains any necessary amendments to this coastal development permit.

**9. California Environmental Quality Act**

The City of Arcata acted as the lead agency for the proposed project and determined that the project was Categorical Exempt from CEQA requirements pursuant to Section 15268.

Section 13096 of the Commission's administrative regulations requires Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirement 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 the proposed development may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed project has been conditioned to be found consistent with the policies of the Coastal Act. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. Mitigation measures that will minimize or avoid all significant adverse environmental impact have been required. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

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**EXHIBITS:**

1. Regional Location Map
2. Vicinity Map
3. Site Plan
4. Cross-Section Schematic
5. Wetland Vegetation Sketch Map
6. Construction Plan
7. Cofferdam Detail Plan
8. Rare Plant Map
9. Wetland Mitigation Map
10. Revegetation Site Plan
11. Project Site Photos

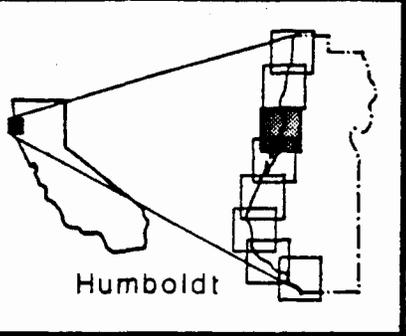
**ATTACHMENT A**

**STANDARD CONDITIONS**

1. Notice of Receipt and Acknowledgement. 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 amount of time. Application for extension of the permit must be made prior to the expiration date.
3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director of 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.

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PROJECT SITE

BOUNDARY

Crannell

NAVAL  
AUXILIARY  
AIR  
STATION

Fieldbrook

McKinleyville

AZALEA  
RESERVE  
STATE  
PARK

ARCATA

Blue L

ARCATA

Bayside

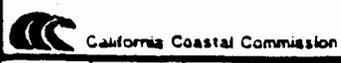
COASTAL

Samoa

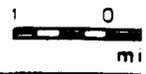
EUREKA

Fairhaven

Cuffen



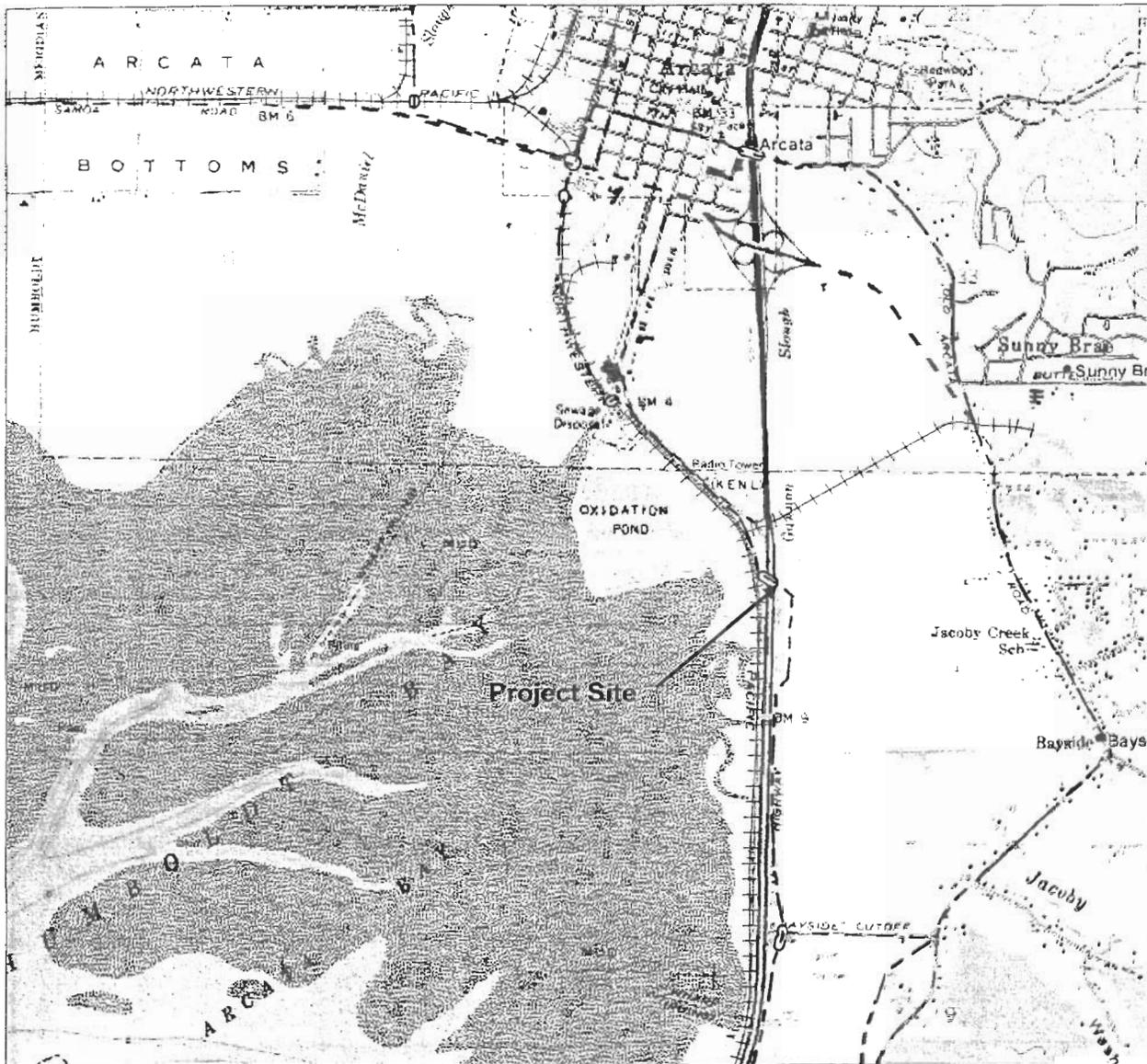
# LOCATION MAP



**EXHIBIT NO. 1**  
**APPLICATION NO.**  
 1-06-003  
 PACIFIC GAS & ELECTRIC  
 REGIONAL LOCATION MAP

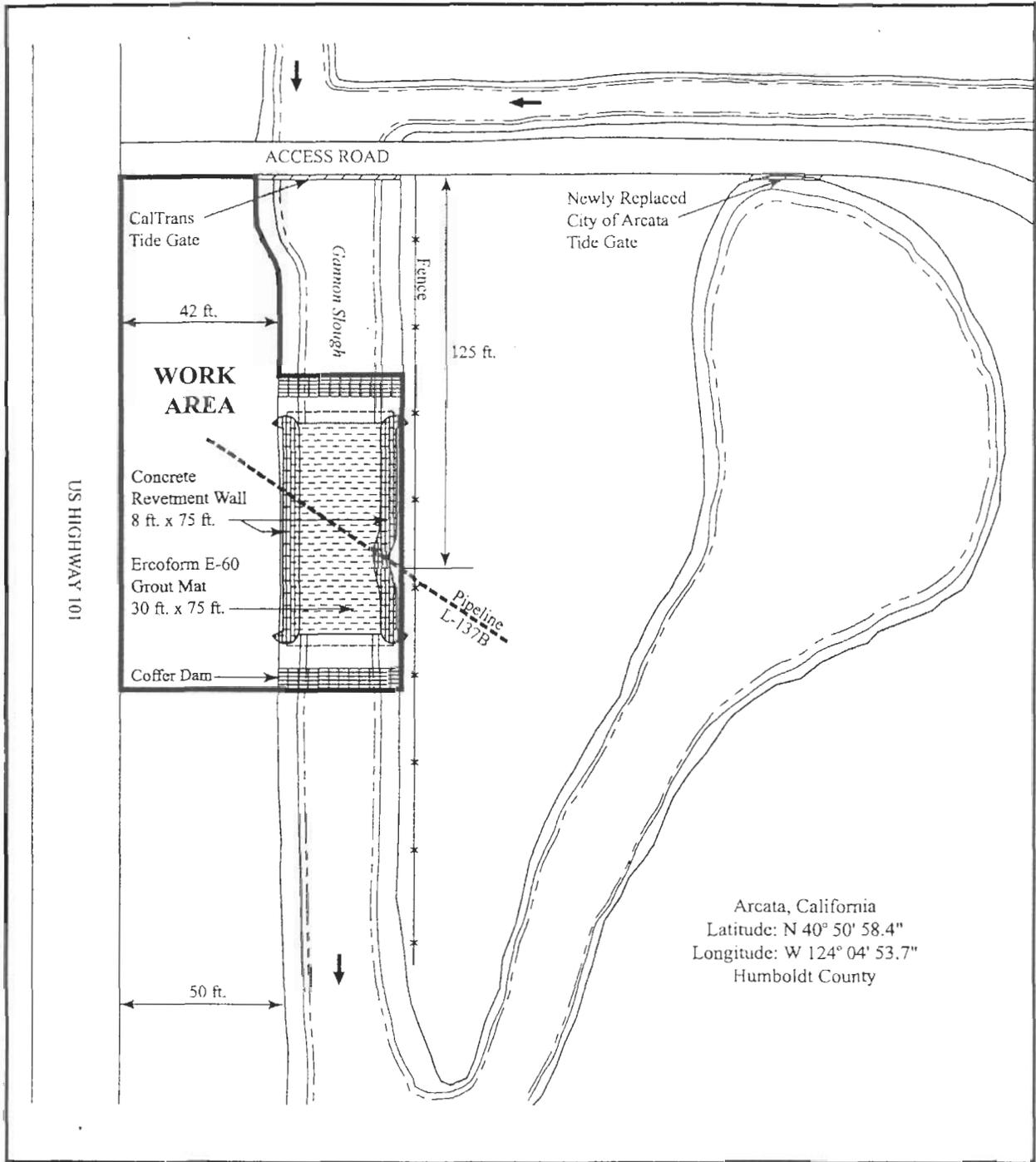
## County of Humboldt

Figure 1. Project Location



**EXHIBIT NO. 2**  
**APPLICATION NO.**  
1-06-003  
PACIFIC GAS & ELECTRIC  
VICINITY MAP

Figure 2. Site Plan



Arcata, California  
 Latitude: N 40° 50' 58.4"  
 Longitude: W 124° 04' 53.7"  
 Humboldt County



Legend

- == Pipeline L-137B
- ▭ Work Area

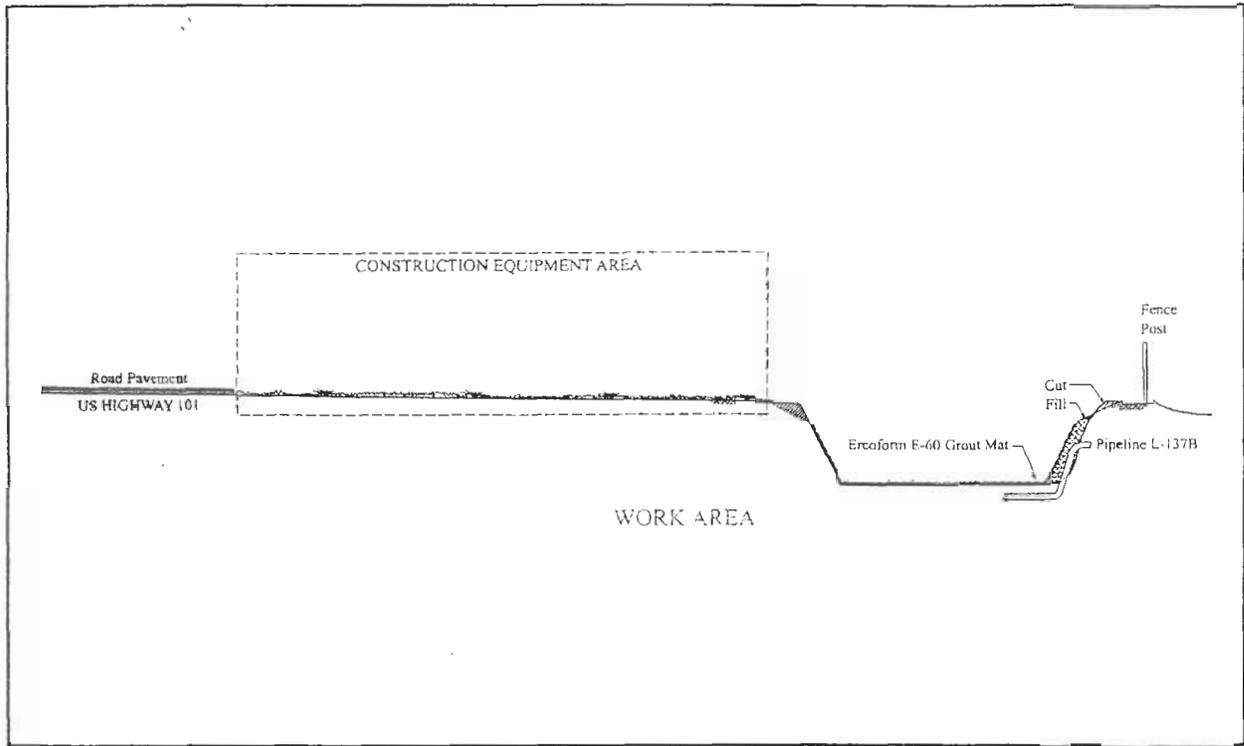


Not to Scale

Pig

**EXHIBIT NO. 3**  
**APPLICATION NO.**  
 1-06-003  
**PACIFIC GAS & ELECTRIC**  
**SITE PLAN**

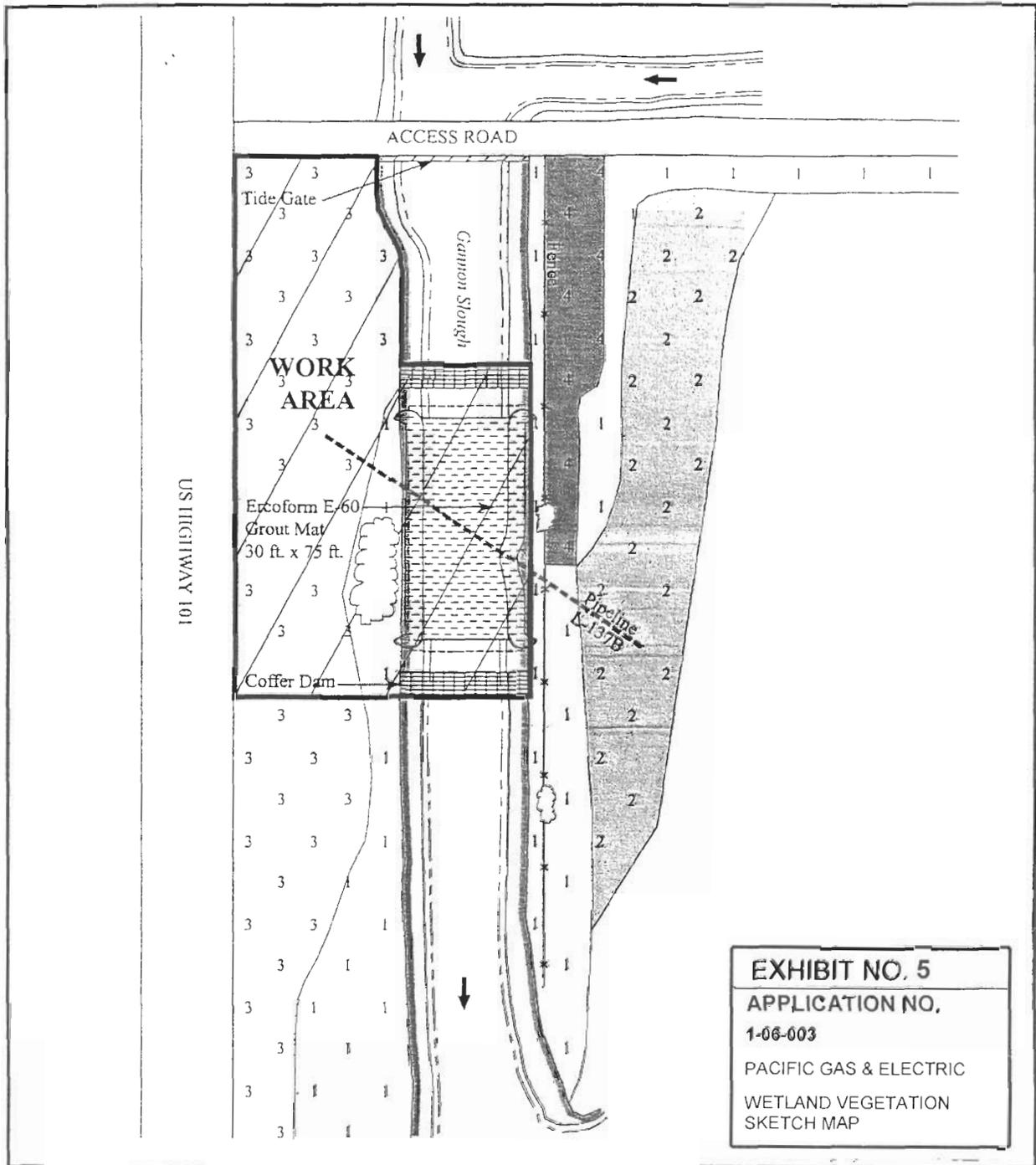
Figure 3. Cross Section Schematic



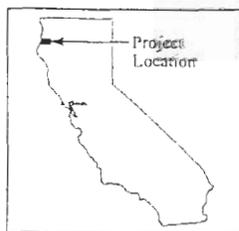
- Legend
-  Work Area
  -  Construction Equipment Area

**EXHIBIT NO. 4**  
**APPLICATION NO.**  
1-06-003  
PACIFIC GAS & ELECTRIC  
CROSS-SECTION  
SCHEMATIC

Figure 4. Wetland Vegetation Sketch Map



**EXHIBIT NO. 5**  
**APPLICATION NO.**  
**1-06-003**  
 PACIFIC GAS & ELECTRIC  
 WETLAND VEGETATION  
 SKETCH MAP



**Legend**

- == Pipeline L-137B
- Salt Marsh Habitat Along Banks
- ▨ Work Area
- 1 Brackish Marsh
- 2 Pickleweed or Mixed Marsh
- 3 Upland - Mowed Highway Shoulder
- 4 Upland - Ruderal Vegetation on Compacted Fill

**WETLAND VEGETATION SKETCH MAP**  
**Gannon Slough**

Pipeline L-137B Gannon Slough Project  
 Pacific Gas & Electric Company



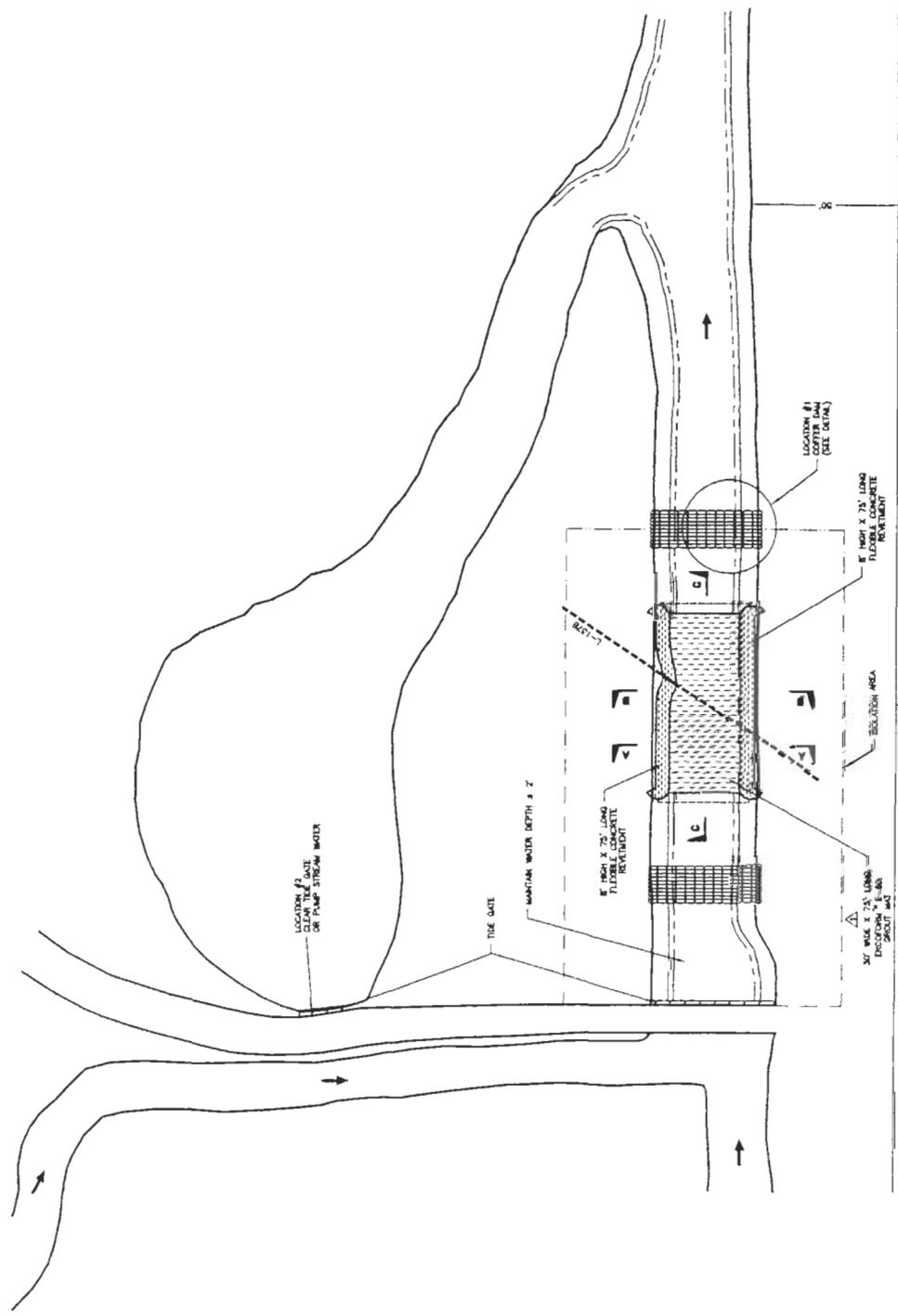
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**EXHIBIT NO. 6**  
**APPLICATION NO.**  
 1-06-003  
 PACIFIC GAS & ELECTRIC  
 CONSTRUCTION PLAN

APPROX. GPS COORDINATES  
 2000000 13420000  
 UTM ZONE 18QUC

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**PACIFIC GAS & ELECTRIC COMPANY**  
 1-13700, DANNON SLOUGH  
 FLEXIBLE CONCRETE BAG RETENTION  
 MERCED COUNTY, CALIFORNIA  
 SHEET NO. 4787-1



HWY 101



NO.	DATE	REVISION	BY	CHK.
1	07-13-04	REVISED PLAN VIEW		
2	04-18-04	REVISED TO FOR		

CONSTRUCTION DRAWING

DATE: 04/18/04  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]

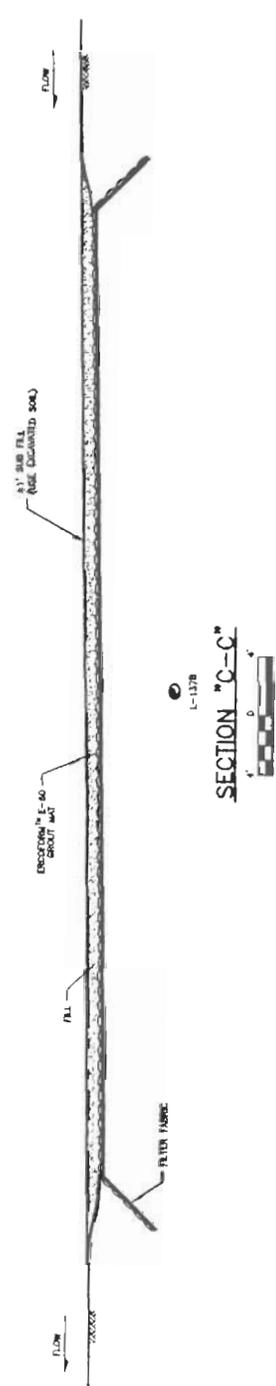
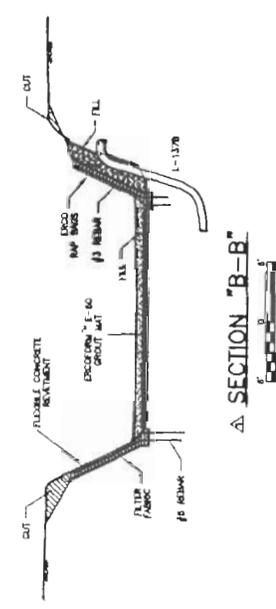
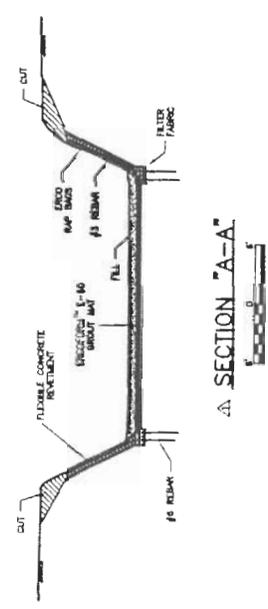
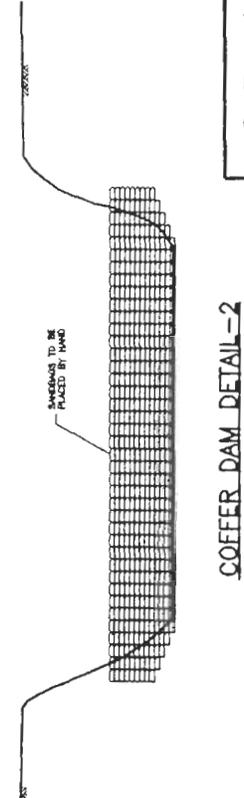
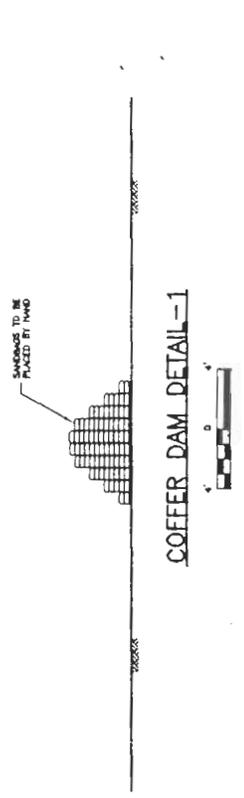
**EXHIBIT NO. 7**  
**APPLICATION NO.**  
 1-06-003  
**PACIFIC GAS & ELECTRIC**  
**COFFER DAM DETAIL PLAN**

**NOTE:**  
 THE DRAWING INDICATES A PROPOSED CONSTRUCTION WHICH IS SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL AGENCIES. THE DRAWING IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

**PACIFIC GAS & ELECTRIC COMPANY**  
 1-1378, DAMMON SLOUGH  
 FLEXIBLE CONCRETE BAG REVEMENT  
 HILLSDALE COUNTY, CALIFORNIA

**RCDM, INC.**  
 4787-2

NO.	DATE	REVISIONS	D.P.	E.P.
1	07-15-64	RECORD PLAN VIEW		
2	04-19-64	REMOVED TO TOP		

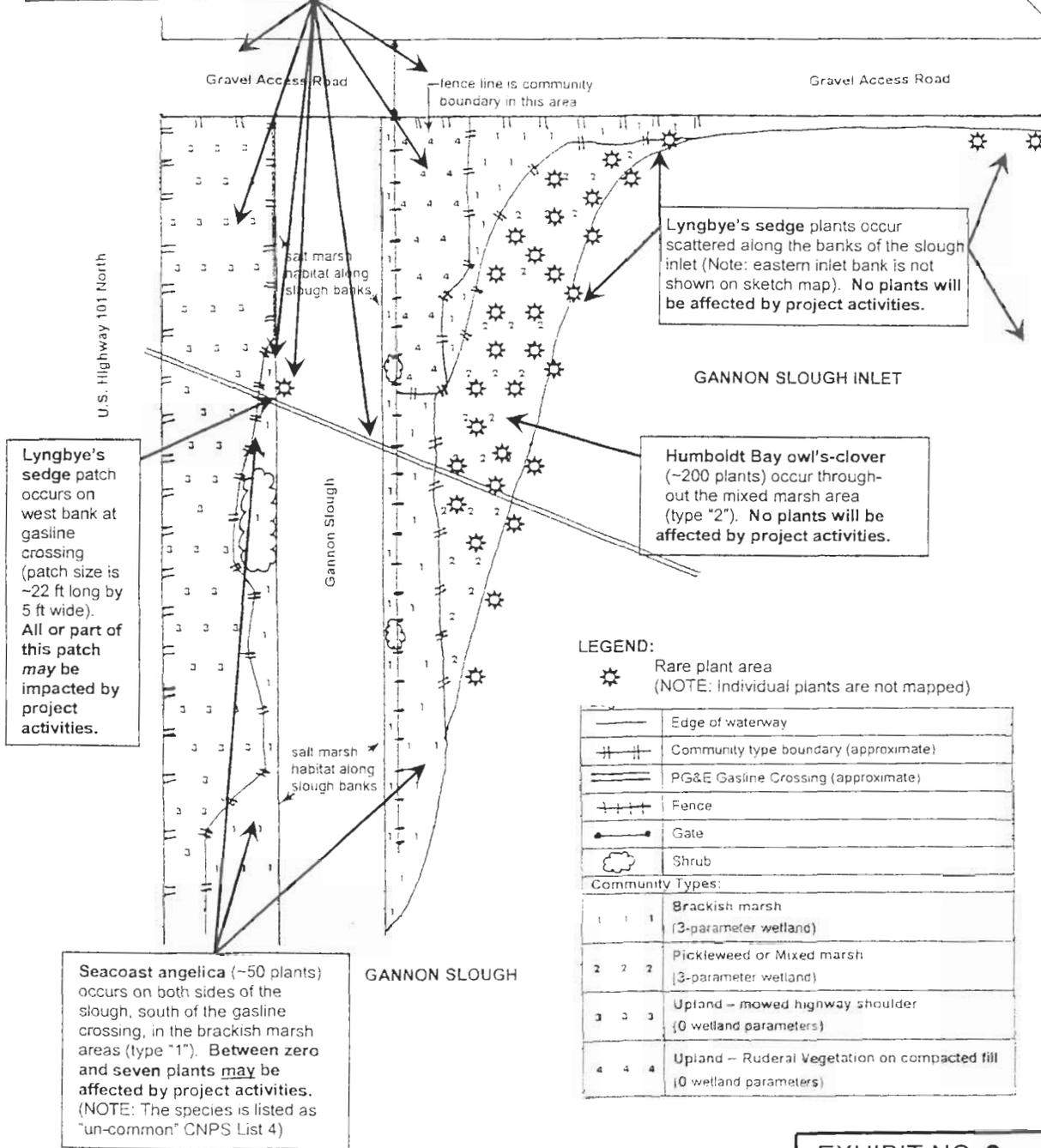
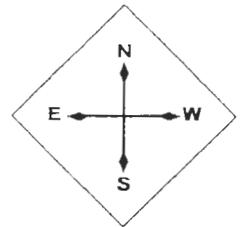


**NOTE:**  
 ALL DIMENSIONS ARE APPROXIMATE. PLEASE CONSULT THE DRAWING FOR DIMENSIONS.

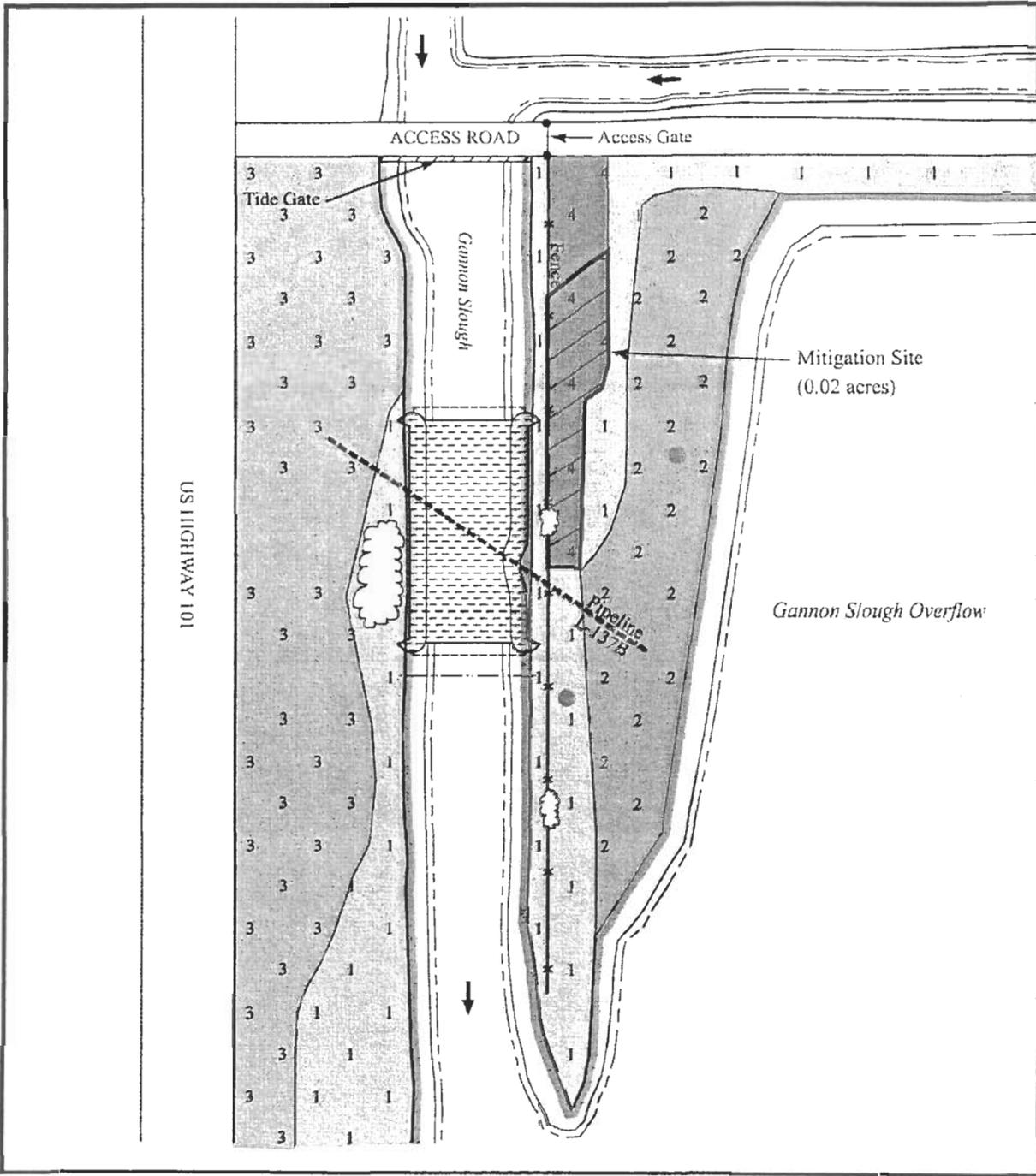
CONSTRUCTION DRAWING

Project impact areas may include the highway shoulder (type "3"), a small patch of brackish marsh (type "1") near the gasoline crossing on the west side of the slough, the gravel access road, the east-side upland area (type "4"), and the immediate gasoline crossing areas, within the channel, on both slough banks.

**Figure 2**  
**Sketch Map**  
 PG&E Gannon Slough Gasline Project  
 Arcata South USGS 7.5' Quad.  
 Section 4 of T5N, R1E, HB&M



**EXHIBIT NO. 8**  
**APPLICATION NO.**  
 1-06-003  
 PACIFIC GAS & ELECTRIC  
 RARE PLANT MAP



**Legend**

- == Pipeline L-137B
- ▬ Salt Marsh Habitat Along Banks
- Reference Site
- 1 Brackish Marsh
- 2 Pickleweed or Mixed Marsh
- 3 Upland - Mowed Highway Shoulder
- 4 Upland - Ruderal Vegetation on Compacted Fill

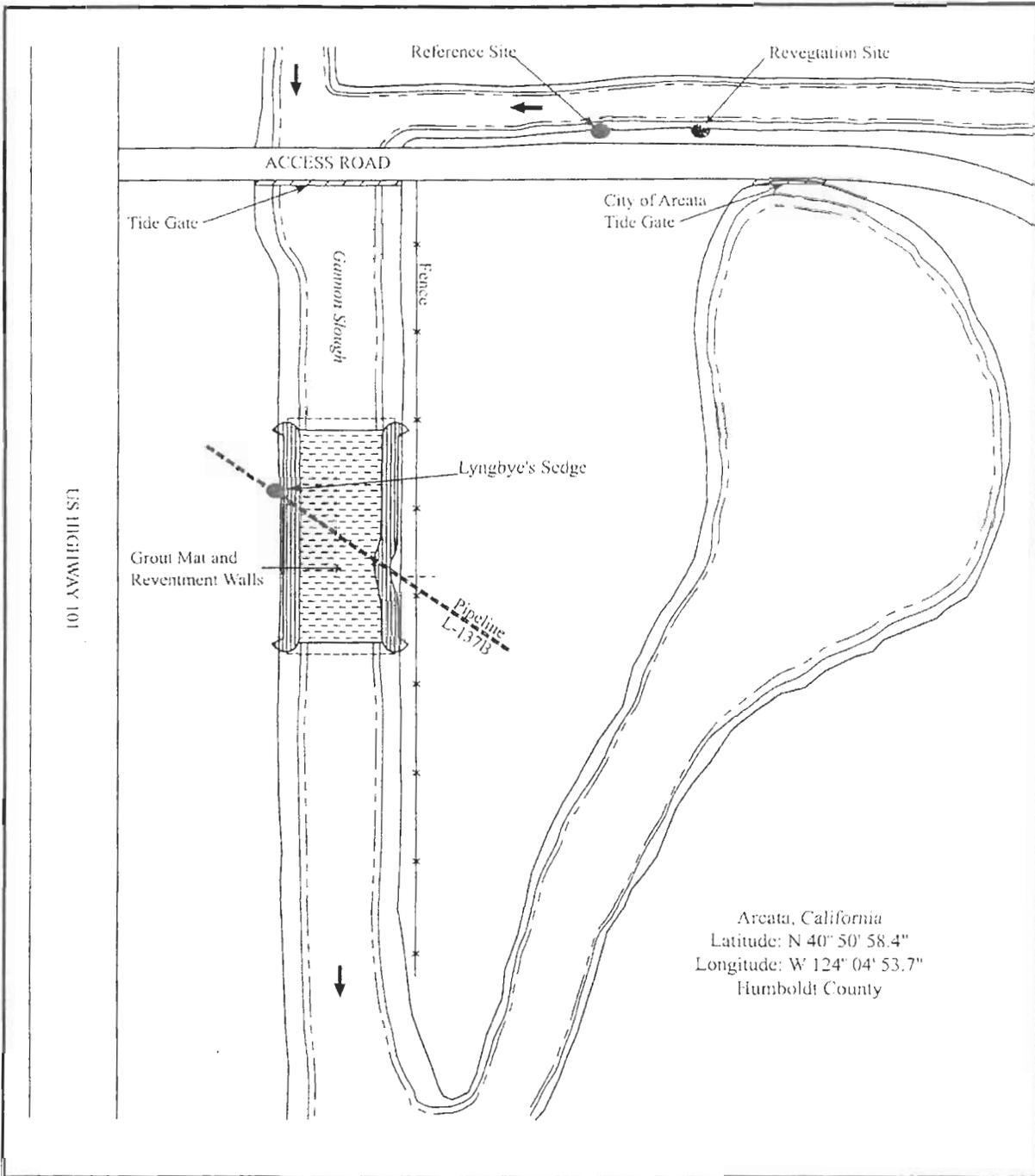
**WETLAND MI**

Pipeline L-137B C  
Pacific Ga:



Not to Scale

<b>EXHIBIT NO. 9</b>
<b>APPLICATION NO.</b>
1-06-003
PACIFIC GAS & ELECTRIC
WETLAND MITIGATION MAP



Arcata, California  
 Latitude: N 40° 50' 58.4"  
 Longitude: W 124° 04' 53.7"  
 Humboldt County



Legend

== Pipeline L-137B



Not to Scale

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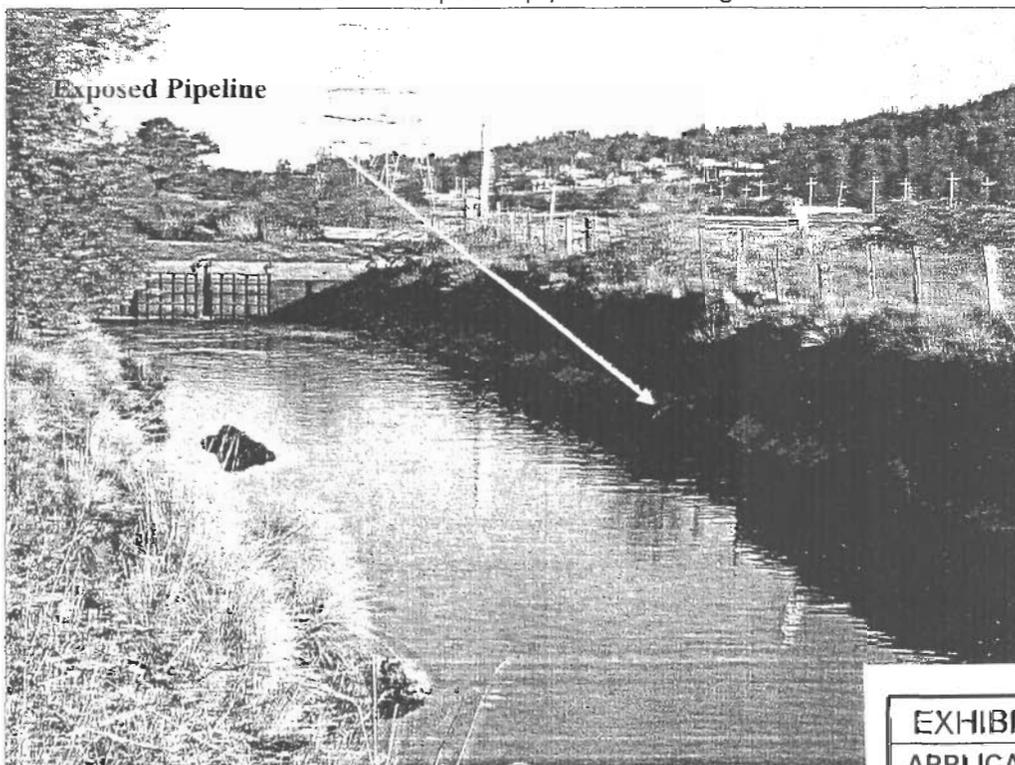
Pip

<b>EXHIBIT NO. 10</b>
<b>APPLICATION NO.</b>
1-06-003
PACIFIC GAS & ELECTRIC
REVEGETATION SITE PLAN

Photo 1. L137B intersecting diked former-tidelands, Gannon Slough, and highway.



Photo 2. Exposed pipeline in slough



<b>EXHIBIT NO. 11</b>
<b>APPLICATION NO.</b>
1-06-003
PACIFIC GAS & ELECTRIC
PROJECT SITE PHOTOS
(1 of 3)

Photo 3. Marsh peninsula intersecting L137B

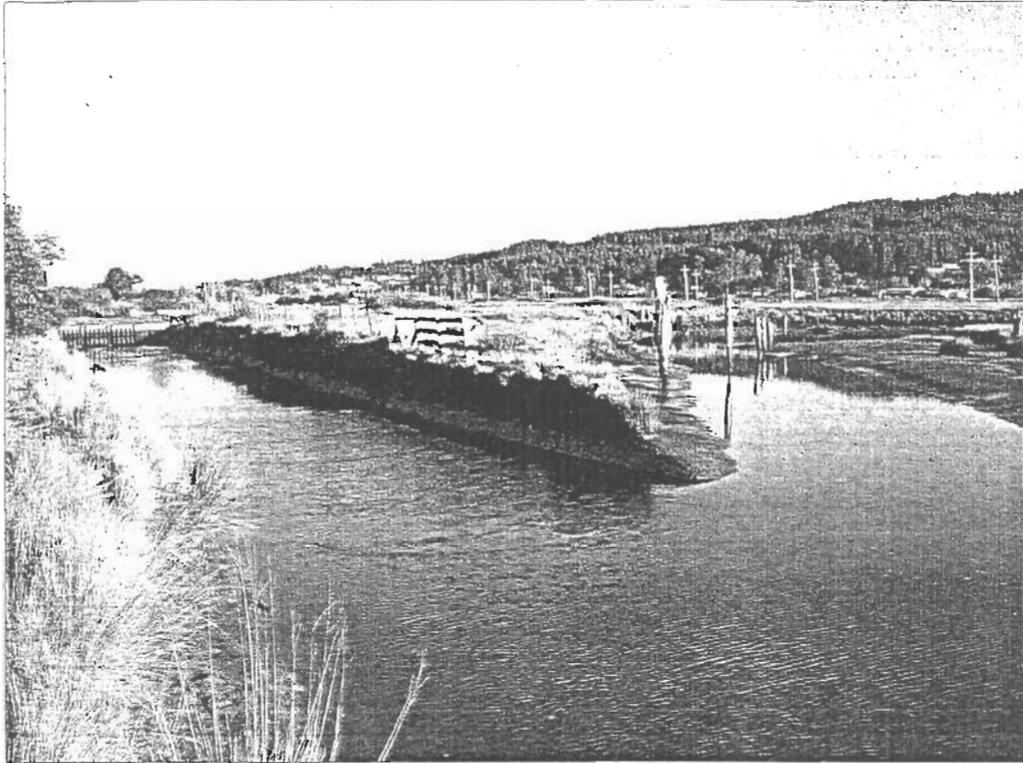


Photo 4. Concrete mat to be installed to protect L137B



203

Photo 5. Photo depicts a before and after documentation of an area secured using a concrete revetment wall

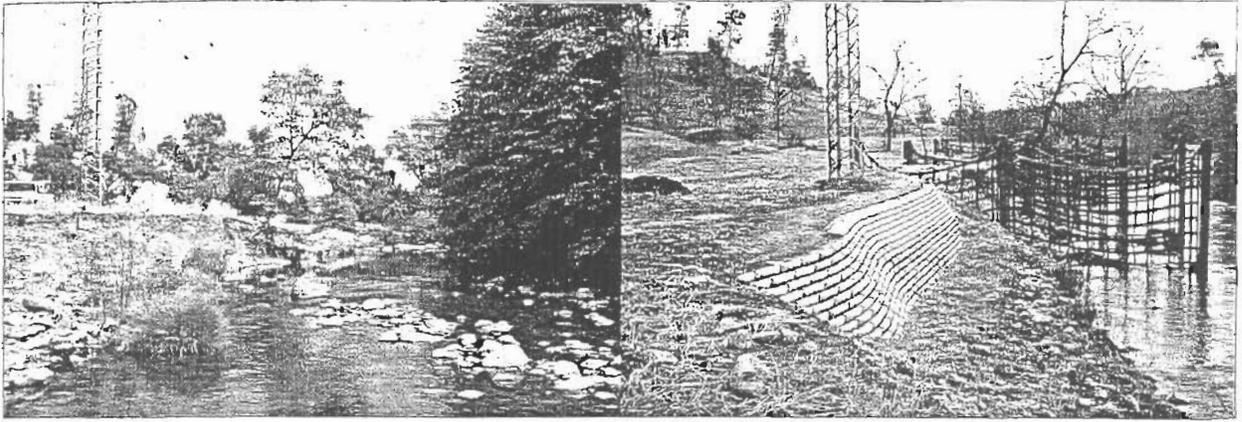
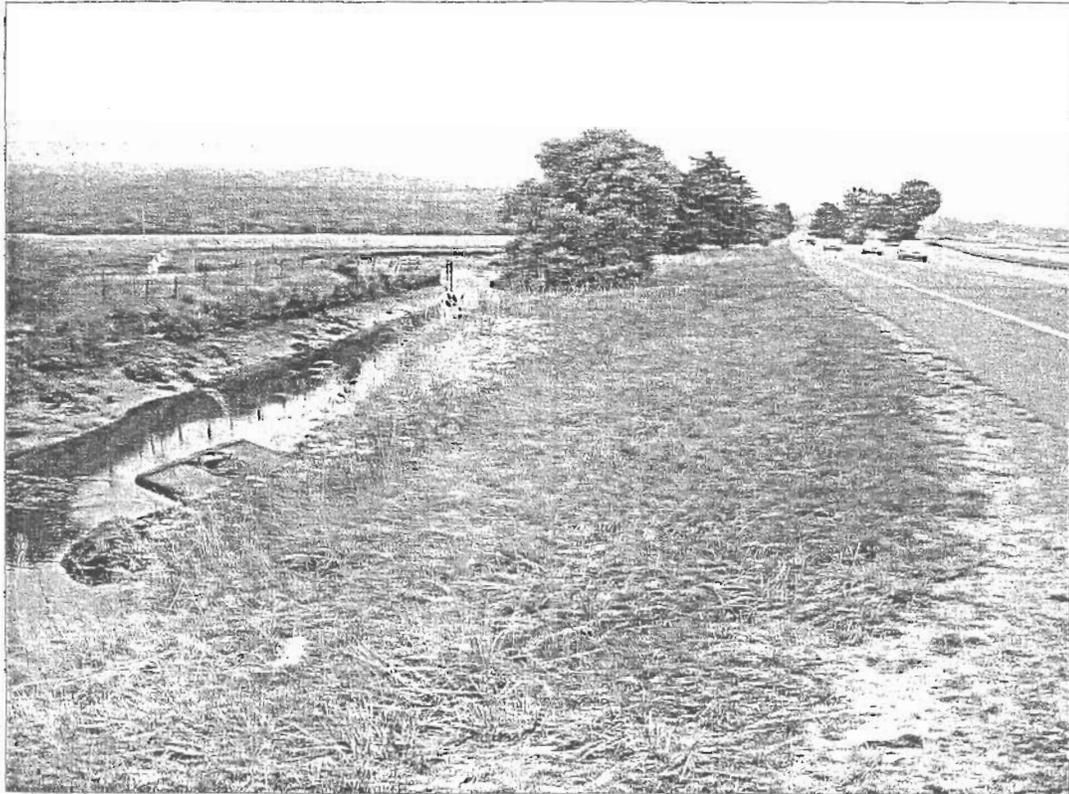


Photo 6. Photo depicts the US 101 ROW bordering Gannon Slough



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