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Staff Report: July 29, 2005
Hearing Date: August 12, 2005
Commission Action:

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 1-05-009

APPLICANTS: Roger and Johanna Rodoni/California Department of Fish and Game

PROJECT LOCATION: The lower 1.1 miles of Rocky Gulch above Brainard Slough and below Old Arcata Rd, Bayside area, Humboldt County. (APNs 501-091-02 & 04, 501-181-09 & 01, 501-261-14).

PROJECT DESCRIPTION: The "Lower Rocky Gulch Salmonid Access and Habitat Restoration Project" includes: (1) excavation of excess sediment from existing channels; (2) excavation of two new sections of channel totaling approximately 1,400 feet to eliminate unnatural 90 degree bends; (3) the use of dredged material to rehabilitate the dikes to contain winter floods and tidal waters; (4) relocation of a 2,500-foot section of dike that parallels Old Arcata Road to 50 feet back from the existing stream channel by excavating the existing dike and moving the fill material away from the channel to create a floodplain and increase the riparian corridor; (5) installation of riparian fencing, stream cattle crossings, and armored watering access sites to reduce impacts from cattle grazing on stream, wetland, and riparian habitats; (6) re-vegetation of native riparian and wetland plant species,

installation of willow baffles, and other materials to protect excavated areas from excessive erosion during the following winter; and (7) future maintenance dredging in the channel.

LAND USE PLAN DESIGNATION: 501-091-02: Agriculture Exclusive; Natural Resources (AE;NR)
501-091-04: Natural Resources; Rural Residential (NR;RR)
501-181-09: Agriculture Exclusive (AE)
501-181-01: Agriculture Exclusive (AE)
501-261-14: Agriculture Exclusive (AE)

ZONING: 501-091-02: Agriculture Exclusive-60 acre minimum; Flood Hazard, Transitional Agriculture Lands combining zone; Natural Resources/ Coastal Wetlands combining zone (AE-60/F,T; NR/W)
501-091-04: Rural Residential Agriculture-2.5 acre minimum-manufactured homes and Coastal Wetlands combining district; Natural Resources and Coastal Wetlands Combining District (RA-2.5-M/W; NR/W)
501-181-09: AE-60/F,T
501-181-01: AE-60/F,T
501-261-14: AE-60/F,T

LOCAL APPROVALS RECEIVED: 1) Humboldt County Coastal Development Permit CDP 04-92/Conditional Use Permit CUP 04-32

OTHER APPROVALS RECEIVED: 1) NOAA Fisheries Section 7 Consultation/Biological Opinion
2) U.S. Fish and Wildlife Service Section 7 concurrence
3) California Department of Fish & Game Streambed Alteration Agreement
4) North Coast Regional Water Quality Control Board Water Quality Certification
5) California Office of Historic Preservation Section 106 Compliance

OTHER APPROVALS REQUIRED: 1) Humboldt Bay Harbor, Recreation and Conservation District Encroachment Permit
2) City of Eureka Public Works Department Encroachment Permit
3) U.S. Army Corps of Engineers Individual Permit
4) U.S. Army Corps of Engineers Nationwide Permit 27 Stream and Wetland Restoration

- SUBSTANTIVE FILE DOCUMENTS:
- 1) Humboldt County LCP
 - 2) Biological Assessment: Lower Rocky Gulch Salmonid Access and Habitat Restoration Project
 - 3) Draft Mitigated Negative Declaration for the Lower Rocky Gulch Anadromous Salmonid Access and Habitat Restoration Project (prepared by Humboldt County)
 - 4) Monitoring Plan for the Lower Rocky Gulch Salmonid Access and Habitat Restoration Project (prepared by Aldaron Laird)

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SUMMARY OF STAFF RECOMMENDATION

Staff recommends that the Commission approve this application with special conditions. The applicants are seeking authorization to implement the California Department of Fish and Game's "Lower Rocky Gulch Salmonid Access and Habitat Restoration Project." The primary purpose of this project is to re-establish access for anadromous salmonids to Rocky Gulch. To achieve this purpose, aggraded channel reaches would be excavated to provide access for anadromous

salmonids between Humboldt Bay and the upper Rocky Gulch watershed. A secondary purpose of the project is to enhance and expand estuarine and freshwater habitats in the lowermost mile of Rocky Gulch. Achieving both of these project purposes would have a beneficial affect on the physical and biological environments of Rocky Gulch, and eventually may contribute to the recovery of Coho salmon (*Oncorhynchus kisutch*), steelhead (*O. mykiss*), coastal cutthroat trout (*O. clarki clarki*), and tidewater goby (*Eucylogobius newberryi*) in Humboldt County. The project area is located on cattle grazed, diked, former tidelands in Humboldt County, near the town of Bayside, just below Old Arcata Road. Rocky Gulch Creek is part of the Jacoby Creek watershed.

The proposed project is consistent with the provisions of Coastal Act Section 30236, as it is a channelization and/or substantial alternation of a stream for the primary function of the improvement of fish and wildlife habitat, and it incorporates the best mitigation measures feasible to reduce adverse impacts to Rocky Gulch, including its sensitive fish species, sensitive plant species, and water quality, as well as mitigation measures to reduce other potential impacts to wetlands and riparian areas.

To ensure the project's consistency with Sections 30231 and 30233 of the Coastal Act, the best feasible mitigation measures to mitigate potential impacts of the development to water quality and fish and wildlife habitat and other coastal resources associated with the alteration and structural fill of Rocky Gulch Creek must be implemented. Additionally, to ensure the project's consistency with Section 30244 of the Coastal Act, which provides protection of archaeological and paleontological resources, mitigation measures must be implemented to protect potential archaeological resources on site. Therefore, Staff recommends that the Commission impose Special Condition Nos. 1 - 8, which require the implementation of ninety-one mitigation measures proposed by the applicant, and included herein, the implementation of other measures to protect water quality, wetland and riparian habitat and vegetation, sensitive fish species, and archaeological resources, and that require the submittal of project monitoring information and remediation plans, if final monitoring reports indicate that the project has been unsuccessful.

As conditioned, staff believes the proposed 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 pages 4-5.

STAFF NOTES

I. Jurisdiction and Standard of Review.

The proposed project is located in the Commission's retained jurisdiction. The County of Humboldt has a certified LCP, but the site 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.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

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. 1-05-009 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 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 attached.

III. SPECIAL CONDITIONS:

1. Mitigation Measures

As proposed by the applicants, the permittees shall undertake all stages of development in accordance with Mitigation Measures Nos. 1 – 91, as listed in Exhibit 3 of the July 29, 2005 Staff Recommendation.

2. Construction Responsibilities and Spill Control

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

- A. Heavy equipment that will be used in the project shall be in good condition and shall be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started;
- B. Equipment operators shall be trained in the procedures to be taken should an accident occur. Prior to the onset of work, the California Department of Fish and Game (CDFG) shall ensure that the contractor has prepared a plan to allow a prompt and effective response to any accidental spills;
- C. All activities performed in or near a stream or wetland shall have absorbent materials designed for spill containment and cleanup at that activity site for use in case of an accidental spill;
- D. Refueling areas for equipment will occur only at the upland staging area B, as described in the Biological Assessment. If equipment must be washed, washing shall occur where wash water cannot flow into wetlands or waters of the U.S./State; and
- E. Stationary equipment shall be positioned over drip pans.

3. Area of Archaeological Significance

- A. The permittee shall notify the Table Bluff Wiyot Tribe before earth moving adjacent to Old Arcata Road and within the Brainard Point area.
- B. If an area of cultural deposits is discovered during the course of the project all construction shall cease and shall not recommence except as provided in subsection (c) hereof; and a qualified cultural resource specialist shall analyze the significance of the find.
- C. A permittee seeking to recommence construction following discovery of the cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director.
 - (i) If the Executive Director approves the Archaeological Plan and determines that the Archaeological Plan's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence after this determination is made by the Executive Director.
 - (ii) If the Executive Director approves the Archaeological Plan but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission.

4. Submittal of Monitoring Information

The permittee shall submit to the Executive Director the monitoring information specified in mitigation measure nos. 6-7, 13-15, 23-25, 62-63, and 84-85 to demonstrate that the project has been performed consistent with the proposed mitigation measures.

5. Remediation Plan

If the final monitoring reports required by mitigation measure nos. 38, 39, 55-57, 68, and 90 indicate that the "Lower Rocky Gulch Salmonid Access and Habitat Restoration" effort has been unsuccessful, in part, or in whole, based on the approved performance standards, the applicant shall submit a revised or supplemental remediation plan within 45 days of submittal of the final monitoring reports to compensate for those portions of the original plan which did not meet the approved performance standards. The revised remediation program shall be processed as an amendment to this coastal development permit.

6. Re-vegetation Plan

A. **PRIOR TO ISSUANCE OF THE PERMIT**, the applicant shall submit, for the review and approval of the Executive Director, a final re-vegetation plan, as stipulated in mitigation measure no. 33, for the entire area disturbed by grading activity. The plan shall be prepared by a licensed professional botanist or biologist with expertise in restoration. The re-vegetation plan shall adhere to the following specifications:

1. The plan shall demonstrate that:

- (a) All non-native invasive plants present in the riparian habitat and buffer area shall be removed;
- (b) The entire disturbed area will be replanted with habitat specific native vegetation. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California, shall be employed or allowed to naturalize or persist on the site. No plant species listed as a 'noxious weed' by the governments of the State of California or the United States shall be utilized within the property. Riparian vegetation is to be planted at a minimum of a 1:1 ratio;
- (c) Rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone or Diphacinone, shall not be used.

2. The plan shall include, at a minimum, the following components:

- (a) A site plan accompanied by a plant list which together show the type, size, and location of all plant materials that will be retained or installed on the disturbed area; and

(b) A schedule for installation of the plants. Planting of seedlings shall begin after December 1, or when sufficient rainfall has occurred to ensure the best chance of survival of the seedlings, but in no case after April 1st.

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. **Length of Development Authorization**

The "future channel maintenance" activities are only authorized by this permit for five (5) years from the date of Commission approval (until August 12, 2010). One request for an additional five-year period of channel maintenance authorization may be accepted, reviewed and approved by the Executive Director for a maximum total of 10 years of channel maintenance authorization, provided the request would not substantively alter the project description, and/or require modifications of conditions due to new information or technology or other changed circumstances. The request for an additional five-year period of repair and maintenance authorization shall be made prior to August 12, 2010. If the request for an additional five-year period would substantively alter the project description, and/or require modifications of conditions due to new information or technology or other changed circumstances, an amendment to this permit will be necessary before any channel maintenance beyond August 12, 2010 may be undertaken.

8. **Fish Capture and Relocation**

As required by the National Marine Fisheries Service (NMFS) terms and conditions of the Biological Opinion, the following measures shall be taken to reduce adverse impacts to salmonids during fish capture and relocation:

- A. NMFS guidelines for electrofishing waters containing salmonids shall be followed. These guidelines can be found on the web at:
<http://www.nwr.noaa.gov/1salmon/salmesa/4ddocs/final4d/electro2000.pdf>;
- B. The field crew must have a copy of the NMFS biological opinion, including these terms and conditions and NMFS electrofishing guidelines, available on site at all times;
- C. Block nets shall be placed at the upper and lower extent of the areas electrofished for relocation purposes. Block net mesh shall be sized to ensure salmonids upstream or downstream do not enter the areas proposed for dewatering between passes with the electrofisher. Block nets shall extend across the entire wetted channel;
- D. Multiple passes with the electrofisher shall be utilized to ensure maximum capture probability of listed salmonids within the area proposed for dewatering;

- E. All captured fish shall be held in water with temperatures not greater than ambient instream temperatures. If cooling is used, water temperatures will not be allowed to cool more than three degrees Celsius (five degrees Fahrenheit) below ambient instream temperatures. All captured fish shall be held in well-oxygenated water, with a dissolved oxygen level of seven parts per million or greater. Prior to release, the following information shall be recorded: (1) number of fish by species; (2) visual determination of age of listed salmonids (e.g., fry, 1+ or 2+ juvenile, or adult); (3) number of listed salmonid injuries and fatalities by age class; (4) number of successfully relocated listed salmonids by age class for each relocation site; and (5) date and time of release of listed salmonids to each relocation site. Listed salmonids shall be subject only to the minimum handling and holding times required to collect the above information and relocate them to appropriate aquatic habitat. All captured fish shall be allowed to recover from electrofishing and other capture gear before being returned to the stream.

9. **Humboldt Bay Harbor, Recreation, and Conservation District Approval**

PRIOR TO ISSUANCE OF THE PERMIT, the applicants shall provide to the Executive Director a copy of a permit issued by the Humboldt Bay Harbor, Recreation, and Conservation District (HBHRCD) or letter of permission, or evidence that no permit or permission is required. The applicant shall inform the Executive Director of any changes to the project required by the HBHRCD. 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. **City of Eureka Encroachment Permit**

PRIOR TO ISSUANCE OF THE PERMIT, the permittee shall submit a copy of the Encroachment Permit issued by the City of Eureka granting approval for the project or evidence that no permit or permission is required. The permittees shall inform the Executive Director of any changes to the project required by the City of Eureka. Such changes shall not be incorporated into the project until the permittees obtain a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

11. **Army Corps of Engineers Approval**

PRIOR TO THE COMMENCEMENT OF DEVELOPMENT, the permittee shall submit a copy of the permit issued by the U.S. Army Corps of Engineers granting approval for the project or evidence that no permit or permission is required. The permittees shall inform the Executive Director of any changes to the project required by the Army Corps of Engineers. Such changes shall not be incorporated into the project

until the permittees obtain a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. History of Lower Rocky Gulch

In 1957, California Department of Fish and Game's (CDFG) Fisheries Manager Ralph McCormick described lower Rocky Gulch "from the mouth up to Old Arcata Road a distance of about one mile is an intertidal estuary." The following historical information obtained from California Department of Fish and Game's (CDFG) Rocky Gulch files was provided to illustrate the history of aggradation that has occurred to the stream and degradation of its fisheries as a result of logging operations upstream. On December 12th 1956, Mr. John Williamson, a rancher on lower Rocky Gulch, reported to Fish and Game Warden John O. Finigan that:

"There was a sudden rise in the creek and the abnormally heavy amount of clay silt was killing spawning salmon. These fish had been washed completely out of the creek by the sudden onrush of heavy silt. He [Mr. Williamson] further stated that the creek was so heavily silted that it didn't have the appearance of water at all, but appeared to be semi-solid, moving very sluggishly down the streambed. (Finigan, 1957)"

That catastrophic environmental calamity in 1956 likely caused the expiration of Coho salmon, steelhead, and coastal cutthroat trout populations, and probably tidewater goby if they were present in Rocky Gulch. Compounding the logging damage to Rocky Gulch's anadromous salmonid populations was the installation of a tide gate (first reported in 1964) at the mouth of Rocky Gulch, which significantly reduced the opportunity for migrating adult anadromous salmonids to enter this stream. Despite nearly fifty years since these events occurred, CDFG's 2001-2003 surveys still have found no Coho salmon, steelhead, or anadromous cutthroat trout in Rocky Gulch, nor has tidewater goby been observed (Laird 2005).

B. Description of Project Area

The entire project area is located along a channelized watercourse and on diked former tidelands that are now used for cattle grazing. The site includes approximately 5,500 feet of stream, associated salt marshes and riparian corridor between Old Arcata Road and US Hwy 101 (exhibit 5).

The upper 2,000 feet of stream downstream of Old Arcata Road is narrowly channelized between poorly maintained dikes and the Old Arcata Road embankment. Much of this reach has become plugged by fine sediment deposition and overgrown by willow and alder thicket. In 2004 and

2005, the dike in this upper reach breached in several locations, allowing the entire stream discharge to flow onto the adjacent pasture.

The lower 3,000 feet of stream runs through straight sections across the middle of a pasture with sharp 90-degree bends. Dikes along the left bank (looking downstream) in this reach contain most tides (although extreme high tides in 2005 overtopped this dike) and flood-flows, including tributary input from three small perennial streams. At the downstream end, the stream flows through a recently upgraded tidegate and joins Washington Gulch to form Brainard Slough above Highway 101. In 2005, the dike along the left bank (south side) of Washington Gulch was breached in several locations causing extensive flooding of the salt marshes and pasture in the project area.

Roger and Johanna Rodoni are the property owners of the project area, and use these former tidelands year-round to graze cattle. The maintenance of reclaimed tidelands for agricultural use has required constant repair of dikes, tidegates, drainage ditches, and stream channels. During the normal course of agricultural use, vehicles and equipment regularly traverse the pasture, which is a seasonal wetland. Cattle have access to, and do graze, the seasonal wetland pasture, riparian corridor, willow swamp, salt marsh, and uplands. Rocky Gulch is the primary source of water for these cattle, and there are several stream crossings and trails that they habitually use along the stream corridor. Humboldt County's Local Coastal Plan has designated the entire valley traversed by lower Rocky Gulch as a coastal wetland and transitional agricultural combining zone.

Currently Rocky Gulch has two hydrologic regimes, one tidal, and the other freshwater, with a dynamic brackish water boundary where the two waters meet. Therefore, the project area has been stratified into tidal and freshwater zones, and will henceforth be described by station numbering that follows engineering notation and is based on the distance (in feet) upstream from station 0+00 at the west side of Hwy 101 where the stream joins Humboldt Bay, e.g. station 6+00 is 600 feet upstream of Humboldt Bay. The range in adjusted tide stage elevation behind the tide gate is from 2.0 to 6.5 feet (NAVD 88) and a 2003 thalweg survey indicates the maximum extent of tidal influence would be near station 37+00. During winter/spring runoff conditions, the brackish water or hydrologic interface zone is from station 6+00 to 37+00, and the freshwater zone is from station 37+00 upstream. Stream flows have breached or bypassed an aggraded channel/ditch reach at station 32+50 where Rocky Gulch makes a 90-degree turn to the west, and generally flow north into a large salt marsh, ultimately draining back to Rocky Gulch farther downstream (Laird 2005).

(1) Reach 1: Tidal Pool [Station 0+00 to 6+00]

This reach extends from the Arcata Bay side of the Highway 101 culvert up to the tide gate on Rocky Gulch (exhibit 5). This area has been designated the 'tidal pool' due to the influence of Humboldt Bay tides and the Hwy 101 culvert. Water surface elevations are nearly equal on both sides of the Hwy-101 culvert (0.3 feet difference, McBain & Trush 2002) indicating that the culvert does not significantly affect tide stage. To the east of Highway 101, dikes enclose the

tidal pool (Brainard Slough), which receives runoff from both Washington Gulch and Rocky Gulch. Two tidegate structures span the mouth of Rocky Gulch: one has been abandoned and filled with concrete. The other structure was recently upgraded with a new tidegate to allow fish passage upstream of the tidegate. The replacement of this tidegate and sections of the adjoining tidegate was authorized by Administrative Coastal Development Permit No. 1-04-059 in November of 2004. The newly installed tidegate was designed to maintain a muted tidal prism and brackish aquatic habitats while simultaneously allowing fish passage. For the period of 2001 through 2003, no anadromous salmonids were observed by CDFG during their surveys of Rocky Gulch. The project proponents are currently monitoring for adult anadromous salmonids upstream of the new tidegate (Laird 2005).

(2) Reach 2: Tidal Slough [Station 6+00 to 16+50]

This section of Rocky Gulch behind the tide gate is still tidally influenced (exhibit 5). The slough channel bottom is predominately fine silts and mud, approximately 10 feet wide by 4 feet deep and linear. A dike that averages 2-3 feet higher than the pasture confines the south bank, and the north bank is a salt marsh that is confined farther to the north by another dike paralleling Washington Gulch. Both slough banks are vertical and undercut from tidal action. Regular tidal flushing in this reach has reduced sediment deposition and keeps the channel free of vegetation. The areas on both sides of the slough channel, with the exception of the dike, are salt marsh. Discharge draining from the grazed wetland to the south enters Rocky Gulch at station 9+00 via a 2-foot diameter drainage culvert and flapgate installed under the dike. During the winter of 2004, a 10-foot section of the dike eroded away, which contained the drainage ditch culvert and flapgate. Tidal waters were temporarily allowed to ascend a tributary network, flooding the salt marsh and grazed wetlands. The landowners repaired the breeched dike in Spring of 2004 and tilled under much of the grazed wetland to the south of the dikes that was inundated by saltwater intrusion. In 2005, high tides in excess of 8.5 ft Mean Lower Water (MLW) caused several breaches in the left bank dike between Washington Gulch and Rocky Gulch and resulted in the salt marsh and pasture being completely flooded.

(3) Reach 3: Tidally Influenced Stream [Station 16+50 to 37+00]

In this reach, Rocky Gulch has been channelized to follow a north-south running property line (exhibit 5). The stream is essentially a ditch that is approximately 10 feet wide by 4 feet deep at its greatest width. From station 28+25 to 32+25, the channel has become so aggraded with sediment, that there is no discernable channel and winter/spring runoff forms a willow swamp in this section. A dike 2-3 feet in height above the pasture borders the stream to the west and south. This reach begins with a 90-degree bend to the south at station 16+50, a second 90-degree bend to the east at station 28+25, and a third 90-degree bend to the south at station 32+25. During the winter 2002-03, most flow left the channel at the 90-degree bend near station 32+50 where flow passes through a salt marsh that drains to the lower tidal reach below station 28+25, abandoning the reach between station 28+25 and 32+25 at low flow. During winter 2003-04, conditions worsened when the dike breached at station 46+00, extending the section of abandoned channel from station 28+25 up to station 46+00. Most flow drained across the seasonal wetland pasture

and through the dike and flapgate at station 9+00. The landowners repaired the breeched dike in spring of 2004 and tilled under much of the grazed wetland to the west of the dikes. There is a cattle crossing at station 35+00 where the stream passes through a 1-½ foot steel culvert. During the winter of 2004-05 this culvert began to back up water and cause the stream to flow out of the channel and across the pasture. On the east side of the channel, salt marsh vegetation dominates up to station 27+00. Riparian vegetation begins to line the channel at station 28+50 and continues upstream to station 61+00. An un-named perennial tributary joins Rocky Gulch near station 35+00 (Laird 2005).

(4) Reach 4: Freshwater-Riparian Reach [Station 37+00 to 61+50]

In this reach of Rocky Gulch, streamflow is not influenced by tidal flux, average discharges are estimated during low flow to be 0.5 cfs, and winter base flow averages 3.5 cfs, while the 100-year flood is estimated to reach 350 cfs (McBain & Trush 2002). In the 1950s this reach was relocated and channelized to parallel Old Arcata Road along the eastern side of a seasonal wetland pasture. Currently the channel is contained by dikes in a narrow corridor, and serves as a drainage ditch. This reach has a dike along its west bank up to station 56+00 that confines the stream to less than 20 feet from Old Arcata Road in many locations. The channel ranges from 3 to 10 – feet-wide and 1 to 3 – feet-deep, and the dike averages 2 to 3 – feet-high. Significant aggradation of the channel has occurred from station 35+00 to 47+00. There are sections of dike in this transitional (tidal to freshwater) zone, station 35+00 and 37+00, that are breached and allow runoff to leave the channel and flow across the seasonal wetland pasture. During the winter of 2004, a breach in the dike at station 46+00 captured all stream flow and discharged the flow onto the grazed wetland pasture, causing much of the pasture to be saturated with standing water. In the summer of 2004 the landowners repaired this breached dike. In the winter of 2004-05, the dike again breached in several locations between station 42+00 and 46+00. These breached dikes allow nearly all the streamflow to exit the Rocky Gulch channel, flow across the pasture, then collect in drainage ditches that route water back into the diked system at station 9+00, 300 feet upstream of the tidegate. The lower section of this reach flows through a willow swamp from station 28+50 to 41+70. Above station 41+70 is dense riparian woodland with stands of redwood. At station 54+50 a PG&E high-pressure gas main transmission line crosses under the Rocky Gulch channel and has become exposed due to local channel down cutting, requiring on-site repairs to protect the pipeline from damage or leaks. From station 56+00 to 61+00 (upstream of the project area), Rocky Gulch flows around a private residence and is not bound by dikes. There is very little riparian vegetation in this area. The upper boundary of this reach is at station 61+50 where Old Arcata Road crosses the stream. This Humboldt County culvert is considered to be undersized and causes occasional flooding upstream, but is not a barrier to anadromous salmonid migration. High flows in Rocky Gulch often back-up above Old Arcata Road, and water is routed into a bypass channel paralleling the road and is then conveyed through a culvert beneath the road to again discharge into Rocky Gulch at station 53+00 (Laird 2005).

C. Description of Proposed Project

The proposed "Lower Rocky Gulch Salmonid Access and Habitat Restoration" project is the second phase of a multi-phased restoration plan prepared by biologist Darren Mierau of McBain & Trush for co-applicant California Department of Fish and Game (CDFG). The restoration plan (McBain & Trush 2002) proposes to re-establish fish access between Humboldt Bay and the upper Rocky Gulch watershed for anadromous salmonids, and enhance aquatic-riparian-wetland habitats along the lower 1.1-mile of Rocky Gulch (Laird 2005).

Plot plans for the proposed project elements can be found on exhibit 5.

(1) Summary of Proposed Construction Activities

Construction is proposed to occur between July 1st and October 31st, 2005. The proposed activities would use existing ranching road access points to bring excavator, backhoe, bulldozer, and dump truck equipment onto the grazed wetland pasture. Heavy equipment and dump truck access would be limited to a designated "site access and staging area" that generally runs along the west side of the dike and stream (exhibit 5). Contractors would employ geotex mats and crushed rock to reduce impacts in excessively wet areas in the staging areas. The equipment would be used to excavate excessive sediment from the existing channels, excavate two new sections of channel totaling approximately 1,400 feet to eliminate unnatural 90° bends, and then use the dredged material to rehabilitate the dikes to contain winter floods and tidal waters. A 2,500-foot section of dike that parallels Old Arcata Road would be set back 50 feet from the existing stream channel by excavating the existing dike and moving the fill material away from the channel to create a floodplain and increase the riparian corridor (exhibit 5). Installation of riparian fencing and stream cattle crossings, and armoring watering access sites) would be implemented to reduce impacts from cattle grazing on stream, wetland, and riparian habitats. After the construction phase, re-vegetation crews would plant native riparian and wetland plant species, and install willow baffles and other materials to protect excavated areas from excessive erosion during the following winter. Following this phase, the channel would require period maintenance to (1) remove accumulated excess sediment and vegetation, (2) to maintain the channel capacity to convey flood flows, (3) to provide unobstructive fish passage across the grazed wetland pasture to reach upstream spawning reaches, and (4) to provide high quality juvenile salmonid rearing habitat in tidally influenced and brackish water zones. This future maintenance would include maintenance dredging of the newly restored channel approximately 4-6 years, and disposal of the dredged spoils onto existing dikes or upland areas.

(2) Detailed Proposed Construction Activities

- (a) Upgrade Existing Ranching Roads to Temporarily Access Construction Sites and Staging Areas

The project would utilize three existing access points: (A) from US Hwy 101 next to the CALTRANS yard at the west side of pasture, (B) from Old Arcata Road at a "knoll" overlooking a salt marsh, and (C) from Old Arcata Road near station 32+50 (exhibit 5). Access point C would require minor vegetation clearing (willow), grading, and enhancement of an existing stream crossing at station 34+50 (Laird 2005).

(b) Tidegate Dike Erosion Control

In June 2005, the Commission issued an emergency coastal development permit (exhibit 4) to install riprap on the west bank of the channel on the upstream and downstream side of the tidegate at station 6+00. The application seeks permanent authorization to retain this riprap. In addition, to complete the task, an additional approximately 20 yards of fill (10-foot-wide, 50-foot-long, 1-foot-high) would be placed on top of the dike above Mean Higher High Water to increase the top-of-dike elevation by one foot, to correspond to 9 feet NAVD88. Excess fill material from the channel reconstruction task would be used (see below) (Laird 2005).

(c) Install Fish Barriers, Relocate Fish, Install Flow Barriers, and De-water Channel in Preparation for Channel Excavation-Construction

During the winter of 2004-05 several breaches in the dike occurred between station 42+00 and 46+00, allowing the stream to flow across the pasture, collect into the main drainage ditch running down the middle of the pasture, and rejoin Rocky Gulch through the flap gate at station 9+00. In general, the creek channel would be de-watered during construction by maintaining the breached dike at station 46+00, diverting a small tributary at station 37+00 into the drainage ditch, and temporarily closing the tidegate. This would be accomplished in the following manner:

- Installing temporary fish barriers at station 9+00, station 37+00 and station 46+00, including a rock dam with a small metal pipe and flap gate at station 9+00, a fish screen at station 37+00 just downstream of the Halvorsen Creek confluence, and a fish screen at station 46+00 at the entrance to the pasture drainage ditch. Once fish screens are installed, fish would be removed with a seine net in the tidal reach of the channel between stations 9+00 and 37+00 and relocated to Washington Gulch. Once fish are removed, the tidegate auxiliary door would be closed at high tide (that allows a muted tidal prism upstream of the tidegate) and any remaining fish would be salvaged from the channel as the tide recedes, and relocated to Washington Gulch. From station 37+00 to 46+00 if there is any stream flow left in the channel by summer 2005, all fish would be removed with a seine net and backpack electro-fisher and relocated upstream of station 46+00.
- After work in the tidal zone (station 9+00 to 37+00) is completed, the downstream fish barrier would be removed at station 9+00 and the tidegate auxiliary door would be opened to restore muted tidal flow to the lower slough channel. A temporary fish barrier would be installed at station 56+00, fish between station 46+00 and 56+00 would be removed with a seine net and backpack electro-fisher, and relocated upstream of station 56+00. Once fish are

removed, a temporary pipeline (2-4 inch diameter) would be installed at station 56+00 and flow would be diverted to the head of the drainage ditch at station 46+00. The pipeline would run about 1,000 feet down the pasture. Approximately 1/2 of a cfs summertime flow is expected from Rocky Gulch at this station.

- At station 37+00 where the Halvorsen Creek culvert passes under Old Arcata Road, a temporary drainage pipe would be installed on the downstream end of the culvert to capture the tributary flow and route this water into the pasture drainage ditch. Approximately 1/10th of a cfs summertime flow is expected from this tributary.
- Once work is completed in the upper freshwater zone (station 37+00 to 56+00), the temporary drainage pipe at station 56+00 would be removed, and all fish would be removed with a seine net and backpack electro-fisher in the pasture drainage ditch from station 46+00 to station 9+00, and relocated upstream of station 46+00. Once fish are removed, flow would be restored at station 46+00 into the reconstructed channel and any remaining fish would be salvaged from the drainage ditch channel as the flow recedes (Laird 2005).

(d) Expand Channel Capacity in the Tidal Reach Of Rocky Gulch and Prevent Tidal Inundation of the Seasonal Wetland Pasture

Working from the left bank (south and west side) of Rocky Gulch, accumulated sediments, vegetation, and debris would be removed with an excavator to create the proposed channel cross section of 40 square-feet (10 feet wide by 4 feet deep) from station 18+00 to station 25+50.

The estuarine environment of Rocky Gulch would be expanded by excavating up to three new tidal slough channels between station 18+ 00 and 25+00. A temporary bridge would be installed across Rocky Gulch without fill to provide equipment access to excavate these tributary channels. Heavy equipment would be confined to the footprint of the proposed tributary channel for access, with excavation beginning at the head of the channel and working downstream to Rocky Gulch.¹

A new main channel would be excavated for Rocky Gulch, 10 feet wide by 3 feet deep, with meander bends from station 25+50 to 37+00, to increase channel capacity, provide reliable fish passage, and improve transport of sediments and debris. Equipment would utilize the new channel footprint for access, starting downstream and working upstream. The present stream crossing over an existing PG&E gas line right-of-way would be maintained. The existing main channel from station 25+50 to 37+00 would become part of the floodplain as an abandoned channel.

The existing dike would be rebuilt with dredged material along the left bank of Rocky Gulch from station 6+00 to station 31+00 up to 9.5 feet elevation (NAVD 88), thus raising the existing

¹ No excavation in the slough channel would occur where the City of Eureka is required to mitigate for the Mad River Pipeline Project's disturbance of Lyngby's Sedge.

dike approximately 1.5 ft. Equipment would work from the west and south sides (pasture side) of the dikes (Laird 2005).

(e) Restore Channel Capacity in the Freshwater Reach of Rocky Gulch, Prevent Inundation of the Seasonal Wetland Pasture, and Install Fish Habitat Enhancement Structures

The silt fence and fish barrier would be relocated from station 9+00 to station 37+00. Riparian vegetation (willow and alder) would be selectively cleared from station 35+00 to station 56+00 to provide excavator and backhoe access (12-foot-wide by 20-foot-high) for short-term construction and long-term maintenance of the stream channel and dike. Vegetation suitable for replanting would be salvaged and stockpiled, as well as unusable willow material to create floodplain willow baffles, and other remaining vegetation would be stockpiled for burning.

The existing channel would be excavated to remove accumulated sediments and vegetation and the channel cross section would be expanded to approximately eight square feet (four-foot-wide by two-foot-deep) from station 37+00 to 47+50. A new channel segment four-foot-wide by two-foot-deep between 49+50 to 56+00 would be excavated, relocating Rocky Gulch away from Old Arcata Road to improve fish passage, riparian vegetation, and sediment transport efficiency. The old channel from 49+50 to 53+00 would be maintained as a flood channel, receiving discharge from above Old Arcata Road via a culvert. The old channel from 53+00 to 56+00 would be back filled.

An existing dike on the left bank of the channel from station 31+00 to 56+00 would be relocated (utilizing cut and fill) to create a 50-foot wide riparian corridor west of the existing Rocky Gulch channel. The dimensions of the new dike would be designed to maintain the footprint of the dike being relocated to achieve a no net fill of surrounding wetlands.

A floodplain from station 31+00 to station 56+00 would be graded sloping downward toward the channel, but an intermittent low elevation natural berm along the left bank of channel would be maintained. Cut material would be placed onto a relocated dike to increase dike elevation. Dikes would be set back 50 feet from the centerline of the existing channel to create 2.9 acres of floodplain. The dike footprint would be 17 feet wide at the base, and would occupy 1.0 acre, and would require relocation of approximately 2,980 cubic yards of fill. No imported fill would be required.

Ten in-stream fish habitat structures (logs/boulders) would be installed from station 31+00 to 56+00, following CDFG's Salmonid Habitat Restoration Manual. Structures would be used to provide in-stream fish rearing habitat and to protect banks from unwanted erosion where bridges, cattle crossings, and PG&E pipelines cross the creek.

Willow baffles would be installed across the floodplain to control erosion and the floodplain would be mulched and/or hydro-seeded. Native riparian woody vegetation and conifer species would be planted within the riparian corridor from station 31+00 to 56+00, concentrating on conifer species (redwood or Sitka spruce) and riparian hardwoods (willow and red alder) within

the riparian "pasture" zones. Conifers would be planted on 20-foot centers, and riparian hardwoods would be planted on 10-foot centers (Laird 2005).

(f) Install Cattle Management Structures for Grazing Control and Access

Currently there is no cattle management fencing within the entire project area, and cattle are able to access the creek in nearly all locations. After construction of the dikes is complete, permanent cattle fencing would be installed on the outside of the dike (west side) from station 56+00 (tied into existing fencing) down to station 28+00. This would create a 50-foot-wide riparian floodplain corridor between the creek and the dikes. This fencing would thus allow the applicants to isolate the creek and riparian zone from the pasture.²

A permanent 12-foot by 20-foot cattle crossing bridge would be installed at station 34+50, and the bottom of the bridge would be maintained at approximately 1-foot higher elevation than surrounding pasture elevation. This bridge would replace an undersized culvert (also used as a crossing) that is currently the primary cause of the major sediment aggradation in the channel from station 34+50 up to approximately station 45+00. The bridge would be set on concrete bridge abutments measuring approximately 2-feet-wide by 3-feet-high by 12-feet-wide, with 2-foot-deep footings (approximately 5 cubic yards of concrete). The abutments would be excavated into the banks, with the bottom of the footings at approximately the elevation of the bottom of the channel. Half-ton and one-ton rip-rap-rock would be placed along the channel banks under the bridge to prevent erosion around the abutments, and crushed rock would be placed on the bridge approaches and deck to reduce/prevent soil erosion where the cattle walk.

The enhancement of two erosion-resistant stream cattle crossings and watering sites would be conducted at stations 31+00 and 50+00 by hardening the channel bed and banks with rock and gravel. These are meant to enhance existing crossings where the cattle currently trample through the creek. Concrete mattresses would simultaneously be installed underneath these same locations to protect a PG&E gas transmission line where it crosses underneath Rocky Gulch. It would be installed in the following manner:

- The gas pipeline would be exposed by excavating along a 50-foot section, where the pipeline intersects the creek. A 16-foot by 20-foot mattress of 4-inch Erco-FormTM would be installed to blanket across the pipeline, and the mattress would be injected with concrete. The pipeline trench would be backfilled and the concrete would be covered with quarry rock and crushed rock base across a 12-foot by 20-foot band to form a solid, erosion resistant stream channel that can be used as a wet cattle crossing and on-stream watering site. Construction would

² The applicants are obtaining a riparian grazing agreement with the California Department of Fish and Game (CDFG) for a 10-year duration that will allow (1) year-round cattle access to the upland areas between the creek and Old Arcata Road, where the cattle go to calve, and accessed by the hardened stream crossings, (2) summer grazing within the riparian zone for short, intense durations (flash grazing), implemented and monitored by the applicants. Cattle will not be allowed to graze for at least the first two growing seasons to allow the replanted vegetation to become established, and will be prohibited from grazing in the riparian zone in winter/spring months when the ground is wet and dikes, riparian vegetation, and stream-banks are vulnerable to impacts from cattle.

require up to 10 cubic yards of concrete; up to 40 cubic yards of quarry rock; and up to 100 cubic yards of crushed base rock.

- Boulder and log structures would be installed downstream of the cattle crossing to provide water surface grade control.

Currently the cattle access the creek in multiple locations to drink and to cross to the upland areas on the east side of the creek. The riparian fencing would prohibit cattle from accessing the creek in all locations except the hardened stream crossings that are designed to be drinking locations. The project would install crushed rock base across the channel and up the banks to eliminate bank erosion and prevent cattle from trampling the streambed and releasing suspended sediment and turbidity downstream. Both crossings (31+00 and 50+00) would be located over top of where the PG&E Ercon Matting would be installed to protect the gas pipeline, thus establishing long-term solutions for both the pipeline protection and cattle crossing. The hardened crossings can be thought of as a "wet-ford" where cattle can walk down into the creek (with a hardened stream bottom). The stream would continue to flow through these crossings, and a log weir would be installed downstream of them to maintain a shallow pool (~1 foot deep) across the "wet-ford". The log weir would have a maximum six inch drop on the downstream side to allow juvenile fish passage, as required by CDFG and National Oceanic and Atmospheric Administrations National Marine Fisheries Service (NMFS) (Laird 2005 and pers. com.).

(g) Post-Construction Site Remediation

Temporary flow diversions, fish barrier structures, temporary stream crossings, and silt fences would be removed. Geotex mats and crushed rock placed to reduce vehicular access impacts in excessively wet areas would be removed. Temporary access roads and staging areas would be de-compacted and areas disturbed by the project would be hydro-seeded.

(h) Future Channel Maintenance

The 2,400-foot section of Rocky Gulch below Old Arcata Road from approximately station 50+00 downstream to approximately station 26+00 is a low-gradient, aggradational reach and will perpetually deposit fine sediment into the channel and onto floodplains. The channel would therefore require periodic maintenance to (1) remove accumulated excess sediment and vegetation, (2) to maintain the channel capacity to convey flood flows, (3) to provide unobstructed fish passage across the grazed wetland pasture to reach upstream spawning reaches, and (4) to provide high quality juvenile salmonid rearing habitat in tidally influenced and brackish water zones. The applicant proposes to implement periodic maintenance with heavy equipment (primarily backhoe) to accomplish these objectives.

Maintenance dredging of the newly restored channels is expected to be required approximately every 4-6 years depending on several factors, including the intensity of upstream timber management and land development (affecting sediment yield), the prior winter high flow regime (affecting sediment transport rates), the effectiveness of tidal slough channels in scouring and removing fine sediment, and the effectiveness of riparian livestock control measures in reducing

bank erosion. Monitoring would be conducted approximately every 2-3 years to determine if channel dredging is necessary. This monitoring would include field observations of changes in bed elevation, surveys of reference cross sections within the 2,400-foot maintenance reach, and measurements of water depths at reference locations (including pool habitat units). A reduction in channel cross section area of more than 20% of the bankfull capacity as determined by level surveys at up to 3-5 reference cross sections would trigger the maintenance operation.

Maintenance would be performed according to the following methods: the section of channel in which maintenance is being proposed would be divided into 100-foot sub-sections for purposes of quantifying potential incidental take (IT) of endangered fish species (as required by federal agencies), fish removal, and the volume of sediment (spoils) removed from the channel. Prior to initiating the excavation, qualified professional fish biologists would isolate the sub-sections to be dredged using temporary blocking nets at the upstream and downstream ends, then seine and electrofish to remove all fish. Fish would be held temporarily in live traps for up to one hour, then transferred to aerated 5-gallon buckets and transported to suitable habitat areas in adjacent sections of stream outside the maintenance area. All fish would be identified and counted prior to being released. The capture and release locations of listed species (e.g. endangered or threatened) would be marked on field maps or noted in field notebooks.

All maintenance work would be performed during summer months at low stream discharge. A silt fence would be installed at the downstream end of the maintenance section, and kept in place for the duration of in-channel activity. The creek channel would be accessed with backhoe using existing ranching road access points. Excess sediment would be excavated from the channel and temporarily placed onto the pasture until the excavation is completed. Equipment operators would be careful not to disturb or damage healthy and mature riparian and conifer vegetation growing along the channel banks and on the floodplain. Vegetation encroaching into the channel may be removed (Laird 2005).

Once all in-channel work is complete, the dredged spoils would be disposed of on the existing dikes or upland areas. The original re-constructed dike footprint (width at the base of the dike) would be maintained so as not to increase the net amount of fill within the wetland pasture. The spoils would be used to fill eroded areas on top of the dike and to maintain the overall height of the dike. The entire maintenance operation would be completed within 2-3 working days for each year that maintenance is conducted. After the channel maintenance is complete, the temporary blocking nets and silt fence would be removed to allow fish to re-colonize the dredged channel sections. This is a modification from the original project description in the Biological Assessment, which states that dredged spoils would be spread on the neighboring wetland pasture.

Within each 100-foot section of channel, an estimated maximum of 30 cubic yards of sediment would be removed at a frequency of no more than every 5 years. This estimate is based on a 20% reduction in the design channel cross section area (40 ft^2) for this reach, or 8 ft^2 , multiplied by the 100 ft section length ($40 \text{ ft}^2 \times 20\% = 8 \text{ ft}^2$; $8 \text{ ft}^2 \times 100 \text{ ft} = 800 \text{ ft}^3$; $800 \text{ ft}^3 = 30 \text{ cubic yards}$). This estimate is highly conservative, and the actual volume of sediment removed per section

would likely be substantially less, because channel aggradation would not be uniform. The maximum volume that would be dredged from the entire 2,400 ft stream reach could approach 720 cubic yards, and the fine sediment excavated would be placed on adjacent dikes or upland areas (Laird 2005).

D. Development within Coastal Rivers and Streams

Section 30236 of the Coastal Act provides that:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat. [Emphases added.]

Section 30236 sets forth a number of different limitations on what development may be allowed that causes substantial alteration of rivers and streams. For analysis purposes, a particular development proposal must be shown to be for one of three purposes: (1) for a necessary water supply project; (2) flood control projects where there is no other feasible methods for protection of existing structures within the floodplain and the project is necessary for public safety and the protection of existing development; or (3) primarily for fish and wildlife habitat improvement. In addition, the development must incorporate the best mitigation measures feasible.

1. Permissible Uses for Channelization and Substantial Alteration of Streams

The first test set forth above is that any proposed channelization or other substantial alteration of a river or stream may only be allowed for three purposes enumerated in Section 30236, including projects that are "primarily for fish and wildlife habitat improvement." In general terms, the proposed development entails excavating the channel of Rocky Gulch and the rehabilitation and relocation of dikes to create a larger floodplain and riparian corridor to contain floodwaters, primarily for the purpose of improving fish habitat in the creek. As described above, these activities involve many components, and are divided into:

- (a) Upgrading existing ranching roads to temporarily access construction sites and staging areas;
- (b) Tidegate dike erosion control;
- (c) Installation of fish barriers, relocating fish, installing flow barriers, and de-watering the channel;
- (d) Expanding channel capacity in the tidal reach of Rocky Gulch and preventing tidal inundation of the seasonal wetland pasture;

- (e) Restoration of channel capacity in the freshwater reach of Rocky Gulch, prevention of inundation of the seasonal wetland pasture, and installation of fish habitat enhancement structures;
- (f) Installing cattle management structures for grazing control and access;
- (g) Post-construction site remediation;
- (h) Future channel maintenance.

The primary objective of the majority of the actions encompassed in development activities a - g are for fish and wildlife habitat improvement, as set forth in Coastal Act Section 30236(3).

Development activities (d), expanding channel capacity in the tidal reach of Rocky Gulch, and (e), restoring channel capacity in the freshwater reach of Rocky Gulch, encompass the "bulk" of the project and involve excavating aggraded channel reaches and the restoration of tidal and freshwater portions of Rocky Gulch Creek to re-establish access for anadromous salmonids. These activities would also enhance and expand estuarine and freshwater habitats in the lowermost mile of Rocky Gulch, by rehabilitating and re-locating the dikes to create a larger floodplain and riparian corridor.

Development activities (a), upgrading roads for construction access and staging areas, and (c), installation of fish barriers and relocating fish, serve to prepare the site for the main fish habitat improvement activities (d) and (e) described above, and hence have the same primary purpose of fish and wildlife habitat improvement. Activity (a) involves the establishment of temporary access areas in order to conduct the main construction activities, and development activity (c) involves the preparation of the channel for the main excavation activities. Fish would be removed from Rocky Gulch and re-located to other areas, the creek would be de-watered, and flow barriers would be installed to prevent water from entering portions of the creek during the main excavation activities. This work would serve to support the main excavation and restoration activities, and hence its primary purpose for improvement fish and wildlife habitat in Rocky Gulch Creek.

Development activity (b) involves the protection of the new "fish friendly" tidegate from any damage from flood and tides, by placing 20 yards of fill (10-foot-wide, 50-foot-long, 1-foot-high) on top of the adjacent dike above Mean Higher High Water to increase the top-of-dike elevation one foot. The application also seeks permanent authorization for the riprap placed around the tidegate for its protection, pursuant to an emergency coastal development permit issued by the Commission in June 2005 (exhibit 4). These activities are essential for re-establishing access to the creek for fish, which had been cut off from the creek for many years since the installation of a conventional tidegate in the early 1960s, which significantly reduced the opportunity for migrating adult anadromous salmonids to enter the stream. This tidegate was upgraded to the current "fish friendly" gate in 2004. It employs an auxiliary door within the tidegate that allows a muted tidal prism to flow behind the tidegate to maintain existing tidal marsh habitats. It is also designed to allow consistent and permanent fish passage. Therefore, the

protection of this tidegate has the primary purpose of improving fish habitat, by preserving the means of fish passage into Rocky Gulch.

The development activities associated with component (f) which involve stream alteration, the installation of cattle management structures for grazing control and access, would also have a primary purpose of fish and wildlife habitat improvement, because they would mitigate the impacts to fish habitat from cattle grazing on the creek banks and drinking water in the creek, where very few controls currently exist. Currently there is no cattle management fencing within the entire project area, and cattle are able to access the creek in nearly all locations. As described above, after construction of the dikes is complete, permanent cattle fencing would be installed on the outside of the dike (west side) from station 56+00 (tied into existing fencing) down to station 28+00. This would create a 50 ft wide riparian floodplain corridor between the creek and the dikes. This fencing would thus allow the applicants to isolate the creek and riparian zone from the pasture. Currently the cattle access the creek in multiple locations to drink and to cross to the upland areas on the east side of the creek. The riparian fencing would prohibit cattle from accessing the creek in all locations except for designated stream crossings. This controlled access would serve to improve fish and wildlife habitat in the creek by reducing erosion of the creek bank and creek beds, and as a result improving water quality, and decreasing sedimentation that could serve to impede fish passage in the creek.

The permanent 12-foot by 20-foot cattle crossing bridge installed at station 34+50 also supports the primary purpose of fish and wildlife habitat improvement. This bridge would replace an undersized culvert that is currently the primary cause of the major sediment aggradation in the channel from station 34+50 to up to approximately station 45+00. Therefore the construction of the bridge would replace a culvert that is detrimental to fish and wildlife habitat, and hence by replacing it, would improve the fish and wildlife habitat. The bridge would be set above the creek by one foot, which would provide no obstruction to fish passage. In addition, the installation of a permanent non-eroding cattle crossing bridge and replacing an informal culvert crossing would serve to limit erosion impacts from cattle crossing the stream, hence further improving the fish habitat, consistent with Section 30236.

The primary objective of development activity (g), post construction site remediation, is also the improvement of fish and wildlife habitat, because the activities are part and parcel to the main fish habitat improvement activities (d and e). These activities involve the removal of the temporary flow diversions, fish barriers, stream crossings, and silt fences that had been placed in the creek to prepare it for excavation. As a result of their removal, water flow would be restored to the channel, and fish will be given access to a creek with an enhanced water flow capacity and enhanced riparian habitat and floodplain. Geotex mats and crushed rocks placed in the wet temporary access areas (outside the creek) would also be removed, and access areas will be de-compacted and hydro seeded, mitigating any impacts to the adjacent wetlands from the project (see mitigation measures below).

Development activities associated with (h), future channel maintenance, also have the primary objective of the improvement of fish and wildlife habitat. The applicants state that the 2,400 ft

section of Rocky Gulch below Old Arcata Road from approximately station 50+00 downstream to approximately station 26+00 is a low-gradient, aggradational reach of the channel, and will perpetually deposit fine sediment into the channel and onto floodplains. In order to (a) provide unobstructed fish passage across the grazed wetland pasture to reach upstream spawning reaches, and (b) provide high quality juvenile salmonid rearing habitat in tidally influenced and brackish water zones, periodic maintenance dredging would need to occur in the future, to remove excess sediment and vegetation that has accumulated over time. Because of the continued existence of the muted tidegate at the beginning of channel, the restored system would need to be continually managed, as described above, in order to sustain its capacity to provide habitat for fish and wildlife. This is because the tidegate prevents seawater from inundating far enough upstream to flush out the accumulated fine sediments. Without removing the tidegate and reverting to a more natural conditions, which is not feasible because it would cause flooding over the agricultural lands, it would be necessary to periodically dredge the channel to keep it open and unobstructed for fish passage. Commission staff consulted with staff from the National Marine Fisheries Service (NMFS), who worked on the Biological Opinion (BO) for the proposed project, and it was their opinion that this future maintenance activity is indeed necessary to maintain unobstructed fish passage up the channel (Keytra Meyer, pers. com., 7/26/05). Therefore, the proposed maintenance dredging associated with development (h) has as its primary objective the improvement of fish and wildlife habitat, consistent with Section 30236 of the Coastal Act.

Thus, for all the above reasons, (a) upgrading existing ranching roads to temporarily access construction sites and staging areas; (b) tidegate dike erosion control; (c) installation of fish barriers, relocating fish, installing flow barriers, and de-watering the channel; (d) expanding channel capacity in the tidal reach of Rocky Gulch and preventing tidal inundation of the seasonal wetland pasture; (e) restoration of channel capacity in the freshwater reach of Rocky Gulch, prevention of inundation of the seasonal wetland pasture, and installation of fish habitat enhancement structures; (f) the installation of riparian fencing and a permanent bridge cattle stream crossing at station 34+50; (g) post-construction site remediation; and (h) future channel maintenance are allowable pursuant to Section 30236(3). Other development activities associated with (f) are permitted under Section 30233 of the Coastal Act, and analyzed below.

a. Availability of Other Feasible Methods for Enhancing Fish Habitat in Rocky Gulch

Enhancement of fish habitat on lower Rocky Gulch Creek could hypothetically be achieved through other methods other than the proposed project. For example, the creek could be dredged without re-aligning the creek to more natural contours, and without re-locating the dikes to create the wider floodplain. However, these methods would be more environmentally damaging because one would have to dredge more frequently as a result of not correcting the problems that are, in part, causing the sedimentation currently (a floodplain that is too narrow [or lacking], crumbling dikes, an unnatural straight stream configuration with unnatural 90 degree turns), and frequent dredging damages fish habitat and riparian vegetation and degrades water quality from increased sediment turbidity in the water. Moreover, without re-locating the dikes and widening the channel, the improvement of the fish rearing-habitat would not occur. Another alternative could be the "no project" alternative. This alternative would continue the status quo on lower

Rocky Gulch Creek, which is characterized by a lack of fish caused by elevated channel sedimentation and aggradation and regular flooding of the grazed seasonal wetlands caused by breaching of the dikes. Additionally, cattle would continue to access the creek in an uncontrolled fashion without the proposed cattle management structures, which would continue to contribute to stream bank erosion and degraded water quality in Rocky Gulch, further impeding fish passage and the viability of adequate fish habitat. Thus, the Commission finds no other feasible measures exist for enhancing fish and wildlife habitat in lower Rocky Gulch Creek.

2. Feasible Mitigation Measures

The second test set forth by the stream alteration policy of the Coastal Act is whether best feasible mitigation measures have been provided to minimize the adverse environmental impacts of the subject channelization, damming, and/or substantial alteration of rivers or streams.

The proposed fish habitat improvement and flood control activities would be conducted in riverine and riparian wetlands and could have potentially significant adverse effects on a number of threatened, endangered and special status species that depend on the aquatic environment of Rocky Gulch and/or their habitats.

Based on literature search, consultations with staff biologists from CDFG, United States Fish and Wildlife Service (USFWS), and National Oceanic Atmospheric Administration National Marine Fisheries Service (NOAA NMFS), and biological and topographic field surveys, the following rare, threatened, or endangered species were selected for discussion in the biological assessment (BA) for the proposed project, because of their potential to inhabit Rocky Gulch:

- Coho salmon (*Oncorhynchus kisutch*);
- steelhead (*O. mykiss*);
- tidewater goby (*Eucylogobius newberryi*);
- western lily (*Lilium occidentale*);
- Humboldt bay owl's clover (*Castilleja ambigua* ssp. *humboldtiensis*);
- Point Reyes bird's beak (*Cordylanthus maritimus* ssp. *palustris*);
- Lyngbye's sedge (*Carex lyngbyei*) (Laird 2005).

Additionally, the project could impact the sensitive habitats associated with these species, such as the filling of seasonal wetlands associated with the relocated levee, the removal of riparian vegetation, and impacts to water quality from erosion associated with channel excavation and potential spills from the use of heavy equipment in and adjacent to the channel.

(a) Mitigation for General Construction Activities

Now that a fish friendly tide gate has been installed at the mouth of Rocky Gulch, the proposed habitat improvement project "may affect" sensitive anadromous salmonids or tidewater goby if

they are present in or below the construction area, however the long-term effects of the proposed project should be beneficial to the sensitive fish species and their habitat in Rocky Gulch. Migrating adult Coho salmon and steelhead enter coastal streams similar to Rocky Gulch from October through February. Peak nesting activities for tidewater goby in lagoons is reported to be from late April through early May.

The proposed general construction actions could also adversely affect populations of Lyngbye's sedge, (*Carex lyngbyei*) a species of concern pursuant to the California Environmental Quality Act (CEQA) that is located in the disturbance footprint of the proposed project. The flowering period for this plant species is completed by July.

Construction and equipment access in and over wetlands (salt marsh, grazed seasonal wetlands, willow swamp, and riparian woodland) during summer/fall may compact the ground if it is saturated, and/or crush vegetative cover. Construction in Rocky Gulch itself also has the potential to adversely affect water quality in the creek (Laird 2005).

The applicants state that any project induced adverse affects would be short-term and less than significant with successful implementation of the following proposed mitigation measures:

1. Construction shall only occur between July 1st and October 31st to avoid or minimize adversely affecting fish and plant species of concern.
2. To temporarily prevent fish species of concern gaining access to Rocky Gulch above the tide gate during construction, the newly installed muted tide gate shall be closed for the duration of construction.
3. Any fish that may be present in Rocky Gulch will be relocated before construction commences. This will be accomplished by installing temporary fish barriers at station 9+00, station 37+00 and station 46+00, including a rock dam with a small metal pipe and flap gate at station 9+00, a fish screen at station 37+00 just downstream of the Halvorsen Creek confluence, and a fish screen at station 46+00 at the entrance to the pasture drainage ditch. Once fish screens are installed, fish shall be removed with seine net in the tidal reach of the channel between stations 9+00 and 37+00 and relocated to Washington Gulch. Once fish are removed, the tidegate auxiliary door shall be closed at high tide (that allows a muted tidal prism upstream of the tidegate) and any remaining fish shall be salvaged from the channel as the tide recedes, and relocated to Washington Gulch. From station 37+00 to 46+00 if there is any stream flow left in the channel by summer 2005, all fish shall be removed with seine net and backpack electro-fisher and relocated upstream of station 46+00. After work in the tidal zone (station 9+00 to 37+00) is completed, the downstream fish barrier at station 9+00 shall be removed and the tidegate auxiliary door opened to restore muted tidal flow to the lower slough channel. A temporary fish barrier shall be installed at station 56+00, fish shall be removed between station 46+00 and 56+00 with seine net and backpack electro-fisher, and relocated upstream of station 56+00. Once fish are removed, a temporary pipeline (2-4 inch diameter) shall be installed at

- station 56+00 and flow diverted to the head of the drainage ditch at station 46+00. The pipeline shall run about 1,000 ft down the pasture. Approximately 1/2 of a cfs summertime flow is expected from Rocky Gulch at this station. Once work is completed in the upper freshwater zone (station 37+00 to 56+00), the temporary drainage pipe at station 56+00 shall be removed, then all fish shall be removed with seine net and backpack electro-fisher in the pasture drainage ditch from station 46+00 to station 9+00, and relocated upstream of station 46+00. Once fish are removed, flow shall be restored at station 46+00 into the reconstructed channel and any remaining fish from the drainage ditch channel shall be salvaged as the flow recedes.
4. During the winter of 2004-05 several breaches in the dike occurred between station 42+00 and 46+00, allowing the stream to flow across the pasture, collect into the main drainage ditch running down the middle of the pasture, and rejoining Rocky Gulch through the flap gate at station 9+00. In general, the creek channel shall be dewatered during construction by maintaining the breached dike at station 46+00, diverting a small tributary at station 37+00 into the drainage ditch, and temporarily closing the tidegate.
 5. Areas identified by McBain & Trush staff geologist or consulting engineer as having "wet" or "soft" soils: (a) shall be covered with heavy synthetic mats or other acceptable non-toxic material and gravel that can be readily laid down and immediately removed following construction, and (b) shall be the minimum width and length necessary to allow movement of equipment to and from the project site.

Monitoring:

6. A qualified fish biologist shall identify and record all fish captured and relocated.
7. Several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(b) Mitigation for Upgrading and Using Existing Ranching Roads to Temporarily Access Construction Sites and Staging Areas

Improving and using access/staging areas by construction equipment (backhoe, excavator, 10 and 20 cubic yard truck, etc.) could affect wetland habitats during summer/fall if these areas are saturated, via ground compaction and/or crushing vegetative cover. Placement of the bridge crossing in Rocky Gulch could adversely affect water quality and associated fish habitat. The applicants propose that wherever possible, sensitive areas would be avoided by heavy equipment, and the project will only proceed if the North Coast Regional Water Quality Control Board issues a water quality certification (Laird 2005). Additionally, the applicants have proposed the following mitigation measures to reduce these impacts to less than significant levels:

8. The placement of a temporary stream crossing in the drainage ditch crossed by access route A shall be designed (i.e. slope, outfall drop, etc) to not impede fish migration

and the enhancement of an existing stream crossing on Rocky Gulch at station 34+50 is designed to not create a barrier to fish migration.

9. As in mitigation measure no. 5, areas identified by McBain & Trush staff geologist or consulting engineer as having "wet" or "soft" soils shall be covered with heavy synthetic mats or other acceptable non-toxic material (gravel) that can be readily laid down and immediately removed following construction, and shall be the minimum width and length necessary to allow movement of equipment to and from the project site.
10. No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.
11. Refueling areas for equipment shall occur only at the upland staging area B. If equipment must be washed, washing will occur where wash water cannot flow into wetlands or waters of the U.S./State.
12. No equipment shall be operated in tidal waters.

Monitoring:

13. Stream crossing installations will be evaluated by an authorized fishery biologist and/or engineer to determine that they are not a barrier to fish migration.
14. During construction, turbidity sampling will be taken periodically below station 9+00.
15. As in mitigation No. 7, several photographic points will be established to document all work performed. Photographs will be recorded in sufficient frequency to document each stage of work.

(c) Mitigation for installing fish barriers, relocating fish, installing flow barriers, installing silt fences and dewatering the channel in preparation for channel construction

The temporary de-watering of the channel will have an adverse affect on aquatic organisms and their habitats as well as the ability of sensitive fish species to utilize these habitats if they are not re-located or prevented from entering the de-watered channel. These species include anadromous salmonids and the tidewater goby. These species could also be adversely affected during their collection and relocation to other waters. Additionally, installation of a temporary tidal barrier at station 9+00 could have short-term (approximately 4 weeks) adverse affects on Lyngbye's sedge, a plant species of concern, if they are present along the channel margins and dry out as result of this action, however, these plants would be transplanted during excavation as soon as the channel is dewatered (see section d, mitigation no. 30). Lastly, the installation of fish barriers, flow barriers, and silt fences are considered "fill" in the creek, which can cause adverse impacts to the creek (Laird 2005). The applicants propose the following mitigation measures to reduce these impacts to less than significant levels:

16. Preceding de-watering of the main channel, McBain & Trush's fish biologist Darren Mierau, once authorized by CDFG, and under Section 10 of the ESA, will use seine

nets and/or backpack electro-shocker to collect all fish from the reaches that will be affected by construction.

17. Any fish collected in the tidal zone of Rocky Gulch shall be relocated to Washington Gulch, and any fish collected in the freshwater zone shall be relocated or "herded" upstream of the flow and fish barriers at station 56+00.
18. De-watering of the channel shall be ramped over a 48-hour period to allow fish to move downstream or upstream, and be collected at the lower fish barrier at station 9+00, or to be collected during the last stages of de-watering.
19. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during, and immediately after de-watering.
20. A silt fence shall be deployed at station 9+00 to trap all suspended sediment that leaves the construction site. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
21. The temporary flap gate at station 9+00 shall be removed as soon as excavation and construction is completed in the tidal zone, which is estimated to be completed within 4 weeks.
22. All temporary fill shall be removed from wetlands and waters of the U.S./State, immediately on cessation of construction.

Monitoring:

23. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during and after channel de-watering. All fish collected shall be identified, measured, and recorded by an authorized fishery biologist. Any mortality shall be documented. Any fish or amphibians taken shall be preserved and provided to CDFG within 24 hours, unless CDFG is present at the time of de-watering.
24. As in Mitigation No. 14, during construction turbidity shall be sampled periodically below station 9+00.
25. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs will be recorded in sufficient frequency to document each stage of work.

(d) Mitigation for Restoring Channel Capacity in the Tidal Reach of Rocky Gulch and Reducing the Risk of Tidal Inundation of the Seasonal Wetland Pasture

If sensitive fish species, such as anadromous salmonids or tidewater goby are present in the channel during the excavation process, adverse impacts to the species would occur. Additionally, effects from the excavation of the channel and placement of fill on the dikes may adversely affect Lyngbye's sedge a plant species of concern, which occur on the margins of salt marshes and tidal slough channels. Further, salt marsh habitat will be converted to tidal waters during the excavation of several new tidal slough channels, and the willow swamp reach along the main stem from station 28+00 to 37+00 will become part of the floodplain when the new channel

bypasses this reach. Additional potential adverse impacts include a potential increase in suspended sediment and turbidity as a result of channel excavation and placement of fill on dikes, in downstream waters (Laird 2005). However, despite the above listed potential impacts, the overall intent of the proposed project is the improvement of fish habitat, including the restoration of Rocky Gulch creek to more natural conditions, and therefore the net effect on sensitive species and their habitats would be positive. Further, to mitigate the potential impacts during the restoration process, the applicants propose the following measures:

26. All fish species of concern present prior to construction shall be re-located and prevented from entering the work site.
27. Excavation shall occur only in a de-watered channel.
28. The willow swamp habitat from station 28+00 to 37+00 shall remain hydrologically connected as a floodplain to the main channel.
29. A qualified botanist shall locate and flag all populations of plant species of concern in the project area.
30. Preceding construction, the top 12 inches of vegetation/topsoil that contain any of the plant species of concern that are in the path of the slough excavations shall be removed as "wafers" and stored separately on pond liners. These soils will be kept moist until they are re-placed along the tidal reach at the appropriate finished grade and in the same orientation.
31. As in Mitigation No. 20, a silt fence shall be deployed at station 9+00 to trap all suspended sediment that leaves the construction site. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
32. McBain & Trush's consulting engineer shall be on site during final grading to assure that the area is recontoured as per approved design specifications.
33. Soon after the bank recontouring work is complete, re-vegetation of the banks shall occur with appropriate salt tolerant native vegetation as per a re-vegetation plan prepared by a qualified botanist.
34. When the dike surfaces have been recontoured re-vegetation of all exposed surfaces shall be mulched and seeded with appropriate grass seed.
35. Exclusionary cattle fencing shall be installed temporarily to allow grass seed to germinate and provide protective ground cover.

Monitoring:

36. A qualified biologist shall conduct a floristic survey of the construction area before being disturbed, during the appropriate flowering periods for the plant species of concern to document their occurrence and location.
37. A qualified biologist shall monitor the wafers throughout the construction season to assure they stay moist. Successful mitigation will be determined if re-establishment of plant species of concern is in a density and total area consistent with pre-impact conditions is achieved in 5 years.

38. Within 60 days of completion of the initial enhancement work: 1) "as built" plans shall be submitted to the Commission that document successful implementation of the project as approved, and 2) an assessment of whether the project's goals have been, or are likely to be achieved.
39. Annual reports shall be provided by CDFG by March 30th of each year, or until the project goal has been achieved, to the Commission, describing and documenting fish presence, habitat evaluation, water quality, sedimentation, and establishment of vegetative cover/salt marsh at the project site.
40. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(e) Mitigation for Restoring Channel Capacity in the Freshwater Reach of Rocky Gulch, Reduce Risk of Inundation of the Seasonal Wetland Pasture, and Installing Fish Habitat Enhancement Structures

While the primary purpose of these activities is to improve fish and wildlife habitat, several potential temporary impacts to sensitive species and their habitats could occur during construction. These include (1) impacts to anadromous salmonids or tidewater goby if they are present during excavation and restoration activities; (2) short-term adverse impacts to wetlands (riparian woodland), as riparian areas would be cleared to provide equipment access for channel restoration work and to re-locate existing dikes; (3) adverse effects to other wetlands (grazed seasonal wetlands) where the existing dike is to be relocated by the placement of fill and grading of a new floodplain (up to 50 feet wide) that will drain towards the channel; (4) the installation of willow/coy logs in the floodplain; (5) and the filling of the main channel from station 53+00 to 56+00 following the construction of the new channel. Placement of instream fish habitat structures in the channel could also be considered a type of fill in the creek, but this is considered a beneficial (fill) effect of the project, as it is intended to improve fish habitat (Laird 2005). To mitigate the potential impacts during the restoration process, the applicants propose the following measures:

41. After work is completed in the tidal zone, the fish barrier shall be relocated from station 9+00 to 36+50 to prevent fish from entering the construction site, but allow tidewater to return to the reconstructed channel.
42. As in Mitigation No. 26, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site.
43. As in Mitigation No. 27, Excavation shall occur only in a de-watered channel.
44. Silt fences shall be deployed at station 36+50 to trap all suspended sediment that leaves the construction site. If the silt fences are not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.

45. The old channel from 49+50 to 53+00 shall be maintained as a flood channel, receiving discharge from above Old Arcata Road via a culvert and shall remain hydrologically connected to the main channel below.
46. Disturbance or removal of riparian vegetation shall not exceed the minimum necessary to complete construction activities.
47. The footprint of the existing dike after excavation and grazed seasonal wetland within the 50-foot riparian corridor shall be graded to create a floodplain that drains towards the channel.
48. The 50-foot riparian corridor shall be planted as per the re-vegetation plan prepared by a qualified botanist, to increase the surface area of riparian woodland habitat.
49. As in Mitigation No. 34, when the dike surfaces have been recontoured re-vegetation of all exposed surfaces shall be mulched and seeded with appropriate grass seed.
50. As in Mitigation No. 35, exclusionary cattle fencing shall be installed to protect mulched and re-vegetated areas.
51. McBain & Trush's consulting engineer shall be on site during final grading to assure that the area is recontoured as per approved design specifications.
52. Equipment shall be operated in the stream channel of flowing streams only as necessary to construct crossing, during excavation, when placing fills, installing instream fish habitat structures, or other channel changes.
53. If operations are not adequately containing sediment, the activity shall cease. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
54. Fish habitat improvements structures shall be designed and constructed in accordance with techniques described in CDFG's "California Salmonid Restoration Manual."

Monitoring:

55. As in Mitigation No. 38, within 60 days of completion of the initial enhancement work: 1) "as built" plans shall be submitted to the Commission that document successful implementation of the project as approved, and 2) an assessment of whether the project's goals have been, or are likely to be achieved.
56. The project site shall be monitored for at least five years, or until the project goals have been achieved, for vegetative planting success, presence of salmonids or tidewater goby and verification of habitat use.
57. As in Mitigation No. 39, Annual reports shall be provided by CDFG by March 30th of each year to the Commission, describing and documenting fish presence, habitat evaluation, water quality, sedimentation, and establishment of vegetative cover/salt marsh at the project site.
58. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(f) Mitigation for Installation of Cattle Management Structures for Grazing Control and Access

The placement of fence posts would involve fill in wetlands (salt marsh, grazed seasonal wetland, willow swamp and riparian woodland), causing potential impacts to sensitive wetland

species and their habitat. Wetland impacts outside of the stream channel are further discussed below in Section F "Filling of Open Coastal Waters." Additionally, the construction of stream crossing bridge abutments, is a type of fill with potential adverse affects to fish habitat in the creek. Placing instream fish habitat structures in the channel can also be considered a type of fill in the creek, but this is considered a beneficial (fill) effect of the project, for the enhancement of fish habitat (Laird 2005). The applicants propose the following mitigation measures to reduce these potential impacts to less than significant levels:³

59. As in Mitigation No. 26, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site.
60. As in Mitigation No. 27, excavation shall occur only in a de-watered channel.
61. Loss of wetland area from the placement of fence posts, and stream crossing bridge abutments shall be mitigated by the construction of a 50-foot-wide riparian woodland floodplain from station 36+50 to station 56+00, and construction of new tidal slough channels between stations 18+00 and 25+00 and the main channel between stations 25+00, and 28+00 and 37+00 as well as the construction of new freshwater channels between stations 49+50 to 56+00.

Monitoring:

62. Within 60 days of completion of the stream crossing bridge, "as built" plans shall be submitted to the Commission that document the implementation of these actions as approved.
63. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(g) Mitigation for Post-Construction Site Remediation

Adverse effects could occur to anadromous salmonids or tidewater goby from the removal of temporary flow diversions, fish barrier structures, temporary stream crossings, and silt fences. Additionally, post-construction remediation of access roads and staging areas could indirectly affect fish habitat and water quality from storm water runoff from these areas (Laird 2005). The applicants propose the following mitigation measures to reduce these impacts to less than significant levels:

64. All temporary fill, synthetic mats and silt fences shall be removed from wetlands and waters of the U.S./State immediately on cessation of construction.
65. Appropriate Best Management Practices (BMPs) from Section 3 of the "California Stormwater Best Management Practices Handbook" shall be implemented to prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.

³ Mitigation measures associated with the in-stream cattle crossings at stations 31+00 and 50+00 are evaluated in Section E, and under Coastal Act Section 30233

66. Channel integrity at station 36+00 and 46+00 shall be restored to return flows to Rocky Gulch and prevent future stream capture.
67. Following completion of work all disturbed grazed seasonal wetlands shall be de-compacted and seeded as needed, with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.

Monitoring:

68. As in Mitigation No. 39, Annual reports shall be provided by CDFG by March 30th of each year, or until the project goal has been achieved, to the Commission, describing and documenting establishment of vegetative cover and recovery of affected wetlands at the project site.
69. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(h) Mitigation for Future Channel Maintenance

If tidewater goby and anadromous salmonids are present in Rocky Gulch Creek during future maintenance dredging activities, adverse effects to these species could occur. Additionally, adverse effects from excavation in the tidal channel and placement of fill on the dikes may adversely affect Lyngbye's sedge, a plant species of concern, which occur on the margins of salt marshes and tidal slough channels. Further, the installation of fish barriers, fish screens and silt fences would involve the temporary placement of fill in Rocky Gulch, potentially effecting this sensitive habitat. Finally, adverse effects such as increase in suspended sediment and turbidity could occur as a result of channel excavation and placement of fill on dikes (Laird 2005). The applicants propose the following mitigation measures to reduce these impacts to less than significant levels:

70. As in Mitigation No. 26, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site by the installation of fish barriers.
71. Excavation shall occur during low flow conditions to minimize downstream water quality effects.
72. A qualified botanist shall locate and flag all populations of plant species of concern in the project area.
73. As in Mitigation No. 30, preceding construction, the top 12 inches of vegetation/topsoil that contain any of the plant species of concern that are in the path of the slough excavations shall be removed as "wafers" and stored separately on pond liners. These soils shall be kept moist until they are re-placed along the tidal reach at the appropriate finished grade and in the same orientation.
74. As in Mitigation No. 46, disturbance or removal of riparian vegetation shall not exceed the minimum necessary to complete construction activities.

75. A silt fence shall be deployed below the maintenance reach to trap all suspended sediment that leaves the construction site. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevents sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
76. Equipment shall be operated in the stream channel of flowing streams only as necessary to restore channel geometry/capacity.
77. The landowner's consulting engineer shall be on site during final grading to assure that the area is recontoured as per approved design specifications.
78. Soon after the bank recontouring work is complete, re-vegetation of the banks shall occur with appropriate salt tolerant native vegetation as per a re-vegetation plan prepared by a qualified botanist.
79. As in Mitigation No. 34, when the dike surfaces have been recontoured re-vegetation of all exposed surfaces shall be mulched and seeded with appropriate grass seed.
80. As in Mitigation No. 67, following completion of work all disturbed grazed seasonal wetlands shall be de-compacted and seeded with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.
81. As in Mitigation No. 35, exclusionary cattle fencing shall be installed temporarily to allow grass seed to germinate and provide protective ground cover.
82. As in Mitigation No. 64, all temporary fill, synthetic mats and silt fences shall be removed from wetlands and waters of the U.S./State immediately on cessation of construction.
83. As in Mitigation No. 65, Best Management Practices (BMPs) from Section 3 of the "California Stormwater Best Management Practices Handbook" shall implemented to prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.

Monitoring:

84. Monitoring shall be conducted approximately every 2-3 years to determine if channel dredging is necessary. This monitoring shall include field observations of changes in bed elevation, surveys of reference cross sections within the 2,000 ft maintenance reach, and measurements of water depths at reference locations (including pool habitat units). A reduction in channel cross section area of more than 20% of the bankfull capacity as determined by level surveys at up to 3-5 reference cross sections shall trigger the maintenance operation.
85. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

The proposed project incorporates reasonable and prudent mitigation measures recommended by federal, state, and local agency consultations, including the U.S. Fish and Wildlife Service, the

National Fisheries Management Service (NMFS), and the California Department of Fish and Game, a co-applicant and funder for this proposed project. In a formal biological and conference opinion issued by NMFS, which addressed the effects of the proposed project on threatened species⁴ and designated critical habitat in accordance with section 7 of the Endangered Species Act (ESA) of 1973, NMFS determined that the project, with all its various mitigation measures, is not likely to jeopardize the continued existence of threatened Coho salmon, Chinook salmon, or NC steelhead, and is not likely to destroy or adversely modify Coho salmon designated critical habitat, or Chinook salmon and NC steelhead proposed critical habitat. Therefore, the Commission imposes Special Condition No. 1, which requires the implementation of mitigation measures 1-85 as described in this document and proposed by the applicant, and which reiterate mitigation measures imposed in the Biological Assessment (Laird 2005), and the Mitigated Negative Declaration (prepared by the County of Humboldt).

Additional Measures

In addition to the mitigation measures proposed, some additional measures, summarized below, are necessary to mitigate the project's impacts on sensitive fish species, potential impacts to water quality associated with accidental chemical spills from the use of heavy equipment, and impacts to riparian vegetation.

In its biological opinion, NMFS outlined additional "reasonable and prudent" mitigation measures to minimize "take" (mortality) of Coho salmon, Chinook salmon, and steelhead, resulting from the de-watering, relocation, and construction activities of the proposed project. These mitigation measures included terms and conditions requiring the applicant to follow NMFS guidelines for electrofishing, use block nets of appropriate size in areas electrofished for fish relocation purposes, and adhere to standards for the storage of captured fish. Therefore, the Commission imposes Special Condition No. 8, to ensure that impacts to sensitive fish species during their capture and relocation are mitigated to less than significant levels.

Mitigation No. 35, as proposed by the applicants, states that soon after the channel bank recontouring work is completed, re-vegetation of the banks would occur with appropriate salt tolerant native vegetation as per a re-vegetation plan prepared by a qualified botanist. In order to ensure that re-vegetation is conducted in the least environmentally damaging manner, and appropriately mitigates the project impacts to riparian vegetation, other details should accompany this mitigation. These additional measures require all non-native invasive plants to be removed, that the area be re-planted with habitat specific native vegetation, that the use of dangerous rodenticides be prohibited, and that seedlings be planted when there is sufficient rainfall to ensure their best chance of survival. Therefore, the Commission imposes Special Condition No. 6, which requires a re-vegetation plan incorporating the elements described above.

⁴ Southern Oregon/Northern California Coast Coho salmon (*Oncorhynchus kisutch*), California Coastal Chinook salmon (*O. tshawytscha*), Northern California steelhead (*O. mykiss*), and coho salmon critical habitat, and conferencing on proposed critical habitat of CC Chinook salmon and NC steelhead.

Additional measures are necessary to ensure that the risks from accidental spills from the use of heavy equipment in and adjacent to the channel are minimized, and that impacts from accidental spills are mitigated to less than significant levels. These additional measures require that heavy equipment be periodically inspected for leaks and kept in good condition, that equipment operators are trained in accidental spill procedures as stipulated in a prepared accidental spill plan, that absorbent materials designed for spill-containment and clean-up are available on site, that refueling areas occur only in upland areas, and that stationary equipment be positioned over drip pans. Therefore, the Commission imposes Special Condition No. 2, which requires that the project comply with requirements summarized above.

The mitigation measures proposed by the applicants include several monitoring provisions, to document the progress of the proposed project. As proposed, there is no indication that the applicants would submit this monitoring information to the Commission. The submittal of the monitoring information is necessary to ensure that the project has been performed consistent with the proposed mitigation measures. Further, if the final report indicates that the planting effort has been unsuccessful, in part, or in whole, based on the approved performance standards, a remediation plan should be prepared and submitted to the Commission to compensate for those portions of the original plan which did not meet the approved performance standards. Therefore, the Commission imposes Special Condition Nos. 4 and 5, which require these elements to occur.

The Commission has, on occasion, granted special districts and cities multi-year periods of authorization for such activities (i.e. 3-04-72, Moss Landing Harbor District routine pier replacement; and 3-00-034, Santa Cruz Port District, routine maintenance dredging; 3-02-047, Monterey Harbor, routine operations and maintenance and 1-03-004, Reclamation District 768, routine repair and maintenance of levee system) in order to reduce both Commission and local staff workload associated with processing repetitive, routine coastal permits. However, given the fact that circumstances can change over time and techniques for addressing maintenance needs can also evolve, the Commission chooses to grant an initial five year period of repair and maintenance authorization with a one-time ability to extend the period of repair and maintenance authorization for another five years for a maximum total of 10 years of repair and maintenance authorization if there are no substantive changes or circumstances that would require re-review or an amendment to this permit. This permit is conditioned accordingly for the "future channel maintenance" portion of the project in Special Condition No. 7.

Conclusion

The Commission finds, as conditioned herein, (1) the primary objectives of proposed project activities (a), (b), (c), (d), (e), (g), (h) and the construction of the cattle crossing bridge at station 34+50 encompassed in activity (f) are to enhance fish and wildlife habitat in lower Rocky Gulch Creek; (2) no other feasible measures exist for the enhancement of fish and wildlife habitat in lower Rocky Gulch Creek, therefore the proposed substantial streambed alteration of the river is for an allowable purpose under Coastal Act Section 30236.

The Commission finds that with the requirements of Special Condition No. 1, which incorporates the proposed mitigation measures 1-85 described above, and Special Condition Nos. 2, 4, 5, 6, 7, and 8, which incorporate the additional measures described above, the project as conditioned incorporates the best mitigation measures feasible to reduce significant adverse environmental effects on the creek to less than significant levels consistent with the requirements of Section 30236 of the Coastal Act.

E. Filling of Open Coastal Waters

The proposed installation of two concrete mattresses in the stream at stations 31+00 and 50+00 to protect an existing PG&E gas transmission line that crosses underneath Rocky Gulch, and two erosion-resistant cattle crossings on top of the mattresses, encompassed in development activity (f), involve placement of fill in coastal waters, and are subject to Section 30233 of the Coastal Act, which sets forth specific standards with regard to development involving the fill of coastal waters.

Coastal Act Section 30233 allows fill in coastal waters 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.

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:

...

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

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.

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

1. That the purpose of the filling, diking, or dredging is for one of the eight uses allowed under Section 30233;
2. That feasible mitigation measures have been provided to minimize adverse environmental effects;
3. That the project has no feasible less environmentally damaging alternative; and
4. That the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

(1) Allowable Use

The first test for a proposed fill/dredging project is whether the fill/dredging is for one of the eight allowable uses under Section 30233(a). The relevant category of use listed under Section 30233(a) that relates to the proposed placement of concrete mattresses and erosion resistant cattle crossings is subcategory (5), stated as follows:

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

To determine if the proposed fill is for an incidental public service purpose, the Commission must first determine that the proposed fill is for a public service purpose. The proposed fill includes placement of two concrete mattresses and two erosion control cattle crossings to protect high pressure natural gas transmission pipelines which traverse beneath Rocky Gulch and through grazed seasonal wetlands within an existing PG&E rights-of-way to ensure continued delivery of natural gas for a portion of the coastal communities of Humboldt County. As the fill would be placed to protect the gas transmission line from damage from crossing cattle as well as erosion from increased water flows, and ensure the continued delivery of natural gas service to the public, the Commission finds that the fill expressly serves a public service purpose consistent with Section 30233(a)(5).

The Commission must next determine if the fill is "incidental" to the public service purpose identified. In the present case, the protection purpose of the proposed fill is incidental to "something else as primary," that is, the gas transmission line. The potential damage caused by excavating the creek and exposing the pipes to streambed erosion associated with the resulting increased water flow, as well as damage from crossing cattle, necessitates the placement of the concrete mattresses and hardened rock stream crossings to protect the structure and function of

the gas transmission line, and also prevent the line from becoming a public safety hazard, or prevent the provision of a needed energy source to the public. A protected gas transmission line is therefore necessary and incidental to the integrity of the public utility.

The Commission finds that for the reasons discussed above, the fill associated with the proposed placement of concrete mattresses and erosion resistant cattle crossings over the top of an existing PG&E gas transmission line is for an incidental public service purpose, and thus, is an allowable use pursuant to Section 30233(a)(5) of the Coastal Act.

(2) Feasible Mitigation Measures

The second test set forth by Section 30233 is whether feasible mitigation measures have been provided to minimize any adverse environmental impacts of the project. The placement of rock, gravel, and concrete for the erosion-resistant stream cattle crossings, watering sites and concrete mattresses to protect a PG&E gas transmission line consist of "fill" in open waters, and have the potential to adversely affect water quality and associated fish habitat in Rocky Gulch. The applicants propose the following mitigation measures to reduce these impacts to less than significant levels:

86. As in mitigation nos. 26, 42, 59, and 70, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site.
87. Excavation shall occur only in a de-watered channel.
88. The conversion of fish habitat areas to hardened cattle and PG&E gas transmission line stream crossings shall be mitigated by the construction of a 50 foot wide riparian woodland floodplain from station 36+50 to station 56+00, and construction of new tidal slough channels between stations 18+00 and 25+00 and main channel between stations 25+00, and 28+00 and 37+00 as well as the construction of new freshwater channels between stations 49+50 to 56+00, and installation of 10 boulder/log habitat structures between stations 31+00 and 56+00.

Monitoring:

89. Stream crossing installations shall be evaluated by an authorized fishery biologist and/or engineer to determine that they are not a barrier to fish migration.
90. Within 60 days of completion of the hardened cattle and PG&E gas transmission line stream crossings, "as built" plans shall be submitted to the Commission that document the implementation of these actions as approved.
91. As in mitigation no. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

To ensure that these measures are implemented, the Commission imposes Special Condition No. 1, which requires the implementation of mitigation measures 1-91, which include the above mitigation measures designed to mitigate the impacts associated with the placement of the

erosion-resistant hardened cattle crossings and concrete mattresses to protect the PG&E gas transmission line, as well as other mitigation measures associated with the other project activities. Only as conditioned will the proposed project ensure that the waters of Rocky Gulch will be protected from the impacts of the proposed fill, as required by Section 30231 and 30233 of the Coastal Act.

Therefore, the Commission finds that the development proposed, and as conditioned includes measures, where feasible, to minimize significant adverse impacts to aquatic habitat and water quality, consistent with Sections 30233 and 30231 of the Coastal Act.

(3) Alternatives Analysis

The third test of Section 30233(a) is whether there are feasible less environmentally damaging alternatives to the proposed project. Possible alternatives to the placement of concrete mattresses to protect the PG&E gas transmission line, and the placement of erosion-resistant hardened cattle crossings on top, include: (a) placement of the two concrete mattresses only, without placing the erosion-resistant cattle crossing; (b) placement of the two erosion-resistant cattle crossings, and not placing the two concrete mattresses; and (c) the "no project" alternative.

Alternative (a) is not a feasible less environmentally damaging alternative because the gas transmission line would not be adequately protected, and the alternative would be more environmentally damaging from the degraded water quality associated with increased erosion, and the potential threat of a major gas leak from the transmission line. The placement of the erosion-resistant cattle crossings are meant to enhance existing cattle crossings that are highly eroded, and threaten the safety of the gas transmission line. If the concrete mattresses were placed to protect the gas transmission line without enhancing the cattle crossing with erosion-resistant materials, than the concrete mattresses would not be able to adequately protect the gas transmission line, and increased erosion would occur in the creek from the non-enhanced cattle crossing. Alternative (b) would not be a feasible less environmentally damaging alternative either, for all of the same reasons. The placement of the erosion-resistant cattle crossings over the gas transmission line without placing the concrete mattresses underneath would not provide adequate protection to the gas line, and the threats to water quality would increase from the potential for gas leaks and increased erosion associated with cattle crossing the creek, as well as the water flow scouring the stream bed and eventually exposing the transmission line. Lastly, alternative (c), the "no project" alternative, would not be a feasible less environmentally damaging alternative, because the objective of protecting the gas transmission line would not be achieved, cattle would still continue to cross the creek in this location, and more damage to the environment would occur from creek bed erosion, sedimentation of the creek, degradation of fish habitat, and threats to water quality from potential gas leaks, as the gas line would not be protected from damage.

Therefore, the proposed development is the least environmentally damaging feasible alternative to protect the public service purpose provided by the PG&E gas transmission line.

(4) Maintenance and Enhancement of Biological Productivity and Functional Capacity

The fourth general limitation set forth by Section 30233 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.

The proposed expansion and enhancement of Rocky Gulch would enhance the biological productivity and functional capacity of the creek. The project would result in only a negligible net decrease in creek area, as small portions of the creek bed are covered by concrete and stones to ensure that cattle crossing does not cause increased erosion and expose the gas transmission line. These crossings are designed in a way as to not impede fish passage in the creek. The current denuded and eroding stream banks would be enclosed by fencing to exclude the cattle to designated crossings that currently have direct access to all the stream areas where anadromous fish could hold and rest during migration. The re-planting of the stream banks would restore a riparian character to the watercourse, providing additional shade and cover for fish, and tree- and shrub-covered habitat for other terrestrial organisms.

Furthermore, as discussed above in the section of this finding on mitigation, the conditions of the permit would ensure that the project would not have significant adverse impacts on existing wetland and open water habitats or on the water quality Rocky Gulch. Thus, the proposed project would maintain the diversity of wetland and open water habitats at the site. For all of the above reasons, the proposed project will maintain and enhance the biological productivity and functional capacity of the wetlands consistent with the requirements of Section 30233 of the Coastal Act.

(5) Conclusion

The Commission thus finds that the proposed fill is for an allowable use, that there is no feasible less environmentally damaging alternative, that feasible mitigation is required for potential impacts associated with the dredging and filling of coastal open waters and wetlands, and that the biological productivity and functional capacity of the open water and wetland habitat affected by the dredging and filling will be maintained and enhanced. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with Sections 30231 and 30233 of the Coastal Act.

F. Archaeological and Cultural Resources

Coastal Act Section 30244 provides protection of archaeological and paleontological resources and requires reasonable mitigation where development would adversely impact such resources.

Little River was the natural feature that separated two prehistoric Native American tribes, the Yurok and Wiyot. The Yuroks had over 50 named villages clustered along the Klamath River and coastal lagoons and creeks, including 17 villages on the coast. The Wiyot lived along the coast around Humboldt Bay, extending 35 miles from Little River to the Eel River.

Both the Yurok and Wiyot have historically utilized both the north and south sides of Little River. Little River State Beach was recently (July 2004) surveyed for prehistoric and historic cultural resources by a State Park Archeologist. A confidential report was prepared and two cultural significant sites were located along with six new findings that could be of some historical significance (Gruver 2004). The two cultural significant sites known to be of importance date back to prehistoric and historical times. Although prehistoric and historic cultural sites have been documented within LRSB, the sites are not within the project area.

The applicant indicates that a cultural monitor would be contacted before earth moving adjacent to Old Arcata Rd and within the Brainard Point area to ensure the protection of any new findings or unknown cultural artifacts that may become unearthed. If an artifact were to become exposed, heavy equipment use in that area would stop and consultation with the monitor, local tribes, and the State Park Archeologist would begin to determine the appropriate course of action.

To ensure protection of any cultural resources that may be discovered at the site during construction of the proposed project, and to implement the recommendation of the archaeologist, the Commission attaches Special Condition No. 3 that requires that if an area of cultural deposits is discovered during the course of the project, all construction must cease and a qualified cultural resource specialist must analyze the significance of the find. To recommence construction following discovery of cultural deposits the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director to determine whether the changes are de minimis in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section Coastal Act Section 30244, as the development will not adversely impact archaeological resources.

G. U.S. Army Corps of Engineers Review

The project is within and adjacent to a navigable waterway and involves "waters of the United States," and is therefore subject to review by the U.S. Army Corps of Engineers (USACE) pursuant to the Federal Clean Water Act (33 USC §1341). Pursuant to the Federal Coastal Management Zone Act (16 USC 1451 *et seq.*), any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the USACE, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches Special Condition No. 11 that requires the permittees, prior to commencement of development, to: (1) demonstrate that all necessary approvals from the USACE for the proposed dredging and filling have been obtained; and (2) incorporate any changes required by the Army Corps only after the permittees obtain any necessary Commission-approved amendment to this permit.

H. Other Local Agency Permits Required

The Humboldt Bar Harbor, Recreation, and Conservation District (HBHRCD) was created in 1970 by the California Legislature to serve the natural resource, recreational, shipping, and economic development management needs of Humboldt Bay and the smaller fishing ports to the north and south (i.e., Trinidad, Shelter Cove). The District functions as the Port Authority for the Port of Humboldt Bay and operates Humboldt County's largest marina, Woodley Island Marina. The HBHRCD regulatory jurisdiction includes all of the waters of Humboldt Bay up to the Mean Higher High Water (MHHW) level (+6.52 feet NAVD₁₉₈₈) except for Indian, Woodley and Danby Islands where the District's jurisdiction extends up to the Mean High Water (MHW) elevation (+5.81 feet NAVD₁₉₈₈).

The proposed development entails the expansion of open water and wetlands, which, upon their completion, will partially lie at and below the MHHW. Accordingly, the proposed development is subject to the permit authority of the HBHRCD. To assure that all local government authorizations, including those required by the HBHRCD, have been secured, the Commission attaches Special Condition No. 9. Special Condition No. 9 requires the applicant, prior to issuance of the Commission's permit amendment, to provide a copy of the permit issued by the District. To further insure that the development approved by the HBHRCD is consistent with that authorized by the Commission, Special Condition No. 9 includes a requirement that the applicant inform the Executive Director of any changes to the project required by the HBHRCD. Should the Executive Director determine that any such changes necessitate that a permit amendment to the coastal development permit be obtained, the applicant is required to secure the amendment from the Commission prior to incorporating the changes mandated by the Harbor District into the project.

I. California Environmental Quality Act (CEQA)

Section 13906 of the Commission's administrative regulation requires Coastal Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are any 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, including all associated environmental review documentation and related technical evaluations incorporated-by-reference into this staff report. Those 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. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, which are hereby incorporated by reference,

mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts, which the activity may 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.

V. EXHIBITS:

1. Regional Location Map
2. Vicinity Map
3. Proposed Mitigation Measures
4. Emergency Permit
5. Project Plans

References

Finigan, J. 1957. Pollution Rocky Gulch Creek, report to Humboldt County District Attorney. California Department of Fish and Game, Rocky Gulch file, Eureka Field Office (cited in Laird 2005 [Biological Assessment]).

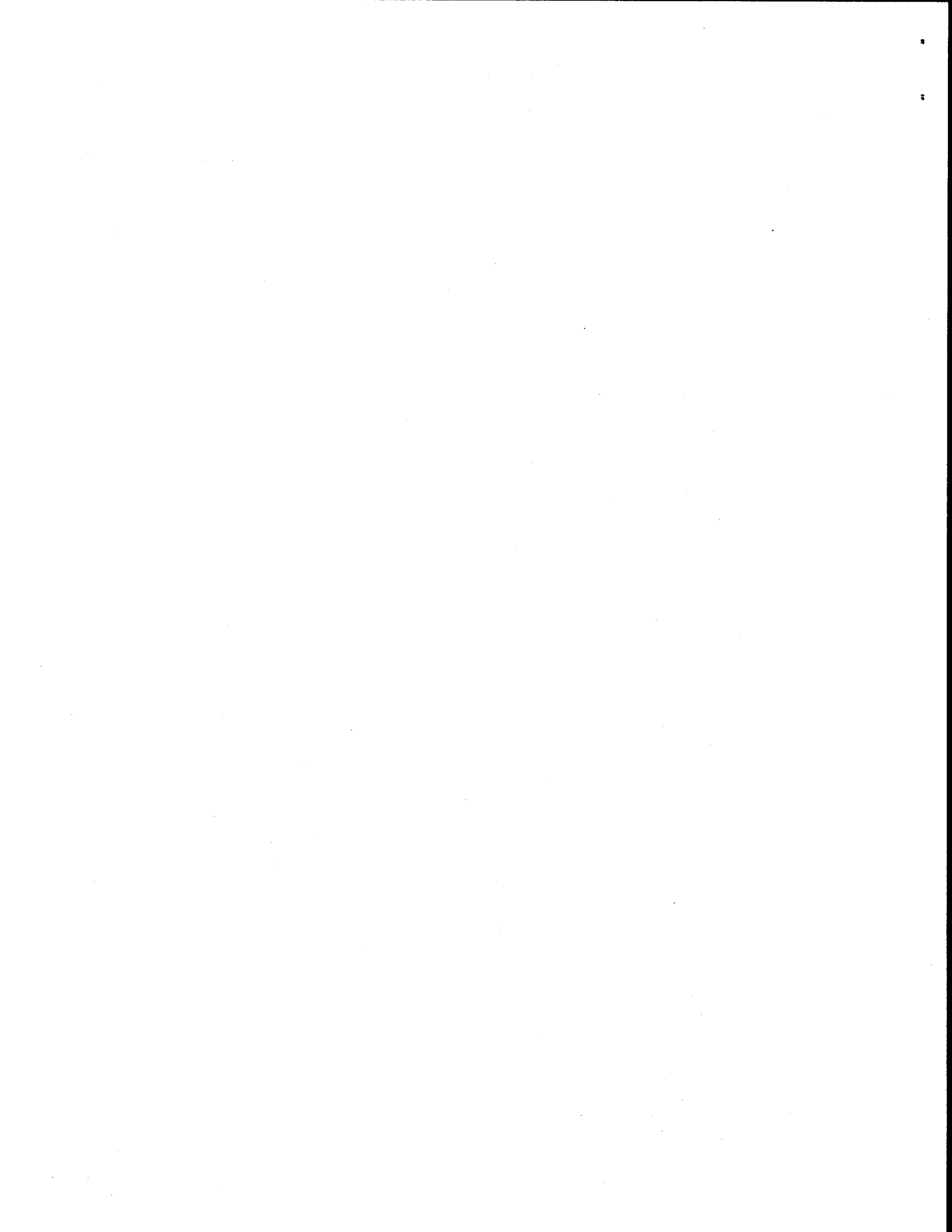
Laird, Aldaron. 2005. Biological Assessment: Lower Rocky Gulch Salmonid Access and Habitat Restoration Project, Bayside, Humboldt County, California.

McBain & Trush. 2002. Rocky Gulch stream assessment project, prepared for California Department of Fish and Game (cited in Laird 2005 [Biological Assessment])

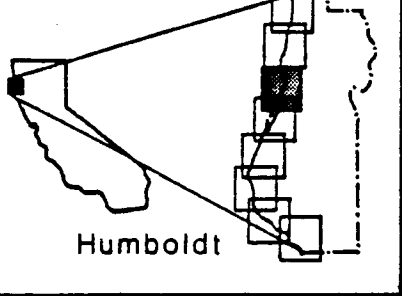
APPENDIX A

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.



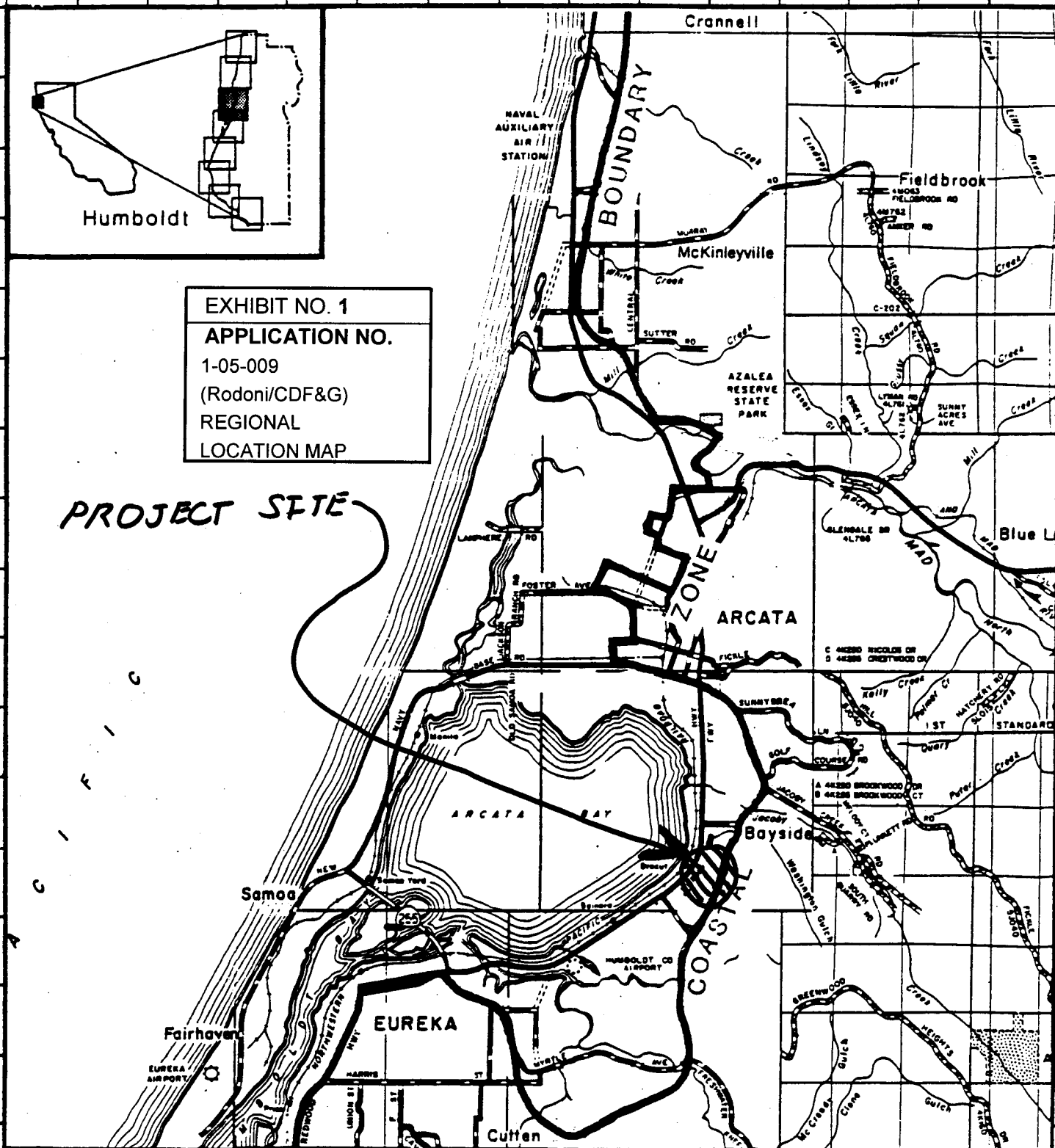
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Humboldt

EXHIBIT NO. 1
APPLICATION NO.
1-05-009
(Rodoni/CDF&G)
REGIONAL
LOCATION MAP

PROJECT SITE



LOCATION MAP



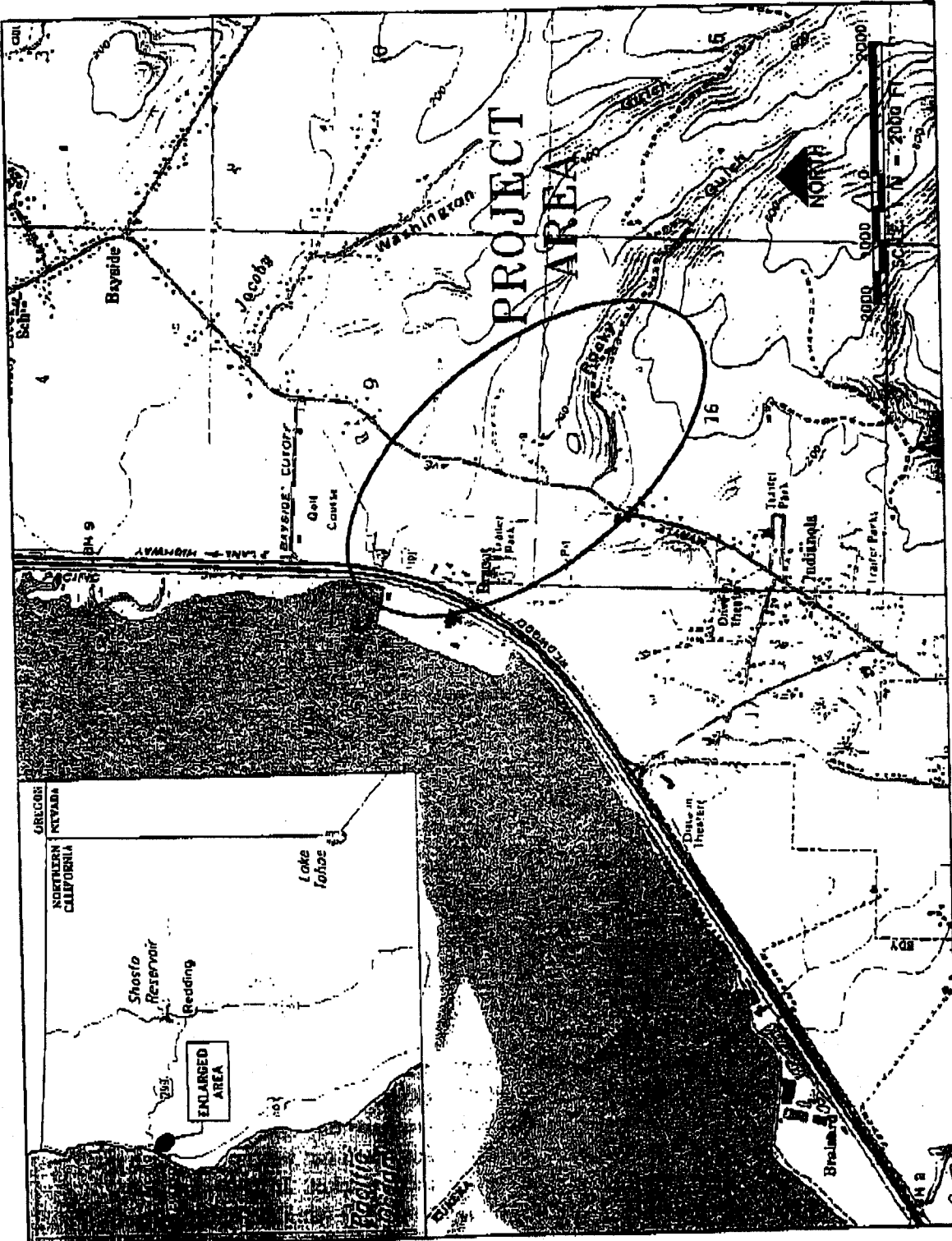


Figure 1. Project location, from U.S.G.S. Arcata South quadrangle.

EXHIBIT NO. 2
 APPLICATION NO.
 1-05-009
 (Rodoni/CDF&G)
 PROJECT
 VICINITY MAP

Proposed Mitigation Measures**(a) Mitigation Measures for General Construction Activities**

1. Construction shall only occur between July 1st and October 31st to avoid or minimize adversely affecting fish and plant species of concern.
2. To temporarily prevent fish species of concern gaining access to Rocky Gulch above the tide gate during construction, the newly installed muted tide gate shall be closed for the duration of construction.
3. Any fish that may be present in Rocky Gulch will be relocated before construction commences. This will be accomplished by installing temporary fish barriers at station 9+00, station 37+00 and station 46+00, including a rock dam with a small metal pipe and flap gate at station 9+00, a fish screen at station 37+00 just downstream of the Halvorsen Creek confluence, and a fish screen at station 46+00 at the entrance to the pasture drainage ditch. Once fish screens are installed, fish shall be removed with seine net in the tidal reach of the channel between stations 9+00 and 37+00 and relocated to Washington Gulch. Once fish are removed, the tidegate auxiliary door shall be closed at high tide (that allows a muted tidal prism upstream of the tidegate) and any remaining fish shall be salvaged from the channel as the tide recedes, and relocated to Washington Gulch. From station 37+00 to 46+00 if there is any stream flow left in the channel by summer 2005, all fish shall be removed with seine net and backpack electro-fisher and relocated upstream of station 46+00. After work in the tidal zone (station 9+00 to 37+00) is completed, the downstream fish barrier at station 9+00 shall be removed and the tidegate auxiliary door opened to restore muted tidal flow to the lower slough channel. A temporary fish barrier shall be installed at station 56+00, fish shall be removed between station 46+00 and 56+00 with seine net and backpack electro-fisher, and relocated upstream of station 56+00. Once fish are removed, a temporary pipeline (2-4 inch diameter) shall be installed at station 56+00 and flow diverted to the head of the drainage ditch at station 46+00. The pipeline shall run about 1,000 ft down the pasture. Approximately 1/2 of a cfs summertime flow is expected from Rocky Gulch at this station. Once work is completed in the upper freshwater zone (station 37+00 to 56+00), the temporary drainage pipe at station 56+00 shall be removed, then all fish shall be removed with seine net and backpack electro-fisher in the pasture drainage ditch from station 46+00 to station 9+00, and relocated upstream of station 46+00. Once fish are removed, flow shall be restored at station 46+00 into the reconstructed channel and any remaining fish from the drainage ditch channel shall be salvaged as the flow recedes.
4. During the winter of 2004-05 several breaches in the dike occurred between station 42+00 and 46+00 (refer to Figure 10), allowing the stream to flow across the pasture, collect into the main drainage ditch running down the middle of the pasture (refer to Figures 11 and 12), and rejoining Rocky Gulch

through the flap gate at station 9+00. In general, the creek channel shall be de-watered during construction by maintaining the breached dike at station 46+00, diverting a small tributary at station 37+00 into the drainage ditch, and temporarily closing the tidegate.

5. Areas identified by McBain & Trush staff geologist or consulting engineer as having "wet" or "soft" soils: (a) shall be covered with heavy synthetic mats or other acceptable non-toxic material and gravel that can be readily laid down and immediately removed following construction, and (b) shall be the minimum width and length necessary to allow movement of equipment to and from the project site.

Monitoring:

6. A qualified fish biologist shall identify and record all fish captured and relocated.
7. Several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(b) Mitigation for Upgrading and Using Existing Ranching Roads to Temporarily Access Construction Sites and Staging Areas

8. The placement of a temporary stream crossing in the drainage ditch crossed by access route A shall be designed (i.e. slope, outfall drop, etc) to not impede fish migration and the enhancement of an existing stream crossing on Rocky Gulch at station 34+50 is designed to not create a barrier to fish migration.
9. As in mitigation measure no. 5, areas identified by McBain & Trush staff geologist or consulting engineer as having "wet" or "soft" soils shall be covered with heavy synthetic mats or other acceptable non-toxic material (gravel) that can be readily laid down and immediately removed following construction, and shall be the minimum width and length necessary to allow movement of equipment to and from the project site.
10. No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.
11. Refueling areas for equipment shall occur only at the upland staging area B. If equipment must be washed, washing will occur where wash water cannot flow into wetlands or waters of the U.S./State.
12. No equipment shall be operated in tidal waters.

Monitoring:

13. Stream crossing installations will be evaluated by an authorized fishery biologist and/or engineer to determine that they are not a barrier to fish migration.
14. During construction, turbidity sampling will be taken periodically below station 9+00.

15. As in mitigation No. 7, several photographic points will be established to document all work performed. Photographs will be recorded in sufficient frequency to document each stage of work.

(c) Mitigation for installing fish barriers, relocating fish, installing flow barriers, installing silt fences and dewatering the channel in preparation for channel construction

16. Preceding de-watering of the main channel, McBain & Trush's fish biologist Darren Mierau, once authorized by CDFG, and under Section 10 of the ESA, will use seine nets and/or backpack electro-shocker to collect all fish from the reaches that will be affected by construction.
17. Any fish collected in the tidal zone of Rocky Gulch shall be relocated to Washington Gulch, and any fish collected in the freshwater zone shall be relocated or "herded" upstream of the flow and fish barriers at station 56+00.
18. De-watering of the channel shall be ramped over a 48-hour period to allow fish to move downstream or upstream, and be collected at the lower fish barrier at station 9+00, or to be collected during the last stages of de-watering.
19. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during, and immediately after de-watering.
20. A silt fence shall be deployed at station 9+00 to trap all suspended sediment that leaves the construction site. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
21. The temporary flap gate at station 9+00 shall be removed as soon as excavation and construction is completed in the tidal zone, which is estimated to be completed within 4 weeks.
22. All temporary fill shall be removed from wetlands and waters of the U.S./State, immediately on cessation of construction.

Monitoring:

23. A survey of the de-watered area for stranded fish or amphibians shall be conducted by an authorized fishery biologist during and after channel de-watering. All fish collected shall be identified, measured, and recorded by an authorized fishery biologist. Any mortality shall be documented. Any fish or amphibians taken shall be preserved and provided to CDFG within 24 hours, unless CDFG is present at the time of de-watering.
24. As in Mitigation No. 14, during construction turbidity shall be sampled periodically below station 9+00.
25. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs will be recorded in sufficient frequency to document each stage of work.

(d) Mitigation for Restoring Channel Capacity in the Tidal Reach of Rocky Gulch and Reducing the Risk of Tidal Inundation of the Seasonal Wetland Pasture

26. All fish species of concern present prior to construction shall be re-located and prevented from entering the work site.
27. Excavation shall occur only in a de-watered channel.
28. The willow swamp habitat from station 28+00 to 37+00 shall remain hydrologically connected as a floodplain to the main channel.
29. A qualified botanist shall locate and flag all populations of plant species of concern in the project area.
30. Preceding construction, the top 12 inches of vegetation/topsoil that contain any of the plant species of concern that are in the path of the slough excavations shall be removed as "wafers" and stored separately on pond liners. These soils will be kept moist until they are re-placed along the tidal reach at the appropriate finished grade and in the same orientation.
31. As in Mitigation No. 20, a silt fence shall be deployed at station 9+00 to trap all suspended sediment that leaves the construction site. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
32. McBain & Trush's consulting engineer shall be on site during final grading to assure that the area is recontoured as per approved design specifications.
33. Soon after the bank recontouring work is complete, re-vegetation of the banks shall occur with appropriate salt tolerant native vegetation as per a re-vegetation plan prepared by a qualified botanist.
34. When the dike surfaces have been recontoured re-vegetation of all exposed surfaces shall be mulched and seeded with appropriate grass seed.
35. Exclusionary cattle fencing shall be installed temporarily to allow grass seed to germinate and provide protective ground cover.

Monitoring:

36. A qualified biologist shall conduct a floristic survey of the construction area before being disturbed, during the appropriate flowering periods for the plant species of concern to document their occurrence and location.
37. A qualified biologist shall monitor the wafers throughout the construction season to assure they stay moist. Successful mitigation will be determined if re-establishment of plant species of concern is in a density and total area consistent with pre-impact conditions is achieved in 5 years.
38. Within 60 days of completion of the initial enhancement work: 1) "as built" plans shall be submitted to the Commission that document successful implementation of the project as approved, and 2) an assessment of whether the project's goals have been, or are likely to be achieved.
39. Annual reports shall be provided by CDFG by March 30th of each year, or until the project goal has been achieved, to the Commission, describing and

documenting fish presence, habitat evaluation, water quality, sedimentation, and establishment of vegetative cover/salt marsh at the project site.

40. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(e) Mitigation for Restoring Channel Capacity in the Freshwater Reach of Rocky Gulch, Reduce Risk of Inundation of the Seasonal Wetland Pasture, and Installing Fish Habitat Enhancement Structures

41. After work is completed in the tidal zone, the fish barrier shall be relocated from station 9+00 to 36+50 to prevent fish from entering the construction site, but allow tidewater to return to the reconstructed channel.
42. As in Mitigation No. 26, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site.
43. As in Mitigation No. 27, Excavation shall occur only in a de-watered channel.
44. Silt fences shall be deployed at station 36+50 to trap all suspended sediment that leaves the construction site. If the silt fences are not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
45. The old channel from 49+50 to 53+00 shall be maintained as a flood channel, receiving discharge from above Old Arcata Road via a culvert and shall remain hydrologically connected to the main channel below.
46. Disturbance or removal of riparian vegetation shall not exceed the minimum necessary to complete construction activities.
47. The footprint of the existing dike after excavation and grazed seasonal wetland within the 50- foot riparian corridor shall be graded to create a floodplain that drains towards the channel.
48. The 50-foot riparian corridor shall be planted as per the re-vegetation plan prepared by a qualified botanist, to increase the surface area of riparian woodland habitat.
49. As in Mitigation No. 34, when the dike surfaces have been recontoured re-vegetation of all exposed surfaces shall be mulched and seeded with appropriate grass seed.
50. As in Mitigation No. 35, exclusionary cattle fencing shall be installed to protect mulched and re-vegetated areas.
51. McBain & Trush's consulting engineer shall be on site during final grading to assure that the area is recontoured as per approved design specifications.
52. As in Mitigation No. 32, equipment shall be operated in the stream channel of flowing streams only as necessary to construct crossing, during excavation, when placing fills, installing instream fish habitat structures, or other channel changes.

53. If operations are not adequately containing sediment, the activity shall cease. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
54. Fish habitat improvements structures shall be designed and constructed in accordance with techniques described in CDFG's "California Salmonid Restoration Manual."

Monitoring:

55. As in Mitigation No. 38, within 60 days of completion of the initial enhancement work: 1) "as built" plans shall be submitted to the Commission that document successful implementation of the project as approved, and 2) an assessment of whether the project's goals have been, or are likely to be achieved.
56. The project site shall be monitored for at least five years, or until the project goals have been achieved, for vegetative planting success, presence of salmonids or tidewater goby and verification of habitat use.
57. As in Mitigation No. 39, annual reports shall be provided by CDFG by March 30th of each year to the Commission, describing and documenting fish presence, habitat evaluation, water quality, sedimentation, and establishment of vegetative cover/salt marsh at the project site.
58. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(f) Mitigation for Installation of Cattle Management Structures for Grazing Control and Access

59. As in Mitigation No. 26, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site.
60. As in Mitigation No. 27, excavation shall occur only in a de-watered channel.
61. Loss of wetland area from the placement of fence posts, and stream crossing bridge abutments shall be mitigated by the construction of a 50-foot-wide riparian woodland floodplain from station 36+50 to station 56+00, and construction of new tidal slough channels between stations 18+00 and 25+00 and the main channel between stations 25+00, and 28+00 and 37+00 as well as the construction of new freshwater channels between stations 49+50 to 56+00.

Monitoring:

62. Within 60 days of completion of the stream crossing bridge, "as built" plans shall be submitted to the Commission that document the implementation of these actions as approved.
63. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(g) Mitigation for Post-Construction Site Remediation

64. All temporary fill, synthetic mats and silt fences shall be removed from wetlands and waters of the U.S./State immediately on cessation of construction.
65. Appropriate Best Management Practices (BMPs) from Section 3 of the "California Stormwater Best Management Practices Handbook" shall be implemented to prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.
66. Channel integrity at station 36+00 and 46+00 shall be restored to return flows to Rocky Gulch and prevent future stream capture.
67. Following completion of work all disturbed grazed seasonal wetlands shall be de-compacted and seeded as needed, with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.

Monitoring:

68. As in Mitigation No. 40, annual reports shall be provided by CDFG by March 30th of each year, or until the project goal has been achieved, to the Commission, describing and documenting establishment of vegetative cover and recovery of affected wetlands at the project site.
69. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(h) Mitigation for Future Channel Maintenance

70. As in Mitigation No. 26, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site by the installation of fish barriers.
71. Excavation shall occur during low flow conditions to minimize downstream water quality effects.
72. A qualified botanist shall locate and flag all populations of plant species of concern in the project area.
73. As in Mitigation No. 30, preceding construction, the top 12 inches of vegetation/topsoil that contain any of the plant species of concern that are in the path of the slough excavations shall be removed as "wafers" and stored separately on pond liners. These soils shall be kept moist until they are replaced along the tidal reach at the appropriate finished grade and in the same orientation.
74. As in Mitigation No. 46, disturbance or removal of riparian vegetation shall not exceed the minimum necessary to complete construction activities.
75. A silt fence shall be deployed below the maintenance reach to trap all suspended sediment that leaves the construction site. If the silt fence is not

- adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevents sediment from entering the waters below. Turbid water shall be contained and prevented from being transported downstream in amounts that are deleterious to fish or could violate state pollution laws.
76. Equipment shall be operated in the stream channel of flowing streams only as necessary to restore channel geometry/capacity.
 77. The landowner's consulting engineer shall be on site during final grading to assure that the area is recontoured as per approved design specifications.
 78. Soon after the bank recontouring work is complete, re-vegetation of the banks shall occur with appropriate salt tolerant native vegetation as per a re-vegetation plan prepared by a qualified botanist.
 79. As in Mitigation No. 34, when the dike surfaces have been recontoured re-vegetation of all exposed surfaces shall be mulched and seeded with appropriate grass seed.
 80. As in Mitigation No. 68, following completion of work all disturbed grazed seasonal wetlands shall be de-compacted and seeded with a commercially available seed mixture composed of the same grass species that dominate the area at the present time.
 81. As in Mitigation No. 35, exclusionary cattle fencing shall be installed temporarily to allow grass seed to germinate and provide protective ground cover.
 82. As in Mitigation No. 65, all temporary fill, synthetic mats and silt fences shall be removed from wetlands and waters of the U.S./State immediately on cessation of construction.
 83. As in Mitigation No. 66, Best Management Practices (BMPs) from Section 3 of the "California Stormwater Best Management Practices Handbook" shall implemented to prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials.

Monitoring:

84. Monitoring shall be conducted approximately every 2-3 years to determine if channel dredging is necessary. This monitoring shall include field observations of changes in bed elevation, surveys of reference cross sections within the 2,000 ft maintenance reach, and measurements of water depths at reference locations (including pool habitat units). A reduction in channel cross section area of more than 20% of the bankfull capacity as determined by level surveys at up to 3-5 reference cross sections shall trigger the maintenance operation.
85. As in Mitigation No. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

(i) Mitigation for placement of "fill" associated with the installation of concrete mattresses and erosion-resistant stream crossings over PG&E gas transmission line

86. As in mitigation no. __, all fish species of concern if they are present prior to construction shall be re-located and prevented from entering the work site.
87. Excavation shall occur only in a de-watered channel.
88. The conversion of fish habitat areas to hardened cattle and PG&E gas transmission line stream crossings shall be mitigated by the construction of a 50 foot wide riparian woodland floodplain from station 36+50 to station 56+00, and construction of new tidal slough channels between stations 18+00 and 25+00 and main channel between stations 25+00, and 28+00 and 37+00 as well as the construction of new freshwater channels between stations 49+50 to 56+00, and installation of 10 boulder/log habitat structures between stations 31+00 and 56+00.

Monitoring:

89. Stream crossing installations shall be evaluated by an authorized fishery biologist and/or engineer to determine that they are not a barrier to fish migration.
90. Within 60 days of completion of the hardened cattle and PG&E gas transmission line stream crossings, "as built" plans shall be submitted to the Commission that document the implementation of these actions as approved.
91. As in mitigation no. 7, several photographic points shall be established to document all work performed. Photographs shall be recorded in sufficient frequency to document each stage of work.

CALIFORNIA COASTAL COMMISSION

NORTH COAST DISTRICT OFFICE

MAILING ADDRESS:

710 E STREET • SUITE 200

P. O. BOX 4908

EUREKA, CA 95501-1865

EUREKA, CA 95502-4908

VOICE (707) 445-7833

FACSIMILE (707) 445-7877



EMERGENCY PERMIT

Roger & Johanna Rodoni
P.O. Box 43
Scotia, CA 95565

Date: June 3, 2005
Emergency Permit No.: 1-05-025-G

LOCATION OF EMERGENCY WORK:

Adjacent to an existing tidegate at the mouth of Rocky Gulch, west of Highway 101, between Eureka and Arcata, Humboldt County (APN 501-091-002)

WORK PROPOSED:

Repair eroded portions of an existing earthen levee and protect the existing tidegate by (1) placing dry earthen fill material as needed to restore the former footprint and slope of the levee as it existed prior to erosion, and (2) placing a total of approximately 100 cubic yards of half-ton quarry rock revetment materials over a total length of approximately 70 lineal feet of levee and bank extending north and south of the tidegate.

PERMIT RATIONALE:

This letter constitutes approval of the emergency work you or your representative has requested to be done at the location listed above. I understand from your information and our site visit that an unexpected occurrence in the form of severe erosion of the levee and banks in the vicinity of the tidegate threatens to breach the levee or cause the collapse of the tidegate structure, either of which would allow seawater to inundate adjoining pasture lands. The situation requires immediate action to prevent damage to life, property, or essential public services.

Pursuant to Title 14 of the California Code of Regulations, Section 13009, the Executive Director of the Coastal Commission hereby finds that:

- (a) An emergency exists which requires action more quickly than permitted by the procedures for administrative or ordinary permits and the development can and will be completed within 30 days unless otherwise specified by the terms of this permit; and
- (b) Public comment on the proposed emergency action has been reviewed as time allows; and
- (c) As conditioned, the work proposed would be consistent with the requirements of the California Coastal Act of 1976.

The work is hereby approved, subject to the conditions listed on the attached page.

If you have any questions about the provisions of this Emergency Permit, please contact the Commission's North Coast District Office.

Sincerely,

PETER M. DOUGLAS
Executive Director

By: Robert S. Merrill
North Coast District Manager

EXHIBIT NO. 4
APPLICATION NO.
1-05-009 (Rodoni/CDF&G)
EMERGENCY
PERMIT
(Page 1 of 3)

cc: Kelley Reid – U.S. Army Corps of Engineers
Dean Prat, California Regional Water Quality Control Board, North Coast Region
Vicki Frey, California Department of Fish and Game
Mike Long, U.S Fish and Wildlife Service
Darren Mierau, McBain and Trush, Inc.

Encl: Emergency Permit Acceptance Form; Regular Permit Application Form

CONDITIONS OF APPROVAL:

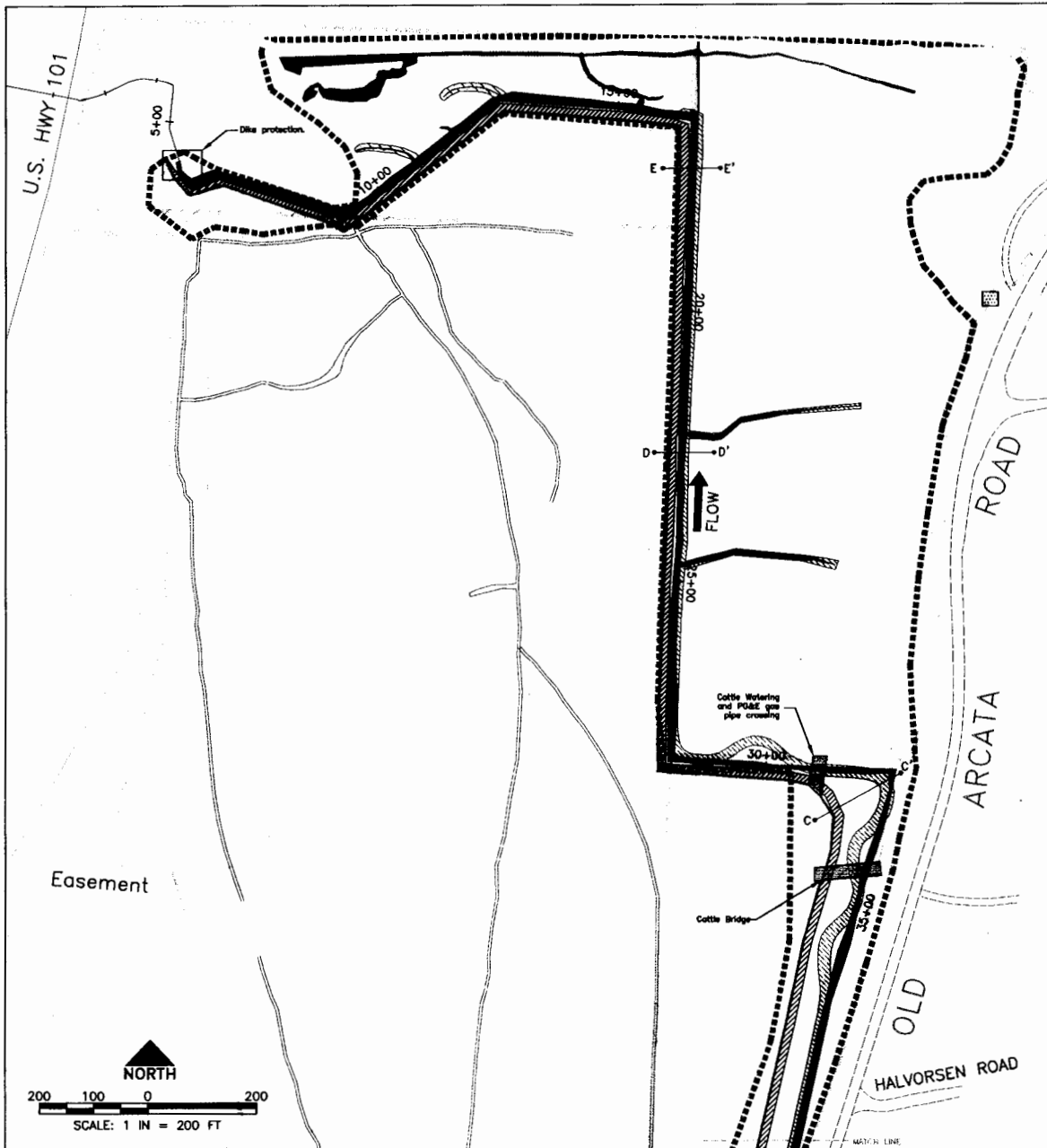
1. The enclosed Emergency Permit Acceptance form must be signed by the PROPERTY OWNER and returned within 15 days.
2. Only work specifically described in this permit and for the specific property listed above is authorized. The project shall be constructed in accordance with the plans and other information submitted to the Coastal Commission. Any additional work requires separate authorization from the Executive Director.
3. The work authorized by this permit must be completed within 60 days of the date of this permit (i.e., by August 3, 2005).
4. In exercising this permit, the applicant agrees to hold the California Coastal Commission harmless of any liabilities for damage to public or private properties or personal injury that may result from the project.
5. This permit does not obviate the need to obtain necessary authorizations and/or permits from other agencies.
6. Heavy synthetic mats or gravel shall be placed on wet or soft soils within areas where movement of equipment to and from the project site will occur. All such material shall be immediately removed following construction.
7. Heavy equipment shall be operated from the top of the levee and bank and no such equipment shall be operated within tidal waters.
8. No construction materials, debris, or waste shall be placed or stored where it may be allowed to enter tidal waters or other wetlands and all construction debris and waste shall be removed from the project site and disposed of at a lawful disposal site outside of the coastal zone.
9. None of the heavy equipment shall be refueled at the project site.
10. The revetment materials shall only be placed within the areas depicted in the photographs submitted by Darren Mierau in an email to Commission staff dated May 25, 2005.

The emergency work is considered to be TEMPORARY work done in an emergency situation. If the property owner wishes to have the emergency work become a permanent development, a Coastal Development Permit must be obtained. A regular permit would be subject to all of the provisions of the California Coastal Act and may be conditioned accordingly. These conditions may include provisions for public access (such as an offer to dedicate an easement) and/or a requirement that a deed restriction be placed on the property assuming liability for damages incurred from storm waves.

If you have any questions about the provisions of this emergency permit, please call the Commission's North Coast District Office at the address and telephone number list on the first page.

Exhibit No. 5
Application No.
1-05-009 (Rodoni/CDFG)
Project Plans (2 pages)





- PROPOSED PROJECT ELEMENTS**
1. Protect dikes surrounding tidegate from bank erosion using 1/4 to 1/2 ton boulders.
 2. Dredge and widen existing channel from station 16+00 to 56+00;
 3. Increase elevation of existing dike from station 6+00 to 31+00;
 4. Excavate new tidal slough channels from station 10+00 to 28+00;
 5. Excavate new channels from station 25+50 to 37+50, and station 59+50 to 56+00;
 6. Relocate existing dike and create 50-foot wide floodplain corridor from station 31+00 to 56+00;
 7. Install cattle watering and pipeline protection structures at stations 31+00 and 50+00. Install cattle bridge at station 34+50;
 8. Plant riparian vegetation from station 31+00 to 56+00;
 9. Install instream habitat structures (logs and boulders), and bank protection measures (willow mattresses) from station 31+00 to 56+00;
 10. Install fencing along west and south sides of dikes from 31+00 to 56+00;
 11. Future maintenance reach station 26+00 to 50+00.

Areas and Lengths for Rocky Gulch Existing and Proposed Conditions within Construction Boundary

	Length (ft)		Area (acres)	
	Existing	Proposed	Existing	Proposed
Dike	4,980	4,810	1.6	1.6
Main Channel	5,100	5,100	1.4	2.1
Slough Channels	2,500	2,500	0.4	0.6
Staging and Access				5.6
Construction Boundary				26.8

Construction Volume Estimates (Cu. Yds.)

Description	Cut	Fill	20% on Fill	Net
Dike and Main Channel	4,850	4,550	900	600 Cut
Slough Channels	600			600 Cut
Total	5,450	4,550	900	0

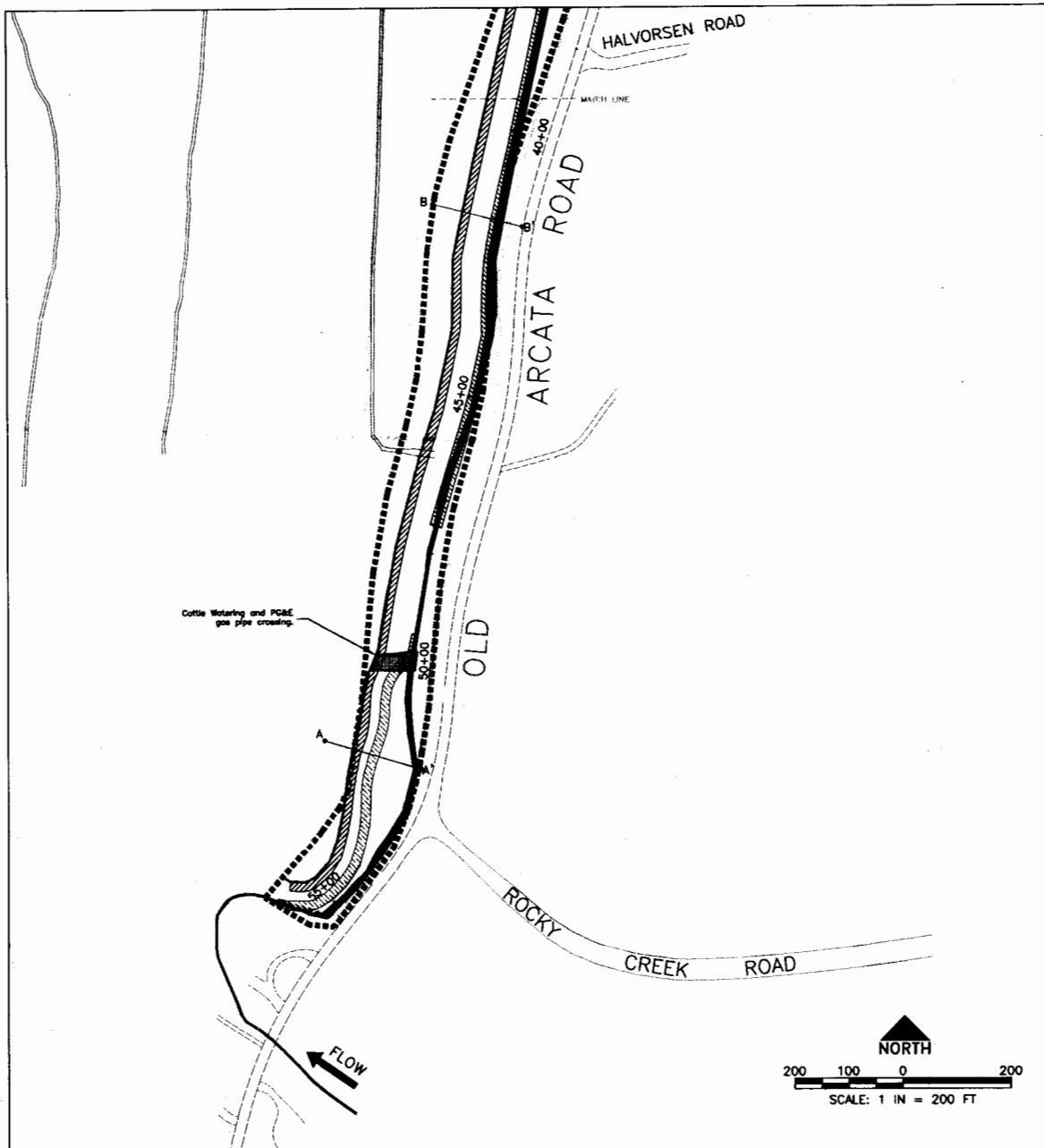
LEGEND

- PARCELS WITHIN PROJECT FOOTPRINT
- PROJECT FOOTPRINT/CONSTRUCTION BOUNDARY
- ||||| RAILROAD
- ==== ROAD
- SITE ACCESS AND STAGING AREAS
- PROPOSED RIPARIAN FENCING
- CROSS SECTION
- EXISTING CHANNEL
- EXISTING DIKE
- PROPOSED CHANNEL DREDGING
- PROPOSED NEW CHANNEL CONSTRUCTION
- PROPOSED DIKE CONSTRUCTION
- PROPOSED CROSSING AND/OR WATERING LOCATION FOR CATTLE AS DENOTED IN ITEM NUMBER 7 OF PROJECTS ELEMENTS

McBain & Trush FISHERIES HYDROLOGY STREAM RESTORATION FLUVIAL GEOMORPHOLOGY
 P.O. BOX 663, ARCATA, CALIFORNIA 95518

ROCKY GULCH RESTORATION
 PROPOSED PROJECT
 Existing and Proposed Improvements, Plot Plan #3a

DRAWN BY	FM
CHECKED BY	AL
DATE	JAN 28, 2005
PLOT	PLAN3V2.DWG
REVISION	V2



PROPOSED PROJECT ELEMENTS

1. Protect dikes surrounding tidegate from bank erosion using 1/4 to 1/2 ton boulders.
2. Dredge and widen existing channel from station 16+00 to 56+00;
3. Increase elevation of existing dike from station 6+00 to 31+00;
4. Excavate new tidal slough channels from station 10+00 to 28+00;
5. Excavate new channels from station 25+50 to 37+50, and station 59+50 to 56+00;
6. Relocate existing dike and create 50-foot wide floodplain corridor from station 31+00 to 56+00;
7. Install cattle watering and pipeline protection structures at stations 31+00 and 50+00. Install cattle bridge at station 34+50;
8. Plant riparian vegetation from station 31+00 to 56+00;
9. Install instream habitat structures (logs and boulders), and bank protection measures (willow mattresses) from station 31+00 to 56+00;
10. Install fencing along west and south sides of dikes from 31+00 to 56+00;
11. Future maintenance reach station 26+00 to 50+00.

Areas and Lengths for Rocky Gulch Existing and Proposed Conditions within Construction Boundary

	Length (ft)		Area (acres)	
	Existing	Proposed	Existing	Proposed
Dike	4,980	4,810	1.6	1.6
Main Channel	5,100	5,100	1.4	2.1
Slough Channels	2,500	2,500	0.4	0.6
Staging and Access				5.6
Construction Boundary				26.8

Construction Volume Estimates (Cu. Yds.)

Description	Cut	Fill	20% on Fill	Net
Dike and Main Channel	4,850	4,550	900	600 Fill
Slough Channels	600			600 Cut
Total	5,450	4,550	900	0

LEGEND

- PARCELS WITHIN PROJECT FOOTPRINT
- PROJECT FOOTPRINT/CONSTRUCTION BOUNDARY
- RAILROAD
- ROAD
- SITE ACCESS AND STAGING AREAS
- PROPOSED RIPARIAN FENCING
- CROSS SECTION
- EXISTING CHANNEL
- EXISTING DIKE
- PROPOSED CHANNEL DREDGING
- PROPOSED NEW CHANNEL CONSTRUCTION
- PROPOSED DIKE CONSTRUCTION
- PROPOSED CROSSING AND/OR WATERING
- LOCATION FOR CATTLE AS DENOTED IN ITEM NUMBER 7 OF PROJECTS ELEMENTS

McBain & Trush FISHERIES HYDROLOGY STREAM RESTORATION FLUVIAL GEOMORPHOLOGY
P.O. BOX 663, ARCATA, CALIFORNIA 95518

ROCKY GULCH RESTORATION
PROPOSED PROJECT
Existing and Proposed Improvements, Plot Plan #3b

DRAWN BY	FM
CHECKED BY	AL
DATE	JAN 26, 2005
PLOT/PLAN	PLAN3V2.DWG
REVISION	B

