STATE OF CALIFORNIA -- THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *GOVERNOR*

CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
710 E STREET • SUITE 200
EUREKA, CA 95501-1865
VOICE (707) 445-7833
FACSIMILE (707) 445-7877

MAILING ADDRESS:
P. O. BOX 4908
EUREKA, CA 95502-4908

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Commission Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	**1-04-011**
APPLICANT:	**EUREKA SAND & GRAVEL COMPANY**
PROJECT LOCATION:	At the Hauck gravel bar along the east side of the Eel River, off of Fowler Lane, west of Highway 101, Alton area, Humboldt County. APNs 106-221-01, 201-221-09, 201-261-01, and 201-261-06.
PROJECT DESCRIPTION:	Seasonally extract up to 150,000 cubic yards of sand and gravel from the Hauck gravel bar on the Eel River over the next five years and install and remove seasonal gravel truck crossings as needed over the low flow channels.
PLAN DESIGNATION:	Agriculture Exclusive (AE) and Natural Resources (NR) as designated by the Eel River Area Plan

ZONING DESIGNATION:	(1) Agriculture Exclusive, 60-acre minimum parcel size with archaeological, flood hazard, coastal streams and riparian protection and transitional agricultural lands combining zone (AE-60/A,F,R,T), and (2) Natural Resources with riparian protection combining zone (NR/R).
LOCAL APPROVALS RECEIVED:	Humboldt County: (1) Coastal Development Permit No. CDP-59-92 approved July 24, 1997; (2) Surface Mining Permit No. SMP-08-92 approved July 24, 1997; (3) Condition Use Permit No. CUP-29-92 approved July 24, 1997; (4) Reclamation Plan Approval No. RP-07-92 granted July 24, 1997; (5) Financial Assurances guaranteeing reclamation of the site approved July 24, 1997; (6) Final Program EIR on Gravel Removal From the Lower Eel River, adopted 1992, and (7) Supplemental Environmental Impact Report certified July 24, 1992.
OTHER APPROVALS REQUIRED:	State Lands Commission Lease; California Department of Fish & Game 1603 Streambed Alteration Agreement; U.S. Army Corps of Engineers Letter of Permission
SUBSTANTIVE FILE DOCUMENTS:	Humboldt County LCP; Humboldt County Program Environmental Impact Report (July, 1992); National Marine Fisheries Service August 2, 2004 biological opinion reviewing the Eureka Sand and Gravel Company's proposed gravel extraction operations at Hauck Bar, Humboldt County.

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends that the Commission approve with conditions the coastal development permit for gravel extraction along the lower Eel River. The applicant proposes to seasonally extract up to 150,000 cubic yards of gravel annually over the next five years

from a gravel bar at the Hauck gravel bar along the east side of the Eel River, off of Fowler Lane, west of Highway 101 near Alton. The Commission previously granted a five-year permit to the applicant in 1997 (CDP 1-96-53); and one-year permits in 2002 (CDP 1-02-022) and 2003 (CDP 1-02-164).

Gravel mining along rivers is regulated by a variety of local, state, and federal agencies. In recent years, with the listing of various salmonid fish species as threatened under the state and federal Endangered Species Acts, considerable attention has been paid to changing mining protocols to best protect the threatened fish species from mining impacts. The development of multi-year gravel mining permitting protocols by involved resource agencies has been on-going. The U.S. Army Corps of Engineers (Corps) granted a Letter of Permission (LOP) in the late 1990s to provide multi-year authorization under the Clean Water Act for the gravel extraction operations in Humboldt County. For the past several years the U.S. Army Corps of Engineers (Corps) has been working to issue a new LOP with revised terms and conditions to better address the protection of threatened salmonids and other environmental resources of the river. As the process of developing a new LOP has taken several years, the process has necessitated the extension of the previous LOP on an annual basis. The new LOP and the extensions of the old LOP has necessitated consultation between the U.S. Army Corps of Engineers (Corps) with NOAA Fisheries under Section 7 of the federal Endangered Species Act on the effects of the permit extensions and new LOP on the threatened salmonid species. On August 13, 2004, NOAA Fisheries published a new biological opinion addressing the new 5-year LOP to be issued by the CORPS. The biological opinion finds that activities that would be authorized under the LOP are not likely to jeopardize the continued existence of the threatened salmonid species or result in the destruction or adverse modification of coho salmon designated critical habitat. The biological opinions that have been issued by NOAA Fisheries as a result of those consultations have provided new information and recommendations for improving limitations on gravel mining to better protect threatened salmonid species.

In addition, a separate biological opinion has been issue for the proposed project. Rather than seek Corps authorization under the anticipated new LOP, the applicant, unlike the other lower Eel River gravel operators, applied last fall for an individual Section 404 permit from the Corps for authorization of mining on the applicant's site over a five year period. The Corps review of this individual application triggered the need for a separate consultation with NOAA Fisheries, and on August 2, 2004, NOAA Fisheries published a biological opinion specific to the applicant's project. As part of the consultation process, the applicant met numerous times with NOAA Fisheries and Corps staff and made changes to the project description to incorporate certain mitigation measures into the project. Taking into consideration these mitigation measures, the biological opinion concluded that the project as revised, is not likely to jeopardize the continued existence of the threatened salmonid species or result in the destruction or adverse modification of coho salmon designated critical habitat.

In previous actions on gravel mining projects over the past few years, the Commission has relied on the information and recommendations of the biological opinions on the one-year extensions of the old LOP to shape coastal development permit requirements for the protection of fisheries and as evidence that gravel mining conducted in accordance with the recommendations would not result in significant adverse impacts on threatened salmonids. These biological opinions of the last several years have only addressed the impacts of gravel mining on fisheries for that particular year. As the biological opinions issued between 2001 and 2003 did not address the effects of gravel mining in future years, and no other credible information was available to the Commission to determine that proposed gravel mining activities would not adversely affect threatened salmonids and would be consistent with the environmentally sensitive habitat protection policies of the Coastal Act, the Commission has limited its coastal development permit authorizations to one year periods. With publication of the August 13, 2004 biological opinion on the new 5-year LOP, and the August 2, 2004 biological opinion addressing the applicant's specific project, evidence exists that gravel operations conducted in accordance with the LOP would not adversely affect threatened salmonids over the next five years. Therefore, special condition No. 6 indicates the gravel operations authorized by the permit shall terminate in five years instead of just one year.

Staff recommends a number of special conditions requiring measures to prevent disturbances to both riverine and terrestrial habitat. In developing the recommended conditions, staff has considered the information and recommendations contained in the NOAA Fisheries biological opinion, as well as requirements imposed on the applicants by other agencies, including the USACE, the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), the State Lands Commission (SLC), and the County of Humboldt Extraction Review Committee (CHERT).

A central component of the recommended conditions is the requirement of Special Condition No. 2 that the permittee submit an annual extraction plan. A river system is dynamic, and the amount of aggregate accumulating on the bars and the exact configuration of bars and channels vary to some degree from year to year. As a result, the Corps, the Department of Fish & Game, NOAA Fisheries, all require each operator to prepare an annual gravel extraction plan that takes into account the conditions that year. Each of these agencies require that the annual plan be reviewed by CHERT, a County panel of consulting geologists and hydrologists who comment on the plans and recommend changes. Similarly, Special Condition No. 2 would require the submittal of an annual gravel extraction plan for review and approval of the Executive Director prior to the commencement of gravel extraction operations in any particular year. The condition requires that the annual plan be consistent with the recommendations of CHERT, NOAA Fisheries, and other agencies, and that the plan conform to certain limitations on mining set forth in Special Condition No. 3. The limitations incorporate the mitigation measures proposed by the applicant and recommended by NOAA Fisheries and the Corps to protect threatened salmonid species and maintain channel form, as well

as other limitations to ensure consistency with the environmentally sensitive habitat and public access policies of the Coastal Act.

Among the specific limitations derived from the biological opinion are requirements that (1) only the particular extraction methods proposed by the applicant and reviewed by NOAA Fisheries be used including: (a) secondary and mid-channel skims, (b) narrow skims, (c) concentrating on-bar gravel extraction from horseshoe-shaped "deep skims," (d) developing "alcove trenches" within the outboard secondary channels on the lower end of the bars; and (e) longitudinal "dry trenching" down the length of a portion of the bars; (2) the head of the gravel bars to be mined be maintained as buffers where gravel extraction would be precluded to provide protection of the natural stream flow steering effect provided by an undisturbed bar; (3) vertical offsets of the gravel extraction area from the low flow channel of the river that exists during the summer mining season be used to help minimize sedimentation impacts on the river; and (4) mining and all post-extraction bar grooming work and equipment removal be performed during the summer months and completed by October 15 to ensure no significant disturbance to anadromous fish (Special Condition No. 8). Gravel mining operations on the river bed need to cease before the rainy season to prevent significant adverse impacts to fisheries, as the runs of the various species of anadromous fish up and down the river increase in the fall with the rise in river water levels and remain at high levels through the early spring. The condition would allow the Executive Director to approve an extension of gravel extraction and regrading activities to as late as November 1 if dry weather conditioned are forecasted, the permittee has received all necessary approvals to extend gravel operations over the extension period from the other reviewing agencies, and if at the end of each day the site is left in a reclaimed state to protect the site should rain occur and river flows unexpectedly rise.

Several of the recommended conditions would impose requirements necessary to achieve consistency with Coastal Act policies that may not be needed to achieve consistency with the requirements of other reviewing agencies.

First, Special Condition 3(f) would prevent disturbance of environmentally sensitive riparian vegetation growing on the gravel bars. The condition would prohibit mining in those areas of the gravel bars where the riparian vegetation has reached a size and extent to where there is an expectation of appreciable habitat values for nesting, forage and cover of wildlife being afforded thereby constituting environmentally sensitive habitat under the Coastal Act. Although the Corps permits for gravel mining have often required mitigation for extraction within riparian areas, the Corps has still allowed extraction within riparian areas. The Coastal Act precludes the Commission from approving this type of extraction because of the prohibition within Section 30233(a)(6) on mining within an ESHA.

For the same reason, the conditions recommended by staff would preclude mining and related gravel extraction development within the wetted channel of the river. The Commission notes that the applicant's current application does not specifically include wet-trenching extraction, or any other extraction within a wetted channel. However, the applicants do propose to install seasonal crossings with abutments that could extend into the flowing water of secondary channels. To ensure that mineral extraction and associated activities such as the installation of seasonal crossings within an environmentally sensitive habitat area as precluded by Coastal Act Sections 30233(a)(6) and 30240 does not occur, Special Condition No. 3.b would require that excavation not occur within the actual wetted channel, where sensitive salmonid species could be present, and (2) Special condition 8(c) prohibits any portion of the seasonal crossing abutments from extending into the wetted channel.

In addition, the staff recommendation includes special conditions designed to avoid significant adverse impacts to coastal water quality consistent with Section 30231 of the Coastal Act. Special Condition No. 2(A)(7) requires that a runoff control plan be reviewed and approved by the Executive Director as part of the annual final gravel extraction plan ensuring that mining equipment be maintained and operated in such a manner so as not to allow for release of petroleum products into the river, that spill clean-up materials be available on the worksite, and that operators and sub-contractors undergo spill contingency training. Special Condition No. 3 requires the applicant to perform the mining project on the exposed gravel bar, to avoid in-water activities that might result in sedimentation of the river. Special Condition No. 5 requires that all materials be promptly removed from the river after the cessation of mining and prior to the start of the rainy season. Special Condition No. 7 prohibits placing any material into the river during gravel extraction activities.

Furthermore, Special Condition No. 8 will ensure that any truck crossings of the channel installed by the applicants will not block passage down the river. The condition requires that any proposed seasonal crossing of the low flow or secondary channels that can be expected to maintain flow year round shall be of the railroad flatcar variety rather than culverted fill crossings. The condition also requires that the flatcar crossing be installed in such a manner that a minimum three-foot vertical clearance is maintained above the surface of the water. Canoes and kayaks would be able to pass through such a crossing. The condition is necessary to achieve consistency with Coastal Act Section 30210, which requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. As conditioned, the project would not significantly affect the fishermen, canoeists or other recreational boaters.

As conditioned, staff believes that the proposed project is fully consistent with the Coastal Act.

The Motion to adopt the Staff Recommendation of Approval with Conditions is found on page 7.

STAFF NOTES:

1. **Standard of Review**

The proposed project is located in the Commission's retained jurisdiction. Humboldt County 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.

2. **Commission Action Necessary**

Unless the timeline to act is extended by the applicant, the Commission must act on the application at the September 9, 2004 meeting to meet the requirements of the Permit Streamlining Act.

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. 1-04-011 pursuant to the staff recommendation.

STAFF RECOMMENDATION OF APPROVAL:

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

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment.

II. STANDARD CONDITIONS: See Attachment A.

III. SPECIAL CONDITIONS:

1. State Lands Commission Review

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director, a written determination from the State Lands Commission that:

a. No State lands are involved in the development; or

b. State lands are involved in the development and all permits required by the State Lands Commission have been obtained; or

c. State lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.

2. Annual Gravel Extraction Plan

A. **PRIOR TO THE START OF EACH YEAR'S GRAVEL EXTRACTION OPERATIONS**, the applicant shall submit, for the review and written approval of the Executive Director, a final gravel extraction plan for that gravel extraction season consistent with the terms and conditions of this permit and that contains the following:

1. A gravel extraction plan of the annual gravel extraction operation containing cross-sections, maps, and associated calculations that accurately depict the proposed extraction area, demonstrates that the proposed extraction will be consistent with the extraction limits specified in Special Condition Nos. 3 and 4 below, and is prepared in conformance

with the requirements of the individual permit granted for the project by the U.S. Army Corps of Engineers, San Francisco District;

2. A pre-extraction vertical rather than oblique aerial photo of the site taken during the spring of the year of mining at a scale of 1:6000 and upon which the proposed extraction activities have been diagrammed;

3. A botanical survey prepared by a qualified biologist with experience in riparian and wetland vegetation mapping, for the review and approval of the Executive Director, that maps all vegetation found in potential extraction areas of the site and highlights the location and extent of all vegetated areas containing woody riparian vegetation that is either (i) part of a contiguous riparian vegetation complex 1/16-of-an-acre or larger or (ii) one-inch-in-diameter at breast height (DBH) or greater. If the areas proposed for extraction are devoid of vegetation, the applicant may substitute the submittal of photographs (including aerial) that are sufficient in the opinion of the Executive Director to demonstrate that no vegetation exists in the proposed extraction areas in lieu of the botanical survey;

4. A copy of the gravel extraction plan recommended by the County of Humboldt Extraction Review Team (CHERT), unless review by CHERT is not required by the County, and evidence that the final gravel extraction plan is consistent with the recommendations of the CHERT as well as consistent with all standard and special conditions of this permit;

5. A post-extraction survey of the prior year's mining activities (if any) conducted following cessation of extraction and before alteration of the extraction area by flow following fall rains, that includes the amount and dimension of material excavated from each area mined and is prepared in conformance with the requirements of the individual permit granted for the project by the U.S. Army Corps of Engineers, San Francisco District;

6. The results of biological monitoring report data required by the individual permit granted for the project by the U.S. Army Corps of Engineers, San Francisco District;

7. A plan for run-off control to avoid significant adverse impacts on coastal resources. The runoff control plan shall include, at a minimum, the following components;

   (a) The erosion control, run-off, spill prevention and response plan shall demonstrate that:

(1) Run-off from the gravel mining extraction and stockpiling sites shall not increase sedimentation in coastal waters;

(2) Run-off from the gravel mining extraction and stockpiling sites shall not result in pollutants entering coastal waters;

(3) Best Management Practices (BMPs) shall be used to prevent entry of polluted stormwater runoff into coastal waters during the transportation and storage of excavated materials, including but not limited to:

(4) A suite of the following temporary erosion and runoff control measures, as described in detail within in the "California Storm Water Best Management Commercial-Industrial and Construction Activity Handbooks, developed by Camp, Dresser & McKee, *et al.* for the Storm Water Quality Task Force, shall be used during mining: *Spill Prevention and Control* (CA12), *Vehicle and Equipment Fueling* (CA31), *Vehicle and Equipment Maintenance* (CA32), *Employee / Subcontractor Training* (CA40), and Dust Control (ESC21);

(2) A narrative report describing all temporary runoff control measures to be used during mining;

(3) A site plan showing the location of all temporary runoff control measures; and

(4) A schedule for installation and removal of the temporary runoff control measures.

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

3. Extraction Limitations

Extraction of material shall be subject to the following limitations:

a. Consistent with the proposed project description, the permittee shall extract no more than 150,000 cubic yards of gravel from the site;

b. The permittee shall only extract material by secondary and mid-channel skims, narrow skims, dry trenching, horseshoe-shaped deep skims, or alcove extractions in the manner described in the NOAA Fisheries Biological Opinion. If dry trenching methods are used, a barrier such as silt fencing, or a gravel berm shall be constructed and maintained during trenching along the entire length of the excavated area to prevent turbid water from entering the flowing river. After completion of gravel extraction operations, the permittee shall remove the berm in several locations to prevent the creation of fish traps;

c. Excavation shall not occur in the active channel (area where water is flowing unimpeded through the river channel);

d. Extraction quantities shall not exceed (1) the proposed cubic yards per year of gravel extraction, (2) any specific allocation limit required by the Army Corps of Engineers, and (3) the long term average sustained yield based on estimates of mean annual recruitment, as utilized by CHERT;

e. Gravel extraction operations shall not disturb or remove any of the riparian vegetation on the river banks;

f. Gravel extraction operations shall not disturb or remove any of the riparian vegetation on the gravel bar that is either: (1) part of contiguous riparian vegetation complex 1/16 acre or larger, or (2) one-inch-in-diameter at breast height (DBH) or greater;

g. Horseshoe extractions shall occur on the part of the gravel bar that is downstream from the widest point of the bar and must be set back from the low flow channel with vertical offsets;

h. Dry trench extractions shall be (1) limited to excavation on an exposed dry travel bar; (2) either shallow and stay above the water table, or deep and extend below the water table, and (3) breached on the downstream end and connected to the river to prevent fish stranding after excavation when the sediment in the trench has settled;

i. Alcove extractions shall be (1) located on the downstream end of gravel bars where naturally occurring alcoves form and provide refuge for salmonids; (2) regularly shaped or irregularly shaped to avoid riparian vegetation; (3) open to the low flow channel on the downstream end to prevent fish stranding; and (4) extracted to a depth either above or below the water table; and

j. Any Bar-skimming extractions that are consistent with subsection b above that are proposed adjacent to the low flow channel shall have a minimum skim floor elevation at the elevation of the 35% exceedence flow.

k. The upstream end of the bar (head) shall not be mined or otherwise altered by gravel extraction operations. The minimum head of the bar shall be defined as that portion of the bar that extends from at least the upper third of the bar to the upstream end of the bar that is exposed at summer low flow.

4. Extraction Season

Extraction and all reclamation required by Special Condition No. 5 must be completed by October 15 of each season. The Executive Director may approve an extension of gravel extraction and reclamation activities beyond that date to as late as November 1 if the permittee has submitted a request for an extension in writing, the Executive Director determines that dry weather conditions are forecast for the extension period, and any necessary extensions of time have been granted by the Department of Fish and Game, the U.S. Army Corps of Engineers, and NOAA Fisheries. No extraction or reclamation activities shall occur after October 15 unless the permittee has first received approval of an extension of time in writing from the Executive Director. The permittee must have reclaimed all portions of the seasonal development area except for removal of any authorized seasonal crossings before an extension can be authorized.

5. Seasonal Site Closure

The seasonal development area must be reclaimed before October 15, or by the extended date approved by the Executive Director pursuant to Special Condition No. 4 above. The site must be reclaimed when extraction has been completed. Reclamation includes: (a) filling in depressions created by the mining that are not part of the approved extraction method; (b) grading the excavation site according to prescribed grade; and (c) removing all seasonal crossings and grading out the abutments to conform with surrounding topography and removing all temporary fills from the bar. After October 15, the development area must be reclaimed daily except for the removal of authorized seasonal crossings.

6. Permit Termination Date

The gravel operations authorized by this permit shall terminate on November 1, 2008. Continued gravel operations after that date shall require a new coastal development permit.

7. Resource Protection

The gravel extraction and processing operations shall not disturb or remove any of the established riparian vegetation habitat along the banks of the river, nor any of the riparian vegetation areas on the gravel bar limited by Special Condition No. 3. No new haul roads shall be cut through the habitat. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete, oil or petroleum products, or other organic or earthen material from any gravel extraction or reclamation activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into river waters.

8. Seasonal Crossings

Any proposed crossing of the low flow channel or secondary channels that could be expected to maintain flow year-round shall be subject to the following criteria:

a. The crossing shall be of the railroad flatcar or bridge variety, placed in a manner so as to span the channel with a minimum clearance of three (3) feet above the water surface;

b. Stream channel crossing locations shall be determined on a site-specific basis. Special consideration shall be given to the proposed placement of the channel crossings at riffles and based on findings from CHERT that the location will minimize adverse effects to salmonids;

c. No portion of the abutments shall extend into the wetted channel;

d. The presence of heavy equipment in the wetted low-flow channel shall be minimized by limiting the number of heavy equipment crossings during each crossing installation or removal. A maximum of two crossing per installation or removal is allowed, although one crossing is preferred. Heavy equipment shall not be used in the wetted low-flow channel except for channel crossing installation and removal;

e. Channel crossings shall only be placed after June 30 of each year; and

f. Channel crossing removal shall be completed by October 15 of each year or by the extended date approved by the Executive Director pursuant to Special Condition No. 5 above.

9. Streambed Alteration Agreement

PRIOR TO THE START OF EACH YEAR'S GRAVEL EXTRACTION OPERATIONS, the permittee shall submit a copy of any necessary Section 1603 Streambed Alteration Agreement or other approval required by the Department of Fish and Game for the project for that gravel extraction season which is consistent with all terms and conditions of this permit. The applicant shall inform the Executive Director of any changes to the project required by the Department of Fish and Game. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

10. Army Corps of Engineers Approval

PRIOR TO THE START OF EACH YEAR'S GRAVEL EXTRACTION OPERATIONS, the permittee shall submit a copy of any authorization issued by the U.S. Army Corps of Engineers granting approval for the project for that year's gravel extraction season which is consistent with all terms and conditions of this permit, or evidence that no seasonal authorization is required. The applicant 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 applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

11. Western Snowy Plover

A. If gravel extraction commences before September 15, gravel extraction operations shall occur at least 1,000 feet from active plover areas. Except as specified below, daily plover surveys by an USFWS approved biologist shall be conducted prior to commencement of daily on-site activities and continue consistent with subsections A(1)-A(3) below:

   1. If an active plover nest is within the area of planned operations or a 1,000 foot buffer area, activities within 1,000 feet of the nest shall be delayed until the nest hatches and the adult and chicks have vacated the area of concern.

   2. Extraction activities within 1,000 feet of any active plover nest without daily surveys may only occur if, three consecutive days of plover surveys conducted by an approved biologist are completed within the 1,000 foot buffer area and the area of operations with no detections of plovers or nests.

3. If 3 consecutive days of no plover detections within the area of operations and the 1,000 foot buffer area cannot be documented, daily surveys shall be performed by an approved biologist and with gravel extraction operations shall occur at least 1,000-feet from any active plover nest.

B. All pre-extraction activities conducted in suitable nesting habitat prior to August 22 of each year shall be preceded by plover surveys completed each day pre-extraction activities are planned to occur. The surveys shall be completed by a biologist approved by the USFWS prior to daily initiation of any pre-operational activities (i.e. topographic surveys). In instances where work must be completed within 1,000 feet of a nest found during pre-operational surveys, the permittee shall adhere to the procedures identified by the approved biologist to avoid potential take of plover adults, juveniles, chicks, and eggs, and shall modify or halt any activity the approved biologist identifies as adversely affecting the plovers. Other surveys (i.e. hydrologic and biological resources) not directly conducted in suitable habitat, but needing access through or near suitable habitat, may be conducted without intensive plover surveys so long as the USFWS is consulted first and the surveys are conducted according to the procedures for working in or near suitable plover habitat areas identified by USFWS.

C. Vehicle use in suitable plover habitat shall be minimized to the maximum extent feasible during the plover nesting season prior to September 15.

1. Vehicle use in suitable plover habitat on the gravel bars shall be restricted to 10 mph, unless on a haul road, where speeds shall be restricted to 30 mph. The first three vehicle trips on access/haul roads in suitable habitat each day shall not exceed 10 mph.

2. Vehicle use in suitable habitat associated with gravel extraction operations shall be restricted to the daytime, between 0.5 hours before sunrise and 0.5 hours past sunset.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Site Description

The applicant proposes to seasonally remove up to 150,000 cubic yards of river run sand and gravel per year over a five year period from the Hauck/Hansen gravel bar along the east side of the lower Eel River, in the Alton area, approximately three miles south of

Fortuna in Humboldt County. The development is located off of Fowler Lane approximately one-half mile west of Highway 101 (See Exhibits 1-2).

The proposed gravel extraction would occur in the upper half of the Hauck/Hansen gravel bar, which extends from a point just downstream of the confluence of the Van Duzen and Eel Rivers to a point several hundred yards downstream. A separate operator currently owns and mines the portion of the bar just downstream from Eureka Sand and Gravel.

The gravel extraction and processing operation is located on four separate parcels that stretch along approximately 4,000 lineal feet of the river (See Exhibit 3). The western boundary of the property is defined by the center-line of the main channel of the river. The parcel extends easterly from the center of the channel across the gravel bar, which is crossed by various secondary overflow channels, some of which are typically dry at the peak of summer.

At the end of the eastern most overflow channel, a bank rises steeply 10 to 15 feet, to a terrace that extends eastward approximately 300 feet to the Sandy Prairie Levee, a flood control improvement installed by the U.S. Army Corps of Engineers after the disastrous 1964 floods on the Eel River. This terrace area west of the levee is covered by riparian habitat and pasture land. The applicant's processing operation is located East of the levee. This operation includes gravel stockpiles, a portable office, a portable concrete batch plant, aggregate processor, concrete walled diesel fuel tank enclosure, and truck weighing scales. East of the Sandy Prairie Levee, the terrace area extends another 2,000 feet to Sandy Prairie Road. This area to the east of the levee is devoted to agricultural pasture land with a barn complex located at the extreme eastern edge of the parcel.

The gravel extraction areas on the bar are generally not visible from Highway 101, the principal public road in the area. Parts of the existing processing plant (equipment towers) are remotely visible. The proposed project would not modify the processing plant.

The Humboldt County zoning for the property includes an archaeological combining zone, indicating the area is considered to have the potential for archaeological resources. However, no known archaeological resources exist at the site. Much of the terrace land along this area has been subject to disturbance as agricultural lands and has been inundated during major flood events. Areas of gravel bars, within the bank full channel, are generally not considered conducive to the existence or preservation of archaeological sites, due to the high incidence of inundation and fluvial reworking.

The entire property is located within the coastal zone and the western-most approximately two-thirds of the parcel lies within the Commission's retained jurisdictional area. The boundary between the Commission's coastal development permit jurisdiction and that of the County runs generally north-south, just east of the Sandy

Prairie Levee. Therefore, all of the gravel extraction activities and proposed summer gravel truck crossings are within the Commission's jurisdiction and are the subject of Coastal Development Permit No. 1-04-011.

The Eel River and its tributaries are ranked among the most significant anadromous fisheries in Northern California. Chinook salmon, coho salmon and steelhead trout are among the most important species with regard to commercial and sport fisheries. The project area and the lower Eel River are mainly utilized by the anadromous fish as a migration route to and from the upstream spawning grounds. In addition, the National Marine Fisheries Service (NOAA Fisheries) indicates that the lower Eel River supports summer rearing for juvenile salmonids, especially steelhead yearlings and fall Chinook sub-yearlings, holding areas for adult summer steelhead as well as spawning and nursery habitat for marine fishes and invertebrates.

The riverine habitat of the river channels on the site (37 acres) and the occasional ponds that form under summer low water conditions provide habitat for invertebrates, fish, amphibians such as frogs and salamanders, invertebrate-eating birds and various mammals including river otters and mink and other mammals that come to the river to forage (such as deer and raccoon). The exposed cobble (275 acres) in the gravel bars adjacent to the low-flow channels provides roosting habitats for two avian species, killdeer (Charadrius vociferus) and western snowy plover (Charadrius alexandrinus nivosus), but otherwise represents one of the sparsest habitats in terms of wildlife diversity and numbers.

North Coast riparian scrub habitat occurs on "islands" between the low flow channels and is the most extensive plant community at the project site occupying a total of approximately 93 acres. Portions of this habitat are inundated every winter during high river flows. The vegetation growing within the North Coast riparian scrub habitat is dominated by coyote brush (*Baccharis pilularis*), which forms a dense shrub layer in some areas. The understory is comprised of weedy annual grasses and forbs. Only a sparse covering of small trees is found in the north coast riparian scrub communities (5%-25%), including black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) and willows (*Salix* sp.). The riparian scrub habitat of Sandy Prairie supports a variety of wildlife species, including a number of small mammals such as raccoon (Procyon lotor), striped skunk (Mephitis mephitis), gray fox (Urocyon cinereoargenteus), rodents and rabbits, and many bird species that use the foraging, nesting and cover.

The most important of the habitat types found at Sandy Prairie is the North Coast black cottonwood forest. A total of approximately 35 acres of this habitat is found within the project area on an island within the bank full channel. Approximately 100 acres is found on the west (left) bank terrace adjacent to the river and is outside of the extraction area. This habitat type is a broad-leaved, winter deciduous forest dominated by black cottonwood with willow and red alder (*Alnus rubra*). The forest has a dense canopy as

well as a dense shrub layer and herbaceous understory. The stands of North Coast black cottonwood forest on the applicant's property range back to 20 to 25 years old, becoming established following major flooding of the Eel River that occurred in 1964. The cottonwood forest represents the most structurally complex habitat on Sandy Prairie, which in turn supports a higher number and diversity of wildlife species than the other habitats. The North Coast black cottonwood forest provides valuable foraging, breeding, roosting, and shelter habitat for a wide variety of wildlife species, including at least nine bird species, eight mammalian species, two amphibian species, and one reptile species.

In general, the riparian vegetation lining the lower Eel River is perhaps the single-most important element for the natural environment in the area. The riparian habitat provides habitat for most of the birds and mammals in the project area. The presence of two different kinds of riparian habitat, the North Coast Scrub and the North Coast black cottonwood forest, provide habitat for a greater number of wildlife species than a more uniform and simple habitat structure would.

The riparian zone along the river provides migration routes for wildlife. Over 200 different species of birds and 40 different species of mammals have been observed in the Eel River Delta, most of which utilize portions of the riparian corridor. In addition to its habitat value, the riparian corridor also provides water quality protection, stream bank stabilization through root penetration, and flood protection.

The project site is used by federally listed threatened and endangered species including coho salmon (Oncorhynchus kisutch), Chinook salmon (Oncorhynchus tshawytscha), steelhead trout (Oncorhynchus mykiss), and the western snowy plover (Charadrius alexandrinus nivosus). The coho was listed by the federal government as a "threatened species" along the northern California and southern Oregon coastlines in May 1997 with critical habitat designated in May 1999. Chinook salmon was federally listed as "threatened" in September 1999 with critical habitat designated in February, 2000. Most recently, the steelhead trout was listed as "threatened" in June, 2000. In 1993, the western snowy plover became a federally listed "threatened" species. Though originally thought to primarily inhabit open beach strand environments, plovers have also been observed roosting and nesting on gravel bars on the lower Eel River. The plover sitings on the Eel River have been in the months of April through early September, during the nesting season. The plovers establish their nests on the open gravel bars rather than in trees.

The Southern Oregon – Northern California Coasts Evolutionarily Significant Unit coho is currently listed as a threatened species in areas between Punta Gorda and the California-Oregon border under the California Endangered Species Act (CESA). Other fish species in the river that are listed by the California Department of Fish and Game as "species of special concern" include coastal cutthroat trout (Oncorhynchus clarki), Pacific lamprey (Lampetra tridentata), and Green sturgeon (Acipenser medirostris).

Special status species are those legally protected by state or federal endangered species laws, and those under consideration for such protection or those of concern to state or federal resource agencies. Even though no special status species apart from the fish species mentioned above have been found at the site, the black cottonwood riparian forest areas at the site offer suitable habitat for a state listed endangered species, the willow flycatcher (Empidonax traillii), and four "species of special concern:" the black-shouldered kite (Elanus caeruleus), Cooper's hawk (Accipiter cooperii), yellow warbler (Dendroica petechia), and yellow-breasted chat (Icteria virens).

The applicant has been undertaking gravel extraction in the proposed area under a previously approved Coastal Development Permit (CDP 1-96-53), approved by the Commission on August 14, 1997; and most recently under Coastal Development Permit Nos. 1-02-022 and CDP 1-02-064. CDP 1-02-064 terminated on November 1, 2003.

B. Detailed Project Description

The applicant proposes to seasonally extract up to a maximum of 150,000 cubic yards of sand and gravel per year over a five-year period from the Hauck bar on the lower Eel River and the lowermost Van Duzen River. The entire bankfull channel area may be subject to extraction depending upon the particular hydraulic dynamics existing at the site (See Exhibit 4). In past extraction seasons, the Hauck gravel bar has had two main extraction areas. One area is located on the northern Van Duzen River delta. The other potential extraction area is located in the middle of the bankfull channel and is bordered on the east by the main channel and on the west by a secondary, or overflow channel that varies in location depending on winter flows and annual recruitment and scour.

To access areas of the bar, the applicant is also seeking authorization to construct seasonal crossings over secondary or overflow channels of the Eel River (See Exhibit 6). As proposed, such crossings would consist of gravel fills placed in the channel or railroad car bridges. The gravel fill for the culverted crossings would be scrapped from surrounding areas. Culverts would be installed in those gravel fill crossings that could be expected to contain water during the summer season. At the end of the extraction season, the fill crossings would be removed by moving culverts off the bar and the bar in vicinity of the bridge would be regarded to reestablish preexisting contours. The railroad car bridge consists of 60-foot-long railroad flat cars placed over the channels with gravel abutments scraped from surrounding areas.

The applicant is seeking authorization to use several different kinds of extraction methods. The annual mining plan that would be prepared prior to the start of mining each year would use one or more of the following methods:

Alcove extractions

Alcove extractions are generally located at the down stream end of point or side channel bars where naturally occurring features form, providing velocity refuge for fish during high flows and thermal refuge for fish during summer base flow. Alcove extractions are irregularly shaped to avoid disturbance to riparian vegetation and are open to the low-flow channel at the downstream end to avoid stranding. Alcoves, which may be extracted to depths above or below the water table, are typically small in area and volume, relative to other extraction methods.

Secondary and Mid-Channel Skims

Skimming of gravel may occur adjacent to secondary, or overflow channels on the Hauck bar or in more interior portions of Hauck bar away from the low-flow channel (See Exhibit 5). These channels are dry during the extraction period and provide an extraction opportunity that is removed from the low flow channel while avoiding higher elevation portions of the bar. A minimum vertical offset of one foot from the secondary channel thalweg will be maintained to allow for fish passage during higher winter flows when the channel is inundated. Finished skim floors would be left in a free draining condition and slope either toward the low-flow channel or downstream. Furthermore, extraction would not intrude into the upper portion of the secondary channel where the elevation control exists. In other words the extraction along secondary channels would not increase the frequency at which flows overtop the upstream control and begin flowing into the channel. In addition to these measures, the overall width of the skim would not exceed one-half of the exposed bar width as measured at the widest point of the bar. The exposed bar surface is that area subject to annual flow inundation and active sediment transport and replenishment cycles, lacking transitional vegetation colonization, grasses and shrubs. The exposed bar may contain sparse patches or widely scattered individual woody plants.

Narrow Skims

Where skimming is proposed adjacent to the low-flow channel, skim widths would be no greater than one-half the exposed bar width as described above. The narrow skims would follow the shape of the bar feature and trend in the general direction of stream flow (See Exhibit 5). These skims would maintain a vertical offset corresponding to the discharge at 35% exceedence level, or 500 and 3,800 cubic feet per second (cfs) for the Van Duzen and Eel rivers, respectively. Finished skims would be free draining and slope either toward the low-flow channel or downstream. Furthermore, these skims would avoid the head of the bar, defined as the upstream one-third of the exposed bar surface. This buffer may be decreased on a case-by-case basis provided the extraction area narrows, tapering smoothly to a point and remains below the upstream crossover riffle. For skims along the Van Duzen River low-flow channel, widths would be not greater than 90 feet as measured at the top of the cut and perpendicular to the channel.

Horseshoe Extractions

This extraction technique involves removing material from the downstream interior portion of a bar, leaving a horizontal and vertical buffer along the low-flow channel. The horizontal buffer provides confinement of low to moderate flows. Horseshoe extractions would avoid intersecting secondary channels and would not intrude into the head of the bar buffer as described above. Extraction slopes on the sidewalls would be at least 6:1 to minimize head cutting. Use of this extraction type is anticipated to be limited, perhaps occurring near the Van Duzen confluence to promote adult migration, should conditions be suitable for this type of design.

Trenching

Excavation for a trench may occur at the Van Duzen River confluence. Excavation would be performed in the desiccated stream channel, although some subsurface flow would likely be present. Trench design would be for the purpose of improving adult salmonid access into the Van Duzen River. Proposed trench designs would be submitted to the Corps and NOAA Fisheries for review and approval. No trenching in the live waters of the channel is proposed.

Gravel is proposed to be extracted using a bulldozer, front-end loader, and dump trucks. The trucks would haul extracted material from the extraction site off the bar via an existing access road to the upland terrace for stockpiling and processing. Processing of the extracted gravel would be performed at the existing processing yard just east of the Sandy Prairie Levee, outside of the Commission's coastal development permit jurisdiction.

Planning for the annual extraction process would begin in April of each year, with the scheduling of a spring photographic series of the river. Once the winter flows recede and stabilize, during late April or early May, the aerial photographic series is taken. Photo coverage includes annual operation area, the bankfull channel, adjacent riparian corridor and project reach limits. The stereoscopic color photographs are utilized as base mapping for the annual extraction activities and monitoring. In the late spring, when the river level drops to a point where gravel deposits become exposed, the operator and consultant conduct a site review of the extraction reach to evaluate extraction potential. Following the site review, the operator's consultant surveys the proposed extraction site(s) and develops the annual extraction plans from the topographic data, site review field notes, and photographic information. The extraction designs, consisting of surveyed cross sections of the proposed extraction area(s), surveyed monitoring cross sections, an extraction narrative, extraction plan photographs and volume calculations are submitted to the Corps and the County of Humboldt Extraction Review Team (CHERT) for review. The CHERT and Corps recommendations and conditions are incorporated into the final plan.

After the extraction season, the operator would remove seasonal crossings and grade the affected areas to smooth slopes and fill in depressions. When the operator has completed extraction and site grooming, the Corps and CHERT would conduct a final site review to assess the site for any additional end-of season reclamation and recommend minor grading to ensure site drainage compliant with the approved extraction plan.

Following extraction, site surveys would be conducted to generate comparative sets of monitoring and extraction cross sections depicting pre- and post- extraction topography and the degree of extraction plan compliance. The comparative cross-sections would be utilized for the identification and minimization of short-term effects that can be caused by extraction processes. The cross sections would also be used to calculate extracted aggregate volumes and evaluate replenishment of material in the proceeding year. Aerial photographs of the reach would also be taken, and post-extraction cross section data and biological monitoring information would be submitted to the Corps and CHERT by January 15 of the following winter.

C. Background on Eel River Gravel Mining

Lower Eel River Gravel Extraction Operations

The lower Eel River has been used for gravel extraction since 1911. Currently, six gravel operations are located along an eight-mile stretch of the lower Eel River, and three additional operations are located on the lower reaches of the Van Duzen River, which flows into the Eel River at Alton. The six operations along the Eel River are within the coastal zone. The average annual maximum amount of gravel permitted to be extracted by the gravel mining operations in the lower Eel and Van Duzen Rivers was estimated by the County in the past to be approximately 1,480,000 cubic yards. Average total annual mining prescriptions for the same river reaches as established from mean annual recruitment (MAR) cross-sectional analysis was 577,772 cubic yards for the 1997 through 2002 extraction seasons. Actual average annual extraction was generally much lower, estimated at approximately 365,641 cubic yards for the same 1997-2002 period.

The projects are interrelated in the sense that all of the gravel bars derive their material from the same upstream sediment sources. Brown and Ritter (1972) determined that the Eel River was a "hydraulically-limited" rather than "sediment-limited" river. This means that replenishment is more a factor of the size and duration of winter flows than the production of sediment in the watershed. This determination was based on the calculated high amounts of sediment that currently exist in active land sliding occurring in the watershed.

Thus, over-extraction by all of the projects in the lower Eel River combined with multiple low winter flow years can contribute cumulatively to erosion of the bed and banks of the

river, which in turn can erode adjacent riparian and other habitat areas, interfere with fishery resources, undermine bridge supports, and cause other significant adverse impacts. However, as noted in the County Programmatic Environmental Impact Report (PEIR), these same impacts can and have occurred when excessive deposition from high winter flow/duration events occur.

Besides the cumulative impacts resulting from river morphology changes, other significant cumulative adverse impacts resulting from the gravel mining operations can occur. The potential impacts include habitat degradation from the installation of new gravel processing operations and access roads within environmentally sensitive habitat adjacent to the exposed gravel bars, exclusion of recreational use of the river banks, and noise. These types of impacts typically do not occur if the area is properly managed.

1991 Program Environmental Impact Report

Until 1991, there had been very little coordinated review of the combined effects of the various gravel mining operations. Permits granted in the past by the various approving agencies were site specific and granted with little knowledge of the cumulative impacts of gravel mining throughout the lower Eel River.

Gravel mining operations on the Eel River now require the approval of a number of different local, state and federal agencies. The initiation of coordinated review began to change in 1991. That year, Humboldt County considered the granting of a gravel lease from the County owned bar at Worswick. To comply with environmental review requirements under the California Environmental Quality Act (CEQA) the County decided to prepare a Program Environmental Impact Report (PEIR) to describe and analyze the potential environmental effects resulting from the thirteen gravel removal operations in the lower Eel River-Van Duzen watersheds. The document was certified in July 1992 and is intended to be incorporated by reference into future environmental documents prepared for individual gravel extraction projects in the area.

As part of that effort, the County initiated a comprehensive review of the status of County permits for each of the operators to reach a final determination as to which operations were proceeding according to valid vested rights or County permits, and which ones required further review. The Department of Fish and Game also began to insist that the operators demonstrate that they had all necessary County approvals before the Department would issue annual Fish and Game Code Section 1603 Streambed Alteration Agreements.

As a result, information was documented about the significant cumulative adverse impacts of the gravel mining operations. The PEIR showed that little change in the bed occurred over the last 75 years. Annual monitoring as well as analysis of additional sources of historic bed elevations has further substantiated this. A late 1990's comparative study by the U.S. Army Corps of Engineers (Corps) repeating cross sections

at locations that were surveyed in 1969 showed overall little change bed elevations and gradient in the last 30 years.

County of Humboldt Extraction Review Team (CHERT)

The County developed a strategy for controlling the cumulative impacts of the gravel operations on riverbed degradation and bank erosion. At the heart of the strategy is an annual administrative approval of extraction plans that specifies the particular method and location of extraction. The primary mitigation measure recommended by the Program EIR is for the County to prepare a River Management Plan that includes, as a primary component, an annual monitoring program to make annual decisions on where and how much gravel can be removed from the lower Eel and Van Duzen Rivers without adversely affecting the river. As described in the Program EIR, the monitoring program was to be conducted by a consulting firm using funds provided by the gravel operators. The monitoring program would involve periodic biological surveys, creating cross-sections and thalweg profiles, and taking aerial photos and ground photos each year for each gravel operation. This information would be compiled and compared to data from previous years to determine gravel recruitment, changes in channel morphology and impacts on wildlife and fisheries. The implementation of this program is currently occurring through the Corps' permitting process and the Humboldt County Interim Management Program. Much of this information is being collected by consultants for the gravel operators as part of the annual monitoring requirements of permitting and reviewing agencies before the commencement of mining each season.

The County established its "Lower Eel River Interim Monitoring Plan" for use until such time that the River Management Plan is developed. The monitoring plan incorporated and refined the reporting and monitoring requirements that were originally developed in 1991. The Plan also calls for the establishment of a review team to provide the County and other oversight agencies with scientific input on the gravel operations. The Committee that was established is known as 'CHERT' (County of Humboldt Extraction Review Team) and is composed of independent fluvial geomorphologists, biologists, and botanists. CHERT has the authority for the County to review all annual mining plans and prescribe changes to those plans as deemed necessary. CHERT integrates all the monitoring data developed by the gravel operators for geomorphic evaluations of the streambed and also evaluates and recommends practices designed to preserve and enhance vegetation and wildlife habitat.

U.S. Army Corps of Engineers Letter of Permission Procedure

In the fall of 1993, due to an amendment to their Clean Water Act (CWA) regulatory program, the Corps became more involved in regulating gravel extraction operations. Whereas previously, the Corp's regulatory review of many in-stream gravel extraction operations focused mainly on the installation of channel crossings and stockpiling of

material on the river bar, in 1993, the Corps began actively regulating incidental fill related to gravel mining activities themselves. In an effort to streamline the processing of CWA permits for the numerous in-stream gravel operations within Humboldt County, the Corps adopted a Letter of Permission (LOP) procedure for authorizing such projects (LOP 96-1). The LOP was adopted after a series of interagency and public meetings. An applicant for a project covered by the LOP must submit yearly gravel plans and monitoring information to the Corps for approval under the procedure. The Corps incorporated the County's CHERT review process into its LOP procedure.

This year, the applicant has chosen to apply for individual Section 404 permits from the Corps rather than seek CWA authorization for their gravel extraction operations under the LOP.

Federal Endangered Species Act Section 7 Consultations with NOAA Fisheries and USFWS

As with all "federal actions" that might adversely impact rare, threatened, and endangered fish and wildlife, the LOP process and the Corps' review of individual Section 404 permits is also subject to consultations with applicable natural resource trustee agencies as required under Section 7 of the Federal Endangered Species Act (FESA). FESA Section 7 directs all Federal agencies to use their existing authorities to conserve threatened and endangered species, and, in consultation with other federal agencies possessing ecological expertise regarding ecology and habitat requirements for these plants and animals, ensure that their actions do not jeopardize listed species or destroy or adversely modify critical habitat. Section 7 applies to management of Federal lands as well as other Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal permits, licenses, or other actions such as the LOP gravel mining and authorization procedure and the issuance of individual Section 404 permits.

The consultation process primarily consists of the agency undertaking the action of compiling biological assessment data detailing the current status of the fish and wildlife species within the area subject to the federal agency action and a preliminary assessment of the likely effects of the action on those species. This information is then submitted to the particular resource agencies assigned the responsibility for ensuring protection to the various FESA-listed species. The National Marine Fisheries Service (NOAA Fisheries) prepares and issues a Biological Opinion regarding impacts of gravel extraction to the listed salmonid species. The western snowy plover, a listed threatened species, also requires consultation with the U.S. Fish and Wildlife Service (USFWS). Based on the findings of the NOAA Fisheries review, mitigation measures required by the FESA are incorporated into extraction requirements. As more information is gathered on the species and the direct, indirect, and cumulative effects on their members and habitat, these mitigation requirements are revised as necessary.

NOAA Fisheries originally issued a Biological Opinion (Opinion) for the Letter of Permission Procedure for Gravel Mining and Excavation Activities within Humboldt County, California (LOP 96-1) in July, 1997. The LOP 96-1 was authorized for a five-year term, expiring in August 2001. Several Endangered Species Act listing actions occurred subsequent to the issuance of NOAA Fisheries' 1997 Opinion including designation of critical habitat for Southern Oregon/Northern California Coastal (SONCC) coho salmon, listing of California Coastal (CC) Chinook salmon as threatened and designation of critical habitat, and listing of Northern California (NC) steelhead as threatened. As a result of the listing of additional salmonid species and designation of critical habitat in 1999, the Corps requested reinitiation of Section 7 ESA consultation and NOAA Fisheries prepared a revised Biological Opinion (May 1, 2000). In June, 2001, the Corps extended the expiration date of LOP 96-1 to October 31, 2001 and requested an amendment to the duration of the 2000 Biological Opinion which analyzed the extended duration of the proposed gravel extraction activities.

NOAA Fisheries began working with the Corps, other agencies, and Humboldt County gravel operators and their consultants during the winter of 2001-2002 on a replacement LOP procedure anticipated to be in place for the 2002-2007 extraction seasons (originally enumerated as LOP 2002-1). A draft LOP 2002-1 was circulated for public comment in May, 2002 at which time it became apparent to involved agencies that several issues could not be resolved prior to the 2002 mining season. As a result, the Corps decided to further extend LOP 96-1 through December 31, 2002 to provide an authorization process for the 2002 gravel mining season and again requested that NOAA Fisheries amend the 2000 Biological Opinion to analyze the extended duration of LOP 96-1.

On November 26, 2002, the Corps issued a public notice announcing re-initiation of its efforts for authorization of a new Humboldt County Letter of Permission process, re-enumerated as LOP-2003-1. Concurrent with the announcement, the Corps again requested a FESA Section 7 consultation from NOAA Fisheries.

On June 11, 2003, NOAA Fisheries issued a draft Biological Opinion for LOP-2003-1. The Draft Opinion incorporated newly available information that was not previously analyzed in the 2000 Biological Opinion and its subsequent revisions issued for the LOP's 2001 and 2002 administrative extensions. In addition, the Draft Opinion further details the potential adverse direct, indirect, and cumulative effects of gravel mining and extraction activities on listed salmonid species that might occur under the proposed five-year duration of LOP 2003-1.

In the Draft Opinion, NOAA Fisheries concluded that authorization of LOP 2003-1 procedures as proposed by the Corps for gravel mining during the 2003-2007 seasons, "is likely to jeopardize the continued existence of threatened SONCC (Southern Oregon/Northern California) coho salmon, NC (Northern California) steelhead, and threatened CC (Central California) Chinook salmon, and is likely to adversely modify

SONCC coho salmon critical habitat." As required by the FESA, accompanying the "jeopardy opinion" were "reasonable and prudent alternatives" (RPAs) to the proposed LOP protocols. If followed, NOAA Fisheries believe gravel mining pursuant to LOP-2003-1 would avoid the likelihood of jeopardizing the continued existence of listed species or destruction or adverse modification of critical habitat. With such program alterations in place, NOAA Fisheries could issue an "incidental take statement" that would allow the Corps to undertake the LOP process without being found in conflict with the provisions of the FESA.

However, in subsequent meetings with the mining applicants, the public, and with Corps, NOAA Fisheries, USFWS, and other permitting agency staff, several of the mining applicants expressed their concerns over the possible future difficulties that might be encountered should the five-year LOP procedure be authorized under a jeopardy opinion. Additional concerns were voiced as to whether NOAA Fisheries had adequately considered and analyzed the information collated over the years by the miners on the effects of FESA-listed fish species. As a result, the Corps decided to extend once again LOP 96-1 through December 31, 2003 to provide an authorization process for the 2003 gravel mining season and again requested that NOAA Fisheries amend the 2000 Biological Opinion to analyze the extended duration of LOP 96-1. In addition, the Corp modified the procedures and terms of LOP 96-1 to include the reasonable and prudent alternatives identified within the draft Biological for LOP 2003-1 in the interest of avoiding a jeopardy opinion also being issued for the 2003 extension of LOP 96-1. On August 29, 2003, NOAA Fisheries issued its Biological Opinion on the modified Letter of Permission procedure for gravel mining (modified LOP 96-1). The Biological Opinion concluded that gravel mining under the modified LOP 96-1 procedure for the 2003 mining season was not likely to jeopardize the continued existence of threatened SONCC coho salmon, NC steelhead, and threatened CC Chinook salmon, and is not likely to adversely modify or destroy SONCC coho salmon critical habitat. In addition, NOAA Fisheries issued an accompanying "incidental take statement" subject to three "reasonable and prudent measures" that set certain procedural requirements for the implementation of LOP 96-1, but did not require substantive changes to the limitations on mining contained in modified LOP 96-1.

In the winter of 2003-2004, the Corps issued a public notice announcing once again, re-initiation of its efforts for authorization of a new Humboldt County Letter of Permission process, re-enumerated as LOP-2004-1. Concurrent with the announcement, the Corps again requested a FESA Section 7 consultation from NOAA Fisheries. In addition, the applicant applied for an individual Section 404 permits from the Corps. To comply with the consultation process of the Endangered Species Act, the Corps requested a FESA Section 7 consultation from NOAA Fisheries on this individual Section 404 permit application.

On August 2, 2004, NOAA Fisheries transmitted its completed biological opinion of the applicants project and its effects on Southern Oregon/Northern California Coast (SONCC) coho salmon and its designated critical habitat, California Coast (SONCC) coho salmon and its designated critical habitat, California Coastal (CC) Chinook salmon and Northern California (NC) steelhead pursuant to Section 7(a)(2) of the Endangered Species Act (See Exhibit 7). The biological opinion concludes that after reviewing the best available information, it is NOAA Fisheries' biological opinion that the Project, as proposed, is not likely to jeopardize the continued existence of the three salmonid species or result in the destruction or adverse modification of SONCC coho salmon designated critical habitat. NOAA Fisheries also evaluated the proposed project for potential adverse effects to essential fish habitat (EFH) for federally managed fish species. The opinion concludes that the proposed action may adversely affect EFH. However, the opinion states that NOAA Fisheries has no conservation measures to recommend over what is currently proposed. The opinion notes that conservation recommendations provided in past gravel mining consultations have been incorporated into the proposed action.

D. <u>Protection of the Riverine Environment</u>.

The proposed project involves the surface mining extraction of sand and gravel from the Sandy Prairie landform of the lower Eel River using heavy mechanized equipment for grading and dredging operations. Several Coastal Act policies address protection of the portion of the river environment below the ordinary high water mark from the impacts of development such as gravel mining. These policies include Sections 30231 and 30233. Section 30231 applies generally to any development in riverine environments and other kinds of water bodies in the coastal zone. Section 30233 applies to any diking, filling, or dredging project in a river and other coastal waters. Gravel extraction within a river bed is a form of dredging within a wetland.

Section 30231 of the Coastal Act states, in applicable part:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes... shall be maintained and, where feasible restored...*

Section 30233 of the Coastal Act provides as states, 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:

...

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

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...

Section 30107.5 of the Coastal Act defines "environmentally sensitive area" as encompassing:

> *...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

The above policies set forth a number of different limitations on what development projects may be allowed in rivers within the coastal zone. 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 for Dredging and Filling of Coastal Waters

The first test set forth above is that any proposed fill, diking or dredging must be for an allowable purpose as enumerated under Section 30233 of the Coastal Act. The proposed project involves dredging for mineral extraction. Surface mining of gravel aggregate materials is specifically enumerated as a permissible use in the above-cited policy, provided the activity is not undertaken in environmentally sensitive areas; Section

30233(a)(6) allows dredging for mineral extraction, provided the activity is not undertaken in environmentally sensitive areas. Therefore, to the extent that the proposed gravel extraction will avoid environmentally sensitive areas, the proposed project is consistent with the use limitations of Section 30233(a)(6).

The environmentally sensitive habitat on the project site consists of various types including: (1) nesting habitat for the threatened western snowy plover, (2) North Coast riparian scrub habitat occurring on high points within the bank-full channel of the river, (3) North Coast black cottonwood forest occurring on a large island and on the left bank of the river within the project site; and (4) the live waters of the river which is habitat for threatened salmonid species. The proposed mining project would be located in areas that would generally avoid intrusion into these habitat areas and/or be performed at times when sensitive species were not nesting and/or utilizing the site for habitat. Descriptions of the habitats and their use by wildlife are found in the Findings Section C, "Site Description," of this report.

Flowing River Channel as Environmentally Sensitive Habitat

Under Section 30107.5 of the Coastal Act, any area supporting a plant, animal, or habitat is environmentally sensitive if the area meets two main criteria: (1) the plant, animal, or habitat is either rare or of special value because of their unique nature or role in the ecosystem, and (2) the area could be easily disturbed or degraded by human activities and developments.

The water column and river bottom substrate within the year-round low-flow channel of rivers provide habitat for a wide variety of resident and migratory fish and wildlife species at all trophic levels, ranging from aquatic macro-invertebrates to mammals. These perennially-inundated areas within the river meet the first criterion of the definition of environmentally sensitive area because during the time that the proposed mining would be conducted within these riverine areas, the inundated areas of the reach may contain rare or endangered species, namely federal- and state-listed salmonids using this reach as a transit corridor between areas of holding habitat prior to the onset of upstream migration.

The perennially-inundated areas within the river clearly meet the second criterion in that diversion, dewatering, fill, and dredging activities for gravel extraction in the river, such as proposed by the applicant, can quickly disturb and degrade the habitat areas the mining activities come in contact with, at least during the mining activities. In addition, on a more permanent basis long after the initial excavation work is completed, trenching can also destabilize the river channel and easily cause erosional impacts that can degrade the perennially inundated areas within the river. Furthermore, the portions of the riverbed that remain wetted also qualify as environmentally sensitive areas because of their special role as a holding area and transit corridor for migrating threatened salmonids.

The Commission has previously determined in numerous permit actions that such riverine perennial channels are environmentally sensitive areas. The Commission has consistently conditioned permits for development in and near such channels and along riparian woodlands within streams and rivers to avoid disturbances of aquatic resources.

In the most comprehensive sense, the entire area between the banks of the river could be considered an environmentally sensitive area, at least during portions of the year when covered by higher flows. However, during the summer dry season when river waters are confined to the definable low-flow channels, the dry exposed areas within the stream banks become inaccessible to fish and other aquatic life forms. In recognition of this situation and the resource-dependent nature of sand and gravel mining, for purposes of considering the proposed gravel mining's consistency with Section 30233(a)(6) and 30240, the Commission has generally applied the environmentally sensitive area designation only to the portions of the river containing stream flow when mining would occur during the summer-early fall dry season.

Based on discussions with NOAA Fisheries, gravel mining activities undertaken directly within the flowing river channels in the form of trenching have the potential to have both direct and indirect significantly adverse impacts on these species through: (a) water quality associated with increased turbidity and sedimentation: (b) organism injuries and or deaths from contact with excavation equipment; (c) organism injuries, deaths, and changes in behavior due to water flow diversions; (d) decreased invertebrate production associated with removal and/or degradation of habitat substrate; and (e) increased susceptibility to predation due to tendency of migratory fish to concentrate in trench excavations that afford little or no cover from predators and poachers.

The Commission notes that the applicant's current application does not specifically include wet-trenching extraction, or any other extraction within wetted channel. However, the applicants do propose to install seasonal crossings with abutments that could extend into flowing water of secondary channels.

To ensure that mineral extraction and associated activities such as the installation of seasonal crossings within an environmentally sensitive habitat area as precluded by Coastal Act Sections 30233(a)(6) and 30240 does not occur, the Commission attaches (1) Special Condition No. 3.b which requires that excavation not occur within the actual wetted channel, where sensitive salmonid species could be present, and (2) Special condition 8(c) which prohibits any portion of the seasonal crossing abutments from extending into the wetted channel.

Riparian Vegetation as Environmentally Sensitive Habitat

The Coastal Commission has previously determined in numerous permit actions that most forms of riparian vegetation are environmentally sensitive. The Commission has

consistently conditioned permits for development near riparian woodlands along streams and rivers to avoid disturbances of riparian areas where mature vegetation exists.

Some of the riparian coastal scrub-shrub vegetation on the gravel bar is inundated during high flows and is often uprooted and scoured by river flows. The hydrodynamics of the river can cause the channel itself to migrate over time, which in time can eliminate more stands of riparian scrub vegetation from one year to the next. As a result, much of the vegetation is young, having only grown a season or several seasons since the time of the last inundation severe enough to remove the plants previously growing there.

Given that some of this riparian vegetation is very new and underdeveloped, it may not provide habitat values sufficient enough for the areas to be characterized as environmentally sensitive.

Under Section 30107.5 of the Coastal Act, any area supporting a plant, animal, or habitat is environmentally sensitive if the area meets two main criteria: (1) the plant, animal, or habitat is either rare or of special value because of their unique nature or role in the ecosystem, and (2) the area could be easily disturbed or degraded by human activities and developments. The non-persistent scrub-shrub riparian areas clearly meet the second criterion in that the gravel extraction materials on the river bar, such as proposed by the applicant, can quickly obliterate any of this habitat the extraction activities comes in contact with. With regard to the first criterion, the riparian scrub-shrub vegetation is not rare, as it usually does not contain rare or endangered species and can be found extensively on the many gravel bars along North Coast waterways. However, such vegetation can be considered especially valuable and therefore also meet the second criterion. In general, riparian vegetation must grow to a certain size and mass before it can begin to contribute significantly to the river ecosystem. A willow sprig growing in isolation that has just taken root and only rises a few feet out of the ground cannot provide much forage area, nesting opportunities, or much screening from predators for birds and other animals who choose to use it. As the sprig grows taller, however, and as more riparian plants colonize the surrounding area, the sprig, and the plants now growing in association with it, can start to provide forage, nesting, and cover opportunities that make it especially valuable habitat and therefore an environmentally sensitive area.

There is no clear-cut answer to the question of just when in the growth and development of riparian scrub-shrub vegetation it reaches the point where it can be considered environmentally sensitive. In discussions with California Department of Fish and Game staff, Commission staff has learned that no specific plant height and diameter, coverage, age, etc. thresholds exist for riparian vegetation that define when habitat value sufficient to categorize the vegetation as environmentally sensitive. Part of the reason for this uncertainty is that there can be tremendous variability in the values of riparian vegetation of the same size from one location to the next depending on such factors as surrounding habitat and vegetation, surrounding land uses, river configuration, etc.

One existing standard that may provide useful guidance for determining when riparian scrub-shrub vegetation reaches the point of becoming environmentally sensitive is a standard imposed in the Corps LOP Procedure. One restriction of the Corps LOP for gravel mining on the Eel River concerns riparian vegetation. The restriction states as follows:

> All riparian and woody vegetation and wetlands must be avoided to the maximum extent possible. Any riparian vegetation or wetland that is to be disturbed must be clearly identified by mapping. Woody vegetation that is part of a contiguous 1/8-acre complex or is at least two inches in diameter breast height (DBH) must be mitigated if it is disturbed. Impacts to other woody vegetation must be described and a summary submitted to the Corps and CHERT with the gravel extraction plans. These impacts may require mitigation at the discretion of the Corps...

The above-referenced Corp LOP restriction establishes a threshold for when impacts to riparian vegetation must be mitigated. The threshold is reached any time the riparian area that would be disturbed contains woody vegetation that is part of a contiguous 1/8-acre complex or is at least two inches (2") diameter at breast height.

The Corps administers its permit program under Section 404 of the Clean Water Act (and the related Section 10 of the Rivers and Harbors Act of 1899). This administration does not limit mineral extraction in wetlands and open coastal waters to the same extent that Coastal Act Section 30233 does. As previously stated, Section 30233(a)(6) only allows the dredge or fill of wetlands and open coastal waters for mineral extraction if the mineral extraction occurs outside of environmentally sensitive areas. Although the Corps can allow mineral extraction in an environmentally sensitive area so long as mitigation is provided, the Commission cannot allow mineral extraction within an environmentally sensitive area at all. Thus, the Corp's purpose in determining when mitigation should be required is not the same as determining when riparian vegetation reaches a level of growth and development such that it should be considered environmentally sensitive.

By requiring mitigation whenever a riparian vegetation area that is to be disturbed contains woody vegetation that is part of a contiguous 1/8-acre complex or is at least 2 inches DBH, the Corp's LOP indicates that vegetation at this level already is providing habitat value. Otherwise, if the vegetation were not providing habitat value there would be no need for mitigation. Therefore, the Commission finds that the riparian vegetation must reach a form of growth and development where it provides important habitat values at some point before the Corps threshold is reached. Acknowledgement of this fact is contained in the rest of the Corps standards which indicate that impacts to other woody vegetation not rising to the threshold level must also be described and submitted to the Corps and may require mitigation at the discretion of the Corps.

In discussions with CDFG staff, Commission staff has discerned that under average growing conditions, a willow tree that is one inch (1") in DBH or part of a contiguous 1/16-acre complex would likely have survived for one growing season. Given that riparian vegetation is only becoming established during the first growing season, the vegetation may not provide significant habitat value at this point. On the other hand, vegetation that has survived more than one growing season would be established and likely to be used by wildlife. Therefore, the Commission finds that the riparian scrub-shrub vegetation should be characterized as an environmentally sensitive area when the vegetation contains woody vegetation that is part of a contiguous complex of 1/16-acre or larger or is one-inch or larger in DBH. In addition, by restricting extraction in vegetated areas that are essentially half as developed as the riparian vegetation for which mitigation is indicated under the Corps' LOP, the Commission will minimize the chances that any riparian vegetation providing significant habitat value will be disturbed by the proposed gravel extraction.

To ensure that mineral extraction proposed by the applicant each year is not performed within an area of environmentally sensitive riparian vegetation, thereby remaining an allowable use under Coastal Act Section 30233(a)(6), the Commission attaches Special Condition Nos. 3.e & f, which further state that gravel extraction operations shall not disturb or remove any area of riparian vegetation growing on the river banks or on the gravel bar meeting either the aerial extent or plant girth criteria discussed above. Furthermore, the Commission attaches Special Condition No. 2 which requires the applicant to submit annually for the review and approval of the Executive Director a final gravel extraction plan for the gravel extraction season that is consistent with the extraction limitations of Special Condition No. 3, which include the aforementioned limitations on extracting gravel in riparian areas.

Exposed Gravel Bars as Environmentally Sensitive Habitat

Another form of environmentally sensitive areas that can potentially be found on the exposed gravel bars are seasonal nesting sites of the western snowy plover. As noted previously, the western snowy plover is a federally listed threatened species which in the past has been observed nesting on gravel bars of the lower Eel and Van Duzen Rivers during April through early September. The USFWS has overseen surveying on the gravel bars within the Eel River during the April to September breeding season window. Surveys conducted in 2003 indicate that a total of 31 adult plovers (17♂, 14♀) constructed a total of 36 nests along the Eel River gravel bars with 42 resulting chicks hatching out.

As the habitat of rare and endangered species meets the definition of environmentally sensitive areas pursuant to Section 30107.5 of the Coastal Act, the Commission finds that any areas utilized by the western snowy plover during the nesting season when the birds are present constitute environmentally sensitive habitat areas. Therefore, the

Commission attaches Special Condition No. 11 which requires that gravel extraction operations avoid western snowy plover habitat by either not commencing until after the nesting season, or commencing only after a biologist approved by the USFWS has surveyed the site and either found no plover nests, or has found some but will conduct daily surveys to ensure a 1,000-foot buffer area is maintained around the nests that are found. Furthermore, Special Condition No. 11 requires daily surveys prior to pre-extraction activities occurring in suitable habitat and restricts vehicle use to prevent adverse impacts to plovers. This condition is consistent with the recommendations of the USFWS to avoid disturbance of the threatened bird species. The requirements of Special Condition No. 11 will ensure that mineral extractions will not impact Western snowy plover nesting sites during the time of nesting when such areas constitute environmentally sensitive areas.

Conclusion on Use Limitations of Coastal Act Section 30233(a)

Therefore, as conditioned herein, the proposed gravel extraction operation is consistent with the use limitations of Section 30233 of the Coastal Act on dredging in coastal water bodies as the mining operation is for mineral extraction in areas that are not environmentally sensitive, consistent with Section 30233(a)(6).

(2) Feasible Mitigation Measures

The second test set forth by the dredging and fill policy of the Coastal Act is whether feasible mitigation measures have been provided to minimize the adverse environmental impacts of the proposed project.

Depending on the manner in which the gravel operation is conducted, the portions of the proposed project to be conducted below the ordinary high water mark could have four potentially significant adverse effects on the natural environment of the lower Eel River. These impacts include: (a) direct and indirect impacts on fisheries; (b) alteration of the riverbed and increased bank erosion; (c) impacts on environmentally sensitive riparian vegetation; (d) impacts to western snowy plover; and (e) impacts to the water quality of the river. The potential impacts and their mitigation are discussed in the following sections:

(a) Fisheries

As noted previously, the Eel River and its tributaries are ranked among the most significant anadromous fisheries in Northern California and include Coho salmon, Chinook salmon, and steelhead trout, all federally listed threatened species under the federal Endangered Species Act. The project area and the lower Eel River are important for these anadromous fish as a migration route to and from upstream spawning grounds. In addition, the lower Eel River supports summer rearing for

juvenile salmonids, especially steelhead yearlings and fall Chinook sub-yearlings, and holding areas for adult summer steelhead as well as spawning and nursery habitat for marine fishes and invertebrates.

Gravel extraction from river bars can adversely affect fisheries in a number of ways. Poorly designed extractions can alter the river channel or even cause capture of the channel into extraction areas in a manner that can lead to significant downstream erosion of stream banks and greater sedimentation of the river. In addition, NOAA Fisheries also indicates that juvenile and adult salmonid stranding could occur as a result of certain extraction methodologies depending on how the methodology is implemented and the manner in which the extraction area is reclaimed and left following extraction. For example, the various on-bar and secondary channel trenching techniques could result in salmonid stranding once river waters rise following the end of the mining season and then subsequently drop during the following spring. The potential for salmonid stranding is minimized if the trenches are breached on their down-stream ends to provide the fish with a connection back into the river's main channel.

NOAA Fisheries staff has also indicated that gravel mining has the potential to result in elevated turbidity levels and increased sedimentation. Fine sediments can become entrained in runoff from skimmed bar surfaces, as skimming typically exposes finer sediment that would be inundated during lower discharges. According to NOAA Fisheries, increased sedimentation can adversely impact salmonid spawning habitat by filling pores spaces, which decreases hydraulic conductivity of the gravel, thus reducing the supply of oxygenated water to incubating eggs.

Construction and removal of channel crossings and the use of heavy equipment can adversely affect salmonids. Heavy equipment is required to operate in the wetted, low flow channel to construct and remove the crossings, which are typically placed at riffle locations. According to NOAA Fisheries, death or injury of salmon through direct contact with such heavy equipment is likely during installation and removal of the crossing structures In addition, Chinook salmon build redds and spawn in riffles and the redds could be subject to a pulse of fine sediment during removal of the channel crossing in late fall. In addition, the operation of heavy equipment has the potential to result in disturbance to salmonids caused by noise and vibration in the extraction work area. Furthermore, culverted stream crossings can also impact rearing salmon habitat by impeding or altering channel stream flow dynamics.

The impacts of gravel mining operations on sensitive fish species include more than just the direct gravel mining activities within or in proximity to the low flow channel or the individual impacts of a particular gravel mining operation at one site. Often of greater significance are the indirect effects of gravel mining on

physical riverine form together with the cumulative adverse impacts on sensitive fish species from all of the various gravel mining operations occurring along the river. Accurately assessing significant adverse indirect and cumulative impacts of the various gravel mining operations on sensitive fish species and/or their habitat can be a difficult task for any one operator to perform.

An assessment of the significant adverse indirect and cumulative impacts of gravel mining operations permitted by the U.S. Army Corps of Engineers (Corps) along the lower Eel River on sensitive fish species does exist in the form of Biological Opinions issued by National Marine Fisheries Service (NOAA Fisheries). These Biological Opinions are issued as a result of formal consultations between the Corps of Engineers and the NOAA Fisheries pursuant to Section 7 of the Federal Endangered Species Act.

As discussed previously in the "Background on Regulation of Eel River Gravel Mining" Finding, the Corps requested that NOAA Fisheries prepare a biological opinion to analyze the applicant's request for an individual permit under Section 404 for seasonal extraction over the next five years at the project site. NOAA Fisheries issued a Biological Opinion on August 2, 2004.

Based on the biological information collected as part of the FESA Section 7 consultation, NOAA Fisheries staff concludes that the proposed seasonal extraction of gravel over the next five years will not result in more than incidental take of threatened salmonid species and will not jeopardize their continued existence. To ensure that significant adverse impacts to salmonids from exceedance of incidental take of listed species does not occur during authorized mining operations, the Commission incorporates within the standards of Special Condition Nos. 2 and 3 specific elements of the proposed project that have been identified by NOAA Fisheries in the biological opinion as important for minimizing impacts to channel form and function, as well as protecting fish habitat.

As part of its review, NOAA Fisheries reviewed the extraction methods and techniques proposed by the applicant and determined that all of the following methods would not adversely affect channel form and function in a manner that would be likely to jeopardize the continued existence of the sensitive fish species. These methods and techniques include: (a) secondary and mid-channel skims, (b) narrow skims, (c) concentrating on-bar gravel extraction from horseshoe-shaped "deep skims," (d) developing "alcove trenches" within the outboard secondary channels on the lower end of the bars; and (e) longitudinal "dry trenching" down the length of a portion of the bars.

Therefore, to ensure that the mineral extraction proposed by the applicants use these proposed techniques to avoid degradation of the habitat of threatened salmonid species, the Commission includes within the requirements of Special Condition No. 3 (b), a limitation which requires use of only these extraction methods. This requirement will ensure that significant adverse disturbance of fish habitat from use of inappropriate extraction measures will be avoided.

Maintaining a head of the bar buffer, where gravel extraction would be precluded, is intended to provide protection of the natural stream flow steering effect provided by an undisturbed bar. According to the Biological Opinion, head-of-bar buffers reduce the potential for geomorphic changes to the river from sediment extraction. The buffer helps to maintain bar slope and form which in turn helps guide stream flows that are effective at creating and maintaining habitats. Therefore, Special Condition No. 3 precludes mining in the upper one-third of a gravel bar, consistent with the Biological Opinion and Corps permit requirements.

The use of vertical offsets of the gravel extraction area from the low flow channel of the river that exists during the summer mining season will also help minimize sedimentation impacts on the river. The natural entrainment of sediment into river flows in the dry summer and early fall seasons is minimal in comparison with natural entrainment in winter months, when heavy rains entrain large quantities of sediment into river flows. Anadromous fish depend on the natural variation in sedimentation of river flows for spawning, migration, and other life-cycle changes. Artificially introducing large amounts of sediment at times of the year when natural entrainment would be low will adversely affect the anadromous fish as discussed above. Therefore, certain vertical offsets need to be maintained to prevent the sediment in lower skimmed surfaces of the bars from becoming entrained prior the beginning of significant movement of fine bed load material in the river. The general effect of skim floor elevations is that effects associated with sediment inputs are reduced as the elevation of the skim floor increases. The application proposes to set minimum skim floor elevations to correspond to the water surface elevation of the flow that is exceeded 35% of the time in the historic record of daily average flows for rivers in Humboldt County. According to the Biological Opinion, the 35% exceedence flow is the flow where significant movement of fine bed load material begins in the rivers of Humboldt County. A skim floor at the 35% exceedence flow will provide confinement of the low flow channel until the stream is gaining in volume and naturally beginning to transport fine sediment. Therefore, Special Condition No. 3 requires that vertical offsets consisting of either the elevation of the 35% exceedence flow be utilized during skimming extractions located next to the low flow channel.

In addition, gravel mining operations on the river bed need to cease before the rainy season to prevent significant adverse impacts to fisheries, as the runs of the various species of anadromous fish up and down the river increase in the fall with the rise in river water levels and remain at high levels through the early spring. In recent F&GC Section 1600 Streambed Alteration Agreements issued for gravel extraction at the project site, the Department of Fish and Game has limited gravel extraction operations to the dry season of June 1 through October 15 each year, which corresponds to the period when potential impacts to fisheries is lowest. The Department can extend the operations until November 1 if dry weather conditions prevail. The NOAA Fisheries Biological Opinion also envisions completion of gravel mining operations by October 15, with similar extensions to November 1 possible.

Therefore, the Commission attaches Special Condition No. 4 that requires mining and all post-extraction bar grooming work and equipment removal be performed during the summer months and completed by October 15 to ensure no significant disturbance to anadromous fish. The Executive Director may approve an extension of gravel extraction and regrading activities to as late as November 1 if dry weather conditioned are forecasted and the permittee has received all necessary approvals to extend gravel operations over the extension period from the Department of Fish and Game, the U.S. Army Corps of Engineers, and NOAA Fisheries.

The current Biological Opinion also indicates that it is NOAA Fisheries opinion that the proposed gravel mining under the project is not likely to destroy or adversely modify SONCC coho salmon designated critical habitat."

Therefore, the Commission finds that as conditioned, the proposed gravel mining project would not result in significant cumulative adverse impacts on sensitive fish species consistent with the requirements of Sections 30231 and 30233 of the Coastal Act.

(b) River Morphology

As discussed above, a potential major impact of gravel mining operations is degradation of the riverbed and erosion of the riverbanks. Such impacts can occur if the amount of gravel extracted from a particular part of the river over time exceeds the amount of gravel deposited on the site through natural recruitment—the downstream movement of sand and gravel materials. Bed degradation and bank erosion can also result from the manner in which gravel is extracted. For example, if gravel bars are skimmed too close to the low-water surface or are left with a very shallow slope, at higher flow stages the river will tend to spread across the bar, reducing the overall depth of flow and resulting in rapid channel

migration or instigation of a multi-channel "braided" configuration. This is also true of watercourse reaches where aggradation of materials is a problem. Such sites tend to trap gravel that would otherwise move downstream, potentially trapping or impeding fish migration up and down the river.

The applicants propose to extract a maximum of 150,000 cubic yards per year over the next five years. Although this amount is small relative to the overall permitted gravel mining activity along the Eel River (up to 1,480,000 cubic yards annually), extraction without consideration of river morphology concerns could cause bed degradation and riverbank erosion.

As discussed in the previous section, the proposed gravel extraction methods have been proposed to avoid significant adverse impacts to channel form and function. The determination of the NOAA Fisheries biological opinion that the proposed project will not result in more than an incidental take of listed species and will not likely threaten the continued existence of these species is based in part on a finding that the proposed extraction methods will help preserve channel form and minimize bank and bar erosion that would degrade fishery habitat. Special Condition No. 3 requires the use of only these proposed gravel extraction techniques. In addition, the annual gravel extraction plans will be reviewed by CHERT in consultation with NOAA Fisheries and the Corps to ensure that the particular methods proposed in any given year will minimize the chances of degradation of channel form based on conditions that exist at the time. Special Condition No. 2 requires that the annual gravel extraction plan be submitted for the review and approval of the Executive Director and section (A)(4) of that condition requires that the submitted plan be consistent with the recommendations of CHERT. These requirements will ensure that disturbance of the active channel will be avoided.

(c) Riparian Vegetation

As discussed previously under Findings Section IV(4)(a) above, the project site contains North Coast riparian scrub habitat and North coast black cottonwood forest. North Coast riparian scrub habitat occurs on "islands" between the low flow channels and is the most extensive plant community at the project site, occupying a total of approximately 93 acres. Approximately 100 acres of North Coast black cottonwood forest is found on the west (left) bank terrace adjacent to the river outside of the extraction area, as well as 35 acres found within the project area on an island within the bank-full channel. Thus, the proposed project has the potential to adversely affect environmentally sensitive riparian vegetation at the Sandy Prairie site.

To prevent disturbances to riparian habitat, Special Condition No. 3 includes the requirement that the mining be performed, on the portions of the gravel bar that do not contain or are in close proximity to riparian vegetation with environmentally sensitive habitat characteristics. Furthermore, the Commission attaches Special Condition No. 7, which reiterates that gravel extraction and processing operations shall not disturb or remove any area of environmentally sensitive vegetation growing on the gravel bar or river bank, and enumerates the threshold growth characteristics for when riparian vegetation becomes environmentally sensitive habitat. In this manner, disturbance to all of the environmentally sensitive riparian vegetation in the vicinity of the project will be avoided.

(d) Western Snowy Plover

The western snowy plover (Charadrius alexandrinus nivosus) was listed as a threatened species by the U.S. Fish and Wildlife Service in 1993. Snowy plovers were first documented nesting on gravel bars along the lower Eel River in 1996, which prompted increased surveying and monitoring efforts to describe the seasonal and spatial use of the lower Eel River by plovers. Surveys have indicated that snowy plovers are distributed along the unvegetated portions of larger gravel bars from the mouth of the Eel River upstream to the mouth of the Van Duzen River and have been found on the gravel bars from early April until early September.

According to a Biological Assessment prepared by qualified biologists entitled, "*Biological Assessment- Snowy Plover Habitat on the Lower Eel River, Humboldt County, CA,*" (July, 2001), approximately 805 acres of gravel habitat are potentially usable for snowy plovers. This estimate varies considerably from year to year and during the nesting season, as it is dependent primarily on river flow levels. The Biological Assessment summarizes plover use of the gravel bars from 1996 to 2001. This survey data indicates an increasing population of plovers in the lower Eel River area during recent years. In addition, according to 2003 survey data provided by the USFWS, thirty-one (31) adult plovers were sighted on the lower Eel River gravel bars during the 2003 breeding season. These birds developed eleven thirty-six (36) nests on eight discrete bar sites through out the lower river, resulting in the successful hatching of forty-two (42) chicks. Although the total amount of chicks surviving to fully fledge is not known at this time, estimates range from 16 to 28.[1]

Because the plover is a federally-listed threatened species, the responsibility for protecting the species rests with the U.S. Fish and Wildlife Service (USFWS).

[1] Jim Watkins, Biologist, USFWS, pers. comm.

The Service's Arcata Fish and Wildlife Office coordinates with the U.S. Army Corps of Engineers (Corps) to provide guidance and regulatory review to private gravel extraction operators and the County of Humboldt on the lower Eel River. The USFWS has set forth recommendations for plover protection based on current data. These recommendations have been incorporated as Special Condition No. 11 and are outlined below.

Western snowy plover adults, nests, and chicks are very cryptic, largely because of their ability to blend in with their surroundings as a defense strategy. All life stages of the plover are susceptible to death or injury by humans driving, operating equipment, and otherwise using occupied plover habitat. Disturbance from noise and activity associated with gravel extraction, vehicle use, and pre-gravel extraction activities may adversely affect western snowy plovers by altering their feeding and breeding behavior, reducing the suitability of nesting habitat, masking essential warning signs of predators, and attracting potential scavengers/predators.

According to the USFWS, data from other portions of the western snowy plover's range suggest that activity and vehicle use in nesting and chick rearing habitat during low light and night conditions likely increases the risk of vehicle strikes to plovers, including adults. Activities associated with gravel extraction (including surveys for engineering, hydrology and biological resources) often need to be conducted prior to the initiation of gravel extraction activities. Because these pre-extraction activities require vehicular use and human presence in potential nest areas during the nest season, a potential exists to adversely affect the western snowy plover through direct harm or harassment.

To minimize disturbance to the plovers from vehicle use and pre-extraction activities, the Commission attaches Special Condition No. 11. Special Condition No. 11(B) requires that daily plover surveys be conducted by a biologist approved by the USFWS prior to daily initiation of any pre-extraction activities that occur in suitable plover habitat. Should pre-extraction activities be required to occur near a nest within the 1,000-foot buffer, Condition No. 11(A) requires the surveying biologist to modify or halt activities as needed to prevent adverse impacts to the plover. Special Condition No. 11(C) restricts vehicle use on the gravel bars and haul roads to necessary uses, to minimum speeds, and to times of the day when there is sufficient daylight to prevent impact to the plovers.

In addition, Special Condition No. 11(A) requires that gravel extraction operations avoid western snowy plover habitat by either not commencing until after the nesting season (after September 15), or commencing only after a biologist approved by the USFWS has surveyed the site for three consecutive days and either found no plovers or nests, or has found some but will continue to

conduct daily surveys to ensure a 1,000-foot buffer area is maintained around the nests that have been found. USFWS recommends this protocol to avoid disturbance of the western snowy plover. The requirements of Special Condition No. 11 will ensure that gravel operations will not be performed in western snowy plover nesting sites or otherwise significantly disturb this threatened species.

Therefore, as conditioned, the Commission finds that the project would not result in significant adverse impacts to the western snowy plover species.

(e) Water Quality

If properly managed, the proposed gravel operations should not significantly adversely affect the river's water quality. However, gravel extraction operations in close proximity to an open stream course could adversely impact water quality, and ultimately the biological productivity and fisheries resources of the river. For example, pushing gravel materials or allowing sediment-laden water to drain from an excavation bucket into the river could degrade water quality and biological productivity by increasing the turbidity of the water. In addition, if not retained to allow settlement of suspended sediment, wash water from gravel processing activities could entrain soil materials which could result in sedimentation of coastal waters.

To prevent such occurrences, the Commission attaches Special Condition Nos. 2, 3, 4, and 7. Special Condition No. 2 requires that a runoff control plan be reviewed and approved by the Executive Director as part of the annual final gravel extraction plan ensuring that mining equipment be maintained and operated in such a manner as to not allow for release of petroleum products into the river, that spill clean-up materials be available on the worksite, and that operators and sub-contractors undergo spill contingency training. Special Condition No. 3 requires the applicant to perform the mining project on the exposed gravel bar, to avoid in-water activities that might result in sedimentation of the river. Special Condition No. 5 requires that all materials be promptly removed from the river after the cessation of mining and prior to the start of the rainy season. Special Condition No. 7 prohibits placing any material into the river during gravel extraction activities.

Therefore, as conditioned, the project will avoid significant adverse impacts to coastal water quality.

(f) Conclusion

The Commission finds, as conditioned herein, the proposed gravel extraction operation is consistent with the requirements of Section 30233 of the Coastal Act,

in that feasible mitigation measures have been provided to minimize adverse environmental effects. The gravel extraction limitations and performance standards imposed through Special Condition Nos. 2, 3, and 4 are designed to prevent impacts to river morphology, riparian vegetation, threatened and endangered species, and water quality. Together with the requirements of Special Condition Nos. 5 and 7, to limit the extraction season and prohibit placement of material into the active channel, the project is conditioned to ensure that significant adverse impacts to the Eel River from the proposed gravel extraction operation will be avoided. Therefore, the proposed project as conditioned is consistent with the requirements of Sections 30231 and 30233 of the Coastal Act.

(3) Alternatives

The third test set forth by the Commission's dredging and fill policies is that the proposed dredge or fill project must have no feasible less environmentally damaging alternative. In this case, the Commission has considered the various identified alternatives, and determines that there are no feasible less environmentally damaging alternatives to the project as conditioned by Special Condition Nos. 1-12. A total of four possible alternatives have been identified, including: (a) the "no project" alternative; (b) obtaining sand and gravel from quarry operations; (c) obtaining sand and gravel from terrace deposits in the Eel River floodplain; and (d) modifying the proposed project. As explained below, each of these alternatives are infeasible and/or more environmentally damaging than the proposed project as conditioned.

(a) No Project Alternative

The no project alternative means that no gravel extraction would occur at the site. Without extraction from the site, an equivalent amount of sand and gravel materials would be obtained from other sources to meet regional demand for cement and concrete aggregate products for the construction of roads, buildings, and other development. Increasing production from other river bar extraction operations would have environmental impacts similar to or greater than the proposed project.

The proposed project is located in an area where gravel has historically been accumulated and mined. Mining in many other parts of the river where gravel does not accumulate could lead to changes in river geomorphology which, in turn, could cause a variety of adverse impacts such as increased sedimentation, the undermining of bridge supports, and bank erosion resulting in the loss of environmentally sensitive riparian habitat areas and/or adjacent agricultural lands.

As discussed below, obtaining additional sand and gravel terrace deposits from the valley floors of local rivers would also create adverse environmental impacts similar to or greater than the proposed project. The Commission therefore finds that the "no project"

alternative is not a feasible less environmentally damaging alternative to the project as conditioned.

(b) Obtaining Sand and Gravel from Quarry Operations

Excavation from the river could be avoided if an equivalent amount of sand and gravel could be obtained from upland quarries. As discussed in the Final Program EIR on Gravel Removal from the Lower Eel River, certified by Humboldt County in 1992, there are few quarries in the vicinity where it would be economically feasible to obtain material of sufficient quality and quantity to that available at the project site. The substrate of nearby areas of Humboldt County are composed mostly of the Franciscan formation that is comprised of large masses of greywacke and sandstone interspersed with less competent (for construction applications) clay and silt materials. This composition of material generally does not lend itself to quarrying. The quarries that are found in the region are generally located in remote areas with limited water supplies and where no nearby processing facilities are available. The unprocessed materials would need to be transported greater distances resulting in associated traffic and air quality impacts. The Commission therefore finds that substituting gravel extracted from quarry operations is not a feasible less environmentally damaging alternative to the project as conditioned.

(c) Obtaining Sand and Gravel from Terrace Deposits

Excavation from the river could be avoided if an equivalent amount of sand and gravel products could similarly be obtained from terrace deposits in the floodplain of the lower Eel, Van Duzen, or Mad Rivers. The floors of these river valleys are underlain by substantial amounts of gravel deposited over thousands of years and provide upland rock quarries. However, commencing gravel extraction from these terrace deposits would create its own adverse environmental impacts. Much of the undeveloped valley floor of each of these rivers is developed with agricultural and timber production uses. Converting productive coastal agricultural lands or forest lands to gravel extraction or other uses would not be consistent with Coastal Act policies which call for the maintenance of lands suitable for agriculture and timber production. Most of the remaining undeveloped areas of these river valleys are currently covered with riparian habitat and other environmentally sensitive habitats. Extracting gravel from such areas would result in far more impact to environmentally sensitive habitat than extraction at the project site as conditioned by the permit to avoid all riparian habitat. Therefore, the Commission finds that substituting gravel extracted from terrace deposits in local river valleys is not a feasible less environmentally damaging alternative to the proposed project as conditioned.

(d) Modifying the Proposed Project as Conditioned

Various modifications to the project as proposed and conditioned could be made in an attempt to reduce the environmental effects. One such modification would be to mine in different locations at the project site. However, this modification would not result in less significant adverse impacts than the project as conditioned under this permit. As discussed previously, the proposed project has been conditioned to restrict mining to areas that would avoid significant adverse impacts to coastal resources. Therefore, modifying the proposed gravel extraction project to require mining in different locations at the project site could result in greater impacts to coastal resources and would not be a feasible less environmentally damaging alternative. No other feasible modification to the proposed extraction scheme has been identified. Therefore, the Commission finds that modifying the proposed gravel extraction project as conditioned is not a feasible less environmentally damaging alternative.

(4) Maintenance and Enhancement of Estuarine Habitat Values

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

As discussed in the section of this finding on mitigation, the conditions of the permit will ensure that the project will not have significant adverse impacts on water quality, riparian vegetation, rare and endangered species, stream morphology, fisheries, or other coastal resources. By avoiding impacts to coastal resources, the Commission finds that the project will maintain the biological productivity and functional capacity of the habitat consistent with the requirements of Sections 30231 and 30233 of the Coastal Act.

(5) Conclusion

The Commission thus finds that the project is an allowable use, that there is no feasible less environmentally damaging alternative, that no additional mitigation is required for the impacts associated with the dredging of coastal waters, and that estuarine habitat values will be maintained or enhanced. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with Sections 30231 and 30233 of the Coastal Act.

E. Protection of Environmentally Sensitive Habitat Areas.

Section 30240 of the Coastal Act states that environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values and that development in areas near such sensitive habitat areas shall be sited and designed to prevent significant adverse impacts to these areas.

As discussed above in the section on permissible uses for dredging of wetlands and open coastal waters, the proposed project as conditioned will not adversely affect environmentally sensitive habitat either within or outside of the bank-full channel of the river. As conditioned, the proposed gravel mining project will not result in significant cumulative adverse impacts on sensitive fish species consistent with the requirements of Sections 30231 and 30233 of the Coastal Act. In addition, mining is limited by the provisions of Special Condition No. 3 which prohibit mining in those portions of the gravel bars where the riparian vegetation has reached a size and extent where there is an expectation of appreciable habitat values for nesting, forage and cover of wildlife being afforded. Furthermore, none of the riparian habitat along the banks of the river will be disturbed by the extraction operation itself. Existing haul roads through the riparian areas must be used to truck gravel from the bar to the stockpiling and processing facility. Special Condition No. 7 requires that the proposed project not disturb or remove any of the established riparian vegetation at the site and prohibits the cutting of new haul roads through the habitat. Moreover, to help prevent potential impacts to the habitat afforded to nesting snowy plovers, Special Condition No. 11 requires that gravel extraction operations avoid western snowy plover habitat by among other means, either not commencing until after the nesting season (after September 15), or commencing only after a biologist approved by the USFWS has surveyed the site for three consecutive days and either found no plovers or nests, or has found some but will continue to conduct daily surveys to ensure a 1,000-foot buffer area is maintained around the nests that have been found. USFWS recommends this protocol to avoid disturbance of the western snowy plover. The requirements of Special Condition No. 11 will ensure that gravel operations will not be performed in western snowy plover nesting sites or otherwise disturb this threatened species.

Therefore, the Commission finds that the project as conditioned is consistent with Section 30240 of the Coastal Act, as the project will avoid significant adverse impacts to the environmentally sensitive habitat areas found on the site.

F. Visual Resources

Section 30251 of the Coastal Act provides in applicable part that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall: (a) be sited and designed to protect views to and along the ocean and scenic coastal areas, and (b) be visually compatible with the character of surrounding areas.

This portion of the river is not readily visible from Highway 101. The upper portions of the project site southern limit may be viewed for a brief period by vehicles that generally travel at speeds of 60 mph and greater on Highway 101 near the Van Duzen River Bridge. The general public would not recognize extraction areas from this viewpoint and

may, at the most, observe a scraper working on the bar. Partial views of the bankfull channel can also be gained from Grizzly Bluff Road west of the channel area. This lightly traveled county road runs between the towns of Ferndale and Rio Dell.

The gravel extraction area and processing facilities are generally not visible from Highway 101 or any other public coastal viewing areas. The extraction operation has existed at the site for many years, and the proposed project will not be any more prominent than the gravel extraction that has occurred at the site in the past. Therefore, the Commission finds that the proposed project is visually compatible with the character of the area as gravel extraction operations here and in the vicinity have long been a part of the view shed.

Therefore, the Commission finds that, as conditioned, the proposed project is consistent with the visual resource policies of Section 30251 of the Coastal Act, as the project is compatible with the visual character of the surrounding area and will not block views to and along the coast.

G. Public Access

Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety. In applying Sections 30210, 30211, and 30212, the Commission is limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential public access.

The project site is located between the first public road (Highway 101) and the sea (the Eel River is considered to be an arm of the sea in this area).

Recreational use of the river in this particular section of the river is very limited, largely because there are very few access points to the river. The principal public access use of the project site that does occur is by fishermen who use the river channel for recreational fishing. Other public access and recreational uses of this stretch of the river include canoeing and recreational boating. The prime fishing season occurs in the spring or wet season when gravel extraction is not occurring. To the extent that canoeists and boaters do use the river channel during the extraction season, the Commission attaches Special

Condition No. 8 which will ensure that any truck crossings of the channel installed by the applicants will not block passage down the river. The condition requires that any proposed seasonal crossing of the low flow or secondary channels that can be expected to maintain flow year round shall be of the railroad flatcar variety rather than culverted fill crossings. The condition also requires that the flatcar crossing be installed in such a manner that a minimum three-foot vertical clearance is maintained above the surface of the water so that canoes and kayaks are able to pass through such a crossing.

Thus, as conditioned, the project will not significantly affect the fishermen, canoeists or other recreational boaters. Furthermore, gravel extraction operations have been occurring at the site for many years. The continued extraction authorized by this permit will not create any additional burdens on public access than have existed in the past. The project will not create any new demands for fishing access or other public access use.

The project as conditioned would have no significant adverse effect on public access. The Therefore, the Commission finds that the project, as proposed without new public access, is consistent with the public access policies of the Coastal Act.

H. State Lands Commission Review

The project is located in the bed of the Eel River, a navigable river, between the ordinary high water marks. As such, the State of California may hold a public trust easement and other property interests at the site. Any such property interest would be administered by the State Lands Commission. To assure that the applicant has a sufficient legal property interest in the site to carryout the project and to comply with the terms and conditions of this permit, the Commission attaches Special Condition No. 1 which requires that the applicant submit evidence that any necessary authorization from the State Lands Commission has been obtained prior to issuance of the permit.

I. CHERT Review.

Pursuant to the USCOE's permit procedures and the County of Humboldt's surface mining regulations, in-stream gravel mining projects within Humboldt County are required to be assessed for potential direct and cumulative to riverine resources by an independent scientific panel known as the County of Humboldt Extraction Review Team, or "CHERT." The CHERT in turn makes specific recommendations to the County and the Corps with regard to appropriate actions that should be taken on the mining applications. Often during the review of mining plans for the upcoming mining season, CHERT may make constructive recommendations to the applicants in the interest of designing a mining proposal that will avoid and/or minimize significant adverse impacts to river resources. These recommendations may involve changes to the amount of gravel

proposed to be extracted, the specific location(s) of the extraction area(s), or the proposed mining techniques. To ensure that the project recommended for approval by CHERT is the same project that was reviewed under this permit by the Commission, and to ensure that extraction does not exceed the extraction limits established under Special Condition No. 3, the Commission attaches Special Condition No.2(A)(4) which requires the applicant to annually submit to the Executive Director for written review and approval a copy of the pre-extraction mining plan review comments obtained from the CHERT as part of the final gravel extraction plan as well as evidence that the final gravel extraction plan is consistent with all recommendations of CHERT and all terms and conditions of this permit.

J. Department of Fish and Game Review

The project requires an annual Section 1603 Streambed Alteration Agreement from the California Department of Fish and Game. Therefore, to ensure that the project area reviewed by the Department of Fish and Game each year is the same project area that was reviewed under this permit by the Commission, and to ensure that extraction does not exceed the extraction limits established under Special Condition No. 3, the Commission attaches Special Condition No. 9 which requires that prior to commencing each year's gravel operations, the applicant submit a copy of the Section 1603 agreement approved by the Department of Fish and Game and evidence that such agreement is consistent with all terms and conditions of this permit.

K. U.S. Army Corps of Engineers Review

The project is within and adjacent to a navigable waterway and is subject to the authority of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Federal Water Pollution Control Act (33 USC 1251 *et seq.*) and Section 10 of the Rivers and Harbors Act (33 USC 403). Pursuant to the Federal Coastal Management Act, any approval granted by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. To ensure that the project ultimately approved by the Corps each season is the same as the project specified in the annual gravel extraction plan approved by the Executive Director pursuant to Special Condition No. 2 herein, the Commission attaches Special Condition No. 10 that requires the applicant, prior to commencing gravel extraction operations each year, to demonstrate that all necessary approvals from the USACE for the approved gravel extraction, as conditioned herein, have been obtained.

L. California Environmental Quality Act

Section 13906 of the California Code of Regulation requires Coastal Commission approval of a coastal development permit application to be supported by findings showing that the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would significantly lessen any significant effect that the activity may have on the environment.

The Commission incorporates its findings on conformity with Coastal Act policies at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed herein in the findings addressing the consistency of the proposed project with the Coastal Act, the proposed project has been conditioned in order to be found consistent with the policies of the Coastal Act. As specifically discussed in these above findings which are hereby incorporated by reference, mitigation measures which will minimize all adverse environmental impact have been required. These required mitigation measures include requirements that limit extraction to avoid environmentally sensitive habitat areas, rare and endangered species, migratory fish, and extractions that could lead to changes in river morphology. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

EXHIBITS:

1. Regional Location Map
2. Vicinity Map
3. Parcel Map
4. Site Map
5. Typical Extraction
6. Typical Channel Crossing
7. Biological Opinion Cover Letter

APPENDIX A

STANDARD CONDITIONS

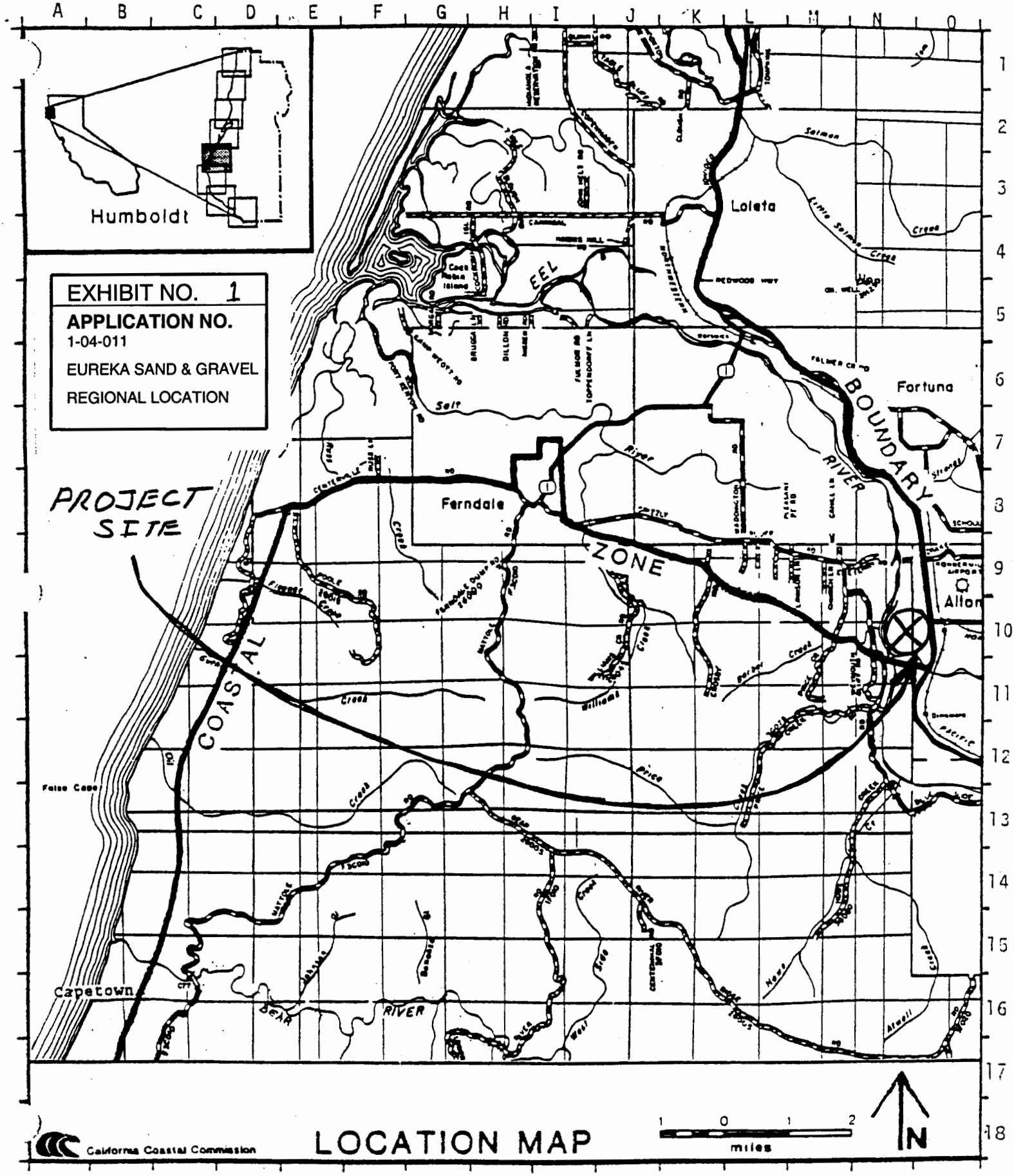
1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

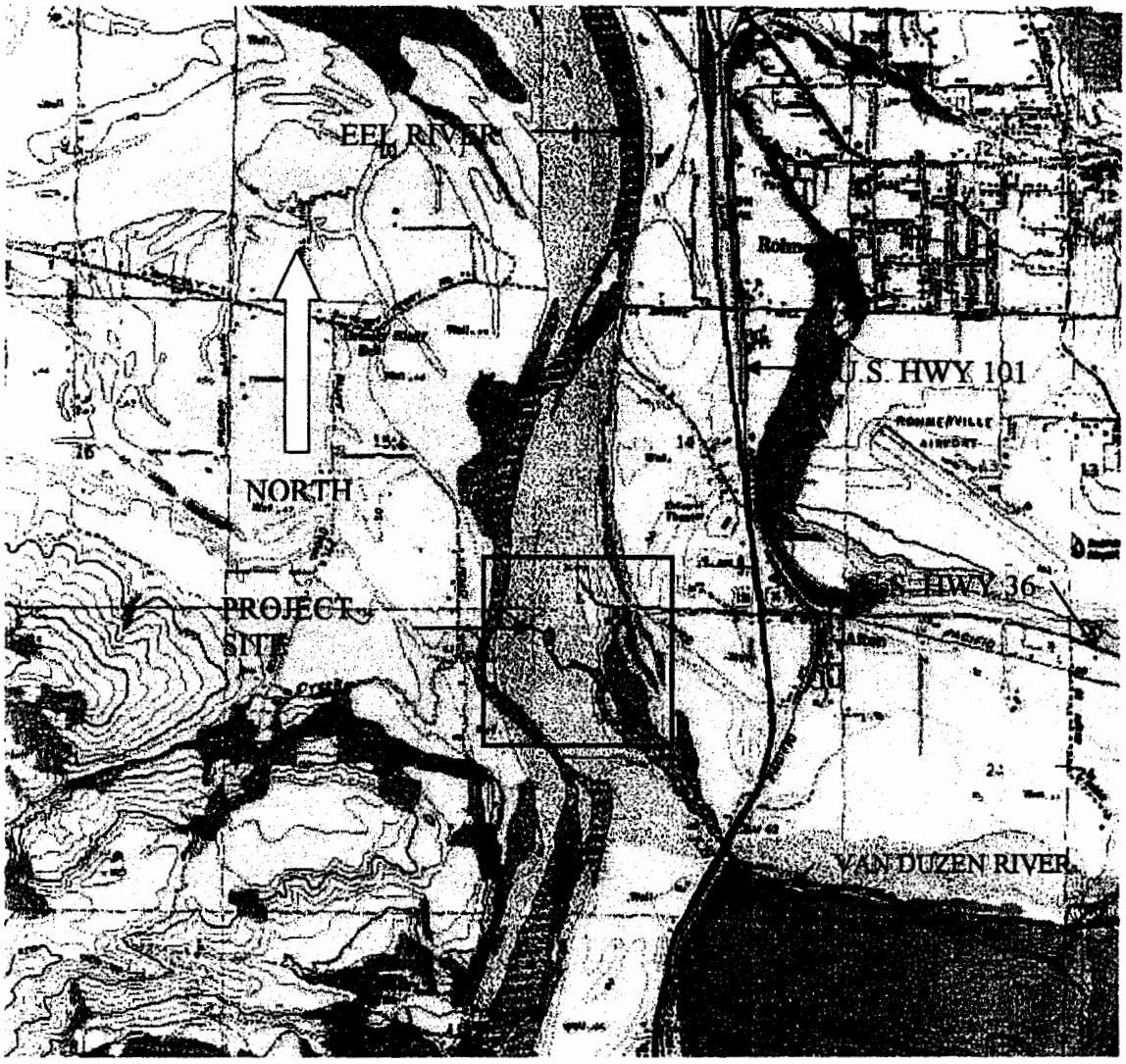
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior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

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

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

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


A B C D E F G H I J K L M N O
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Humboldt
EXHIBIT NO. 1
APPLICATION NO.
1-04-011
EUREKA SAND & GRAVEL
REGIONAL LOCATION
PROJECT SITE
COASTAL ZONE BOUNDARY
Loleta
Fortuna
Ferndale
Alton
Capetown
False Cape
EEL
RIVER
Salt
Creek
Slough
Little Salmon Creek
Redwood Hwy
Palmer Canal
Pacific
1 0 1 2
miles
N
California Coastal Commission
LOCATION MAP
County of Humboldt
Sheet 5 of 8



PURPOSE: Gravel Extraction

DATUM: MSL

ADJACENT OWNERS:
See Attached List

SCALE:

EUREKA READY MIX
HAUCK BAR EXTRACRTION

IN: Eel River
AT: Alton, California

COUNTY: Humboldt
Application By: Paul Kraus

EXHIBIT NO. 2
APPLICATION NO.
1-04-011
EUREKA SAND & GRAVEL
VICINITY MAP

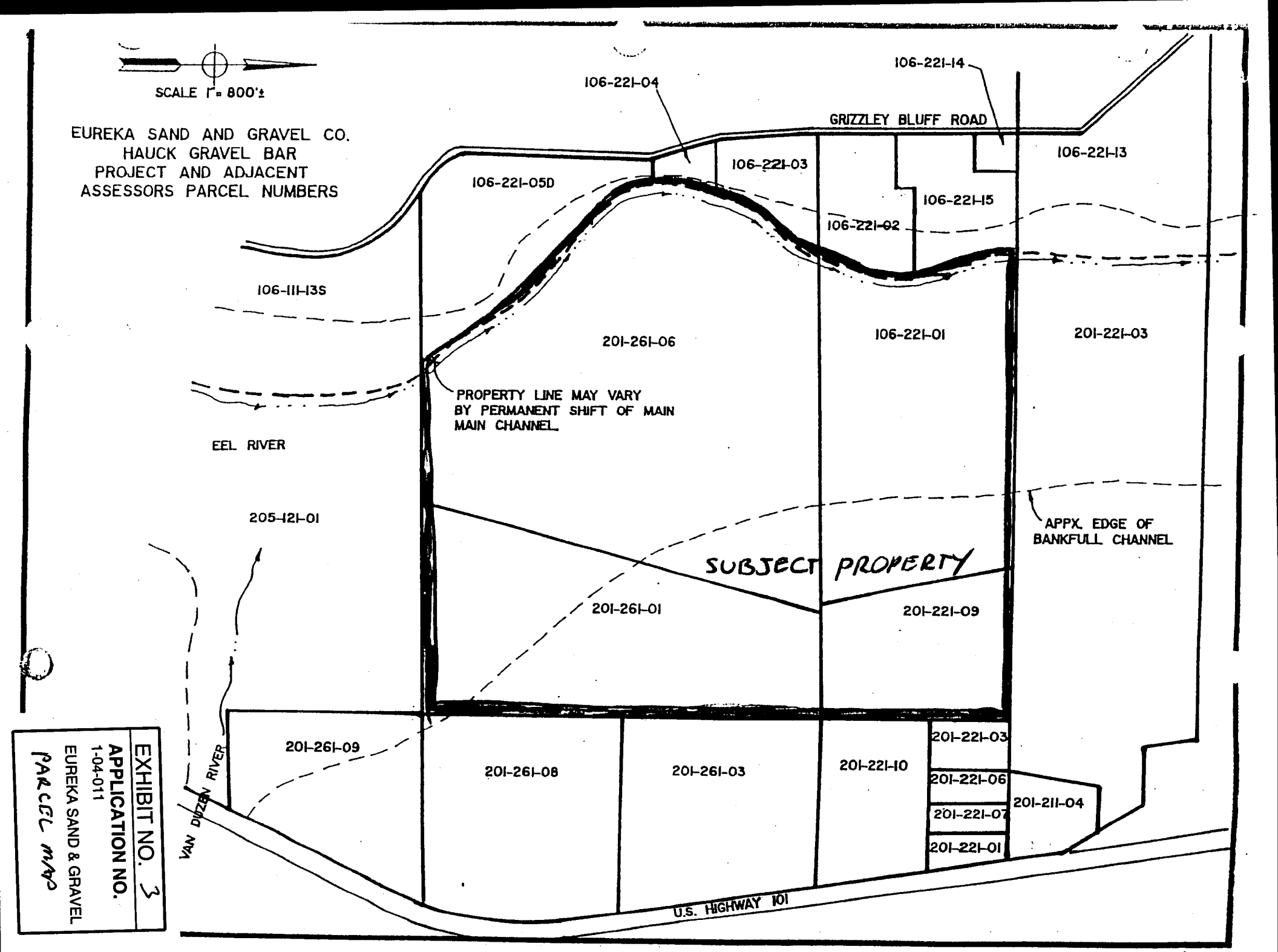

SCALE 1" = 800'±
EUREKA SAND AND GRAVEL CO.
HAUCK GRAVEL BAR
PROJECT AND ADJACENT
ASSESSORS PARCEL NUMBERS
106-221-04
106-221-14
GRIZZLEY BLUFF ROAD
106-221-13
106-221-03
106-221-05D
106-221-15
106-221-02
106-111-13S
201-261-06
106-221-01
201-221-03
PROPERTY LINE MAY VARY
BY PERMANENT SHIFT OF MAIN
MAIN CHANNEL.
EEL RIVER
205-121-01
APPX. EDGE OF
BANKFULL CHANNEL
SUBJECT PROPERTY
201-261-01
201-221-09
201-261-09
201-261-08
201-261-03
201-221-10
201-221-03
201-221-06
201-221-07
201-221-01
201-211-04
VAN DUZEN RIVER
U.S. HIGHWAY 101
EXHIBIT NO. 3
APPLICATION NO.
1-04-011
EUREKA SAND & GRAVEL
PARCEL MAP

EXHIBIT NO. 4

APPLICATION NO.
1-04-011

EUREKA SAND & GRAVEL

SITE MAP

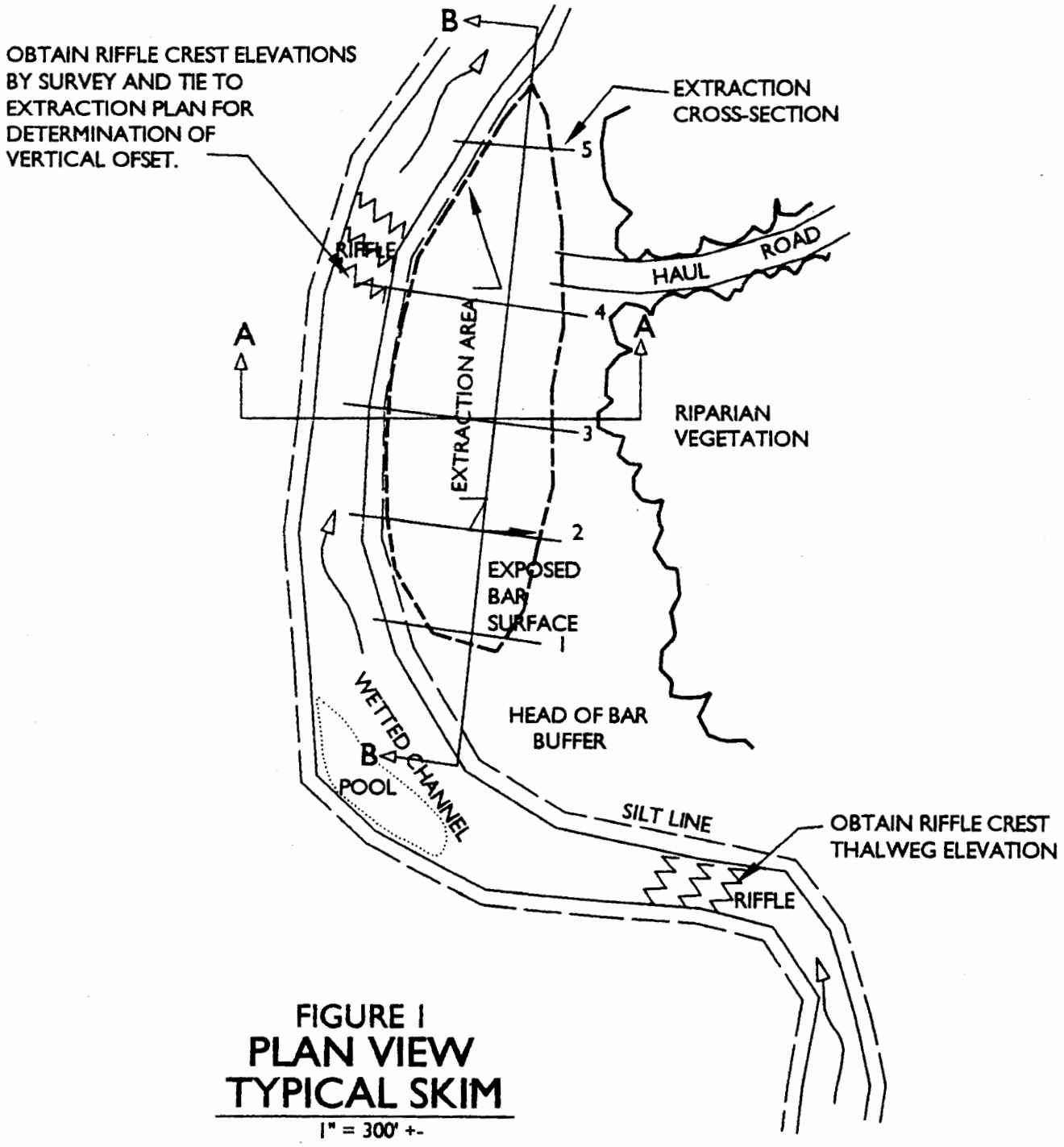


FIGURE 1
PLAN VIEW
TYPICAL SKIM
1" = 300' +-

C:\MYDOCUMENTS\MAD RIVER FOLDERS\CHRISTIE\CHCORPS LP\EXTRDRAWING

OCT. 10, 2002

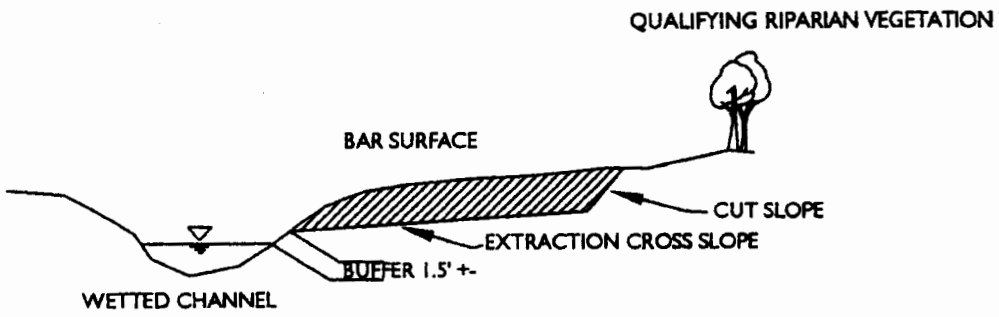
PURPOSE: GRAVEL EXTRACTION
DATUM:
SCALE:
ADJ. OWNERS: SEE ATTACHED

APPLICATION BY PAUL KRAUS

EUREKA READY MIX CONCRETE CO., INC.

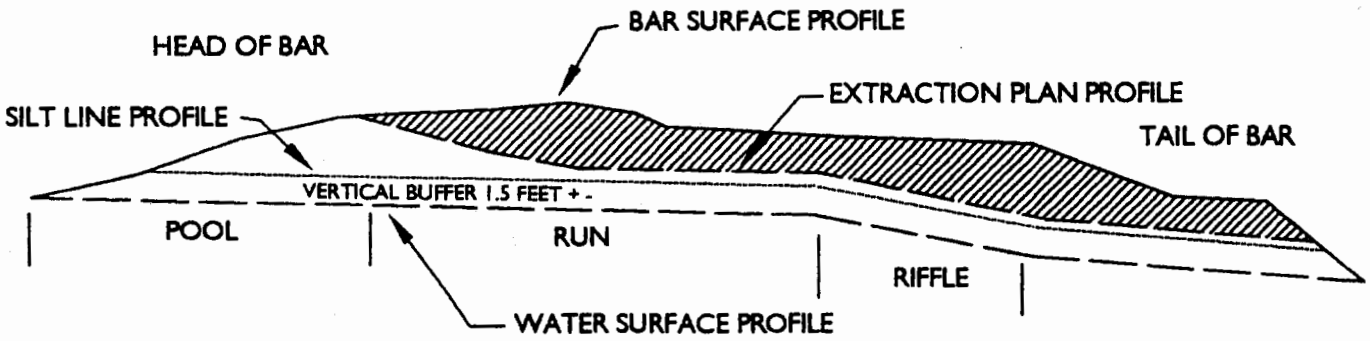
IN: EEL RIVER
AT: ALTON
COUNTY: HUMBOLDT

EXHIBIT NO. 5
APPLICATION NO. 1-04-011
EUREKA SAND & GRAVEL
TYPICAL EXTRACTION
(1 of 4



CROSS SECTION A-A

SCALE 1"=200'



LONGITUDINAL SECTION B-B

SCALE 1"=200'

FIGURE 2
TYPICAL SKIM CROSS-SECTIONS

C:\MYDOCUMENTS\MAD RIVER FOLDERS\CHRISTIE\CHCORPS1.PM\EXTRXS

OCT. 10, 2002

PURPOSE: GRAVEL EXTRACTION DATUM: SCALE: 1"=200' ADJ. OWNERS: SEE ATTACHED APPLICATION BY PAUL KRAUS	EUREKA READY MIX CONCRETE CO., INC. IN: EEL RIVER AT: ALTON COUNTY: HUMBOLDT

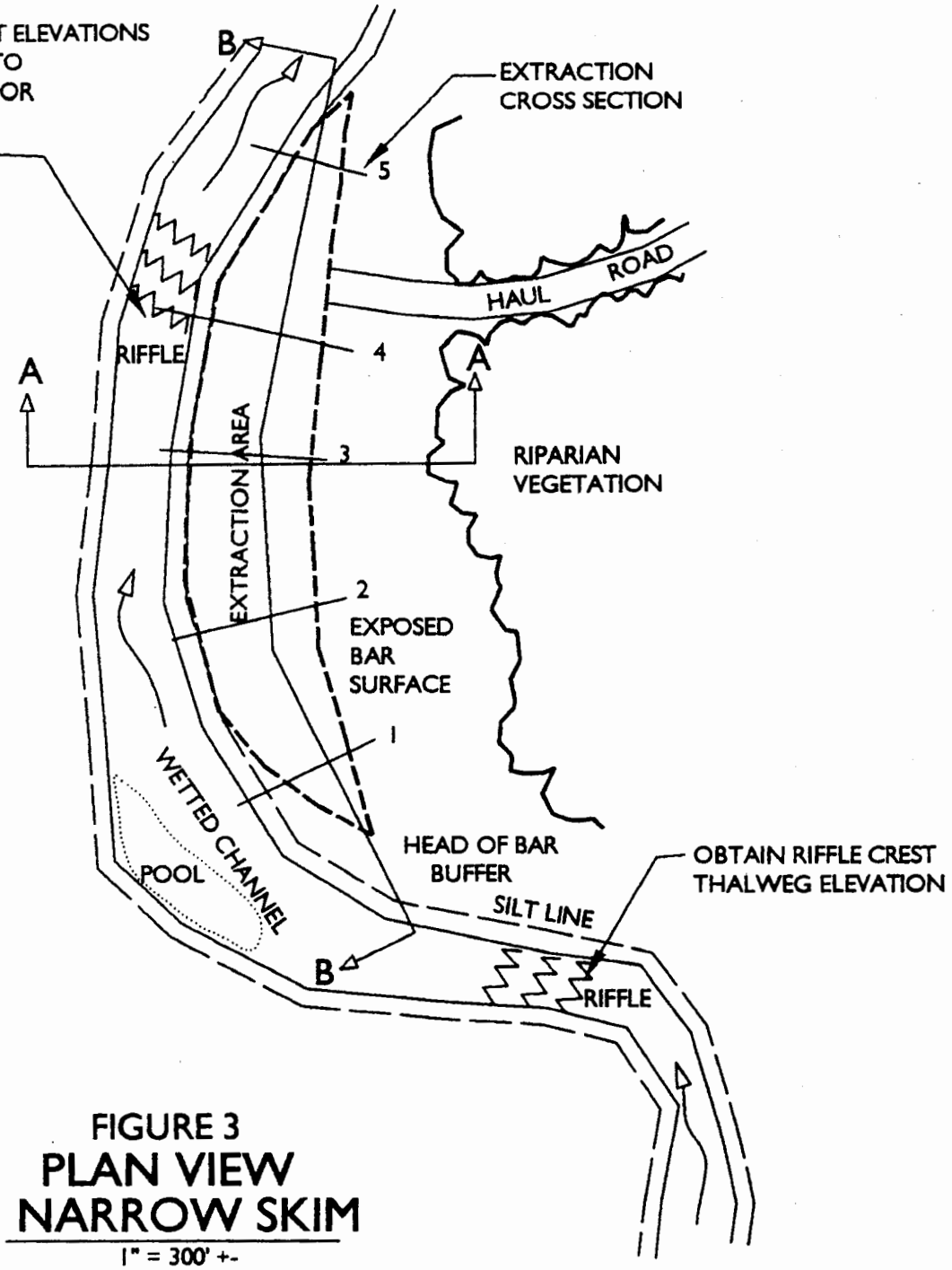


FIGURE 3
PLAN VIEW NARROW SKIM
1" = 300' +-

C:\HYDOCUMENTS\MAD RIVER FOLDERS\CHRISTIE\CHCONPS LP\NARROWEXTR

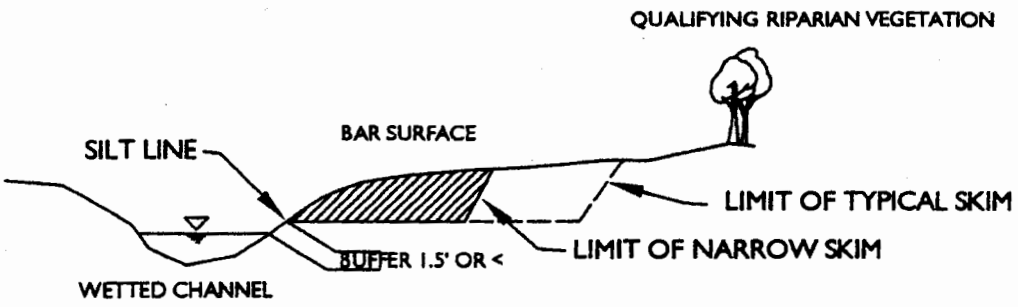
OCT. 10, 2002

PURPOSE: GRAVEL EXTRACTION
DATUM:
SCALE:
ADJ. OWNERS: SEE ATTACHED

APPLICATION BY PAUL KRAUS

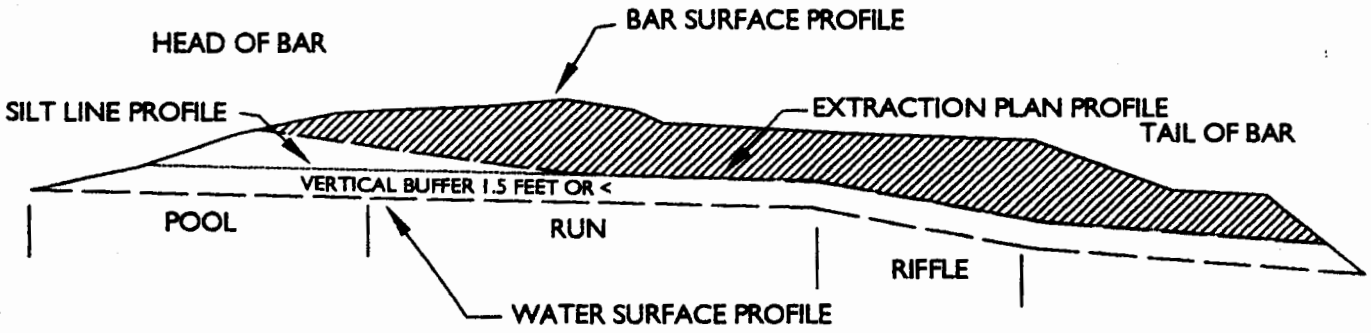
EUREKA READY MIX CONCRETE CO., INC.

IN: EEL RIVER
AT: ALTON
COUNTY: HUMBOLDT



CROSS SECTION A-A

SCALE 1"=200'



LONGITUDINAL SECTION B-B

SCALE 1"=200'

FIGURE 4

NARROW SKIM CROSS-SECTIONS

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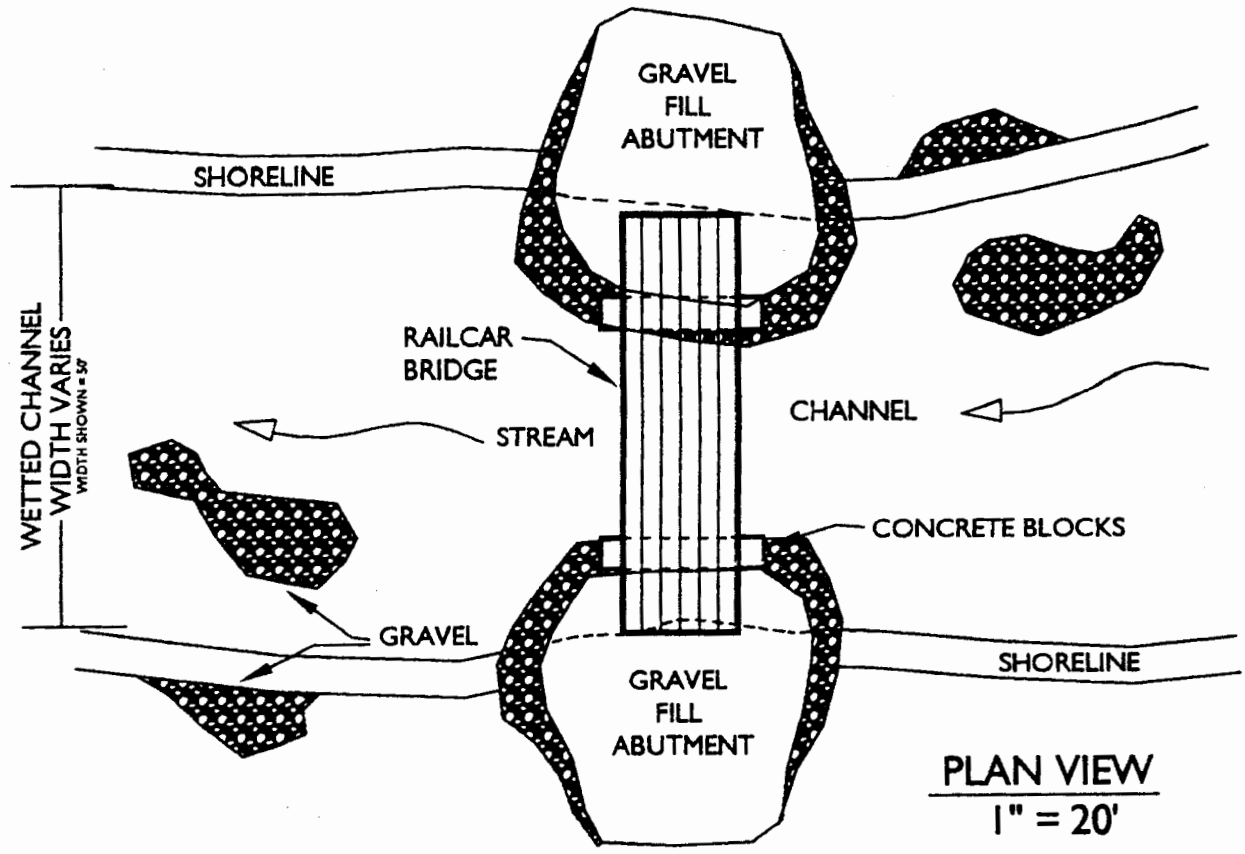
OCT. 10, 2002

PURPOSE: GRAVEL EXTRACTION DATUM: SCALE: 1"=200' ADJ. OWNERS: SEE ATTACHED APPLICATION BY PAUL KRAUS	EUREKA READY MIX CONCRETE CO., INC. IN: EEL RIVER AT: ALTON COUNTY: HUMBOLDT

(4 of 4)



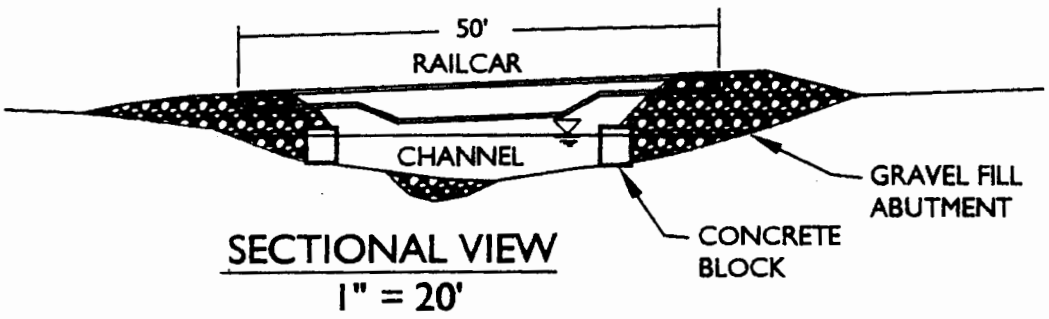


FIGURE 6
TYPICAL SUMMER CROSSING

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OCT. 10, 2002

PURPOSE: GRAVEL EXTRACTION
DATUM:
SCALE:
ADJ. OWNERS: SEE ATTACHED

APPLICATION BY PAUL KRAUS

EUREKA READY MIX
CONCRETE CO., INC.

IN: EEL RIVER
AT: ALTON
COUNTY: HUMBOLDT

EXHIBIT NO. 6
APPLICATION NO.
1-04-011
EUREKA SAND & GRAVEL
TYPICAL STREAM
CROSSING

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802- 4213

AUG 12 2004

151422SWR03AR8838: SF

Mr. Calvin Fong
Chief, Regulatory Branch
Department of the Army, Corps of Engineers
333 Market Street
San Francisco, California 94105-2197

Dear Mr. Fong:

This letter transmits the National Marine Fisheries Service's (NOAA Fisheries) biological opinion (Opinion) based on our review of the Eureka Ready Mix Concrete Company's proposed gravel extraction operations (hereafter referred to as Project), and its effects on Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*) and its designated critical habitat, California Coastal (CC) Chinook salmon (*O. tshawytscha*) and Northern California (NC) steelhead (*O. mykiss*) pursuant to section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This Opinion (Enclosure 1) is based on the best available information provided to NOAA Fisheries from the U.S. Department of the Army, Corps of Engineers (file number 27725N), and other relevant published studies and unpublished information.

After reviewing the best available scientific and commercial information, the current status of SONCC coho salmon, CC Chinook salmon and NC steelhead, the environmental baseline for the action area, the anticipated effects of the Project, and the cumulative effects, it is NOAA Fisheries' biological opinion that the Project, as proposed, is not likely to jeopardize the continued existence of these three species or result in the destruction or adverse modification of SONCC coho salmon designated critical habitat.

Essential Fish Habitat Consultation

In addition, recent amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) require Federal agencies to consult with NOAA Fisheries regarding any action or proposed action that may adversely affect essential fish habitat (EFH) for Federally managed fish species. NOAA Fisheries evaluated the Project for potential adverse effects to EFH pursuant to section 305(b)(2) of the MSA.

EXHIBIT NO. 7
APPLICATION NO.
1-04-011
EUREKA SAND & GRAVEL
BIOLOGICAL OPIN.
COVER LETTER
(1 of 2)

The action area of the Project includes areas identified as EFH for various life stages of Chinook salmon and coho salmon, species that are Federally managed under the Pacific Coast Salmon Fishery Management Plan. Based on the best available information, NOAA Fisheries has determined that the proposed action may adversely affect EFH. EFH Conservation Recommendations are provided in Enclosure 2. For more information on EFH, see our website at http://swr.nmfs.noaa.gov.

If you have any questions regarding these consultations, please contact Mr. Sam Flanagan at (707) 825-5173.

Sincerely,

for Rodney R. McInnis
Regional Administrator

Enclosures (2)

cc: Mr. Paul Krause, Eureka Ready Mix Concrete Company

(2 of 2)