



US Army Corps  
of Engineers

SAN FRANCISCO DISTRICT

# PUBLIC NOTICE

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DATE: September 11, 2000

RESPONSE REQUIRED BY: September 26, 2000

Regulatory Branch  
333 Market Street  
San Francisco, CA 94105-2197

PERMIT MANAGER: David Ammerman PHONE: 707-443-0855 dammerman@spd.usace.army.mil

**1. INTRODUCTION:** The County of Humboldt, Department of Public Works, 1106 Second Street, Eureka, California 95501-0579, (Contact: Mr. Richard Stein at 707-445-7741), has applied for a Department of the Army permit to extract approximately 20,000 cubic yards (CY) of gravel from and discharge approximately 250 CY of gravel during post-extraction grading into the Van Duzen River, adjacent to Van Duzen County Park, west of State Route 36, in Humboldt County, California. This application is being processed pursuant to the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

**2. PROJECT DESCRIPTION:** As shown in the attached drawings (Sheets 1 to 6), the applicant plans to remove approximately 20,000 CY of gravel from a gravel bar across the channel from Humboldt Grove in Van Duzen County Park. A bulldozer and front end loader would be used to skim (scalp) the gravel bar surface and load gravel onto trucks. The trucks would haul the gravel to a temporary, upland stockpile area (an existing concrete pad located on the former Keller Ranch off of Keller Road). The gravel haulers would use existing ranch roads for access and transport of gravel (see Sheets 3 through 5 of 6). The applicant states that Keller Road is owned by Pacific Lumber Company.

The above work would be performed by Pacific Lumber Company, while the applicant would monitor and survey the bar for both pre- and post-extraction periods to document actual gravel volumes removed, gravel bar surface elevations, and recruitment of gravel over the winter. A minimum 75-foot buffer zone would be maintained from the edge of the water. The bar would be left with a 1%

slope toward the low flow channel and the bar would be smoothed over to remove any depressions or pits when the extraction is complete. No river crossings would be required for this project. The applicant anticipates that the work window would take place between September 16 and October 15.

The purpose of the proposed project would be to concentrate river flow away from an eroding bank adjacent to Van Duzen County Park. Van Duzen County Park contains Humboldt Grove, a 6 acre old-growth, coast redwood forest bordering the Van Duzen River. During the past recent winters, seven redwood trees were undermined by bank erosion and fell into the river (See Sheet 6 of 6). The fallen trees were left in place at the recommendation of the California Department of Fish and Game in an attempt to provide improved cover habitat for anadromous salmonids. Those trees were cabled together by the applicant and are still in place. The proposed project is intended to stabilize the eroding bank immediately east of the largest downed redwood by removing gravel from the gravel bar immediately opposite the erosion site. The applicant states this would allow the river's high flow to move to the south, removing some of the pressure on the eroded bank and prevent further erosion. This would, in turn, prevent undermining of the remaining stands of redwoods adjacent to the river.

The applicant obtained Department of the Army Permit No. 23075N, dated December 24, 1997, to place 1,600 CY of rock slope protection (RSP) along 600 lineal feet of streambank and for placement of a temporary river crossing, adjacent to Humboldt Grove for the same purpose of preventing redwood trees from toppling into the river. For a

variety of reasons, the applicant did not construct the project authorized in 1997. Instead, the applicant wishes to pursue the above proposed gravel extraction to accomplish the same objective.

3. **STATE APPROVALS:** Under Section 401 of the Clean Water Act (33 U.S.C. Section 1341), an applicant for a Corps permit must obtain a State water quality certification or waiver before a Corps permit may be issued. The applicant has provided evidence that he has applied for Section 401 water quality certification from the California Regional Water Quality Board (RWQCB), North Coast Region. No Corps permit will be granted until the applicant obtains the required certification or waiver. The waiver shall be explicit, or it will be deemed to have occurred if the State fails or refuses to act on a valid request for certification within 60 days after the receipt of a valid request, unless the District Engineer determines a shorter or longer period is reasonable for the State to act.

Those parties concerned with any water quality issues that may be associated with this project should write to the Executive Officer, California Regional Water Quality Control Board, North Coast Region, 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403, by the close of the comment period of this public notice.

4. **PRELIMINARY ENVIRONMENTAL ASSESSMENT:** The Corps of Engineers has assessed the environmental impacts of the action proposed in accordance with the requirements of the National Environmental Policy Act of 1969 (Public Law 91-190), and pursuant to Council on Environmental Quality's Regulations, 40 CFR 1500-1508, and Corps of Engineers' Regulations, 33 CFR 230 and 325, Appendix B. Unless otherwise stated, the Preliminary Environmental Assessment describes only the impacts (direct, indirect, and cumulative) resulting from activities within the jurisdiction of the Corps of Engineers.

The Preliminary Environmental Assessment resulted in the following findings:

a. **IMPACTS ON THE AQUATIC ECOSYSTEM**

(1) PHYSICAL/CHEMICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Substrate - The gravel bar (as shown on Sheets 4 through 6 of 6), would be skimmed or scalped from a triangular area approximately 900 feet long and 300 feet wide at its longest and widest points. Depth of the skim is estimated to be up to four feet. Extraction would remove approximately 20,000 CY of gravel substrate in this reach of the river. There are three commercial or private gravel extraction operations on the Van Duzen River downstream of the project. The closest operation is the Noble site at River Bar road approximately 4 miles west of Carlotta and 10 miles downstream of Van Duzen County Park. For the 1999 season, a total of 146,814 CY of gravel was extracted from the Van Duzen River. The volumes extracted were divided between three operators, Jack Noble, Thomas Bess, and Leland Rock who is located at the confluence of the Eel River and Van Duzen River (CHERT Report, February 2000). At least one of the operators, Jack Noble has applied for increased volumes of gravel extraction during the 2000 season (up to 100,000 CY). The size and height of the existing gravel bar across from Van Duzen County Park indicates winter gravel recruitment. The gravel bar is growing towards the right bank, narrowing the river channel adjacent to the County Park. Given the hydraulic dynamics of the Van Duzen River, the project reach is likely to recruit gravel in future winter high flows, in a normal to above normal rainfall year. Assuming normal winter high or above normal flows, the loss of substrate to gravel extraction would be compensated by winter recruitment, a neutral impact on the project sites' substrate. However, if winter high flows and associated bedload and sediment transport is below normal, there would a static condition or a short-term, moderate impact on river substrate elevations, with possible degradation of channel thalweg.

Currents/Circulation - The Van Duzen River takes a turn to the east (towards State Route 36) as it passes the project site. The river bends off the east bank, rounds the point of the gravel bar and flows back to the northwest. During high flows most of

the gravel bar is inundated. The deepest channel scouring occurs adjacent to the east bank of the river along Van Duzen County Park. Most of the river's erosive forces concentrate on the right or east bank of the river at this reach, and contributes to the eroded bank due to scouring. The river channel narrows at the point of the bar, increasing water velocity along the right bank. As a result, the erosion undermines the rootballs of the old growth redwood trees. Several of these large tree trunks fell parallel to the right bank of the river pointing downstream. At least two or three of the old growth redwood trunks have fallen perpendicularly across the river channel and onto the point of the gravel bar. During high flows, water flowing under and over the fallen tree trunks may create a turbulent flow that can cause turbidity and some scouring across the entire river channel.

The proposed project would extract most of the gravel down an average four foot depth. Extraction would take place between the baseline (bisecting the cross sections in Sheet 6 of 6) eastward to the point of the bar. The intent is to deepen this area of gravel bar so that the centerline of high flows would tend to migrate northwestward towards the left bank, thus relieving scouring pressure and flows on the right bank. The project would have a moderate, short-term (possibly lasting only one winter depending on water flows and bedload) impact on river currents and circulation. The river channel may migrate from left to right bank at will, depending on how gravel is recruited on the bar each winter and what volume of river flow. The County, if authorized this extraction, would likely have to extract gravel from this gravel bar repeatedly to compensate for recruitment over the winter.

Erosion/Sedimentation Rate - If the proposed project were implemented and no other action were taken to stabilize the right bank, the right bank would continue to erode eastward into Humboldt Grove, taking redwood trees and county park property with it. A state of equilibrium could be reached if the channel deepened and the erosion action reaches resistant rock or riverbank material to halt the right bank meander. If enough redwood

trees and other vegetation fall into the right bank, this material might also form a resistant barrier to further retard bank erosion. The proposed project would have a short-term, moderate impact on reducing bank erosion on the right bank, because it is likely the County would have to repeatedly extract the bar to widen and deepen the active river channel.

In addition, failure to act on the bank erosion may allow increased sedimentation to occur in the river from periodically eroding river banks during high flows. The proposed gravel extraction would have a short-term, minor impact on river sedimentation provided the extraction remains at least 75 feet from the edge of the water in the low flow river channel.

Water Quality - The proposed gravel extraction would have minor, short-term, adverse impacts on water quality due to increased sedimentation, provided a 75 foot buffer is maintained between the extraction area and the low flow channel of the river.

## (2) BIOLOGICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Pool and Riffle Areas (Special Aquatic Site) - The existing pool and riffle areas in the project reach are defined by a narrow pool that has developed between the point of the gravel bar and the eroded right bank. This is not a stable pool because of recurring bank erosion. Bank and vegetation debris falling into the pool may partially fill this pool. A riffle area exists downstream of the point of the bar and the fallen trees. A wider and more braided section of riffle exists during low flow periods just upstream of the gravel bar.

The proposed project would have the effect, temporarily, of widening the pool between the point of the bar and the right bank, creating a shallower but wider pool more towards the left bank and in the center of the gravel bar. Depending on gravel recruitment over winter, the gravel bar may widen again towards the right bank, re-creating the deep pool along the right bank. Any change to the existing pool and riffle complex in this reach of the

river would likely be short-term unless below normal winter flows deposit less gravel on the bar. Impacts on the pool and riffle system would tend to be neutral with normal to above normal flows.

Endangered Species - The project reach is a migratory corridor for both adult and juvenile anadromous fish including coho salmon (Oncorhynchus kisutch), chinook salmon (O. tshawytscha), and steelhead trout, O. mykiss). All three fish species are listed as threatened under the Endangered Species Act (ESA) of 1973, by the National Marine Fisheries Service (NMFS). The Corps is initiating consultation with the NMFS regarding possible project impacts on the three listed species including the critical habitat of the coho salmon and chinook salmon, pursuant to Section 7 of the ESA. The Van Duzen River and its tributaries is considered critical habitat for coho salmon and chinook salmon.

In addition, the project site is in the vicinity of known habitat for two listed bird species, the northern spotted owl (Strix occidentalis caurina), and the marbled murrelet (Brachyramphus marmoratus). Both birds nest and roost within old growth conifer forest including redwood forest. The old growth redwoods contained within the Humboldt Grove section of Van Duzen County Park represents suitable habitat for northern spotted owl and marbled murrelet. As mentioned previously in the Public Notice, the purpose of the proposed project is to prevent bank erosion adjacent to the County Park, which in turn would prevent the undermining and toppling of old growth redwoods into the river. The project would prevent further habitat loss for spotted owl and marbled murrelet, where elsewhere in nearby watersheds, old growth forests have declined due to road building and logging. The applicant states the proposed project would be performed between September 16 and October 15 in order to avoid the nesting and breeding season of both the marbled murrelet and spotted owl.

The Corps is initiating Section 7 consultation under the ESA with the U.S. Fish and Wildlife Service regarding possible project impacts to the spotted owl and marbled murrelet.

Habitat for Fish, Other Aquatic Organisms, and Wildlife - The proposed project would be performed on a dry gravel bar during low flow periods of the river. The gravel extraction would be performed with a minimum 75 foot buffer between the extraction area and the low flow channel. No river crossing would be required for this project and no equipment would be allowed to enter the low flow channel. The generation of temporary sediment and turbidity, noise and vibration impacts for the duration of the project (which be recurring from season to season), would be short-term, minor, and adverse.

#### b. IMPACTS ON RESOURCES OUTSIDE THE AQUATIC ECOSYSTEM

##### (1) PHYSICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Air Quality - Project activity would have minor, short-term, adverse impacts on air quality in the vicinity of the project site. Based on the relative minor size of the proposed project and limited to an evaluation of air quality impacts only within Corps jurisdictional areas, the Corps has determined that the total direct and non-direct project emissions would not exceed the de minimis threshold levels of 40 CFR 93.153. Therefore, the proposed project would conform to the State Air Quality Implementation Plan (SIP) for California.

Noise Conditions - The proposed project would have short-term, minor, and possibly recurring adverse impacts on ambient noise conditions within Van Duzen County Park and adjacent private property during gravel extraction, particularly with added truck traffic entering and leaving Keller Road and State Route 36.

##### (2) SOCIOECONOMIC CHARACTERISTICS AND ANTICIPATED CHANGES

Aesthetic Quality - There would be short-term, minor adverse impacts on aesthetic quality of the project area including Van Duzen County Park due to the presence of construction equipment on the

gravel bar and the sight of gravel trucks moving on private roads across the river from the County Park.

Employment - The proposed project would provide short-term, minor, but possibly recurring employment opportunities for equipment operators, truck drivers and contractors for the duration of the gravel extraction project.

Mineral Resources - The proposed gravel extraction would be performed by Pacific Lumber Company. Pacific Lumber Company would use the gravel extracted from the bar for the Company's own use (graveling of local, private roads and forest roads or other uses). The gravel extracted from the bar would not be available for commercial sale.

Public Health and Safety - The proposed project would have a long-term, minor, beneficial impact on public safety by preventing old growth redwood trees from possibly falling onto occupied county park campgrounds or day use areas if bank erosion continues eastward.

Traffic/Transportation - The proposed project would have a minor, short-term but possibly recurring impact on traffic/transportation by a minor increase in truck traffic entering and leaving a public highway (State Route 36).

Wild & Scenic Rivers - The Van Duzen along the project reach is designated within the Wild and Scenic River System. This project reach is designated as "Scenic" and contains scenic river values. The proposed project would have short-term, minor, but possibly recurring adverse impacts on Wild and Scenic river values including project reach aesthetics, noise, and river water quality. The Corps is contacting the National Park Service regarding impacts of the proposed project to Wild and Scenic River values.

#### (4) HISTORIC - CULTURAL CHARACTERISTICS AND ANTICIPATED CHANGES

A Corps of Engineers archaeologist will be requested to conduct a cultural resources assessment

of the permit area, involving review of published and unpublished data on file with city, State, and Federal agencies. If, based upon assessment results, a field investigation of the permit area is warranted, and cultural properties listed or eligible for listing on the National Register of Historic Places are identified during the inspection, the Corps of Engineers will coordinate with the State Historic Preservation Officer to take into account any project effects on such properties.

#### c. SUMMARY OF INDIRECT IMPACTS

None have been identified.

#### d. SUMMARY OF CUMULATIVE IMPACTS

The proposed project site is approximately ten miles east and upstream of the closest gravel extraction site (Noble property) on the Van Duzen River. Two more gravel extraction sites are downstream from the Noble site. The project site is also approximately 25 miles downstream from the closest gravel extraction site at Dinsmore in Trinity County (Mercer Fraser). Other activities upstream and downstream from the project site include two Simpson Timber river crossings constructed in summer only and numerous rock slope protection projects along riverfront property in the Carlotta area. The immediate project area is relatively quiet as far as in-stream activities are concerned with the exception of some nearby rock slope protection work carried out by Caltrans in the past. The proposed project would add short-term, possibly recurring but minor cumulative impacts to the Van Duzen River.

#### e. CONCLUSIONS AND RECOMMENDATIONS

Based on an analysis of the above identified impacts, a preliminary determination has been made that it will not be necessary to prepare an Environmental Impact Statement (EIS) for the subject permit application. The Environmental Assessment for the proposed action has however, not yet been finalized and this preliminary determination may be reconsidered if additional

information is developed.

#### 5. EVALUATION OF ALTERNATIVES:

Evaluation of this activity's impact on the public interest will also include application of the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b)(1) of the Clean Water Act, 33 U.S.C. Section 1344(b).

The applicant has provided an alternatives analysis that addressed the proposed project, no action, and several alternatives to the proposed project. The following alternatives are described as they appear in the applicant's alternatives analysis (all alternatives from County letter dated April 12, 2000):

Alternative 1: Rip Rap the Bank - Involves excavation of a toe trench and placing of approximately 1,600 CY of 1/4 to 3 ton rock along approximately 600 lineal feet of river bank. This alternative would also incorporate planting willow shoots within the rip-rap. This alternative would require installation of river crossing so that an excavator can access the base of the opposite bank and dig a toe trench, and place rock. Cost of this alternative is estimated at \$250,000.

Alternative 2 - Construct a 600 foot Reinforced Concrete Retaining Wall - Involves excavation in the exposed bedrock to key in the base of the concrete wall. The riverbank cannot be laid back to facilitate the retaining wall installation because there are old growth redwoods growing near the edge of the bank. The wall would also have to be keyed in to the existing ground at each end. After construction, the space between the wall and the existing river bank would be backfilled, with gravel and capped with topsoil. The top of the fill would be planted with native vegetation. This alternative would require installation of a river crossing to accommodate the heavy equipment required for excavation and installation. Estimated cost of alternative two is \$500,000.

Alternative 3 - Construct a Concrete Retaining Wall - Utilizes driven steel H piles to hold the precast

concrete slabs. This alternative would require installation of a river crossing to accommodate the heavy equipment required for pile driving, concrete slab and backfill installation. Estimated cost of Alternative three is \$550,000.

Alternative 4 - Construct a 600 foot Redwood Pile and Plank Retaining Wall. This would involve installation of 60 second growth 20-foot redwood piles and 180 four inch by twelve inch redwood planks. The planks would be installed at the top and bottom of the exposed 10 foot sections of the piles with another plank installed at the diagonal from top corner to bottom corner between piles to provide rigidity to the structure. Because the piles cannot be driven into the bedrock, a river crossing will be required to accommodate the heavy equipment needed to drill 10-foot deep holes into which the pile would be placed. Such an installation would be expected to reduce the velocity of high flows to the extent that suspended materials would be deposited, gradually filling the space between the wall and the exposed river bank. Estimated cost of this alternative is \$90,000 to \$100,000.

Alternative 5 - Install Biodegradable Fabric Mesh and Plant with Willow Shoots - this work would be done by hand and would not require a river crossing if rip-rap were not combined with this alternative. Because the exposed river bank is a vertical scarp, it would be necessary to plant the willows by creating horizontal holes in the bank. The applicant states the planted cuttings would thus be growing out horizontally from the bank; but, being positively phototropic, they would turn 90 degrees to grow straight up, putting pressure on the plant end within the bank and eventually causing it to pull loose from the bank. The applicant states the project would not succeed without extensive rip-rap incorporated into it. Estimated cost is \$25,000 without rip-rap, and \$275,000 with rip-rap.

Alternative 6 - Remove Gravel from Gravel Bar Opposite the Erosion Site (Preferred Alternative) - Use bulldozer and front end loader to remove or skim 20,000 CY of gravel from the gravel bar across channel from the right-hand eroded bank. A

900 foot by 300 foot wide area be extracted with the intent of lowering substrate, encouraging winter flow to migrate more towards the left bank of the river. No river crossing would be required. The Pacific Lumber company has agreed to provide the labor and equipment for this work and the County is to handle permitting with the respective local, state, and Federal agencies. In return, the Pacific Lumber company would retain the extracted gravel for use on the Company's own property. Estimated cost of this alternative to the County for obtaining authorization and performing survey work is \$4,500.

Alternative 7 - No Project - The applicant states this alternative would allow the river to continue to erode the riverbank, causing the loss of additional old growth redwoods and their habitat value for marbled murrelet and northern spotted owl. The applicant states if the surrounding areas still contained the original, extensive, old growth redwoods that existed in 1948, this alternative would be realistic. The river would be allowed to move back and forth in its natural channel meander and over its natural floodplain, taking land in some areas and building it in others. However, the applicant states with removal of most of the old growth redwoods in adjacent watersheds, the remnant forest that remains is too valuable for wildlife habitat and human appreciation to consider this alternative.

**6. PUBLIC INTEREST EVALUATION:** The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision will reflect the national concern for both protection and utilization of

important resources. All factors which may be relevant to the proposal must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

**7. CONSIDERATION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**8. SUBMISSION OF COMMENTS:** Interested parties may submit in writing any comments concerning this activity. Comments should include the applicant's name, the number, and the date of this notice and should be forwarded so as to reach this office within the comment period specified on page one of this notice. Comments should be sent to the Regulatory Branch. It is Corps policy to forward any such comments which include objections to the applicant for resolution or rebuttal. Any person may also request, in writing, within the comment period of this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Additional

details may be obtained by contacting the applicant whose address is indicated in the first paragraph of this notice, or by contacting David A. Ammerman of our Eureka Office at telephone 707-443-0855 or email dammerman@spd.usace.army.mil. Details on any changes of a minor nature which are made in the final permit action will be provided on request.

#### CITATIONS:

1. Klein, Randy; Jager, Doug; Trush, Bill; Lehre, Andre; County of Humboldt Extraction Review Team (Chert) 1999 Post-Extraction Report, prepared by the County of Humboldt Extraction Review Team (CHERT), for the Humboldt County Board of Supervisors, February 8, 2000

2. County of Humboldt; Biological Assessment of the Potential Impacts on Coho Salmon, Chinook Salmon, Steelhead, Marbled Murrelet and Northern Spotted Owl Resulting from a Bank Stabilization Project on the Van Duzen River, prepared by Humboldt County Department of Public Works, Natural Resources, February 2000

3. County of Humboldt, Letter to Corps of Engineers, Response to Pre-construction Notification comments and alternatives analysis, prepared by Humboldt County Department of Public Works, Natural Resources, April 12, 2000