

US Army Corps
of Engineers

PUBLIC NOTICE

NUMBER: 25751N DATE: November 2, 2001
RESPONSE REQUIRED BY: December 2, 2001

Regulatory Branch
333 Market Street

San Francisco, CA 94105-2197

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1. INTRODUCTION: The California Department of Fish and Game, 619 Second Street, Eureka, California 95501 (Contact: Ms. Karen Kovacs at 707-441-5789) and the County of Del Norte, Department of Public Works, 981 H Street, Crescent City, California 95531 (Contact: Mr. Ernie Perry at 707-464-7254), has applied for a Department of the Army permit to breach, over a 2-year period, the sandbar separating Lake Talawa and Lake Earl from the Pacific Ocean, and side cast excavated material onto the sandbar, in Del Norte County, California. Discharges of dredged or fill into wetlands or other waters of the U.S. are regulated by the Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. This application is being processed pursuant to the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

2. PROJECT DESCRIPTION: As shown in the attached drawings (Enclosure 1), the applicant proposes to breach an unvegetated sandbar with the use of a bulldozer, creating a channel approximately 200 feet long and approximately 20 feet wide. The excavated material would be side cast on either side of the cut as the bulldozer performs the breach. The volume of material displaced during the breaching is estimated to be between 350 and 500 cubic yards. It generally takes a period of 24 hours before breaching is complete. Breaching would be conducted between September 1 and February 15 if the water levels at Lake Earl rise above 8.0 feet mean sea level (MSL), or again on February 15 if water levels are above 5.0 feet MSL.

The purpose of the breach is to prevent flooding of local county roads. The breach may also prevent flooding of domestic wells and possible aquifer contamination.

The requested permit would be for a 2-year period only. Since 1993, the applicants, and other Federal and state resource management and regulatory agencies, have been meeting on a regular basis (known as the Lake Earl Working Group) and working to develop a longer term solution to breaching and formulating alternatives for optimal lake level management. The coordination process is continuing.

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 before a Corps permit may be issued. The applicants are notified by this Public Notice that, unless they provide the Corps with evidence of a valid request for state water quality certification to the North Coast Regional Water Quality Board within 30 days of the date of this public notice, the Corps may consider this application withdrawn. No Corps permit will be granted until the applicant obtains the required certification. A Water Quality Certification 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.

The Corps will coordinate with the State Historic Preservation Officer to take into account any effects this project may have on any cultural resources listed or eligible for listing on the National Register of Historic Places.

Although California Department of Fish and Game is producing a Lake Earl management plan in accordance with CEQA, the Corps will also coordinate with the California Coastal Commission and other affected state agencies to request their opinions concerning the management of Lake Earl.

4. PRELIMINARY ENVIRONMENTAL

ASSESSMENT: The Corps of Engineers is assessing 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.

Lake Earl, which is actually two lakes connected by a deep (18 foot) narrow channel, is a coastal lagoon separated from the Pacific Ocean by a narrow beach strand and active sand dune. Lake Talawa, the smaller of the two lakes, is closer to the Pacific Ocean. The active sand dune and beach strand separates Lake Talawa from the ocean. Since the strand and dune are subjected to erosive wave action, particularly in the winter, little vegetation has established.

Depending on currents, tides, winds, and other climatic and oceanographic conditions, the strand and dune separating Lake Talawa from the ocean may rise to 15.0 feet MSL, but usually reaches 10-12 feet

MSL. The County of Del Norte (Memorandum, Del Norte County, November 2000) reported that the sand bar elevation at the mouth of Lake Earl was 13.75 feet MSL at its lowest point on November 14, 2000 and the lake level at that time was 8.05 feet MSL. Since 1976, the strand and dune area has been excavated during the winter months, breaching Lake Talawa, and allowing the lakes' waters to flow into the Pacific Ocean.

Since 1991, records have been maintained by staff at the Lake Earl Wildlife Area on water levels at the time of manual breaching and during the rest of the year. There is evidence to suggest local landowners have excavated the beach strand and sand dune over the past 70-100 years to drain the lake. The water levels and dates of many past draining events are unknown, but the practice of draining the lake by early residents seems to have been to provide additional pastureland around the lake.

After breaching, either manually or naturally, the time to reestablish and close the breach varies, depending upon prevailing climatic and oceanographic conditions. Generally, the breach appears to be closed by late summer.

It seems likely that the breaching activity proposed by the applicants would result in substantially similar physical impacts over the next 2 years.

The Preliminary Environmental Assessment resulted in the following findings:

a. IMPACTS ON THE AQUATIC ECOSYSTEM

(1) PHYSICAL/CHEMICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Substrate - The breach site and the substrate under the nearer parts of the lake are composed of unvegetated sand, which will likely be naturally replaced by late summer of each year.

Currents/Circulation - Breaching Lake Talawa to the Pacific Ocean, particularly when the lakes have reached water levels near Ordinary High Water (OHW, 10.0 feet MSL), results in a maximum

discharge estimated in excess of 10,000 cubic feet per second (cfs). Over a 24-48 hour period, the elevation of the lakes can drop 5-6 feet MSL, and stabilize around 2-3 feet MSL when the breach site is open.

The breach and temporary high flow rate into the Pacific Ocean probably have minimal effects, if any, on offshore tidal currents or circulation patterns.

Aquifer Recharge - The relationship of aquifer recharge (the natural recharge and storage of groundwater that could be extracted for domestic wells), ground water movement, and domestic well use within the aquifer at Lake Earl is not clearly understood. A hydrology study completed by the California Department of Water Resources in 1989 identified 26 wells on lands around Lake Earl below 12.0 feet (MSL). At the 10.0 feet MSL elevation, 3 wells on private property surrounding the Lake Earl Wildlife Area are still apparently used, and about 6 wells appear to have now been abandoned (Corps Public Notice, 1995). There still exists a difference of opinion between private property owners of some of these wells and local health agencies regarding the effect of Lake Earl elevation on domestic wells.

Water Quality - Water quality is a broad term which includes salinity, biological oxygen demand (BOD), and pollutants/contaminants.

Salinity: After the sand barrier is breached, most of the Lake Earl and Lake Talawa fresh water flows into the ocean, after which, salt water flows into the lakes, mixing with the remaining fresh water. The majority of salt-water intrusion appears to be confined to Lake Talawa, since most of the brackish water plant communities are found around the margins of Lake Talawa. In addition to the opinions mentioned in the previous section, there is also discussion about whether the wells become contaminated with salt or brackish ground water.

BOD: Some estuarine systems tend towards stagnation if not breached or flushed periodically. This tendency does not apparently manifest at Lake Earl. During the Tetra Tech investigation (see Wetlands section below), oxygen levels were fairly high.

Pollutants/Contaminants: The water has not been tested for contaminants, however, a resolution

signed and approved on November 14, 1996, the Del Norte County Board of Supervisors stated that a lake level of 10-12 feet MSL would result in the flooding of wells and septic systems. Some septic systems (septic tanks and leach lines) for neighboring property owners could fail if the water level of Lake Earl were held at the 10.0 foot MSL elevation over a prolonged period of time.

(2) BIOLOGICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Wetlands - The Lake Earl Wildlife Area was acquired in 1975 by the California Department of Fish and Game (CDF&G) for the purpose of protecting and enhancing these coastal wetlands. In 1998 there were approximately 2,382 acres of estuarine wetlands, 2,599 acres of palustrine wetlands, and 10,018 linear feet of riverine habitat. For more detailed descriptions of such habitats, a list of plant species, and comparison of habitat change over time, refer to the (Final) Intensive Habitat Study for Lake Earl and Lake Talawa, prepared by Tetra Tech Incorporated, dated March 2000. A copy of the Tetra Tech Inc. report is available at the Del Norte County Library.

When the lake is breached, the lake water level lowers to around 2-3 feet MSL and the size of the lake decreases from 4,826 acres (at 10 feet MSL) to 2,191 acres. Some of the fringe wetlands become drier and some of the submerged wetlands become temporarily exposed.

Many wetland types are more productive with a fluctuating water table. The submerged wetlands would become exposed, would be less anaerobic (without oxygen) and would temporarily produce more vegetation. This additional vegetation would eventually become submerged again, and be the basis of the aquatic food chain.

Similarly, the fringe wetlands around the lake would become less saturated, less anaerobic, and more fertile.

The fluctuating productivity is a function of the variable water table, however, the quantity and

quality of the wetlands don't significantly change until the management of lake shifts to a consistently different range of lake levels or breaching periods.

Mud Flats (Special Aquatic Site) - There are approximately 52 acres of mud flats at the Lake Earl Wildlife area, a relatively small portion of the 5033 acres of jurisdictional waters present. More information is required to determine the effects of breaching on the mudflats.

Wildlife Sanctuaries - Breaching the lake at 8.0 feet MSL is a compromise among the needs of several species. There is no single breaching level or time that protects all the resources of the Lake Earl Wildlife Area. For example, spring breaching for anadromous fish conflicts with management for the tidewater goby and Oregon silverspot butterfly. High level breaching favors waterfowl species but causes erosion at cultural resource sites.

Endangered Species - There are several federally registered threatened or endangered species which may use a portion of Lake Earl including tidewater goby, Oregon silverspot butterfly, California brown pelican, western lily, Aleutian Canada goose, western snowy plover, bald eagle, peregrine falcon and coho salmon. According to the Tetra Tech Inc. report, the proposed breaching may affect tidewater gobies, coho salmon and the Oregon silverspot butterflies. The Corps will initiate formal consultation for these species, and any other federally listed threatened or endangered species, which may be affected by this project, with the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

Habitat for Fish, Other Aquatic Organisms, and Wildlife - The project area is well known for the many bird species, including aquatic birds, which use the area for migration stop, feeding, nesting, etc. Breaching the sandbar to control the lake levels would affect different bird species in different ways. The 4.0 feet MSL elevation would therefore tend to favor exposed mudflat and increased shorebird activity rather than waterfowl abundance.

b. IMPACTS ON RESOURCES OUTSIDE THE AQUATIC ECOSYSTEM

(1) PHYSICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Air Quality - Project activity would have minor, short-term 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 within Corps jurisdictional areas only, 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 breaching would also have minor, short-term impacts on noise conditions in the project area.

(2) BIOLOGICAL CHARACTERISTICS AND ANTICIPATED CHANGES

The lake ecology appears to be tied to periodic breaching. The sand barrier is generally closed by late summer. The lake fills and is either manually breached or naturally breached around 12-15 feet MSL.

(3) SOCIOECONOMIC CHARACTERISTICS AND ANTICIPATED CHANGES

Since breaching the lake at 8.0 feet MSL is a matter of maintaining the status quo, the proposed project would change the regional socioeconomic conditions very little.

Aesthetic Quality - The presence of construction equipment and associated activity would create a short-term, minor, adverse impact on the aesthetic quality of the sand barrier at this location. After previous breaching events, many nearby residents have noticed an offensive odor.

Public Health & Safety - If Lake Earl is not breached and it rises above the 9.0 foot MSL elevation, access to some undeveloped residential lots may be restricted. If the lake elevation rises above the 10.0 foot MSL elevation, septic systems

may begin to fail.

Recreational Opportunities - At lower levels, the lake will afford fewer opportunities for boating, skiing, etc. until the lake level again rises.

Recreational Fishing - After breaching the lake, there would be less surface water and less fishing opportunities, however, it seems that breaching the lake is an important part of the Lake Earl ecology.

Traffic/Transportation - If the lake is not breached and it rises above the 9.0 foot MSL elevation, some roads may become inundated.

(4) CULTURAL CHARACTERISTICS AND ANTICIPATED CHANGES

An archaeologist is currently conducting a cultural resources assessment of the permit area, involving review of published and unpublished data on file with city, State, and Federal agencies. If 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 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

None have been identified.

e. CONCLUSIONS AND RECOMMENDATIONS

Based on an analysis of the information available, the Corps has determined that additional data is needed before the significance of the impacts upon the quality of the human environment can be determined. No decision regarding the need for an Environmental Impact Statement (EIS) can, therefore, be made until the Final Environmental Assessment (EA) has been completed.

5. EVALUATION OF ALTERNATIVES: Evaluation of this activity's impacts includes 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. 1344(b)). An evaluation was made by this office under the 404(b)(1) guidelines and it was determined that the proposed project is water dependent.

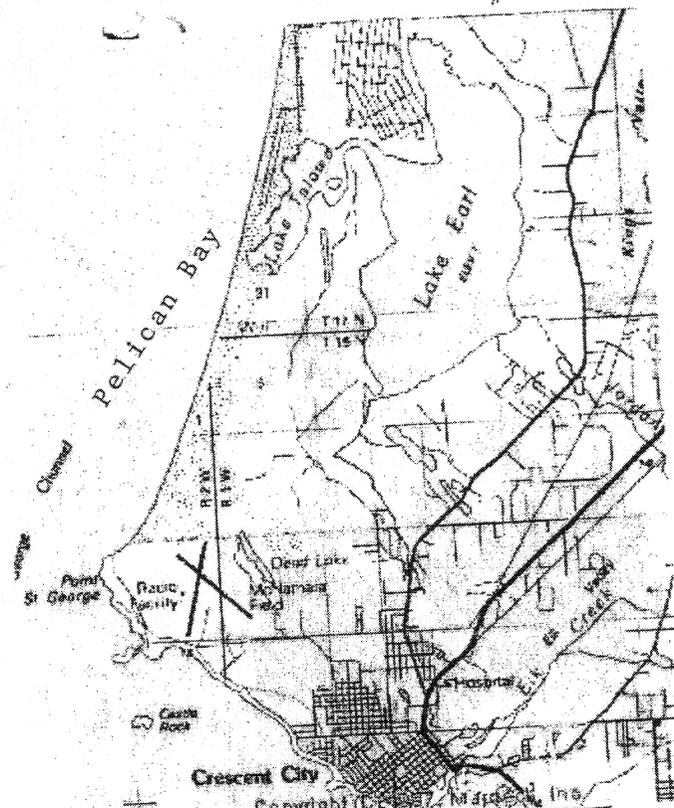
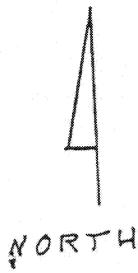
6. PUBLIC INTEREST EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on 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 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.

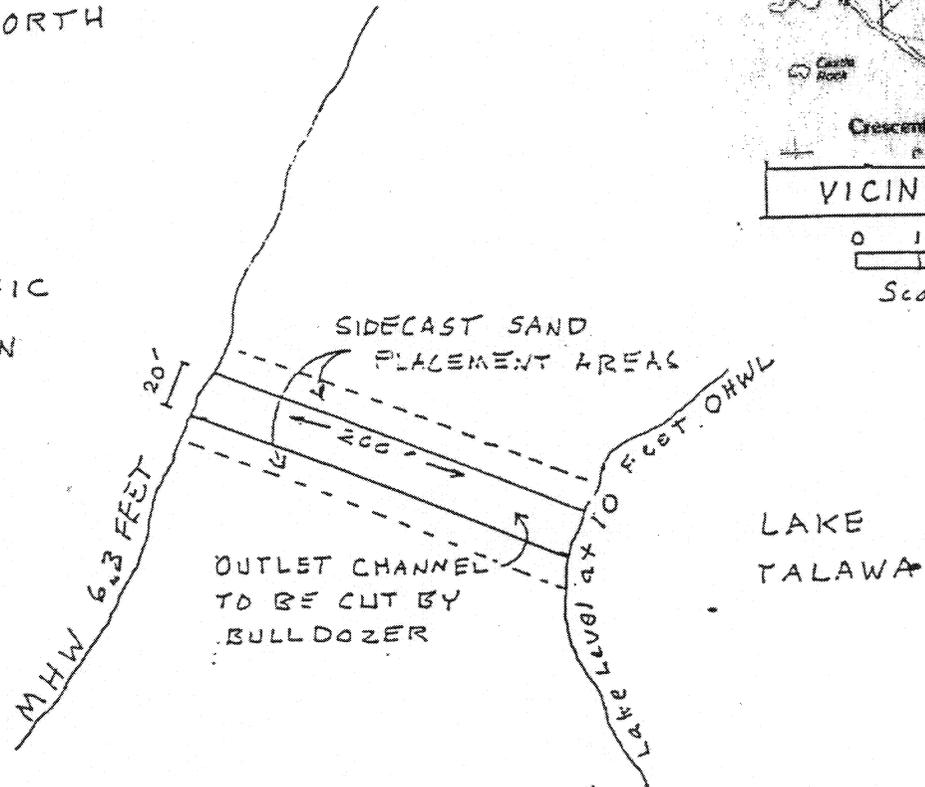
8. SUBMISSION OF COMMENTS: Interested parties may submit in writing any comments concerning this activity. Comments should include the applicant's name, the number and the date of this notice and should be forwarded so as to reach this office within the comment period specified on page one of this notice. Comments should be sent to the Corps of Engineers' 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 the Corps project manager Kelley Reid of our office at telephone 707-443-3548 or Kelley.E.Reid@spd02.usace.army.mil referencing the file number 25751N. Details on any changes of a minor nature, which are made in the final permit action, will be provided on request.

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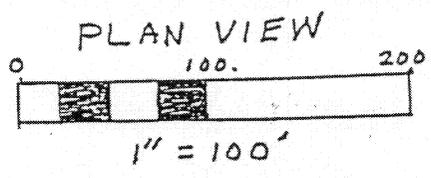


VICINITY MAP
Scale in miles

PACIFIC OCEAN



Purpose: Prevent flooding of public roads and wells.
Datum: MHW
Adjacent landowners:
CA State Lands Comm.
CA Dept. of Parks and Recreation
Pacific Shores S/D landowners

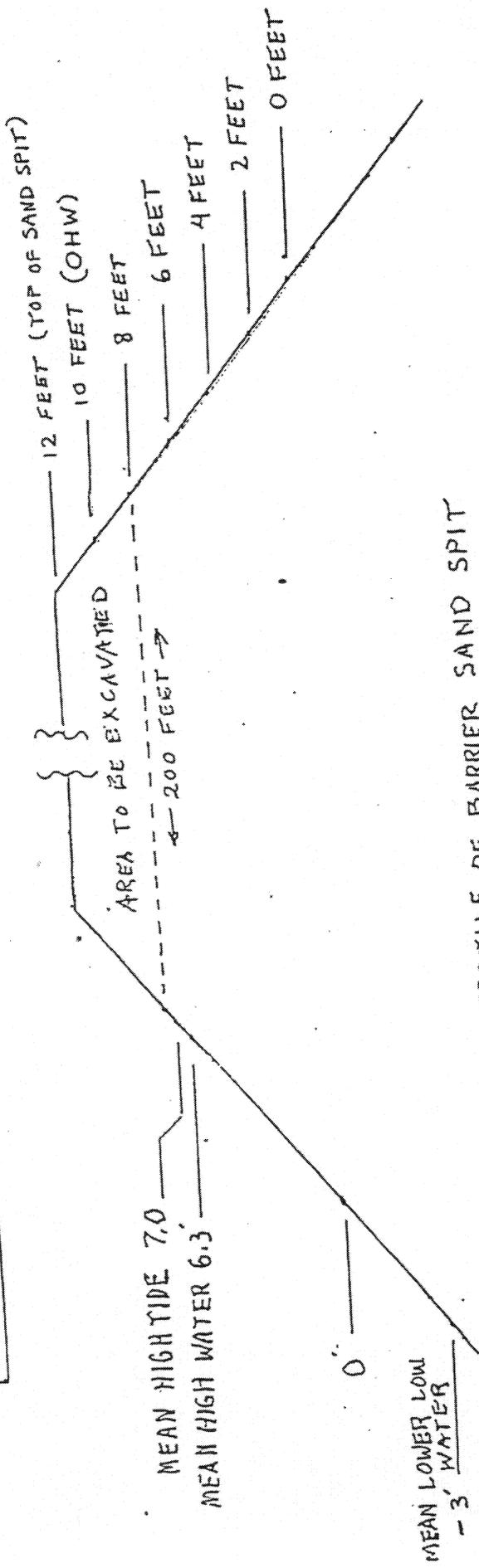


CA. DEPT OF FISH & GAME
619 2nd STREET
EUREKA, CA. 95501
&
DEL NORTE COUNTY

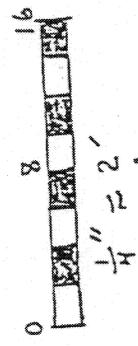
Proposed breaching of Lake Earl by cutting a channel to the ocean.
Location: Lake Earl, 5 miles North of Crescent City, Del Norte County, CA
Applicant: CA. Dept. Fish and Game & Del Norte County.

LAKE EARL
SURFACE ELEVATION

OCEAN
TIDE LEVELS



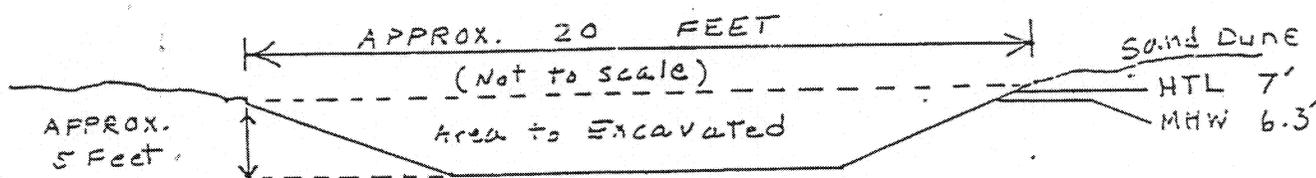
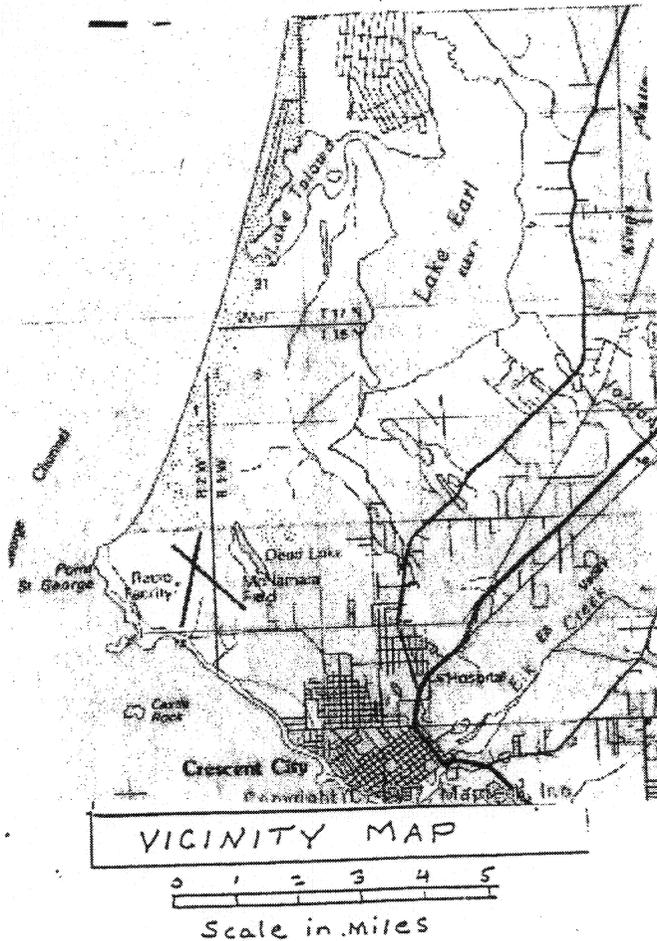
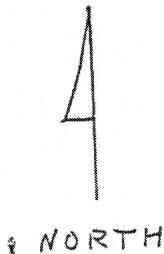
PROFILE OF BARRIER SAND SPIT
AT SITE OF PROPOSED BREACHING



Propose breaching of Lake Earl by cutting a channel to ocean.
Location: Lake Earl, 5 miles North of Crescent City, Del Norte County.
Applicants: CA Dept. of Fish and Game, and Del Norte Co.

PROFILE VIEW
CA. DEPT. OF FISH & GAME
619 2ND STREET
EUREKA, CA. 95501
AND
DEL NORTE COUNTY

Purpose: Prevent Flooding of wells and public roads.
Datum: MHW



CROSS SECTION

Purpose: prevent flooding of public roads and wells.
Datum: MHW

LAKE EARL PROJECT
CA. DEPT. OF FISH AND GAME
DEL NORTE COUNTY

Proposed breaching of Lake Earl. at Lake Earl, 5 miles north of Crescent City, Del Norte County.