MINUTE ITEM
This Calendar Item No. C25 was approved as Minute Item No. 25 by the State Lands Commission by a vote of 3 to 0 at its 08/03/94 meeting.

CALENDAR ITEM

C25

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08/03/94
WP 7084
N. Smith
PRC7084

GENERAL PERMIT - ANNUAL SEASONAL DAM

APPLICANT:
Waldo Giacomini
Box 126
Point Reyes Station, California 94956

AREA, TYPE LAND AND LOCATION:
An area of tide and submerged land within the bed of Lagunitas Creek, near the community of Point Reyes Station, Marin County.

LAND USE:
Installation of a gravel dam annually during the summer months for the impoundment of fresh water, and prevention of salt water intrusion.

CURRENT PERMIT TERMS:
Permit period:
One year, eight months beginning May 1, 1992.

Public liability insurance:
Combined single limit coverage of $100,000.

Consideration:
$150 per annum.

PROPOSED LEASE TERMS:

Lease period:
One year, ten months beginning January 1, 1994.

Public liability insurance:
Combined single limit coverage of $500,000.

Consideration:
$150 per annum.

BASIS FOR CONSIDERATION:
Pursuant to 2 Cal. Code Regs. 2003.

APPLICANT STATUS:
Applicant is owner of upland.

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PREREQUISITE CONDITIONS, FEES AND EXPENSES:
Filing fee and processing costs have been received.

STATUTORY AND OTHER REFERENCES:
A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Code Regs.: Title 2, Div. 3; Title 14, Div. 6.

AB 884:
12/11/94

OTHER PERTINENT INFORMATION:
1. The Applicant owns and operates a large scale dairy operation on the uplands adjacent to the proposed project site. Historically, the applicant has installed a temporary gravel dam annually across the bed of Lagunitas Creek, near his dairy operation during the summer months to provide a source of fresh water for irrigation and stock water purposes. The gravel dam impounds fresh water and reportedly prevents salt water intrusion up stream of the dam, thereby allowing the pumping of fresh water for irrigation purposes. The gravel material used to construct the dam is obtained from the creekbed at the dam site. The dam is annually washed out, due to heavy winter runoff from the Lagunitas Creek watershed, thereby returning the gravel to the creek.

2. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

3. A Finding Of No Significant Impact (FONSI) was prepared and adopted for this project by U.S. Army Corps of Engineers (USACOE), San Francisco District. The document was circulated for public review as broadly as State and local law may require and notice was given meeting the standards in 14 Cal. Code Regs. 15072(a). Therefore, pursuant to 14 Cal. Code Regs. 15225, the staff recommends the use of the federal FONSI in place of a Negative Declaration.

APPROVALS OBTAINED:
U.S. Army Corps of Engineers.

FURTHER APPROVALS REQUIRED:
State Lands Commission.

EXHIBITS:
A-1. Land Description
A-2. Land Description
B. Location Map
C. Public Notice 18843N83 and USACOE Conditional Permit
D. Finding of No Significant Impact

IT IS RECOMMENDED THAT THE COMMISSION:

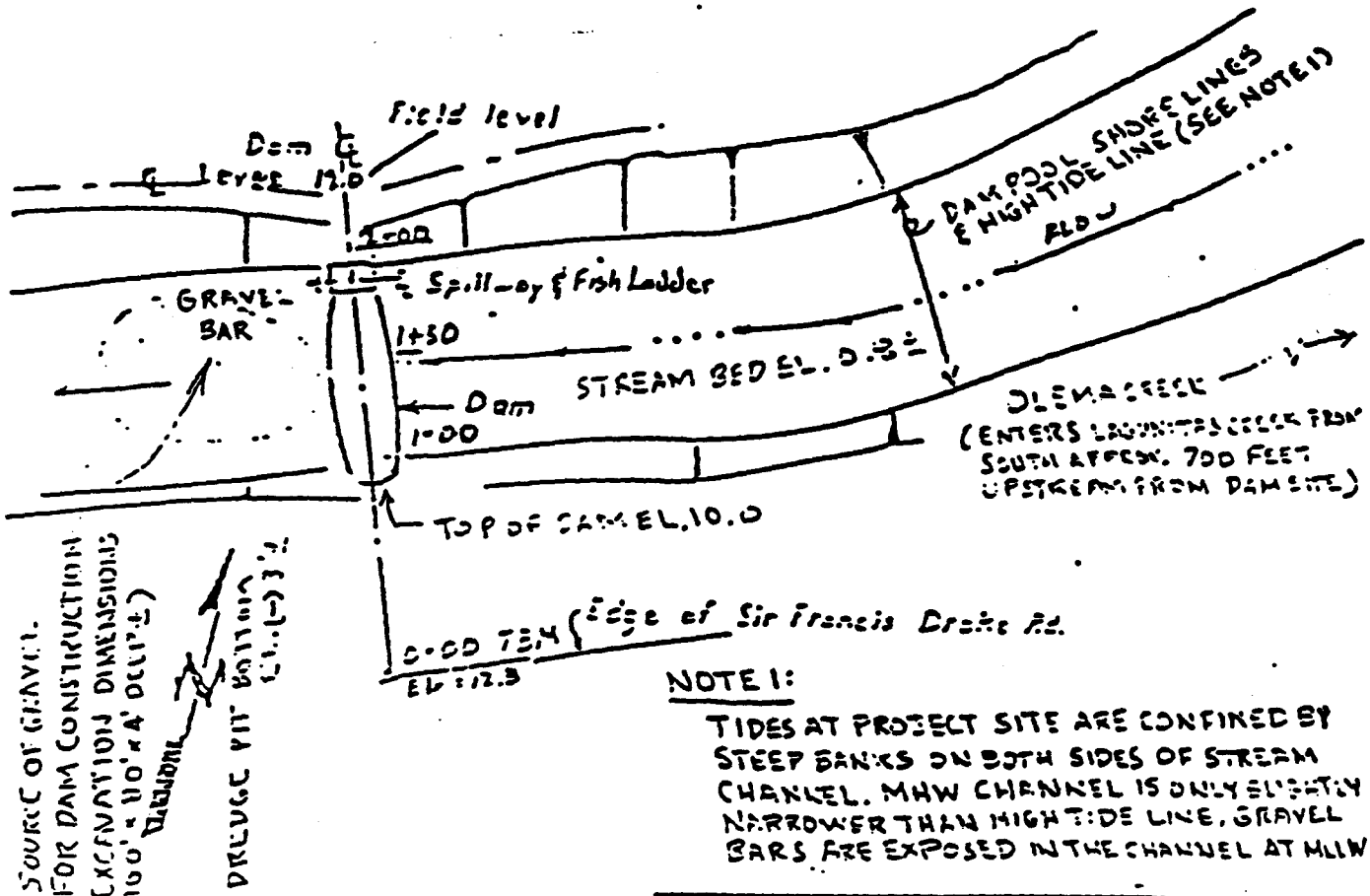
1. FIND THAT THE FINDING OF NO SIGNIFICANT IMPACT, PREPARED AND ADOPTED FOR THIS PROJECT BY U.S. ARMY CORPS OF ENGINEERS, MEETS THE REQUIREMENTS OF THE CEQA. THEREFORE, PURSUANT TO 14 CAL. CODE REGS. 15225, ADOPT SUCH FEDERAL DOCUMENT FOR USE IN PLACE OF A NEGATIVE DECLARATION.

2. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.

3. AUTHORIZE ISSUANCE TO WALDO GIACOMINI OF A ONE-YEAR TEN-MONTHS GENERAL LEASE FOR THE ANNUAL CONSTRUCTION OF A SEASONAL DAM BEGINNING JANUARY 1, 1994; IN CONSIDERATION OF ANNUAL RENT IN THE AMOUNT OF $150, PROVISION OF PUBLIC LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF $500,000; FOR ANNUAL INSTALLATION OF A SEASONAL DAM ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

EXHIBIT "A-1"

LAND DESCRIPTION



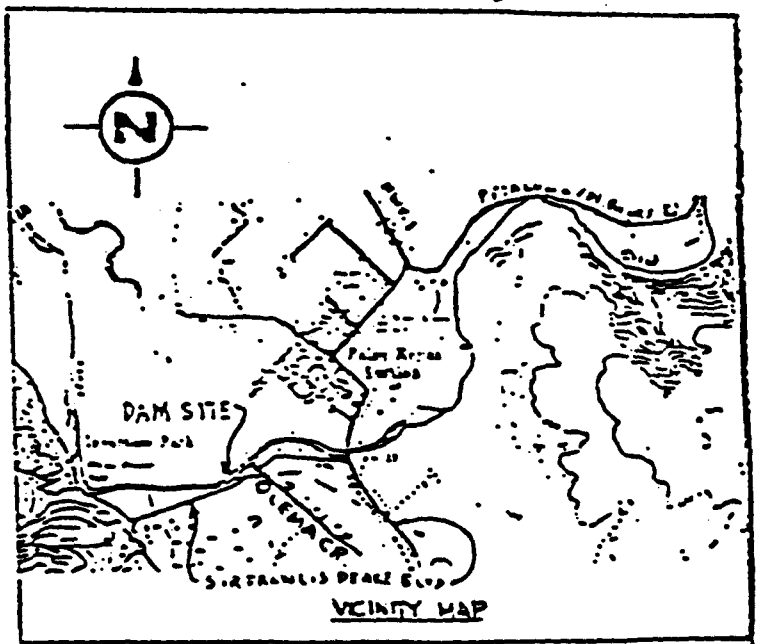
NOTE 1:

TIDES AT PROJECT SITE ARE CONFINED BY STEEP BANKS ON BOTH SIDES OF STREAM CHANNEL. MHW CHANNEL IS ONLY SLIGHTLY NARROWER THAN HIGH TIDE LINE. GRAVEL BARS ARE EXPOSED IN THE CHANNEL AT MLLW.

PLAN

Scale - 1"=100'

0 25 50 75 100



VICINITY MAP

PURPOSE: PREVENT SALINITY INTRUSION INTO PASTURE IRRIGATION WATER

DATUM: MLLW

ADJACENT PROPERTY OWNERS:

1. STATE OF CALIF.
2.
3.

PLAN VIEW & VICINITY MAP WITH-PROJECT CONDITION

RICH GIACCMINI
P.O. BOX 85
PT. REYES STA., CA 94956

PROPOSED SUMMER DAM

IN: LAGUNITAS CREEK

AT: POINT REYES STATION

APPLICATION BY: RICH GIACCMINI

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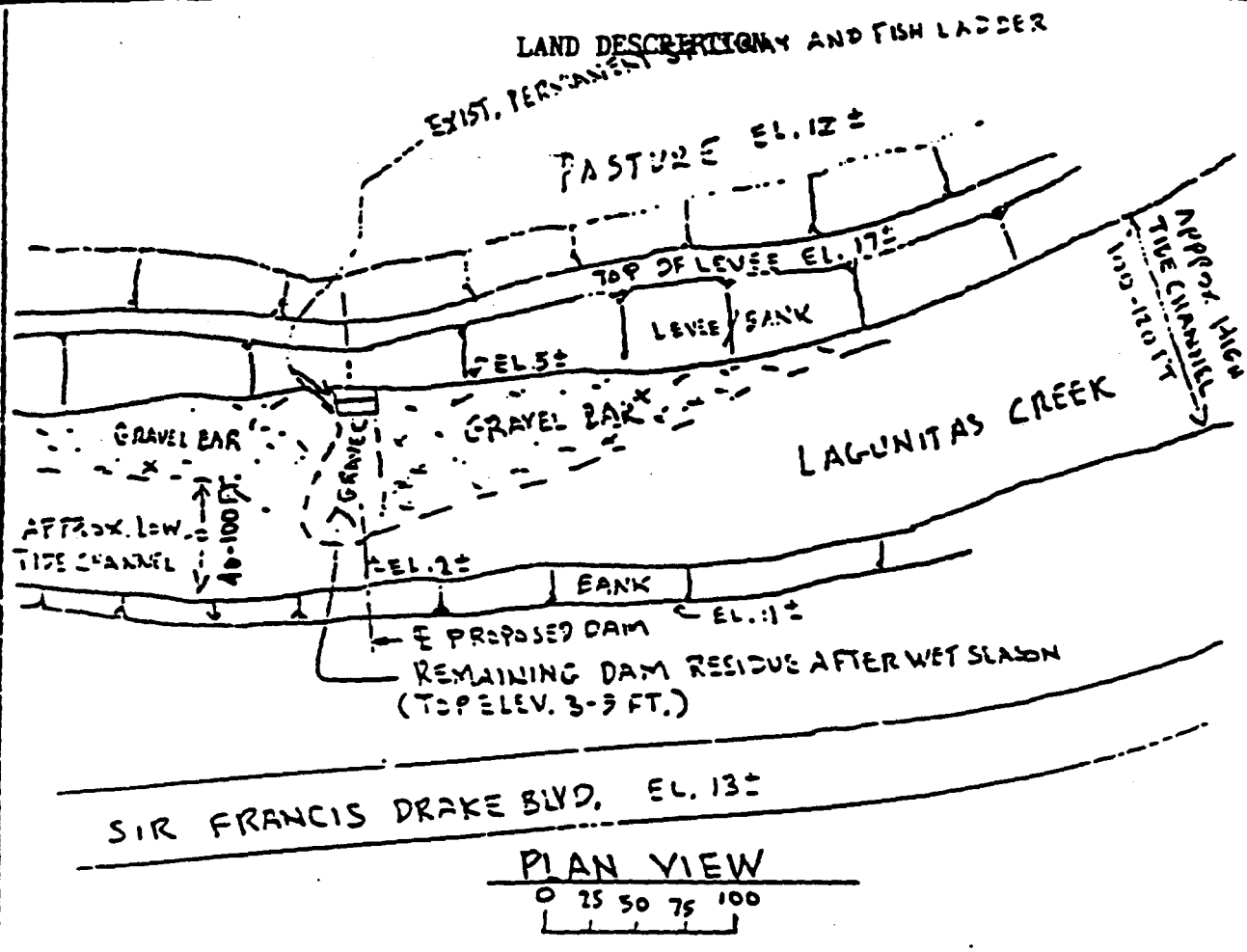
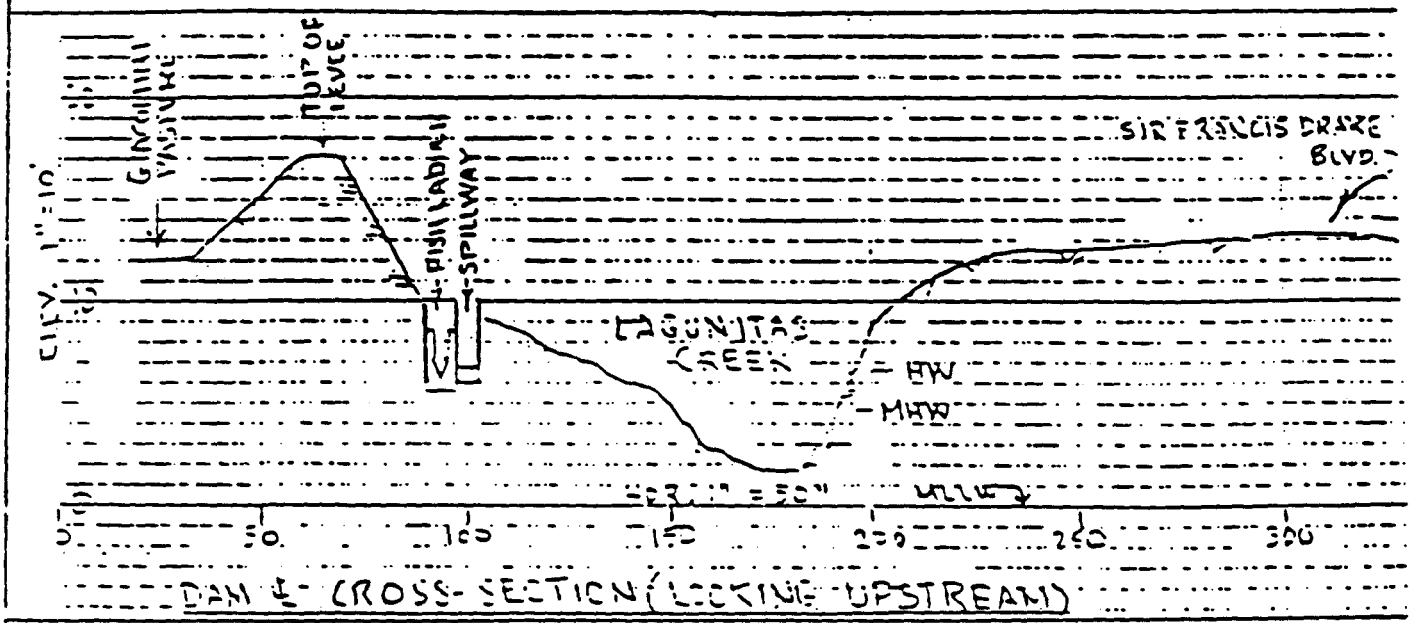
DATE 9/2021

ATTACHMENT 2B

EXHIBIT "A-2"





NOTE: EXISTING SITE CONDITIONS SHOWN ARE AS THE SITE WAS PRIOR TO INSTALLATION OF THE DAM IN JUNE 1993

PURPOSE: PREVENT SALINITY INTRUSION INTO PASTURE IRRIGATION WATER
DATUM: MLLW
ADJACENT PROPERTY OWNERS:
1. STATE OF CALIF.
2.
3.

PLAN VIEW AND CROSS-SECTION "EXISTING" SITE CONDITIONS

RICH GIACOMINI
P.O. BOX 85
PT. REYES STA., CA 94956

PROPOSED SUMMER DAM

IN LAGUNITAS CREEK
CALENDAR PAGE STATION 147
COUNTY OF: MARIN STATE: CA
MINUTE PAGE RICH GIACOMINI 2822
SHEET 1 OF 2 DATE 5/5/93

ATTACHMENT 2A

EXHIBIT B

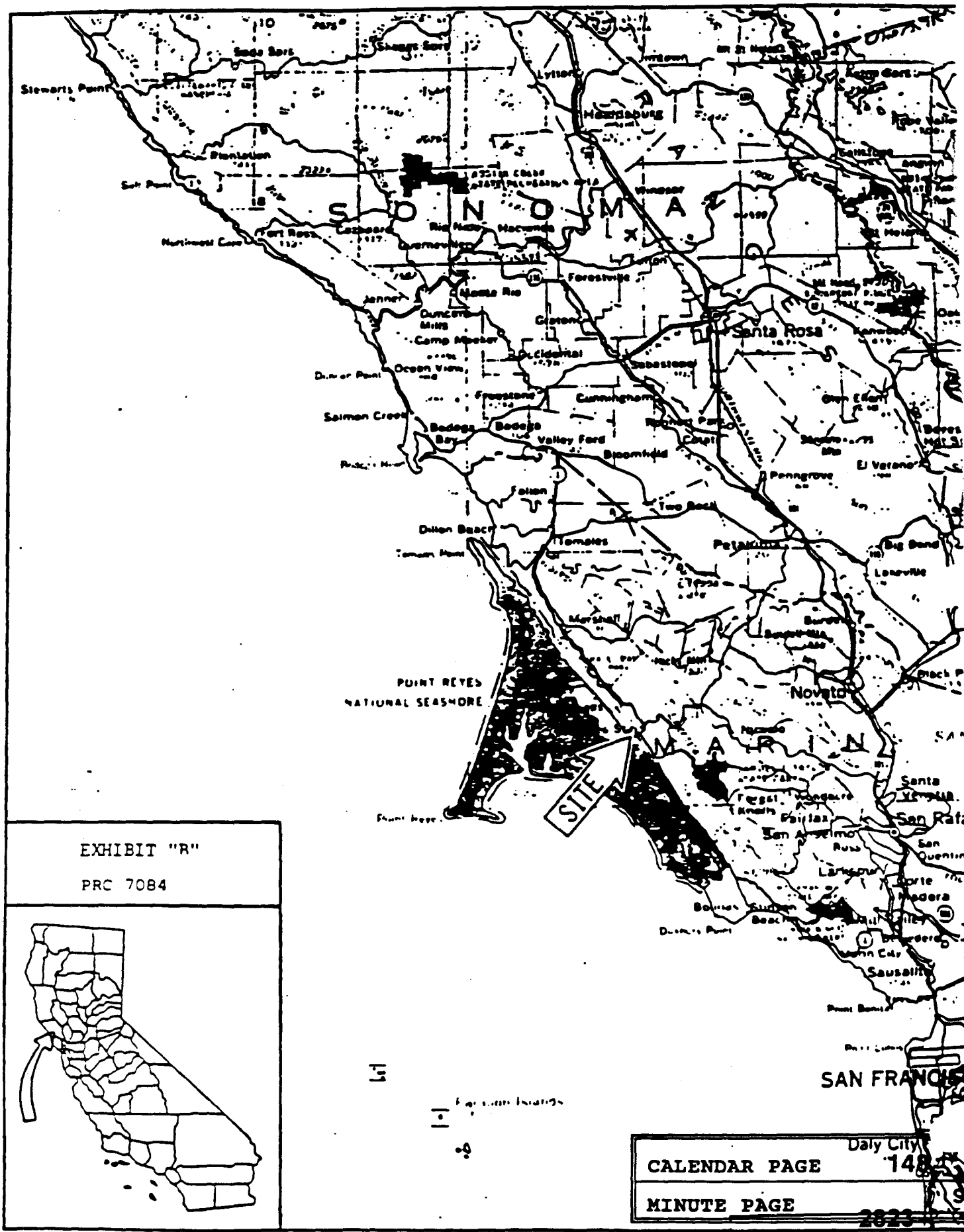


EXHIBIT "B"

PRC 7084

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SAN FRANCISCO DISTRICT

US Army Corps of Engineers

PUBLIC NOTICE

NUMBER: 18843N83 DATE: Feb. 4, 1994

RESPONSE REQUIRED BY: March 7, 1994

Regulatory Branch
211 Main Street
San Francisco, Ca. 94105-1905 PERMIT MANAGER: David Ammerman PHONE: (415) 744- 3037, ex

The Waldo Giacomini Dairy Ranch, P.O. Box 85, Point Reyes Station, California 94956 (Contact: Mr. Richard Giacomini at 415-663-1449) has applied for renewal of a Department of the Army authorization to place approximately 1,300 cubic yards of fill for construction of a summer dam (annually over a five-year period beginning in June, 1994) across the tidal reach of Lagunitas Creek, approximately 2,500 feet downstream from the State Highway 1 bridge, near the community of Point Reyes Station, in Marin County, California.

This application is being processed pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344)

The applicant states the purpose of the above proposed summer dam is to impound water upstream of the dam and raise the surface of the impoundment to a level high enough to prevent salinity intrusion from tidal influx of Lagunitas Creek. By preventing salinity intrusion upstream of the dam, sufficient water of satisfactory quality can be extracted by pumping for use in the applicant's dairy operation. The dam would incidentally prevent saline water from intruding into the adjacent Point Reyes Station community's domestic water supply during the periods of low stream flow.

As shown on the attached drawings, t applicant would construct a gravel dam approximately 10 feet hig 100 feet long, 8 feet wide at the to and 60 feet wide at its base. The fi material would be gravel obtained fr the creek bed immediately downstream of the damsite. Approximately 1,300 cubic yards of material would be excavated by dragline or bulldozer t form the dam. The dam would abut against an existing permanent spillw which contains a Denil fish ladder. The applicant states the summer dam has been installed in thi fashion for each of the past 49 year

In the fall of each year, the dam would be breached by naturally occurring high stream flow after winter storms or would be breached b the applicant by November 1, 1993. Currently, the applicant must obtain approval from the Corps of Engineers and other resource agencies before leaving the dam installed beyond November 1, 1993 as upstream adult, anadromous fish migration usually occurs during this time period.

The applicant previously was issued Corps Permit No. 16700N63 on May 11, 1987 to install the summer da into Lagunitas Creek over a five-year period. The special conditions of th original permit required the applican to provide the Corps of Engineers wit information on anadromous fisheries before and after installation of the summer dam and on salinity and water temperature data for both pre and post-installation of the summer dam.

Since i[illegible] of the original permit the applicant has submitted t

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the Corps of Engineers the Giacomini Dam Environmental Assessment, prepared by A.A. Rich and Associates dated November 6, 1988 and an Alternatives Analysis for the summer dam dated December 1, 1987 which included salinity studies, fish life histories and migration patterns for Lagunitas Creek.

In 1991, the applicant requested a time extension to allow annual installation of the gravel dam while the applicant attempted to obtain funding for additional studies required as special conditions of the original permit and to prepare an ongoing, interim study of fish migration. The Corps of Engineers granted a time extension by Letter of Permission No. 16700N63A dated December 17, 1991 with an expiration date of December 31, 1993.

In the spring of 1993, the applicant, in response to resource agency concerns over the summer dam's potential impacts to downstream juvenile fish passage, proposed to delay installation of the summer dam for the 1993 season until June 15, 1993 instead of May 15, 1993. In addition, the applicant proposed to construct a pipeline connecting the applicant's irrigation wells with the North Marin Water District wells located upstream from the summer dam. This pipeline would provide irrigation for the applicant's dairy operations on an interim basis until the dam is installed on June 15, 1993.

The Corps of Engineers granted Letter of Modification No. 16700N63B for delaying dam installation until June 15, 1993 and for the applicant t conduct beach seining studies of fis on Lagunitas Creek. The pipeline itself is not in Corps jurisdiction and is not regulated by the Corps.

The summer dam was actually not installed until June 23, 1993. The applicant's consultant, Western Ecological Services Company, Inc., prepared and submitted to the Corps Engineers a Fish Seining Study of Lagunitas Creek dated July 26, 1993.

The current permit application covered in this Public Notice, Application No. 18843N83, is for renewal of the applicant's 1987 Corp permit for a five-year period to install the gravel dam on an annua basis.

The applicant proposes, as mitigation for the summer dam's impacts to downstream fish migration to continue on an annual basis to delay installation of the dam from mid-May to as late in June as possib depending on the level of salinity intrusion occurring in Lagunitas Cre due to lack of freshwater flows expected during that time period. Th applicant would continue to use the pipeline diversion as installed during the 1993 season to provide interim irrigation for the applicant dairy operation.

The applicant is not considering conducting further fish migration o stream condition studies due to: (1 Cost- the applicant cannot afford t spend money on further studies, (2) The National Park Service may consi

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purchase of the applicant's property in the future for wetlands restoration, and (3) There is still pending a California State Water Resources Control Board order setting streamflows for Lagunitas Creek which could effect the applicant's property.

3. The applicant has been informed to notify the California Coastal Commission to determine whether a permit or consistency determination is required under the Coastal Zone Act of 1972 for the above project. The California Coastal Commission previously issued Permit No. 504 on December 2, 1974 with no expiration date. Since 1974, the California Coastal Commission did not require renewal of a permit as the project. described above had not changed substantially in past years.

The applicant has been informed to notify the Regional Water Quality Control Board, San Francisco Bay Region to determine the need for State water quality certification. The applicant has also been informed to notify the California Department of Fish and Game to consummate annual Streambed Alteration Agreements with that Department.

If the State Water Resources Control Board determines that this project is consistent with the California Water Quality Control Plan, Requirements adopted by the Regional Board and Sections 301, 302, 303, 306 and 307 of the Clean Water Act, the State will issue a Certificate of Conformance with Wate Quality Standards to the project proponent. Those parties concerned with any water quality problems that may be associated with this project should write to the Executive Office California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, California 94612, by t close of the comment period of this public notice.

4. Corps of Engineers has assessed the environmental impacts of the action proposed in subject permit application 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. Unless otherwise stated, the Preliminary Environmenta Assessment presented herein describe only the impacts (direct, indirect, and cumulative) resulting from activities within the jurisdiction o the Corps of Engineers. The Environmental Matrix and other worksheets and supporting data used the preparation of this Preliminary Environmental Assessment are on file in the Impact Analysis Section, Regulatory Branch, Corps of Engineer 211 Main Street, San Francisco, California.

The Preliminary Environmental Assessment resulted in the following findings:

a. IMPACTS ON THE AQUATIC ECOSYSTEM

(1) Physical/Chemical Characteristics and Anticipated Changes

Substrate - The applicant proposes to construct a seasonal gravel dam in Lagunitas Creek, requiring the placement of 1,300 cubic yards of sand and gravel fill. The dam would measure 100 feet in length, 10 feet in height, and 60 feet in width at the base. The footprint would be 6,000 square feet.

Gravel would be obtained by dragline excavation of the bar immediately downstream of the dam. Gravel would be redeposited in the borrow area when the dam is washed out.

Streamflow - Lagunitas Creek is one of two major freshwater tributaries to Tomales Bay. Its watershed measures 82 square miles (Figure 1). Two dams have been constructed on the main stem of the creek - Peters Dam (Kent Reservoir) and the Lagunitas Dam. Nicasio Creek, a major tributary to lower Lagunitas Creek, is also dammed. These reservoirs, which are operated by the Marin Municipal Water District, control 70 percent of the watershed and result in decreased winter and spring flows and decreased peak flows (Philip Williams and Associates, 1993). In addition to damming, the watershed has been highly modified through historic and current land use practices, including logging and cattle grazing.

Watershed modification has altere the sediment budget of Lagunitas Creek. Logging and cattle grazing have resulted in increased sediment input while damming has reduced the frequency of flushing flows, which would normally remove sediment from the channel. On the other hand, the constriction of the channel by dikes and the entrapment of sediment behin the dams would generally decrease sedimentation into the creek. It appears that the combination of thes factors has resulted in a cycle of aggradation between floods followed scour during high flows, with a long-term trend of aggradation. The channel has aggraded 2 to 3 feet ove the last century (Philip Williams an Associates, 1993).

The proposed project site is located in the Lagunitas Creek estuary, approximately 1,400 feet upstream of the creek's mouth. This reach is subject to tidal action and experiences a range of salinity leve dependent upon the magnitude of freshwater flows and tidal elevation As flows decrease in the summer, saline water moves farther upstream with the incoming tides (Figures 2 a 2a). At flows greater than 9 cubic feet per second (cfs), saline waters remain downstream of the site during most tides (Philip Williams and Associates, 1993). Between 1983 and 1990, average monthly flows of less than 9 cfs occurred in June through October (Figure 3).

When the dam is in place, it impounds freshwater flows and blocks the movement of saline water upstrea thereby altering salinity distributi

within the estuary. Water within the impoundment is then diverted at an average rate of 2.33 cfs, resulting in decreased freshwater flows downstream. The alteration of salinity distribution in the estuary is considered to be a major adverse impact.

In addition, freshwater flows in Lagunitas Creek are restricted by releases from upstream dams, which are operated by the Marin Municipal Water District. Water release requirements and water diversion rights in Lagunitas Creek are currently under review by the State Water Resources Control Board. Increased releases from the dams would increase the magnitude of flows over the Giacomini's dam, thereby reducing its impacts on salinity distribution within the estuary. However, the outcome of this review is not foreseeable.

Erosion/Sedimentation Rate - The impoundment of flows upstream of the seasonal dam may cause increased sedimentation in the upstream reach. Because the dam is removed by high flows, during which the majority of the suspended sediment transport occurs, this impact is considered to be minor.

Water Supply (Natural) - The proposed dam impounds fresh water for use in irrigating 328 acres of grazed pasture. This diversion decreases the magnitude of freshwater flows downstream of the dam. This is considered to be an indirect, adverse impact of dam construction.

(2) Biological Characteristics and Anticipated Changes

Pool and Riffle Areas (Special Aquatic Site) - The seasonal dam impounds water to approximately one mile upstream of the dam site, increasing water surface elevation by approximately 4 feet (measured at the dam) (WESCO, 1993). The impoundment inundates pool and riffle habitat during the period of dam installation.

Endangered Species - No impacts to any federally listed threatened or endangered species have been identified at this time. However, if such impacts are identified, the Corps will initiate consultation with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service as required by Section 7 of the Endangered Species Act. However, several special status species occur (or occurred historically) at the site.

The California red-legged frog (Rana aurora draytonii), a candidate species, and the northwestern pond turtle (Clemmys marmorata marmorata), a candidate 2 species, inhabit the impoundment and the irrigation ditches fed from the impoundment (Philip Williams and Associates, 1993). These species require freshwater habitat, such as that created by the dam, and in the absence of the dam may be extirpated from the immediate site. These species would likely migrate upstream as saline flows enter this portion of the estuary, usually in May or June. The dam, therefore, is not considered to directly benefit these species. However, the dam may indirectly benefit them by providing freshwater to the irrigation ditches.

The tide water goby (Eucyclogobius newberryi), a proposed endangered species, historically inhabited Lagunitas Creek. Although this species was once abundant, it has not been observed in the creek since 1953 (Rich, 1988; Philip Williams and Associates, 1993). This estuarine species prefers brackish water with salinity less than 10 parts per thousand (ppt). Historically, it likely inhabited the brackish waters of the lower estuary and moved upstream with the salinity gradient as freshwater flows receded in the spring or summer. The summer dam, which has been constructed annually since 1943, would block this upstream migration and trap gobies (and other brackish water species) in the saline waters downstream. Although the dam does not directly impact this species, it may preclude its reestablishment in Lagunitas Creek.

The coho salmon (Oncorhynchus kisutch), a species which has been petitioned for listing, also occurs in Lagunitas Creek. This species migrates through the project site during the adults' upstream migration to their spawning grounds and during the smolts' migration to the ocean. Impacts to this species are discussed under the heading "Habitat for Fish, Other Aquatic Organisms, and Wildlife."

Habitat for Fish, Other Aquatic Organisms, and Wildlife - As discussed under the heading "Streamflow," the dam is constructed in the estuarine portion of Lagunitas Creek and affec the estuary by reducing freshwater flows and precluding or reducing the mixing of fresh and saline waters. The elimination of this mixing, whic alters the estuarine salinity distribution, likely eliminates or reduces brackish water species from the creek during the period when the dam is in place. Some species may b displaced permanently; however, this is difficult to assess because the d has been installed annually since 1943.

Surveys conducted in the impoundment behind the dam identifie the following: coho salmon, steelhea trout, Sacramento sucker, California roach, carp, largemouth bass, bluegill, staghorn sculpin, prickly sculpin, surf smelt, green sunfish threespine stickleback and yellow goby (Cox, 1987; WESCO, 1993). In addition, white sturgeon have been observed below the dam. Due to the spatial and temporal focus of these surveys, this species list is not complete for the Lagunitas Creek.

Although they do not spawn in Lagunitas Creek, white sturgeon (Acipenser transmontanus) are believe to use it as a nursery. The dam prevents the upstream migration of this species, thereby restricting habitat availability. The extent of habitat upstream of the dam (to which access is precluded) has not been measured or described. The Departmen of Fish and Game believes that a shallow riffle would prevent sturgeon from migrating upstream of the Highwa One bridge (Cox, B., California Department of Fish and Game, personal communication, 1991).

Coho salmon (Oncorhynchus kisutch) and steelhead trout (Oncorhynchus mykiss) occur in Lagunitas Creek. No spawning has been documented at the project site (including within the impoundment); however, these species migrate through the site on their way to spawning grounds upstream and during their return to the ocean. The dam may impact these species by blocking the immigration of spawning adults, entrapping emigrating smolts in the impoundment, and reducing the available food supply.

Immigration of Spawning Adults: The dam may inhibit the upstream migration of steelhead trout and coho salmon returning the spawn in the upstream reaches of Lagunitas Creek and its tributaries. To mitigate this impact, the applicant has constructed an 8-step Denil fishway. The occurrence and magnitude of this impact depends upon the removal of upstream migration relative to the installation of the dam and the effectiveness of the Denil fishway. The effectiveness of the fishway has not been documented and can not be included in this assessment.

The initiation of immigration is correlated with the occurrence of the season's first high flows. Smith (1986) reports that coho immigration may begin as early as October. However, Rich's (1991) survey of existing records reports that, in the 21 years sampled between 1949 and 1984, coho salmon were first sited in Lagunitas Creek between November 6 to January 7. The distribution of these sightings is as follows: November, 9 years (43%); December, 1 years (47%); and January, 2 years (10%). However, the timing, methods and locations of these surveys are n known. This information, therefore, may not be indicative of the initiation of immigration and is not considered to be conclusive. Based the available information, coho immigration is likely to begin in October, dependent upon the timing o the first winter storm. Immigration may begin later during dry years or years when the fist storm occurs lat in the season. Coho migration continues through January. Adult steelhead begin their migration into Lagunitas Creek as early as November (Smith, 1986) and continue through March. Because the dam would be in place as late as November, it would likely impact the immigration of adul coho salmon into Lagunitas Creek. This impact may be mitigated or partially mitigated by the Denil fishway, depending on its effectiveness.

Smolt Entrapment: The dam may tra emigrating coho and steelhead smolts in the upstream impoundment. Once trapped, these smolts may be subject to temperature-induced physiological stress, increased predation, and entrainment in the irrigation intake. The magnitude of these impacts depend upon the timing of coho and steelhead smolt emigration relative to the installation of dam.

Although salmonid emigration studies have been conducted in Lagunitas Creek, none have conclusively defined the temporal window or conditions for salmonid emigration. The available data are summarized in Table 1. The peak timing of coho smolt emigration determined by the various studies

ranges from April 15 to June 15. Coho smolts were present in samples taken as late as June 24 and were present on June 15 during all but one study. The peak timing of steelhead smolt emigration determined by these studies ranges from April 7 through June 24. Steelhead smolts were present in samples taken as late as July 1 and were present on June 15 during all but one study. Based on these data, the Corps assumes that coho smolts may be present in Lagunitas Creek at least until June 24 and possibly later. Steelhead smolts may be present at least until July 1 and probably later. In addition, coho and steelhead emigration peaks may occur as late as June 15 and June 24, respectively.

The occurrence and magnitude of entrapment depends upon the timing of emigration relative to the installation of the dam. The applicant proposes to install the dam on June 15, or earlier if salinity intrusion into the pastures occurs. Installation during this period would likely inhibit coho and steelhead smolt emigration and may inhibit the emigration peaks. Dependent upon the timing of installation, the dam may result in major adverse impacts to salmonid emigration.

Emigrating smolts that are trapped in the impoundment and do not use the ladder or spillway may be subject to temperature-induced physiological stress, increased predation, depleted food resources, and entrainment in the irrigation intake. The smolts that survive impoundment conditions may remain in the estuary and emigra the following year.

Coho salmon and steelhead trout a adapted to living in cold water and may experience physiological stress when subjected to warmer temperatures. The preferred temperature of coho salmon ranges fr 11.8 to 14.6°Celsius, and the upper lethal limit is 25.8°C (Laufle, et al., 1986). The preferred temperatu of steelhead ranges from 13 to 21°C. Freshwater life stages prefer 10.0 to 12.8°C (Emmett et al., 1991). The upper lethal limit is 28°C. Water temperatures in excess of 20°C can cause smolt reversal (reversal of physiological adjustment to marine life) (Jones and Stokes, 1981). No long-term studies of the water temperature within the impoundment have been conducted; however, WESCO (1993) sampled surface and bottom temperatures at five stations in the project reach between June 3 and July 16, 1993 (Table 2). Prior to dam installation, surface temperatures ranged from 18 to 25°C. Bottom temperatures ranged from 17 to 22 °C, one to three degrees cooler than the surface at the same station. After dam installation, surface temperatures ranged from 18 to 22°C. Bottom temperatures ranged from 17 to 21 °C and were always one to two degrees cooler than surface temperatures at the same station. Based on this limited data, it appear that the dam may not result in increased water temperatures within the impoundment during the early to mid summer. No data describing temperatures within the impoundment are available for August and September, when flows are generally

lower than in June and July (Figure 3). It, therefore, is not possible to conclusively assess temperature impacts at this time.

Juvenile salmonids trapped within the impoundment also may be subject to increased predation. The impoundment may provide habitat for the non-native largemouth bass (Micropterus salmoides), which feeds on small salmonids and other fish. This species is believed to have been introduced into the creek from Kent and Nicasio Reservoirs. The effects of predation in the impoundment have not been studied. However, a 1987 electrofishing survey captured only two largemouth bass in the impoundment (Cox, 1987). None were captured in a 1993 seining survey (WESCO, 1993). These limited data are not conclusive. The presence of bass in the impoundment would result in decreased salmonid population sizes.

Furthermore, salmonids trapped within the impoundment may be entrained in the irrigation pump that diverts water from Lagunitas Creek. To prevent entrainment, the applicant has screened the irrigation intake with 5/32-inch mesh fish screen. This mitigation is considered to be adequate.

Food Availability: The dam may decrease the food supply available to salmonids. Opossum shrimp (Neomysis mercedis) is a major salmonid food resource in Lagunitas Creek. In Bratovich's surveys (1988) the shrimp was the onl important food source to salmonids sampled between May 19 and June 24. In one June sample of salmonids withi the impoundment, stomach contents averaged 205 shrimp per individual. By late June, stomach samples contained only negligible amounts of the shrimp, probably due to their depletion in the habitat upstream of the dam.

(Neomysis mercedis) resides predominantly in brackish water at th upstream end of the salinity gradient moving up- and downstream with the tides and with receding freshwater flows (Bratovich, 1988). In samples taken in Lagunitas Creek, few shrimp were found at salinities in excess of 13 parts per thousand (Bratovich, 1988). The dam eliminates the natura estuarine salinity gradient and prevents the upstream movement of thi species, trapping them in the downstream saline waters. Bratovich (1988) concluded that by late June nearly all of the shrimp were trapped below the dam. By July, few remained in the estuary. The dam's impacts or the population size and distribution of the shrimp may adversely impact th salmonid populations by reducing food availability.

In summary, the dam may adversely impact coho salmon and steelhead trou by impeding the immigration of spawning adults (coho only), entrapping emigrating smolts, and reducing food supply. Dependent upon the timing of immigration and emigration (which may vary annually) relative to the timing of dam installation, these impacts may resul in major adverse effects to the salmonid population of Lagunitas Creek.

b. IMPACTS ON RESOURCES OUTSIDE THE AQUATIC ECOSYSTEM

(1) Socioeconomic Characteristics and Anticipated Changes

Agricultural Activity - The purpose of the dam is the creation of an impoundment, allowing the diversion of water from Lagunitas Creek. This water is used to irrigate 328 acres of pasture, providing the evapotranspiration needs of the feed crop and preventing saline ground water from penetrating into the crop's root zone during the growing season. Without irrigation, the pastures would be impacted by saline conditions, and the dairy operation may become infeasible.

Commercial Fishing - By adversely impacting the coho salmon population of Lagunitas Creek, the proposed dam may impact commercial fishing. This impact is considered to be minor.

Economics - The Giacomini pastures are located on diked, formerly tidal lands of Tomales Bay. Due to their historic hydrologic condition and their low elevation, the soil and groundwater in these pastures exhibit high salinity levels. In order to maintain the pastures for grazing, the applicant must irrigate with sufficient freshwater during the dry season to meet the evapotranspiration needs of the feed crop and keep the saline groundwater table below the crop's root zone. Water impounded behind the seasonal dam is used to meet this irrigation need.

The elimination of this water supply would force the applicant to implement another supply at substantial cost or cease operation, both of which would incur major economic impacts to the applicant (see "Alternatives").

In addition, in 1990, the Giacomini Ranch produced 4.4% of the milk in west Marin County and 3.6% of the California

Cooperative Creamery's Marin County milk source (Philip Williams and Associates, 1993). Reduction in the ranch's productivity may economically impact these dairy markets.

Employment - The Giacomini Ranch currently employs eight people (Philip Williams and Associates, 1993). Reduction in ranch productivity or feasibility may reduce or eliminate this employment.

Public Health and Safety - See "Water Supply (M&I)"

Recreational Fishing - By adversely impacting the coho salmon and steelhead trout populations of Lagunitas Creek, the dam may impact recreational fishing opportunities in the watershed (see "Habitat for Fish, Wildlife, and Other Aquatic Organisms).

Water Supply (M&I) - The North Marin Water District "Coast Guard" wells are located 5,800 feet upstream of the seasonal dam, in the estuarine portion of Lagunitas Creek (Figure 4). These wells, which divert water at an average rate of 0.6 cfs (maximum rate = 1.02 cfs), are subject to tidal inundation and salinity intrusion during periods of low freshwater fl and high tides (Philip Williams and Associates,

The seasonal dam prevents salinity intrusion into the municipal water system by blocking the upstream movement of saline water during the summer low flow period. According to the District, withdrawal from these wells during the low flow season would not be possible without the Giacomini seasonal dam or some other salinity barrier.

To address the vulnerability of their wells to salinity intrusion, the District is currently testing a new well at the Gallagher Ranch, 1.3 miles east of State Route One at Point Reyes Station (Figure 4) (Nelson et al., 1992). This well is currently producing 130 gallons per minute. After completion of construction, it will remain in a standby status (Chris de Grabriel, North Marin Water District, personal communication, 1994).

As discussed under "Streamflow", water releases from the Marin County Municipal Water District dams upstream are currently under review by the State Water Resources Control Board. Increased releases from these reservoirs would mitigate or partially mitigate salinity intrusion impacts at the municipal wells. However, the outcome of this review is not foreseeable at this time.

c. Alternatives:

No Action - This alternative would deny the construction of a seasonal dam. Elimination of the dam would allow the re-establishment of estuarine mixing in lower Lagunitas Creek during the low flow season. This condition would likely benefit salmonid and estuarine species by providing a more natural (and gradua salinity gradient in the estuary and by eliminating barriers to migration

The dam plays a vital role in the operation of the Giacomini Dairy by providing freshwater for irrigation their pastures. Without adequate irrigation, these pastures would be damaged by high salinity levels. Th loss would incur major economic impacts to the ranch and would rende operation infeasible.

In addition, dam removal would eliminate the protection of the Nort Marin Water District Wells from salinity intrusion, thereby degradin the local municipal water supply. T continue providing municipal water, the District would likely be forced transfer its summer operation to the Gallagher Ranch well. The cost of connecting the system to this well i estimated at $417,000. If additiona water treatment is needed, cost woul increase by an additional $450,000 (Philip Williams and Associates, 1993).

Genazzi Site: This alternative would include the construction of a seasonal dam at the Genazzi site, upstream of the current site (Figure 5). The impacts of this dam would b similar to those of the current dam site. However, the following benefi would be provided:

A lower dam could be constructe at this site, requiring a 2-step Den fish ladder instead of the 8 steps a the current site (Philip Williams an Associates, 1993). This ladder woul be more passable by migrating salmonids.

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The lower dam would impact estuarine salinity distribution at flows less than 6 cfs, as compared to 9 cfs at the current site, thereby decreasing the duration of impacts to salinity distribution in Lagunitas Creek (Philip Williams and Associates, 1993).

The dam would be located upstream of the confluence of Olema and Lagunitas Creek, thereby increasing the availability of brackish water habitat downstream of the dam.

The cost to the applicant of relocating to this site is estimated at $200,000 (Philip Williams and Associates, 1993). In addition, the cost of pumping water from this site to the pastures (estimated at $3,700 per month) would incur additional annual expenses.

2. Historic - Cultural Characteristics and Anticipated Changes

A Corps of Engineers' 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, 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

See "Streamflow."

d. SUMMARY OF CUMULATIVE IMPACTS

The Lagunitas Creek watershed has been impacted by logging, grazing, damming, water diversion, and diking of tidal lands. Taken together, these actions have degraded the water quality and wildlife habitat of the basin resulting in declining biological diversity. By incurring the impacts discussed in this assessment, the proposed summer dam would contribute to the cumulative degradation of the watershed.

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.

Citations:

Cox, B. 1987. Memo to the File. California Department of Fish and Game, Yountville, CA.

Emmett, R.L., S.L.Stone, S.A. Hinton, and M.E. Monoco. 1991. Distribution and Abundance of fishes and invertebrates in west coast estuaries,Volume II: species life history summaries. ELMR Rep. No. 8. NOAA/NOS Strategic Environmental Assessments Division, Rockville,

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Jones and Stokes Associates, Inc. 1981. Ecological characterization of the central and northern California coastal region. Vol. II, Part 2, Species. US. Fish and Wildlife Service, Office of Biological Services, and Bureau of Land Management, Pacific Outer Continental Shelf Office, Washington, D.C. FWS/OBS-80/46.2

Laufle, J.C., G.B. Pauley, and M.F. Shepard. 1986. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (Pacific northwest)--coho salmon. U.S. Fish Wild. Serv. Biol. Rep. 82(11.48). Army Corps of Engineers, TR EL-82-4. 18 pp.

Nelson, J.O. and W.I.Wilson. 1992. Point Reyes Station Area Water System Emergency Back-up Well Environmental Assessment/Initial Study. Prepared for the North Marin Water District, Novato, CA.

Philip Williams and Associates. 1993. An Evaluation of the Feasibility of Wetland Restoration on the Giacomini Ranch, Marin County. Prepared for the National Park Service - Golden Gate National Recreational Area, San Francisco, CA.

Rich,A.A. and the North Marin Water District. 1987. The Summer Dam. Prepared for Richard Giacomini, Point Reyes Station, CA.

Rich, A.. 1988. The Giacomini Summ Dam Environmental Assessment. Prepared for Richard Giacomini, Poi Reyes Station, CA.

Rich, A.. 1991. Letter to Richard Giacomini dated July 31,1991.

Smith,G.E.. 1986. Instream flow requirements, anadromous salmonids spawning and rearing, Lagunitas Creek, Marin County. Stream Evaluation Report 86-2. California Department of Fish and Game, Sacramento, CA.

WESCO. 1993. Letter to Richard Giacomini dated July 26, 1993.

5. Evaluation of this activity's impacts includes application of the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b 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. 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

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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. 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 th 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. Interested parties may submit in writing any comments concerning this activity. Comments should include th 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 o page one of this notice. Comments should be sent to: Lieutenant Col Leonard E. Cardoza, District Engine. Attention: 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 publi hearings shall state, with particularity, the reasons for holdin 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 Ammerman of our office (telephone 415-744-3037, extension 241). 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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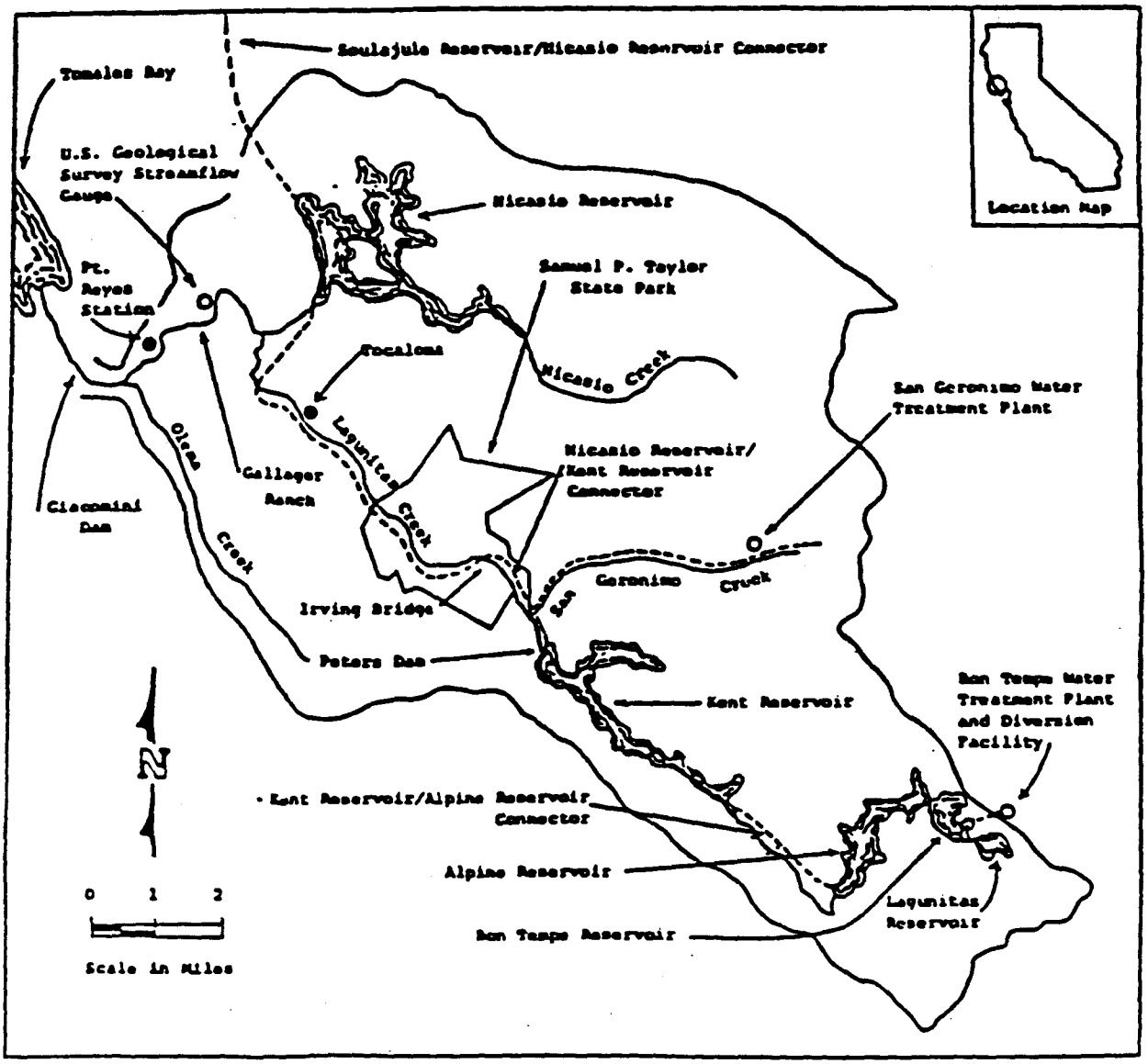
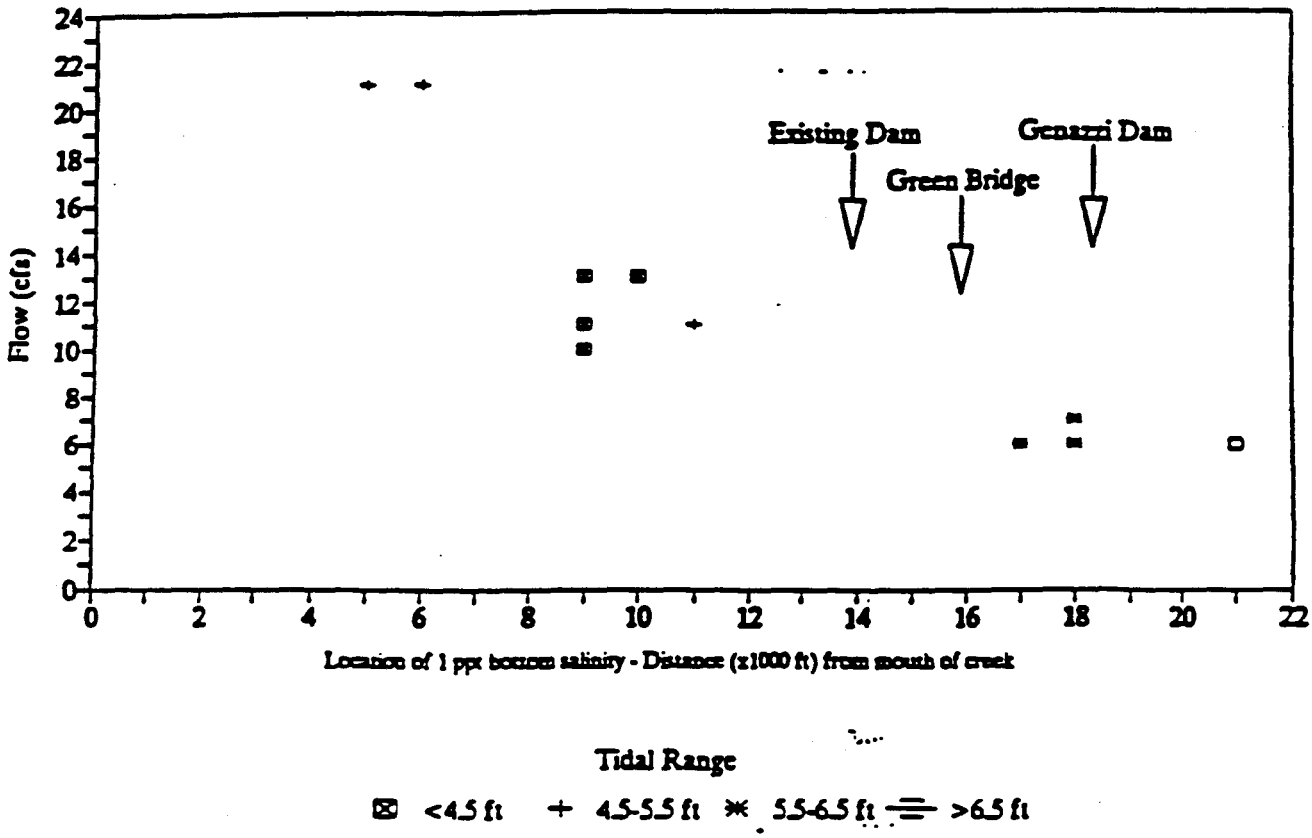


Figure 1: The Lagunitas Creek Watershed

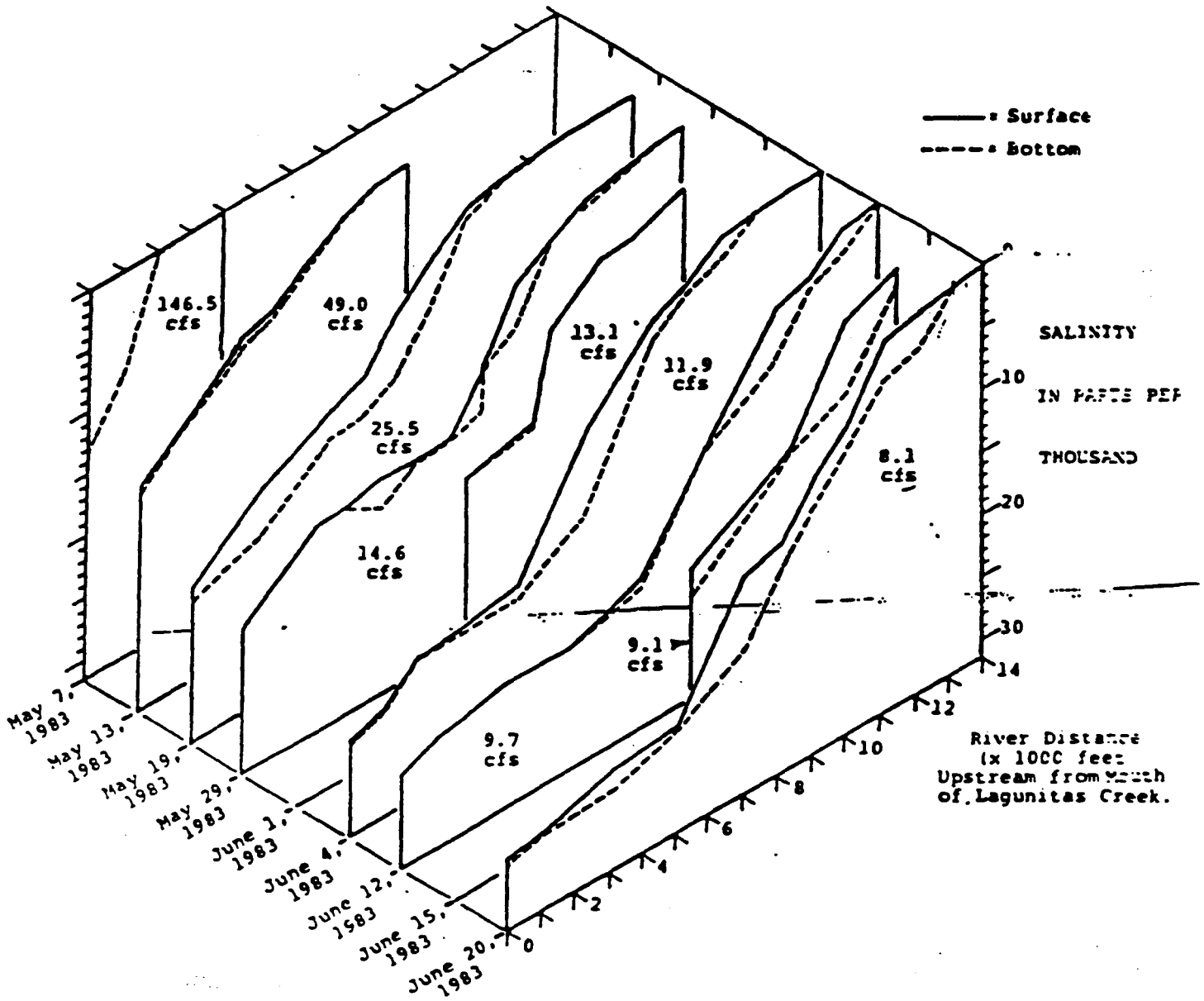
(Source: Smith, 1986)



Note: The Giacomini dam is located 100 feet upstream of station 14.

Figure 2: Correlation of Lagunitas Creek Flow and Position of Salt Water Intrusion

(Source: Philip Williams and Associates, 1993



Note: The Giacomini dam is located 100 feet upstream of station 14. The dam was installed June 1, 1983 (Rich, 1987)

Figure 2a: Surface and Bottom Salinity Concentrations (ppt) in the Lagunitas Creek Estuary

(Source: Bratovich, 1988)

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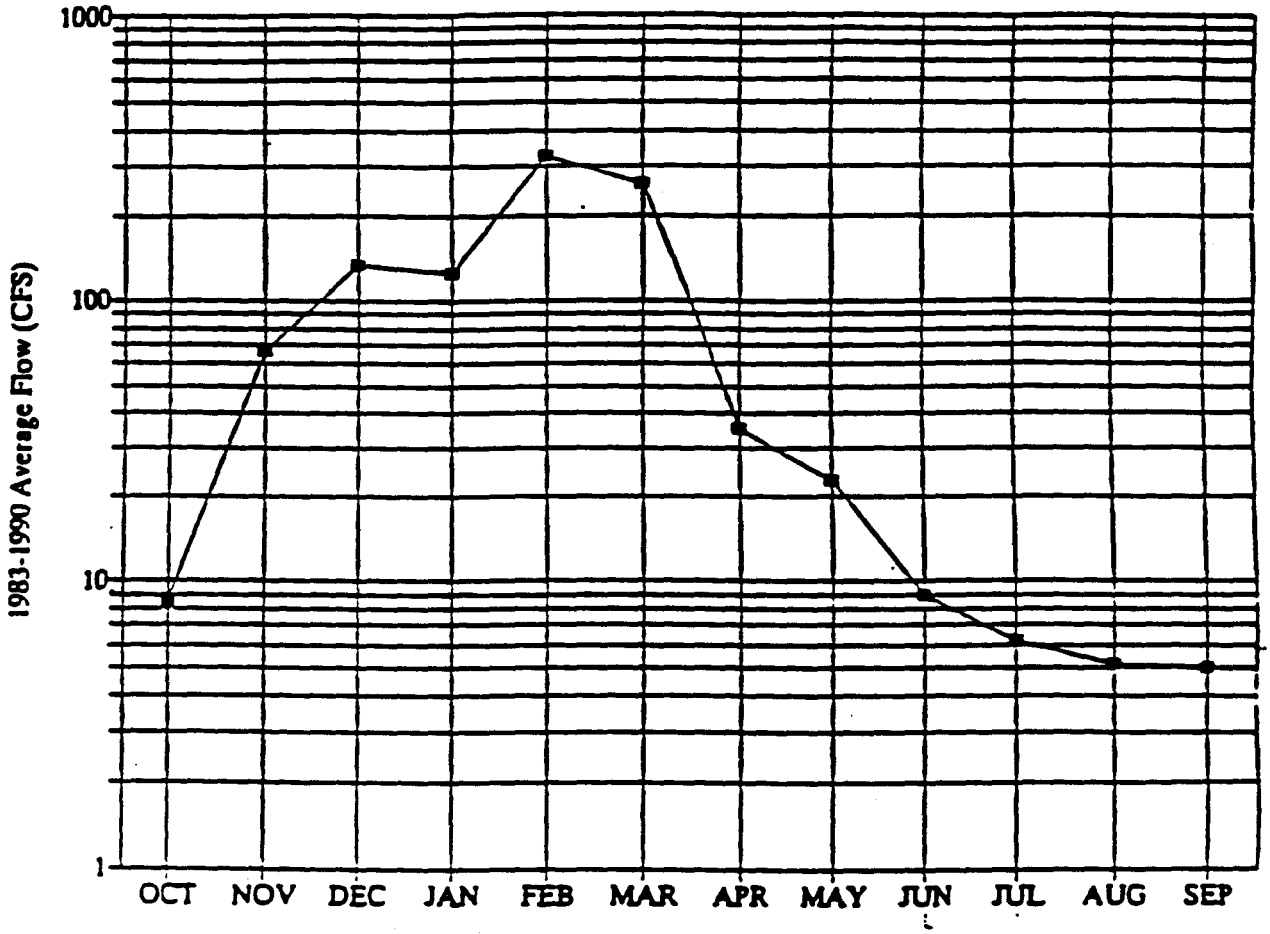

Note: Flow in lower Lagunitas Creek is estimated as 3 cubic feet per second less than flow at the Gallagher Gage.

Figure 3: Average Monthly Flow at the Gallagher Gage, Lagunitas Creek

(Source: Philip Williams and Associates, 1993)

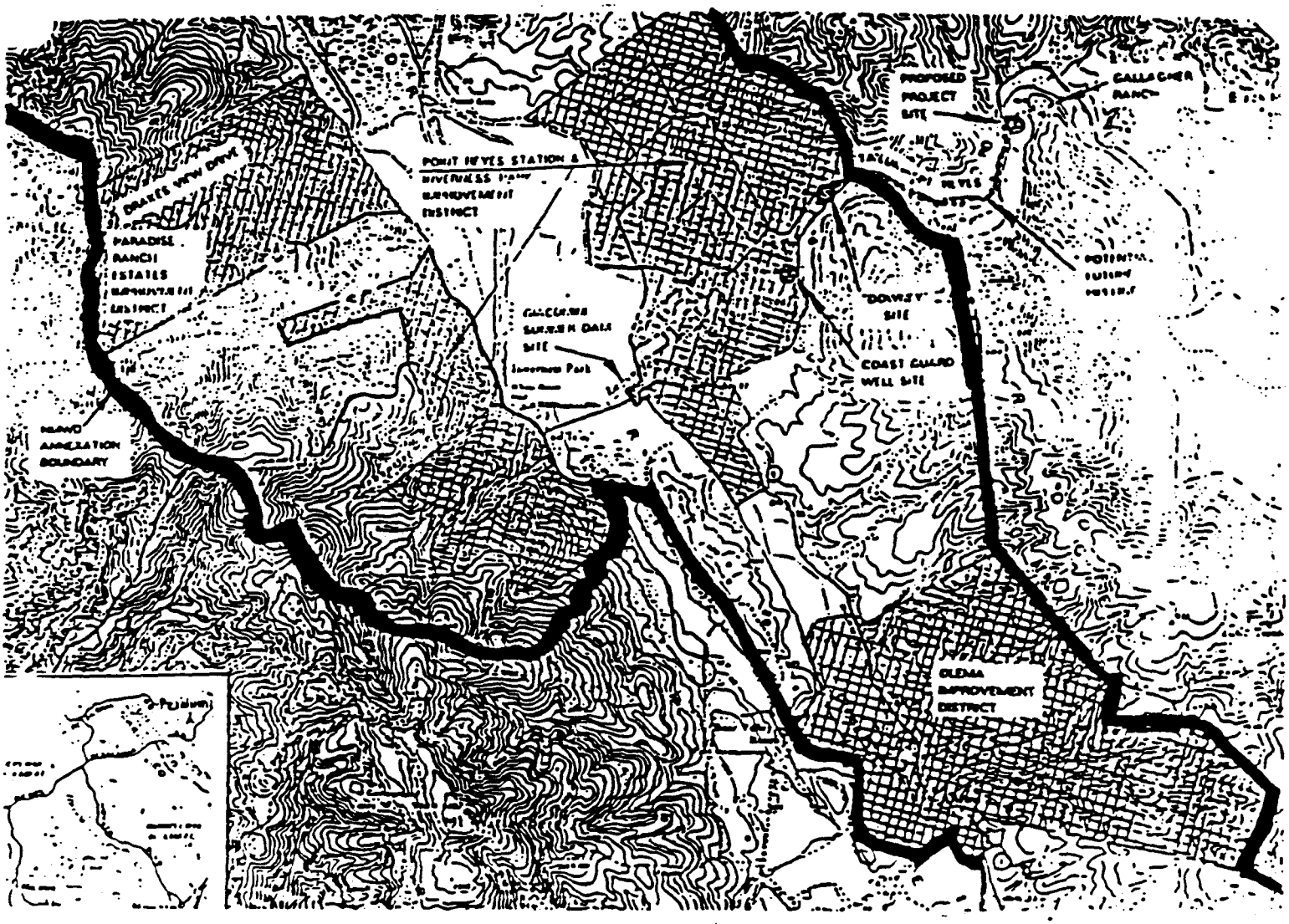

Figure 4: North Marin Water District Service Area and Well Locations

(Source: Nelson et al., 1992)

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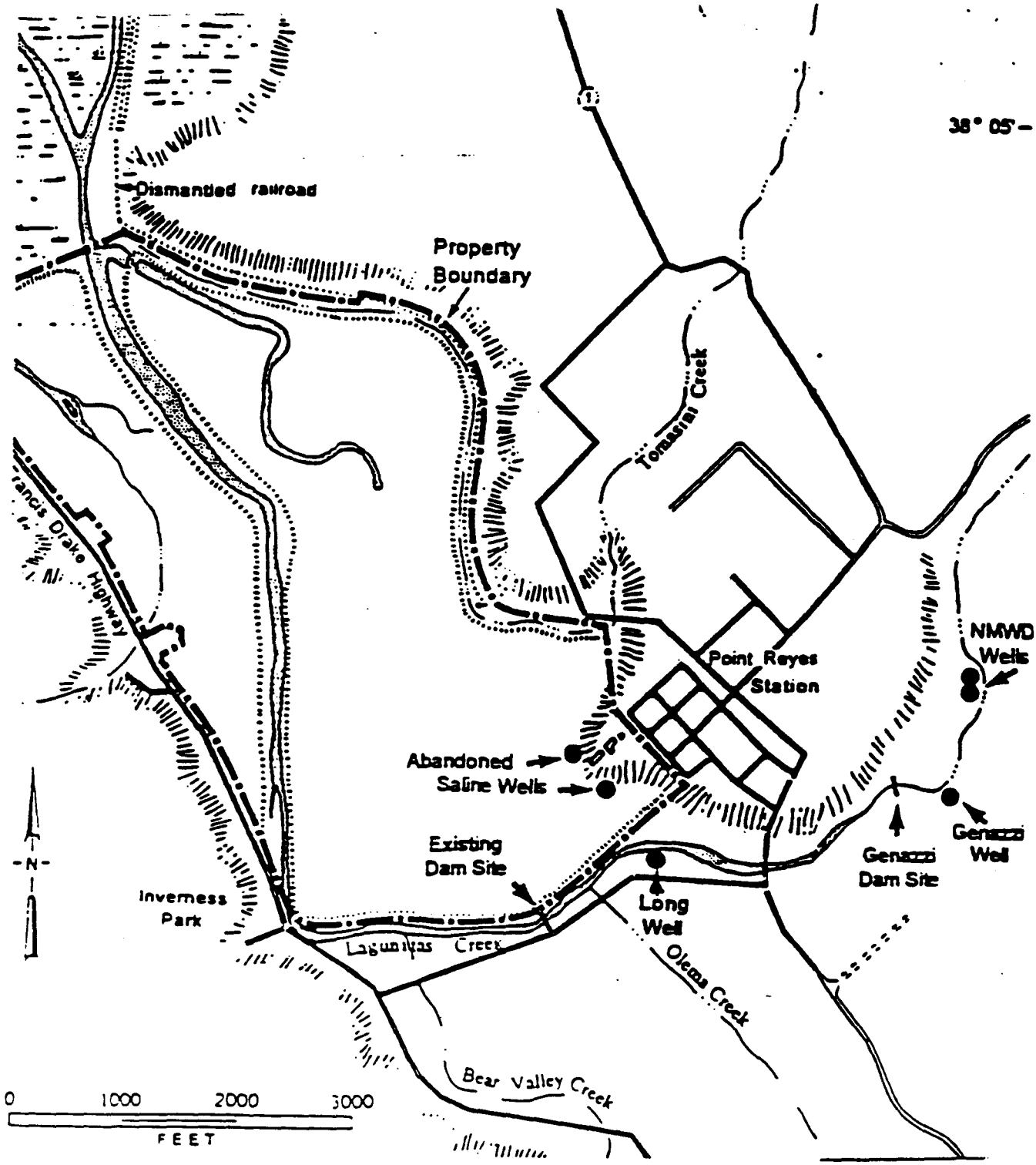

Figure 5: Genazzi Dam Site Location

(Source: Philip Williams and Associates, 1993)

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			Coho Salmon			Steelhead Trout		
Researcher	Sample Method	Sample Period	Peak[1]	Present in Last Sample?	Present June 15?	Peak[1]	Present in Last Sample?	Present June 15?
Bratovich et al.	seine	May 7-June 24, 1983	June 15	Yes	Yes	June 1	Yes	Yes
Bratovich et al.	seine	April 25-July 1, 1984	June 4	No	Yes	June 24	Yes	Yes
Bratovich et al.	trap[2]	April 13-June 30, 1983	?	No	Yes	April 20	No	Yes
Bratovich et al.	trap[3]	March 6-June 30, 1983	May 1-7	No	No	April 19	No	Yes
Bratovich et al.	trap[4]	March 6-June 30, 1984	April 15	No	Yes	April 7	No	No
Cox	electro-shock[5]	May 27, 1987	N/A	No	N/A	N/A	Yes	N/A
WESCO	seine[6]	May 28-July 16, 1993	June 11	Yes	Yes	June 11	Yes	Yes

TABLE 1 Comparison of Available Salmonid Emigration Data

(Sources: Rich, 1987; Rich, 1988; Bratovich et al., 1988; CDFG, 1987; and WESCO, 1993)

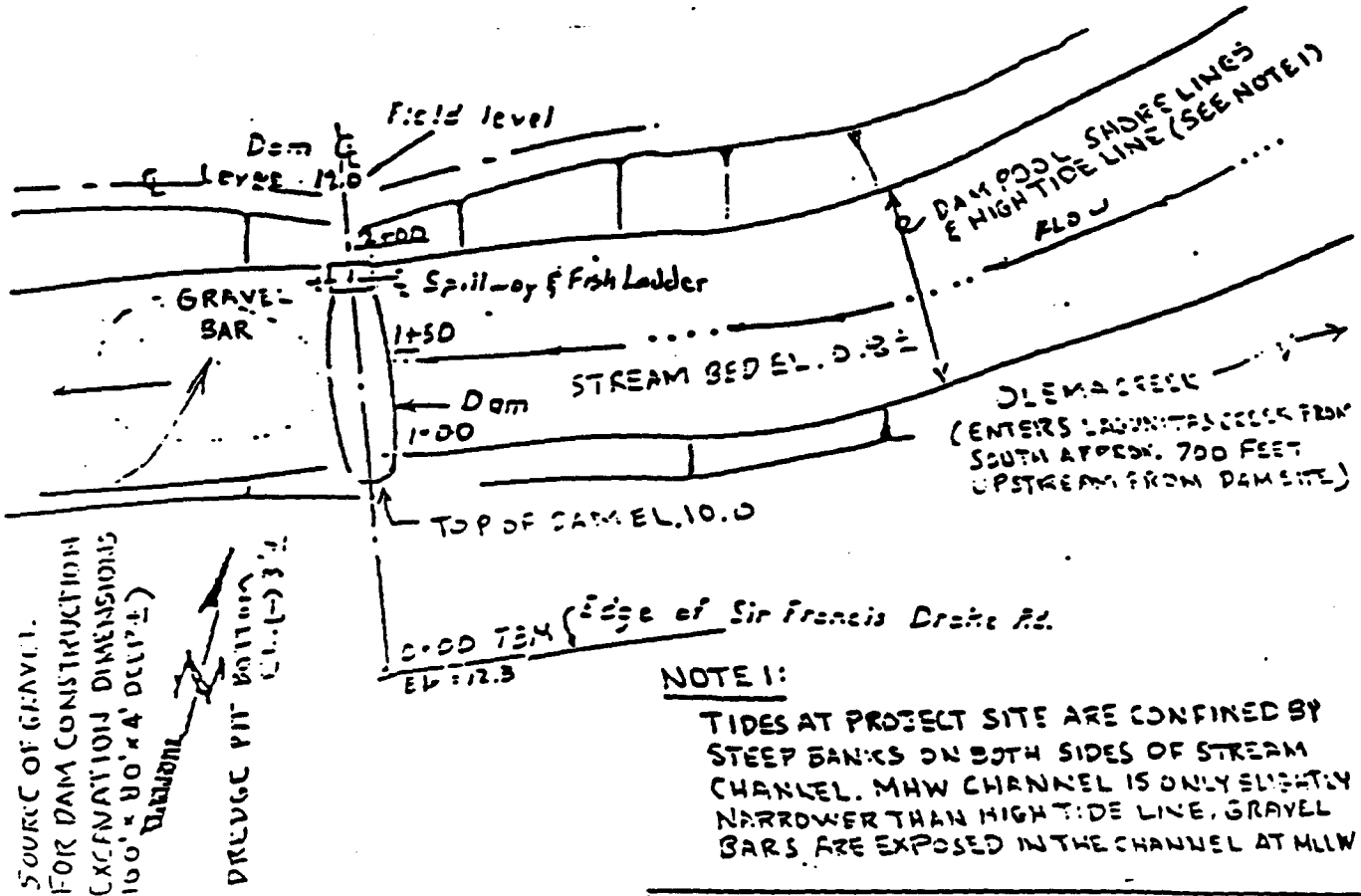
Notes:
1 period or date during which greatest number sampled
2 trap washed out April 27-May 5
3 trap washed out March 19-21
4 trap washed out March 8-12 and March 26-31
5 survey of dam impoundment only
6 survey of dam impoundment only

	TIME	JUNE 3 top	JUNE 3 bot	JUNE 11 top	JUNE 11 bot	JUNE 18 top	JUNE 18 bot	JUNE 25 top	JUNE 25 bot	JULY 6 top	JULY 6 bot	JULY 16 top	JULY 16 bot
DAM SITE													
	0830	18	17										
	1330	22	21										
	0830			18	17								
	1330			21	20								
	0930					20	19						
	1415					25	22						
	0945							21	20				
	0940									22	21		
	0940											20	19
JACK LONG POOL													
	0930	18	17										
	1400	18	17										
	0945			19	18								
	1400			21	20								
	1030					21	20						
	1445					24	22						
	1020							21	20				
	1015									21	20		
	1020											21	19
TELEPHONE POLE RIFFLE													
	1030	18	17										
	1030			18	17								
	1130					22	21						
	1100							20	19				
	1105									20	19		
	1130											20	19
POOL ABOVE TEL. POLE													
	1100	18	17										
	0830			19	18								
	1145					21	20						
	1200							20	19				
	1130									20	19		
	1140											18	17
COAST GUARD POOL													
	1145	20	18										
	1145			19	18								
	1300					21	20						
	1240							19	18				
	1200									20	19		
	1210											18	17

Note: Dam installed June 20.

Table 2: Lagunitas Creek Water Temperatures
June 3 through July 16, 1993

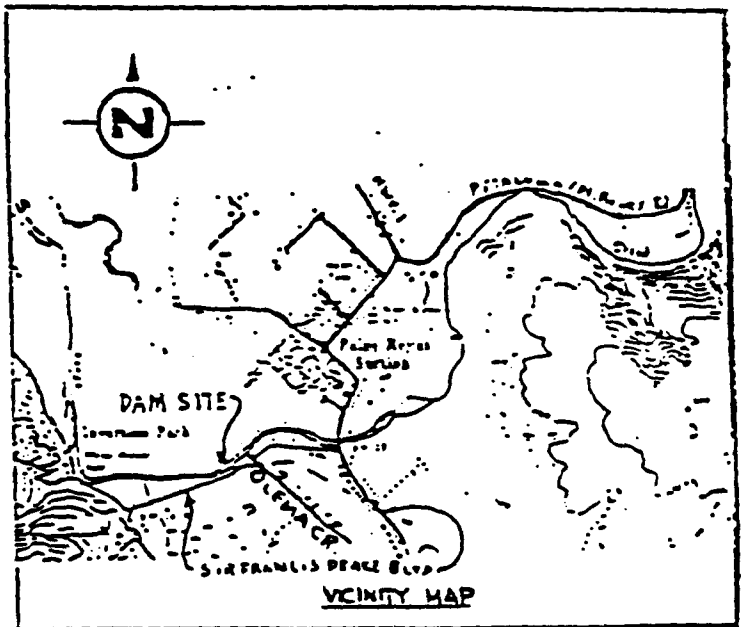
(Source: WESCO, 1993)



NOTE 1:

TIDES AT PROJECT SITE ARE CONFINED BY STEEP BANKS ON BOTH SIDES OF STREAM CHANNEL. MHW CHANNEL IS ONLY SLIGHTLY NARROWER THAN HIGH TIDE LINE. GRAVEL BARS ARE EXPOSED IN THE CHANNEL AT MLLW

PLAN
Scale - 1"=100'
0 25 50 75 100



VICINITY MAP

PURPOSE: PREVENT SALINITY INTRUSION INTO PASTURE IRRIGATION WATER
DATUM: MLLW
ADJACENT PROPERTY OWNERS:
1. STATE OF CALIF.
2
3

PLAN VIEW & VICINITY MAP WITH-PROJECT CONDITION

RICH GIACOMINI
P.O. Box 85
PT. REYES STA., CA 94956

PROPOSED SUMMER DAM
IN: LAGUNITAS CREEK
AT: POINT REYES STATION

CALENDAR PAGE 171
APPLICATION BY: RICH GIACOMINI
MINUTE PAGE DATE 9/3/93

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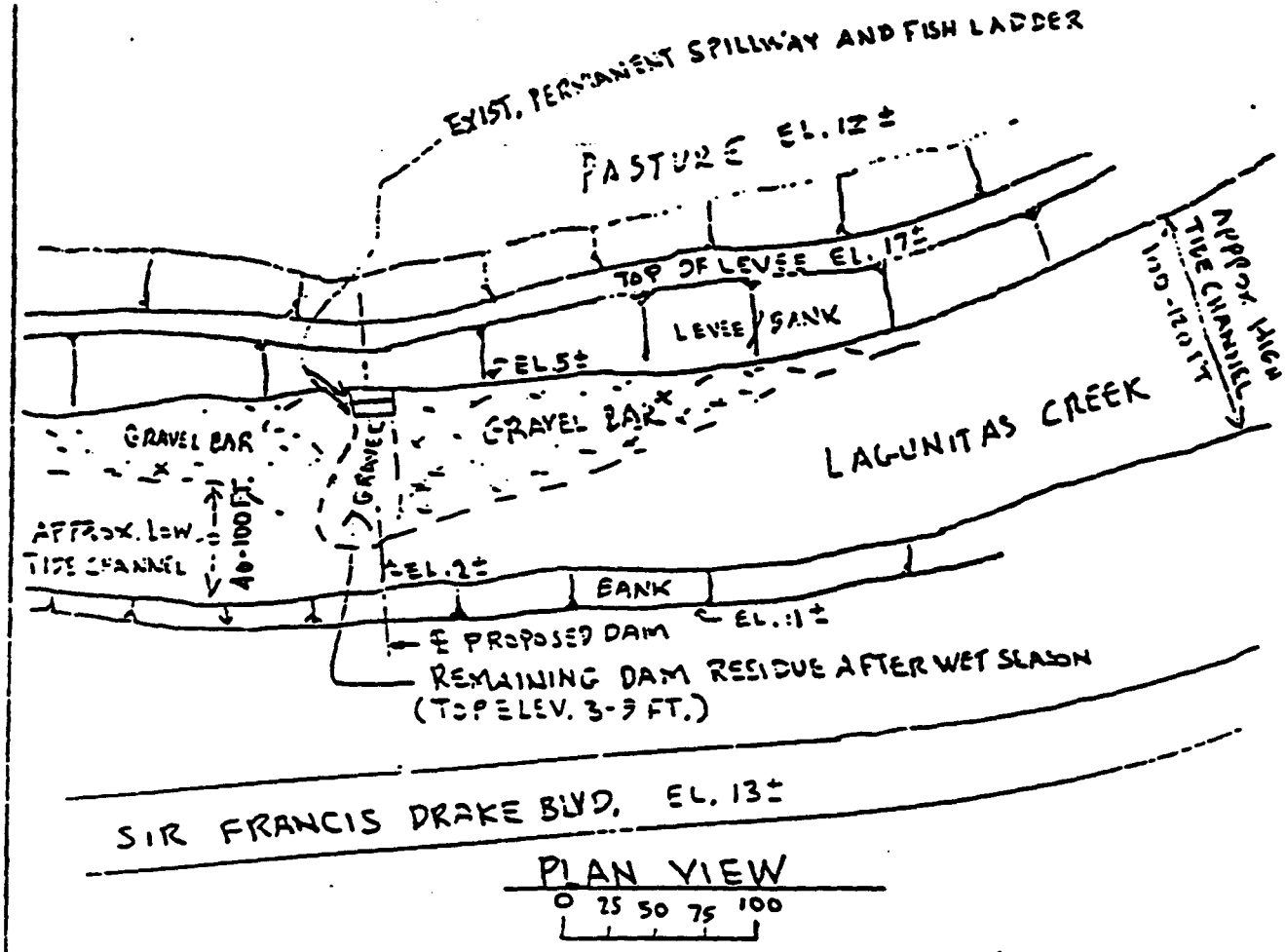
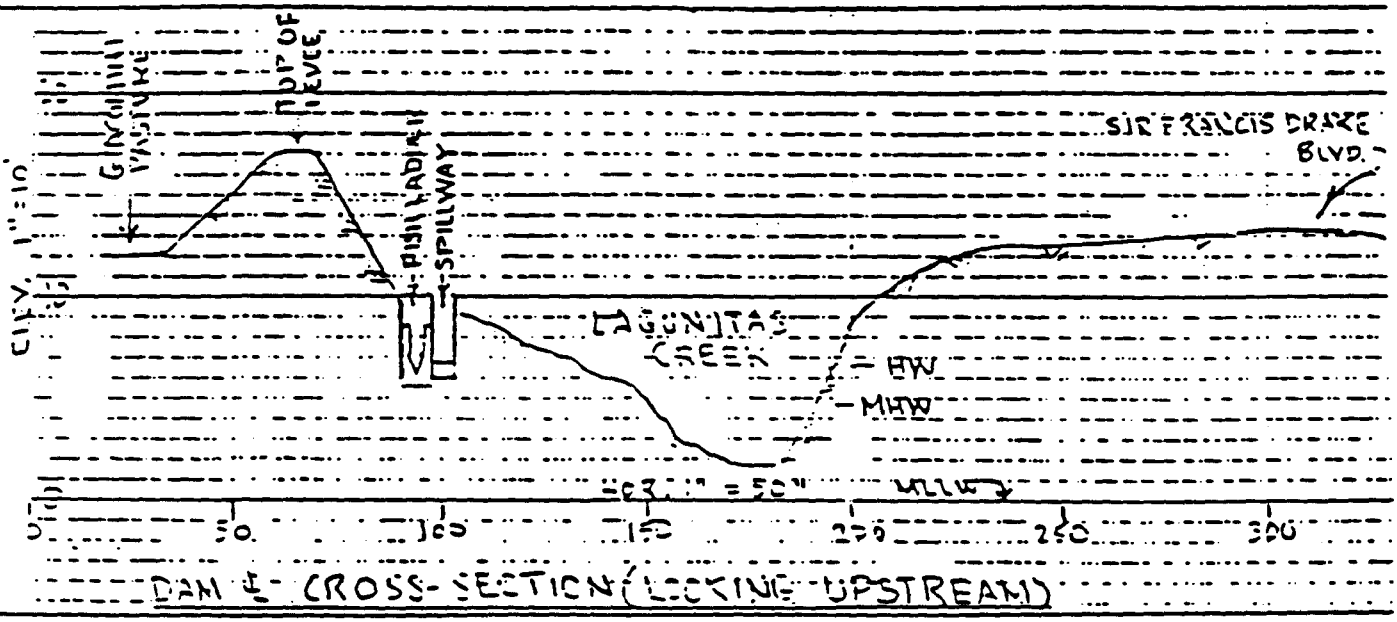
ATTACHMENT 2B





NOTE: EXISTING SITE CONDITIONS SHOWN ARE AS THE SITE WAS PRIOR TO INSTALLATION OF THE DAM IN JUNE 1993

PURPOSE: PREVENT SALINITY INTRUSION INTO PASTURE IRRIGATION WATER
DATUM: MLLW
ADJACENT PROPERTY OWNERS:
1. STATE OF CALIF.
2.
3.

PLAN VIEW AND CROSS-SECTION "EXISTING" SITE CONDITIONS

RICH GIACOMINI
P.O. BOX 85
PT. REYES STA., CA 94956

PROPOSED SUMMER DAM
IN: LAGUNITAS CREEK
CALENDAR PAGE STATION 172
COUNTY OF: MARIN STATE: CA
MINUTE PAGE RICH GIACOMINI
SHEET 1 OF 4 DATE 5/3/93

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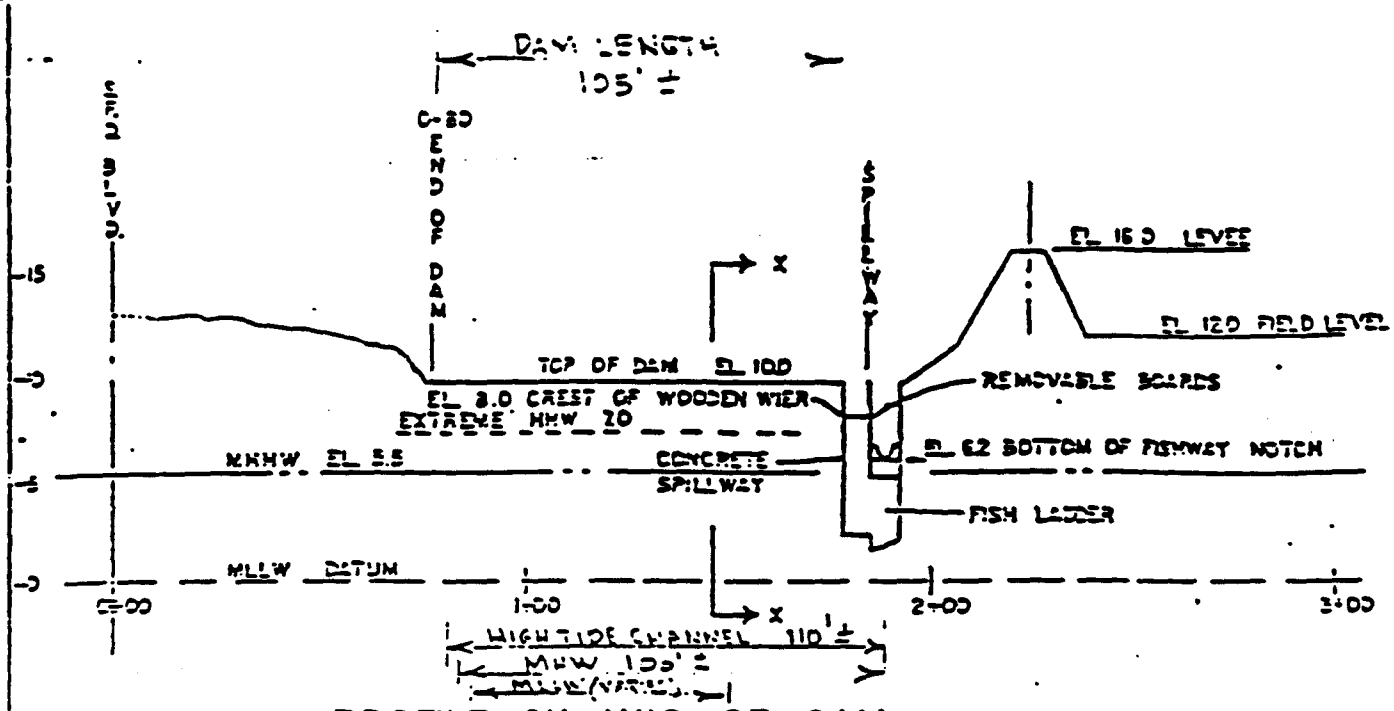
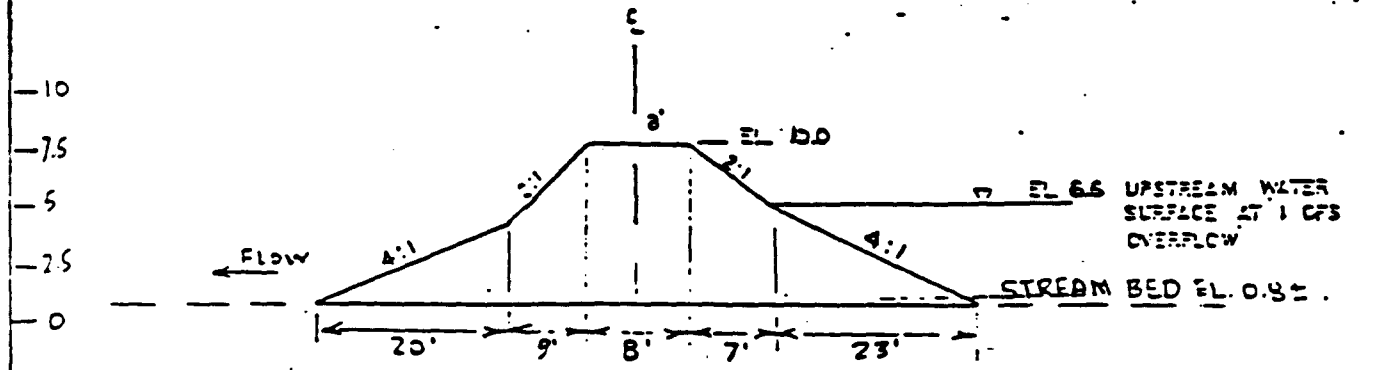
ATTACHMENT 2A



PROFILE ON AXIS OF DAM (LOOKING DOWNSTREAM)

SCALE VERT 1 = 10 HORZ 1 = 50

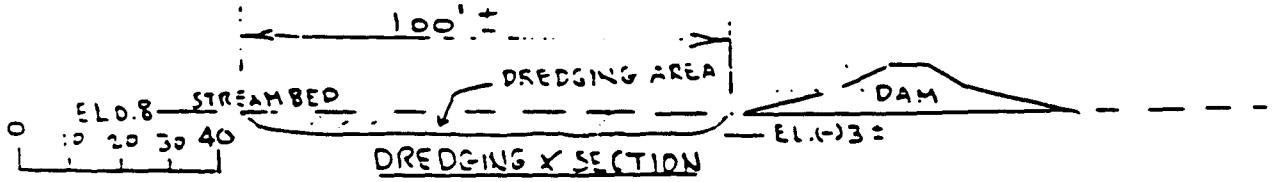
0 2 4 6 8 10 0 10 20 30 40 50



X SECTION AT 1+50

SCALE 1" = 20' ±

0 5 10 15 20



DREDGING X SECTION

PURPOSE: PREVENT SALINITY INTRUSION INTO PASTURE IRRIGATION WATER

DATUM: MLLW

ADJACENT PROPERTY OWNERS:

1 STATE OF CALIF.

2

3

DAM PROFILE & CROSS SECTION WITH PROJECT CONDITIONS

RICH GIACOMINI
P.O BOX 85
PT. REYES STA., CA 94956

PROPOSED SUMMER DAM

IN: LAGUNITAS CREEK

AT: POINT REYES STATION

COUNTY OF MARIN STATE CA

APPLICATION BY: RICH GIACOMINI

DATE 9/3/93

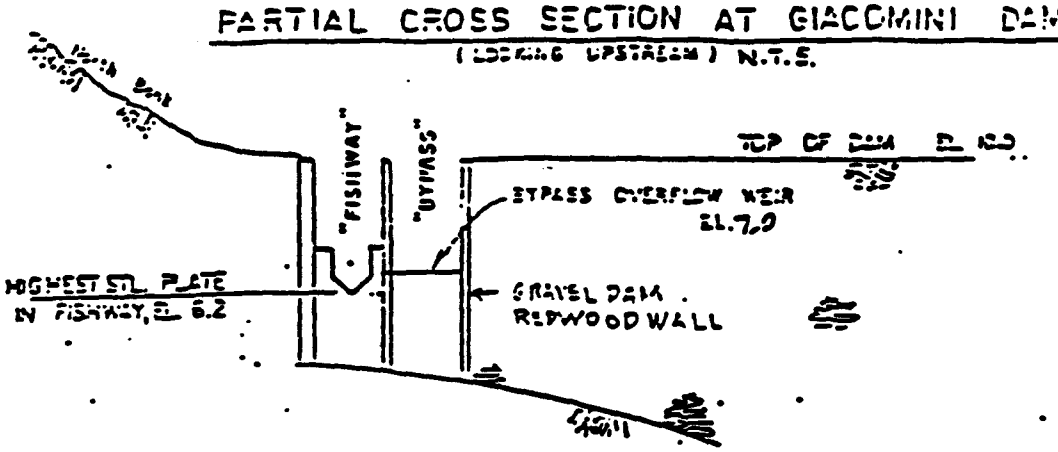
CALENDAR PAGE 173

MINUTE PAGE 2848

ATTACHMENT 3

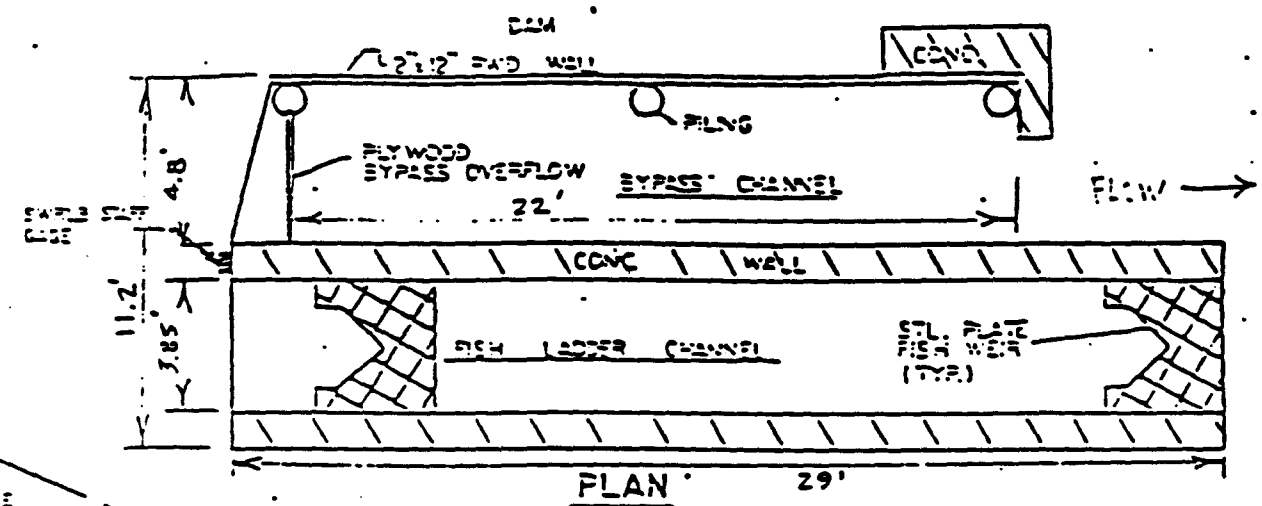
PARTIAL CROSS SECTION AT GIACOMINI DAM

(LOOKING UPSTREAM) N.T.S.



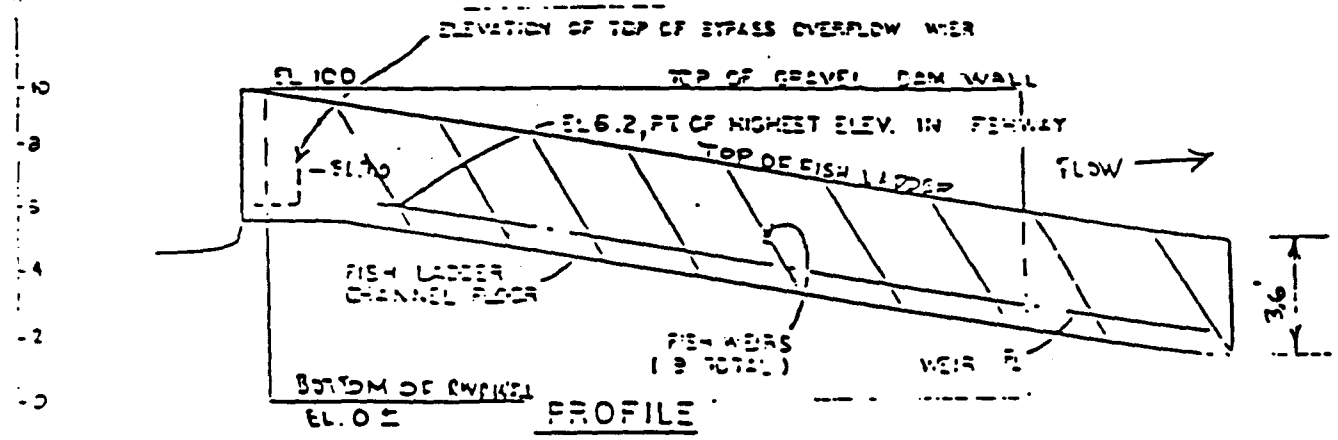
DETAIL OF BYPASS CHANNEL & DENIL FISHWAY

N.T.S.



PLAN

N.T.S.



PROFILE

N.T.S.

PURPOSE: PREVENT SALINITY INTRUSION INTO PASTURE IRRIGATION WATER

DATUM: MLLW

ADJACENT PROPERTY OWNERS:

1 STATE OF CALIF.

2.

3.

FISH LADDER, (EXISTING) SPILLWAY

RICH GIACOMINI
P.O. BOX 85
PT. REYES STA., CA 94956

PROPOSED SUMMER DAM

IN: LAGUNITAS CREEK

BY: POINT REYES STATION

COUNTY: MARIN STATE: CA

APPLICATION BY: JOCH GIACOMINI

CALENDAR PAGE 174

MINUTE PAGE 4 DATE 9/3/93

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ATTACHMENT 4

DEPARTMENT OF THE ARMY PERMIT

Permittee Waldo Giacomini Dairy Ranch

Permit No. 18843N83

Issuing Office USAED, San Francisco

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: to place 1,300 cubic yards of fill for a summer dam 10 feet high by 100 feet long across the tidal reach of Lagunitas Creek, downstream of Olema Creek and approximately 2,500 feet downstream from the State Highway 1 bridge, near the community of Point Reyes Station, in Marin County, California in accordance with the attached drawings marked: "PROPOSED SUMMER DAM, IN: LAGUNITAS CREEK, AT: POINT REYES STATION, COUNTY OF: MARIN, STATE: CA, APPLICATION BY: RICH GIACOMINI," in four (4) sheets dated 9/3/93.

Project Location Lagunitas Creek, Point Reyes Station, Marin County

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on November 1, 1995. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

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ENG FORM 1721, Nov 86 EDITION OF SEP 82 IS OBSOLETE. (33 CFR 325 (Appendix A))

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space prov and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

Please see page 2A for Special Condition to Permit No. 18843N83

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
X

( ) Section 404 of the Clean Water Act (33 U.S.C. 1344).
X

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activi authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

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SPECIAL CONDITIONS TO PERMIT NO. 18843N83

1. You shall investigate the feasibility of relocating the existing dam to an upstream location on Lagunitas Creek or its tributaries. You shall conduct detailed analysis of the Genazzi and Marshall sites for the comparative logistics, cost and technology required to provide the minimum level of water supply and minimum protection from salinity intrusion from Lagunitas Creek tidal waters. The above analysis shall be submitted in a report form to the Corps of Engineers no later than February 1, 1995

2. During each year's dam installation you shall install stoplogs (flashboards) at the upstream end of the fishway bypass to ensure all stream flow is carried by the denil fishway. The stoplogs shall be installed such that the top of the top stoplog is approximately 22 inches above the level of the concrete slab at the upstream end of the denil fishway. You shall use two 2-foot by 8-foot and one 2-foot by 6-foot nominal dimension boards.

3. During each year's dam installation, two 2-foot by 8-foot stoplogs shall be installed across the downstream end of the fishway bypass to create a small plunge pool.

4. The summer dam shall not be installed prior to June 15th of any year and shall be removed no later than November 1st of each year. Any variation on installation or removal dates shall be requested no later than 30 days prior to installation or removal and must be approved by the Corps of Engineers.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the publ interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstance warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revoca procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Rick Grace — 1-14-94

(PERMITTEE) (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

6/14/94

(DISTRICT ENGINEER) (DATE)
LEONARD E. CARDOZA
LTC, EN

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

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(TRANSFEREE)

EXHIBIT D

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

1. Incorporated by reference is the Environmental Assessment (EA) for Permit Application No. 18843N83 ; dated June 7, 1994 .

2. Factors considered in this FONSI were the aquatic ecosystem, wetland, fish and wildlife resources including threatened and endangered species, water quality, cultural resources, navigation, and agency policies.

3. Based on information gathered during the preparation of the environmental assessment and received from cooperating Federal agencies having special expertise or having jurisdiction by law, or from public, it is concluded that an Environmental Impact Statement will not be prepared.

14 Jun 94
Date

LEONARD E. CARDOZA
LTC, EN
Commanding

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NO MINUTE PAGE NUMBER THIS PAGE