Staff Report to the Zoning Administrator

Application Number: 121040

Applicant: California Polytechnical State University Fndn; Attn: Brian Dietterick
Owner: Cal Poly State University Foundation
APN: 057-151-06

Agenda Date: May 4, 2012

Agenda Item #: 5

Time: After 9:00 a.m.

Project Description: Proposal to recognize the bridge abutment repair work performed under Emergency Coastal Permits 111023 and 111453 and to redirect streamflow using anchored log vanes in order to protect the integrity of the bridge abutment and to enhance aquatic habitat. Proposal also includes re-contouring and stabilizing approximately 130 feet of stream bank.

Location: Project located on the west side of Swanton Road about 3 miles northwest of the intersection with Highway 1.

Supervisoral District: 3rd District (District Supervisor: Neal Coonerty)

Permits Required: Coastal Development Permit, Riparian Exception

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 121040, based on the attached findings and conditions.

Exhibits

A.	Project plans and description	E.	Assessor's, Location, Zoning and General Plan Maps
B.	Findings	F.	Comments & Correspondence
C.	Conditions		
D.	Categorical Exemption (CEQA determination)		

Parcel Information

Parcel Size:	558.2 acres
Existing Land Use - Parcel:	Parks and Recreation, Commercial Agriculture
Existing Land Use - Surrounding:	Commecial Agriculture and Timber Production
Project Access:	Swanton Road

Planning Area:	North Coast
Land Use Designation:	A (Agriculture)
Zone District:	PR-P (Parks, Recreation and Open Space –Agricultural Preserve) CA-P (Commercial Agriculture - Preserve)
Coastal Zone:	X Inside __ Outside
Appealable to Calif. Coastal Comm.	X Yes __ No

Environmental Information

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	N/A
Fire Hazard:	Not a mapped constraint
Slopes:	N/A
Env. Sen. Habitat:	Riparian Habitat associated with Scotts Creek
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Swanton Road is a scenic road; proposed development will not be visible from road.
Drainage:	Existing drainage adequate
Archeology:	Not mapped/no physical evidence in the vicinity of the stream work

Services Information

Urban/Rural Services Line:	__ Inside X Outside
Water Supply:	N/A
Sewage Disposal:	N/A
Fire District:	CalFire
Drainage District:	None

History and Project Description

Due to a large debris jam approximately 140 feet upstream of Swanton Pacific Railroad bridge, flow from Scotts Creek abandoned the main channel and flow was re-directed toward the left bank upstream of the bridge. The change in flow resulted in bank erosion and undercutting one of the bridge abutments as well as the loss of aquatic habitat.

During 2011, the abutment was shored up under emergency permit 111023, through the installation of approximately 37 feet of sheet piling against the upstream face of the abutment. The sheet piles were anchored to the footing with high strength bolts, in order to prevent further settlement of the abutment and possible structural failure of the bridge itself. The remaining work necessary to complete the project was to be done under a standard Coastal Development Permit' however permit coordination and communication issues between Cal Poly and various regulatory agencies delayed the application such that the regulatory process was not completed prior to the 2011-2012 winter storm season.

A second Emergency Coastal Permit (111453) was approved in February 2012 in order to

complete the bridge abutment repair, and to authorize filling the void under the abutment with between 3.5 and 4 cubic yards of gravel to provide structural support.

The emergency work has largely been completed under Building Permit B-111260 and was performed under the guidance of a biological monitor, who was approved by the U.S. Fish & Wildlife Service, to survey the site each morning for California red-legged frog (CRLF), prior to the start of any activities. No frogs were detected at any location within the project area or in adjacent areas, before, during or after construction activities. Pre-construction

The final phase of work consists of redirecting the stream flow off of the stream bank using two 60-foot log vanes that will be anchored using 2-ton granite boulders. The vanes will enter the bank at approximately bankfull elevation and placed at a 7% slope. Two logs will be joined together and buried rock in the stream bank will act as sills to provide scour protection while anchoring the logs and rootwads. Smaller logs and rocks will be used to fill the gaps between rootwads and about 130 feet of stream bank will be reconstructed at 2 to 1 slope and revegetated using native species. Steel cable tie backs will be installed to prevent additional rotation of the bridge abutment. The project is expected to take place during the last week of August to coincide with yearly minimum flows, when streams can be diverted and the project area can be dewatered. The project is conditioned to require a biological monitor to be onsite at all times during construction to monitor for impacts to coho salmon and steelhead trout.

Zoning & General Plan Consistency

The subject property is a parcel of approximately 558 acres in area, located in the CA-P (Commercial Agriculture – Agriculture Preserve) and PR-P (Parks, Recreation and Open Space – Agriculture Preserve). The bridge repair and streambank stabilization is an allowed use in the zone districts and governing Agricultural General Plan designation.

Local Coastal Program Consistency

The proposed bridge repair and stream bank stabilization is in conformance with the County's certified Local Coastal Program, in that the preservation of the stream will protect the riparian habitat species and habitat from further degradation due to bank failure and sediment deposition. The proposed work will take place under the guidance of approved biological monitors to ensure no significant impacts to protected species or habitat during the construction.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

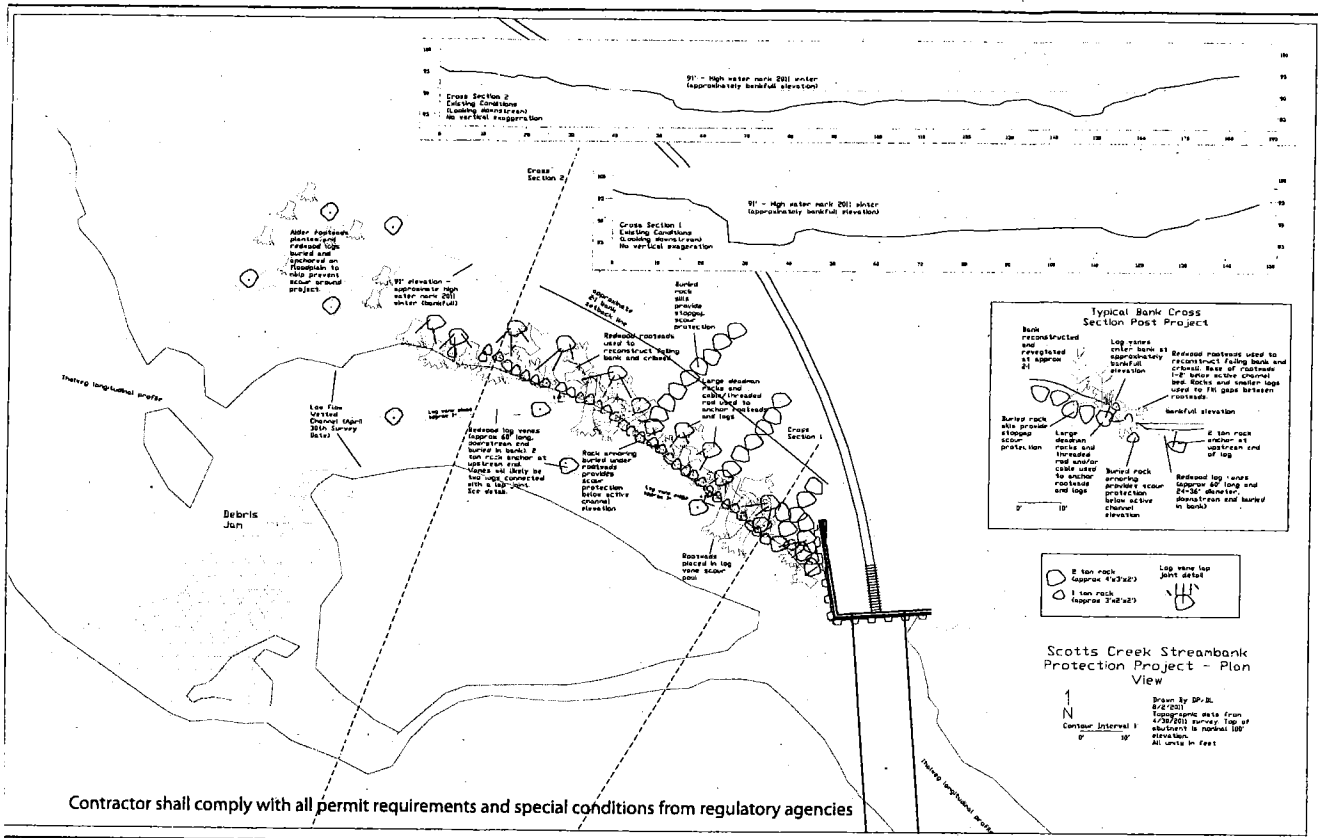
- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

- **APPROVAL** of Application Number **121040,** based on the attached findings and conditions.

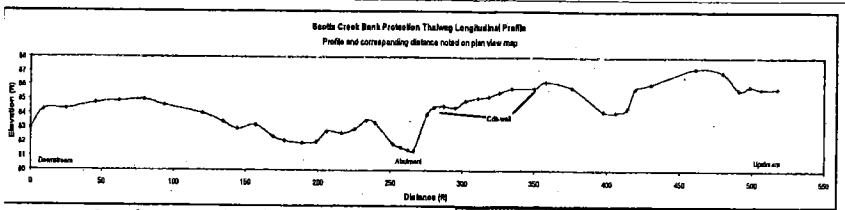
Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

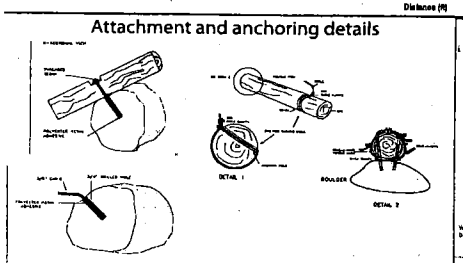
Report Prepared By: Robin Bolster-Grant
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-5357
E-mail: robin.bolster@co.santa-cruz.ca.us

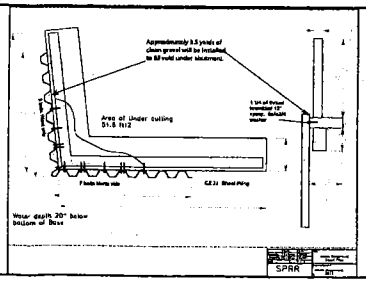


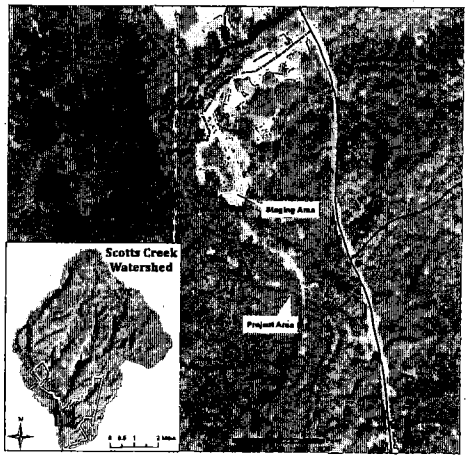
Contractor shall comply with all permit requirements and special conditions from regulatory agencies



Attachment and anchoring details







PROJECT TITLE: Scotts Creek Streambank Stabilization Project

DATE: October 27, 2011

LOCATION: Lower Scotts Creek between Little Creek and Winter Creek tributaries, Santa Cruz County.

OBJECTIVES:
This project aims to stabilize left streambank to prevent further bank erosion by incorporating log vanes that will redirect streamflow off left bank and create pool habitat and slack water. Bank will be protected using composition of rootwads, large wood, and rocks that will create cover in pools and enhance aquatic habitat.

PROJECT DESCRIPTION:
Due to a large debris jam approximately 140 feet upstream of Swanton Pacific Railroad bridge, flow from Scotts Creek abandoned the main channel and flow was redirected towards the left bank upstream of the bridge. This has caused bank erosion and degradation of active channel resulting in undercutting bridge abutment and loss of aquatic habitat. In February 2011, under emergency permitting, interlocking sheet piles were installed to prevent further scour under the abutment, although there is still concern that high flows will continue to erode bank around abutment.

This project plans to redirect flow off of streambank using two 60 foot log vanes that will anchor upstream end in streambed using 2-ton granite boulders (see attachment details). Log vanes will enter bank at approximately bankfull elevation and placed with 7% slope. Two redwood logs with approximate diameter of 24"-36" will be joined together with a lap joint to make the 60 foot log vane. Buried rock in bank will act as sills to provide stopgap scour protection and will anchor to logs and rootwads.

Streambank protection measures consist of redwood rootwads that will line the bank and extend into the active channel. Smaller logs and rocks will be used to fill in the gaps between rootwads. Banks will be reconstructed at 2:1 slope and revegetated using native species that will provide cover and minimize erosion. Upstream floodplain will be outfitted with redwood logs and rootwads to prevent scour around project area at high flows.

Project goals are not only to protect the integrity of the bridge abutment, but to also enhance aquatic habitat focusing on anadromous fish species. Log vanes will redirect flow from streambank and provide pool habitat and slack water. Rootwads will extend into active channel creating cover and refugia during both high and low flows.

Project is expected to take place in the last week of August to coincide with yearly minimum flows when stream can be diverted and project area can be dewatered. Clean gravel will be placed in November 2011 under the bridge abutment to fill the void behind the sheet piles installed in February 2011. This will help provide bearing strength to the abutment until the rest of the project can be implemented. Project area is easily accessible and erosion control measures will be followed in project and staging areas. Mitigation efforts for threatened and endangered species will comply with DFG and NOAA prescribed protection measures.
See separate sheets for dewatering plan and revegetation plan.

COOPERATIVE PARTIES:
This project is being cooperatively planned and implemented by Cal Poly's Swanton Pacific Ranch and Santa Cruz County Resource Conservation District. Additional collaboration from NRCS, DFG, and NOAA assisted with planning and permitting process.

FUNDING RELIANCE:
Total costs of the project including the design, permitting and implementation are being met through a combination Proposition 50 funds and contributions provided by Cal Poly State University, Swanton Pacific Ranch.

CONTACT INFORMATION:
Brian C. Dietterick, Ph.D., P.H.
Director, Swanton Pacific Ranch
Cal Poly State University
125 Swanton Rd. Davenport, CA 95017
831.458.5415; (SPR Fax) 831.458-5411
bdietter@calpoly.edu

Created by:
D. Loganbill, D. Perkins,
E. Carnegie
August 2011

EXHIBIT 4

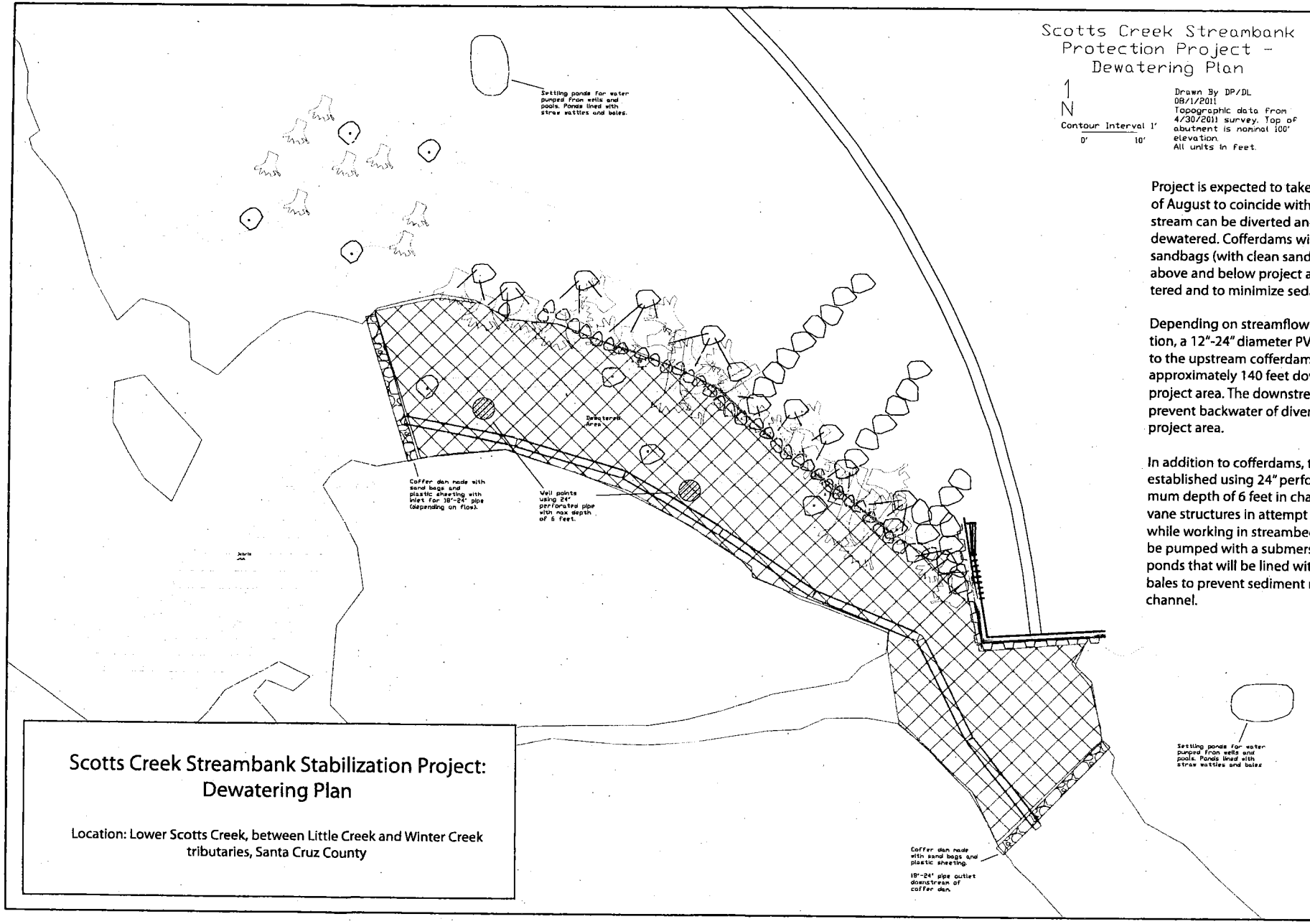
SCOTTS CREEK STREAMBANK STABILIZATION PROJECT

Location: Lower Scotts Creek between Little Creek and Winter Creek tributaries, Santa Cruz County.

Brian C. Dietterick
Director, Swanton Pacific Ranch
Cal Poly State University Foundation
125 Swanton Road
Davenport, CA 95017
(831) 458-5410 (Voice)
(831) 458-5411 (Fax)
bdietter@calpoly.edu

EXHIBIT A

Scotts Creek Streambank Protection Project - Dewatering Plan



1
N

Contour Interval 1'

0' 10'

Drawn By DP/DL
08/1/2011
Topographic data from 4/30/2011 survey. Top of abutment is nominal 100' elevation.
All units in feet.

Project is expected to take place in the last week of August to coincide with minimum flows when stream can be diverted and project area can be dewatered. Cofferdams will be installed using sandbags (with clean sand) and plastic lining above and below project area to keep site dewatered and to minimize sediment entering stream.

Depending on streamflow at time of implementation, a 12"-24" diameter PVC pipe will be attached to the upstream cofferdam and will divert water approximately 140 feet downstream beyond project area. The downstream cofferdam will prevent backwater of diverted streamflow into project area.

In addition to cofferdams, two well points will be established using 24" perforated pipe to a maximum depth of 6 feet in channel in proximity to log vane structures in attempt to minimize water while working in streambed. The well points will be pumped with a submersible pump to settling ponds that will be lined with straw wattles and bales to prevent sediment re-entering stream channel.

Scotts Creek Streambank Stabilization Project: Dewatering Plan

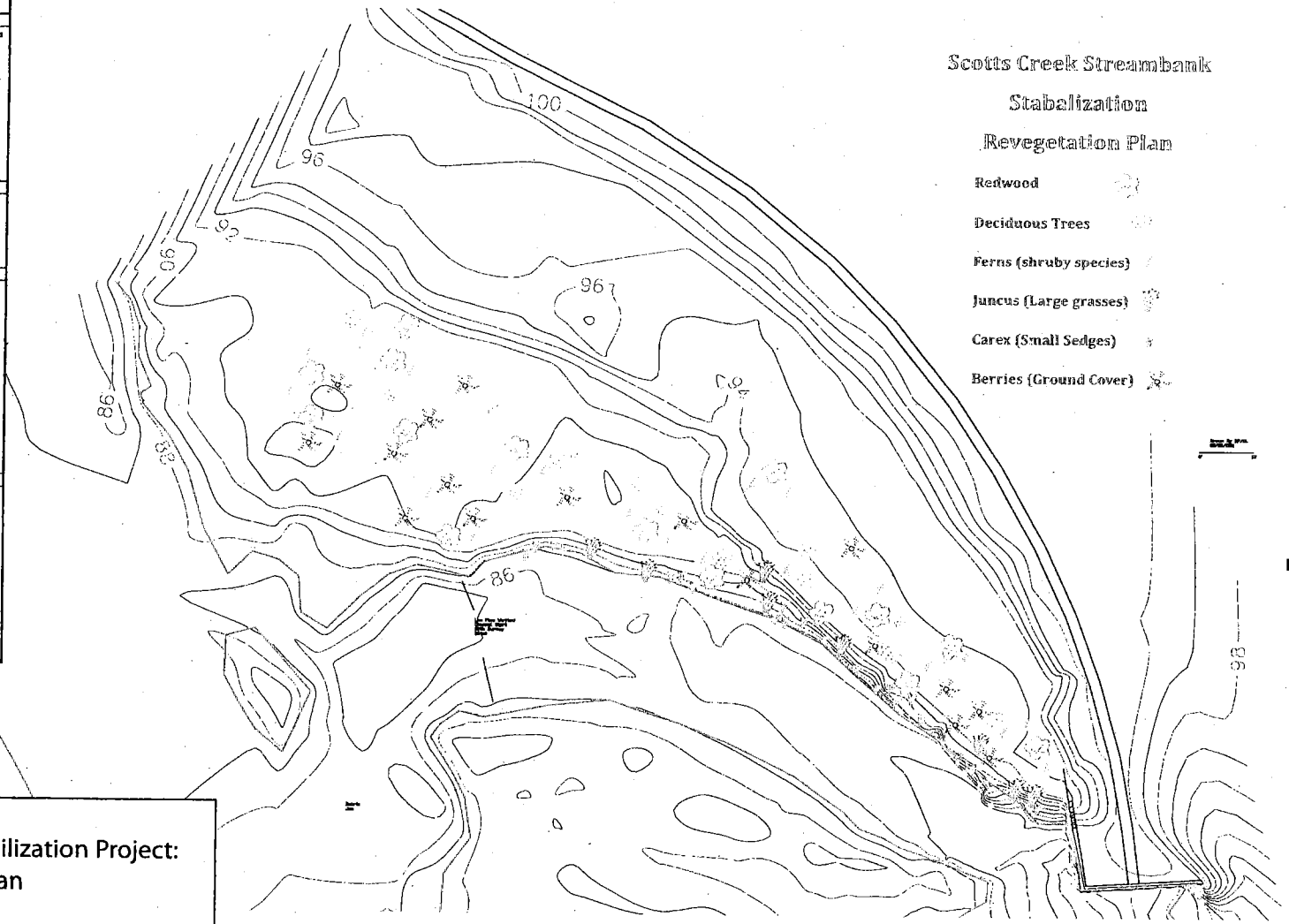
Location: Lower Scotts Creek, between Little Creek and Winter Creek tributaries, Santa Cruz County

EXHIBIT A

Scotts Creek Revegetation Plant Palette

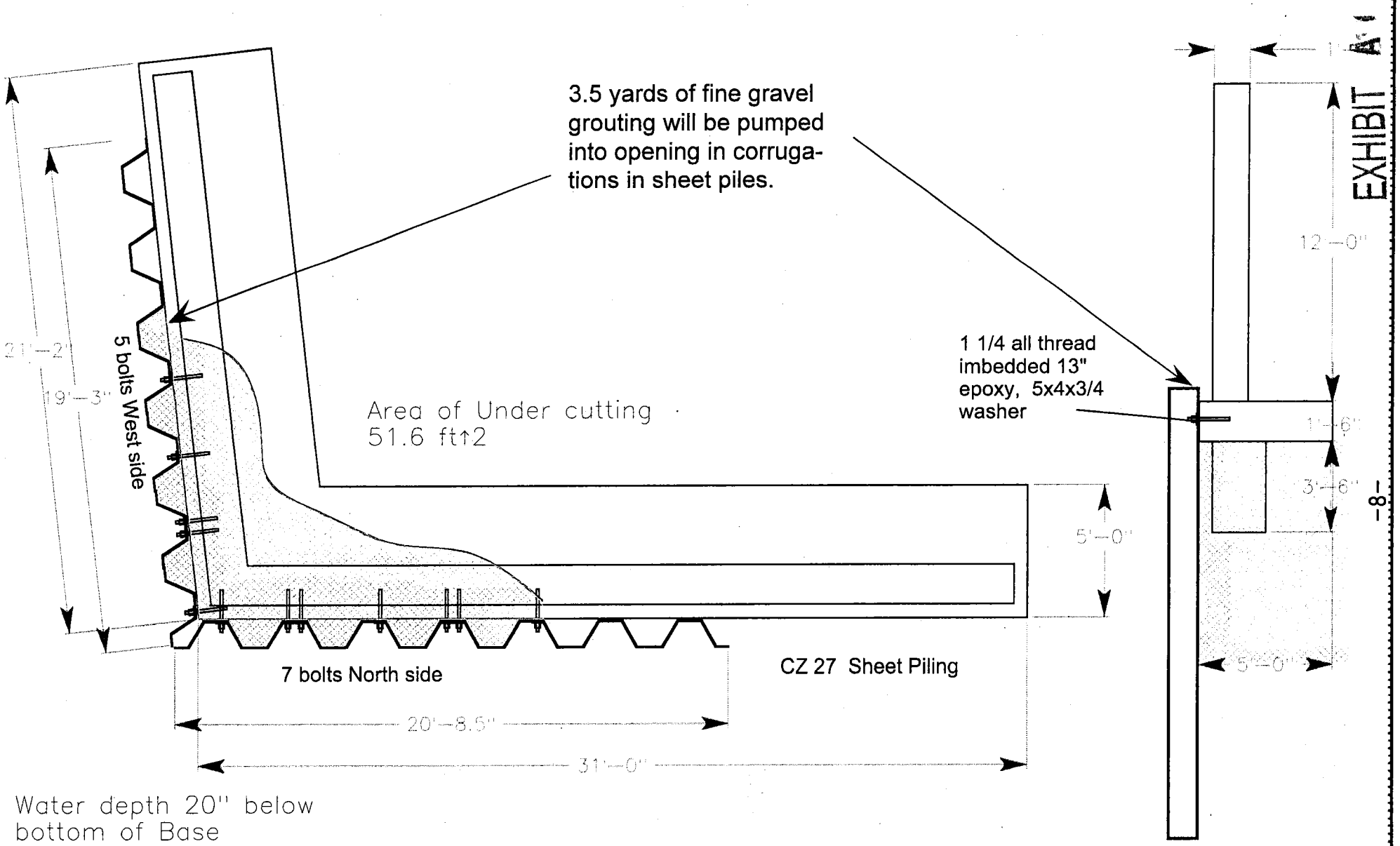
Revegetation will be focussed to the left bank above the Railroad bridge and at the bridge abutment

Common Name	Species Name	Habitat Function	Location Condition
Trees			
Coast Redwood	*Sequoia sempervirens*	Transplant rootwads to promote root binding in substrate and provide cover	Floodplain and streamside slopes
Box Elder	*Acer negundo*	Deciduous broad shading	Floodplain adjacent to pools
Red & Blue Elderberry	*Sambucus racemosa* *Sambucus cerulea*	Bank stabilization / cover / shade	Crest of soft slope along left bank and at bridge abutment
Shining-yellow Willow	*Salix lucida ssp. lasiandra*	Deciduous shading	Floodplain adjacent to pools
Silver Willow	*Salix sitchensis*	Deciduous shading	Floodplain adjacent to pools
Creek Dogwood	*Cornus sericea*	Deciduous shading	Flood plain - crest of soft slope
Shrubs			
Lady fern	*Athyrium felix-femina var. cyclosorus*	Erosion control/soil binding - Cover-habitat complexity	Soft slope- LWD/J-hooks - understory
Giant chain fern	*Woodwardia fimbriata*	Erosion control/soil binding - Cover-habitat complexity	Soft slope- LWD/J-hooks - understory
Bunch Grasses			
Brown rush	*Juncus effusus ssnv hesperius*	Reduce hyrologic roughness - erosion control/soil binding	Stream edge - LWD-jhooks
Spreading rush	*Juncus patens*	Reduce hyrologic roughness - erosion control/soil binding	Stream edge - LWD-jhooks
Pacific rush	*Juncus effusus pacificus*	Reduce hyrologic roughness - erosion control/soil binding	Stream edge - LWD-jhooks
Bigleaf sedge	*Carex amplifolia*	Reduce hyrologic roughness - erosion control/soil binding	Stream edge - LWD-jhooks
Barberpole sedge	*Scirpus microcarpus*	Sedges to reduce roughness along meanders	Stream edge - LWD-jhooks
Cyperus	*Cyperus eragrostis*	Sedges to reduce roughness along meanders	Stream edge - LWD-jhooks
Slough sedge	*Carex obnupta*	Reduce hyrologic roughness - erosion control/soil binding	Stream edge - LWD-jhooks
Ground Cover			
Salmonberry	*Rubus spectabilis*	Soil binding - habitat complexity	Left bank slopes and bare ground
Blackberry	*Rubus ursinus*	Soil binding - habitat complexity	Left bank slopes and bare ground
Thimbleberry	*Rubus parviflorus*	Soil binding - habitat complexity	Left bank slopes and bare ground
Redwood sorrel	*Oxalis oregana*	Soil binding - habitat complexity	Left bank slopes and bare ground
Woodland strawberry	*Fragaria vesca*	Soil binding - habitat complexity	Left bank slopes and bare ground
Fuchsia flower gooseberry	*Ribes divaricatum var. pubiflorum*	Soil binding - habitat complexity	Left bank slopes and bare ground
Cream bush	*Holodiscus discolor*	Soil binding - habitat complexity	Left bank slopes and bare ground
Snowberry	*Symphoricarpos mollis*	Soil binding - habitat complexity	Left bank slopes and bare ground



Scotts Creek Streambank Stabilization Project: Revegetation Plan

Location: Lower Scotts Creek, between Little Creek and Winter Creek tributaries, Santa Cruz County



	Name	Date
Created by	E. J Cornegie	2/1/2011
Changed by	E. J Cornegie	5/18/2011
Scale	1" = 4'	

SPRR

Title: North Revetment Sheet Piles

Drawing Number: North Revetment 2011

Scotts Creek Railroad Bridge Emergency Sheet Pile Project Monitoring Report
USACE RGP File Number 2010-00407S
February 26, 2011
County Version

Brian Dietterick, PhD, PH, Director, Swanton Pacific Ranch, Cal Poly
Drew Perkins, Watershed Hydrology Graduate Assistant, Swanton Pacific Ranch, Cal Poly
Drew Loganbill, Watershed Hydrology Graduate Assistant, Swanton Pacific Ranch, Cal Poly

1.0 Summary

This report documents take avoidance measures for listed salmonids in association with work done on the Scotts Creek Railroad Bridge Abutment Protection Project, performed under Army Corp of Engineers Regional General Permit 5, File Number 2010-00407S. The work occurred between February 9, 2011 and February 15, 2011. No listed salmonids were killed or injured during the project. The work area was separated from the stream channel by a seine net and plastic sheeting attached to T-stakes (see photo monitoring below for pictures). The work area was snorkle surveyed by NMFS staff at the Soutwest Fisheries Science Center (SWFSC) before the net and sheeting were installed and every morning before sheet pile work began. No salmonids were identified in the work area or the vicinity of the project during any of these surveys. It is highly unlikely that take of listed salmonid species occurred as a result of this project. This project helped minimize potential for bridge failure, which would likely have catastrophic consequences to both property and habitat.

2.0 Work Performed

The project included installing 13 sheet piles adjacent to the abutment with a vibratory hammer to a depth of 15' to 17' below the base of the footing, drilling into the abutment footing and installing bolts to secure the sheets to the abutment, and erosion control measures on the bank adjacent to the abutment and in the areas disturbed by construction (Figure 1.). The sheet piles were installed by a crane with a 100' boom that was positioned outside of the channel area. Scaffolding was installed around the abutment which allowed workers to access the site without disturbing the streambed. Flow conditions during construction were unseasonably low, and although some light rain fell during construction, no more than 0.25" fell at the project site during a 24-hour period. The stage at the Scotts Creek streamgage downstream from the site varied between 1.41 and 1.48 feet during construction (19-25 cfs). Summer time low flow stage is approximately 1.05 feet (~2 cfs). Figure 2 shows stage during the 2010-2011 Winter. Construction was completed and erosion control measures were installed before any rainfall fell on 2/15/2011 (rainfall started at approximately 10:00 PM). A log of daily contruction and monitoring activities is also included. The additional grouting work is to be completed at the same time the upstream revetment project is to occur. *See accompanying project description and drawings for the entire project*

EXHIBIT A

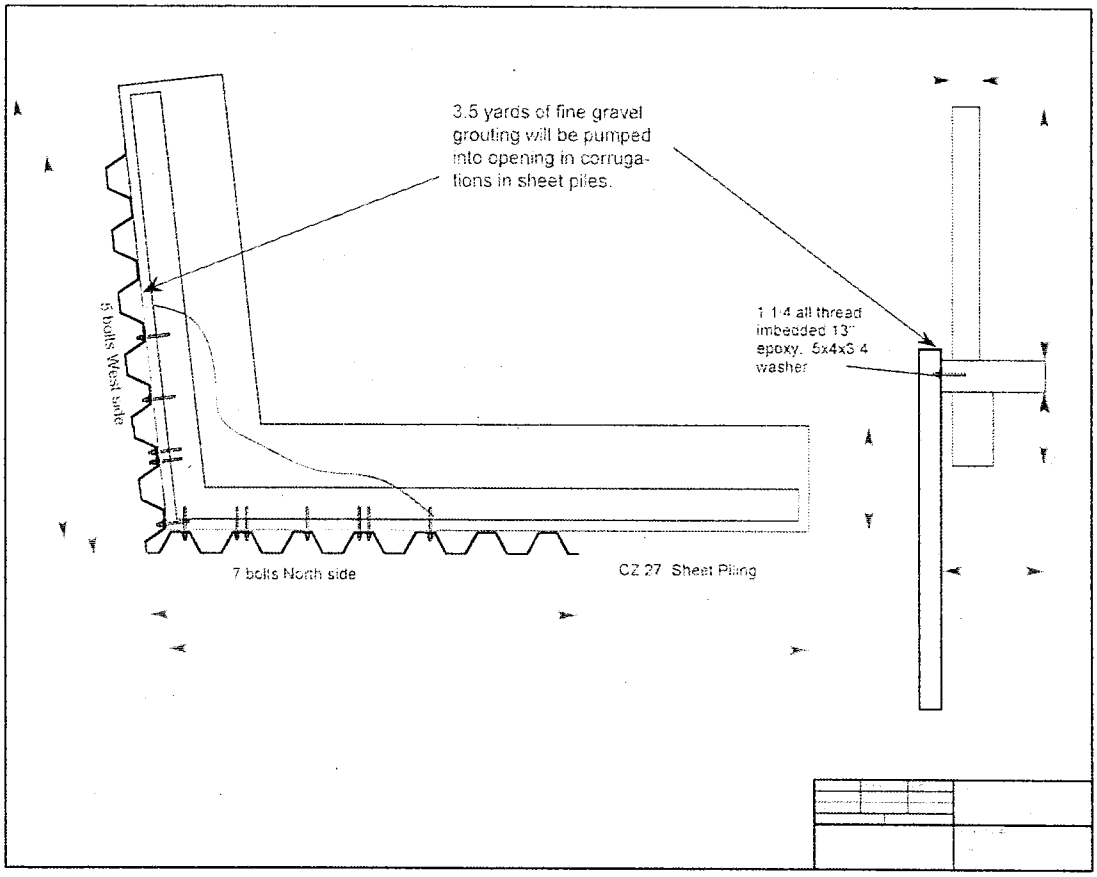


Figure 1. Sheet pile installation and grouting design.

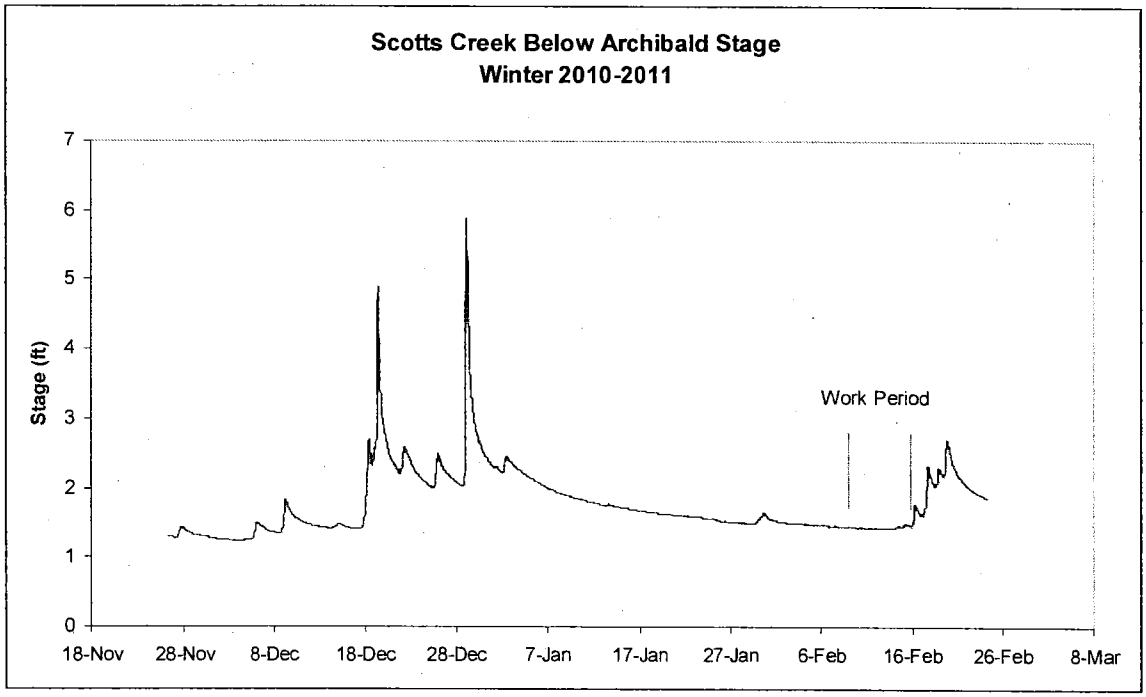


Figure 2. Stage at Scotts Creek Stream Gage during the 2010-2011 Winter. The construction period is shown in orange.

EXHIBIT A

3.0 Salmonid take minimization measures

The work area was snorkle surveyed by staff of the SWFSC on February 9 and no salmonids were identified. The t-stakes were pounded into the channel by hand and the work area was separated from the channel with a silt fence, clear plastic sheeting, and a seine net installed by SWFSC staff. The plastic sheeting and silt fence minimized flow into and out of the work area, which minimized downstream movement of sediment disturbed by sheet driving operations.

Snorkle surveys of the work area and adjacent channel were performed by SWFSC staff each morning before sheet driving operations began. Ranch watershed hydrology personnel (Drew Perkins or Drew Loganbill) were on site at all times to ensure that the net and plastic sheeting was not damaged by work operations and was capable of preventing salmonids from entering the work area and all other take minimization measures dictated in the permit were performed.

4.0 Sound level monitoring

Sound levels were recorded underwater using a sound data logger set at a 0.5 second sampling interval. A non-recorder sound meter (with maximum hold function) was also used to measure sound levels in the air. Sound levels were measured at the bank approximately 20' from the abutment on the downstream side. Figure 3 through 5 show sound levels recorded during the 12th, 14th and 15th. No recording sound meter was available on the 11th and only manual measurements, shown in Table 1, were available.

Table 1. Manual sound level underwater measurements from Feb 11th.

10:10	Pile Drive	Max 104.1 dB
11:05	Pile Drive	Max 87.1 dB
11:45	Pile Drive	Max 101.1 dB
12:05	Pile Drive	Max 103.2 dB

EXHIBIT A

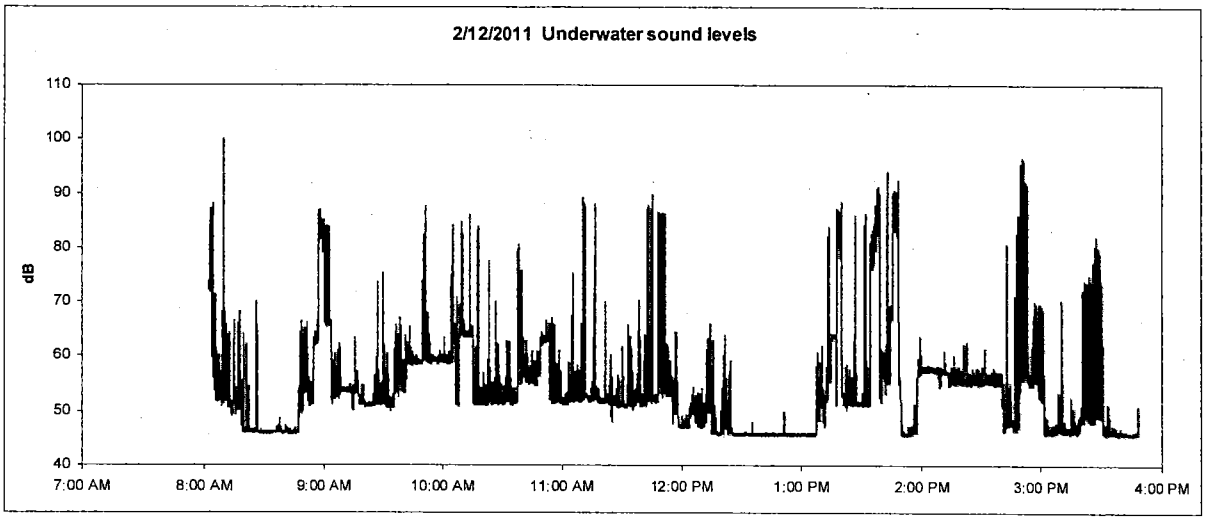


Figure 3. Time-series graphs of sound levels from 2/12/2011.

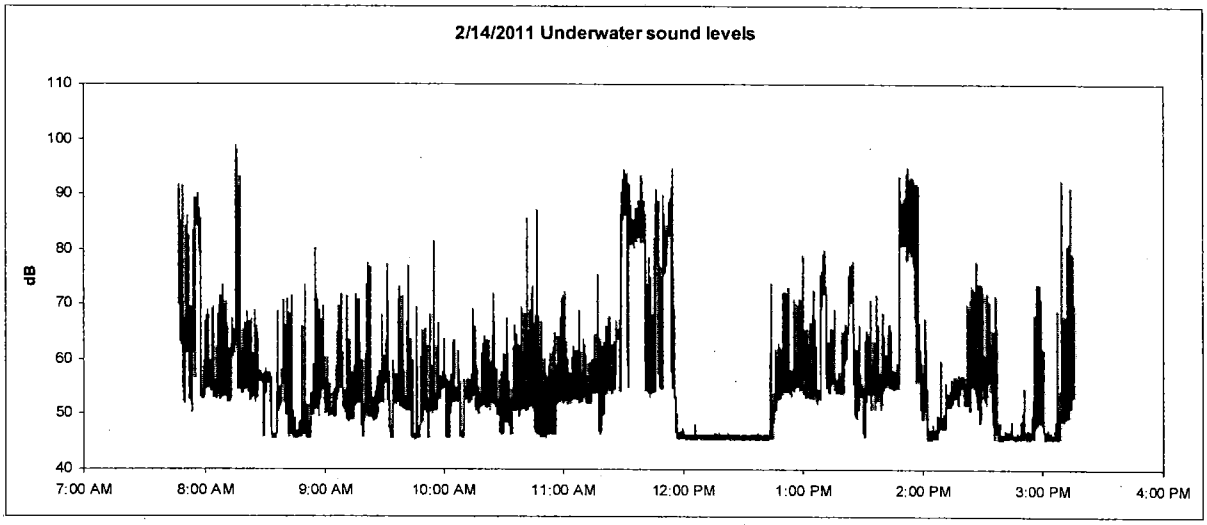


Figure 4. Time-series graphs of sound levels from 2/14/2011.

EXHIBIT A

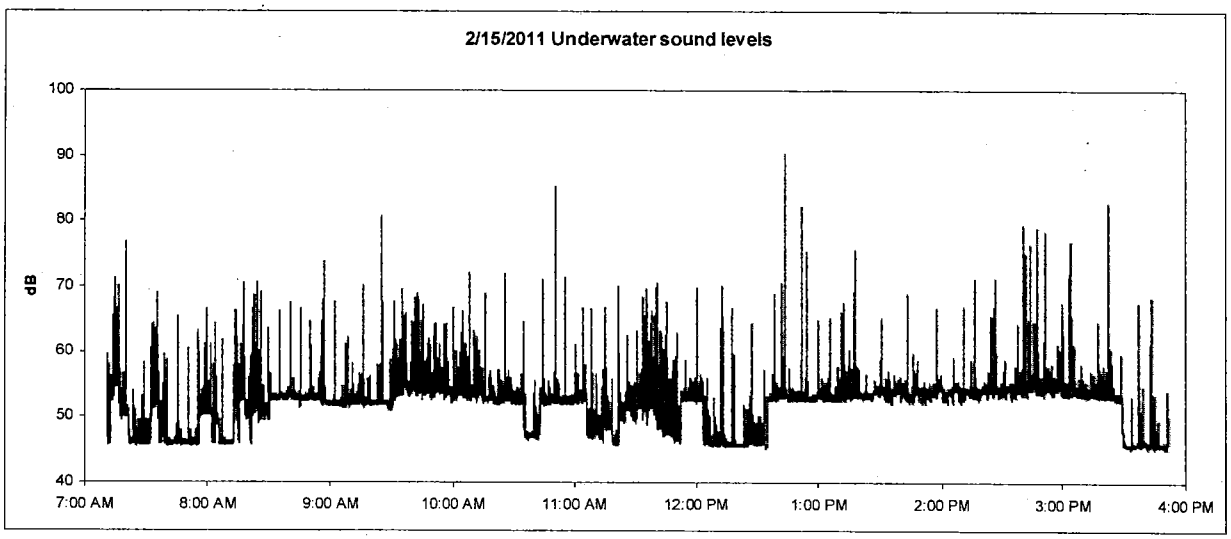


Figure 5. Time-series graphs of sound levels from 2/15/2011.

5.1 Peak and RMS dB levels during sheet driving.

Peak and RMS dB levels were calculated for the first four sheets driven on the Feb. 14th.

Table 2. Peak levels during active sheet pile driving on 2/14/2011.

7:50	RMS = 73.6	Max = 90.1
8:14	RMS = 77.5	Max = 98.9
11:28	RMS = 84.4	Max = 94.4
11:45	RMS = 75.6	Max = 90.8

5.2 Sound Histograms.

The following histograms (Figures 6 through 8) show the time spent at each sound level during the day.

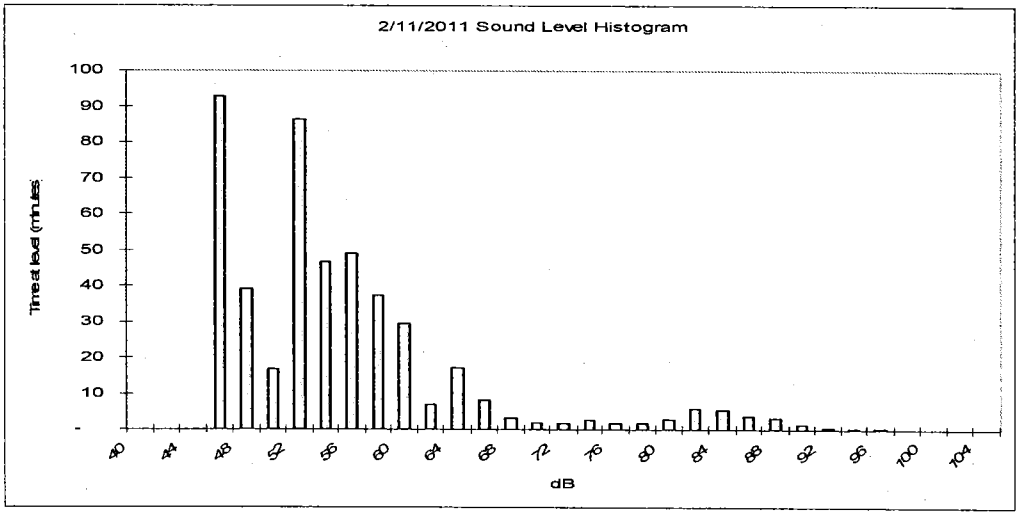


Figure 6. Frequency histogram of sound levels from 2/11/2011.

EXHIBIT A

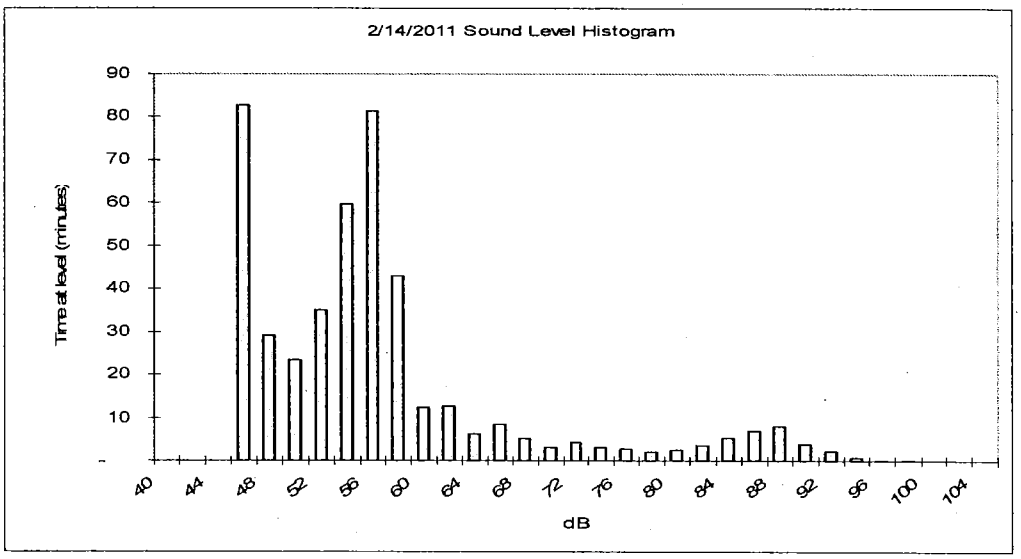


Figure 7. Frequency histogram of sound levels from 2/14/2011.

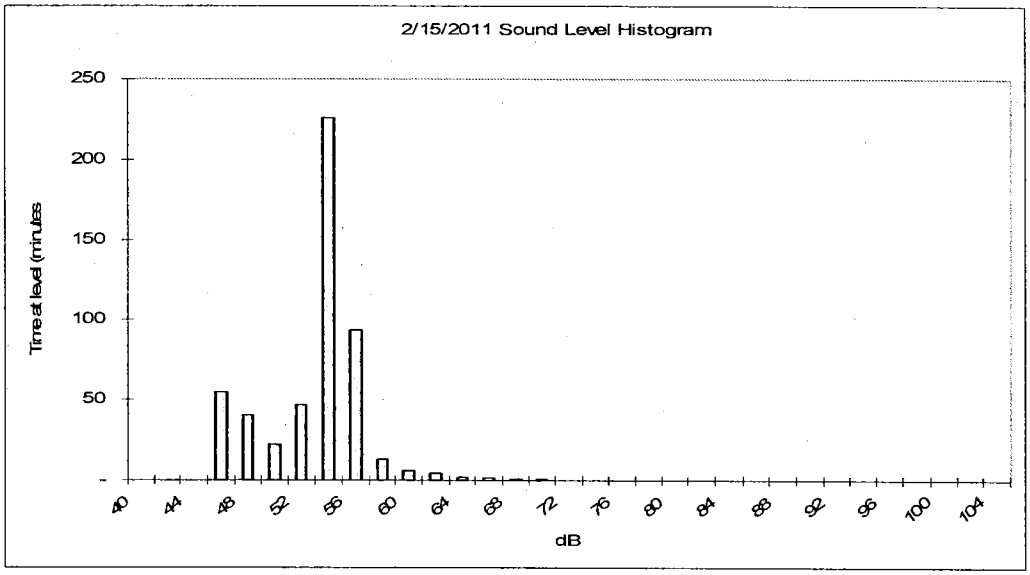


Figure 8. Frequency histogram of sound levels from each day. Note the axis are significantly different in the 2/15/2011 graph.

EXHIBIT A

5.2 Tabular sound level exceedence.

Continuous recording of underwater sound levels observations summarized by the time decibel readings were exceeded (presented in Tables 2 through 4).

Table 2. Sound levels measured by recording sound meter for Saturday, 2/12/2011.

dB	Time at level (s)	Time at level (min)	Time Exceeded (s)	Time Exceeded (min)	Time Exceeded (hr)
40	0.0		27970	466.2	7.77
42	0.0		27970	466.2	7.77
44	0.0		27970	466.2	7.77
46	5570.5	92.84	27970	466.2	7.77
48	2352.0	39.20	22400	373.3	6.22
50	1011.0	16.85	20048	334.1	5.57
52	5177.0	86.28	19037	317.3	5.29
54	2791.5	46.53	13860	231.0	3.85
56	2935.0	48.92	11068	184.5	3.07
58	2238.0	37.30	8133	135.6	2.26
60	1776.0	29.60	5895	98.3	1.64
62	413.0	6.88	4119	68.7	1.14
64	1027.0	17.12	3706	61.8	1.03
66	493.0	8.22	2679	44.7	0.74
68	187.0	3.12	2186	36.4	0.61
70	116.0	1.93	1999	33.3	0.56
72	107.5	1.79	1883	31.4	0.52
74	162.0	2.70	1776	29.6	0.49
76	99.0	1.65	1614	26.9	0.45
78	102.0	1.70	1515	25.2	0.42
80	180.0	3.00	1413	23.5	0.39
82	347.0	5.78	1233	20.5	0.34
84	328.0	5.47	886	14.8	0.25
86	218.5	3.64	558	9.3	0.15
88	199.0	3.32	339	5.7	0.09
90	84.0	1.40	140	2.3	0.04
92	35.0	0.58	56	0.9	0.02
94	10.0	0.17	21	0.4	0.01
96	9.0	0.15	11	0.2	0.00
98	1.5	0.03	2	0.0	0.00
100	0.5	0.01	1	0.0	0.00
102	0.0	0.00	0	0.0	0.00

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Table 3. Sound levels measured by recording sound meter Monday, 2/14,2011.

dB	*Time at level (s)*	*Time at level (min)*	*Time Exceeded (s)*	*Time Exceeded (min)*	*Time Exceeded (hr)*
40	0.0		27012	450.2	7.50
42	0.0		27012	450.2	7.50
44	0.0		27012	450.2	7.50
46	4963.5	82.73	27012	450.2	7.50
48	1755.0	29.25	22048	367.5	6.12
50	1410.5	23.51	20293	338.2	5.64
52	2103.5	35.06	18883	314.7	5.25
54	3583.0	59.72	16779	279.7	4.66
56	4890.5	81.51	13196	219.9	3.67
58	2582.0	43.03	8306	138.4	2.31
60	748.0	12.47	5724	95.4	1.59
62	769.0	12.82	4976	82.9	1.38
64	379.5	6.33	4207	70.1	1.17
66	518.5	8.64	3827	63.8	1.06
68	309.5	5.16	3309	55.1	0.92
70	183.5	3.06	2999	50.0	0.83
72	270.5	4.51	2816	46.9	0.78
74	190.5	3.18	2545	42.4	0.71
76	164.0	2.73	2355	39.2	0.65
78	123.0	2.05	2191	36.5	0.61
80	162.0	2.70	2068	34.5	0.57
82	211.5	3.53	1906	31.8	0.53
84	335.5	5.59	1694	28.2	0.47
86	426.5	7.11	1359	22.6	0.38
88	488.5	8.14	932	15.5	0.26
90	233.5	3.89	444	7.4	0.12
92	145.0	2.42	210	3.5	0.06
94	41.5	0.69	65	1.1	0.02
96	12.5	0.21	24	0.4	0.01
98	9.5	0.16	11	0.2	0.00
100	1.5	0.03	2	0.0	0.00
102	0.0	0.00	0	0.0	0.00
104	0.0	0.00	0	0.0	0.00

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Table 4. Sound levels measured by recording sound meter Tuesday, 2/15,2011.

dB	*Time at level (s)*	*Time at level (min)*	*Time Exceeded (s)*	*Time Exceeded (min)*	*Time Exceeded (hr)*
40	0.0		30863	514.4	8.57
42	0.0		30863	514.4	8.57
44	0.0		30863	514.4	8.57
46	3295.5	54.93	30863	514.4	8.57
48	2431.0	40.52	27568	459.5	7.66
50	1354.0	22.57	25137	418.9	6.98
52	2845.0	47.42	23783	396.4	6.61
54	13568.5	226.14	20938	349.0	5.82
56	5629.0	93.82	7369	122.8	2.05
58	805.5	13.43	1740	29.0	0.48
60	356.0	5.93	935	15.6	0.26
62	277.5	4.63	579	9.6	0.16
64	118.5	1.98	301	5.0	0.08
66	86.5	1.44	183	3.0	0.05
68	39.0	0.65	96	1.6	0.03
70	24.0	0.40	57	1.0	0.02
72	16.5	0.28	33	0.6	0.01
74	3.5	0.06	17	0.3	0.00
76	4.5	0.08	13	0.2	0.00
78	2.5	0.04	9	0.1	0.00
80	3.5	0.06	6	0.1	0.00
82	0.5	0.01	3	0.0	0.00
84	1.0	0.02	2	0.0	0.00
86	0.5	0.01	1	0.0	0.00
88	0.0	0.00	1	0.0	0.00
90	0.0	0.00	1	0.0	0.00
92	0.5	0.01	1	0.0	0.00
94	0.0	0.00	0	0.0	0.00
96	0.0	0.00	0	0.0	0.00
98	0.0	0.00	0	0.0	0.00
100	0.0	0.00	0	0.0	0.00
102	0.0	0.00	0	0.0	0.00
104	0.0	0.00	0	0.0	0.00

5.0 Photo monitoring

Four photo monitoring sites were established and are located as follows: 1) Looking north at the staging and work area. 2) The top of the upstream bank looking at the upstream side of the abutment. 3) Across the channel looking at the corner of the abutment. 4) on the downstream gravel bar looking at the downstream side of the abutment. Full size photos are available.

Photos were taken before construction, daily during construction, and after construction. (Photos from 2/10/2011 and 2/12/2011 exist, but were not included in this this report. No

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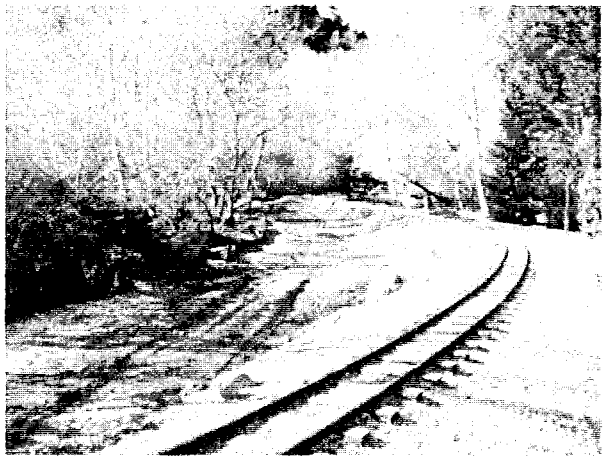
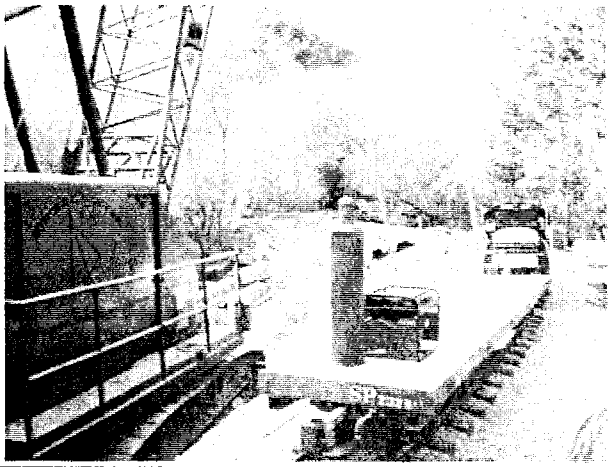
instream work was performed on 2/10. Photos taken on 2/12 were taken in the morning and are almost identical to the photos from 2/11/2011.)

Photo Point 1

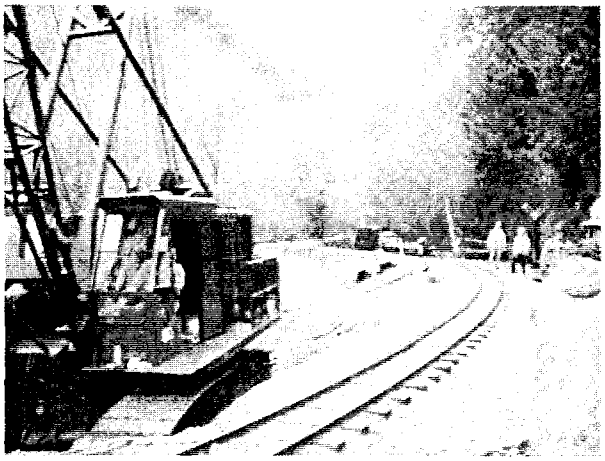
2/9/2011



2/11/2011



2/14/2011



2/15/2011

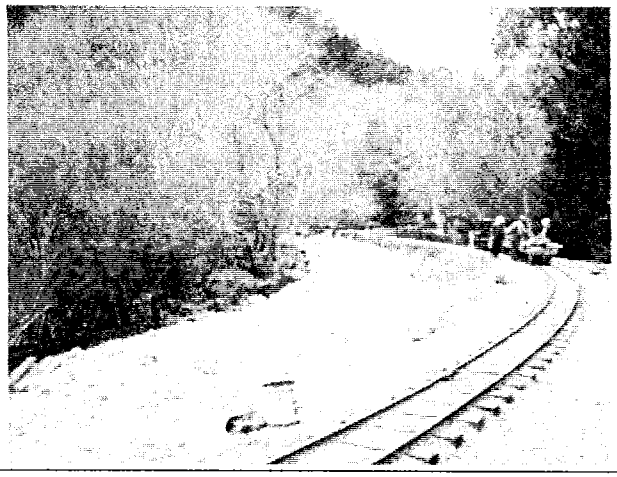


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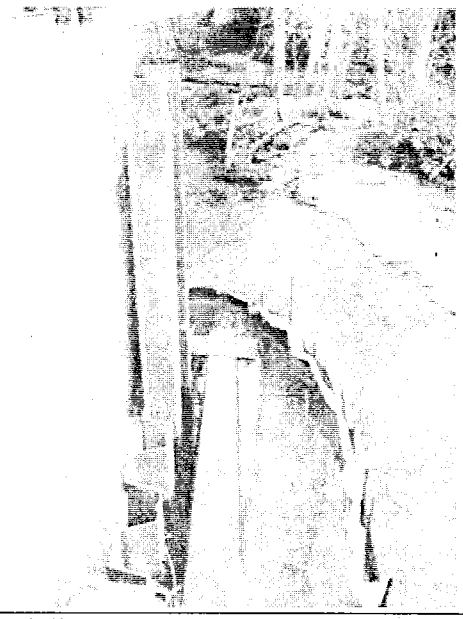
Photo Point 2

2/9/2011

2/11/2011



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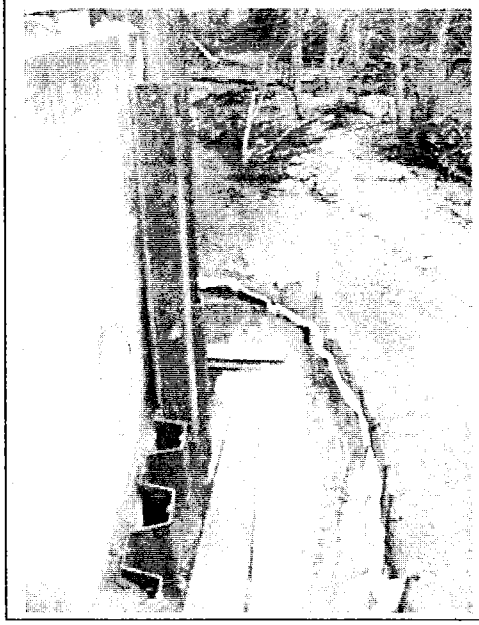

2/15/2011

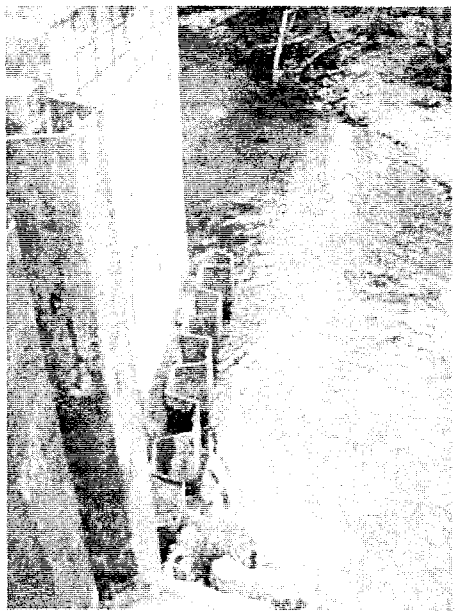

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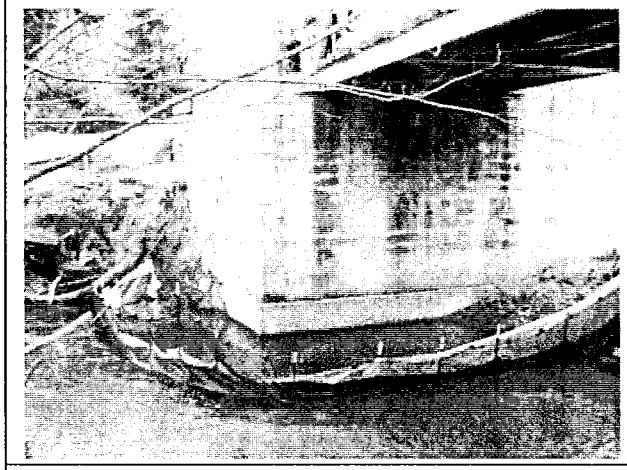
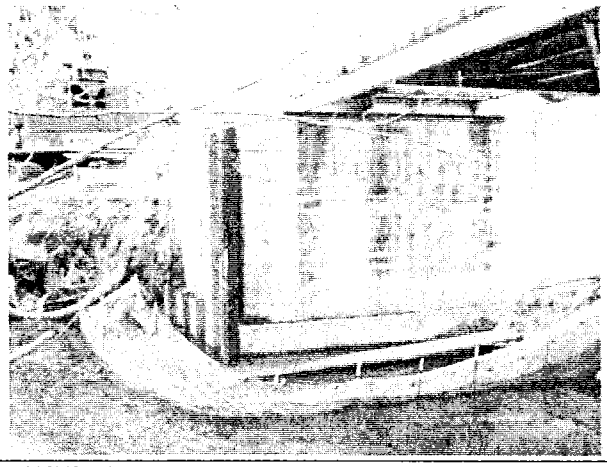
Photo Point 3

2/9/2011



2/11/2011



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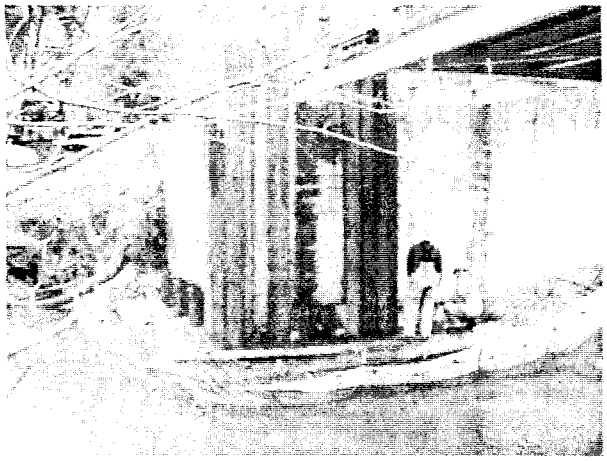

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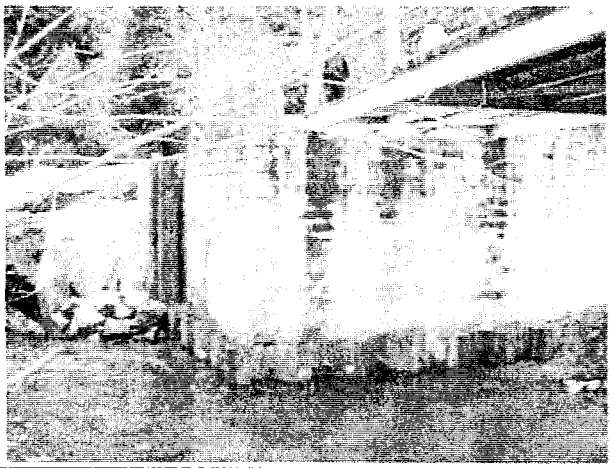

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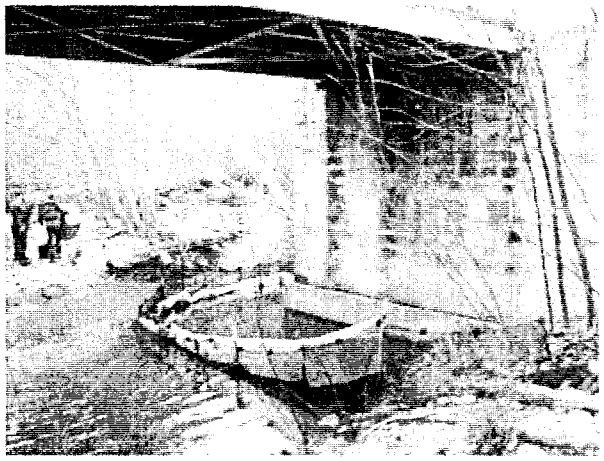
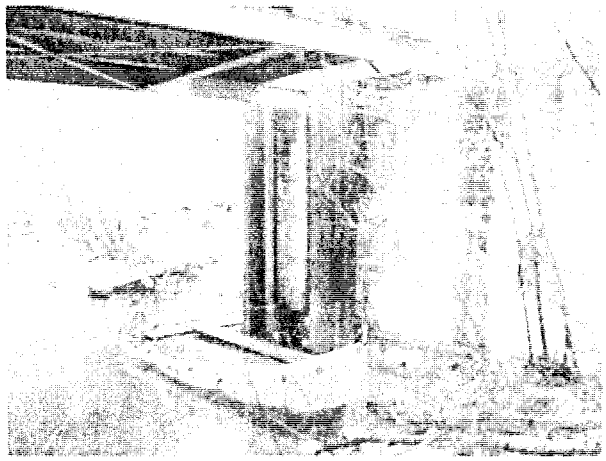
Photo Point 4

2/9/2011

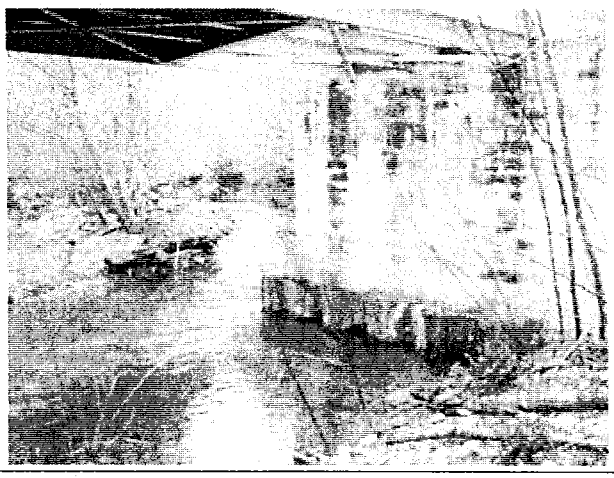


2/11/2011

2/14/2011



2/15/2011



6.0 Daily log of monitoring and construction activities

1/17/2011

Silt fence and erosion control installed as barrier to riparian corridor in project area.

1/18 - 2/8/2011

Daily survey for CRLF at project site. No frogs found.

2/9/2011 - Wednesday

9:30 Project site checked for CRLF and no frogs found.

9:45 NMFS crew conducted snorkel check for salmonids at project site including under abutment. No salmonids were found.

Cal Poly and NMFS crews installed silt fence in creek around project area.

10:45 4 photo monitoring points were established. Pictures were taken at all points.

13:00 CP crew installed plastic sheet in channel around project site to contain sediment

EXHIBIT A

in stream.
15:00 NMFS crew installed seine net in creek around project area.

Daily Recap:
Installed t-stake fence. Installed silt fence and plastic sheeting. Installed seine net.

2/10/2011 - Thursday
7:15 Project site checked for CRLF and no frogs found.
8:00 NMFS crew conducted snorkel check for salmonids upstream and downstream of project site including under abutment. No salmonids were found.
Pictures taken at all four photo monitoring points.
Checked for equipment leaks.
12:15 Project site checked for CRLF and no frogs found.
16:00 Project site checked for CRLF and no frogs found.
Project site cleared of trash.

Daily Recap:
Crane transported to site.
Unloaded and set up vibratory hammer. Unloaded and sorted sheet piling.
Cut piling to make corner bend.
Installed scaffolding for above water access to abutment.
Removed beams from bridge.
No pile driving occurred.

2/11/2011 - Friday
7:00 Project site checked for CRLF and no frogs found.
7:15 NMFS crew conducted snorkel check for salmonids at project site including under abutment. No salmonids were found.
Photos taken at monitoring sites.
Equipment checked for leaks. None found.
12:15 Project site checked for CRLF and no frogs found.
Pictures taken at all four photo monitoring points.
15:45 Project site checked for CRLF and no frogs found.
Project site cleared of trash.

Sound levels in water during driving (3" under surface, ~20' from abutment):
10:10 first attempts at corner pile - max 104.1 dB (hit obstruction and aborted).
11:05 first pile drive - max 87.1 dB
11:45 max 101.1 dB
12:05 max 103.2 dB

Daily Recap:
Several attempts were made at the corner sheet but there was an obstruction and it could not be positioned correctly. First sheet pile driven closer to bank at 11:00. 5 sheet piles driven total.

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Bridge abutment moved during lunch and broke weld on angle iron. No sheets were driven after lunch. Angle iron resting against abutment was rewelded. 3 sheets cut, tops removed, and prepped for bolt installation tomorrow.

2/12/2011 - Saturday

7:00 Project site checked for CRLF and no frogs found.
7:15 NMFS crew conducted snorkel check for salmonids at project site including under abutment. No salmonids were found.
8:05 Turned on sound recorder.
12:05 Checked for CRLF with Dan Grout. None found.
3:45 Checked project area for CRLF. None found. Removed trash. Equipment checked for leaks and none found.

Sound levels in air during drilling and driving (~20' from abutment). Continuous data from sound recorder underwater attached:

8:20 Drilling four holes. Max 88.7 dB.
9:01 Pile drive. Max 88.8 dB.
9:50 Several attempts at double sheet. Max 105.2 dB.
10:18 Pile drive attempt at double sheet. Max 105.0 dB.
1:20 Pull piling (w/ shackle dangling). Max 106.8 dB.
1:25 Pile drive corner piece. Max 102.0 dB. Estimated average 95 dB.
2:56 Pile drive double sheet (successful). Max 107.3 dB.

Daily Recap:

Drilled bolt holes in footing in morning. After several attempts successfully drove sheet pile under northern bridge beam (One long sheet and one short sheet welded together). Buried channel iron from original scour protection attempt was obstructing the sheet pile and causing interlock on sheets to come apart. Dan Grout visited site at noon and advised on CRLF. Epoxyed bolt holes and installed 1 ¼' bolts.

2/14/2011 - Monday

Weather: 0.18" overnight. At 7:00 light wind with very light rain. CNRFC forecast has light rain until Tuesday evening. NWS in 7:55 AM update says "rain has mostly ended".
6 hr Preciptation Forecast for Ben Lomond Mountain starting at 4:00 am Monday:
Mon 0.45/0.15/0.02/0.04
Tues 0.04/0.10/0.40/1.00
Wed 0.30/0.30/0.18/0.08

7:00 Project site checked for CRLF and no frogs found.
7:25 NMFS crew conducted snorkel check for salmonids at project site including under abutment. No salmonids were found.
7:35 Next sheet pile positioned.
7:55 Turned on sounds recorder, placed in stream.
8:00 First sheet pile hammered in place.

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8:20 Dan Grout, CRLF biologistvisited site.
8:30 Second sheet pile hammered in place.
11:35 Third sheet pile hammered in place lasting 13 minutes.
12:35 Project site checked for CRLF and no frogs found.
14:31 Drilling started.
15:20 Sound recorder stopped.
15:30 Project site checked for CRLF and no frogs found.

Daily Recap:
Two sheet piles were hammered in under bridge first thing in the morning. Dan Grout visited site to make sure everything looked good for CLRF. While next sheet pile was getting set up, the tops of sheet piles were cut off. Third sheet pile was hammered in place before lunch. Last two sheet piles were driven in on upstream wall and then final sheet was driven in under bridge. After final sheet were driven in, holes were drilled in the footing then bolts epoxyed in place.

2/15/2011 - Tuesday
7:00 Checked site for CRLF. None found. Dan Grout checked site in very early morning and did not find any CRLF.
7:15 installed sound recorder (no pile driving or drilling occurred today).
12:00 Checked site for CRLF. None found. No rain yet.
2:15 Crane left work area.
3:00 Rocks installed and all fencing/scaffolding out of creek.
5:30 Erosion control finished. Rain started at approximately 10:00 pm.

Daily Recap:
No pile driving or drilling occurred today. Remaining sheets were cut and removed. All bolts were tightened. Beams removed from bridge were rewelded. Vibratory hammer and crane left the jobsite. Seine net, siltfence, plastic sheeting, t-stakes, and scaffolding were removed from the channel. Jute netting was placed over the failing bank adjacent to the abutment. 7 large rocks were placed at the base of the jute netting to protect the toe of the slope. The entire work area disturbed by construction was heavily straw mulched and the siltfence was checked and repaired where necessary.

2/16/2011
Daily Recap: Erosion control measures checked after ~0.85" of rain overnight. No issues identified.

EXHIBIT A

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts, other than the Special Use (SU) district, listed in section 13.10.170(d) as consistent with the General Plan and Local Coastal Program LUP designation.

This finding can be made, in that the property is zoned CA-P and PR-P (Commercial Agriculture and Parks, Recreation and Open Space – Agricultural Preserve Combining District). The proposed bridge repair and streambank stabilization is permitted within the zone district, and the zoning is consistent with the site's (A) Agriculture General Plan designation.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements as the proposed development is limited to repair of an existing permitted bridge.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to section 13.20.130 et seq.

This finding can be made, in that the development is not visible from surrounding properties and will not substantially alter the appearance of the existing permitted bridge.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the General Plan and Local Coastal Program land use plan, specifically Chapter 2: figure 2.5 and Chapter 7, and, as to any development between and nearest public road and the sea or the shoreline of any body of water located within the coastal zone, such development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act commencing with section 30200.

This finding can be made, in that the project site is not located between the shoreline and the first public road and is approximately four miles inland from the coast.

5. That the proposed development is in conformity with the certified local coastal program.

This finding can be made, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. Additionally, the bridge repair is an allowed use in the Commercial Agriculture zone district of the area, as well as the General Plan and Local Coastal Program land use designation. The bridge is not visible from any surrounding properties and the repair work will not substantially impact the appearance of the bridge.

Riparian Exception Findings

1. That there are special circumstances or conditions affecting the property.

Following an accumulation of large wood in the center of Scotts Creek Channel 100-feet upstream from the railroad bridge crossing, the thalweg channel changed from the more central channel position to the left side. This more concentrated flow condition led to downcutting alongside the live-log crib wall installed immediately downstream of the left bridge abutment and alongside the abutment. The repairs conducted in conjunction with Emergency Coastal Permits 111023 and 111453 allowed temporary shoring and filling of voids behind the bridge abutment in order to make necessary emergency repairs. The final phase of work to redirect the stream flow, and to re-contour and anchor the streambank, will protect against a recurrence of the scour and undercutting that threatened the bridge and sensitive aquatic habitat.

2. That the exception is necessary for the proper design and function of some permitted or existing activity on the property.

The stream flow must be redirected and the streambank stabilized in order to protect against future scour and possible failure of both the bridge and nearby streambank. Failure of the bridge and streambank could have significant negative impacts on the creek, including impacts to endangered coho salmon and threatened steelhead, which are known to exist in the creek. Steel cable tie backs will be installed to prevent additional rotation of the bridge abutment.

3. That the granting of the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located.

The streambank stabilization and log vane placement will prevent impacts to downstream properties and the area in which the project is located. If the bridge were to fail, the impacts to endangered and threatened fish could be detrimental.

4. That the granting of the exception, in the Coastal Zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative.

The placement of the log vanes to redirect stream flow, and the re-contouring and anchoring of the streambank will help to ensure the integrity of the bridge abutment, as well as enhancing aquatic habitat. The log vanes will provide pool habitat and slack water, while the rootwads will create cover and refugia during both high and low flows. The proposed measures have been designed with consultation from the Santa Cruz Resource Conservation District, the Natural Resources Conservation Service, and the National Marine Fisheries Service to protect the streambank and provide habitat benefits for listed salmonid species. The project will take place during mid-to-late summer to coincide with yearly minimum flows when the stream can be diverted and project area can be dewatered. A condition of project approval requires a biological monitor to be onsite at all times during construction.

5. That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the Local Coastal Program Land Use Plan.

The granting of the exception is in accordance with the purpose of Chapter 16.30 of the County Code, the General Plan and the Local Coastal Program Land Use Plan. The proposal has been designed in a manner that the actual construction impacts of the repair have minimal effect on the riparian corridor. The long terms effects of the repair and restoration will be beneficial to the proper functioning and habitat value of the riparian system.

Conditions of Approval

Exhibit A. Project Plans, prepared by California Polytechnic State University Foundation, dated August 2011.

I. This permit recognizes the emergency placement of 3.5 cubic yards of gravel fill into voids of the abutment repair of the Swanton Railroad bridge and authorizes the placement of two 60-foot log vanes, anchored by 2-ton granite boulders. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/ owner shall:

A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Any outstanding balance due to the Planning Department must be paid prior to making a Building, Grading, or Demolition Permit application. Applications for Building, Grading, or Demolition Permits will not be accepted or processed while there is an outstanding balance due.

C. Obtain a final inspection for building permit B-111260.

II. All construction shall be performed according to the approved plans for the building permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

A. Streambank stabilization work shall be consistent with the scope of work shown on Exhibit A approved for this project.

B. The property owner, applicant or other responsible party shall contact Environmental Planning at (831) 454-3168, four working days prior to final site inspection.

C. Erosion control measures must be in place at all times during construction. All disturbed soils shall be stabilized to prevent siltation in the watercourse.

D. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

III. Operational Conditions

A. Obtain any required State and Federal permits or approvals for the proposed work prior to commencing work.

B. All conditions of the State and Federal Agencies must be followed.

C. A biological monitor shall be onsite at all times during construction to monitor for impacts to coho salmon and steelhead.

D. If vegetation is removed in the course of construction, the removal must be supervised by a qualified biologist to make sure that California red legged frogs (CRLF) are not present. If CRLFs are present, vegetation removal must stop and the County Planning Department must be consulted as to how to proceed.

E. Erosion control must be installed on the failing crib wall to ensure that vibrations from installation of the sheet piles do not include sedimentation into the creek.

F. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

IV. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

E. .

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Steven Guiney, AICP	Robin Bolster-Grant
Deputy Zoning Administrator	Project Planner

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 111023
Assessor Parcel Number: 057-151-06
Project Location: 291 Swanton Rd.

Project Description: Provide emergency structural support to failing bridge abutment and to stabilize a stream bank.

Person or Agency Proposing Project: California Polytechnical State University Fndn; Attn: Brian Dietterick

Contact Phone Number: (805) 756-6155

A. _____ The proposed activity is not a project under CEQA Guidelines Section 15378.

B. _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).

C. _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.

D. __X__ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type: 15269 Emergency Projects

E. _____ **Categorical Exemption**

Specify type:

F. Reasons why the project is exempt:

Emergency bridge repair, necessary to prevent bridge collapse

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date:_____
Robin Bolster-Grant, Project Planner

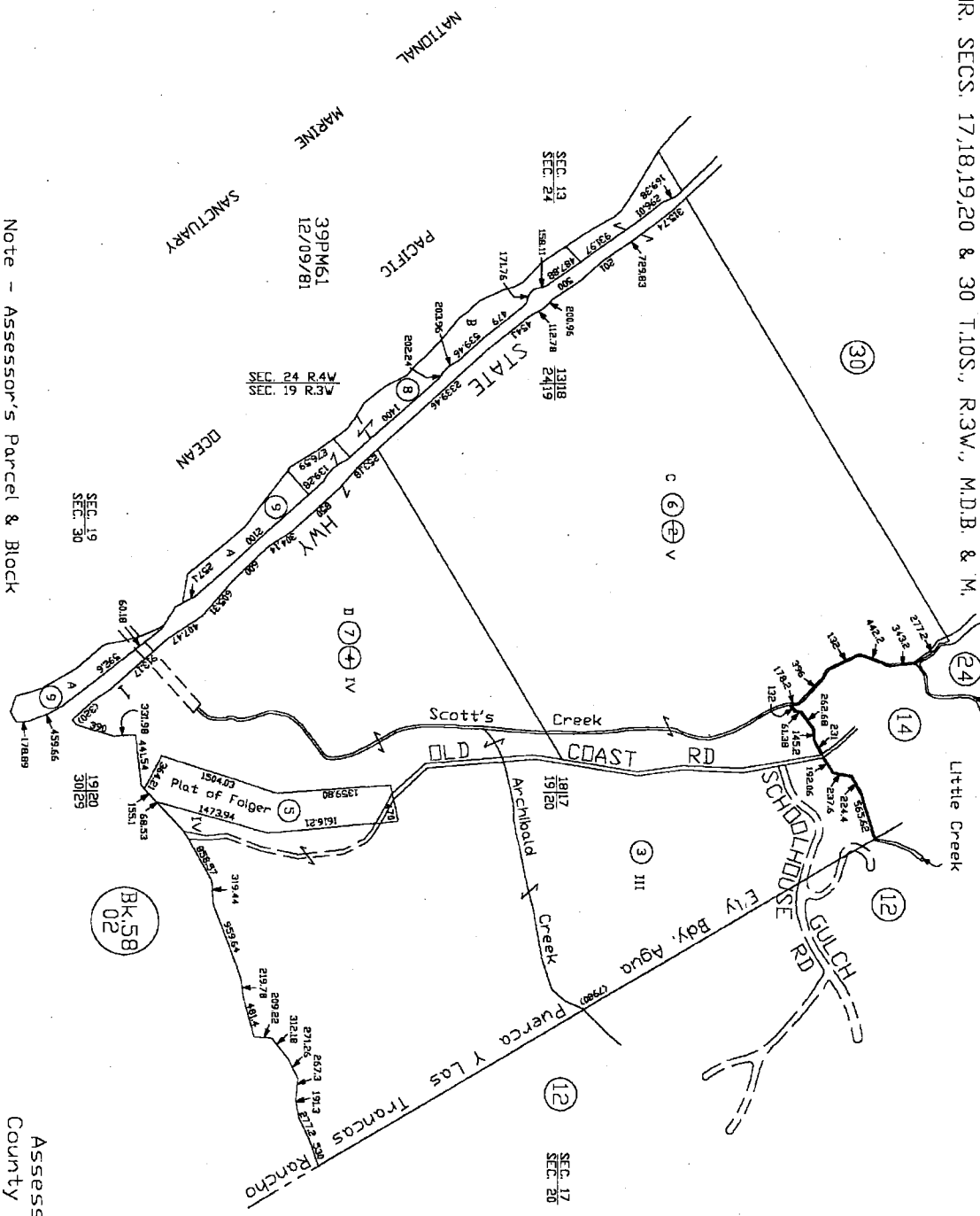
EXHIBIT D

Electronically redrawn 11/14/00 KSA
Rev. 11/14/00 KSA (Por. to Pg. 30)
Rev. 1/11/01 GG (Add map ref.)
Rev. 6/25/01 mvn (changed page refs.)

FOR TAX PURPOSES ONLY

RANCHO AGUA PUERCA Y LAS TRANCAS

POR. SECS. 13 & 24, R.4W., & POR. SECS. 17,18,19,20 & 30 T.10S., R.3W., M.D.B. & M.



Note - Assessor's Parcel & Block Numbers are Shown in Circles.

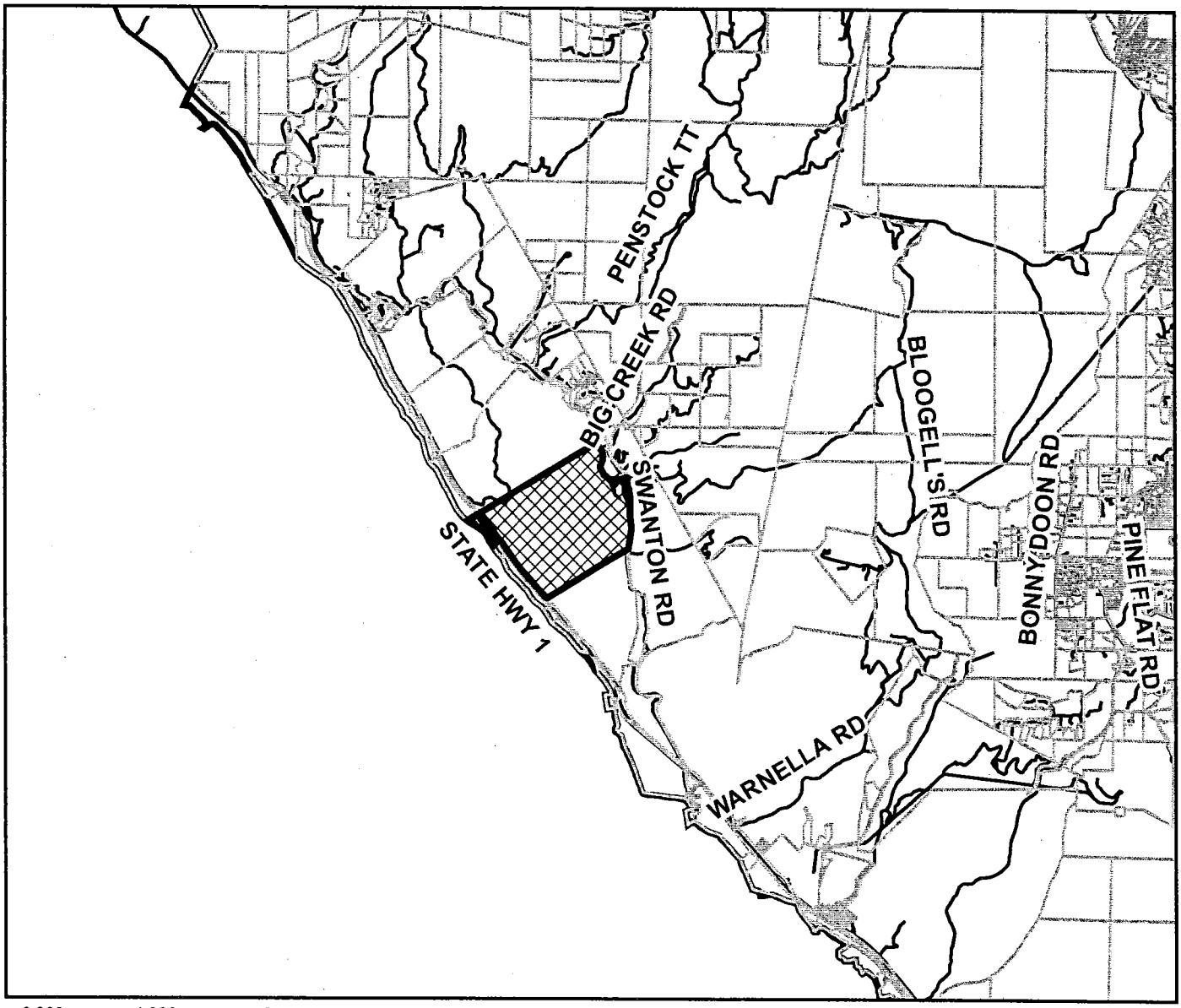
Assessor's Map No. 57-15
County of Santa Cruz, Calif.
Nov. 2000

Tax Area Code 86-022

57-15

EXHIBIT E

Location Map



9,800 4,900 0 9,800 19,600 29,400 39,200 Feet

LEGEND

- APN: 057-151-06
- Assessors Parcels
- Streets
- State Highways
- County Boundary

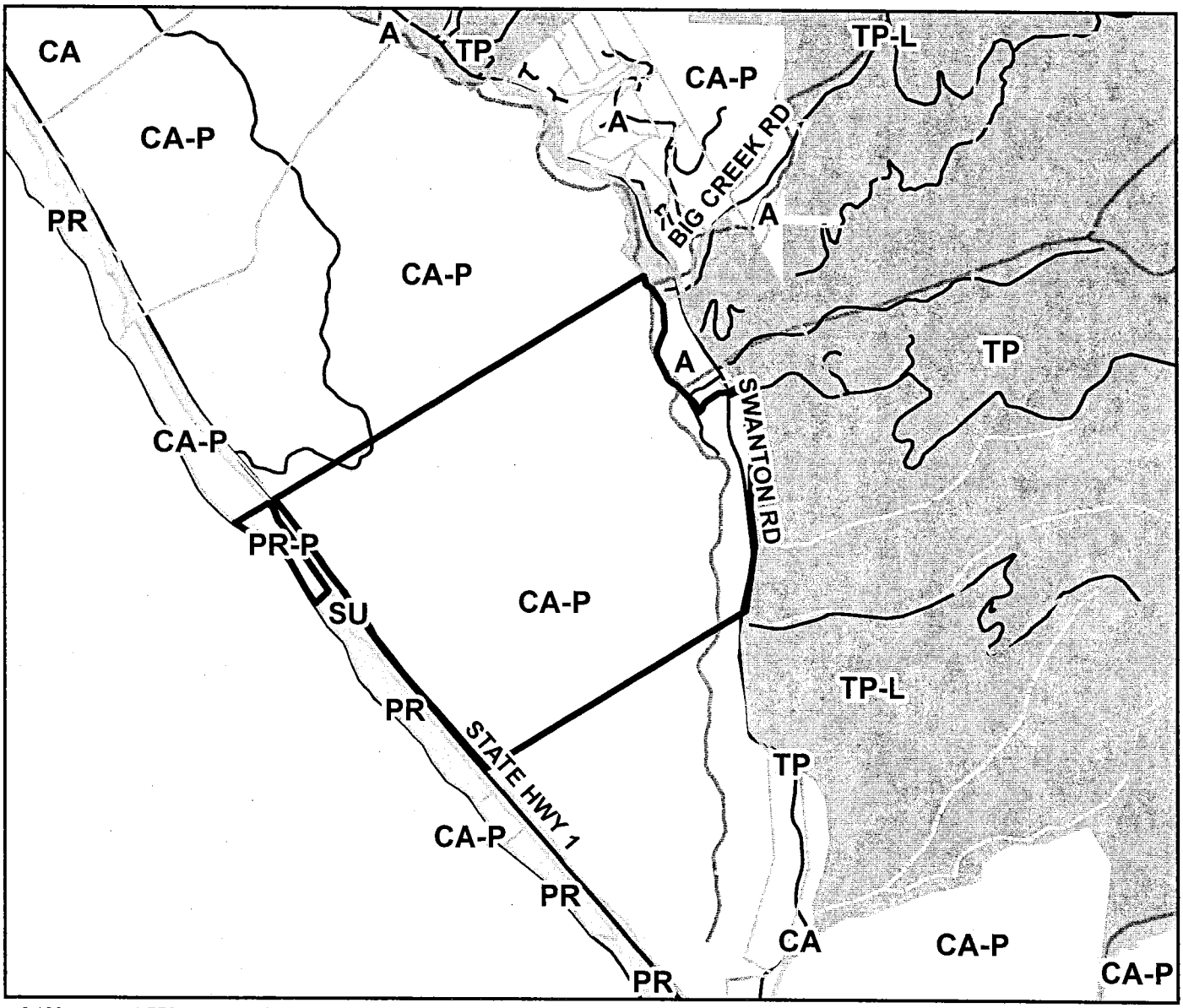
N
W E
S

Map Created by
County of Santa Cruz
Planning Department
March 2012

EXHIBIT E

pln028

Zoning Map



LEGEND

- APN: 057-151-06
- Assessors Parcels
- Streets
- State Highways
- County Boundary

Streams

- PERENNIAL
- INTERMITTENT
- AGRICULTURE COMMERCIAL
- AGRICULTURE
- PARK
- SPECIAL USE
- TIMBER PRODUCTION

N
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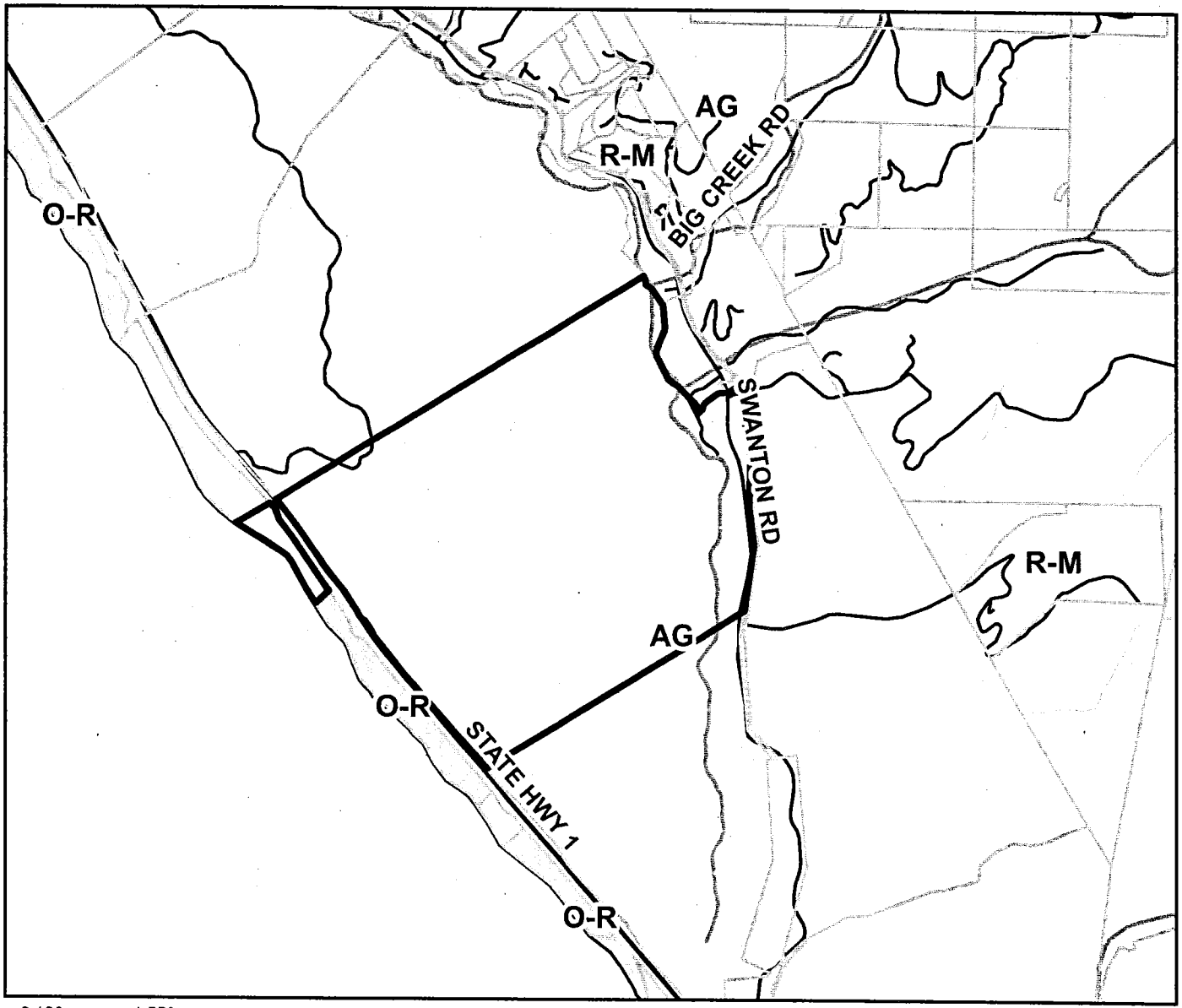
Map Created by
County of Santa Cruz
Planning Department
March 2012

EXHIBIT E

pln028

General Plan Designation Map



3,100 1,550 0 3,100 6,200 9,300 12,400 Feet

LEGEND

- APN: 057-151-06
- Assessors Parcels
- Streets
- State Highways
- County Boundary

Streams

- PERENNIAL
- INTERMITTENT
- Agriculture
- Residential-Mountain
- Parks and Recreation

N W E S

Map Created by
County of Santa Cruz
Planning Department
March 2012

EXHIBIT E

pln028

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 121040

APN 057-151-06

Environmental Planning

Routing No: 1 | Review Date: 03/05/2012

KENT EDLER (KEDLER) : Complete

Application complete as submitted.

Note to Planner, the building permit for the sheet piles has not received a final inpsection. This applicant shuold be made aware of this (maybe also a permit condition to get their permit finaled?)

Project Review

Routing No: 1 | Review Date: 03/05/2012

ROBIN BOLSTER (RBOLSTER) : Complete

EXHIBIT F