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Th-3a

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Date Filed:	February 23, 2005
180th Day:	August 22, 2005
Staff:	ALW-SF
Staff Report:	March 24, 2005
Hearing Date:	April 14, 2005

ADMINISTRATIVE PERMIT

APPLICATION FILE NO: **2-04-017**

APPLICANTS: **California Department of Transportation (Caltrans)**

PROJECT DESCRIPTION: Approval for a Programmatic Five-Year Management Plan to manage the sediment removal and flood control of this portion of Highway 1 along Bolinas Lagoon. The project includes the removal of accumulated sediment, debris and vegetation that has constrained the hydraulic capacity and functional capability of the drainage structures.

PROJECT LOCATION: Route 1, Bolinas Lagoon, Marin County.

EXECUTIVE DIRECTOR'S DETERMINATION: The Executive Director determines that the proposed development qualifies for approval through the issuance of an administrative permit pursuant to Public Resources Code Section 30624. The findings for this determination and for any special conditions follow.

NOTE: This permit shall not become effective until it is reported to the Commission at its next scheduled meeting. If one-third or more of the appointed Commissioners request, the Executive Director's permit issuance shall not be effective, and the application shall be set for public hearing at a subsequent Commission meeting.

This permit will be reported to the Commission at the following time and location:

DATE	April 14, 2005
TIME:	Meeting Begins at 9:00 a.m., Item Th3a
PLACE:	Fess Parker's Doubletree Resort 633 East Cabrillo Blvd. Santa Barbara, CA (805) 669-3581

IMPORTANT – Prior to commencement of any development authorized herein, the following must occur:

1. The permittee must sign the acknowledgement and acceptance of the permit and conditions on pages 22-24 of this permit and return same to the Commission's offices; and
2. The permittee must receive the Notice of Permit Waiver Acceptance verifying that the Commission has concurred with the Executive Director's determination as stated above.

PETER DOUGLAS
Executive Director

By: Alfred Wanger
Title: Deputy Director

1.0 FINDINGS FOR EXECUTIVE DIRECTOR'S DETERMINATION

1.1 Project Location

The project site is located along Highway 1 along the northeast shore of Bolinas Lagoon in Stinson Beach, Marin County (Exhibit 1, Regional Map & Exhibit 2, Vicinity Map).

Highway 1 (Shoreline Highway) is a two-lane state highway that links the Golden Gate Bridge to the south with Marin County and other coastal counties and communities to the north. Highway 1 is a rural coastal roadway and provides access to Mount Tamalpais State Park and Muir Woods. It has numerous switchbacks and significant changes in grades. During the summer, visitors travel to Stinson Beach and Muir Beach, which are located along Highway 1 south of the Town of Bolinas. Traffic volumes in the area west of Tamalpais Valley are approximately 3,400 daily, and 370 peak hour vehicle trips near Muir

Beach. Near Stinson Beach the traffic increases to 5,400 daily and 590 peak hour trips. These traffic levels continue past Bolinas Lagoon to a point just north of the intersection of Highway 1 and Olema-Bolinas Road, where the daily traffic decreases to about 2,600 daily and 290 peak hour trips.[1]

1.2 Project Description

The project consists of seasonal culvert and channel cleaning in seventeen locations along Highway 1, adjacent to Bolinas Lagoon. This portion of the Project begins at Post Mile 12.79 and ends at Post Mile 17.01 (See Exhibits 1 and 2). The project includes the removal of accumulated sediment, debris and vegetation that has constrained the hydraulic capacity and functional capability of the drainage structures. The work may also include the trimming of small trees and shrubs, including willow, alder and coastal live oak saplings as necessary to restore the hydraulic capacity of the affected culverts. Culverts measuring less than 24 inches will be cleaned out either with a hand shovel or "vactor" truck (which vacuums material into a tank for offsite disposal). Larger culverts may be cleaned out by either excavator or backhoe working from the roadway. No trees will be removed. Debris and excess dredged material generated from the project will be removed from the work area and disposed of in an approved location, outside the coastal zone (Redwood Sanitary Landfill). A list of the culverts to be cleaned is included (Exhibit 3) identifying the size, type, length and area of material that will be removed. This portion of the project is within the original permit jurisdiction of the Commission and includes only the downstream portion of the culverts that drain under Highway 1

Caltrans is seeking approval from the Commission for a period of five years, to effectively manage the sediment removal and flood control of this portion of Highway 1, in Marin County. Because many of the culverts and channels cannot be maintained on an annual basis, and the maintenance time period is limited to a window between July and October, Caltrans believes this request would allow for better management of these facilities, and maintain a safe and dependable roadway for the public and the residents of West Marin, ensuring all-weather public access to the coast.

1.3 Project Background

Bolinas Lagoon is part of the Gulf of the Farallones National Marine Sanctuary (GFNMS), and is surrounded by open lands owned by the Audubon Canyon Ranch, Point Reyes National Seashore, Golden Gate National Recreation Area (GGNRA), and Mount Tamalpais State Park. The 1,400-acre Bolinas Lagoon is owned by Marin County and managed by the Marin County Open Space District as the Bolinas Lagoon Open Space Preserve. The watershed surrounding Bolinas Lagoon is 16.7 square miles, and is three miles in width by nine miles in length. Mount Tamalpais State Park, managed by the California Department of Parks and Recreation, is the largest state land area, and a portion of this park falls within the watershed. Small land holdings are owned by the College of

[1] Bolinas Lagoon Ecosystem Restoration Project, Volume I, U.S. Army Corps of Engineers/Marin County Open Space District (2002)

Marin, which maintains a marine biology station on the shore of the Lagoon, the Bolinas Public Utilities District, and the Bolinas-Stinson Beach School District.

Poor basin sediment management practices resulting in high sediment loads entering the lagoon, the placement of fill material in the lagoon, and the diversion and manipulation of watercourses entering the lagoon have impacted adjacent habitat over time. Shoaling within the lagoon is believed to be a result of increased sediment loads caused by both freshwater inflows and material being forced into the lagoon through the entrance.

The historic and continued channelization of lower Pine Gulch Creek has resulted in significant alteration to the sediment dynamics of the Bolinas Lagoon watershed. Prior to channelization the creek would have had access to its floodplain. By constraining the creek to one course and eliminating sediment deposition on the floodplain, the sediment transported by the creek is concentrated in a delta area.

In addition to Pine Gulch Creek, many of the other creeks that drain directly to Bolinas Lagoon have been channelized to some extent through culverts under Highway 1. These creeks include Copper Mine, Lewis, Wilkins, Pike County, Garden Club, Audubon, Morses, McKinnan and Stinson Gulch. These creeks are no longer free to "jump" out of their low-flow channels during high flow events to dissipate energy and deposit sediment on their floodplains. During previous storm events, the low-flowing channel of Audubon Canyon was dug out with a tractor to return the creek to its channel and prevent destruction of buildings in the flood plain.[2]

Most of the creeks that are channelized through culverts along Highway 1 drain steep canyons. They are intermittent/ephemeral at lower elevations but are often perennial at higher elevations (NPS 2000). Where the streams enter the lagoon, the mix of fresh and salt water supports brackish marsh species such as cattails and bulrush are found in the brackish marsh area of the lagoon. In the upper portions of the drainages, coniferous and mixed evergreen forests border the streams. Proceeding up the canyons toward Bolinas Ridge, the vegetation cover transitions from forest to coastal scrub, chaparral, and annual prairie/grassland. Riparian habitat has increased along the margins of the lagoon, and creek delta areas are expanding due to sediment carried out of these channelized eastern tributaries.

The largest single contributor of water and sediment to the Bolinas Lagoon watershed is Pine Gulch Creek, a perennial tributary located on the northwestern side of the lagoon near the town of Bolinas. On the landward side of the Highway 1, on the northeastern side of the lagoon, nine small steeply sloped drainages originate from Bolinas Ridge at an elevation of 1,500 feet.[3]

On the eastern side, there are several smaller intermittent creeks flowing in from Bolinas ridge, including Easkoot Creek. Access to Bolinas Lagoon is provided by

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[2] Bolinas Lagoon Watershed Study "Input Sediment Budget", U.S. Army Corps of Engineers (2001)

[3] Bolinas Lagoon Ecosystem Restoration Project, Volume II-Technical Appendices B, Water Resources Analysis U.S. Army Corps of Engineers/Marin County Open Space District (2002)

Highway 1, which runs parallel along the eastern border, Bolinas/Olema Road, Wharf Road, Seadrift, and Dipsea Roads. The Lagoon hosts an array of biologically diverse species including benthic invertebrates, marine algae, threatened and special status species, and large numbers marine mammals and shorebirds. Located along the Pacific Flyway, Bolinas Lagoon was designated as a *Wetland of International Importance* in 1998 by the U.S. Fish and Wildlife Service.

The proposed project is the second phase of a two-phase seasonal maintenance and channel-cleaning program for culverts located along Highway 1, adjacent to Bolinas Lagoon. Phase one of the project is the seasonal maintenance and channel cleaning of forty-five culverts on Highway 1 adjacent to Bolinas Lagoon. Caltrans submitted a Negative Determination (NE-080-03) to the Commission's Office of Federal Consistency for this portion of the project.[4]

Phase two of the project involves those twenty-five culverts that are additionally permitted by the CDFG. Caltrans has submitted CDP applications to the Commission and the County of Marin for this portion of the project, as dual jurisdiction exists. As stated in the project description, the downstream portion of the culverts that drain under Highway 1 are within the original permit jurisdiction of the Commission and the upland portions of these culverts inland of Highway 1 are located in the County's coastal development permitting jurisdiction under its certified LCP.

1.4 Consultation and coordination

To address potential concerns regarding the unique and sensitive resources in the Bolinas Lagoon area, Caltrans consulted with numerous federal, state and local agencies during the development of the proposed project. These consultation and coordination efforts are summarized below.

National Marine Fisheries Service Concurrence

The NMFS commented on March 27, 2003, following a site visit to the project to assess the potential for impacts to salmon and steelhead. At that time, they stated that it was unlikely that any of the drainages accessible through the culverts contained habitat utilized by coho salmon. A small number of creeks may provide habitat for steelhead, and measures to protect anadromous fish were proposed as part of the project. The NMFS determined that the project is unlikely to result in adverse affects to steelhead or have any affects on coho salmon. [5]

California Department of Fish and Game

The CDFG issued a *1601 Lake and Streambed Alteration Agreement* for the project on July 17, 2003. The agreement shall be for a period of five

[4] Negative Determination (NE-080-03) California Coastal Commission's Office of Federal Consistency, September 11, 2003

[5] Section 7 Consultation Correspondence National Marine Fisheries Service (2003)

years, and is renewable beyond the expiration date, December 31, 2007. Conditions of the agreement specify the timing of the work to be permitted, upstream and downstream limitations of sediment removal, vegetation clearing, stockpiling and storage of equipment, and disposal of dredged material.[6]

U.S. Fish and Wildlife Service

On March 26, 2003, the USFWS commented on the project and determined that the cleaning of these culverts along the Bolinas Lagoon is not likely to affect the federally threatened California red-legged frog *(Rana aurora draytonii),* or the federally threatened tidewater goby (*Eucyclogobius newberryi)* in accordance with the requirements of the Endangered Species Act of 1973. In addition to the conservation measures and restrictions outlined in the Special Conditions listed above, a survey for the red-legged frog will be conducted two weeks prior to the beginning of the project.[7]

U.S. Army Corps of Engineers

The ACOE reviewed this project and transmitted comments and authorization to Caltrans on October 21,2002, indicating that the project would qualify for a Corps permit under the conditions specified in *Nationwide Permit (NWP) 3(ii) Maintenance.* The permit authorization is valid for two years, with a 12-month extension that allows for the completion of ongoing maintenance. A copy of the permit is included in the application. Under the ACOE jurisdiction, which includes the areas inside the culverts, 0.00015 acres of jurisdictional waters and 0.0022 acres of jurisdictional wetlands will be temporarily impacted from the project.[8]

Gulf of the Farallones National Marine Sanctuary

The GFNMS commented on the project on January 22, 2004, and determined that the project is unlikely to result in adverse effects to listed species or habitat within the Sanctuary.[9]

California Regional Water Quality Control Board

On October 25, 2001, the Regional Water Quality Control Board issued Caltrans a *Conditional Certification and Waiver of Waste Discharge Requirements* (WDRs) for the project under Section 401 of the Clean Water Act. The Board also provided conditions and applicable limitations to ensure water quality standards and to minimize the discharge of

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[6] Section 1601 Lake and Streambed Alteration Agreement (five-year agreement) California Department of Fish and Game, Notification Number 1600-2003-0532-3 (2003)

[7] Determination of No Adverse Affect U.S. Fish and Wildlife Service (2003)

[8] Section 404 Nationwide Permit 3(ii) Maintenance U.S. Army Corps of Engineers (2003)

[9] Determination of No Adverse Affect Gulf of the Farallones National Marine Sanctuary (2003)

effluents, in compliance with the applicable provisions of the Clean Water Act. [10]

California State Lands Commission

On April 30, 2004, the State Lands Commission responded to Caltrans request for jurisdictional determination, and advised Caltrans "*the area over which the project would extend was located within the legislative grant to the County of Marin, pursuant to Chapter 787, Statute of 1969 and as amended.*" The project area was therefore not subject to the Commission's current leasing or permitting requirements.[11]

Marin County Open Space District

The Coastal Commission requires that local planning departments review and complete the *Local Agency Review Form* (Appendix B-Application for Coastal Development Permit). This form includes a list of local discretionary approvals that are needed or received for the proposed project. Caltrans was required to apply for a Marin Open Space District (MCOSD) Use Permit for the project. The MCOSD is the public entity to which the Bolinas Lagoon Open Space Preserve lands (those lands within the lagoon up to the Historic Mean High Tide Line) are granted by the State Lands Commission.

On August 27, 2004, the MCOSD granted Caltrans a Short Term Use Permit with conditions for the project. The District included specific conditions in granting the permit that require Caltrans to consult with the District Interpretive Naturalist during biological monitoring, notify the MCOSD 60 days prior to the start of work, post notices at specific locations adjacent to the Bolinas Lagoon Preserve 30 days prior to the start of work, and provide District staff with an annual report and results of biological monitoring within 60 days of the completion of work.

The District also incorporated site-specific conditions at sensitive habitat locations for individual Post Miles. These include such items as protecting vegetation and Alder trees, avoiding disturbances to marine mammals, conducting additional Red-legged frog surveys, and minimizing the alteration of existing streams.[12]

1.5 Permit Authority, Extraordinary Methods of Repair and Maintenance of Existing Structures

Coastal Act Section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an

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[10] Section 401 Water Quality Certification California Regional Water Quality Control Board (2001)

[11] Jurisdictional Determination California State Lands Commission (2004)

[12] Marin Co. Open Space District **Short Term Use Permit** Marin County Open Space District (2004) and **Short Term Use Permit Conditions** Marin County Open Space District (2004)

addition to, or enlargement or expansion of the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures which involve a risk of substantial adverse environmental impact as enumerated in Section 13252 of the Commission regulations.

Section 30610 of the Coastal Act provides, in relevant part:

> Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas: . . .
>
> (d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.

Section 13252 of the Commission regulations provides, in relevant part:

> (a) For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:
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> (1) Any method of repair or maintenance of a seawall revetment, bluff retaining wall, breakwater, groin, culvert, outfall, or similar shoreline work that involves:
>
> (A) Repair or maintenance involving substantial alteration of the foundation of the protective work including pilings and other surface or subsurface structures;
>
> (B) The placement, whether temporary or permanent, of rip-rap, artificial berms of sand or other beach materials, or any other forms of solid materials, on a beach or in coastal waters, streams, wetlands, estuaries and lakes or on a shoreline protective work except for agricultural dikes within enclosed bays or estuaries;
>
> (D) The presence, whether temporary or permanent, of mechanized construction equipment or construction materials on any sand area, bluff, or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams.

> (3) Any repair or maintenance to facilities or structures or work located in an environmentally sensitive habitat area, any sand area, within 50 feet of the edge of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams that include:
>
> (A) The placement or removal, whether temporary or permanent, of rip-rap, rocks, sand or other beach materials or any other forms of solid materials;
>
> (B) The presence, whether temporary or permanent, of mechanized equipment or construction materials.

The proposed project is considered a repair and maintenance project under Section 13252 of the Commission's regulations. Section 13252 of the Commission's regulations requires a coastal development permit for extraordinary methods of repair and maintenance enumerated in the regulation. The proposed repair and maintenance involves repair and maintenance to existing culverts that would include the removal of accumulated sediment, debris and vegetation that has constrained the hydraulic capacity and functional capability of the drainage structures. The proposed development may also involve use of mechanized equipment in environmentally sensitive habitat areas, or within 20 feet of coastal waters or streams. The proposed repair and maintenance therefore requires a coastal development permit under Section 13252(a)(1) of the Commission's regulations.

In considering a permit application for a repair or maintenance project pursuant to the above-cited authority, the Commission reviews whether the proposed *method* of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development.

1.6 Coastal Act Issues

1.6.1 Biological Resources

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through among other means, minimizing adverse effects of waste water discharged and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waster water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30233 states:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

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

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

Coastal Act Section 30240 states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The proposed development is located along the shoreline of Bolinas Lagoon. Bolinas Lagoon is within the Gulf of the Farallones National Marine Sanctuary, one of four national marine sanctuaries in California and one of thirteen in the nation. The Sanctuary was designated in 1981 to protect and manage the 1,255 square miles encompassing the Gulf of the Farallones, Bodega Bay, Tomales Bay, Drakes Bay, Bolinas Bay, Estero San Antonio, Estero de Americano, Duxbury Reef, and Bolinas Lagoon. The approximately 2.2-square-mile (1,400-acre) lagoon contains environmentally sensitive habitat, including wetland and mudflats. The lagoon provides an important haul-out and birthing site for harbor seals. In addition, benthic invertebrates and fish in the lagoon support a great diversity and abundance of wintering and migratory shorebirds, waterfowl, gulls, and other water-associated birds (Marin County LCP 1981). The lagoon is the only designated "Wetland of International Significance" on the Pacific Flyway as determined by the Convention on Wetlands of International Importance in 1998, and was recognized particularly for its waterfowl habitat. Approximately 245 species of birds have been identified at the Lagoon and its surrounding watershed. Twenty-three of these species are considered rare, threatened, or endangered. Shorebirds and waterfowl such as the brown pelican, snowy plover, dunlin, great blue heron, black crowned night heron, willet, sandpiper, and greater sand plover have been observed on the lagoon. Heron and egret are known to nest in the lagoon. Of the fifty or so estuaries that have formed along the Pacific Coast, Bolinas Lagoon is one of only 13 that sustain large numbers of migratory shorebirds. The Bolinas Lagoon Management Plan prepared by Marin County in 1996 also identified three species each of amphibians and mammals that frequent Bolinas Lagoon as rare, threatened, or endangered. Marin County designates Bolinas Lagoon as a County Nature Preserve. The U.S. Army Corps of Engineers found that Bolinas Lagoon is part of a larger natural habitat complex that is part of or adjacent to the Sanctuary, encompassing the Pt. Reyes National Seashore, Golden Gate National Recreation Area, Central California Coast Biosphere Preserve, Mt. Tamalpais State Park, and the Audubon Canyon Ranch Bird Sanctuary.

The Bolinas Lagoon's proximity to large areas of undeveloped and protected land, are significant factors in the development of such a diverse ecosystem. The Lagoon contains subtidal channels, intertidal mudflats, islands, and emergent salt marsh. In 1998, estimates of estuarine habitat in the lagoon indicated that there were some 238 acres of upland habitat, 849 acres of intertidal habitat, and 213 acres of subtidal habitat. Subtidal habitat of phytoplankton and benthic diatoms support a highly productive community in the lagoon. These organisms provide the base of the subtidal food chain. Ghost shrimp *(Calianasa californiensis)* are commonly found in the sandy substrata

within the Lagoon. Primary consumer fish species include topsmelt *(Atherinops affinis)*, Pacific herring *(Clupea harengus pallasi)*, and Northern anchovy *(Engraulis mordax)*.[13]Section 30230 states that marine resources, especially those areas and species of special biological significance, shall be maintained and where possible enhanced. Section 30231 protects the biological productivity and the quality of coastal waters, and wetlands.

Historic land uses of property adjacent to the lagoon have been significant contributors to sediment and turbidity that affect species and habitat. What happens to sediment that enters the lagoon is dependent on both tidal elevation and the rate of stream discharge. At lower tidal stands, drainages and streams deposit sediment along the delta areas further inland from the lagoon entrance. When the tide is higher, the sediment is dispersed over a wider portion of the delta. Higher stream flows combine with tidal influences to carry more sediment offshore, as well as being capable of moving larger sized sediment particles. The larger sediment particles are more likely to remain in the lagoon, while fine-grained particles remain suspended and can be transported out of the lagoon on ebb tides.

Temporary impacts to wetlands and riparian habitat will occur as a result of the project. Impacts have been identified based on both the U.S. Army Corps of Engineer's (ACOE) definition of wetlands, and the broader more inclusive Coastal Act definition. Under the Coastal Act, the project will result in an estimated 1,961 square feet/205.17 cubic yards of temporary impacts from the removal of accumulated sediment, debris, dead and downed trees, and wetland and riparian vegetation.

The approximate area of silt and debris to be removed at the affected culverts consists of an area 50% of the culvert size (diameter/area), the two channel ends (25% below flow line, with side slopes of 1.5:1), and fifteen feet in downstream length from the headwall. A typical section illustrating a standard reinforced concrete box (RCB) culvert, and tidal variations within the culvert, is attached as Exhibit 4. The culverts are located within Caltrans right of way (ROW), though the headwalls, especially the downstream headwalls, may typically occur in inter-tidal, and sub-tidal areas, mudflats, and stream channels.

Vegetation within the watershed varies and includes fresh water marsh and riparian areas, as well as upland habitat, forest, scrub and grassland. Mixed evergreen forests extend up the canyons, gulches and ridges, and coastal scrub and grasslands dominate exposed slopes. Riparian habitat is increasing along the margins of the lagoon, and creek deltas are expanding into the lagoon due to large annual sediment loads carried out of the channelized eastern tributaries.

Emergent salt marsh occurs on the margins of Pine Gulch Creek delta, Kent Island, and in a narrow band along the fringes of the lagoon. Algal mats in tidal marshes consist of green and bluegreen algae and numerous species of diatoms. Two dominant plant species are Pacific cordgrass (*Spartina foliosa*) and pickleweed (*Salicornia virginica*). Pickleweed occurs at higher elevations, approximately mean high water (MHW) to

[13] Bolinas Lagoon Management Plan, Marin County Open Space District (1996)

above tidal action where salt is still present in the soil.[14] The lower areas are dominated by pickleweed interspersed with fleshy jaumea (*Jaumea carnosa*), arrow grass (*Triglochin concinna*), and sea lavender (*Limonium californicum*). Salt marsh dodder (*Cuscuta salina*) is a parasitic plant found in association with pickleweed and other salt marsh species at various elevations. Alkali heath (*Frankenia gandifolia*) can be found in the mid-range elevation of the lagoon. Salt grass (*Distichlis spicata*) and salt bush (*Atriplex watsonii*) interspersed with rush (*Juncus* spp.) are dominant in the higher areas.

Where freshwater flows into the lagoon, brackish marsh forms with species such as cattails (*Typha latifolia*) and bulrush (*Scripus* spp.). [15] Vegetation associated with those channels and culverts that will be dredged include a combination of wetland and riparian vegetation. [16] A matrix of the vegetation associated with each post-mile location is included with this Coastal Development Permit Application. The *Summary of Temporary Wetland Impacts* (Exhibit 5) reflects the location, size, length and type of each culvert, and the quantity of material that will be dredged/removed. Exhibit 5 includes upstream habitat under the jurisdiction of the County of Marin's Local Coastal Program (LCP), and downstream habitat, under original permit jurisdiction of the California Coastal Commission.

TEMPORARY IMPACTS TO WETLANDS AND RIPARIAN VEGETATION

Post Mile	Size	Type	Length (ft)	Material removed (ft^2)	Material removed (yd^3)
12.79	12"	CSP	36	30	2
13.27	8"	TCP	31	20	1
13.49	6'X6'	RCB	32	120	22.14
14.31	24"	RCP	35	8	1.50
14.34	18"	RCP	38	35	4
14.41	4'X10'	RCB	32	180	21
14.90	18"	RCP	37	90	4
15.46	30"	RCP	53	60	5
15.63	18"	RCP	44	8	4
15.93	18"	RCP	45	45	4
15.96	4'X7'	RCB	43	240	31
15.98	18"	RCP	49	75	3
16.06	33"X48"	CSP	41	240	14
16.10	18"	CSP	27	60	1.48
16.47	4.5'X5'	RCB	31	240	32
16.95	4'X10'	RCB	30	360	38
17.01	4'x7'	RCB	45	150	17.05
	Total Area			**1,961.00 ft^2**	**205.17 yd^3**

CSP: Corrugated Steel Pipe; **RCB:** Reinforced Concrete Box; **RCP:** Reinforced Concrete Pipe; **TCP:** Terra Cotta Pipe

[14] Bolinas Lagoon Ecosystem Restoration Project, Volume II-Technical Appendices B, U.S. Army Corps of Engineers/Marin County Open Space District (2002)

[15] Marin County Open Space District (1996)

[16] Defined as: the association of plant species which grows adjacent to freshwater watercourses, including perennial and intermittent streams, lakes, and other freshwater bodies.

Special status species are defined as those plant and animal species that are listed as threatened, endangered, or of special concern by the U.S. Fish and Wildlife Service (USFWS), NMFS, or the California Department of Fish and Game (CDFG), including those species proposed for federal or state listing. Plants listed by the California Native Plant Society are also included in the attached table, *Special Status Species Potentially Occurring in Bolinas Lagoon* (Exhibit 6). Some disruption of upstream and downstream habitat in the lagoon could occur if the project were proposed when flows are present in the streambeds. Anadromous salmonids pass through Bolinas Lagoon en-route to many of the creeks in the adjacent watershed. While steelhead trout are found in all the creeks that feed the lagoon (MCOSD 1996), they may not be able to grow to full size as the majority of the streams in the watershed are dry during the summer, while a few are also affected by water diversions at Easkoot and Pine Gulch Creeks. A recent 2-year study conducted on three streams in Audubon Canyon found only juvenile (young of the year) steelhead trout (Szychowski 1999).[17]

In 1998, anadromous steelhead trout within the Central California Evolutionary Significant Unit (ESU) were listed by the National Marine Fisheries Service (NMFS). In February 2000, the NMFS designated critical habitat for the Central California Coastal Steelhead (*Oncorhynchus mykiss*) that included the water, substrate, and adjacent riparian zone of estuarine reaches of 19 ESUs of west coast salmon and steelhead under the Endangered Species Act. These designations included more than 154,000 square miles and fifty river sub-basins. In September 2003, as a result of a ruling by the U.S. District Court in Washington D.C., the NMFS began a review of these critical habitat designations and is presently amending the Code of Federal Regulations. At this time the final rulemaking has not been published, although critical habitat designations from 19 ESUs have been removed.

The timing of the project will avoid any impacts to the steelhead trout and its habitat, as well as federally threatened California red-legged frog *(Rana aurora draytonii),* or the federally threatened tidewater goby (*Eucyclogobius newberryi).* To ensure protection of anadromous fish and listed species, **Special Condition 1** requires that the work be conducted between July 1 and October 15, in accordance with the NMFS guidelines for protection of Salmonid Habitat, and only for those culverts where the streambed is dry, no flow is present and no rain is predicted. This work period corresponds to the seasonal dry period in this area when Salmonids are generally not present, and ensures that the work avoids impacts to these species. Furthermore, by requiring that work occur only when the streambed is dry and no water is flowing, possible impacts to California red-legged frog are also avoided. **Special Condition 6** further requires that work in areas subject to tidal influence be conducted only during low tides when the water level is below the culverts to avoid impacts to fish, including tidewater gobies. In considering the potential effects to the species within the lagoon, the project will result in temporary impacts to surrounding vegetation. .

In considering the potential effects to the species within the lagoon, the project will result in temporary impacts to surrounding vegetation; however, the cleaning of these

[17] Bolinas Lagoon Ecosystem Restoration Project Draft EIS/R and Feasibility Report, Volume I, U.S. Army Corps of Engineers/Marin County Open Space District (2002)

culverts will also enhance sections of drainages and open water habitat, alleviate impacts of culvert blockages and sediment loading, and restore streambeds that currently present barriers to migration for the Central California Coastal Steelhead (*Oncorhynchus mykiss*) and Central California Coastal Coho Salmon (*Oncorhynchus kisutch*).

On March 27, 2003, the NMFS stated that:

> *it was unlikely that any of the drainages accessible through the culverts contained habitat utilized by coho salmon. A small number of creeks may provide habitat for steelhead, and measures to protect anadromous fish were proposed as part of the project.*

The NMFS determined that the project is unlikely to result in adverse affects to steelhead or have any affects on coho salmonTo ensure protection of anadromous fish and listed species, **Special Condition 1** requires that the work be conducted between July 1 and October 15, in accordance with the NMFS guidelines for protection of Salmonid Habitat, and only for those culverts where the streambed is dry, no flow is present and no rain is predicted. This work period corresponds to the seasonal dry period in this area when Salmonids are generally not present, and ensures that the work avoids impacts to these species. Furthermore, by requiring that work occur only when the streambed is dry and no water is flowing, possible impacts to California red-legged frog are also avoided. **Special Condition 6** further requires that work in areas subject to tidal influence be conducted only during low tides when the water level is below the culverts to avoid impacts to fish, including tidewater gobies. Additionally, **Special Condition 7** requires that a survey of the sites for the presence of California red-legged frog be conducted two weeks prior to the beginning of work and requires a biological monitor to be present during all work with the ability to halt maintenance work if necessary to prevent impacts to the frog or its habitat. **Special Conditions 2 and 3** requires that the removal of vegetation and sediment be limited to that which is necessary to restore hydraulic capacity to the culverts and to use methods which avoid or minimize impacts to vegetation and riparian habitat.

Bolinas Lagoon includes an array of biologically diverse species, including benthic invertebrates, marine algae, threatened, endangered and special status species such as Coho salmon, steelhead trout, black rail, migrating birds on the Pacific Flyway, and other resident and migratory fish, birds and seals. Endangered brown pelicans are present from April to January during the anchovy migration period. Threatened snowy plovers are seen at the spit at the mouth of the lagoon. Merlin (a species of special concern), and large numbers of egrets, great blue heron, babbling and diving ducks, and shorebirds are present, particularly during the fall and winter migration periods. Ghost shrimp, gaper clam, littleneck clams and Washington clams are present in the tidal and subtidal habitat. Pacific herring appear in the lagoon in winter.

Approximately 200 harbor seals haul out regularly in the lagoon, giving birth to about 50 pups during the pupping season. The population of harbor seal in the Gulf of the

Farallones is estimated to comprise 20% of the entire California population. Bolinas Lagoon serves as an important place of refuge, and is more isolated and sheltered than other sites along the north coast and in San Francisco Bay. Haul out sites provide seals with resting, breeding, and nursery areas. The haul out sites are used year-round and include portions of Kent Island and exposed sandbars near the main channel.[18]

The goals of the 1996 *Bolinas Lagoon Plan* (BLP) include more specific language that is consistent with the Coastal Act regarding preserving and enhancing aquatic habitat within the lagoon. The plan states that a primary goal is to:

> *1. Preserve and restore the ecological values of Bolinas Lagoon. Objectives are to: 1) Preserve the abundance and diversity of Lagoon life; 2) Preserve and enhance, over the long term, an ecological system including aquatic habitats (subtidal, intertidal, marsh, riparian, sand bar and beach) that best protects the abundance and diversity of Lagoon life; 3) Restore water quality and hydraulic functions that will decrease sedimentation and prevent the loss of rich marine habitats.*

Special status species and marine habitat will be protected during the project through the mitigation and conservation measures identified in **Special Conditions 1-8.** These conditions are consistent with similar requirements for mitigation and conservation measures approved by the USFWS, NMFS, ACOE and CDFG.

Through the implementation of restricted work windows (July through October) to minimize and avoid impacts to anadromous fish and listed species, water quality control measures, protection of existing vegetation, and biological monitoring, the project will be carried out in a manner that considers the fragility and importance of the lagoon habitat.

The project is consistent with Section 30231 and 30230 in that it will restore hydraulic capacity and function to impeded culverts Part of this project will include the revegetation of disturbed riparian areas adjacent to the culverts, and the long-term maintenance of the structures with the implementation of the proposed *Programmatic Five-Year Management Plan*. **Special Conditions 2 and 3** requires that the removal of vegetation and sediment be limited to that which is necessary to restore hydraulic capacity to the culverts and to use methods that avoid or minimize impacts to vegetation and riparian habitat. **Special Condition 5** requires that debris, soils, silt, sand, cement, concrete, washings or other material related to construction such as waste, oil, petroleum products or organic or earthen material be prevented from entering or be washed by rainfall or runoff into adjacent waters.

Some disruption of upstream and downstream habitat in the lagoon could occur if the project were proposed when flows are present in the stream beds, but the timing of the project will avoid any impacts to designated critical habitat or listed species due to limited work windows between July 1 and October 15. **Special Condition 1** requires that the work be conducted between July 1 and October 15, in accordance with the

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[18] Bolinas Lagoon Ecosystem Restoration Project Draft Feasibility Report, U.S. Army Corps of Engineers/Marin County Open Space District (2002)

NMFS guidelines for protection of Salmonid Habitat, and only for those culverts where the streambed is dry, no flow is present and no rain is predicted. This work period corresponds to the seasonal dry period in this area when Salmonids are generally not present, and ensures that the work avoids impacts to these species. Furthermore, by requiring that work occur only when the streambed is dry and no water is flowing, possible impacts to California red-legged frog are also avoided. **Special Condition 6** further requires that work in areas subject to tidal influence be conducted only during low tides when the water level is below the culverts to avoid impacts to fish, including tidewater gobies. In considering the potential effects to listed species within the lagoon, the project will result in temporary impacts to native wetland and buffer vegetation established along stream banks. However, the cleaning of these culverts will also enhance sections of drainages and open water habitat, alleviate impacts of culvert blockages and sediment loading, and restore streambeds that currently present barriers to migration for the Central California Coastal Steelhead (*Oncorhynchus mykiss*) and Central California Coastal Coho Salmon (*Oncorhynchus kisutch*). **Special Conditions 2 and 3** requires that the removal of vegetation and sediment be limited to that which is necessary to restore hydraulic capacity to the culverts and to use methods which avoid or minimize impacts to vegetation and riparian habitat.

In consultation with the NMFS, Caltrans will implement mitigation and conservation measures to protect anadromous fish during the project. These avoidance and monitoring measures are required by **Special Conditions 1 through 8**. The potential for adverse impacts to wetland and riparian areas has been minimized with avoidance and conservation measures designed to protect habitat. These measures were developed in consultation with the NMFS, CDFG, and the ACOE.

Section 30233(b) of the Coastal Act states that:

> *(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.*

No maintenance, dredging, or excavation shall be done in any culverts with continuous fresh water flows to avoid potential impacts to the red-legged frog. In areas that are subject to tidal influence, work shall be conducted during low tides, when the water level is below the elevation of the culvert to avoid impacts to any fish species. During the removal of sediment, the work shall not create barriers to aquatic life movements, or pooled or ponded areas, which could trap fish at culvert inlets and outlets.

The project is consistent with Section 30233(b) of the Coastal Act in that avoidance and conservation measures will be implemented to avoid any potential impacts to marine species and habitats. Dredge spoils from the excavation of the culverts headwalls and interior areas are not suitable for beach replenishment. The excavated material

consists of sediment and woody vegetation, as well as a conglomerate mix of mud and rocks typical of subtidal habitat. **Special Condition 1** requires that the work be conducted between July 1 and October 15, and only for those culverts where the streambed is dry, no flow is present and no rain is predicted. **Special Condition 6** further requires that work in areas subject to tidal influence be conducted only during low tides when the water level is below the culverts. These measures are designed to avoid impacts to anadromous fish and listed species. **Special Conditions 2 and 3** requires that the removal of vegetation and sediment be limited to that which is necessary to restore hydraulic capacity to the culverts and to use methods which avoid or minimize impacts to vegetation and riparian habitat. **Special Condition 4** requires that debris and excess dredged material generated from the project will be removed from the work area and disposed of in an approved location, outside the coastal zone. To further protect the biological productivity and the quality of adjacent coastal waters, **Special Condition 5** requires that debris, soils, silt, sand, cement, concrete, washings or other material be prevented from entering or be washed by rainfall or runoff into adjacent waters.

Section 30240 of the Coastal Act further states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed in those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The proposed project is consistent with Section 30240 of the Coastal Act as it incorporates numerous avoidance and conservation measures to ensure that environmentally sensitive habitat areas (ESHA) are protected from significant disruption. These measures are included as **Special Conditions 1-8**, and include: seasonal restrictions to undertake work in streams, restoration of disturbed areas, sediment removal methods, disposal of excavated material, biological monitoring, surveys for special status and listed species, and annual reporting.

Therefore, the Commission finds that the proposed project is consistent with Coastal Act Sections 30230, 30231, 30233, and 30240.

1.5.2 Visual

Section 30251 of the Coastal Act requires the protection of the scenic and visual qualities of coastal areas as a resource of public importance

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to*

> *minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Bolinas Lagoon and the adjacent shoreline is a highly scenic area. Marin County's Unit I LCP states "to travelers on the highway bordering the Bolinas Lagoon, the outstanding visual elements are the mountains rising on one side and the expanse of the Lagoon itself on the other."

Views from public roadways and bicycle paths looking seaward would not be significantly impacted by the temporary presence of either Caltrans vehicles or machinery, or the short-term storage of excavated materials within the roadway right of way. Views from the highway adjacent to Bolinas Lagoon at sea level, between post miles 12.79 and 14.90 are also partially blocked because of the Sea Drift Development.

The Marin County LCP (Coastal Views) provides a summary of the visual features and existing degradation of the coastal views along Highway 1 bordering the lagoon in stating that:

> *To travelers on the highway bordering the Bolinas Lagoon, the outstanding visual elements are the mountains rising on one side and the expanse of the lagoon itself on the other. The Seadrift spit is indeed visible here, but it is a low lying peninsula, which is not the most commanding visible feature of the area. The development of the heretofore vacant lots along Dipsea Road will modify the present views from the Highway. These changes, however, should not significantly distract from the principal visual features of the area. Limitations on height and reduction of density along Dipsea Road, would reduce the travelers' potential perception of a "wall" of houses back-dropping the lagoon.*

Excavated material will not be on the roadway right of way longer than is required to load disposal trucks. Caltrans does not intend to store material on the seaward side of Highway 1 during maintenance activities. Any material that requires the removal of moisture will be stored at Caltrans maintenance facilities prior to disposal at the Redwood Sanitary Landfill.

Therefore, the Commission finds that the proposed project is consistent with Coastal Act Section 30251.

1.6.3 Public Access

Section 30210 of the Coastal Act states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Section 30211 of the Coastal Act states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

There are a variety of wildlife viewing areas and small boat launching sites adjacent to Highway 1 are within the project limits. The proposed project is a repair and maintenance project, consisting of short duration activities at each culvert location along the stretch of Highway 1 between post miles 12.79 and 17.01. Because of the short duration and temporary nature of the culvert cleaning work in any given location, staff believes that the project would not have an adverse impact on public access.

In response to the Commission staff's concerns regarding non-motorized travel on the "edge of the Highway," Caltrans has reported that this activity occurs sporadically in this area. Additionally, there are sections of the roadway between post miles 12.79 and 17.01 that have an adequate shoulder for pedestrians and bicyclists, but much of the roadway does not. Because of the short duration and temporary nature of the culvert cleaning work in any given location, staff believes that the project would not have an adverse impact on pedestrian other non-motorized travel in the area.

The Audubon Canyon Ranch is a popular destination for naturalists, and kayakers also access the lagoon from areas that provide adequate depth of water for launching and retrieval. Because the lagoon is a tidally influenced body of water, kayakers often prefer to launch at the more popular Town of Bolinas to avoid becoming stranded at low tidal elevations. The MCOSD has posted informational signs warning kayakers that these areas do not provide adequate water depth. The project will not affect any access to the shoreline or existing portions of the state right of way that would limit or restrict the public's use of such areas.

Therefore, the Commission finds that the proposed project is consistent with Coastal Act Sections 30210 and 30211.

1.6.4 Archaeological Resources

Section 30244 of the Coastal Act states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

A recent study of archeological resources in the area indicates that there is a reasonable potential for sites containing resources of archeological significance to exist east of the project area. No archeological resources were found in areas to the west of the project area (downstream of Highway 1), within the areas covered by this application. Caltrans developed archeological resources monitoring and mitigation conditions for work in those areas of known or suspected archeological resources east of the project area. These conditions were developed as part of a Coastal Development Permit issued by the County of Marin (Coastal Permit 05-16) for that portion of the project east (upstream) of Highway 1, within the jurisdiction of their Local Coastal Program. The conditions include oversight by a qualified archaeologist and a Native American consultant from the Federated Indians of the Graton Rancheria (FIGR), avoidance of specific areas of known resources, and the use of hand tools to clean culverts in certain areas.

Onsite monitoring of the proposed project will be available, as a result of qualified personnel conducting oversight of concurrent and related activities east of the project area. Although previous investigations of archeological resources in the area indicate it is unlikely that archeological resources will be found downstream of Highway 1, the existing archeological resources monitoring and mitigation activities are adequate to ensure that archeological resources are protected. The Commission finds that these measures are in conformity with the requirements of Coastal Act Section 30244.

1.7 California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effects, which the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. The proposed project has been conditioned to be found consistent with the policies of the Coastal Act and to minimize or eliminate all significant adverse environmental effects. Mitigation measures have been imposed to (1) avoid adverse impacts to the sensitive biological resources of the area, (2) minimize any temporary impacts caused by the culvert cleaning and maintenance operations, (3) restore the areas disturbed by culvert cleaning and maintenance operations, and (4) properly dispose of and/or remove the debris and dredged material generated from the project in a manner that conforms to the resource protection policies of the Coastal Act. As

conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impacts, which the development may have on the environment. Therefore, the Commission finds that the proposed project can be found consistent with Coastal Act requirements to conform to CEQA.

2.0 CONDITIONS

2.1 Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
3. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
4. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

2.2 Special Conditions

1. Seasonal Restrictions and Project Timing

All work shall be conducted during the period from July 1 to October 15, in any given year. All streambed work shall be performed only when the streambed is dry, no flow is present, and no rain is predicted within twenty-four hours. In the event of rain, all work shall cease.

2. Restoration of Disturbed Areas

Large woody vegetation that currently exists on stream channel banks shall be left in place, and where necessary, trimming of such vegetation shall be done with hand tools to improve access to the culverts and improve flow. All disturbed areas shall be restored to the state in which they existed prior to construction (i.e., regraded to pre-project contours and re-vegetated with an all-native plant palette). Removal of vegetation shall not be done with bulldozers or backhoes, and the root zone of existing vegetation shall not be disturbed.

3. Methods of Removal of Sediment

Only the quantity of material necessary to restore hydraulic capacity to the affected culverts shall be removed, and the method employed in this process shall be done in a manner that maintains the existing gradient of the stream. The

quantity of sediment and gravel removed shall be limited to no more than 15 feet either upstream or downstream of the culvert headwall.

4. Disposal of Excavated Material

All debris and dredged material generated from the project shall be disposed of in an approved location, outside the coastal zone.

5. Water Quality

No debris, soils, silt, sand, cement, concrete, washings or other material related to construction such as waste, oil, petroleum products or organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into adjacent waters. At the conclusion of operations, any excess material shall be removed from the work area and disposed of in an approved location outside of the coastal zone.

6. Fish and Wildlife Habitat and Resources

No maintenance, dredging, or excavation shall be done in any culverts with continuous fresh water flows to avoid potential impacts to the California red-legged frog. In areas that are subject to tidal influence, work shall be conducted during low tides, when the water level is below the elevation of the culvert to avoid impacts to any fish species. During the removal of sediment, the work shall not create barriers to aquatic life movements, or pooled or ponded areas, which could trap fish at culvert inlets and outlets.

7. Biological Monitoring

Two weeks prior to the beginning of work, a qualified biologist shall conduct a survey of the site for the presence of the California red-legged frog in accordance with USFWS and CDFG protocol. A qualified biological monitor experienced with the California red-legged frog shall be present at the site during all maintenance activities. The biological monitor shall have the authority to halt all maintenance activities as necessary to protect habitat and individual animals. The monitoring shall be conducted in accordance with USFWS and CDFG protocol. The biological monitor shall complete daily monitoring reports that indicate the date and time of work, weather conditions, the monitoring biologist's name, project activity/progress, and any sensitive species observed. These reports shall be compiled and submitted to the Executive Director upon completion of maintenance work. If any red-legged frogs (adults, tadpoles, or egg masses) are found, all work in the area shall cease and the USFWS and CDFG shall be contacted.

8. Annual Reporting Requirements

Within sixty days of completion of the work for any given year, Caltrans shall provide the Commission, ACOE, CDFG, and other agencies, an annual report describing the number, location and nature of activities performed. The annual report shall describe for each location: the amount (area and volume) of material

removed, type of material removed, the method of removal, type and location of equipment used, and the location of the disposal site for excavated material.

9. **Period of Time Development is Authorized**
Development is authorized by this permit for period of five years from the date of approval of this permit. Future extensions of this permit may be considered by the Executive Director based upon a review of project performance and environmental conditions at the time of any potential renewal.

ACKNOWLEDGEMENT OF PERMIT RECEIPT/ACCEPTANCE OF CONTENTS:

I/We acknowledge that I/we have received a copy of this permit and have accepted its contents including all conditions.

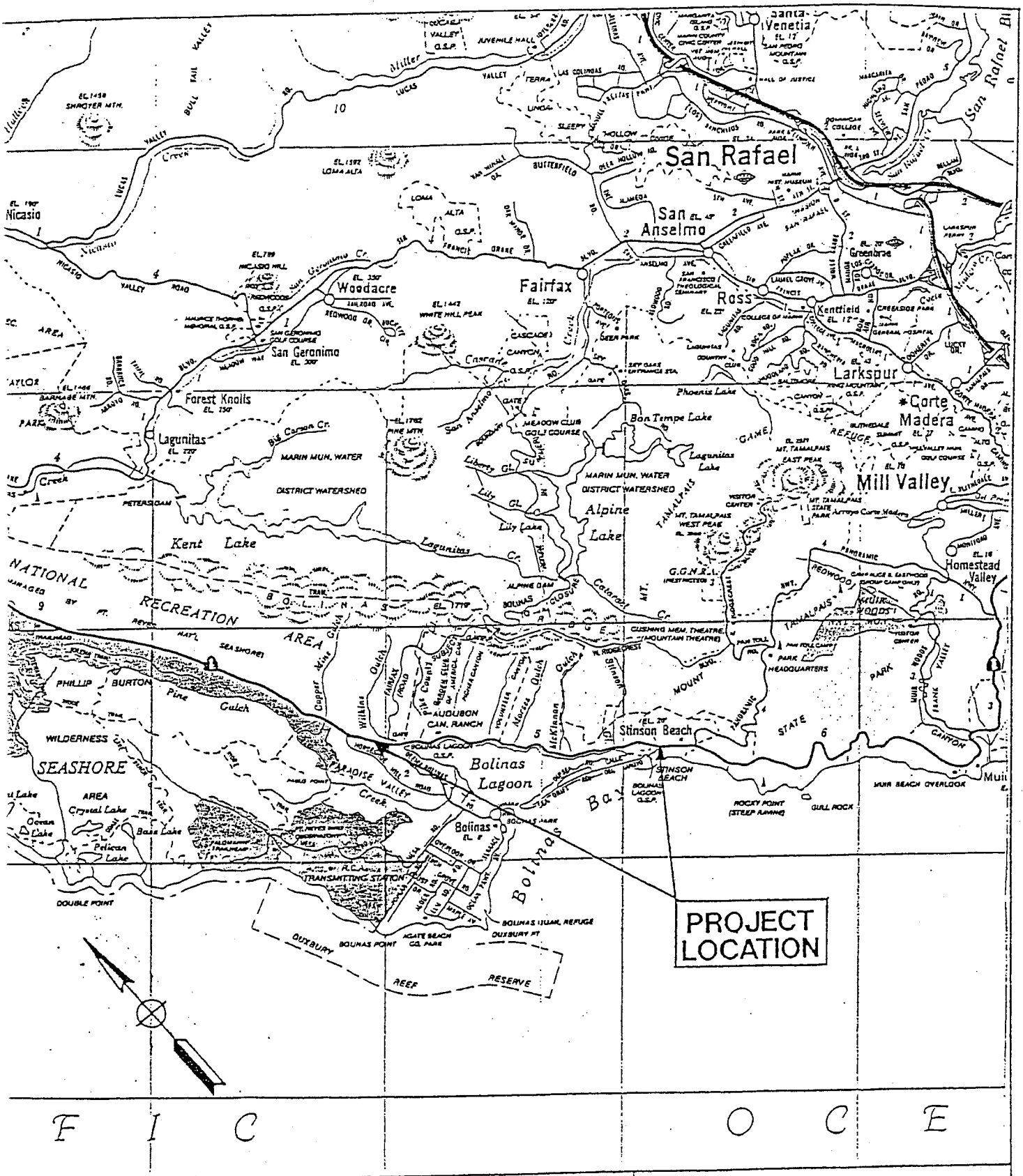
Applicant Signature_____ Date of Signing:_____

EXHIBITS:
1. Regional Map
2. Vicinity Map
3. Roadway Culverts at Bolinas Lagoon: Size, type, length and PM locations California Department of Transportation (2003)
4. As Built Drawing
5. Temporary Impact to Wetlands and associated Vegetation California Department of Transportation (2003)
6. List Of Special Status Species

Substantive File Documents

Coastal Development Permit Application, California Department of Transportation, District 4, October 2004

Coastal Development Permit Application Filiing Determination for Application Number 2-04-017 (Caltrans), Highway 1, Bolinas Lagoon, Marin County, January 7, 2005



PURPOSE: To improve Roadway Drainage and prevent Flooding of Highway 1.

EXHIBIT NO. 1
APPLICATION NO. 2-04-017 CALTRANS

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VICINITY MAP

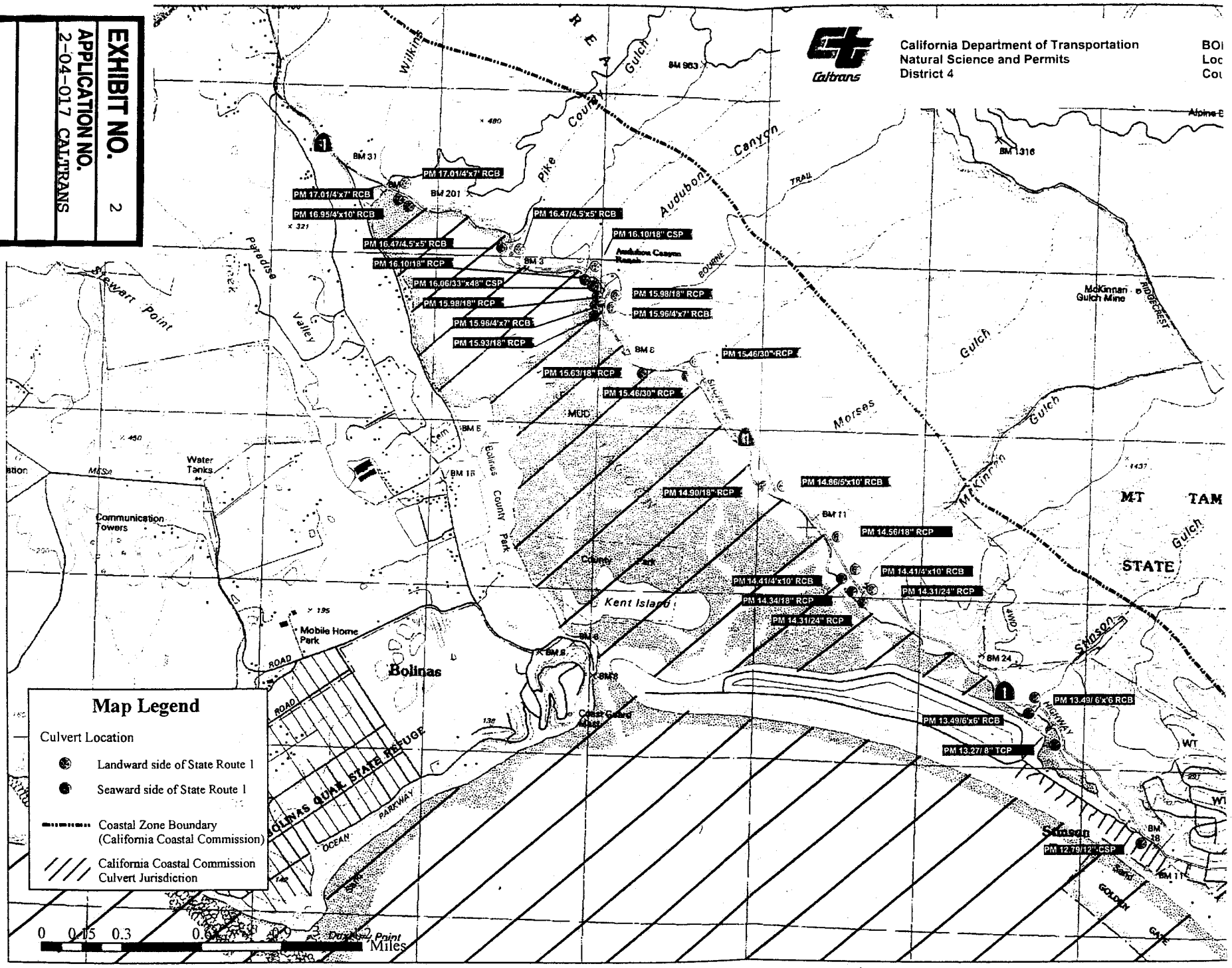
SCALE

FEET 0 2000 5000 7500 10000 FEET

Bolinas Lagoon Culvert Cleaning

IN: north of Stinson Beach
AT: Bolinas Lagoon
COUNTY OF: Marin STATE: CA
APPLICATION BY:
State of California
Department of Transportation
SHEET: 1 OF 13 DATE: July 31, 1995

EXHIBIT NO. 2
APPLICATION NO. 2-04-017 CALTRANS



Roadway Culverts Along Bolinas Lagoon on State Highway Route 1

25 CDFG 1601 Culverts within Coastal Commission Original Permit Jurisdiction

Post Mile	Size	Type	Length	Headwall	Pipe+end ACOE (yd3)	End only CCC (yd3)	(ft2)	Waters of U.S. ACOE (yd3)	Waters of U.S. ACOE (ft2)	Wetlands ACOE (yd3)	Wetlands ACOE (ft2)
12.79	12"	CSP	36'	NO	3	2	30				
13.05	***12"***	***RCP***	***38'***	***NO***							
13.27	8"	TCP	31'	YES	2	1	20				
13.45	***18"***	***RCP***	***38'***	***NO***							
13.49	6'x6'	RCB	37'	BOTH	76	22.14	120	**Stinson Gulch**			
13.54	***18"***	***RCP***	***47'***	***YES***							
13.63	***18"***	***CSP***	***27'***	***YES***							
14.31	24"	RCP	35'	DI	10	1.5	8				
14.34	18"	RCP	38'	YES	6	4	35				
14.41	4'x10'	RCB	32'	BOTH	62	21	180	**McKinnan Gulch**			
14.56	***18"***	***RCP***	***60'***								
14.86	***5'x10'***	***RCB***	***35'***					**Morses Gulch**			
14.9	18"	RCP	37'	NO	6	4	90				
15.4	***4'x7'***	***RCB***	***43'***					**Un-named Gulch**			
15.46	30"	RCP	53'	YES	16	5	60				
15.63	18"	RCP	44'	DI	6	4	8				
15.71	***8"***	***TCP***	***47'***								
15.93	18"	RCP	45'	YES	6	4	45				
15.96	4'X7'	RCB	43'	BOTH	54	31	240	**Audubon Gulch**			
15.98	18"	RCP	49'	YES	6	3	75				
16.06	33"X48"	CSP	41'	INLET	23	14	240				
16.1	18"	CSP	27'	YES	5	1.48	60				
16.47	4.5'X5'	RCB	31'	BOTH	45	32	240	**Pike County Gulch**			
16.95	4'X10'	RCB	30'	BOTH	60	38	360	**Wilkins Gulch**			
17.01	4'x7'	RCB	45'	BOTH	55	17.05	150				
					Total (yd3)	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**
					282	**205.17**	**1961**	**0**	**0**	**0**	**0**

EXHIBIT NO. 3
APPLICATION NO. 2-04-017 CALTRANS

45 Non-1601 Culverts - Coastal Commission Federal Consistency Approval (NE-080-03)

Post Mile	Size	Type	Length	Headwall	Pipe+end ACOE (yd3)	End only CCC (yd3)	(ft2)	Waters of U.S. ACOE (yd3)	Waters of U.S. ACOE (ft2)	Wetlands ACOE (yd3)	Wetlands ACOE (ft2)
12.81	8"	TCP	36'	YES	2	1	2	2	2		
12.89	8"	TCP	33'	YES	2	1	1.83			2	1.83
12.98	8"	TCP	29'	YES	2	1	1.61			2	1.61
13.15	15"	CSP	36'	YES	4	3	3.75			4	3.75
13.20	8"	TCP	28'	YES	2	1	1.56	2	1.56		
13.27 *	**8"**	**TCP**	**31'**	**YES**	**2**	**1**	**1.72**	**2**	**1.72**		
13.32	8"	TCP	28'	YES	2	1	1.56	2	1.56		
13.35	8"	CSP	28'	YES	2	1	1.56	2	1.56		
13.45 *	**18"**	**RCP**	**37'**	**NO**	**6**	**4**	**4.63**			**6**	**4.63**
13.79	14"	CSP	43'	NO	4	3	4.18	4	4.18		
13.82	12"	CSP	48'	NO	3	2	4	3	4		
13.99	18"	RCP	44'	YES	6	4	5.5			6	5.5
14.06	8"	TCP	34'	YES	2	1	1.89			2	1.89
14.11	12"	CSP	36'	NO	3	2	3			3	3
14.16	8"	TCP	34'	YES	2	1	1.89	2	1.89		
14.29	18"	RCP	73'	D.I.	7	4	9.13	7	9.13		
14.37	18"	RCP	36'	D.I.	6	4	4.5	0	0	6	4.5
14.56 *	**18"**	**RCP**	**60'**	**D.I.**	**7**	**4**	**7.5**			**7**	**7.5**
14.62	12"	RCP	35'	YES	3	2	2.92	3	2.92		
14.67	12"	TCP	28'	YES	3	2	1.94	3	1.94		
14.72	12"	TCP	37'	YES	3	2	3.08	3	3.08		
14.77	12"	TCP	36'	YES	3	2	3	3	3		
14.97	18"	CSP	30'	YES	6	4	3.75			6	3.75
15.05	18"	CSP	33'	D.I.	6	4	4.13			6	4.13
15.07	18"	RCP	44'	D.I.	6	4	5.5			6	5.5
15.08	18"	CSP	30'	NO	6	4	3.75			6	3.75
15.21	18"	RCP	42'	D.I.	6	4	5.25	6	5.25		
15.26	18"	RCP	42'	D.I.	6	4	5.25			6	5.25
15.30	8"	TCP	38'	YES	2	1	2.11	2	2.11		

* **These Post miles were incorrectly listed on NE-080-03 and are CDFG 1601 culverts as shown on CDP application # 2-04-017**

45 Non-1601 Culverts - Coastal Commission Federal Consistency Approval (NE-080-03)

Post Mile	Size	Type	Length	Headwall	Pipe+end ACOE (yd3)	End only CCC (yd3)	(ft2)	Waters of U.S. ACOE (yd3)	Waters of U.S. ACOE (ft2)	Wetlands ACOE (yd3)	Wetlands ACOE (ft2)
15.32	8"	TCP	46'	YES	2	1	2.56			2	2.56
15.53	18"	CSP	44'	NO	6	4	5.5			6	5.5
15.56	12"	TCP	36'	YES	3	2	3			3	3
15.58	18"	RCP	44'	D.I.	6	4	5.5	6	5.5		
15.67	12"	CSP	36'	NO	3	2	3	3	3		
15.77	18"	RCP	42'	D.I.	6	4	5.25	6	5.25		
15.84	18"	RCP	43'	D.I.	6	4	5.38			6	5.38
15.88	8"	TCP	27'	YES	2	1	1.5			2	1.5
16.25	18"	RCP	46'	D.I.	6	4	5.75			6	5.75
16.28	18"	RCP	44'	D.I.	6	4	5.5			6	5.5
16.61	18"	RCP	36'	D.I.	6	4	4.5			6	4.5
16.72	10"	TCP	27'	YES	2	2	1.5	2	1.5		
16.74	8"	TCP	26'	YES	2	1	1.44			2	1.44
16.76	10"	TCP	28'	YES	2	2	1.94	2	1.94		
16.80	8"	TCP	26'	YES	2	1	1.44	2	1.44		
16.85	12"	RCP	32'	NO	3	2	2.67			3	2.67
					Total (yd3)	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**
					177	**114**	**158.92**	**67**	**64.53**	**110**	**94.39**
							0.0036 acres Total		**0.00015 acres Waters**		**0.0022 acres Wetlands**

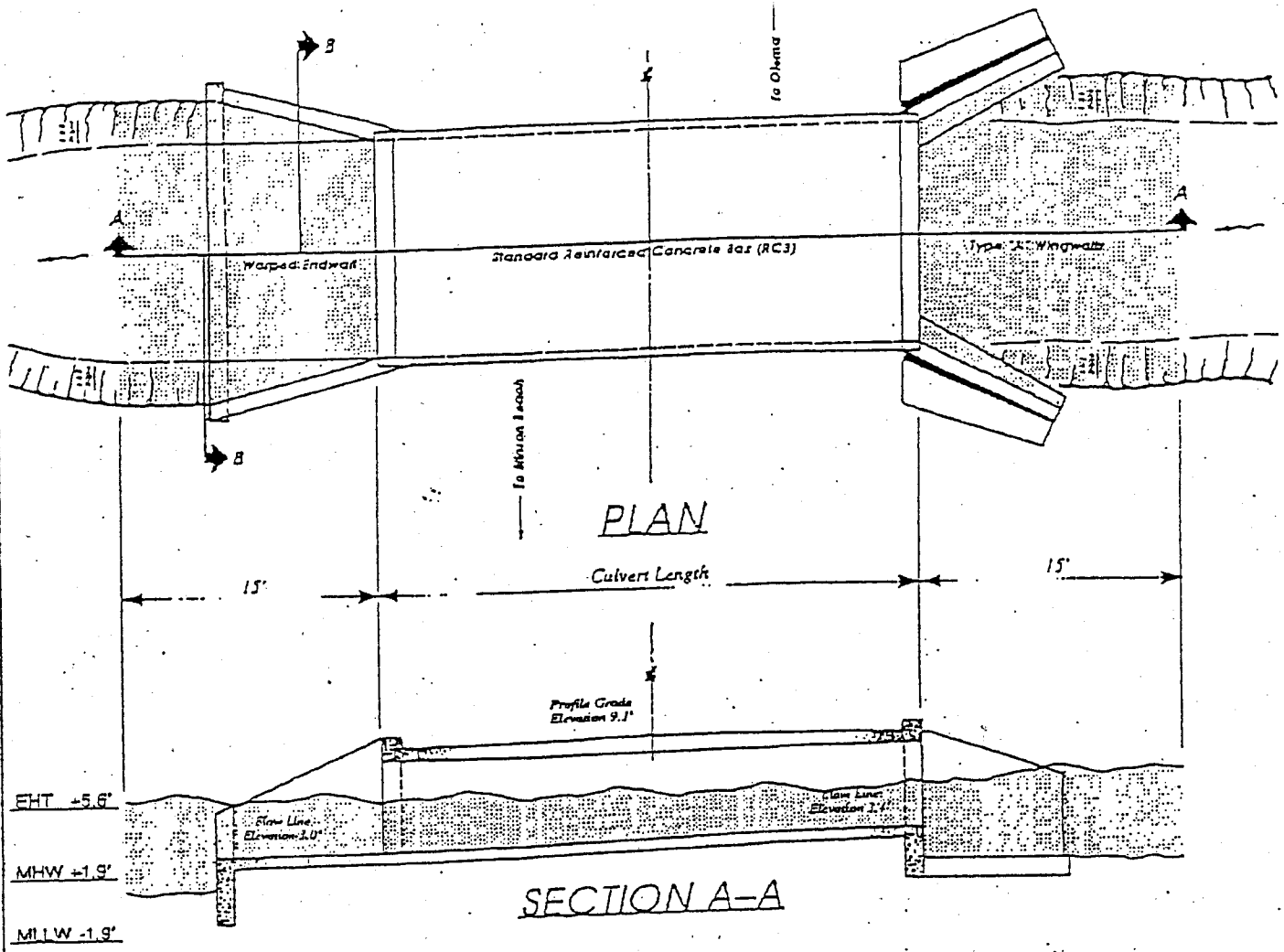
11 CDFG 1601 Culverts within County of Marin Local Coastal Program Permit Jurisdiction

Post Mile	Size	Type	Length	Headwall	Pipe+end ACOE (yd3)	End only CCC (yd3)	(ft2)	Waters of U.S. ACOE (yd3)	Waters of U.S. ACOE (ft2)	Wetlands ACOE (yd3)	Wetlands ACOE (ft2)
13.49	6'X6'	RCB	32	BOTH	76	31.86	150	Stinson Gulch			
14.31	24"	RCP	35	DI	10	4.5	25				
14.41	4'X10'	RCB	32	BOTH	62	17	150	McKinnan Gulch			
14.56	18"	RCP	60	DI	7	4	40				
14.86	5'X10'	RCB	35	BOTH	85	52	90	Morses Gulch			
15.46	30"	RCP	53	YES	16	5	60				
15.96	4'X7'	RCB	43	BOTH	54	15.5	75	Audubon Canyon			
15.98	18"	RCP	49	YES	6	1	25				
16.1	18"	CSP	27	YES	5	2.52	105				
16.47	4.5'X5'	RCB	31	BOTH	45	12.48	175	Pike County Gulch			
17.01	4'X7'	RCB	45	BOTH	55	13.95	125				
					Total (yd3)	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**
					421	**159.81**	**1020**	**0**	**0**	**0**	**0**

14 Non-1601 Culverts Pending Coastal Commission Federal Consistency Approval

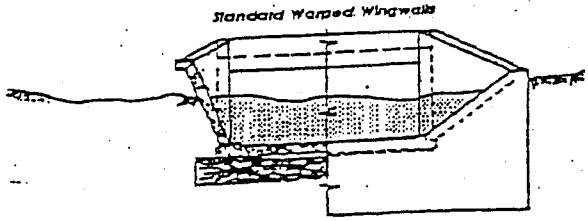
Post Mile	Size	Type	Length	Headwall	Pipe+end ACOE (yd3)	End only CCC (yd3)	(ft2)	Waters of U.S. ACOE (yd3)	Waters of U.S. ACOE (ft2)	Wetlands ACOE (yd3)	Wetlands ACOE (ft2)
13.12	8"	TCP	32	YES	2	1		2	41.3		
13.69	42"	RCP	46	BOTH	30	19		30	368		
13.91	24"	RCP	50	NO	11	6		11	160		
14.47	18"	RCP	76	D.I.	8	4		8	159		
15.02	24"	RCP	41	D.I.	10	6		10	142		
15.35	18"	CSP	53	D.I.	7	4		7	124.5		
16.12	13"X22"	CSP	38	YES	5	3		5	40.5		
16.15	13"X22"	CSP	38	YES	5	3		5	57		
16.19	13"X22"	CSP	40	YES	5	3		5	60		
16.66	18"	RCP	35	YES	6	4		6	97.5		
16.82	13"X22"	CSP	32	YES	4	3		4	48		
15.15	18"	CSP	54	YES	7	4				7	126
16.5	18"	RCP	37	YES	6	4				6	100.5
16.51	18"	RCP	38	YES	6	4				6	102
					Total (yd3)	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**	**Total (yd3)**	**Total (ft2)**
					112	**68**	**0**	**93**	**1297.8**	**19**	**328.5**

12.81	Non -1601 Culverts
13.05	***No Maintenance is currently planned for these culverts***
12.79	Coastal Commission original permit jurisdiction culverts
13.27	These Culverts were listed on NE 080-03, and additionally on this Coastal Commission CDP permit application resulting in duplication. (PM 13.27, 13.45 and 14.56)
13.49	County of Marin LCP permit jurisdiction culverts



PLAN

SECTION A–A



SECTION B–B

Accumulated Silt and Debris to be Removed

Approximate Area: Culvert (50% of size) and 2-Channel Ends (25% below Flow Line, with Side Slopes of 1.5:1, 15' length from Headwall)

PURPOSE: To improve Roadway Drainage and prevent Flooding of Highway 1.

DATUM: MLLW

ADJACENT PROPERTY OWNERS: See Item 24 of Application

TYPICAL SECTION

SCALE

Bolinas Lagoon Culvert Cleaning

IN: north of Stinson Beach
AT: Bolinas Lagoon
COUNTY OF: Marin STATE: CA
APPLICATION BY:
State of California
Department of Transportation
SHEET: 13 OF 13 DATE:

EXHIBIT NO. 4
APPLICATION NO. 2-04-017 CALTRANS

EXHIBIT NO. 10
EA 5C6000

Department of Transportation

Temporary Impacts to Wetlands and Associated Vegetation

PM	Volume (cuyds) @ culvert end	Area (sq ft) @ culvert end	Upstream sediment type	Upstream vegetation type	Upstream material removed (ft2)	Upstream standing water?	Downstream sediment type	Downstream vegetation type	Downstream material removed (ft2)	Downstream standing water (June 2003)
12.79	2	30	silt, leaf litter	pampas grass, cattail, periwinkle, horsetail, wild celery, CA blackberry, red willow	none	2"	silt, leaf litter	cattail, CA blackberry, horsetail, German ivy, morning glory, red willow	40 ft2 sediment 20 ft2 vegetation	2"
13.05	2	30	silt, leaf litter, rock	fennel, poison oak, CA blackberry, curly dock, wild oat grass	none	none	silt, sand, rock	poison oak, coast live oak saplings, wild oat grass, rattlesnake grass, elderberry	none	none
13.27	1	19.99	silt	poison oak, sticky monkeyflower, morning glory, elderberry, alder, coyote brush	none	none	sand, silt	iceplant, wild oat grass, tule, rush, tarweed	40 ft2 sediment 20 ft2 vegetation	none
13.45	4	45	silt	rush, pampas grass, fennel, thistle, velvet grass, fern, prickly oxtongue	none	none	sand, silt	tarweed, CA blackberry, rush, wild radish	none	moist
13.49	54	240	silt, rock	red willow, alder, coyote brush, horsetail, CA blackberry, morning glory	105 ft2 sediment 45 ft2 vegetation	part of channel is moist	rock, silt, sand, dead vegetation	rabbitfoot grass, alder, tarweed, CA poppy, pampas grass, mustard	96 ft2 sediment 24 ft2 vegetation	part of channel is moist
13.54	6	60	sand, silt, rock	fennel, rush, tarweed, morning glory	none	<1"	silt, wood, leaf litter	red willow (part of it already trimmed)	none	1"
13.63	14	240	silt, rock, leaf litter	fennel, alder, pampas grass, CA blackberry, mustard, fern, red willow	none	moist	sand, silt, rock	fennel, pampas grass, tule, pickleweed, cordgrass, algae	none	2" partially submerged by tide

EXHIBIT NO. 5
APPLICATION NO. 2-04-017 CALTRANS

EXHIBIT NO. 16
EA 5C6000

Department of Transportation

Temporary Impacts to Wetlands and Associated Vegetation

PM	Volume (cuyds) @ culvert end	Area (sq ft) @ culvert end	Upstream sediment type	Upstream vegetation type	Upstream material removed (ft2)	Upstream standing water?	Downstream sediment type	Downstream vegetation type	Downstream material removed (ft2)	Downstream standing water (June 2003)
14.31	6	60	silt	German ivy, elderberry, nasturtium	25 ft2 of sediment and vegetation	4" flowing	rock, sand, mudflats	saltgrass	8 ft2 of sediment and vegetation	4" flowing
14.34	4	45	sand, rock	pickleweed, saltgrass, tarweed, algae	none	none	silt, mudflats	fennel, red willow, cattail	35 ft2 of sediment and vegetation	none
14.41	38	360	silt, rock	thistle, nut sedge, wild radish, alder, tyle, red willow, morning glory, periwinkle	105 ft2 sediment 45 ft2 vegetation	3"	rock, silt, sand, wood, algae	tarweed, rabbitfoot grass, fennel, saltgrass	150 ft2 of sediment 30 ft2 of vegetation	part of channel has 3"
14.56	4	45	silt	rattlesnake grass, coyote brush, sweet pea, fern, CA grape, horsetail, tule, cattail, red willow, poison oak	28 ft2 sediment 12 ft2 vegetation	none	sand, rock	none	none	none
14.86	52	360	rock, silt	cattail, fennel, poison oak, CA blackberry	60 ft2 vegetation 30 ft2 sediment	none	silt, rock	red willow, periwinkle, fennel, CA blackberry, poison oak	none	none
14.9	4	45	silt	periwinkle, horsetail, CA blackberry, rush, fern, calla lily, rattlesnake grass, velvet grass	none	4" trickle	silt	red willow, German ivy, alder, CA blackberry, periwinkle, horsetail, fern, pond weed	90 ft2 of sediment and vegetation; trim ~6 alder branches and several willow saplings	4" trickle
15.4	31	240	silt, rock	red willow, CA blackberry, nut sedge, German ivy, mustard	none	3" trickle	sand, gravel	iceplant, tule, horsetail, coyote brush, fennel, mule fat	none	3" trickle

Temporary Impacts to Wetlands and Associated Vegetation

PM	Volume (cuyds) @ culvert end	Area (sq ft) @ culvert end	Upstream sediment type	Upstream vegetation type	Upstream material removed (ft2)	Upstream standing water?	Downstream sediment type	Downstream vegetation type	Downstream material removed (ft2)	Downstream standing water (June 2003)
15.46	10	240	silt, rock	fennel, tarweed, tule, coyote brush	20 ft2 sediment 40 ft2 vegetation	1"	rock, sand	pickleweed	40 ft2sediment 20 ft2 vegetation	almost always submerged by tide
15.63	4	45	silt	wild oat grass, sage brush, poison oak, rattlesnake grass, fennel	none	none	rock, sand, washed up kelp	pickleweed, saltgrass, saltbush	8 ft2 of sediment and vegetation	none; above level of tide today
15.71	1	19.99	rock, silt, leaf litter	poison oak, Queen Anne's lace, CA blackberry, CA buckeye, thistle, unknown grass	none	none	rock, sand	pickleweed	8 ft2 of sediment and vegetation	none; above level of tide todal; broken culvert
15.93	4	45	silt, rock	Douglas fir, poison oak, coyote brush, rush, CA bay laurel	none	none	silt, rock, wood	Coast live oak, redwood saplings, tule, tarweed, iceplant, poison oak	55 ft2 sediment 55 ft2 vegetation	3" due to tide
15.96	31	240	silt, rock	alder, CA bay laurel, CA blackberry, horsetail, fennel, poison oak	40ft2 sediment 35 ft2 vegetation	6"	silt, rock	alder, curly dock, horsetail, nut sedge, tarweed, cattail, wild radish, coyote brush	30 ft2 sediment 45 ft2 vegetation	6"
15.98	4	45	silt, leaf litter, dead vegetation	cattail, CA blackberry, horsetail, tule, fennel, coyote brush, Douglas fir	5 ft2 of sediment 20 ft2 vegetation	2" trickle	silt	iceplant, cattail, tarweed, coyote brush, tule	15 ft2 sediment 60 ft2 vegetation	2" trickle
16.06	14	240	silt, leaf litter, dead vegetation	red willow, thistle, Queen Anne's lace	none	3"	silt	fennel, red willow, rush, alder, mustard, CA blackberry, iceplant	60 ft2 of sediment and vegetation	1"

Temporary Impacts to Wetlands and Associated Vegetation

PM	Volume (cuyds) @ culvert end	Area (sq ft) @ culvert end	Upstream sediment type	Upstream vegetation type	Upstream material removed (ft2)	Upstream standing water?	Downstream sediment type	Downstream vegetation type	Downstream material removed (ft2)	Downstream standing water (June 2003)
16.1	4	45	silt	rush, wild celery, horsetail, red willow	105 ft2 of sediment and vegetation	1"	silt, wood, dead vegetation	rush, nut sedge, wild radish, tarweed	60 ft2 of vegetation and sediment	2" trickle
16.47	32	240	silt, rock, dead vegetation	thistle, mule fat, rabbitfoot grass, saltbush, upland grasses	125 ft2 sediment 50 ft2 vegetation	Part of channel has 2" flow	silt, rock	red willow, saltbush, horsetail, saltgrass, tule, nut sedge, tarweed	150 ft2sediment 120 ft2 vegetation	2"
16.95	38	360	silt, rock	red willow	none	4"	silt, rock	none	150 ft2 of sediment	6"
17.01	31	240	silt, leaf litter	red willow, cattail, horsetail, CA blackberry, wild radish, fennel	75 ft2 sediment 50 ft2 vegetation, trim willow	1"	silt, leaf litter	cattail, horsetail, CA blackberry, German ivy, wild celery, unknown mint	70 ft2 sediment 80 ft2 vegetation	1"

California Department of Fish and Game
Natural Diversity Database
CNDDB Wide Tabular Report

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Alopecurus aequalis var. sonomensis Sonoma alopecurus	G5T1Q S1.1	CNPS: 1B Code: 3-3-3	Fed: Endangered Cal: None	22 S:1	0	0	1	0	0	0	0	1	1	0	0
Amorpha californica var. napensis Napa false indigo	G4T2 S2.2	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	42 S:2	0	0	0	0	0	2	2	0	2	0	0
Aplodontia rufa phaea Point Reyes mountain beaver	G5T2 S2	CDFG: SC	Fed: None Cal: None	9 S:1	0	0	0	0	1	0	1	0	0	1	0
Arctostaphylos hookeri ssp. montana Mt. Tamalpais manzanita	G3T2 S2.2	CNPS: 1B Code: 3-1-3	Fed: None Cal: None	16 S:5	1	0	0	0	0	4	1	4	5	0	0
Arctostaphylos virgata Marin manzanita	G2 S2.2	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	23 S:7	0	0	1	0	0	6	3	4	7	0	0
Ardea alba great egret	G5 S4	CDFG:	Fed: None Cal: None	29 S:1	0	0	0	0	0	1	1	0	1	0	0
Ardea herodias great blue heron	G5 S4	CDFG:	Fed: None Cal: None	74 S:1	0	0	0	0	0	1	1	0	1	0	0
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	G2T2 S2.2	CNPS: 1B Code: 3-2-3	Fed: None Cal: None	23 S:1	0	0	0	0	1	0	1	0	0	1	0
Caecidotea tomalensis Tomales isopod	G2 S2	CDFG:	Fed: None Cal: None	5 S:1	0	1	0	0	0	0	1	0	1	0	0
Carex lyngbyei Lyngbye's sedge	G5 S2.2	CNPS: 2 Code: 2-2-1	Fed: None Cal: None	16 S:1	0	0	0	0	0	1	1	0	1	0	0
Ceanothus masonii Mason's ceanothus	G1 S1.3	CNPS: 1B Code: 3-2-3	Fed: None Cal: Rare	6 S:3	0	1	1	0	0	1	1	2	3	0	0
Charadrius alexandrinus nivosus western snowy plover	G4T3 S2	CDFG: SC	Fed: Threatened Cal: None	110 S:1	0	0	0	0	0	1	1	0	1	0	0
Cirsium hydrophilum var. vaseyi Mt. Tamalpais thistle	G1T1 S1.2	CNPS: 1B Code: 3-2-3	Fed: None Cal: None	12 S:4	2	1	0	0	0	1	0	4	4	0	0
Cordylanthus maritimus ssp. palustris Point Reyes bird's-beak	G4?T2 S2.2	CNPS: 1B Code: 2-2-2	Fed: None Cal: None	62 S:4	0	0	1	0	0	3	3	1	4	0	0
Corynorhinus townsendii townsendii Townsend's western big-eared bat	G4T3T4 S2S3	CDFG: SC	Fed: None Cal: None	21 S:1	0	1	0	0	0	0	0	1	1	0	0

EXHIBIT NO. 6
APPLICATION NO.
2-04-017 CALTRANS

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Cypseloides niger black swift	G4 S2	CDFG: SC	Fed: None Cal: None	46 S:1	0	0	0	0	0	1	1	0	1	0	0
Danaus plexippus monarch butterfly	G5 S3	CDFG:	Fed: None Cal: None	335 S:14	0	9	3	1	1	0	0	14	13	0	1
Dirca occidentalis western leatherwood	G2G3 S2S3	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	40 S:2	0	0	0	0	0	2	1	1	2	0	0
Eucyclogobius newberryi tidewater goby	G3 S2S3	CDFG: SC	Fed: Endangered Cal: None	111	5	12	8	1	26	59	30	81	85	16	10
Fritillaria lanceolata var. tristulis Marin checker lily	G5T1 S1.1	CNPS: 1B Code: 3-3-3	Fed: None Cal: None	28 S:4	0	0	2	0	0	2	2	2	4	0	0
Geothlypis trichas sinuosa saltmarsh common yellowthroat	G5T2 S2	CDFG: SC	Fed: None Cal: None	74 S:2	0	0	0	0	0	2	0	2	2	0	0
Gilia capitata ssp. chamissonis dune gilia	G5T2 S2.1	CNPS: 1B Code: 2-3-3	Fed: None Cal: None	29 S:1	0	0	0	0	0	1	1	0	1	0	0
Gilia capitata ssp. tomentosa woolly-headed gilia	G5T1 S1.1	CNPS: 1B Code: 3-3-3	Fed: None Cal: None	11 S:1	0	0	0	0	0	1	1	0	1	0	0
Hesperolinon congestum Marin western flax	G2 S2.1	CNPS: 1B Code: 3-3-3	Fed: Threatened Cal: Threatened	26 S:2	1	1	0	0	0	0	0	2	2	0	0
Horkelia tenuiloba thin-lobed horkelia	G2 S2.2	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	14 S:1	0	0	0	0	0	1	0	1	1	0	0
Hydrochara rickseckeri Ricksecker's water scavenger beetle	G1G2 S1S2	CDFG:	Fed: None Cal: None	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Laterallus jamaicensis coturniculus California black rail	G4T1 S1	CDFG:	Fed: None Cal: Threatened	84 S:2	0	0	0	0	0	2	0	2	2	0	0
Leptosiphon croceus coast yellow leptosiphon	G1 S1.1	CNPS: 1B Code: 3-3-3	Fed: None Cal: None	4 S:1	0	0	0	0	1	0	1	0	0	1	0
Lessingia micradenia var. micradenia Tamalpais lessingia	G2T1 S1.1	CNPS: 1B Code: 3-2-3	Fed: None Cal: None	4 S:3	0	1	0	1	0	1	1	2	3	0	0
Navarretia rosulata Marin County navarretia	G2? S2?	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	13 S:7	0	2	0	0	0	5	0	7	7	0	0
Oncorhynchus kisutch Coho salmon - central California esu	G4 S2?	CDFG:	Fed: Threatened Cal: Endangered	10	0	2	2	1	0	5	0	10	10	0	0

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Oncorhynchus mykiss irideus steelhead-central California coast esu	G5T2 S2	CDFG:	Fed: Threatened Cal: None	25	1	1	3	3	0	17	3	22	25	0	0
Oncorhynchus mykiss irideus steelhead-northern California esu	G5T2 S2	CDFG:	Fed: Threatened Cal: None	1	0	1	0	0	0	0	0	1	1	0	0
Pleuropogon hooverianus North Coast semaphore grass	G1 S1.1	CNPS: 1B Code: 3-3-3	Fed: None Cal: Threatened	17 S:1	0	0	0	0	1	0	1	0	0	1	0
Quercus parvula var. tamalpaisensis Tamalpais oak	G4T1 S1.3	CNPS: 1B Code: 3-1-3	Fed: None Cal: None	9 S:3	0	0	0	0	0	3	3	0	3	0	0
Rallus longirostris obsoletus California clapper rail	G5T1 S1	CDFG:	Fed: Endangered Cal: Endangered	70 S:1	0	0	0	0	0	1	1	0	1	0	0
Rana aurora draytonii California red-legged frog	G4T2T3 S2S3	CDFG: SC	Fed: Threatened Cal: None	757	127	297	138	49	2	144	46	711	754	3	0
Rana boylii foothill yellow-legged frog	G3 S2S3	CDFG: SC	Fed: None Cal: None	403 S:2	0	0	0	0	0	2	2	0	2	0	0
Serpentine Bunchgrass	G2 S2.2		Fed: None Cal: None	22 S:1	0	0	0	0	0	1	0	1	1	0	0
Sidalcea calycosa ssp. rhizomata Point Reyes checkerbloom	G5T2 S2.2	CNPS: 1B Code: 2-2-3	Fed: None Cal: None	31 S:1	0	0	0	0	0	1	1	0	1	0	0
Sidalcea hickmanii ssp. viridis Marin checkerbloom	G3T2 S2.2?	CNPS: 1B Code: 3-1-3	Fed: None Cal: None	6 S:2	0	0	0	0	0	2	2	0	2	0	0
Streptanthus batrachopus Tamalpais jewel-flower	G1 S1.2	CNPS: 1B Code: 3-1-3	Fed: None Cal: None	5 S:2	1	1	0	0	0	0	0	2	2	0	0
Streptanthus glandulosus ssp. pulchellus Mt. Tamalpais jewel-flower	G4T1 S1.2	CNPS: 1B Code: 3-2-3	Fed: None Cal: None	15 S:4	0	1	0	0	0	3	3	1	4	0	0
Trifolium amoenum showy Indian clover	G1 S1.1	CNPS: 1B Code: 3-3-3	Fed: Endangered Cal: None	23 S:1	0	0	0	0	1	0	1	0	0	1	0

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
1	***Alopecurus aequalis var. sonomensis*** Sonoma alopecurus	PMPOA07012	Endangered		G5T1Q	S1.1	1B/3-3-3
2	***Amorpha californica var. napensis*** Napa false indigo	PDFAB08012			G4T2	S2.2	1B/2-2-3
3	***Aplodontia rufa phaea*** Point Reyes mountain beaver	AMAFA01012			G5T2	S2	SC
4	***Arctostaphylos hookeri ssp. montana*** Mt. Tamalpais manzanita	PDERI040J5			G3T2	S2.2	1B/3-1-3
5	***Arctostaphylos virgata*** Marin manzanita	PDERI041K0			G2	S2.2	1B/2-2-3
6	***Ardea alba*** great egret	ABNGA05010			G5	S4	
7	***Ardea herodias*** great blue heron	ABNGA04010			G5	S4	
8	***Astragalus pycnostachyus var. pycnostachyus*** coastal marsh milk-vetch	PDFAB0F7B2			G2T2	S2.2	1B/3-2-3
9	***Caecidotea tomalensis*** Tomales isopod	ICMAL01220			G2	S2	
10	***Carex lyngbyei*** Lyngbye's sedge	PMCYP037Y0			G5	S2.2	2/2-2-1
11	***Ceanothus masonii*** Mason's ceanothus	PDRHA040F6		Rare	G1	S1.3	1B/3-2-3
12	***Charadrius alexandrinus nivosus*** western snowy plover	ABNNB03031	Threatened		G4T3	S2	SC
13	***Cirsium hydrophilum var. vaseyi*** Mt. Tamalpais thistle	PDAST2E1G2			G1T1	S1.2	1B/3-2-3
14	***Cordylanthus maritimus ssp. palustris*** Point Reyes bird's-beak	PDSCR0J0C3			G4?T2	S2.2	1B/2-2-2
15	***Corynorhinus townsendii townsendii*** Townsend's western big-eared bat	AMACC08015			G4T3T4	S2S3	SC
16	***Cypseloides niger*** black swift	ABNUA01010			G4	S2	SC
17	***Danaus plexippus*** monarch butterfly	IILEPP2010			G5	S3	
18	***Dirca occidentalis*** western leatherwood	PDTHY03010			G2G3	S2S3	1B/2-2-3
19	***Eucyclogobius newberryi*** tidewater goby	AFCQN04010	Endangered		G3	S2S3	SC
20	***Fritillaria lanceolata var. tristulis*** Marin checker lily	PMLIL0V0P1			G5T1	S1.1	1B/3-3-3
21	***Geothlypis trichas sinuosa*** saltmarsh common yellowthroat	ABPBX1201A			G5T2	S2	SC
22	***Gilia capitata ssp. chamissonis*** dune gilia	PDPLM040B3			G5T2	S2.1	1B/2-3-3
23	***Gilia capitata ssp. tomentosa*** woolly-headed gilia	PDPLM040B9			G5T1	S1.1	1B/3-3-3

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS/R-E-D
24 ***Hesperolinon congestum*** Marin western flax	PDLIN01060	Threatened	Threatened	G2	S2.1	1B/3-3-3
25 ***Horkelia tenuiloba*** thin-lobed horkelia	PDROS0W0E0			G2	S2.2	1B/2-2-3
26 ***Hydrochara ricksecker*** Ricksecker's water scavenger beetle	IICOL5V010			G1G2	S1S2	
27 ***Laterallus jamaicensis coturniculus*** California black rail	ABNME03041		Threatened	G4T1	S1	
28 ***Leptosiphon croceus*** coast yellow leptosiphon	PDPLM09170			G1	S1.1	1B/3-3-3
29 ***Lessingia micradenia var. micradenia*** Tamalpais lessingia	PDAST5S063			G2T1	S1.1	1B/3-2-3
30 ***Navarretia rosulata*** Marin County navarretia	PDPLM0C0Z0			G2?	S2?	1B/2-2-3
31 ***Oncorhynchus kisutch*** Coho salmon - central California esu	AFCHA02030	Threatened	Endangered	G4	S2?	
32 ***Oncorhynchus mykiss irideus*** steelhead-central California coast esu	AFCHA0209G	Threatened		G5T2	S2	
33 ***Oncorhynchus mykiss irideus*** steelhead-northern California esu	AFCHA0209Q	Threatened		G5T2	S2	
34 ***Pleuropogon hooverianus*** North Coast semaphore grass	PMPOA7Y031		Threatened	G1	S1.1	1B/3-3-3
35 ***Quercus parvula var. tamalpaisensis*** Tamalpais oak	PDFAG051Q3			G4T1	S1.3	1B/3-1-3
36 ***Rallus longirostris obsoletus*** California clapper rail	ABNME05016	Endangered	Endangered	G5T1	S1	
37 ***Rana aurora draytonii*** California red-legged frog	AAABH01022	Threatened		G4T2T3	S2S3	SC
38 ***Rana boylii*** foothill yellow-legged frog	AAABH01050			G3	S2S3	SC
39 ***Serpentine Bunchgrass***	CTT42130CA			G2	S2.2	
40 ***Sidalcea calycosa ssp. rhizomata*** Point Reyes checkerbloom	PDMAL11012			G5T2	S2.2	1B/2-2-3
41 ***Sidalcea hickmanii ssp. viridis*** Marin checkerbloom	PDMAL110A4			G3T2	S2.2?	1B/3-1-3
42 ***Streptanthus batrachopus*** Tamalpais jewel-flower	PDBRA2G050			G1	S1.2	1B/3-1-3
43 ***Streptanthus glandulosus ssp. pulchellus*** Mt. Tamalpais jewel-flower	PDBRA2G0J2			G4T1	S1.2	1B/3-2-3
44 ***Trifolium amoenum*** showy indian clover	PDFAB40040	Endangered		G1	S1.1	1B/3-3-3

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Element Occurrence Rank

	Element	Excellent	Good	Fair	Poor	None	Unknown	Totals
1	Alopecurus aequalis var. sonomensis	0	0	1	0	0	0	1
2	Amorpha californica var. napensis	0	0	0	0	0	2	2
3	Aplodontia rufa phaea	0	0	0	0	1	0	1
4	Arctostaphylos hookeri ssp. montana	1	0	0	0	0	4	5
5	Arctostaphylos virgata	0	0	1	0	0	6	7
6	Ardea alba	0	0	0	0	0	1	1
7	Ardea herodias	0	0	0	0	0	1	1
8	Astragalus pycnostachyus var. pycnostachyus	0	0	0	0	1	0	1
9	Caecidotea tomalensis	0	1	0	0	0	0	1
10	Carex lyngbyei	0	0	0	0	0	1	1
11	Ceanothus masonii	0	1	1	0	0	1	3
12	Charadrius alexandrinus nivosus	0	0	0	0	0	1	1
13	Cirsium hydrophilum var. vaseyi	2	1	0	0	0	1	4
14	Cordylanthus maritimus ssp. palustris	0	0	1	0	0	3	4
15	Corynorhinus townsendii townsendii	0	1	0	0	0	0	1
16	Cypseloides niger	0	0	0	0	0	1	1
17	Danaus plexippus	0	9	3	1	1	0	14
18	Dirca occidentalis	0	0	0	0	0	2	2
19	Eucyclogobius newberryi	5	12	8	1	26	59	111
20	Fritillaria lanceolata var. tristulis	0	0	2	0	0	2	4
21	Geothlypis trichas sinuosa	0	0	0	0	0	2	2
22	Gilia capitata ssp. chamissonis	0	0	0	0	0	1	1
23	Gilia capitata ssp. tomentosa	0	0	0	0	0	1	1
24	Hesperolinon congestum	1	1	0	0	0	0	2
25	Horkelia tenuiloba	0	0	0	0	0	1	1
26	Hydrochara ricksecker	0	0	0	0	0	1	1
27	Laterallus jamaicensis coturniculus	0	0	0	0	0	2	2
28	Leptosiphon croceus	0	0	0	0	1	0	1
29	Lessingia micradenia var. micradenia	0	1	0	1	0	1	3
30	Navarretia rosulata	0	2	0	0	0	5	7
31	Oncorhynchus kisutch	0	2	2	1	0	5	10
32	Oncorhynchus mykiss irideus	1	1	3	3	0	17	25
33	Oncorhynchus mykiss irideus	0	1	0	0	0	0	1
34	Pleuropogon hooverianus	0	0	0	0	1	0	1
35	Quercus parvula var. tamalpaisensis	0	0	0	0	0	3	3
36	Rallus longirostris obsoletus	0	0	0	0	0	1	1
37	Rana aurora draytonii	127	297	138	49	2	144	757
38	Rana boylii	0	0	0	0	0	2	2
39	Serpentine Bunchgrass	0	0	0	0	0	1	1
40	Sidalcea calycosa ssp. rhizomata	0	0	0	0	0	1	1
41	Sidalcea hickmanii ssp. viridis	0	0	0	0	0	2	2
42	Streptanthus batrachopus	1	1	0	0	0	0	2
43	Streptanthus glandulosus ssp. pulchellus	0	1	0	0	0	3	4
44	Trifolium amoenum	0	0	0	0	1	0	1
	Totals	138	332	160	56	34	278	998

	Element	Presumed Extant	Possibly Extirpated	Extirpated	Totals
1	Alopecurus aequalis var. sonomensis	1	0	0	1
2	Amorpha californica var. napensis	2	0	0	2
3	Aplodontia rufa phaea	0	1	0	1
4	Arctostaphylos hookeri ssp. montana	5	0	0	5
5	Arctostaphylos virgata	7	0	0	7
6	Ardea alba	1	0	0	1
7	Ardea herodias	1	0	0	1
8	Astragalus pycnostachyus var. pycnostachyus	0	1	0	1
9	Caecidotea tomalensis	1	0	0	1
10	Carex lyngbyei	1	0	0	1
11	Ceanothus masonii	3	0	0	3
12	Charadrius alexandrinus nivosus	1	0	0	1
13	Cirsium hydrophilum var. vaseyi	4	0	0	4
14	Cordylanthus maritimus ssp. palustris	4	0	0	4
15	Corynorhinus townsendii townsendii	1	0	0	1
16	Cypseloides niger	1	0	0	1
17	Danaus plexippus	13	0	1	14
18	Dirca occidentalis	2	0	0	2
19	Eucyclogobius newberryi	85	16	10	111
20	Fritillaria lanceolata var. tristulis	4	0	0	4
21	Geothlypis trichas sinuosa	2	0	0	2
22	Gilia capitata ssp. chamissonis	1	0	0	1
23	Gilia capitata ssp. tomentosa	1	0	0	1
24	Hesperolinon congestum	2	0	0	2
25	Horkelia tenuiloba	1	0	0	1
26	Hydrochara ricksecker	1	0	0	1
27	Laterallus jamaicensis coturniculus	2	0	0	2
28	Leptosiphon croceus	0	1	0	1
29	Lessingia micradenia var. micradenia	3	0	0	3
30	Navarretia rosulata	7	0	0	7
31	Oncorhynchus kisutch	10	0	0	10
32	Oncorhynchus mykiss irideus	25	0	0	25
33	Oncorhynchus mykiss irideus	1	0	0	1
34	Pleuropogon hooverianus	0	1	0	1
35	Quercus parvula var. tamalpaisensis	3	0	0	3
36	Rallus longirostris obsoletus	1	0	0	1
37	Rana aurora draytonii	754	3	0	757
38	Rana boylii	2	0	0	2
39	Serpentine Bunchgrass	1	0	0	1
40	Sidalcea calycosa ssp. rhizomata	1	0	0	1
41	Sidalcea hickmanii ssp. viridis	2	0	0	2
42	Streptanthus batrachopus	2	0	0	2
43	Streptanthus glandulosus ssp. pulchellus	4	0	0	4
44	Trifolium amoenum	0	1	0	1
	Totals	963	24	11	998