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Filed:	07/28/2010
180th day:	01/24/2010
Staff report prepared:	11/30/2010
Staff Report prepared by:	R.T. Ananda
Staff Report approved by:	C.Lester
Hearing date:	12/16/2010

COASTAL DEVELOPMENT PERMIT APPLICATION

Application number.....**2-10-020**

Applicant.....**Marin County Department of Public Works**

Project location……... Sites along Sir Francis Drake Boulevard, Bear Valley Road, Fairfax-Bolinas Road, and Olema-Bolinas Road in West Marin County, CA.

Project description…….Maintenance Cleaning of Sediment from 46 Culverts and Associated Drainages within the Coastal Zone in Marin County.

Local Approvals .....County of Marin Consolidated CDP

File documents……Coastal Development Permit Application 2-10-020

Staff Recommendation ..**Approval with Conditions**

A.Staff Recommendation

1. Summary of Staff Recommendation

The Marin County Department of Public Works (DPW) is seeking approval to conduct culvert and drainage cleaning over a six-year period as part of its maintenance program to remove excess sediment for flood control along Sir Francis Drake Boulevard, Bear Valley, Fairfax-Bolinas, and Olema-Bolinas Roads. The purpose of the maintenance work is to protect these roadways all of which are existing essential roads/transportation corridors in West Marin County. The on-going maintenance activities would prevent flooding of the adjacent roads and properties, avoid accidents and possible road closures, ensure public safety, and improve water quality and aquatic resources, i.e. fish, wildlife and their habitats. Flood control and protection would be accomplished by removing the minimum amount of accumulated excess sediment from the existing blocked culverts, drainage ditches, and channels and streams. The proposed project does not include construction of new or expanded structures.

The proposed project will not result in impacts to public access. Additionally, it includes measures to mitigate potential impacts to biological resources and water quality. Measures include:

- Timing the projects when they will have the least impacts, minimizing disturbance to plant and animal life.
- Care of special-status species (including use of a qualified biologist/endangered species coordinator to perform pre-construction surveys and rescue/relocation of sensitive species), and construction crew training and education. The qualified biologist/endangered species coordinator will be on site to implement any needed conservation measures for special-status species during and following project construction (including de-watering).
- All maintenance work would be conducted during the summer dry season (June 15 to October 15) to minimize impacts to anadromous fish/salmonids and other aquatic resources. The excavation work to be conducted in tidal waters at Sir Francis Drake blvd. Mile Markers 28.86, 28.29, 28.23 and 25.27 will be done at low tide.
- All appropriate Best Management Practices (BMPs) will be implemented, including conducting the work from the road whenever possible, minimizing loss of native vegetation, minimizing sediment disturbance and suspension within the water column, and taking all excavated material to an upland disposal site. Sediment/erosion controls will be used to keep excess soil from washing or blowing away during removal, transport and storage. These controls include sediment traps, silt fences, turbidity curtains, hay bales, hydro-seeding using a native mix, and use of straw mulch, as necessary.
- Implementing a riparian restoration and monitoring plan that includes planting vegetation between December 1 and April 1; and monitoring/watering during the dry season for at least two growing seasons or until plants stabilize. This plan will be deemed successful with greater than 70 percent survival of planted native willow cuttings. Plant growth will be inspected annually.

The Special Conditions of this approval ensure the project's maximum conformance with Coastal Act requirements. Overall, because the central purpose of the project is flood control, and the best feasible mitigation measures are incorporated, the project is approvable consistent with Coastal Act 30236. The project, as proposed and conditioned, will provide protection for coastal public access and coastal resources. Staff recommends that the **Commission approve a CDP with conditions**.

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2. Staff Recommendation on Coastal Development Permit

Staff recommends that the Commission, after public hearing, **approve** the proposed project subject to the standard and special conditions below.

Motion: I move that the Commission approve coastal development permit number 2-10-020 pursuant to the staff recommendation.

Staff Recommendation of Approval: Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve the Permit: The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

3. Conditions of Approval

A. 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.

B. Special Conditions:

1. Mitigation Measures for State-listed and Federally-listed Species

All specific mitigation measures, in addition to the General Measures for Protection of Biological Resources and Best Management Practices included in the Department of Public Works' *Supplemental Biological Assessment, Maintenance of 47 Culverts/Drainages, West Marin County, California, (Summarizes and Updates Sycamore 2004),* dated March 2010, for California Black Rail, California Clapper Rail, California Freshwater Shrimp, California red-legged frog, Coho salmon, steelhead trout, and tidewater goby shall be implemented.

2. Seasonal Restrictions, Project Timing, and De-Watering

All project activities shall be conducted during the low-flow period/summer dry season between June 15 and October 15 in any given year. Prior to sediment removal, Sir Francis Drake Blvd. Mile Markers 29.63 (downstream), 28.29 (upstream), 27.51 (downstream), 26.93 (downstream), 25.86 (upstream), 28.86 (upstream and downstream), 28.29 (downstream), and Olema-Bolinas Road Mile Marker .18 (upstream and downstream) shall be temporarily de-watered at the active work sites via temporary cofferdams. Temporary pumps and pipes shall divert water from the upstream side of the coffer dam to the downstream outfall on hard surfaces to limit streambed erosion. Pump intakes shall be screened to protect fish and other species.

3. Biological Surveying and Monitoring

Prior to beginning work, a qualified biologist/endangered species coordinator shall conduct a survey of the site for the presence of California black rail, California freshwater shrimp, California red-legged frog, Coho salmon, steelhead trout, Western pond turtle, and tidewater goby in accordance with USFWS and CDFG protocol. A qualified biological/endangered species coordinator monitor experienced with all of these species shall be present at the site during all maintenance activities. 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 of these species (including adults, tadpoles, or egg masses) are found, all work in the area shall cease and the USFWS and CDFG shall be contacted to determine the appropriate action. The biologist shall have the authority to halt all maintenance activities as necessary to protect critical habitat, and to implement appropriate conservation measures, including the rescue or relocation of individual animals to suitable upstream or downstream habitat.

4. Restoration of Disturbed Areas

Large woody vegetation that currently exists on stream channel banks shall be left in place to the maximum extent feasible. All disturbed areas shall be restored to the state in which they existed prior to construction (i.e., re-graded to pre-project contours and revegetated with an all-native plant palette). DPW shall implement a riparian restoration and monitoring plan that includes planting vegetation between December 1 and April 1; and monitoring/watering during the dry season for at least two growing seasons or until plants stabilize. This plan will be deemed successful with greater than 70 percent survival of planted native willow cuttings. Plant growth will be inspected annually. If survival falls below 70 percent, areas will be re-planted with additional willow cuttings and watering re-initiated as needed. DPW shall submit an annual status/monitoring report on the progress of the re-vegetation.

5. Sediment Removal and Disposal

Only the quantity of material necessary to restore hydraulic capacity to the affected culverts and stream channels shall be removed, and the method employed in this process shall be done in a manner that maintains the existing gradient of the stream. All debris and dredged material generated from the project shall be disposed of in an approved location, outside the coastal zone.

6. Water Quality

All appropriate Best Management Practices (BMPs) shall be implemented, including conducting the work from the road whenever possible, minimizing loss of native vegetation, minimizing sediment disturbance and suspension within the water column, and taking all excavated material to an upland disposal site. Sediment/erosion controls will be used to keep excess soil from washing or blowing away during removal, transport and storage. BMPs shall include sediment traps, silt fences, turbidity curtains, hay bales, hydro-seeding using a native mix, and use of straw mulch, as necessary). These BMPs are

listed in the Bay Area Storm Water Management Agencies Association (BASMAA) Flood Control Facility Maintenance Best Management Practices (BMP) Manual (EOA, Inc. 2000) and FishNet4C Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet4C 2004), adopted by the County of Marin. 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. Best Management Practices shall be implemented in accordance with

7. Reporting Requirements

Within sixty days of completion of the first sediment removal episode, Marin Department of Public Works shall submit to the Executive Director a report describing 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. Every two years thereafter, Marin Department of Public Works shall submit similar reports describing each sediment removal episode that occurred within that two year period.

Submit a report within two years of implementing mitigation measures for riparian and tidal marsh impacts. The report shall include the description of impacts, the quantity and species used to revegetate the impact area, and the level of success.

8. Length of Development Authorization

This permit authorizes the proposed development for six (6) years from the date of Commission approval (until December 16, 2016). One request for an additional six-year period of development authorization may be accepted, reviewed, and approved by the Executive Director for a maximum total of twelve (12) years of development authorization (until December 16, 2021), provided that the request would not substantively alter the project description and/or require modifications of conditions due to new information or technology or other changed circumstances.

The request for an additional six-year period of development authorization shall be made prior to December 16, 2016. If the request for an additional six-year period would substantively alter the project description and/or require modifications of conditions due to new information or technology or other changed circumstances, an amendment to this permit will be required. All sediment removal operations proposed after December 16, 2016, or after December 16, 2021 if no additional six-year period of authorization has been granted by the Executive Director or amendment has been obtained, shall require a new coastal development permit.

B.Findings and Declarations

The Commission finds and declares as follows:

1. Project Environmental Setting, Location, and Description

Environmental Setting

The proposed project site is located in West Marin County along Sir Francis Drake Blvd., Bear Valley, Fairfax-Bolinas, and Olema-Bolinas Roads. (EXHIBIT 1 - Regional Map)
The proposed project is a flood control project comprising maintenance activities to clean out accumulated sediment from 46 culverts and portions of associated drainages and ditches. (EXHIBIT 2 - Location Map Project Sites)

Land uses in the project area include dairy cattle grazing in the northern portion and rural residences around Inverness, Olema and Bolinas. A good portion of the land within the project area in the northern and central portions is undeveloped, open space and includes public areas that are part of Point Reyes National Seashore. The southern portion traverses land that adjacent to Bolinas Lagoon, including privately-owned, agricultural lands and lands owned by the National Park Service and managed by the Marin County Department of Parks and Open Space.

Vegetation communities comprise coastal freshwater marsh, north coast riparian scrub/forest, northern coastal salt marsh, and ruderal vegetation.

Location

Sir Francis Drake Boulevard Mile Markers (MM) 33.58, 33.48,33.43, 33.39, 33.34, 33.30, 33.19, 33.16, 33.06, 29.63, 29.16, 29.09, 28.86, 28.65, 28.29, 28.23, 27.74, 27.54, 27.51, 27.44, 27.19, 27.00, 26.93, 25.96, 25.86, 25.44, 25.27, 25.20; Bear Valley Road MM 2.08 and 1.11; Fairfax-Bolinas Road MM 14.64, 14.60, and 14.59; and Olema-Bolinas Road MM .01, .03, .06, .18, .21, .24, .27, .36, 1.17, 1.47, 1.51, 1.56, and 1.61 in West Marin County, CA.

Description

The proposed project is a Marin County Department of Public Works (DPW) flood control maintenance project. The purpose of the maintenance work is to protect Sir Francis Drake Blvd., Bear Valley, Fairfax-Bolinas, and Olema-Bolinas Roads, all of which are existing essential roads/transportation corridors for the area. Flood control and protection would be accomplished by removing accumulated excess sediment from the existing culverts, drainage ditches, and blocked channels and streams. Blockage of the existing culverts and drainage ditches is the result of decomposed granite deposited from the steep slopes of the surrounding hillsides and sediment transport from the roads. The on-going maintenance project would prevent flooding of the adjacent roads and properties, avoid accidents and possible road closures, ensure public safety, and improve water quality and aquatic resources, i.e. fish,

wildlife and their habitats. The water ways within the project area include Schooner, First Valley, Second Valley, Third Valley, Dream Farm, Redwood, Fish Hatchery, Haggerty Gulch, Bear Valley and Lagunitas Creeks - tributaries to Schooner Bay, Tomales Bay, and Lagunitas Creek; Wilkins and Lewis Gulches – tributaries to Bolinas Lagoon; and various un-named stream channels, swales, and drainage ditches.

The proposed project would entail removing the minimum amount of sediment necessary to restore the hydrological capacity of streams, channels, and drainage ditches. It also includes measures to avoid impacts to and protect special status plant and animal species. Proposed project activities include removal of riparian vegetation to provide access for maintenance equipment. The proposed maintenance work would result in restoring the natural flow regime of associated channels and drainages by removing accumulated sediment; providing flood protection for essential transportation corridors; improving water quality and passage for anadromous fish. Measures to mitigate impacts to riparian vegetation and tidal marsh include revegetating affected sites by in-kind replacement of removed habitat.

Some locations are regulated by the Army Corps of Engineers (ACOE) because the proposed work would include: filling for placement of temporary cofferdams and or excavating in tidal waters which are subject to Section 10 of the Rivers and Harbors Act; or fill and or excavation below the Ordinary High Water Mark in fresh waters, which are subject to Section 404 of the Clean Water Act. The specific locations under ACOE jurisdiction are Sir Francis Drake Blvd. Mile Markers 29.63 (Third Valley Creek), 28.86 (Second Valley Creek), 28.29 (First Valley Creek), 28.23 (un-named tidal channel), 27.51 (Dream Farm Creek), 26.93 (un-named creek channel), 25.86 (Fish Hatchery Creek), 25.27 (Haggerty Gulch), and Olema-Bolinas Rd Mile Marker .18 (Lewis Gulch).

Wetlands: The flood control maintenance work at the 46 project sites would result in a cumulative total excavation of approximately 2,597 cubic yards of sediment, causing temporary loss or disturbance to approximately 8,183 linear feet (0.79 acre) of wetlands and/or waters of the U.S. and State. The estimated annual sediment load for the 46 sites is approximately 740 cubic yards; with excavation, there will be a temporal loss of fresh, brackish and salt marsh vegetation and creek channel substrate (gravel-cobble) removed from the bed of the various stream channels and drainages along Sir Francis Drake Blvd., Bear Valley Road, Fairfax-Bolinas Road and Olema-Bolinas Road. (EXHIBIT 3 - Table 1, Impacts)

The U. S. Army Corps of Engineers (ACOE) has jurisdiction over nine sites, as listed below. The removal of sediment from these stream and tidal channels is regulated by the ACOE because the work will either require fill (e.g., temporary cofferdam) and / or excavation in tidal waters under Section 10 of the Rivers and Harbors Act; or fill (e.g., temporary cofferdam) and excavation below ordinary high water in fresh waters under Section 404 of the Clean Water Act.

1. Mile Marker 29.63 SFDB (Third Valley Creek);
2. Mile Marker 28.86 SFDB (Second Valley Creek);

3. Mile Marker 28.29 SFDB (First Valley Creek);
4. Mile Marker 28.23 SFDB (unnamed tidal channel);
5. Mile Marker 27.51 SFDB (Dream Farm Creek);
6. Mile Marker 26.93 SFDB (unnamed creek channel);
7. Mile Marker 25.86 SFDB (Fish Hatchery Creek);
8. Mile Marker 25.27 SFDB (Haggerty Gulch Creek); and
9. Mile Marker .18 OBR SFDB (Lewis Gulch).

Sediment removal from the location sites listed above as well as the remaining 37 streams, channels and ditches are regulated by the California Coastal Commission under its direct permit jurisdiction or the County of Marin under its Local Coastal Program. All project sites contain waters of the U.S. and State. Additional named waterways within the remaining 37 sites include Schooner Creek (adjacent to Mile Markers 33.58 through 33.06 SFDB), Redwood Creek (adjacent to Mile Marker 27.19 Sir Francis Drake Blvd.), Bear Valley Creek (adjacent to Mile Markers 2.08 and 1.11), and Wilkins Gulch (at Mile Marker 14.64 Fairfax-Bolinas Road). Many of the unnamed channels and ditches are adjacent to or near Schooner Bay, Tomales Bay, Lagunitas Creek and Bolinas Lagoon.

Four sites (Sir Francis Drake Blvd. Mile Marker 28.86 (Second Valley Creek) and downstream of Sir Francis Drake Blvd. Mile Markers 28.29 (First Valley Creek); 28.23 (tidal channel) and 25.27 (Haggerty Gulch Creek) will require excavation in tidal waters/wetlands. The remaining project sites require excavation in fresh waters/wetlands.

Construction activities will require use of temporary cofferdams within seven stream channels, including Third Valley Creek (Mile Marker 29.63), Second Valley Creek (Mile Marker 28.86), First Valley Creek (Mile Marker 28.29), Dream Farm Creek (Mile Marker 27.51), unnamed creek channel (Mile Marker 26.93), Fish Hatchery Creek (Mile Marker 25.86), and Lewis Gulch (Mile Marker 18 OBR). This will result in placement of temporary fill for cofferdams required to de-water these sites during sediment removal activities. The cofferdams will result in approximately 42 cubic yards of temporary fill (EXHIBIT 5 - Table 3, Cofferdam Impacts).

The temporary cofferdams will be installed within the creek/channel bed and remain in place during construction to keep the active work areas de-watered and protect water quality and aquatic species. Creek/channel flows will be diverted around the active construction site to downstream reaches by temporary pumps and pipes. The cofferdams will be constructed with sand bags, gravel bags or equivalent native materials and be secured with plastic sheeting and anchored in place. Water would be pumped from the upstream side of the cofferdam through high-density polyethylene pipe or flexible hose that would run parallel along the top of bank to the downstream outfall. Diversion pipe outlets would be placed on hard surfaces or outfall protection in the form of rock or similar material would be installed to prevent streambed erosion, or pumped water will be discharged to vegetated upland areas adjacent to the work areas via flexible pipe, to prevent streambed erosion/sedimentation. De-watering of the construction site will be done by pumping with screened intakes with mesh size not larger than 1/8 inch to protect fish and other aquatic species. Construction of cofferdams and de-watering will occur according to guidelines from the California Department of Fish and Game and National Marine

Fisheries Service (NMFS 1997 and 2000). All cofferdams, pumps, pipes, sand bags and sheet plastic will be removed from the stream upon project completion. Clean river gravel may be left in the stream, but the cofferdams will be breached to return the stream flow to its natural channel.

Riparian: Staging and operating equipment within the various stream channels and drainages will result in removal of approximately 84 small (diameter 2-12 inches) riparian trees and the need to trim 71 trees (EXHIBIT 4 -Table 2, Riparian Impacts).

Cumulative: Implementation of the entire maintenance program at sites within the Schooner Bay, Tomales Bay and Bolinas Lagoon watersheds will result in excavation of approximately 3,449 cubic yards of sediment which would result in impacts to approximately 9,063 linear feet (0.95 acre) of wetlands and waters of the U.S. and State. The estimated annual sediment load for the entire maintenance program is approximately 946 cubic yards. Staging and operating equipment in the areas covered by the entire maintenance program will result in removal of approximately 96 and trimming of 79 riparian trees (2-12 inches in diameter), primarily small willows and alders. Some of this tree removal is also necessary to reduce the risk of flood damage (i.e., where downed trees block channel flow).

Special Status Species: 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), National Marine Fisheries Service (NMFS), or the California Department of Fish and Game (CDFG), including those species proposed for federal or state listing. Implementation of this project has the potential for impacts to special-status species, including California black rail, California clapper rail, California red-legged frog, Coho salmon, and steelhead trout. Some temporary disruption of upstream and downstream habitat in the lagoon could occur if the project were proposed when flows are present in the streambeds.

Methods and Equipment: A small (6-foot wide by 4-foot high) dozer, for example, will be placed in the downstream channels at Sir Francis Drake Blvd. Mile Markers 28.86 and 28.29, and Olema-Bolinas Road Mile Marker .18, to facilitate removal of sediment from the bottom of the channels. The sediment will be pushed up to upland staging areas (located at the road and top of bank) where it will then be removed for off-site disposal. The following is a list of the equipment to be used, as specified by site.

1. MM 29.63 SFDB (excavator at top of upland bank and road);
2. MM 28.86 SFDB (dozer to push material to culvert/bridge; excavator at road);
3. MM 28.29 SFDB (dozer in creek and excavator at top of upland bank and road);
4. MM 28.23 SFDB (excavator at top of upland bank);
5. MM 27.51 SFDB (excavator at top of upland bank);
6. MM 26.93 (excavator at top of upland bank and road);
7. MM 25.86 SFDB (excavator at top of upland bank and road);
8. MM 25.27 SFDB (excavator at road); and

9. MM .18 OBR (dozer in creek and excavator at top of upland and small wetland (i.e., about 200 square feet) bank and road). Use of dozer in creek will minimize the loss of riparian vegetation that would otherwise be impacted along the linear creek bank.
10. An excavator will dig out accumulated sediment from the upstream and downstream drainage ditches and channels at the remaining 37 project sites. All equipment will be operated from the road or top of upland banks.

Staging: The maintenance work will be conducted from designated staging areas, as detailed below, and shown on the project plan aerial/mapping, dated March 2010. Staging locations, in the interim, will remain in their existing condition. Equipment and other project materials will be stored at the County of Marin's Nicasio Corporation Yard until construction activities are initiated for each site.

1. MM 29.63 SFDB: Upland staging areas will be located at the paved road for upstream work and along the top of the dirt creek bank for downstream work;

2. MM 28.86 SFDB: Upland staging areas will be located at the paved road for upstream and downstream work. Dozer to be placed in downstream channel will push material to the downstream culvert/bridge.

3. MM 28.29 SFDB: Upland staging areas will be located at the paved road for upstream and downstream work. Dozer in downstream channel will push material to culvert and along channel where excavator will remove it from the road or top of bank.

4. MM 28.23 SFDB: Upland staging area will be located along the filled area above the downstream channel bank.

5. MM 27.51 SFDB: Upland staging area will be located along the top of the downstream dirt bank.

6. MM 26.93 SFDB: Upland staging area will be located at the paved road for upstream work and along the top of dirt creek bank for downstream work.

7. MM 25.86 SFDB: Upland staging areas will be located at the paved road for upstream work and along the top of the dirt creek bank for downstream work.

8. MM 25.27 SFDB: Upland staging areas will be located at the paved road for upstream and downstream work.

9. MM .18 OBR: Upland staging areas will be located along paved road for upstream work and along paved road and approximately 200 square-foot wetland area at top of creek bank (SA 3) adjacent to culvert for downstream work.

10. Other Sites**:** Upland staging areas will be located at the paved road or road right-of-way (top of dirt bank) for upstream and downstream work.

Dewatering: Temporary Cofferdams will be placed at nine project sites to dewater the area during sediment removal. (EXHIBIT 5, TABLE 3, Cofferdam Impacts)

Sediment/debris Disposal: All excavated sediment will be removed to an upland site (Nicasio Corporation Yard or other upland disposal site).

Timeframe and Schedule: The proposed flood control maintenance project would be implemented over a six-year period. Maintenance activities would be conducted during a specific work window, between June 15 and October 15 (summer dry season), in order to minimize potential impacts to salmonids and other aquatic resources. The frequency of culvert maintenance work will be phased over time. The highest priority areas would be done first; future maintenance of project areas will be done on an as-needed basis, approximately every two to five years. (See EXHIBIT 3 - Table 1, for frequency of cleaning at each site and EXHIBIT 6 - Table 4, for the projected year for maintenance at each site.

Project-Incorporated Mitigation Measures: The DPW will emphasize avoidance of adverse impacts to biological resources and listed species through the use of general and specific measures to protect coastal biological resources.[1] These measures range from creek protection, timing the projects when they will have the least impacts, minimizing disturbance to plant and animal life, care of special-status species (including use of a qualified biologist/endangered species coordinator to perform pre-construction surveys and rescue/relocation of sensitive species), and construction crew training and education. The qualified biologist/endangered species coordinator will be on site to implement any needed conservation measures for special-status species during and following project construction (including de-watering).

All maintenance work would be conducted during the summer dry season (June 15 to October 15) to minimize impacts to anadromous fish/salmonids and other aquatic resources. The excavation work to be conducted in tidal waters at Sir Francis Drake blvd. Mile Markers 28.86, 28.29, 28.23 and 25.27 will be done at low tide.

All appropriate Best Management Practices (BMPs) will be implemented, including conducting the work from the road whenever possible, minimizing loss of native vegetation, minimizing sediment disturbance and suspension within the water column, and taking all excavated material to an upland disposal site. Sediment/erosion controls will be used to keep excess soil from washing or blowing away during removal, transport and storage. These controls include sediment traps, silt fences, turbidity curtains, hay bales, hydro-seeding using a native mix, and use of straw mulch, as necessary. These BMPs are listed in the Bay Area Storm Water Management Agencies Association (BASMAA) Flood Control Facility Maintenance Best Management Practices (BMP) Manual (EOA, Inc. 2000) and

[1] Department of Public Works, *Supplemental Biological Assessment, Maintenance of 47 Culverts/Drainages, West Marin County, California, (Summarizes and Updates Sycamore 2004),* March 2010.

FishNet4C Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet4C 2004), adopted by the County of Marin.

Implementation of these projects would improve water quality and salmonid habitat at many sites by minimizing road-related sediment delivery to the creek channels and removing barriers to fish passage at sites with sediment-clogged culverts. The sediment removal will result in a temporal loss of coastal fresh, brackish and salt marsh vegetation removed from the creek channels and related drainages. This vegetation will re-establish naturally. Therefore, no compensatory mitigation for temporal loss of freshwater wetland vegetation is included for the proposed maintenance program. DPW, however, will plant approximately 15 gum plants (*Grindelia stricta*) within the upper tidal marsh zone on the north bank of the tidal channel to mitigate the loss of approximately 400 square feet of tidal marsh vegetation that would be removed at Sir Francis Drake Blvd. Mile Marker 28.23. DPW will also monitor the site post-project to assure that the tidal wetlands re-establish within approximately two years. To minimize the loss of riparian habitat, DPW will revegetate project sites containing native riparian trees (e.g., arroyo willow and red alder) by providing in-kind replacement of removed riparian trees over six inches in trunk diameter at breast height or multi-trunked species with an aggregate diameter over ten inches, using native willow cuttings, at a 3:1 replacement ratio.

2. Coastal Development Permit Determination

A. Marine Environment and Land Resources

1. Coastal Act Policies

Section 30236

Coastal Act Section 30236 of the Coastal Act limits when a stream or river can be altered. It states:

> *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (l) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat*. [Emphases added.]

Section 30230

Coastal Act Section 30230 requires that marine resources be maintained, enhanced and restored. New development must not interfere with the biological productivity of coastal waters or the continuance of healthy populations of marine species:

> *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.*

Section 30231

Coastal Act Section 30231 requires that the productivity of coastal waters necessary for the continuance of healthy populations of marine species shall be maintained and restored by minimizing waste water discharges and entrainment and controlling runoff. 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.*

Section 30233

Coastal Act Section 30233 allows fill of open coastal waters, wetlands, estuaries, and lakes where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. It states in relevant part:

> *(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: …*
>
> > *(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.*
>
> *(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. …*
>
> *(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game,*

including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30240

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

2. Analysis as Water Supply and Flood Control Project

Permissible Uses for Channelization and Substantial alteration of Streams

Any proposed channelization or other substantial alteration of a river or stream may only be allowed for three purposes enumerated in Section 30236, including “flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development.”

The proposed development involves dredging of creek channels as a flood control maintenance project. The primary objective of the development is increase natural flow in the creek and drainage ditch channels in order to avoid flood damage, traffic accidents and road closures along Sir Francis Drake Blvd., Bear Valley Road, and Fairfax-Bolinas Road.

The streambed alteration associated with the proposed flood channel maintenance program is therefore, allowable pursuant to Section 30236(2) of the Coastal Act provided: (a) there is no other feasible method for protecting existing structures in the floodplain; and (b) such protection is necessary for public safety or to protect existing development.

Feasible Methods for Protecting Floodplain Structures

An alternatives analysis considers "No Project" and raising the existing roadbeds as alternatives to sediment removal. Raising the roadbed to avoid flooding impacts would most likely cause adverse environmental impacts as compared to the proposed maintenance work.

Construction to raise/elevate the roadbed would severely disrupt traffic on busy Sir Frances Drake Blvd., which is a major means of accessing the coast. It could also cause adverse environmental impacts such as leaching of asphalt constituents into adjacent channels and wetlands, exposing aquatic species to harmful pollutants and adversely impacting water quality. Elevating the roadbed would also simply force floodwaters into other areas, exacerbating the existing situation. The portion of the project site along Sir Francis Drake Blvd. Mile Markers 33.58 to Olema-Bolinas Road Mile Marker 1.61, additionally, would be infeasible to elevate the road due to physical constraints and financial limitations[2].

The "No Project" alternative is not less damaging to the proposed development/maintenance work because flooding would continue to occur, threatening the existing development and public safety.

There would not be the benefit of improved water quality or the removed barriers to fish passage from either of these alternatives.

The Commission finds no other feasible, less environmentally damaging measures exist for protecting structures in the floodplain.

Necessity of Project for Public Safety and to Protect Existing Structures

The streams, channels, and drainages will continue to accumulate sediment transported from the surrounding hillsides and become progressively more blocked, further reducing the hydraulic function and capacity of the channels, and increasing the risk of flooding, and damage to roads and property in the area, without the proposed on-going maintenance work (to remove accumulated sediment and vegetation).

DPW road maintenance staff, for example, had to perform emergency removal of sediment in 2006 at many of the sites covered by this permit application. This previous work was required due to the inundation of roads caused by storm damage that was declared a state of emergency by the Governor of

[2] Marin County Department of Public Works, Alternatives Analysis for Maintenance Cleaning of Sediment from 46 Culverts and Drainages in West Marin County California, May 7, 2010

the State of California on January 3, 2006 and by the President as a Federal disaster. It will ensure a proactive approach to maintenance cleaning of the culverts and drainages rather than delaying it to the future when it would be necessary on an emergency basis, which could result in greater impacts to natural resources and pose a risk to public safety under flood conditions.

The proposed project, as detailed above in the "Project Description", includes temporary placement of fill in coastal stream/channels. The controlling policy for this project is Section 30236. However, to the extent Section 30233 applies, it allows for approval of fill within the marine environment for limited uses, provided that the proposed development/activity is the least environmentally damaging alternative and all feasible mitigation measures have been applied to minimize adverse impact to the marine environment. The fill required by the project is allowed as an incidental public service. Temporary cofferdams will be placed at nine project sites to dewater the respective areas during sediment removal. They will function to reduce sediment in the water during the work, thus minimizing water quality impacts. All appropriate Best Management Practices (BMPs) will be implemented, including conducting the work from the road whenever possible, minimizing sediment disturbance and suspension within the water column, and taking all excavated material to an upland disposal site (Nicasio Corporation Yard). Sediment/erosion controls will be used to keep excess soil from washing or blowing away during removal, transport and storage. These include erosion controls such as sediment traps, silt fences, turbidity curtains, hay bales, hydro-seeding using a native mix, and use of straw mulch, as necessary. These practices are consistent with Section 30233 of the Coastal Act.

The Commission finds that the protection to the project area that would be provided by the flood control maintenance work is necessary for public safety and the protection of existing development. This work is consistent with Coastal Act Section 30236. The method of repair is the least environmentally damaging and will result in protection of the existing roadways from flooding.

3. Analysis Biological Resources

The proposed development sites are located in West Marin County in areas adjacent to Tomales Bay, Bolinas Lagoon, and Schooner Bay; and include several creeks, channels, and drainage ditches. Bolinas Lagoon and Tomales bay are within the Gulf of the Farallones National Marine Sanctuary, which is 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 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. Bolinas Lagoon is part of the Gulf of the Farallones National Marine Sanctuary. It is surrounded by open lands owned by Audubon Canyon Ranch, Point Reyes National Seashore, Golden Gate National Recreation Area, and Mount Tamalpais State Park, as well as small residential and agricultural areas in the towns of Stinson Beach and Bolinas. The Bolinas Lagoon

is approximately 2.2-square-miles (1,400 acres) watershed surrounding Bolinas Lagoon is 16.7 square miles (three miles in wide and nine miles long).[3]

The Lagoon contains sub-tidal 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 sub-tidal habitat. Sub-tidal habitat comprised of phytoplankton and benthic diatoms supports a highly productive community in the lagoon. These organisms provide the base of the sub-tidal 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)*.[4]

Tomales Bay is a 6,800-acre estuary located on the central California coast approximately 40 miles northwest of San Francisco. It is twelve miles long and relatively shallow, occupying the seaward end of a rift valley created by San Andreas Fault. The Tomales Bay watershed occupies an area of approximately 219 square miles (140,000 acres, 142 perimeter miles).[5]

Tomales Bay is a significant biological community that supports a diversity of habitats, including; eelgrass beds, intertidal sand and mud flats, and salt and freshwater marshes. Large sub-tidal meadows of eelgrass grow in the northern half of Tomales Bay between Pelican Point and Tom's Point where temperatures, salinities, and tidal exchange resemble those in the Pacific. Thousands of species of birds, invertebrates and plants, and numerous threatened and endangered species inhabit the watershed, such as brown pelicans, Coho salmon, steelhead trout, red-legged frogs, western snowy plover, northern spotted owl, tidewater goby, steller sea lions, and the Point Reyes jumping mouse. The watershed is especially important to approximately 20,000 wintering shorebird, seabirds, and water birds, among many other bird species that occur both seasonally and year-round (Kelly, 1998). The waters of the bay are also important to many fish species, including salmon, eels, sturgeon, halibut, endangered Coho salmon, and the commercially important Pacific herring that rely, respectively, on its creeks and extensive eelgrass beds to spawn. Several species of marine mammals have been documented in the bay and there is a resident harbor seal population that breeds there. The seal population ranges between 500 and 800 seals depending on the time of year.[6]

Schooner Bay is located west of Inverness and the northernmost, largest "finger" of Drakes Estero, which is within Point Reyes National Seashore. Water flows from Schooner Creek feed into Schooner Bay, through Drakes Estero, to Drakes Bay and ultimately into the Pacific Ocean. The National Park Service, in a synopsis of Drakes Estero, identifies the natural resource significance of Drakes Estero.

[3] Bolinas Lagoon Ecosystem Restoration Project, Draft Feasibility Study, June 2002
[4] Bolinas Lagoon Management Plan, Marin County Open Space District (1996)
[5] Point Reyes National Seashore Association, *Tomales Bay, Physical Characteristics* (2010)
[6] Gulf of the Farallones, National Marine Sanctuary: *Ecosystem Protection* (2010)

Steelhead trout, a federally protected species, has been documented in a tributary to Schooner Bay in the late 1990s and found to spawn in Schooner Bay.[7]

Lagunitas Creek begins on Mt. Tamalpais. This creek and its tributaries feed into Marin Municipal Water District's reservoirs. Downstream of the reservoirs, the creek is a spawning and rearing ground for Coho salmon and steelhead trout.[8] The creek is also habitat for California freshwater shrimp, a Federal and State Listed Endangered Species (USFWS 1998). The U.S. Fish and Wildlife Service's 2005 recovery plan for the tidewater goby identifies Lagunitas Creek as being is located within the Greater Bay Area Recovery Unit, Sub-Unit GB-3 Lagunitas Creek (USFWS 2005) and designates it as critical habitat for the tidewater goby (USDOI 2008*a*). Surveys of the project sites for the maintenance cleaning, however, indicate that they do not contain suitable habitat for either of these species[9].

Vegetation communities at the project sites include coastal freshwater marsh, north coast riparian scrub/forest, northern coastal salt marsh, and ruderal vegetation. These habitats support the following special-status species: California black rail, California clapper rail, California red-legged frog, Coho salmon, and steelhead trout. As indicated in the U.S. Fish and Wildlife Services' 2002 recovery plan for the California red-legged frog (CRF), the project area is located within the Point Reyes Peninsula Core Area for the CRF (USFWS 2002). The project area also includes designated and proposed critical habitat for the CRF (USDOI 2006 and 2008*b*, respectively). Tomales Bay, Lagunitas Creek and Bolinas Lagoon support Coho salmon and steelhead trout. Schooner Creek, Second Valley Creek, First Valley Creek, Dream Farm Creek, Redwood Creek, Fish Hatchery Creek and Wilkins Gulch support steelhead trout (COM 2004 and 2006). Marin County Department of Public Works staff has observed steelhead trout within Lewis Gulch near downstream tidal marsh habitat. Third Valley Creek also supports steelhead trout.

Implementation of this maintenance program will have a net beneficial impact to the creeks and channels within the Schooner Bay, Tomales Bay and Bolinas Lagoon watersheds by minimizing road-related sediment transport to, and erosion of, these waterways. Water quality will be improved and the impacts to coastal/marine resources will be reduced. The maintenance program will protect these watersheds by reducing siltation of channels and drainages and removing existing silt barriers to fish passage. It will also restore normal drainage patterns, ecological functionality, hydraulic capacity and geomorphic conditions of the lagoon, stream channels and creeks.

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. Section 30240 states, additionally, that Environmentally Sensitive Habitat areas shall be protected against any significant disruption of habitat

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[7] National Park Service, Park News, Point Reyes National Seashore, *Drakes Estero a Sheltered Wilderness Estuary (*2010)

[8] Marin Municipal Water District, 2010

[9] Department of Public works, *Supplemental Biological Assessment, Maintenance of 47 Culverts/Drainages, West Marin County, California, (Summarizes and Updates Sycamore 2004)* March 2010

values, and only uses dependent on those resources shall be allowed within those areas. To the extent the project involves non-resource dependent activities; Section 30236 is controlling and authorizes this flood control project. Other aspects of the project will result in habitat restoration, which is a resource-dependent use consistent with Section 30240.

The DPW will emphasize avoidance of adverse impacts to biological resources and listed species through the use of general and specific measures to protect coastal biological resources.[10] These measures range from creek protection, timing the projects when they will have the least impacts, minimizing disturbance to plant and animal life, care of special-status species (including use of a qualified biologist/endangered species coordinator to perform pre-construction surveys and rescue/relocation of sensitive species), and construction crew training and education. The qualified biologist/endangered species coordinator will be on site to implement any needed conservation measures for special-status species during and following project construction (including de-watering).

The maintenance methods would entail using a small (6-foot wide by 4-foot high) dozer and excavator to remove sediment and debris. A small dozer, for example will be placed in the channels at Sir Francis Drake Blvd. Mile Markers 29.63, 28.86, 28.29, 28.23, 27.51, 26.93, 25.86, 25.27; and Olema-Bolinas Road Mile Marker .18, to facilitate removal of sediment from the bottom of the channels. The sediment would be pushed up to upland staging areas (located at the road and top of bank) where it will then be removed for off-site disposal. While the work at the remaining 37 sites would be conducted from the road or top of upland banks. Equipment will be staged in designated upland locations.

All maintenance work would be conducted during the summer dry season (June 15 to October 15) to minimize impacts to anadromous fish/salmonids and other aquatic resources. The excavation work to be conducted in tidal waters at Sir Francis Drake blvd. Mile Markers 28.86, 28.29, 28.23 and 25.27 will be done at low tide.

Marine resources must be protected and restored as required by Coastal Act Section 30230. The habitat values of Environmentally Sensitive Habitats such as Bolinas Lagoon and Tomales Bay must also be protected pursuant to Section 30240. This approval incorporates **Special Condition Nos. 1, 2, and 3** thus ensuring the protection of biological resources and sensitive habitats. The Commission finds that the proposed maintenance and flood control project, as conditioned, will prevent impacts that would significantly degrade coastal resources, and will be compatible with the continuance of the habitat for species of special concern. It is consistent with Sections, 30230, 30231, and 30240 of the Coastal Act.

4. Analysis Water Quality

Temporary Cofferdams will be placed at nine project sites to dewater the respective areas during sediment removal. All appropriate Best Management Practices (BMPs) will be implemented, including

[10] Department of Public Works, *Supplemental Biological Assessment, Maintenance of 47 Culverts/Drainages, West Marin County, California, (Summarizes and Updates Sycamore 2004),* March 2010.

conducting the work from the road whenever possible, minimizing loss of native vegetation, minimizing sediment disturbance and suspension within the water column, and taking all excavated material to an upland disposal site (Nicasio Corporation Yard). Sediment/erosion controls will be used to keep excess soil from washing or blowing away during removal, transport and storage. These controls include sediment traps, silt fences, turbidity curtains, hay bales, hydro-seeding using a native mix, and use of straw mulch, as necessary. Coastal Act Section 30231 requires the protection of water quality. Water ways within the project area include Schooner, First Valley, Second Valley, Third Valley, Dream Farm, Redwood, Fish Hatchery, Haggerty Gulch, Bear Valley and Lagunitas Creeks - tributaries to Schooner Bay, Tomales Bay, and Lagunitas Creek; Wilkins and Lewis Gulches – tributaries to Bolinas Lagoon; and various un-named stream channels, swales, and drainage ditches. The maintenance activities associated with these locations could potentially result in adverse impacts on water quality, which is inconsistent with the above-cited Coastal Act policies. The BMPs identified are adequate to satisfy the requirements of Coastal Act Section 30231 to protect water quality. This approval incorporates **Special Condition Nos. 5 and 6** thus ensuring the protection of water quality.

The Commission finds that the proposed methods for the maintenance project will prevent impacts that would adversely affect water quality. It is consistent with Section 30231 of the Coastal Act.

B. Public Access

1. Coastal Act Policies

Coastal Act Sections 30210 through 30224 require that new development maximize public recreational access, provide visitor-serving recreational facilities, protect oceanfront land for recreational use and development, encourage recreational boating facilities, and in general establish that coastal-dependent, visitor-serving, and public recreational access developments have priority over other types of uses and development.

Section 30210 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 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.*

2. Analysis Public Access

Public access at Olema-Bolinas Road Mile Markers .18, 1.17 (managed by Marin County Parks and Open Space Department) and 1.56 (Bolinas Lagoon Open Space Preserve) is along a vegetated path that extends from the road towards Bolinas Lagoon. There is no assigned public parking near these sites, so these areas would only be used if someone wanted to park on Olema-Bolinas Road and walk to these sites. A public lookout over Drakes Estero is located just past Sir Francis Drake Blvd. Mile Markers 33.58 through 33.06 (adjacent land is owned and managed by the National Park Service), and this road leads to the Point Reyes lighthouse. Public access on Inverness Foundation land at Sir Francis drake Blvd. Mile Marker 28.23 can be accommodated by either parking along Sir Francis Drake Blvd. or the store parking lot in downtown Inverness. This site contains a public bench and overlooks Tomales Bay. The proposed maintenance work would not result in permanent impacts to public shoreline access or recreational opportunities. The construction/maintenance work, however, would temporarily require equipment located along the roads and top of bank (i.e., at Sir Francis Drake Blvd. Mile Markers 28.23. Sir Francis Drake blvd. and Olema-Bolinas Road are main traffic thoroughfares and are very busy roads. The project work would cause temporary delay and re-direction of vehicular traffic. Work will be done (and equipment staged) from the road right-of-way and alternative traffic routes will be clearly marked with County of Marin traffic control signs or communicated on-site by County road maintenance crews. The work will be done on week days and level of service will not drop below acceptable County standards. The minor impacts are the same as currently-occurring traffic impacts associated with routine road maintenance activities along these roads in west Marin County.

The proposed flood control maintenance program is a repair and maintenance project, consisting of short duration activities at each culvert location along Sir Francis Drake Blvd, Bear Valley Road, Fairfax-Bolinas Road., and Olema-Bolinas Road. The culvert cleaning work in any given location would not result in an adverse impact on public access, because it will temporarily occur over a short duration.

The Commission finds that the proposed project is consistent with Coastal Act Sections 30210 and 30211; as the proposed 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 the areas.

C. Conclusion

The streambed alteration associated with the proposed flood control maintenance project is allowable as a flood control project consistent with the limitations of Coastal Act Section 30236(2) because (a) there is currently no other feasible method for protecting existing structures in the floodplain; and (b) such protection is necessary for public safety or to protect existing development. The threat of flooding to adjacent roads and public safety will only increase without the proposed project to remove accumulated sediment,.

The Commission finds that the proposed project will prevent impacts that would significantly degrade coastal resources, and will be compatible with the continuance of the habitat for species of special concern.

C. 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.

These findings on Coastal Act consistency are hereby incorporated by reference 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, and (3) 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 proposed project can be found consistent with Coastal Act requirements to conform to CEQA.

D. Exhibits

Map of Marin Copyright © 2006 digitalcottage.com
Source: West Marin Chamber of Commerce * Point Reyes National Seashore * Marin Visitors Guide

EXHIBIT 1
2-10-20 (Marin County Dept. of Public Works)
Regional Map
Page 1 of 1

EXHIBIT 2
2-10-20 (Marin County Dept. of Public Works)
Location Map Project Sites
Page 1 of 2

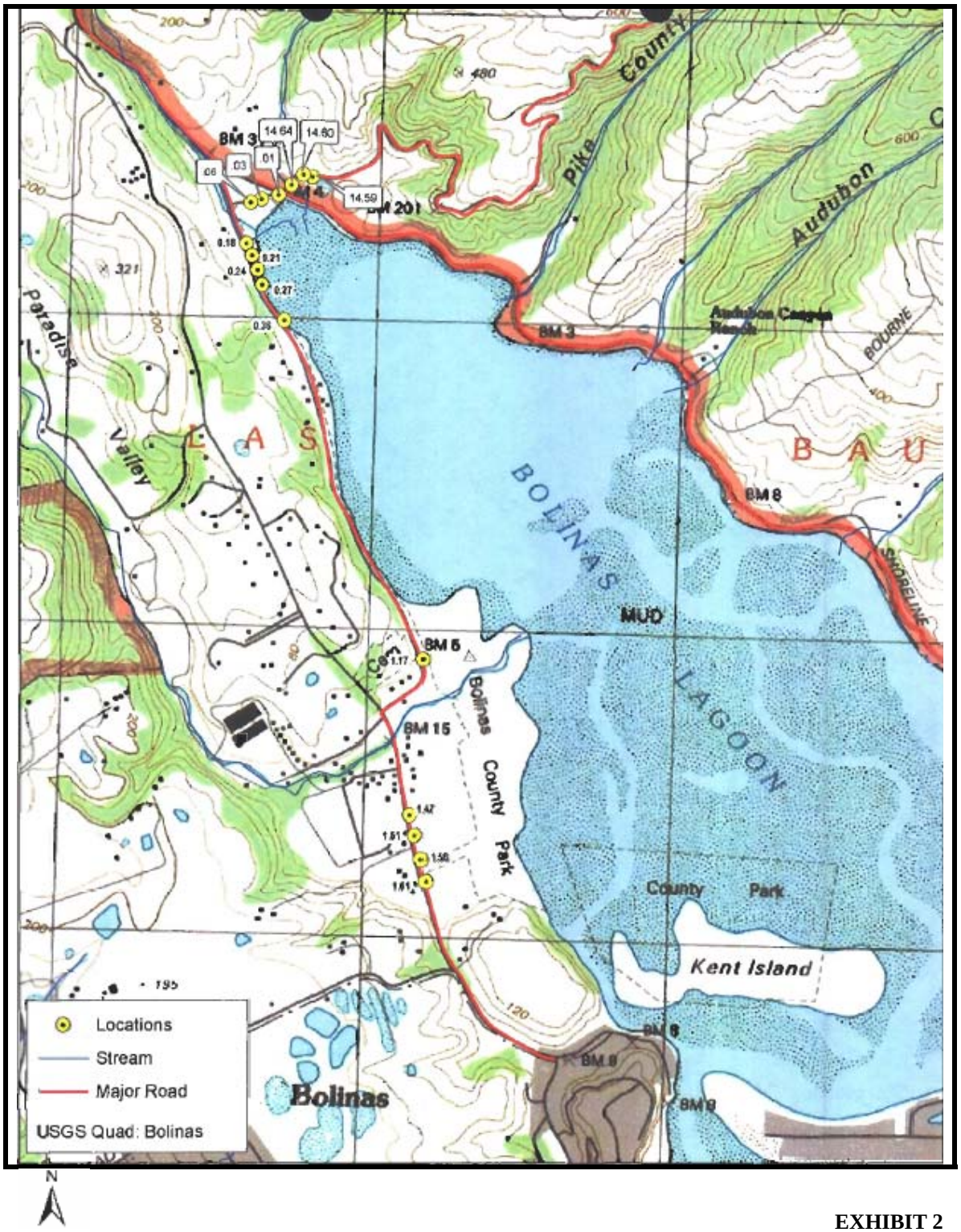

EXHIBIT 2
2-10-20 (Marin County Dept. of Public Works)
Location Map Project Sites
Page 2 of 2

Table 1. Impacts of 46 Sediment Removal Projects in West Marin County on Wetlands and Waters of the U.S. and State and Estimated Annual Excavation Frequencies/Amounts (within Permit Jurisdiction of California Coastal Commission or Marin County LCP)

Excavation of Fresh and Tidal Waters/Wetlands or Temporary Cofferdam								
				Total			Est. Ex.	Est.Annual
Mile Marker	Length	Width	Depth	Lin.Ft.	Sq.Ft.	Cu.Yds.	Freq.Yrs.	Sed. Load.
29.63 SFDB US	10	4.5	1	10	45	1.67	5+	0.33
29.63 SFDB DS	270	3.5	1	270	945	35.00	5+	7.00
28.86 SFDB US	20	6	6	20	120	26.67	5+	5.33
28.86 SFDB DS	200	7	4	200	1,400	207.4	5+	41.48
28.29 SFDB US	20	12	4	20	240	35.56	5+	7.11
28.29 SFDB DS	180	15	3	180	2,700	300.00	5+	60.00
28.23 SFDB DS Only	80	5	1	80	400	14.81	5+	2.96
27.51 SFDB DS Only	200	5	2	200	1,000	74.07	5+	14.81
26.93 SFDB US	20	4	1	20	80	2.96	5+	0.59
26.93 SFDB DS	150	4	0.5	150	600	11.11	5+	2.22
25.86 SFDB US	20	8.5	1.5	20	170	9.44	5+	1.88
25.86 SFDB DS	100	9.5	3	100	950	105.55	5+	21.11
25.27 SFDB US	15	8	4	15	120	17.77	5+	3.55
25.27 SFDB DS	15	11	4	15	165	24.44	5+	4.88
.18 OBR US	700	4	4	700	2,800	414.81	5+	82.96
.18 OBR DS	300	9	1.5	300	2,700	150.00	5+	30.00
Subtotal				**2,300**	**14,435**	**1,431.26**		**286.21**
Excavation of Fresh Waters/Wetlands				**Total**			**Est. Ex.**	**Est.Fut.Ex.**
Mile Marker	**Length**	**Width**	**Depth**	**Lin.Ft.**	**Sq.Ft.**	**Cu.Yds.**	**Freq.Yrs.**	**Req.Ann.**
33.58 SFDB, US & DS	5	5	1	10	50	1.86	3+	0.62
33.48 SFDB, US & DS	5	5	1	10	50	1.86	3+	0.62
33.43 SFDB, US & DS	5	5	1	10	50	1.86	3+	0.62
33.39 SFDB, US & DS	5	5	1	10	50	1.86	3+	0.62
33.34, 33.30, 33.19 SFDB US	800	4	2	800	3,200	237.03	1-2 yrs	118.51
33.34 SFDB DS	50	4	2	50	200	14.81	1-2 yrs	7.40
33.30 SFDB DS	15	4	2	15	60	4.44	1-2 yrs	2.22
33.30 to 33.19 SFDB DS	700	4	2	700	2,800	207.4	1-2 yrs	103.70
33.16 SFDB DS	20	4	2	20	80	5.92	1-2 yrs	2.96
33.06 SFDB DS	5	4	2	5	20	1.48	3+	0.49
29.16 SFDB US	10	5	0.5	10	50	0.93	5+	0.18
29.16 SFDB DS	10	10	0.5	10	100	1.85	5+	0.37
29.09 SFDB DS Only	50	8	1	50	400	14.81	5+	2.96
28.65 SFDB DS Only	50	3	1	50	150	5.55	5+	1.11
27.74 SFDB DS Only	10	5	1	10	50	1.85	5+	0.37
27.54 SFDB DS Only	100	2.5	1.5	100	250	13.88	5+	2.77
27.44 SFDB DS Only	70	3	1	70	210	7.77	5+	1.55
27.19 SFDB DS Only	8	4	2	8	32	2.37	5+	0.47
27.00 SFDB DS Only	70	5	3	70	350	38.89	5+	7.77
25.96 SFDB DS Only	40	2	1	40	80	2.96	5+	0.59
25.44 SFDB DS Only	40	2	1	40	80	2.96	5+	0.59
25.20 SFDB DS Only	30	2	1	30	60	2.22	5+	0.44
2.08 BVR DS Only	50	4	2.5	50	200	18.52	3+	6.17
1.11 BVR US	5	5	0.5	5	25	0.46	3+	0.15
1.11 BVR DS	30	5	2	30	150	11.11	3+	3.70
14.64,14.60,14.59 FBR US	500	2	0.5	500	1,000	18.51	3+	6.17

11/17/2010

TABLE 2 - Riparian Impacts - Estimated Number of Trees to be Removed/Trimmed and Size
(Primarily willow and alder; also non-native acacia at MMs 27.74 and 27.44)
Maintenance Cleaning of 46 Culverts/Drainages in West Marin County, CA
(Excludes MM 25.00 SFD, White House Pool)

Mile Marker	Trees Removed	Tree Size	Trees Trimmed	Tree Size
29.63 SFDB	6	6-8 inches	10	2 inches
29.16 SFDB	10	4-6 inches		
28.86 SFDB	5	2-3 inches		
28.29 SFDB	5	3-6 inches		
27.74 SFDB	6	3 inches		
27.54 SFDB	6	8 inches (all dead)		
27.51 SFDB	3	4 inches	10	2 inches
27.44 SFDB	8	6-12 inches (3 live; 5 dead)		
27.00 SFDB	2	2-4 inches		
26.93 SFDB	1	4 inches		
25.27 SFDB	1	4 inches		
25.20 SFDB	4	2 inches		
2.08 BVR	3	6 inches (1 live; 2 dead)		
14.64 FBR	7	6 inches	10	2-4 inches
14.60 FBR	4	6 inches	4	2-3 inches
.01 to .03 OBR			8	4-6 inches
.18 OBR	3	12 inches	20	2 inches
.21 OBR			5	2 inches
.24 OBR	5	2 inches		
.36 OBR			4	2 inches
1.17 OBR	5	2 inches		
TOTALS	**84**	**Varies**	**71**	**Varies**

SFDB = Sir Francis Drake Blvd.
BVR = Bear Valley Road
FBR = Fairfax-Bolinas Road
OBR = Olema-Bolinas Road

EXHIBIT 4
2-10-20 (Marin County Dept. of Public Works)
Table 2, Riparian Impacts
Page 1 of 1

TABLE 3

Temporary Cofferdams in Fresh Waters – Size (Length X Average Width X Depth

Mile Marker	Size (feet)	Cubic Yards
29.63 SFD DS	2'LX7'WX2'D (2)	2.07
28.29 SFD US	3'LX15'WX3'D (US)	5.00
27.51 SFD DS	3'LX9'WX3'D (2)	6.00
26.93 SFD DS	3'LX7'WX3'D (2)	4.66
25.86 SFD US	4'LX10'WX3'D (2)	8.88
.18 OBR US and DS	2'LX6'WX2'D (US) and 2'LX9'WX2'D (DS)	2.22
TOTAL:	**Varies**	**28.83**

Temporary Cofferdams in Tidal Waters - Size (feet), Length X Ave. Width X Depth

Mile Marker	Size (feet)	Cubic Yards
28.86 SFD US	2'LX8'WX2'D (creek channel) and 2'LX6'WX2'D (drainage ditch)	2.07
28.86 SFD DS	4'LX12'WX3'D	5.33
28.29 SFD DS	3'LX18'WX3'D	6.00
TOTAL:	**Varies**	**13.40**

Total Temporary Impacts from Cofferdams: 42.23 cubic yards; 42 linear feet; 409 square feet; 0.009 acre.

EXHIBIT 5
2-10-20 (Marin County Dept. of Public Works)
Table 3, Cofferdam Impacts
Page 1 of 1

Table of Priority Sites for Sediment Removal and Estimated Project Schedule by Year			
Maintenance Cleaning of Sediment from 47 Culverts and Drainages in West Marin County, CA			
Work Window is June 15 to October 15; Schedule is Based on Expected Receipt of All Permits			
Excavation of Fresh and Tidal Waters/Wetlands or Temporary Cofferdam			
Mile Marker	**2010**	**2011**	**2012**
29.63 SFDB US and DS		X	
28.86 SFDB US and DS			X
28.29 SFDB US and DS			X
28.23 SFDB DS Only			X
27.51 SFDB DS Only			X
26.93 SFDB US and DS			X
25.86 SFDB US and DS			X
25.27 SFDB US and DS			X
25.00 SFDB US and DS	X		
.18 OBR US and DS		X	
Excavation of Fresh Waters/Wetlands			
Mile Marker			
33.58 SFDB US & DS			X
33.48 SFDB US & DS			X
33.43 SFDB US & DS			X
33.39 SFDB US & DS			X
33.34, 33.30, 33.19 SFDB US and DS		X	
33.16 SFDB DS Only		X	
33.06 SFDB DS Only		X	
29.16 SFDB US and DS			X
29.09 SFDB DS Only		X	
28.65 SFDB DS Only		X	
27.74 SFDB DS Only		X	
27.54 SFDB DS Only		X	
27.44 SFDB DS Only			X
27.19 SFDB DS Only		X	
27.00 SFDB DS Only		X	
25.96 SFDB DS Only		X	
25.44 SFDB DS Only		X	
25.20 SFDB DS Only		X	
2.08 BVR DS Only			X
1.11 BVR US and DS		X	
14.64,14.60,14.59 FBR US and DS		X	
.01, .03, .06 OBR US and DS		X	
.21 OBR US and DS		X	
.24 OBR US and DS		X	
.27 OBR US and DS		X	
.36 OBR US and DS		X	
1.17 OBR US and DS		X	
1.47 OBR US and DS		X	
1.51 OBR US and DS		X	
1.56 OBR US and DS		X	
1.61 OBR US and DS		X	

Note: Highlighted areas are highest-priority sites for sediment removal.

7/8/2010

EXHIBIT 6
2-10-20 (Marin County Dept. of Public Works)
TABLE 4, Priority Schedule