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pw2-82-3.doc

STAFF REPORT AND RECOMMENDATION
PUBLIC WORKS PLAN SPECIFIC PROJECT

APPLICATION NO.: PWP-2-82-3 (Wilder Ranch State Park)

APPLICANT: **CALIFORNIA DEPARTMENT OF PARKS & RECREATION**

PROJECT LOCATION: Wilder Creek in Wilder Ranch State Park, 0.2 mile east of Highway 1, Santa Cruz County

PROJECT DESCRIPTION: Restoration of creek by removing old spillway and bypassing silt-filled reservoir with replacement channel (see Exhibit 2).

SUBSTANTIVE FILE DOCUMENTS:

1. *Wilder Ranch State Parks General Plan* (the Public Works Plan PWP-2-82), and Commission findings and conditions dated January 22, 1982.
2. PWP-2-82-2 Condition #2 compliance file including *Water and Wastewater Management Report for Wilder Ranch State Park.*
3. *Wilder Creek Watershed: Facts, Photos and Fish Barriers* by Robb Short and Kathy Brown, UCSC student paper, Spring 1994.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval:

The Commission hereby approves the specific project, on the grounds that the development will be in conformity with the provisions of the certified public works plan and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act. The proposed project is a beneficial one for the environment in that it will restore a natural salmon stream that has been blocked by a dam and it will stop associated erosion. As work will occur in a riparian corridor and result in elimination of an artificial pond, the proposed project is conditioned to require care in construction to minimize adverse environmental impacts.

II. RECOMMENDED CONDITIONS

1. **Evidence of Approvals**

Prior to commencement of construction the applicant shall submit evidence of approvals from the Department of Fish and Game, the U. S. Fish and Wildlife Service, and the Department's Environmental officer (for CEQA purposes). The required final plans and specifications outlined in Condition #3 below shall incorporate the requirements of these agency approvals.

2. **Preconstruction Biotic Assessment**

Prior to commencement of construction, the permittee shall submit to the Executive Director for review and approval, confirmation that the following have occurred and that no additional biotic assessment action is required:

a. A qualified biologist shall survey the entire project construction site, including an assessment of the presence of special status species and habitat suitable for such species, and

b. A qualified biologist or revegetation specialist shall mark areas of native vegetation to be protected prior to initiation of work. Native vegetation shall be protected by constructing temporary fencing and flagging, where such work is within or directly adjacent to riparian woodland, native trees or other environmentally sensitive vegetation.

3. **Final Plans and Specifications**

Prior to commence of construction the applicant shall submit final plans and specifications for all project aspects including: spillway demolition and reconstruction, dam removal, temporary creek bypass, permanent creek bypass, berm installation, gully filling and reseeding, and excess material disposal. Final plans and specifications shall include:

- existing and bypass channel alignment, channel profile and typical channel section (showing channel width and shape);
- longitudinal section of spillway;
- delimiting of wetland, riparian, and native grass areas (pursuant to condition #2)
- delimiting of construction work areas to minimize equipment within sensitive areas, with provisions to also mark these in the field for the duration of construction (pursuant to condition #2);
- delimiting of locations outside of sensitive habitat areas for construction equipment staging and access;
- streambank revegetation plans for stabilization of bypass channel
- construction scheduling;
- monitoring plan (e.g., locations, methods and frequency of sediment sampling and process for any remedial actions, including an analysis of stream channel suitability for fish spawning and an analysis of sediment sources if sedimentation remains problematic);

- identification of excess materials disposal methods and locations (including previously excavated material that has been stockpiled);
- final site, grading, and revegetation plans for use of any suitable excavated material on site in locations that will fill in eroded areas or reestablish natural contours (e.g., at base of eroded hillside, in low meadow areas)
- schedule and installation procedures for berm to block existing water channels (see condition #5).

4. **Environmental Monitor**

Prior to commencement of construction, the permittee shall submit the name, address, telephone number, and qualifications of an environmental and condition compliance monitor to the Executive Director for review and approval. The environmental and conditions monitor shall be funded and provided by the permittee and may be an ecologist employed by the Department of Parks and Recreation. The monitor must be on site during all work in sensitive areas. The environmental and condition monitor shall be empowered to halt construction, if it is necessary to ensure that permittee is complying with all conditions of this permit. Unresolved disagreements between the monitor and the permittee with respect to environmental and condition compliance matters shall be reported to the Executive Director for settlement.

5. **Post-construction Monitoring Report**

a. Within 45 days after project construction is completed, applicant shall submit for Executive Director review and approval a narrative and map detailing how results of project construction comply with original project description and these conditions. This report shall include recommendations regarding installation of the berm to block existing water channels and associated fauna relocation, consistent with the Department of Fish and Game and U. S. Fish and Wildlife Service requirements.

b. Results of sediment monitoring (pursuant to condition #3) shall be submitted for Executive Director review and approval (see condition #6c).

c. Two years after project completion, permittee, based on consultation with Department of Fish and Game personnel, shall submit for Executive Director review and approval a progress report which evaluates project success and the desirability of encouraging meanders to the new creek channel and identifies any other necessary remediation for meeting project objectives.

6. **Future Work**

a. This approval only authorizes the described Phase I work, as conditioned (see Exhibit 2). A separate Public Works project determination shall be submitted for future work.

b. Prior to rearranging any water connections, applicant shall submit a description of the proposed utility work along with any necessary revisions to the Water Management Report for Wilder Ranch State Park, for Executive Director review and approval. If the Executive

Director determines that the utility work constitutes "new development", the matter shall be agendized as a separate Public Works Project for the Commission to review.

c. Prior to any future downstream sediment removals, pursuant to the planned sediment monitoring (see conditions #3, 5b), the applicant shall submit excavation, disposal, and restoration plans for Executive Director review and approval or referral to the Commission as a separate public works project review. As part of any future sediment removal request, applicant shall provide information as to major sediment sources within the watershed that the Department controls and erosion control plans to reduce these sources.

III. FINDINGS AND DECLARATIONS.

The Commission finds and declares as follows:

1. Project Description and Background

The *Wilder Ranch State Park General Plan* was certified with modifications as a Public Works Plan on January 22, 1982. The applicant is now proposing its third specific project pursuant to that plan. The proposed project is located on Wilder Creek (see Exhibits 1 and 2). The project is to restore the creek in phases by first removing part of a dam and spillway. The creek will be temporarily diverted. A new channel will be dug and directed over the modified spillway. An existing deep gully in the meadow below the dam, formed by recent erosion, will be filled and seeded. Monitoring of sediment movement within and downstream from project site will then occur. A separate, future phase of the project would be to completely remove the spillway, but that will not likely occur for many years, according to the applicant, and hence will require separate Commission review.

2. Consistency with the Adopted Public Works Plan.

Section 30605 of the Coastal Act provides, in part, that:

> ...Where a plan for a public works or state university or college development project has been certified by the Commission any subsequent review by the Commission of a specific project contained in such certified plan shall be limited to imposing conditions consistent with Sections 30607 and 30607.1.

Section 30606 states:

> Prior to the commencement of any development pursuant to Section 30605, the public agency proposing the public works project, ... shall notify the commission and other interested persons, organizations, and governmental agencies of the impending development and provide data to show that it is consistent with the certified public works plan or long-range development plan. No development shall take place within 30 working days after the notice.

The applicant has submitted an analysis of consistency with *Wilder Ranch State Park General Plan* (see Exhibit 3). This analysis shows that the project will help satisfy various *Plan* objectives to restore the park to a more natural habitat.

The proposed project includes work in a riparian corridor. Some loss of riparian vegetation is necessary in order to perform the restoration work. In order to minimize impacts, it is necessary to clearly delimit the sensitive habitats and construction zones, have staging locations outside of the sensitive areas, and have a biological monitor on-site during construction. The Department of Fish and Game will have to approve this work and evidence of this approval needs to be submitted before construction commences.

The proposed project includes excavation of material; both earthen and concrete. It is important that the material be properly disposed of. The earth may be used to fill in eroded areas or restore natural contours. The concrete and any other debris should be taken to a landfill or recycling facility. The applicant's current plans are to take the concrete to the concrete recycling area of either the City or County landfill.

The proposed project will result in current wet areas (within the silted-in reservoir) drying up after the creek flows into its new channel, as well as dewatering of an existing excavated pump pond. A three foot high berm is proposed to be installed to block flood water from entering the channel to the pond. On balance the new riparian and wetland area will be more natural and beneficial to fauna that uses the area as habitat. An orderly and gradual transition is desirable. Therefore, animals in the areas to be disturbed should be trapped and relocated. Some water should be allowed to flow into the existing wet areas at least until the new stream channel is established. Because of the presence of endangered species (the California red-legged frog), the U.S. Fish and Wildlife Service will have to be consulted, as well as the Department of Fish and Game. The results of that consultation need to be submitted before construction commences. Prior to installation of the berm, timing and procedures should be determined based on input from these resource agencies.

The replacement stream channel will be dug straight to encourage sediment flow. Over time, it can be expected meanders will develop. The applicant indicates that meanders may be encouraged. Again , it is important to evaluate the habitat situation, in consultation with the Department of Fish and Game, prior to performing such further work in the new creek channel.

The resultant drying up of the artificial pump pond will eliminate a source of water for the Park's landscaping and developed facilities, as well as leased-out agricultural lands. The Department is considering other sources, such as City water connections or on-site wells, in order to substitute for this current source. As part of previous approvals, the Department has a partially approved water management plan. The applicant needs to submit its replacement water proposal to the Executive Director for determination of compliance with the previously approved plan (the applicant can submit a concurrent amendment to that plan). If the replacement water project is considered "new development," then the Commission will have to subsequently review it as a public works project also.

The proposal includes filling in a gully that has been recently eroded through a meadow below the dam. Fill material should be appropriately identified, and the proposed reseeding with native flora should be monitored to ensure its successful establishment.

The proposed project will result in sediments no longer being trapped behind the dam, but instead will be conveyed by stream further down the creek channel. The applicant indicates that sediments emanate from the watershed, due to natural erosion. The project proposal includes monitoring movement of sediments after every storm to determine if sediment movement exceeds expectations. In order to ensure the utility of this monitoring, the applicant shall provide more detail as to the timing, location, and method of sediment sampling and the procedure for addressing any problems. Particular attention should be given to the streambed condition and suitability for fish spawning (i.e., to ensure that the sediments do not fill in interstitial spaces between fine cobble and gravel needed by Coho salmon for spawning). Any future sediment removal shall require Executive Director review and approval. If future sediment removal is necessary, Department personnel should conduct a watershed survey to pinpoint sediment sources and identify erosion control measures to reduce sediments. Previously, excess sediment has been excavated and stockpiled, and its permanent disposal should be appropriately authorized through this project as well.

In conclusion, if these measures are undertaken, as conditioned, the Commission finds that the specific restoration project as proposed is a use permitted by the Public Works Plan and is consistent with the resource policies of that certified plan.

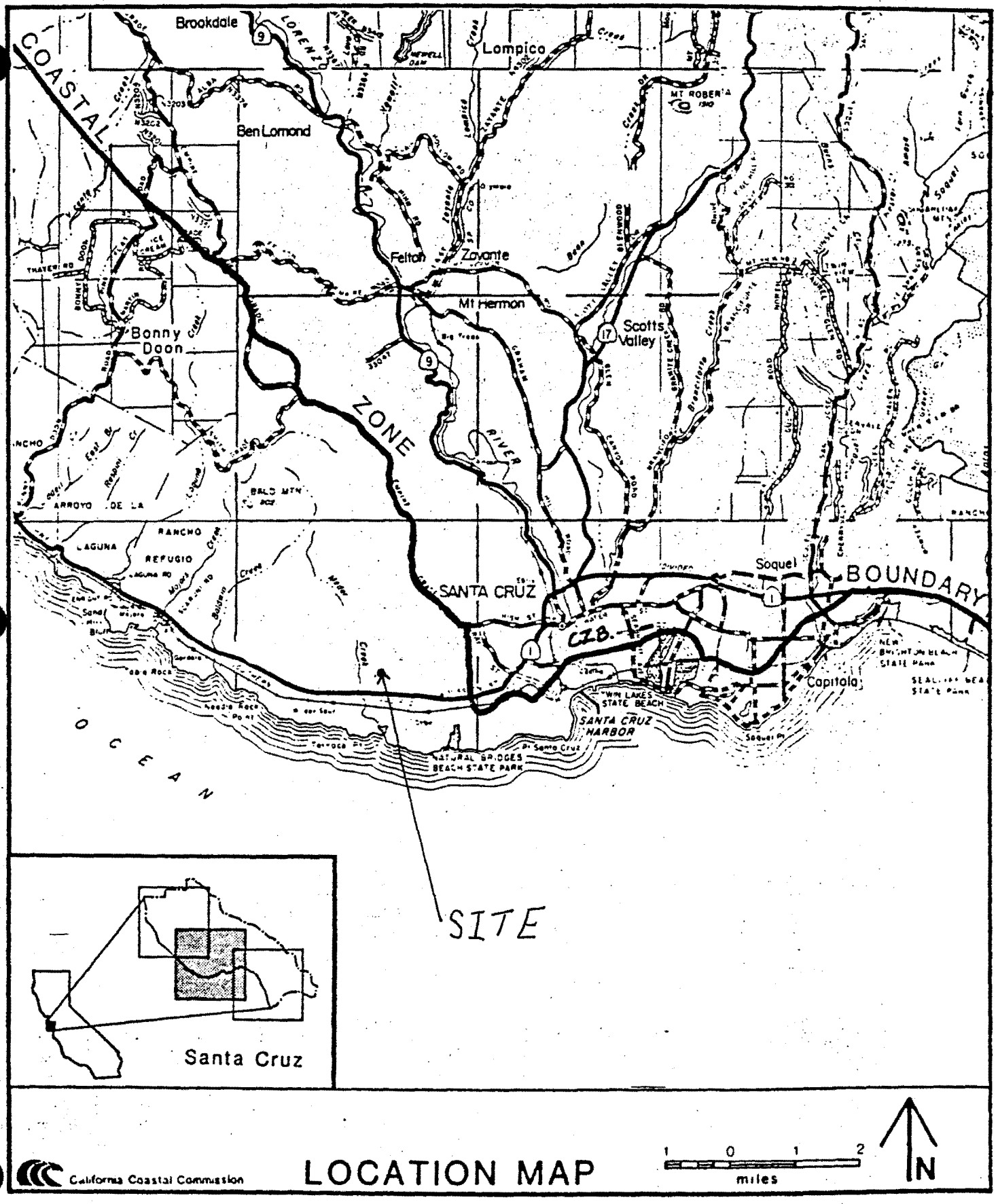
3. California Environmental Quality Act (CEQA)

The Department of Parks and Recreation is the lead agency for this project under CEQA. Department staff has preliminarily determined that the project is categorically exempt from CEQA, however, a final determination has not been made pending further staff review. This is an environmentally beneficial project. Nevertheless, project construction could result in some adverse impacts necessitating some conditions, as discussed above. The project, as conditioned, is the least environmentally damaging within the meaning of CEQA.

EXHIBITS

1. Location Map
2. Project Narrative and Map
3. Finding of Consistency With Public Works Plan

pw2-82-3.doc



County of Santa Cruz

Sheet 2 of 3

Exhibit 1

PWP-2-82-3

PROJECT PLAN

WILDER CREEK DAM REMOVAL PROJECT, PHASE I

INTRODUCTION: Wilder Creek Dam was built in the mid-1900's to provide irrigation water. The dam impounded a watershed of approximately 1500 acres, and appears to have been constructed from material excavated from the reservoir site. The spillway was armored with concrete.

The dam proved to be an effective sediment trap, and the 1-acre reservoir filled with sediment by 1985. The total sediment field measures approximately 20,000 cubic yards, or an average of approximately 300 cubic yards per year trapped by the dam. Every year since 1985, sediment was excavated from a small side-pond to provide for a State Park water pump.

Sediment continued to build up in the reservoir site, and in winter 1994/95, high flows of Wilder Creek began to bypass the perched plateau of sediment and the dam. The water flowed west around the dam and rejoined the natural creek bed 100 feet below the spillway. At the point where the creek bypass rejoined the natural creek bed, a eroding head cut began to work its way up the bypass through a grassy slope. The head cut continued to move during winter 1995/96 until it reached a point just below the City of Santa Cruz Water Department's North Coast Pipeline, a 36-inch pipeline which supplies the eastern portion of the City of Santa Cruz. During winter 1996/97, heavy rains during December and January caused the head cut to move higher up the grassy slope, exposing and undercutting thirty feet of the North Coast Pipeline and the State Park pipeline to the pump pond. On January 14, 1997, Bill Kocher, Director of the Water Department of the City of Santa Cruz, sent a letter to State Parks formally requesting action to stop further erosion and to backfill and compact the area around the exposed pipeline.

PROJECT OBJECTIVE: The long-term goal of this project is to eliminate Wilder Creek Dam and the impounded sediment field, restoring natural hydrological processes to the Creek. This will be accomplished in two phases.

The objective of Phase I is to increase the gradient through the sediment field by lowering the height of the dam spillway six feet and excavating a channel from the spillway to the head of the sediment field. This will (1) immediately prevent Wilder Creek from bypassing the dam, (2) cause most of the naturally occurring sediment load to be carried over the dam, and (3) cause some of the sediment field to be carried over the dam.

The objective of Phase II is to lower the height of the dam spillway the remaining six feet to the level of the natural creek bed, and to dispose of the remaining sediments. Phase II could begin as long as twenty to fifty years after Phase I, determined by the rate at which sediments are moved in Phase I. Anadromous fish are occasionally seen in Wilder Creek

EXHIBIT NO. 2
APPLICATION NO. PWP-2-82-3
Project Narrative and Map

below the dam, so it is possible that salmon and/or steelhead could resume breeding above the dam site once it is removed.

METHODS AND MATERIALS: The project will be accomplished in the following steps:

1. All work will occur during low water flow (less than 3 cfs during July, August, or September).
2. At the request of the California Coastal Commission, Central Coast Area Office, an ecologist will be the daily on-site supervisor for the project. The ecologist will evaluate daily environmental concerns and direct equipment operators.
3. All staging and parking shall occur next to the dirt road, 400 feet west of the dam. Only equipment necessary at the work site shall be driven beyond that point (See Project Detail).
4. Access to the work site shall be along the trail from the staging area to the spillway. Access across Wilder Creek to the proposed new creek channel work site shall be across the dam spillway.
5. Each morning, the area to be disturbed or excavated will be surveyed for the presence of red-legged frogs. Individuals found will be caught and moved to a safe area.
6. The dam will be excavated next to the spillway to a point six feet deeper than the top of the spillway. The creek will be temporarily diverted into an 18" flex pipe, 60 feet long to the creek bed below.
7. Working in the sediment field to the east of the creek, 600 feet of channel will be excavated through the sediment field, six feet deep at spillway, two feet deep at the head of the sediment field. Connection with the creek will occur only after the channel has been completed. The channel will be relatively straight to maximize the gradient through the sediment field. At a later date when the movement of sediments through the sediments is confirmed, meanders may be encouraged in the new channel. The excavated material will be placed to the east of the channel above the high water line of the creek. For the first 150 feet of channel closest to the spillway, an old cut or excavation exists. The material excavated adjacent to this area will be placed in the old cut until it corresponds to the natural slope. The material excavated from the remainder of the channel will be spread over a 20-foot wide swath to the east of the new channel, leaving a surface which corresponds to adjacent terrain.
8. The old concrete spillway (approx. 11 cubic yards) will be broken up by an excavator and removed from the site. The concrete is approximately 12 inches thick on top and 4 inches thick on the bottom. The presumed destination of this concrete is the concrete recycling area of the City of Santa Cruz or Buena Vista Landfill.
9. The spillway site will be excavated 6 feet lower.
10. A new 'temporary' (20-50 years) spillway will be poured using 11 cubic yards of concrete and wire mesh. The flex pipe will be removed, and the creek will be directed over the new spillway.
11. A 36' high berm will be placed in the existing stream channel north of the pump pond (see Project Detail), further encouraging flood waters to use the new stream channel.

Ex. 2 cont.

12. The gully formed when Wilder Creek bypassed the dam will be filled and seeded with grasses and forbes typical of the area.
13. The movement of sediments will be monitored after every storm to (a) determine if sediment movement exceeds expectations and to (b) determine when sediment movement has stabilized to the point where Phase II, removal of the spillway to natural creek bed level, can occur. The new stream channel through the sediment field will be monitored to determine if sediments are being transported through the site. The new stream channel may be encouraged to meander if sediment transport is adequate through the system.

COSTS: Costs assume the use of equipment rented with an operator. Using State Park equipment and operators, extra costs would be only materials.

1.	Breach dam and divert creek. One day	$1,000
2.	Remove 11 cubic yards concrete in old spillway. One Day	$1,000
3.	Dig 600 feet of channel through sediment field. 3 days excavator	$3,000
4.	½ roll wire mesh for new spillway	$ 55
5.	11 cubic yards concrete	$ 880
6.	Contractors in/out charge for excavator	$1,000
	TOTAL	$6,935

CONSTRAINTS AND MITIGATIONS: For this project, the following issues will be considered:

1. Red-legged Frog. Red-legged frogs are found along Wilder Creek. To minimize the movement of fine sediments, earthmoving will be done when Wilder Creek is at its lowest flow (July, August, or September). Each morning, the area to be disturbed or excavated will be surveyed for the presence of red-legged frogs. Individuals found will be caught and moved to a safe area.
2. Tidewater Goby. Goby are found in Wilder Creek Estuary, one mile downstream. Until Wilder Creek Dam filled with sediment in 1985, it trapped the naturally occurring sediment load that Wilder Creek would have transported toward the Estuary. Also during this period, Wilder Creek was excavated south of the Southern Pacific Railroad Tracks where the creek gradient naturally flattened through two agricultural fields. This practice was stopped in 1988. Removal of Wilder Creek Dam coupled with no downstream excavation of sediments will allow some of the naturally occurring sediment load of Wilder Creek to reach the Estuary. In addition, there will be an increased sediment load carried downstream for several decades as some of the sediments impounded by the dam are released. Goby were last collected at this site in 1992 by Jerry Smith. The area is listed in the Tidewater Goby Draft Recovery Plan as being in Recovery Unit 8. The U.S. Fish and Wildlife Service will be consulted about the potential impact of this project.
3. Wilder Creek Wetlands. This area between the Southern Pacific Railroad Tracks and the Wilder Creek Estuary was farmed until 1994. From 1994 to the present, the farm fields were recontoured to create wetlands, Wilder Creek was allowed to aggrade and

Ex. 2 cont.

overflow its excavated channel, and native plants were established. Some of the sediments released by the dam removal project may be trapped in the newly restored wetlands. This area will be monitored each year to determine what changes are occurring, and action will be taken to ensure satisfactory functioning of the wetland ecosystem.

4. Downstream Wilder Creek undercrossings: Highway One, Wilder Dairy Barn, and Southern Pacific Railroad Tracks. The resumption of natural sediments flows, and the temporary release of some sediments impounded by the dam, may cause Wilder Creek to aggrade by these facilities. All three are engineered to accommodate the flow of water and sediments well beyond existing loads. All three facilities will be monitored after heavy storms to evaluate sediment loads. Mitigation could include excavating excess sediments from Wilder Creek or excavating additional sediment from behind Wilder Creek Dam.

PERMITTING AND REVIEW:

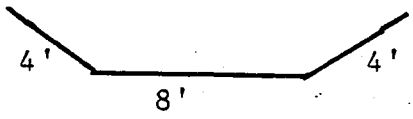
1. California Environmental Quality Act
2. California Department of Fish and Game, Stream Alteration Agreement
3. California Coastal Commission
4. Army Corps of Engineers

Ex. 2 cont

Project Location
Feasley Gulch
Old Dairy Gulch
Sandy Flat Gulch
WILDER RANCH STATE PARK
UNIVERSITY OF CA SANTA CRU
EMPIRE GRADE
Moore Creek
Ex 2 cont

PROJECT DETAIL

WILDER CREEK DAM REMOVAL PROJECT, PHASE I



Cross section of existing and proposed spillway.

Ex 2 cont

STATE OF CALIFORNIA — RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF PARKS AND RECREATION

Santa Cruz District
600 Ocean St.
Santa Cruz, CA 95060
May 1, 1997

Rick Hyman
California Coastal Commission
Central Coast Area Office
725 Front St., Suite 30
Santa Cruz, CA 95060

Dear Rick,

Attached is our plan to remove a stock pond on Wilder Creek. The project is located in Wilder Ranch State Park, which has a General Plan ('Public Works Plan') approved in 1980. We are requesting a determination of the concurrence of this project with the approved General Plan.

There are three issues addressed in the General Plan which are applicable:

1. General Erosion Control Policy, Page 17. "Destructive or unnatural erosion shall be controlled and prevented by means that are in harmony with the park. Artificial controls shall be introduced only under the most extreme circumstances"..."Steps shall be taken to correct existing erosion problems...." This stock pond was on the property when acquired by DPR. It is an undesirable structure and is now causing severe erosion when Wilder Creek flows around the facility.
2. DPR Resource Management Directives, referenced on Page 13. POLICY #43. "The Department will continually strive to avoid degrading park system values by diversion of waters, by the alteration of stream regimes, or by allowing pollution to occur." The dam of this stock pond is severely altering the hydrological processes of Wilder Creek. It is possibly the only constraint on the return of a viable salmon and steelhead run in Wilder Creek.
3. DPR Resource Management Directives, referenced on Page 13. POLICY #36. "It is an objective of the department to maintain the natural faunal habitat, wherever possible. The natural wildlife habitat is defined as the nature of the wildlife resources and habitat of each area before Euroamerican modification." The stock pond is in conflict with this policy because it blocks anadromous fish from access to the Wilder Creek watershed.

Please determine if the enclosed material is adequate to determine concurrence with the Public Works Plan and advise me at (408) 429-2867 if more information is needed.

George Gray
District Ecologist

REC
MAY
CAL
COASTAL

EXHIBIT NO. 3
APPLICATION NO. PWP-2-82-3
Consistency with Public Works Plan