STATE OF CALIFORNIA – THE RESOURCES AGENCY PETE WILSON, *Governor*

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

W 19b

STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY DETERMINATION

Consistency Determination No.	**CD-047-97**
Staff:	JRR-SF
File Date:	4/11/1997
45th Day:	5/26/1997
60th Day Extended To:	8/22/1997
Commission Meeting:	8/13/1997

FEDERAL AGENCY: FOREST SERVICE

DEVELOPMENT LOCATION: Parking lot at the west end of Sycamore Canyon Road, Pfeiffer Beach, Big Sur, Los Padres National Forest, Monterey County (Exhibit 1)

DEVELOPMENT DESCRIPTION: Reconstruct existing parking and construction of restroom, boardwalk, entrance kiosk and turn around, gate, revegetation of disturbed areas, and implementation of traffic management plan (Exhibit 2)

SUBSTANTIVE FILE DOCUMENTS:

1. CD-080-95, Consistency Determination by Forest Service for rehabilitation of Pfeiffer Beach Day Use Area.

2. Pfeiffer Beach Day Use Rehabilitation Project, Environmental Assessment, June 1997.

3. Sycamore Canyon Road/Pfeiffer Beach Transportation Analysis, September 1996.

EXECUTIVE SUMMARY

The Forest Service submitted a consistency determination for the rehabilitation of existing deteriorated recreational support facilities at Pfeiffer Beach in Big Sur. This project is similar to one that the Commission previously reviewed. The Commission objected to the Forest Service's consistency determination for that project (see CD-80-95). In the proposed project, however, the Forest Service addressed the Commission's concerns by completing a transportation analysis of Sycamore Canyon Road. Additionally, the proposed project includes construction of a boardwalk from the parking area to the beach, relocation and expansion of bathrooms, repaving of existing parking areas and access roads, construction of an entrance kiosk and turn-around, restoration of overflow parking areas, and implementation of the traffic management plan.

The Forest Service's proposal to improve the recreational support facilities in the area will have the effect of drawing more people to the beach adding to an already serious traffic problem. This problem interferes with the public's ability to get to the shoreline and also represents a public safety issue because emergency vehicles cannot access this area during peak recreation periods. In a similar project, the Commission found that without traffic management, the improvements would increase the traffic problem in a manner inconsistent with the access policies of the California Coastal Management Program (CCMP). Because of this concern, the Commission objected to the previously submitted consistency determination, CD-80-95. As a result of the consistency process, the Forest Service agreed to prepare a transportation plan for Sycamore Canyon Road, the only access road to Pfeiffer Beach. The Forest Service has completed that transportation plan and has incorporated the recommendations of that plan into this consistency determination. Thus, the Forest Service has modified the proposal, as directed by the Commission and mandated under Section 30214, to address critical transportation impacts and manage access in a manner taking into account the various site's constraints and unique features. Additionally, the proposed project reduces the number of designated parking spaces, but the reduction is necessary to protect natural resources and the carrying capacity of the beach. Therefore the proposed project is consistent with the access and recreation policies of the CCMP.

The project benefits habitat resources because the boardwalk will direct people away from those areas containing those sensitive resources. The project is consistent with the water quality policies of the Coastal Act, because the Forest Service will pave the overflow parking lot using "best management practices" to direct runoff away from the stream. Additionally, the boardwalk will reduce erosion into the stream. Finally, the traffic management program will reduce habitat impacts associated with indiscriminate

parking. Therefore, the project is consistent with the habitat and water quality policies of the CCMP.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description.

The Forest Service proposes to reconstruct existing parking areas within the Pfeiffer Beach Day Use Area facility, providing up to 65 vehicle parking spaces and supporting approximately 195 people at one time. The Forest Service proposes to repave the existing Pfeiffer Beach connector road and construct a boardwalk from the main parking lot to the beach and an entrance kiosk with a turn around lane and gate. Additionally, the project includes the removal of the existing two unit vault toilet, construction of a new four unit restroom, a host site trailer pad, an information kiosk, a bike rack, and an entrance gate and the installation of a public phone. Finally, the project includes implementation of a traffic management plan for Sycamore Canyon Road.

II. Status of Local Coastal Program.

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the CCMP, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has partially incorporated the Monterey County LCP, including the Big Sur Segment, into the CCMP.

III. Federal Agency's Consistency Determination.

The Forest Service has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

IV. Staff Recommendation:

The staff recommends that the Commission adopt the following motion:

MOTION. I move that the Commission concur with the U.S. Forest Service's consistency determination.

The staff recommends a YES vote on this motion. A majority vote in the affirmative will result in adoption of the following resolution:

Concurrence.

The Commission hereby **concurs** with the consistency determination made by the Forest Service for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program.

VI. Findings and Declarations:

The Commission finds and declares as follows:

A. Public Access and Recreation Resources. Section 30210 of the Coastal Act provides that:

> *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 30213 of the Coastal Act provides that:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred.*

Section 30214 of the Coastal Act provides that:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
>
> *(1) Topographic and geologic site characteristics.*
>
> *(2) The capacity of the site to sustain use and at what level of intensity.*
>
> *(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.

(c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs.

Section 30221 of the Coastal Act provides that:

Ocean front land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30223 of the Coastal Act provides that:

Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30252 of the Coastal Act provides that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in

the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30252 of the Coastal Act provides that:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision of extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of on-site recreational facilities to serve the new development.

Section 30253 of the Coastal Act provides, in part, that:

New Development shall:

....

(5) Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30254 of the Coastal Act provides, in part, that:

....

Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

The Big Sur segment of the Monterey County's LCP policy 4.1.3.A.5 provides, in part, that:

> *Sycamore Canyon Road ... should be maintained at a level that resident and visitor traffic can safely be accommodated. Improvements to the width or alignment of these roads shall only be approved when negative visual and environmental impacts will not result and where the improvements will not adversely impact adjacent residents. Pedestrian access shall be provided where feasible. Priority uses shall not be precluded on these roads by non-priority developments.*

Big Sur LCP policy 4.2.3 provides that:

> *Consideration should be given to regulating vehicular access to Pfeiffer Beach on Sycamore Canyon Road during peak periods. A temporary gate at Highway 1 operated by the parks and Recreation Department is a possible approach. A shuttle service between Pfeiffer Big Sur State Park and Pfeiffer Beach should also be considered.*

1. **Character of the Area.** Because of the very special nature of the Big Sur Coast, the Commission is concerned about any activity that will affect the character of this area. If the pristine and natural character of this portion of the coast is significantly degraded, it would change this unique recreational resource. Therefore, the Commission is evaluating the Forest Service's proposed project for its effect on the character of the Big Sur Coast.

Although the overall character of the Big Sur coast is a wild and natural shoreline, the Forest Service has already improved the Pfeiffer Beach area to enhance the recreational experience. There are existing paved and unpaved parking and restrooms. The development proposed by the Forest Service includes reconstruction of the paved parking, an increase in the size of the restrooms, and the addition of a boardwalk. This development is consistent and compatible with the character the existing developed recreational facilities at Pfeiffer Beach.

2. **Facilities Improvements.** The Forest Service proposes to improve the day use area at Pfeiffer Beach in Big Sur. The area is a popular visitor destination and the proposed improvements may draw more people to the area. The Commission has concerns about any activity that has the potential to affect access resources in this area. The Big Sur Coast is an important visitor destination. People from all over the world come to see this coastal area and considered it to be the "jewel of the California coast." Thus, any potential adverse impacts to the access and resources of this area are of great concern to the Commission.

The Forest Service proposes to improve existing access facilities at Pfeiffer Beach. These access improvements include re-constructing the existing parking areas, relocation and expansion of bathrooms, and construction of a kiosk, turn around, gate, and boardwalk. These improvements support recreational use of this beach. The bathroom expansion and relocation is necessary to meet existing demand. The boardwalk will improve access to the beach while minimizing impacts to habitat resources. Both the bathroom and boardwalk will improve coastal access for persons with disabilities. Finally, re-constructing the existing parking areas will improve parking in the area. Currently, parking in these areas are not orderly. This chaotic parking situation reduces the number of parking spaces and results in down-road traffic impacts.

3. Traffic. The Coastal Act protects public access resources from impacts associated with increases in traffic and requires the Commission to manage access opportunities in a manner that takes into account, among other things, public safety. Increases in traffic congestion make it more difficult for the public to drive to coastal recreation areas, and thus can interfere with public access to the shoreline. The Big Sur Coast LCP expresses the need to reserve limited highway capacity for recreational traffic and minimizes non-priority uses that would use up traffic capacity. However, the LCP also identifies a serious traffic issue with respect to Sycamore Canyon Road, the only access road to Pfeiffer Beach. The LCP states that:

> *Sycamore Canyon Road, a private one-lane road over which the U.S. Forest Service holds easements for public access to Pfeiffer Beach, is carrying traffic during peak use periods that exceeds its safe capacity. This is leading to conflicts between recreational and residential traffic.*

The proposed project will improve the recreational facilities at Pfeiffer Beach and could draw more people to Pfeiffer Beach. Thus, the project could increase traffic on Sycamore Canyon Road. This increase in traffic will further exacerbate congestion on an already unsafe road and interfere with the ability of emergency vehicles to get into the area. Therefore, the Commission finds that the proposed project will affect traffic by further exceeding the road's safe capacity. In the previous consistency determination for this project, the Commission found that the traffic impacts generated by the proposed project were inconsistent with the access policies of the Coastal Act. The Commission also found that the project would be consistent with the CCMP if the Forest Service prepared and implemented a transportation plan for Sycamore Canyon Road as part of this project.

The Forest Service recently completed a transportation analysis for Sycamore Canyon. The study is the product of a team made up of representatives of the Forest Service, Coastal Commission, Caltrans, California Department of Parks and Recreation, Monterey County, and the public. In that study, the analysis team concluded that "the road appears

to handle the traffic demand most of the time, but there are about 50 days per year where the peak demand exceeds the prudent capacity of the road." (Transportation Analysis, page 18.) The study also concludes that there is a direct relationship between traffic problems on the road and parking at the beach. Finally, the study included several management alternatives to reduce this traffic conflict. The preferred alternative is a two-tiered approach. The first tier requires a manually operated wood sign near the intersection of Highway 1 and Sycamore Canyon. The sign will inform the public on whether or not the road is open or closed depending on the availability of parking spaces. If this tier fails to reduce traffic, the Forest Service will require enforcement of the sign by stationing an additional employee at the intersection of Highway 1 and Sycamore Canyon Road. This traffic management alternative also requires continued monitoring of traffic on Sycamore Canyon Road. If monitoring demonstrates that this alternative fails to manage traffic, the Forest Service will reconsider other alternatives identified in the plan.

The Commission finds that the proposed project will improve traffic conditions on Sycamore Canyon Road, and thus improve public access to the shoreline. Currently, the Forest Service does not manage parking or traffic in this area. The Forest Service estimates that the site currently has the parking capacity of 87 vehicles. However, the Forest Service has data indicating that as many as 154 cars have parked in the area, which results in indiscriminate parking creating traffic congestion and pedestrian safety concerns. Additionally, the unmanaged parking causes environmental impacts such as soil compaction, increased erosion, and vegetation trampling. The proposed project will reduce the parking capacity from 87 vehicles to 65 and enforce the parking capacity as described above. These measures will significantly reduce the traffic impact and improve public access along Sycamore Canyon Road.

4. <u>Parking</u>. The proposed project results in a reduction in currently available parking. At Pfeiffer Beach, there is an estimated parking capacity of 87 vehicles. Additionally, the Forest Service allows indiscriminate parking to occur at any area that will accommodate a vehicle. The indiscriminate parking has allowed as many as 154 vehicles to park within the Pfeiffer Beach facility. The proposed project will reduce the parking capacity to 65 vehicles and, through signage and enforcement, eliminate the practice of indiscriminate parking. Since there is no other access or parking facilities for Pfeiffer Beach, the project will reduce public access to the shoreline.

Sections 30210 and 30214 of the Coastal Act allow the Commission to consider access management measures that are necessary to protect the carrying capacity of the beach or other natural resources. The Forest Service proposes the reduction in parking for several reasons. First, and primary, the current parking situation results in significant traffic delays during peak periods. The traffic delays interfere with access to the shoreline, as well as interfering with access by emergency vehicles and local residents.

The purpose of the parking restrictions is, in part, to protect natural resources and maintain the carrying capacity of the beach. The indiscriminate parking results in significant habitat impacts. People park in any area able to accommodate a vehicle regardless of habitat impacts. The area contains riparian and stream resources and several types of upland habitat. The uncontrolled parking results impacts to most of these habitat areas. The management measures reducing this type of parking are necessary to protect the habitat resources.

The Forest Service has also determined that the existing improved parking capacity of 85 vehicles may allow for public use of Pfeiffer Beach in excess of the carrying capacity of that beach. Based on the size and expected public use of this beach, the Forest Service determined the recreational carrying capacity of Pfeiffer Beach is 215 people at one time (EA, page 11). Current transportation data suggests that an average of three people per vehicle for traffic into Pfeiffer Beach (pers. comm. William Metz, USFS). If the Forest Service maintains current level of designated parking, then a maximum of 261 people could use the beach at one time. This maximum use would exceed the Forest Service estimated carrying capacity of 215 people at one time. Based on this data, the Commission finds that the reduction in parking is necessary to maintain the carrying capacity of the beach. Therefore, the Commission finds the proposed parking restrictions consistent with the access policies of the CCMP.

5. Conclusion. In conclusion, the Commission finds that the proposed improvements will support public access to the shoreline and recreational use of the coastal zone. Additionally, the proposed improvements will not affect the visual and recreational character of Pfeiffer Beach or the Big Sur Coast. Although these improvements will benefit public use of Pfeiffer Beach, they could attract more people to the area, increasing traffic on Sycamore Canyon Road. However, the proposed transportation management plan will mitigate for this impact. The Forest Service has modified the proposal, as directed by the Commission and mandated under Section 30214, to address critical transportation impacts and manage access in a manner taking into account the various site's constraints and unique features. Finally, the proposed parking restrictions are necessary to protect coastal resources. Therefore, the Commission finds the project consistent with the access and recreational policies of the CCMP.

B. Water Quality. Section 30231 of the Coastal Act provides that:

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 discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The proposed project involves the paving of existing overflow parking areas. The new pavement increases the impervious surfaces leading to an increase in runoff with the potential to affect water quality of the nearby stream. Runoff from these newly paved parking areas could degrade water quality of the stream, because it may contain oil and grease, anti-freeze, and other pollutants associated with automobiles. The Commission believes that this impact will not be significant, because the Forest Service is only proposing to re-surfacing existing parking areas. Since the existing parking areas have the potential to degrade water quality of the stream, the proposed project does not represent a new water quality impact.

Additionally, the Forest Service has designed the improvements to minimize water quality impacts. Specifically, the Forest Service designed the proposed project with eighteen separate "best management practices." These "best management practices" include erosion control plans, slope stabilization, control of drainage, and control of construction in streamside management zones. Exhibit 3 contains a full description of these measures. These "best management practices" will prevent polluted runoff from the re-surfaced areas from significantly degrading water quality of the stream. Therefore, the Commission finds that the proposed project is consistent with the water quality policies of the CCMP.

C. <u>Habitat Resources</u>. Section 30240 of the Coastal Act provides that:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such 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 such areas, and shall be compatible with the continuance of such habitat areas.

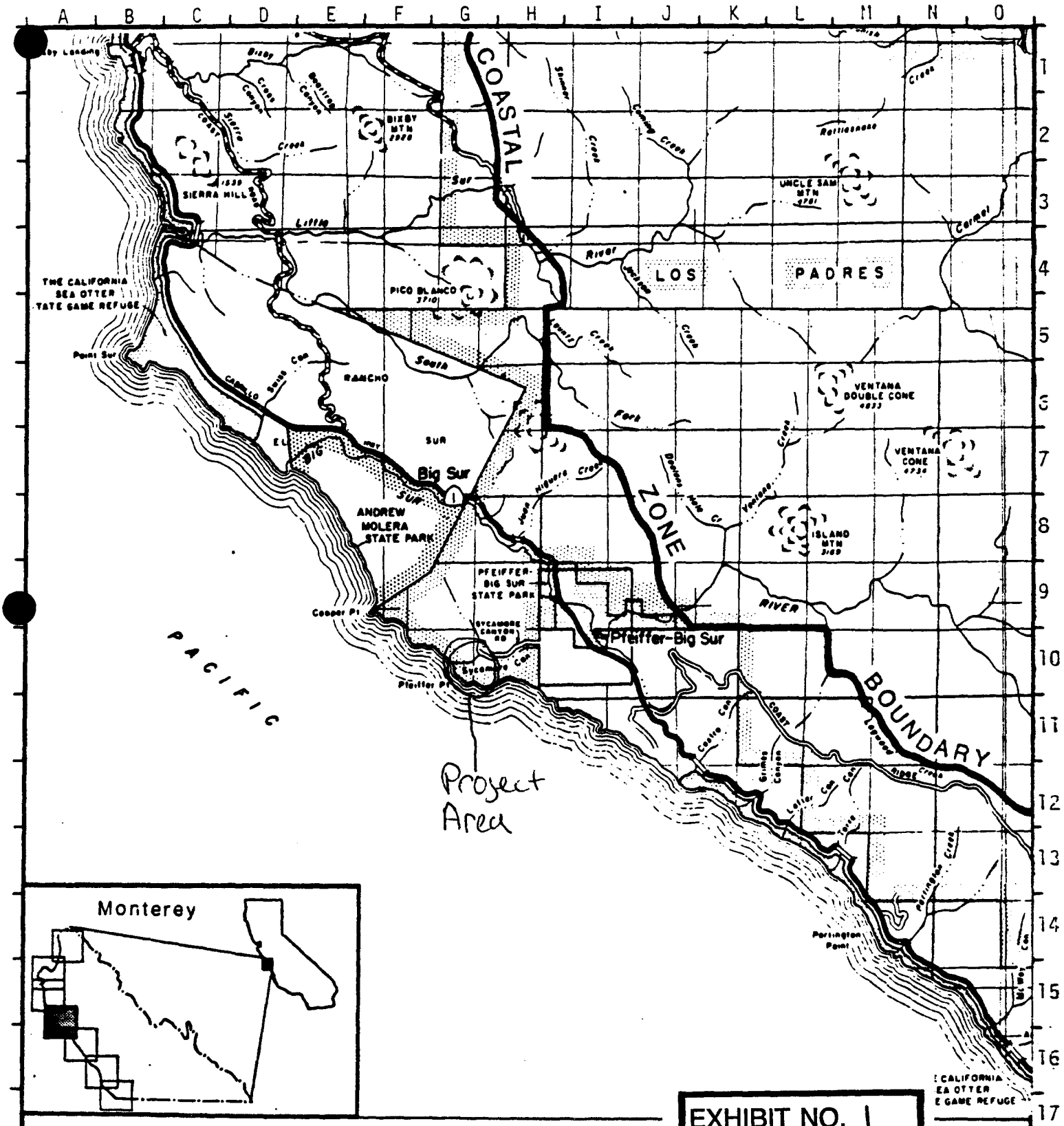
The project area contains sensitive dune, riparian, and stream resources. However, the Forest Service has designed the project to avoid any effects on these resources. Except for the proposed boardwalk, the Forest Service will limit the project to already developed areas. Since the Forest Service will site both the re-paving of the existing overflow

parking lot and relocation and expansion of the restrooms in already developed areas, they will not affect sensitive resources.

On the other hand, the Forest Service will construct the proposed boardwalk outside the existing development footprint. One of the purposes of this boardwalk, however, is to reduce impacts to sensitive resources from existing public access routes. Currently, public access routes go through and are adjacent to sensitive resources of the area. Public use of these routes has resulted in degradation of sensitive resources. The boardwalk will become the primary access route and will reduce the ongoing degradation of sensitive resources. Additionally, the Forest Service will site and design the boardwalk to avoid impacts on sensitive resources.

Finally, the proposed project will improve habitat protection by eliminating the existing indiscriminate parking that occurs after the existing parking lots are full. That indiscriminate parking occurs on any area that can accommodate a vehicle regardless of any habitat impacts. This type of parking results in adverse impacts to riparian, stream, meadow, and other upland habitat impacts. As part of the proposed project, the Forest Service will manage traffic on Sycamore Canyon Road in a manner that reflects the designated parking capacity. In other words, the Forest Service will discourage vehicle use of Sycamore Canyon Road if the parking lot is full. Such management practices will reduce the indiscriminate parking and benefit habitat resources.

In conclusion, the Commission finds that the proposed project will not only avoid impacts to sensitive resources, it will reduce ongoing degradation. Therefore, the Commission finds the proposed project consistent with the habitat and archaeology policies of the CCMP.



California Coastal Commission

LOCATION MAP

County of Monterey

Attachment C

EXHIBIT NO. 1

APPLICATION NO.

CD-47-97

California Coastal Commission

N

PFEIFFER BEACH
ALTERNATIVE 3- MODERATE REHABILITATION

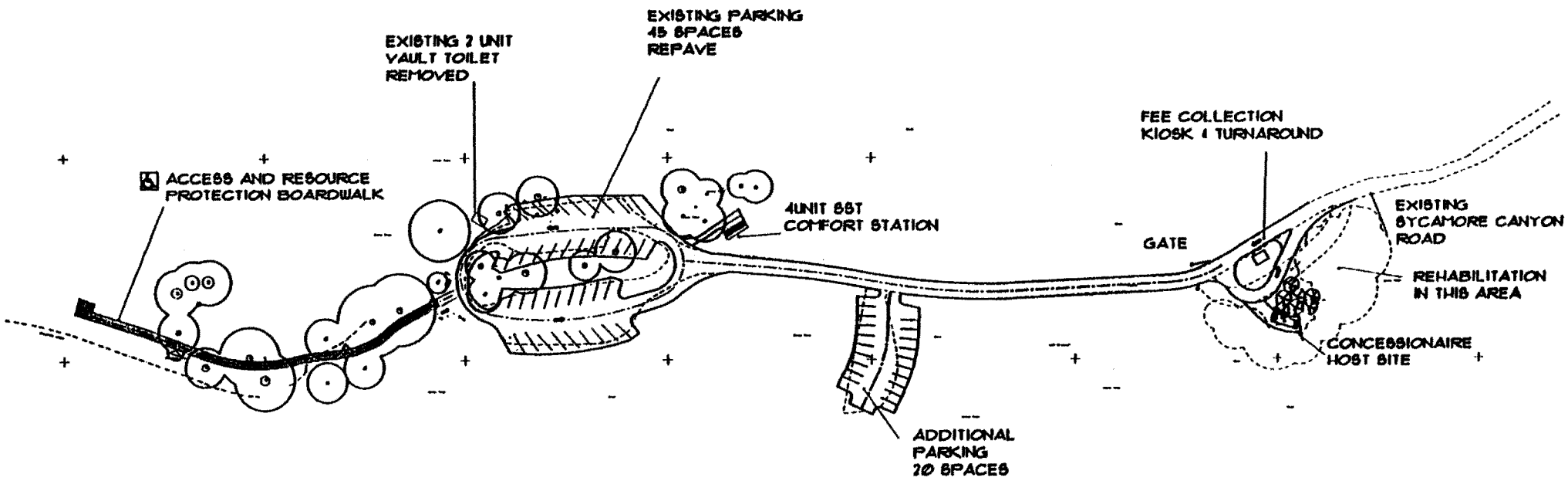


EXHIBIT NO. 2
APPLICATION NO.
CD-47-97
California Coastal Commission

RECEIVED
AUG 28 1995
CALIFORNIA
COASTAL COMMISSION

CALIFORNIA
COASTAL COMMISSION
AUG 28 1995
RECEIVED

FAX TRANSMITTAL

TO: JAMES RAIVES, Federal Consistancy Coordinator, CCC, 415/904-5400.

Enclosed are the "BEST MANAGEMENT PRACTICES" -- Numbered 2.2, 2.3, 2.5, 2.7,
2.10 thru 2.13, 2.19, 2.23, 2.28, 4.5, 4.6, 4.10, 5.4,.7.1, 7.3, and 7.4, a total of eighteen (18) seperate `Best Management Practices' used in planning and designing the project.

Do not hesitate to give me a call should you have questions. Zech/

FROM: Richard D. Zechentmayer
MONTEREY RANGER DISTRICT
LOS PADRES NATIONAL FOREST

DATE: August 28, 1995**

PAGE 1 OF: 19

PHONE: (408) 385-5434

FAX: (408) 385-0628

EXHIBIT NO. 3
APPLICATION NO.
CD-47-97
19 pages
California Coastal Commission

22.11 - Erosion Control Plan (PRACTICE: 2-2)

1. Objective. To limit and mitigate erosion and sedimentation through effective planning prior to initiation of construction activities and through effective contract administration during construction.

2. Explanation. Land disturbing activities usually result in at least short term erosion. By effectively planning for erosion control, sedimentation can be minimized. Therefore, within a specified period after award of contract*, the Purchaser (Contractor) shall submit a general plan which, among other things, sets forth erosion control measures. Operations cannot begin until the Forest Service has given written approval of the plan. The plan recognizes the mitigation measures required in the contract.

3. Implementation. Detailed mitigative measures are developed by design engineers, using an interdisciplinary approach; the measures are reflected in the contract's specifications and provisions.

Contracted projects are implemented by the contractor and/or operator. Compliance with contract specifications and operating plans is assured by the COR, ER, or FSR through inspection.

This practice is required by the referenced directives or contract provisions. It is commonly applied to road construction or timber sales, but should be extended to apply to road construction for mining, recreation, special uses and other roadwork on National Forest lands.

*Presently 60 days per C6.3 on Timber Sale Contracts. A similar plan is required in plans of operations by miners and by permittees on special uses.

EX. 3 P. 2

22.11a - Timing of Construction Activities (PRACTICE: 2-3)

1. Objective. To minimize erosion by conducting operations during minimal runoff periods.

2. Explanation. Since erosion and sedimentation are directly related to runoff, scheduling operations during periods when the probabilities for rain and runoff are low is an essential element of effective erosion control. Purchasers shall schedule and conduct operations to minimize erosion and sedimentation. Equipment shall not be operated when ground conditions are such that excessive damage will result. Such conditions are identified by the COR or ER with the assistance of a soil scientist or other specialists as needed.

In addition, it is important to keep erosion control work as current as practicable with ongoing operations. Construction of drainage facilities and performance of other contract work which will contribute to the control of erosion and sedimentation shall be carried out in conjunction with earthwork operations or as soon thereafter as practicable. The operator should limit the amount of area being graded at a site at any one time, and should minimize the time that an area is laid bare. Erosion control work must be kept current when road construction occurs outside of the normal operating season.

3. Implementation. Detailed mitigative measures are developed by design engineers, using an interdisciplinary approach and are incorporated into the EA and contracts.

Forest Service foremen and supervisors are responsible for implementing force account projects to design standards and as specified in the project plan.

Contracted projects are implemented by the contractor or operator. Compliance with plans, specifications, and the operating plan is assured by the COR or ER through inspection.

This practice is required by the referenced directives or contract provisions.

EX. 3 P. 3

22.11c - Road Slope Stabilization (Administrative Practice) (PRACTICE: 2-5)

1. Objective. To reduce sedimentation by:

- Minimizing erosion from road slopes.
- Minimizing the chances for slope failures along roads.

2. Explanation. No stabilization project can entirely prevent erosion from cut and fill slopes, but no road construction should be planned without considering stabilization needs. The first planning requirement is for an adequate soils and geologic investigation, to provide data necessary for proper cut and fill design considerations such as:

a. The proper cut and fill slopes for the material.
b. The handling of surface and subsurface drainage.
c. Necessary compaction standards and surfacing needs.

A prerequisite for stabilization is to provide basic mechanical stability of the soils, using data from soils and geologic investigations to develop requirements for proper slope angles, compaction, and adequate drainage.

3. Implementation. Erosion prevention considerations must be included in planning for all road construction contracts. When the stabilization work is to be accomplished by the Forest Service, the job must be done immediately after or during completion of the construction contract, to prevent unacceptable erosion.

Most, if not all, of the stabilization measures must be completed prior to the first winter season, when erosion is most severe. At especially critical locations, with a high erosion and/or sedimentation potential, expensive remedies may be necessary.

Project location and detailed mitigative measures are determined during the EA process, and included in the project plan, using an interdisciplinary approach.

Forest Service foremen and supervisors are responsible for ensuring that force account projects meet design standards and project criteria.

Contracted projects are implemented by the contractor or operator. Compliance with project plan requirements, and the operating plan is assured by the COR or ER through inspection.

These practices are applied where needed, as recommended by the TSPP and resultant project plan.

EX. 3 P. 4

22.11e - Control of Road Drainage (PRACTICE: 2-7)

1. Objective. - To minimize the erosive effects of water concentrated by road drainage features.

- To disperse runoff from disturbances within the road clearing limits.

- To lessen the sediment load from roaded areas.

- To minimize erosion of the road prism by runoff from road surfaces and from uphill areas.

2. Explanation. A number of measures can be used (alone or in combination) to control the detrimental effects of road drainage. Methods used to reduce erosion may include such things as properly spaced culverts, cross drains, or water bars, dips, energy dissipators, aprons, downspouts, gabions, debris racks, and armoring of ditches and drain inlets and outlets.

Dispersal of runoff can be accomplished by such means as rolling the grade, insloping, outsloping, crowning, installation of water spreading ditches, contour trenching, or overside drains, etc. Dispersal of runoff also reduces peak downstream flows and associated high water erosion and sediment transport.

Sediment loads can be reduced by installing such things as: sediment filters, settling ponds, and contour trenches. Soil stabilization can help reduce sedimentation by lessening erosion on borrow and waste areas, on cut and fill slopes, and on road shoulders. Methods for stabilization are outlined in Practice 2-4. Road surface stabilization is outlined in Practice 2-23.

3. Implementation. Project location, design criteria and detailed mitigative measures are determined during the EA process using an interdisciplinary approach. These are documented in the project plan.

Forest Service crew foremen and supervisors are responsible for ensuring that force account projects meet design standards, and project criteria.

Contracted projects are implemented by the contractor or operator. Compliance with plans, specifications, and operating plans is assured by the Forest Service COR, ER, or FSR.

This practice is required in contracts when identified, as needed, in the Forest Service Planning Process.

EX. 3 P.5

22.11h - Construction of Stable Embankments (Fills) (PRACTICE: 2-10)

1. Objective. To construct embankments with materials and methods which minimize the possibility of failure and subsequent water quality degradation.

2. Explanation. The failure of road embankments and the subsequent deposition of material into waterways may result from the incorporation of slash or other organic matter into fills, from a lack of compaction during the construction of the embankment, as well as from the use of inappropriate placement methods.

To minimize this occurrence, the roadway should be designed and constructed as a stable and durable earthwork structure with adequate strength to support the pavement structure, shoulders, and traffic. Proper slope ratio design will promote stable embankments. Within streamside zones, embankments shall be constructed of inorganic material, and shall be placed by methods b. to f. below. Other embankments should be primarily constructed of inorganic material and may be placed by one or more of the following methods:

a. Sidecasting and end dumping
b. Layer placement
c. Layer placement (roller compaction)
d. Controlled compaction
e. Controlled compaction using density controlled strips
f. Special project controlled compaction

On projects where required densities are specified, some type of moisture-compaction control may be necessary. The outer faces of embankments are often not stabilized, because of difficulty in accessing equipment to finished slopes; such areas are subject to erosion and slipping.

3. Implementation. Project constraints and mitigative measures are developed through the EA and road design process, using an interdisciplinary approach. The appropriate method of embankment placement is chosen during this process.

Forest Service crew foremen and supervisors are responsible for implementing force account projects, to design standards and project criteria.

Contracted projects are implemented by the contractor or operator. Compliance with project plan specifications, and the operating plan is assured by the COR/ER through inspection.

This practice is required by the directives shown in the references.

22.11i - Control of Sidecast Material (PRACTICE: 2-11)

1. Objective. To minimize sediment production originating from sidecast material during road construction or maintenance.

2. Explanation. Unconsolidated sidecast material can be difficult to stabilize and is susceptible to erosion and/or mass instability. Site-specific limits or controls for the sidecasting of uncompacted material should be developed through interdisciplinary input, and shown on the plans. Loose, unconsolidated sidecast material should not be permitted to enter streamside management zones, as directed by the references. Sidecasting is not an acceptable construction alternative in areas where it will adversely affect water quality. Prior to commencing construction or maintenance activities, waste areas should be located where excess material can be deposited and stabilized. During road maintenance operations, care shall be taken to eliminate the deposition of sidecast material and shall be done so as not to weaken stabilized slopes. Disposal of slide debris shall be done only at designated waste areas, which may include on the road surface.

The roadway shall be constructed in reasonably close conformity within the lines, grades, and dimensions, shown on the drawings or designated on the ground. Provisions for waste material disposal are a part of every road construction and maintenance contract.

3. Implementation. Project location, selected disposal areas, and mitigative measures are developed through the EA process, using an interdisciplinary approach.

Forest Service foremen and supervisors are responsible for ensuring that force account projects meet design standards and project EA criteria. Road Maintenance Plans are developed for each Forest which include needed slide and slump repairs, and, in critical areas, disposal site location for excess material.

Contracted projects are implemented by the contractor or timber sale operator. Compliance with project criteria, contract specifications, and operating plans is assured by the Forest Service COR, ER, or FSR. Standard Maintenance Specifications have been prepared which include disposal site operation, disposal methods, and surface treatment.

Timber Sale contracts include C5.4 and T-Road Maintenance Specifications which address Slide and Slump Repair, Surface Blading, and side casting of road maintenance material.

EX. 3 P. 2

22.11j - Servicing and Refueling of Equipment (PRACTICE: 2-12)

1. Objective. To prevent pollutants such as fuels, lubricants, bitumens, raw sewage, wash water and other harmful materials from being discharged into or near rivers, streams and impoundments or into natural or man-made channels leading thereto.

2. Explanation. During servicing or refueling, pollutants from logging or road construction equipment may enter a watercourse. This threat is minimized by selecting service and refueling areas well away from wet areas and surface water, and by using berms around such sites to contain spills. Spill prevention and countermeasures plans are required if the volume of fuel exceeds 660 gallons in a single container or if total storage at a site exceeds 1320 gallons (see BMP 7-4).

3. Implementation. The COR/ER or SA will designate the location, size and allowable uses of service and refueling areas. They will also be aware of actions to be taken in case of a hazardous substance spill, as outlined in the Forest Hazardous Waste Contingency Plan.

EX. 3 P. 9

22.11k - Control of Construction in Streamside Management Zones (Buffer Strips) (PRACTICE: 2-13)

1. Objective. To designate a zone along streams, which will reduce the adverse effects of nearby roads, by:

a. Acting as an effective filter for sediment generated by erosion from road fills, dust drift, and oil traces;

b. Maintaining shade, riparian habitat (aquatic and terrestrial), and channel stabilizing effects;

c. Keeping the floodplain surface in a resistant, undisturbed condition to limit erosion by flood flows.

2. Explanation. Except at designated stream crossings, roads, fills, sidecast, and end-hauled materials must be kept at a distance from nearby streams, to minimize the road's impacts on the critical riparian zone and on the stream itself. Factors such as stream class, channel stability, sideslope, ground cover, and stability are taken into account in developing zone widths. It is vital to stabilize fill slopes before the streamside management zone is saturated with sediment.

Stream classes and buffer zone widths are determined by an interdisciplinary process involving hydrologists, fisheries biologists, and other specialists as required.

3. Implementation. Project location and mitigative measures are developed by the interdisciplinary team and are inserted into the contract by design engineers.

Forest Service foremen and supervisors are responsible for ensuring that force account projects meet design standards and project criteria.

Contracted projects are implemented by the contractor or operator. Compliance with EA criteria, contract specifications, and operating plans is assured by the COR, FSR or ER.

This practice is required by the directives and contract provisions shown in the references and as documented in the project plan.

EX 3 P.9

22.11q - Disposal of Right-of-Way and Roadside Debris (PRACTICE: 2-19)

1. Objective. - To insure that debris generated during road construction is kept out of streams and to prevent slash and debris from subsequently obstructing channels.

- To insure debris dams are not formed which obstruct fish passage or which could result in downstream damage from high water flow surges after dam failure.

2. Explanation. As a preventive measure, construction debris and other newly generated roadside slash developed along roads near streams (in the streamside management zone) shall be disposed of by the following means as applicable:

a. On Site

(1) Piling and Burning
(2) Chipping
(3) Burying
(4) Scattering
(5) Windrowing
(6) Disposal in Cutting Units

b. Removal to agreed upon locations (especially stumps from the road prism).

c. A combination of the above.

d. Large limbs and cull logs may be bucked into manageable lengths and piled alongside the road for fuelwood.

3. Implementation. Disposal of right-of-way and roadside debris criteria are established in the project plan by the responsible forest official with the help of the ID team. Project location and detailed mitigative measures are developed.

Forest Service foremen and supervisors are responsible for ensuring that force account projects meet design standards.

Contracted projects are implemented by the contractor or operator. Compliance with plans, specifications, and operating plans is assured by the Forest Service COR or ER.

EX. 3 P. 10

22.11u - Road Surface Treatment to Prevent Loss of Materials (PRACTICE: 2-23)

1. Objective. To minimize the erosion of road surface materials and consequently reduce the likelihood of sediment production from those areas.

2. Explanation. Unconsolidated road surface material is susceptible to erosion during precipitation events. Likewise, dust derived from road use may settle onto adjacent water bodies. On timber sale transportation system roads, the Purchaser shall undertake measures to prevent excessive loss of road material if the need for such action has been identified.

Road surface treatments include watering, dust oiling, penetration oiling, sealing, aggregate surfacing, chip-sealing, or paving, depending on traffic, soils, geology, road design standards, and available funding.

3. Implementation. Project location and detailed mitigative measures are developed by the design engineer, using an interdisciplinary approach, to meet project criteria.

Forest Service foremen and supervisors are responsible for ensuring that force account projects meet design standards and project EA criteria.

Contracted projects are implemented by the contractor or operator. Compliance with project criteria, contract specifications, and operating plans is assured by the COR, ER or FSR.

EX. 3 P. 44

22.11z • Surface Erosion Control at Facility Sites (PRACTICE: 2-28)

1. Objective. Reduce the amount of surface erosion taking place on developed sites and the amount of soil entering streams.

2. Explanation. On lands developed for administrative sites, ski areas, campgrounds, parking areas, or waste disposal sites much ground is cleared of vegetation. Erosion control methods need to be implemented to keep as much of the soil in place as possible and to minimize the amount of soil entering streams. Some examples of erosion control methods that could be applied at a site for keeping the soil in place would be applying grass seed, jute mesh, tackifiers, hydromulch, paving, or rocking of roads, water bars, cross drains, or retaining walls.

To control the amount of soil entering streams the natural drainage pattern of the area should not be changed; sediment basins and sediment filters should be established to filter surface runoff; and diversion ditches, and berms should be built to divert surface runoff around bare areas. Construction activities should be scheduled to avoid periods of the year when heavy runoff will occur.

3. Implementation. This management practice is used as a preventative and remedial measure for any land development project that will remove the existing vegetation and ground cover and leave bare soil. This practice can be implemented by earth scientists in the planning phase for National Forest System projects or by special use permit requirements for private development on public land.

Mitigative measures are developed by the interdisciplinary team and incorporated in the project by the design engineer.

Forest Service foremen and supervisors are responsible for implementing force account projects to design standards and project criteria.

Contracted projects are implemented by the contractor or operator. Compliance with plans, specifications, and operating plans is assured by the COR, ER, and FSR.

EX. 3 P. 12

24.11c - Control of Sanitation Facilities (PRACTICE: 4-5)

1. Objective. The objective is to protect surface and subsurface water from bacteria, nutrients, and chemical pollutants resulting from the collection, transmission, treatment, and disposal of sewage at Forest Service facilities.

2. Explanation. Toilet facilities are provided at developed recreation sites. The type and number depends on the capacity of a given site. Sanitation facilities (which may vary from a pit toilet to a sophisticated treatment plant) will be planned, located, designed, constructed, operated, inspected and maintained to minimize the possibility of water contamination.

3. Implementation. Field investigations will be performed by the appropriate disciplines to evaluate soil, geological, vegetative, climatic, and hydrological conditions. The location, design, inspection, operation and maintenance will be performed or controlled by qualified personnel who are trained and familiar with the sanitation system and operational guidelines.

State and local authorities should be consulted prior to the installation of new sanitation facilities or modifications of existing facilities to assure compliance with all applicable State and local regulations. Coordination and cooperation should be pursued with State and local Health Department and Water Quality Control Board representatives in all phases of sanitation management: planning, design, inspection and operation and maintenance.

EX. 3 P. 43

24.11d - Control of Refuse Disposal (PRACTICE: 4-6)

1. Objective. The objective is to protect water from nutrients, bacteria, and chemicals associated with solid waste disposal.

2. Explanation. The users of National Forest recreation facilities are encouraged to cooperate in the proper disposal of garbage and trash. Users will be encouraged to burn their combustible trash in fireplaces or stoves. Receptacles are provided for unburnables at most developed sites. Garbage and trash must be "packed out" by those who use general forest and wilderness areas.

The final disposal of collected garbage will be at a properly designed and operated sanitary landfill. Each landfill site will be located where groundwater and surface waters are at a safe distance, as prescribed in the provisions of the California Administrative Code, Title 23, Chapter 3, Subchapter 15, and other State or local regulations.

3. Implementation. The public education effort is a continuing process accomplished through the use of signs, printed information, mass media, and personal contact. Public cooperation is vital.

Each National Forest has solid waste disposal plans which spell out collection, removal, and final disposal methods. Garbage containers are placed in areas which are convenient for recreationists and are easily maintained. Authorized Forest Officers may issue citations to violators.

EX. 3 P. 14

24.11h - Protection of Water Quality Within Developed and General Forest Recreation Areas (PRACTICE: 4-10)

1. Objective. To protect water quality by regulating the discharge and disposal of potential pollutants.

2. Explanation. This practice prohibits placing in or near a stream, lake or other waterbody, substances which may degrade water quality. This includes, but is not limited to, human and animal waste, petroleum products, and other hazardous substances. Areas may be closed in order to restrict use in problem areas.

3. Implementation. The public will be encouraged through signs, pamphlets, and public contact to conduct their activities in ways that will not degrade water quality. Private citizens can observe violations and report them to an authorized Forest Officer. Officers can issue citations to violators.

EX. 3 P. 45

25.11b - Revegetation of Surface Disturbed Areas (PRACTICE: 5-4)

1. Objective. To protect water quality by minimizing soil erosion through the stabilizing influence of vegetation.

2. Explanation. This is a corrective practice to stabilize the soil surface of the disturbed area. The vegetation selected will be a mix best suited to meet the management objective for the area, be it range, wildlife, timber, or fuels management. Fertilization, irrigation, tackifier, netting, jute or other material may be necessary to insure vegetation is established.

Grass or browse species may be seeded between recently planted trees where appropriate for aesthetics, erosion prevention or wildlife needs. The factors evaluated are soil fertility, slope, aspect, EHR, soil water holding capacity, climatic and weather variables, and suitable species selection. These are both field determinations and office interpretations made by an interdisciplinary team. Practice 1-15, Revegetation of Area Disturbed by Harvest Activities, is related.

3. Implementation. The identification of disturbed areas and species mix will be determined after an environmental assessment is made to determine site specific needs. Projects are subsequently monitored to assess their effectiveness, and need for follow-up action. The responsible line officer assembles an interdisciplinary team when appropriate or assigns specific individuals or work teams to plan and execute the project.

EX. 3 P. 46

27.1 - Watershed Restoration (PRACTICE: 7-1)

1. Objective. To improve water quality and soil stability.

2. Explanation. Watershed restoration is a corrective measure to:

a. Repair degraded watershed conditions and restore the hydrologic balance with a vegetative cover that will maintain or improve soil stability, reduce surface runoff, increase infiltration, and reduce flood occurrence and flood damages;

b. Conserve the basic soil resource;

c. Maintain and improve water availability or quality; and

d. Enhance economic, social, and scenic benefits of the watershed.

Factors considered are predicted change in water quality, downstream values, onsite productivity, threat to life and property, direct and indirect economic returns, and social and scenic benefits. Examples of watershed restoration measures are gabions and soil ripping.

3. Implementation. This management practice is implemented through the development of a watershed restoration inventory, the approval of cost-effective restoration plans, and the funding of the plan and subsquent restoration action. The planning will be done by an interdisciplinary team. The actual work may be done by Forest Service crews or by contract. Interdisciplinary team members will evaluate performance by monitoring soil conditions and water quality.

EX 3 P. 17

27.11a - Protection of Wetlands (PRACTICE: 7-3)

1. Objective. To avoid adverse water quality impacts associated with destruction or modification of wetlands.

2. Explanation. The Forest Service does not permit the implementation of activities and new construction in wetlands whenever there is a practical alternative. Evaluation of proposed actions in wetlands will consider factors relevant to the proposal's effect on the survival and quality of the wetlands. Factors to be considered include water supply, water quality, recharge areas, flood and storm hazards, flora and fauna species, habitat diversity and stability, and hydrologic utility.

3. Implementation. The Regional Forester is responsible for ensuring that wetland values are considered and documented as an integral part of all planning processes. The Forest Supervisor, through the use of earth scientists, will determine whether proposed actions will be located in wetlands and, if so, whether there is a practical alternative. If there are no viable alternatives, the Forest Supervisor must insure that all mitigating measures are incorporated into the plans and designs and that the actions maintain the function of the wetlands. Identification and mapping of wetlands are part of the land management planning data inventory process.

FY. 3 P. 18

27.11b - Oil and Hazardous Substance Spill Contingency Plan and Spill Prevention Control & Countermeasure (SPCC) Plan (PRACTICE: 7-4)

1. Objective. To minimize contamination of waters from accidental spills.

2. Explanation. A contingency plan is a predetermined organization and action plan to be implemented in the event of a hazardous substance spill. Factors considered for each spill are the specific substance spilled, the quantity, its toxicity, proximity of the spill to waters, and the hazard to life and property.

The SPCC Plan is a document which requires appropriate measures (40 CFR 112) to prevent oil products from entering the navigable waters of the United States. An SPCC Plan is needed if the total oil products on site above-ground storage exceeds 1320 gallons or if a single container exceeds a capacity of 660 gallons.

3. Implementation. Each forest is responsible for designating emergency spill coordinators and documenting names and telephone numbers of agencies to call regarding cleanup of spills. Individual Forests may maintain an inventory of materials to use during the cleanup of a spill. Disposal methods and sites will be coordinated with EPA, State, and Local officials responsible for safe disposal.

SPCC Plans are required for Forest Service owned and special use permitted facilities, as well as by timber sale operators and other contractors who store petroleum products. They must be reviewed and certified by a registered professional engineer.

EX. 3 P. 19