MONTEREY COUNTY PLANNING COMMISSION

Meeting: July 25, 2012 Time: 9:00 A.M.	**Agenda Item No.:** 1
Project Description: Hold a workshop to discuss a Combined Development Permit (formerly PLN080052) consisting of: 1) Use Permit for the removal of the San Clemente Dam and related improvements; 2) Use Permit for the removal of the Old Carmel River Dam and related improvements; 3) Use Permit for development on 25% slopes; and 4) Use Permit for the removal of protected trees. The project includes road improvements on the construction access route along Cachagua Road and the Jeep Trail.	
Project Location: San Clemente Dam Region, at the confluence of the Carmel River (River Mile 18.5) and San Clemente Creek, approximately 15 miles southeast of the City of Carmel-by-the-Sea and 3.7 miles southeast of Carmel Valley Village.	**APNs:** 417-051-004-000; 417-051-005-000; 417-051-001-000; 417-251-002-000-M
Planning File Number: PLN110373	**Owner:** California American Water **Agent:** URS Corporation
Planning Area: Greater Monterey Peninsula Area Plan and Cachagua Area Plan	**Flagged and staked:** No
Zoning Designation: PG/160 [Permanent Grazing, with a minimum building site of 160 acres] and RC/1000 [Resource Conservation with a maximum gross density of one unit/1,000 acres]	
CEQA Action: Supplemental EIR/EIS	
Department: RMA - Planning Department	

RECOMMENDATION:

Staff recommends that the Planning Commission hold a workshop to discuss a Combined Development Permit (formerly PLN080052) consisting of: 1) Use Permit for the removal of the San Clemente Dam and related improvements; 2) Use Permit for the removal of the Old Carmel River Dam and related improvements; 3) Use Permit for development on 25% slopes; and 4) Use Permit for the removal of protected trees.

PROJECT OVERVIEW:

The San Clemente Dam is a 106-foot high concrete arch dam located approximately 18.5 miles from the Pacific Ocean on Carmel River, approximately 15 miles southeast of the City of Carmel-by-the-Sea and 3.7 miles southeast of Carmel Valley Village. The confluence of the Carmel River and San Clemente Creek is located just upstream of the dam. When the dam was constructed in 1921, it had a reservoir storage capacity of approximately 1,425 acre-feet. Today the reservoir has been filled by more than 2.5 million cubic yards of sediment, leaving a reservoir storage capacity of approximately 70 acre-feet. California American Water (CAW) owns and operates the dam. The dam no longer serves a useful purpose now that water is no longer diverted from upstream of the dam.

The California Department of Water Resources (CDWR) issued a safety order for the dam structure early in the 1990s, determining that San Clemente Dam could potentially fail in the event of either a major earthquake or flood. In 2006, CDWR the released a Draft Environmental Impact Report/Environmental Impact Statement (EIR/S) for the San Clemente Dam Seismic Safety Project that evaluated five alternatives for addressing dam safety issues, including CAW's then- preferred approach of Dam Strengthening, as well as an alternative that would remove the San Clemente Dam and reroute the Carmel River (Alternative 3).

Strengthening the dam would resolve the public safety issues, but would not address other issues related to the dam such as impaired access for steelhead to 25 miles of upstream spawning and rearing habitat, disruption of sediment transport to the lower river and Carmel River beach, and ecological discontinuity of aquatic and riparian habitats. Removing the dam would resolve these issues and provide significant benefits to both steelhead and California red-legged frog. For these reasons, the California State Coastal Conservancy (as a lead for the State of California), National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and the Planning and Conservation League Foundation worked with CAW to develop a feasible approach to cooperatively implement Alternative 3. In December 2007, CDWR certified the Final EIR/S, and in February 2008, CDWR indicated that the dam safety issue could be addressed through implementation of Alternative 3. Monterey County is a responsible agency for the project under CEQA.

Since CDWR filed the Notice of Determination, CAW identified several necessary changes to Alternative 3. CDWR, as a lead agency, evaluated the proposed changes, and determined that a supplement to the Final EIR (SEIR) needed to be prepared. The Draft SEIR describes the revised project features and analyzes potential impacts associated with changes to the project and to proposed mitigation. The Draft SEIR was released on April 24, 2012 for a 45-day public review period.

The Old Carmel River Dam is located approximately 1,800 feet downstream of the San Clemente Dam on a bend of the Carmel River. Each of the project alternatives evaluated in the 2008 Final EIR/EIS included constructing a notch in the Old Carmel River Dam, with the exception of the no-project alternative. To improve fish passage and restore the Carmel River to a more natural state, CAW now proposes to completely remove the Old Carmel River Dam, rather than notch this dam as described and analyzed in the 2008 Final EIR/EIS. DWR did not address removal of the Old Carmel River Dam in the April 2012 SEIR. Therefore, a Second Draft SEIR was prepared to specifically address impacts related to removal of Old Carmel River Dam. The Second Draft SEIR was released on June 14, 2012 for a 45-day review period.

On September 6, 2011, the project was initially reviewed by the Carmel Valley Land Use Advisory Committee (LUAC). The LUAC members asked questions regarding project design details and requested a site visit before making a recommendation on the project. A joint site visit with the Planning Commission was held on May 23, 2012. The project was reviewed again by the LUAC on June 18 and July 2, 2012. Issues discussed at the LUAC meetings included potential downstream flooding, sedimentation transport, use of San Clemente Drive for construction access, the timing of the Cachagua Road closures, the location of park and ride lots for construction workers and California American Water's local-hire practices. On a 4-1-2-0 vote, the LUAC supported the project as proposed (see **Exhibit D**, Minutes of July 2, 2012 meeting).

See Project Discussion in **Exhibit B** for an in-depth discussion of the proposed project.

Bob Schubert

Bob Schubert, AICP, Senior Planner
(831) 755-5183, schubertbj@co.monterey.ca.us
July 13, 2012

cc: Front Counter Copy; Planning Commission; Cachagua Fire Protection District; Public Works Department; Parks Department; Environmental Health Bureau; Water Resources Agency; Wanda Hickman, Planning Services Manager; Bob Schubert, Project Planner; Jeff Syztel, Owner's Representative; John Chamberlain, Agent; Seth Gentzler, URS Corporation; Trish Chapman, California Coastal Conservancy; Laura Engeman, California Coastal Conservancy; Joyce Ambrosius, National Oceanic & Atmospheric Administration; Megan Jones, Rincon Consultants; Henry Gowan; Denise Duffy; Jim Sulentich; Steve Stanlei; Roberta Chappell; Brock Guruniazi; Charles Page; Robert Reid; Jayne Mohammadi; Kathleen Lee; Louis Ramirez; The Open Monterey Project; LandWatch; Planning File PLN110373

Attachments:	Exhibit A	Project Discussion
	Exhibit B	Vicinity Map
	Exhibit C	Carmel Valley Land Use Advisory Committee Minutes of July 2, 2012 Meeting
	Exhibit D	Construction Access Alternatives Summary by Seth Guntzler dated July 13, 2012
	Exhibit E	Project Application (on CDs – Planning Commissioners only)

This report was reviewed by Wanda Hickman, Planning Services Manager. WMH

EXHIBIT A
PROJECT DISCUSSION

Project Description

California American Water (CAW) has applied for a Combined Development Permit consisting of: 1) Use Permit for the removal of the San Clemente Dam and related improvements; 2) Use Permit for the removal of the Old Carmel River dam and related improvements; 3) Use Permit for development on 25% slopes; and 4) Use Permit for the removal of protected trees (see **Exhibit E**, Project Application). The project area is approximately 80 acres.

The project involves rerouting the Carmel River into San Clemente Creek at a location approximately 3,000 feet upstream of the dam, bypassing the majority of accumulated sediment in the Carmel River. The bypass will be excavated through the drainage divide between the Carmel River and San Clemente Creek. Upstream of the reroute channel, the Upper Carmel River will be excavated and restored to transition to exiting channel grades upstream. The new combined flow reach between the Reroute Channel and the present dam location will be restored with focus on steelhead passage. Upstream of the combined flow reach, the Upper San Clemente Creek will also be excavated and restored to transition to existing channel grades upstream. The accumulated sediment in the San Clemente Creek will be excavated and relocated to the abandoned Carmel River arm, and the sediment in the abandoned Carmel River arm will be stabilized in place to form a sediment stockpile. A diversion dike will be constructed to divert the Carmel River flow into the San Clemente Creek drainage through the reroute channel, and to prevent flow from entering the upstream end of the abandoned reservoir. The project also includes road improvements on the construction access route along Cachagua Road and the Jeep Trail.

The two major roads that provide access to the project are San Clemente Drive from the north and Tassajara Road through Cachagua Road from the southeast. The applicant proposes the latter as the primary construction access route. From Cachagua Road, access would continue on an existing dirt road (referred to as the Jeep Trail) to a section of road that would be constructed, referred to as the Reservoir Access Road (see Item 2.1, Site Access Map, in Section 2 of **Exhibit E**, Project Application). The existing Jeep Trail is an access road owned and maintained by the Monterey Peninsula Regional Parks District and extends from Cachagua Road, winding through the hillsides adjacent to the site. A portion of the Jeep Trail is located on a Conservation and Scenic Easement that was deeded to Monterey County. Depending on the type of construction vehicles, the route would be either via the northern end of Cachagua Road (3 miles) or via Tassajara Road to the southern end of Cachagua Road (8.3 miles). Tassajara Road and the northern end of Cachagua Road are both off of Carmel Valley Road.

Several small staging areas would be created along the Jeep Trail and the Reservoir Access Road for stockpiling materials, vehicles and equipment during construction. Limited secondary access would be from San Clemente Drive off of Carmel Valley Road. San Clemente Drive runs from Carmel Valley Road through the Sleepy Hollow subdivision and onto CAW property.

The section of Cachagua Road to the south of the intersection with the Jeep Trail has five curves that would be difficult for tractor-trailers pulling lowboys to negotiate. The five curves would require widening to allow passage of the larger construction vehicles. This section of Cachagua Road has a load-restricted one-lane bridge that would need improvements to handle construction equipment loads.

The duration of construction is estimated to be approximately 40 months, to occur over four or five construction seasons. When all project elements are in place, both the San Clemente Dam and the Old Camel River Dam will be removed. Habitat restoration and re-vegetation will be performed for the Upper Carmel River reach, reroute channel and slopes, combined flow reach, diversion dike, stabilized sediment slope and the sediment stockpile. The restoration will include transitioning to the limit of construction and/or existing undisturbed vegetation. After project completion, CAW intends to convey the property around the San Clemente Dam to the Bureau of Land Management.

Project Issues

Key project issues are related to the proposed removal of protected trees, grading, construction access alternatives, parking for construction workers and potential impacts to sensitive habitats.

Tree Removals

The project lies in two planning areas: the Greater Monterey Peninsula Area Plan and the Cachagua Area Plan, each with a distinct list of protected trees. Oak trees are the only species protected in the Greater Monterey Peninsula Area Plan. The Cachagua Area Plan list of protected trees includes Santa Lucia Fir, Black Cottonwood, Fremont Cottonwood, Box Elder, Willows, California Laurel, Sycamore, Oak and Madrone.

The protected trees in the vicinity of the project construction activities were inventoried and mapped (see Attachment C, Arborist Report and Forest Management Plan in **Exhibit E**, Project Application). These maps then were overlaid on the design plans to see if changes could be made to minimize tree removals. As a result, two design changes were made to minimize removal of protected trees, avoiding 47% of the trees that would have been removed by implementation of the initial design. The first design change relocated staging areas to avoid removing groves of large oaks, avoiding the removal of 893 protected trees. The second design change resulted in avoidance of 251 additional trees through modifications to the Jeep Trail and Reservoir Access Road alignment and staging areas. As a result, the total number of protected trees proposed for removal was reduced from 2,463 to 1,318. In addition, the number of trees to be pruned decreased by 65%, from 196 to 68, via design changes to minimize construction impacts.

Proposed mitigation ratios for tree replacement are as follows:

- 50% of removed oak trees will be mitigated at 3:1 for entire project area;
- 50% of removed oak trees will be mitigated by contributing to the Oak Woodlands Conservation Fund; and
- 100% of removed protected non-oak trees will be replaced at 1:1 for ratio the Cachagua Area Plan.

The proposed mitigation meets the requirements of Zoning Ordinance Section 21.64.260.D.4. Installation of the trees listed in the proposed planting plan results a net gain of trees.

Grading

The accumulated sediment from both the San Clemente Creek arm and a portion of the Carmel River arm would be excavated, relocated, stabilized and retained in a stockpile. Compared to the previously analyzed Alternative 3, the proposed project would increase removal of accumulated sediment from approximately 380,000 to 830,000 cubic yards (relocating sediment to the Carmel River arm sediment disposal area); would construct 12 staging areas along the Jeep Trail; would

utilize Tassajara Road and Cachagua Road for heavy equipment mobilization; and would include a new screening plant upstream of the diversion dike, among other changes.

A diversion dike will be constructed to divert the Carmel River into the San Clemente Creek drainage through a reroute channel and to prevent flow from passing into the sediment stockpile. The total grading quantities are 1,243,640 cubic yards of cut and 1,198,200 cubic yards of fill. Although the cut/fill volumes are different due to density differences after handling, the mass of excavated material is the same as that to be filled.

Construction Access Alternatives

A site visit was conducted on July 11, 2012 with members of the design teams, the California Coastal Conservancy, County staff and members of the public to see the proposed and alternative construction access routes. In addition, the applicant submitted a memorandum summarizing the analysis of construction access alternatives (see **Exhibit D**, Construction Access Alternatives Summary by Seth Guntzler dated July 13, 2012). Initially, three primary routes were considered for construction access to the site (see Figures 1, 2, and 2-1 in **Exhibit D**). The three options were as follows:

1. San Clemente Drive to the Low Road (Low Road option)
2. San Clemente Drive to the High Road (High Road option)
3. Cachagua Road to the Jeep Trail (Jeep Trail option)

Option 1 (San Clemente Drive to the Low Road) was eliminated from further consideration by the applicant due to the lack of practical and feasible options to improve the road, in addition to safety concerns associated with falling rock and landslides from the uphill slope adjacent to the road.

Option 2 (High Road option) would involve improvement of San Clemente Drive (inside of California American Water's gate) and the High Road. This would include improving approximately 14,300 linear feet of existing dirt road to a minimum width of 18 feet and providing a 12-foot wide travel surface of graded aggregate base. The width increase would result in fairly significant uphill and downhill daylight slopes along the alignment, impacting a significant number of existing trees and habitat. Since the High Road currently only extends to the top of the San Clemente Dam, a High Road extension would need to be constructed (approximately 3,300 linear feet) for equipment to access the work area. In addition, the San Clemente Drive bridge across Tularcitos Creek would need to be replaced, and two new bridges would need to be constructed, one across Carmel River at the Sleepy Hollow ford, and one across San Clemente Creek, to access the work area.

Option 3 (the Jeep Trail option) is the option proposed by the applicant and analyzed in the Supplemental EIR. It involves accessing the site via the Jeep Trail and a new reservoir access road which would enter the site from east of the existing reservoir. The existing Jeep Trail is an access road owned and maintained by the Monterey Peninsula Regional Parks District and extends from Cachagua Road, winding through the hillsides adjacent to the site. Depending on the type of construction traffic, the route to the Jeep Trail would either be via Cachagua Road off of Carmel Valley Road, or via Tassajara Road off of Carmel Valley Road, connecting to south Cachagua Road. Improvements to the Jeep Trail include improving approximately 11,500 linear feet of existing dirt road to a minimum width of 18 feet and providing a 12-foot wide travel surface of graded aggregate base. The width increase would result in uphill and downhill daylight slopes along the alignment, impacting existing trees and habitat. A new reservoir access

road (approximately 3,000 linear feet) would need to be constructed to connect the Jeep Trail to the work area. In addition to these road improvements, a number of public road improvements would be required to accommodate construction traffic. Improvements would be needed in six separate locations and would involve expanding the road width to allow for a greater turning radius, thinning vegetation to improvement sight distance, and adding structural supports to one bridge (Bridge #529 on Cachagua Road) to allow for the weight of construction equipment.

Table 1 (below) summarizes key components and impacts associated with the two access route options.

Table 1. Access Route Option Summary

Access Element	Jeep Trail Option	High Road Option
Length of Existing Road Improvement (18' width)	11,500 linear feet	14,300 linear feet
Existing Road Improvement Trees Impacted	352 trees	438 trees*
Length of New Road Construction	3,000 linear feet	3,300 linear feet
New Road Disturbance Footprint	2.8 acres	7.3 acres
New Road Trees Impacted	134 trees	291 trees
Total Trees Impacted	486 trees	729 trees
Existing Bridge Improvement	Minor improvements to Bridge #529 on Cachagua Road	Replacement of Bridge at Tularcitos Creek
New Bridge Construction and Associated Impacts	None	Two (2) New Bridges: at Sleepy Hollow Ford and San Clemente Creek

*Tree estimate for the High Road improvement is based on review of aerial photographs, and a resulting conclusion that tree impacts per linear foot would be similar to those associated with the Jeep Trail improvement.

In conclusion, the High Road option results in approximately 2,800 linear feet of additional road improvement, approximately 300 linear feet of additional new road construction, and 3 additional new or replacement bridges, compared to the Jeep Trail option. In addition, the High Road option results in a 50% increase in the number of trees impacted and an additional 4.5 acres of new road construction disturbance area/habitat, compared to the Jeep Trail option.

Parking for Construction Workers

In order to minimize traffic impacts during construction, on-site parking will be limited to 12 temporary parking spaces for equipment in use and workers. The first phase of the project involves access road improvements beginning in the fall of 2012. During this initial phase, an existing Caltran's Park and Ride lot near the intersection of Laureles Grade Road and Highway 68, with 18 spaces or more, will be used. Laborers would be shuttled by minibus back and forth from this location to the access road improvement sites. Once work starts on the dam removal, temporary Park and Ride lots will be constructed in the Carmel Valley area to accommodate up

to 80 workers. The location of these lots has not been determined at this time. The temporary Park and Ride lots will require future discretionary permits from Monterey County.

Sensitive Habitat

Sensitive habitats within the project area were identified and mapped for California Red Legged Frog, steelhead, California tiger Salamander and Monterey spineflower. The Landscape Restoration Plan (see Section 3 and Attachments F and G in **Exhibit E**, Project Application) includes the following:

- *Riparian*: Approximately 19.8 acres of riparian vegetation will be planted in a corridor paralleling the banks of the reconstructed river.
- *Wetland*: Approximately 3 acres of wetlands will be restored to achieve a no net loss of wetland and provide habitat for California Red Legged and other wildlife.
- *Upland*: Oak woodlands, chaparral and scrub are proposed for upland restoration in appropriate locations.

Habitat construction activities would be completed at the end of each construction season, but most restoration would occur during the forth construction year. These activities include collection, growing, installation and maintenance of replacement plants in the restoration areas.

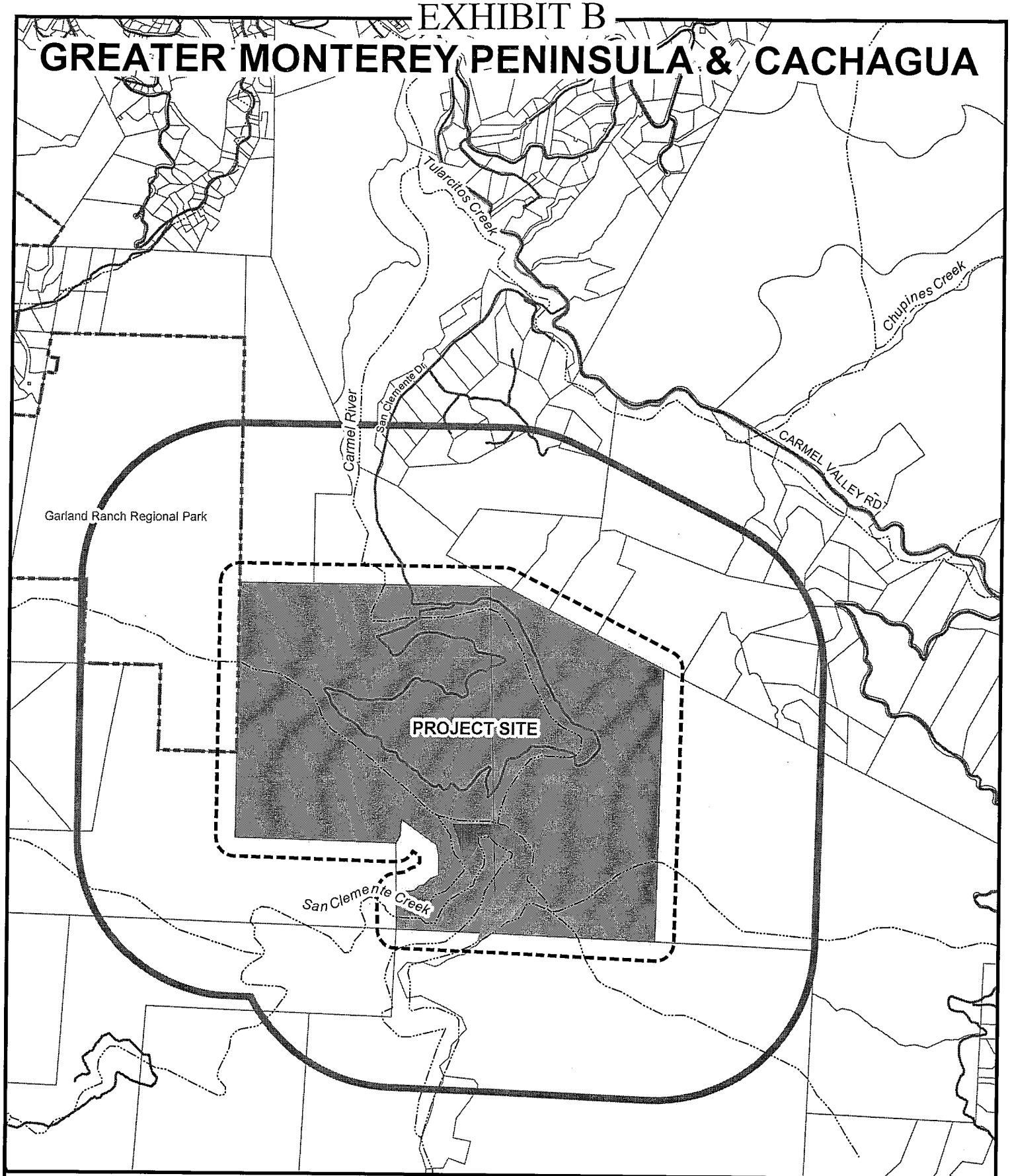
Recommendation

Staff recommends that the Planning Commission hold a workshop to consider and provide direction to staff on the proposed project. Issues that the Planning Commission may want to discuss include the following:

1. Are the proposed tree removals the minimum necessary to implement the project?
2. Is the proposed primary construction access route (i.e., Tassajara Road through Cachagua Road and the Jeep Trail from the southeast) the preferred route?
3. Are there any alternatives that could lessen the construction period impacts, particularly in regard to the road improvements proposed on the construction access routes along Cachagua Road and the Jeep Trail.

EXHIBIT B

GREATER MONTEREY PENINSULA & CACHAGUA



APPLICANT: CAL-AM WATER CO (SAN CLEMENTE DAM REMOVAL)

APN:417-051-004-000 & 417-051-005-000 **FILE #** PLN110373

Water | 2500' Limit | 300' Limit | City Limits

N

0 2,000
Feet

MONTEREY COUNTY CALIFORNIA • 1850 •

PLANNER: SCHUBERT

EXHIBIT C

MINUTES

Carmel Valley Land Use Advisory Committee

Monday, July 2, 2012

1. **Meeting called to order by** Janet Brennan at 6:28 pm

2. **Roll Call**

Members Present: John Anzini, Janet Brennan, David Burbidge, Judy MacClelland, Doug Pease

Members Absent: Neil Agron, Charles Franklin

3. **Approval of Minutes:**

A. June 18, 2012 minutes

Motion: John Anzini (LUAC Member's Name)

Second: Doug Pease (LUAC Member's Name)

Ayes: 4

Noes: 0

Absent: 2 (Agron, Franklin)

Abstain: 1 (Brennan)

4. **Public Comments:** The Committee will receive public comment on non-agenda items that are within the purview of the Committee at this time. The length of individual presentations may be limited by the Chair.

None

5. **Scheduled Item(s)**

6. **Other Items:**

A) Preliminary Courtesy Presentations by Applicants Regarding Potential Projects

None

B) Announcements

Janet Brennan announced that the July 16, 2012 LUAC meeting will be held at the Mid Valley Fire Station.

7. **Meeting Adjourned:** **7:10** pm

Minutes taken by: Judy MacClelland

Minutes received via email July 4, 2012

Action by Land Use Advisory Committee
Project Referral Sheet

Monterey County Planning Department
168 W Alisal St 2nd Floor
Salinas CA 93901
(831) 755-5025

Advisory Committee: **Carmel Valley**

Please submit your recommendations for this application by: **July 2, 2012**

Project Title: CALIFORNIA-AMERICAN WATER CO (SAN CLEMENTE DAM REMOVAL)
File Number: PLN110373 **Item continued from 6/18/12 meeting**
File Type: PC
Planner: SCHUBERT
Location: SAN CLEMENTE DAM REGION
Project Description:
Combined Development Permit (formerly PLN080052) consisting of: 1) Use Permit for the removal of the San Clemente Dam and related improvements; 2) Use Permit for the removal of the Old Carmel River Dam and related improvements; 3) Use Permit for development on 25% slopes; and 4) Use Permit for the removal of protected trees. The project includes road improvements on the construction access route along Cachagua Road and the Jeep Trail. The property is located in the San Clemente Dam Region, at the confluence of the Carmel River (River Mile 18.5) and San Clemente Creek, approximately 15 miles southeast of the City of Carmel-by-the-Sea and 3.7 miles southeast of Carmel Valley Village (Assessor's Parcel Number 417-051-004-000; 417-051-005-000; 417-051-001-000; 417-251-002-000-M), Greater Monterey Peninsula Area Plan and Cachagua Area Plan.

Was the Owner/Applicant/Representative Present at Meeting? Yes X No _____

Jeffery Szytel, WSC Water Systems Consulting, Inc.

Was a County Staff/Representative present at meeting? Bob Schubert (Name)

PUBLIC COMMENT:

Name	Site Neighbor?		Issues / Concerns (suggested changes)
	YES	NO	
Deborah McFarland 241 Vista Verde Carmel Valley, CA 93924		X	What kind of earthquake insurance does Cal.-Am have for the existing dams?

LUAC AREAS OF CONCERN

Concerns / Issues (e.g. site layout, neighborhood compatibility; visual impact, etc)	Policy/Ordinance Reference (If Known)	Suggested Changes - to address concerns (e.g. relocate; reduce height; move road access, etc)
Janet Brennan: Requested clarification regarding lead agency for the project application.		
David Burbidge: Changes in streambed. Use of San Clemente Drive as transportation route. Timing of Cachagua Road closure.		
John Anzini: Opposed to project, concern about sediment transport. Asked about local-hire preferences.		

ADDITIONAL LUAC COMMENTS

Judy MacClelland: Requested comparison of pre-project and post-project floodplain.

Janet Brennan: In support of dam removal; dams are destructive to fisheries; project is well-designed.

RECOMMENDATION:

Motion by: Doug Pease (LUAC Member's Name)

Second by: Dave Burbidge (LUAC Member's Name)

X Support Project as proposed

_____ Recommend Changes (as noted above)

_____ Continue the Item

Reason for Continuance: _____

Continued to what date: _____

AYES: 4 (Pease, Burbidge, Brennan, MacClelland,)

NOES: 1 (Anzini)

ABSENT: 2 (Agron, Franklin)

ABSTAIN: 0

EXHIBIT D

URS

DRAFT

Date: July 13, 2012

To: Richard Svindland, PE (California American Water)
Trish Chapman (State Coastal Conservancy)

From: Seth Gentzler, P.E. (URS), John Roadier, P.E. (URS)

Subject: ***Carmel River Reroute & San Clemente Dam Removal Project***
Construction Access Road Alternatives Summary

1.0 PURPOSE

The objective of this memorandum is to summarize the preliminary alternatives analysis associated with construction access to the Carmel River Reroute & San Clemente Dam Removal (CRRDR) Project site. The screening analysis consisted of a preliminary assessment and comparison of potential access route improvements and impacts to natural resources.

2.0 EXISTING CONDITIONS

Under existing conditions, California American Water (CAW) accesses San Clemente Dam (SCD) and the surrounding property via San Clemente Drive off Carmel Valley Road (see Figure 1). Once San Clemente Drive enters CAW property (through a locked gate), there are two options to reach SCD, referred to as the High Road and Low Road.

The Low Road is reserved for incoming traffic, and primarily runs parallel to the Carmel River alignment, crossing the river at the Old Carmel River Bridge (OCRD), and extending to the top of the SCD left abutment (see Figure 1). The Low Road is a dirt road with a typical width ranging from 10-12 feet, with minimal shoulders. The uphill slope from the road is typically vertical or near vertical rock extending up several hundred feet to the top of the canyon wall. The downhill slope from the road is typically a vertical or near vertical slope extending directly down into the active Carmel River channel.

The High Road is reserved for outgoing traffic, and extends from the top of the SCD left abutment up over the adjacent hillside, then down to a low water crossing at the Carmel River near the Sleepy Hollow Rearing Facility, joining back up with San Clemente Drive near the CAW gate (see Figure 1). The High Road is a dirt road with a typical width ranging from 10-12 feet, with minimal shoulders. The uphill slope from the road is typically vertical or near vertical rock extending up to the top of the canyon wall. The downhill slope from the road is typically a vertical or near vertical slope extending down the adjacent hillside.

The base of SCD can be accessed via an extension off of the Low Road, referred to as the Plunge Pool Road, which diverts from the Low Road at OCRD (see Figure 1).

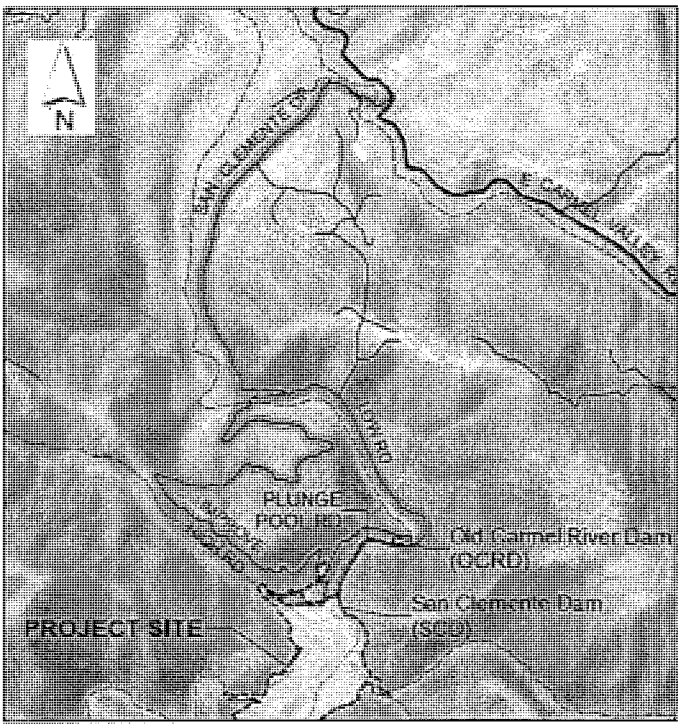


Figure 1. Existing Access to SCD

3.0 PROPOSED ALTERNATIVES

Initially, three primary routes were considered for construction access to the site. The three options were as follows:

1. San Clemente Drive to the Low Road (Low Road option)
2. San Clemente Drive to the High Road (High Road option)
3. Cachagua Road to the Jeep Trail (Jeep Trail option)

Option 1 above (San Clemente Drive to the Low Road) was screened out due to the lack of practical and feasible options to improve the road, in addition to safety concerns associated with falling rock and landslides from the uphill slope adjacent to the road.

This memorandum focuses on the comparison between the High Road option and the Jeep Trail option, as described in detail below.

3.1 High Road Option

The High Road option would involve improvement of San Clemente Drive (inside of the CAW gate) and the High Road to accommodate construction traffic. At a minimum, this would include improving approximately 14,300 linear feet of existing dirt road to a minimum width of 18 feet and providing a 12-foot wide travel surface of graded aggregate base. The width increase would result in fairly significant uphill and downhill daylight slopes along the alignment, impacting a significant number of existing trees and habitat. Since the High Road currently only extends to the top of SCD, a High Road extension would need to be constructed (approximately 3,300 linear feet) for equipment to access the work area. The High Road extension alignment (solid yellow lines) and impact area (dashed red lines) are shown in Figure 2.

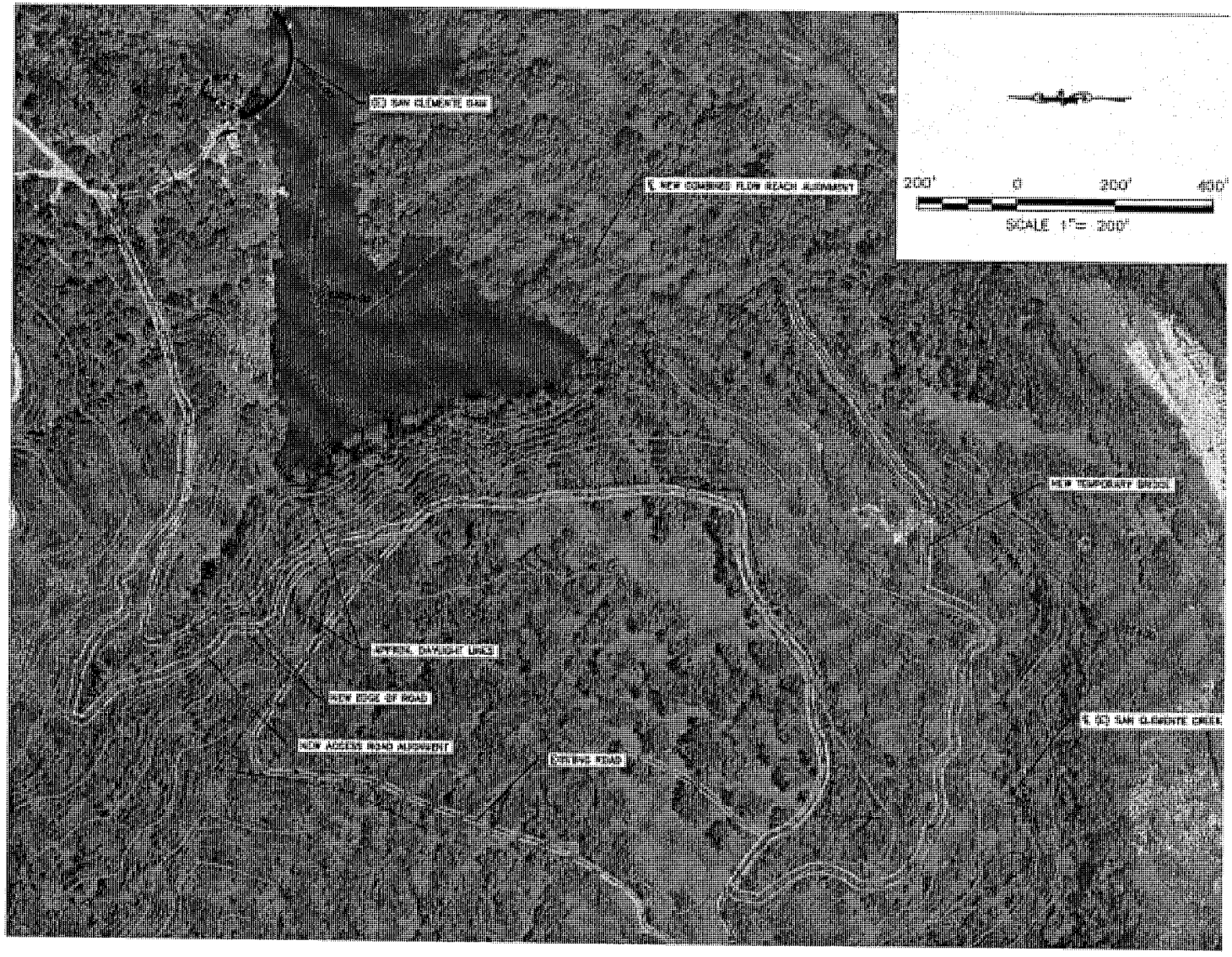


Figure 2. High Road Extension

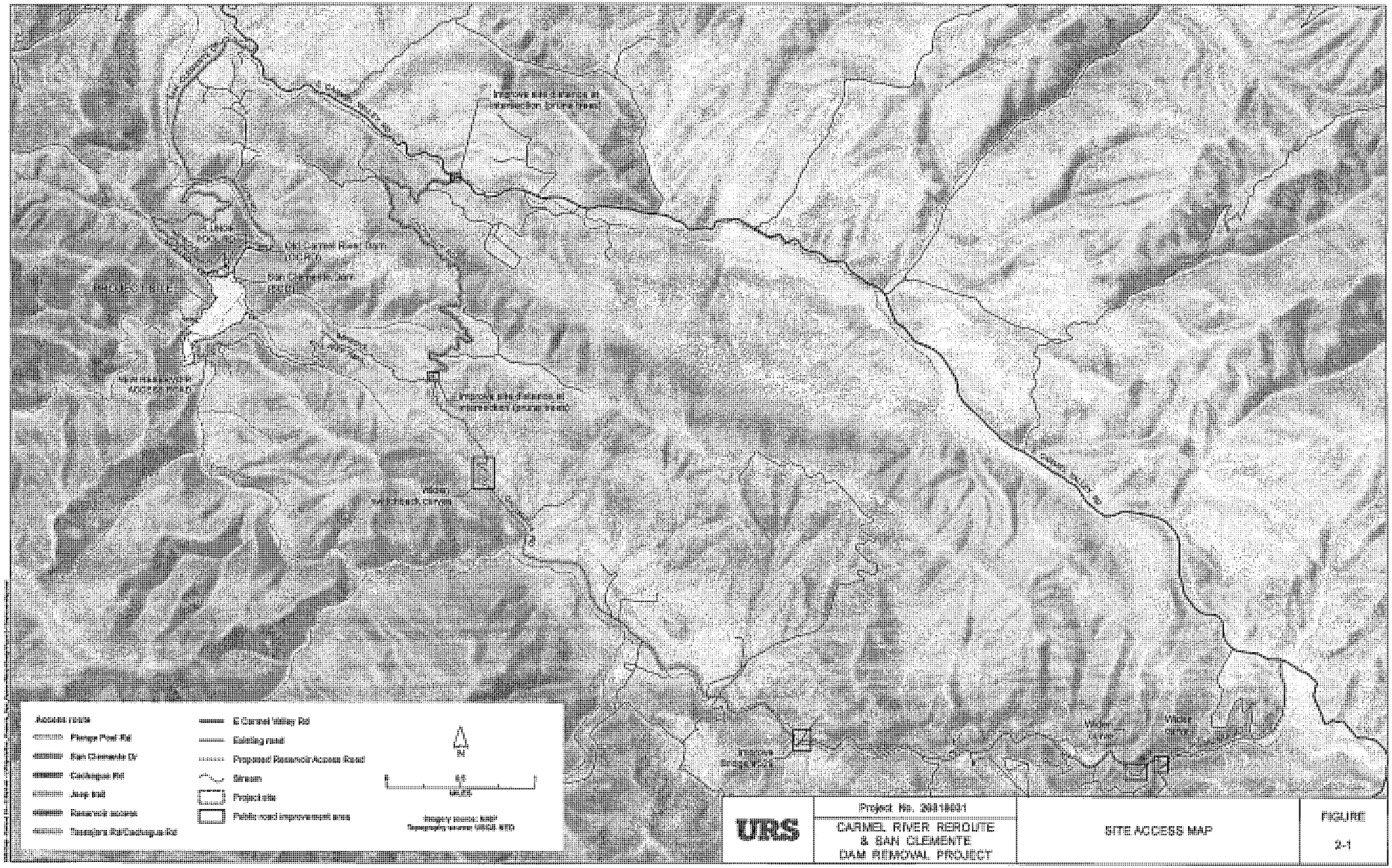
In addition to the road improvement discussed above, the San Clemente Drive bridge across Tularcitos Creek would need to be replaced, and two new bridges would need to be constructed, one across Carmel River at the Sleepy Hollow ford, and one across San Clemente Creek, to access the work area.

3.2 Jeep Trail Option

The Jeep Trail option would involve accessing the project work area via the Jeep Trail and a new reservoir access road, which would enter the site from east of the existing reservoir. The existing Jeep Trail is an access road owned and maintained by the Monterey Peninsula Regional Parks District (MPRPD), and extends from Cachagua Road, winding through the hillsides adjacent to the site. Depending on the type of construction traffic accessing the site, the route to the Jeep Trail would either be via Cachagua Road off of Carmel Valley Road, or via Tassajara Road off of Carmel Valley Road, connecting to south Cachagua Road (see Figure 2-1).

Improvements to the Jeep Trail would include improving approximately 11,500 linear feet of existing dirt road to a minimum width of 18 feet and providing a 12-foot wide travel surface of graded aggregate base (yellow highlights on Figure 2-1). The width increase would result in uphill and downhill daylight slopes along the alignment, impacting existing trees and habitat. A new reservoir access road (approximately 3,000 linear feet shown in magenta on Figure 2-1) would need to be constructed to connect the Jeep Trail to the work area.

In addition to the road improvements summarized above, a number of public road improvements would be required to accommodate construction traffic. Improvements would be needed in six separate locations (as shown on Figure 2-1) and would involve expanding the road width to allow for a greater turning radius, thinning vegetation to improvement sight distance, and adding structural supports to one bridge (Bridge #529 on Cachagua Road) to allow for the weight of construction equipment.



URS	Project No. 38618601	SITE ACCESS MAP	FIGURE
	CARMEL RIVER REROUTE & SAN CLEMENTE DAM REMOVAL PROJECT		2-1

4.0 CONCLUSIONS

Table 1 provides a summary of key components and impacts associated with the two access route options.

Table 1. Access Route Option Summary

Access Element	Jeep Trail Option	High Road Option
Length of Existing Road Improvement (18' width)	11,500 linear feet	14,300 linear feet
Existing Road Improvement Trees Impacted	352 trees	438 trees*
Length of New Road Construction	3,000 linear feet	3,300 linear feet
New Road Disturbance Footprint	2.8 acres	7.3 acres
New Road Trees Impacted	134 trees	291 trees
Total Trees Impacted	486 trees	729 trees
Existing Bridge Improvement	Minor improvements to Bridge #529 on Cachagua Road	Replacement of Bridge at Tularcitos Creek
New Bridge Construction and Associated Impacts	None	Two (2) New Bridges: at Sleepy Hollow Ford and San Clemente Creek

*Tree estimate for the High Road improvement is based on review of aerial photographs, and a resulting conclusion that tree impacts per linear foot would be similar to those associated with the Jeep Trail improvement.

The High Road option results in approximately 2,800 linear feet of additional road improvement, approximately 300 linear feet of additional new road construction, and 3 additional new or replacement bridges, compared to the Jeep Trail option. In addition, the High Road option results in a 50% increase in the number of trees impacted and an additional 4.5 acres of new road construction disturbance area/habitat, compared to the Jeep Trail option.