

**MINUTE ITEM**

This Calendar Item No. C20 was approved as Minute Item No. 20 by the California State Lands Commission by a vote of 3 to 0 at its 9-3-99 meeting.

**CALENDAR ITEM  
C20**

A 5, 10

PRC 8103

09/03/99

S 5, 6

W 25491

D. Jones

**GENERAL LEASE - PUBLIC AGENCY USE**

**LESSEE:**

California Department of Fish and Game  
Water and Aquatic Habitat Conservation Branch  
1416 Ninth Street, Room 1341  
Sacramento, California 95814

**AREA, LAND TYPE, AND LOCATION:**

3 acres, more or less, of sovereign lands in the lower American River, near the city of Sacramento downstream of Nimbus Dam, Sacramento County.

**AUTHORIZED USE:**

Salmon and Steelhead Habitat Improvement Project at six sites between River Mile 18.5 (Sacramento Bar) and River Mile 23 (Sailor Bar). The sites are named Project Sites 2, 3, 7, 37, 39, and 42.

**LEASE TERM:**

Five years, beginning August 1, 1999.

**CONSIDERATION:**

The public use and benefit; with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interest.

**OTHER PERTINENT INFORMATION:**

1. Applicant has a right to use the uplands adjoining the lease premises.
2. A Mitigated Negative Declaration and Mitigation Monitoring Program were prepared and adopted for this project by the California Department of Fish and Game. The California State Lands Commission's staff has reviewed such documents.

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3. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code sections 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.
  
4. The California Department of Fish and Game is implementing a pilot salmon and steelhead habitat improvement project on the lower American River. It involves a five mile reach between Nimbus Dam downstream to Sacramento Bar and is within the boundaries of the American River Parkway Regional Park. The project proposes to evaluate methods and management techniques used to increase and improve chinook salmon and steelhead spawning habitat by loosening and redistributing layers of coarse, compacted gravel, and by adding 6,000 tons of gravel at six locations along a five mile reach of the lower American River to compensate for the dam-related losses of spawning gravel. The goal is to re-establish a range of gravel sizes more suitable for spawning use. The Department will monitor the project for three to five years.

**APPROVALS OBTAINED:**

U.S. Army Corps of Engineers, U.S. Department of the Interior, California Department of Fish and Game, California Regional Water Quality Control Board, The Reclamation Board, Sacramento County Department of Regional Parks, Recreation, and Open Space.

**EXHIBITS:**

- A-1 Site Maps  
to A-3
- B-1 Location Map  
to B-3
- C. Mitigation Monitoring Program

**PERMIT STREAMLINING ACT DEADLINE:**

November 22, 1999

**RECOMMENDED ACTION:**

IT IS RECOMMENDED THAT THE COMMISSION:

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CALENDAR ITEM NO. C20 (CONT'D)

**CEQA FINDING:**

1. FIND THAT A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING PROGRAM WERE PREPARED AND ADOPTED FOR THIS PROJECT BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. ADOPT THE MITIGATION MONITORING PROGRAM, AS CONTAINED IN EXHIBIT C, ATTACHED HERETO.

**SIGNIFICANT LANDS INVENTORY FINDING:**

FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED BY THE COMMISSION FOR THE LAND PURSUANT TO PUBLIC RESOURCES CODE SECTIONS 6370, ET SEQ.

**AUTHORIZATION:**

AUTHORIZE ISSUANCE TO CALIFORNIA DEPARTMENT OF FISH AND GAME OF A GENERAL LEASE - PUBLIC AGENCY USE, BEGINNING AUGUST 1, 1999, FOR A TERM OF FIVE YEARS, FOR A SALMON AND STEELHEAD HABITAT IMPROVEMENT PROJECT ON THE LAND SHOWN ON EXHIBITS A-1 THROUGH A-3 ATTACHED AND BY THIS REFERENCE MADE A PART HEREOF; CONSIDERATION BEING THE PUBLIC USE AND BENEFIT, WITH THE STATE RESERVING THE RIGHT TO SET A MONETARY RENT IF THE COMMISSION FINDS SUCH ACTION TO BE IN THE STATE'S BEST INTEREST.

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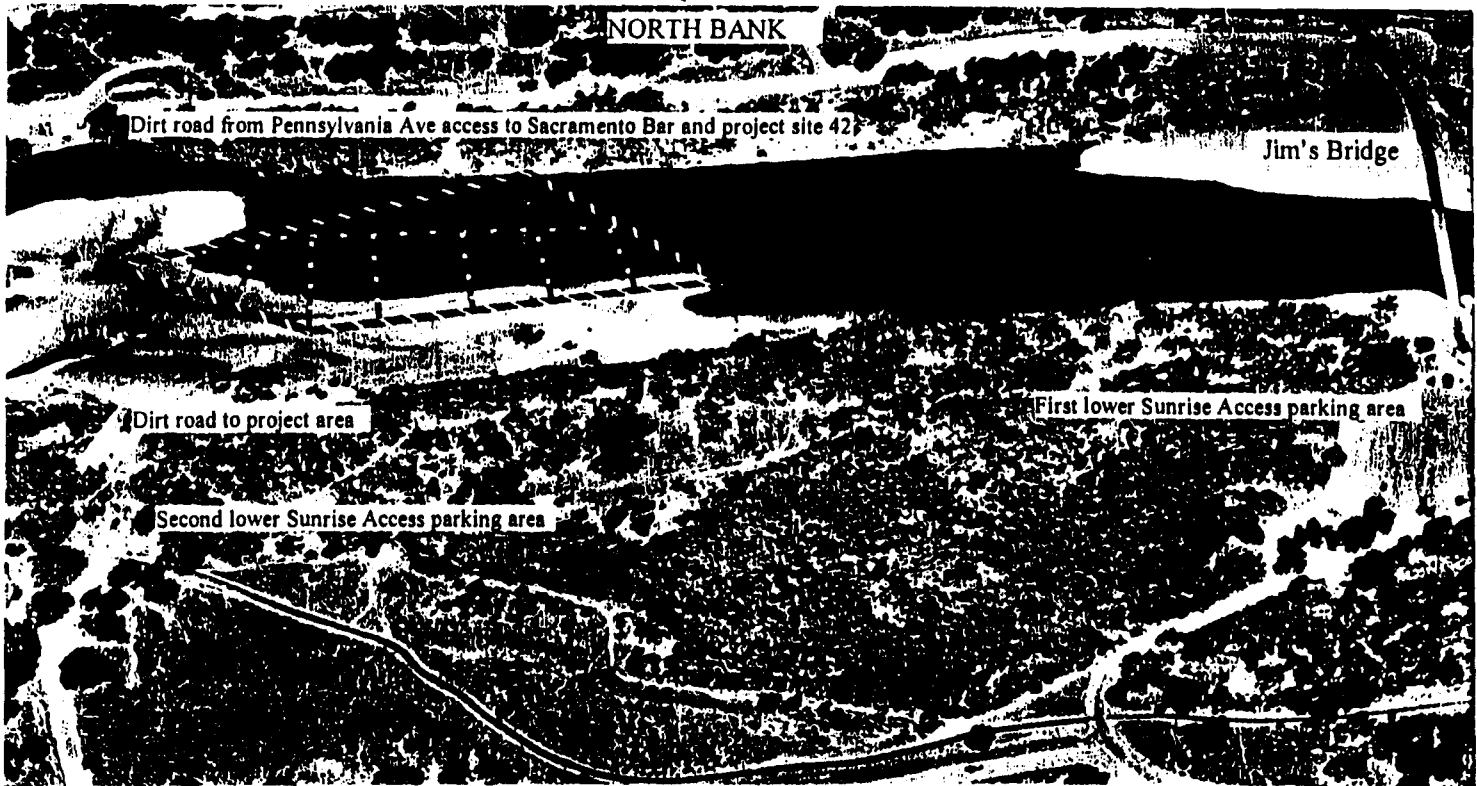
Project Site 42. Sacramento Bar, American River Parkway, Sacramento CA. River access: north on Sunrise Blvd. Right on South Bridge Street. Through entrance kiosk and left to lower Sunrise parking area. Through first parking area to Jim's Bridge. Across bridge to the north side of the river to the Pennsylvania Ave. access area. Left on first dirt road after bridge. Dirt road to parking area and trail access to Sacramento Bar. The red and white dashed lines define habitat unit 42. The black and white dashed lines define the limits of the project area.

This exhibit is solely for purposes of generally defining the area to be leased, and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or other property.

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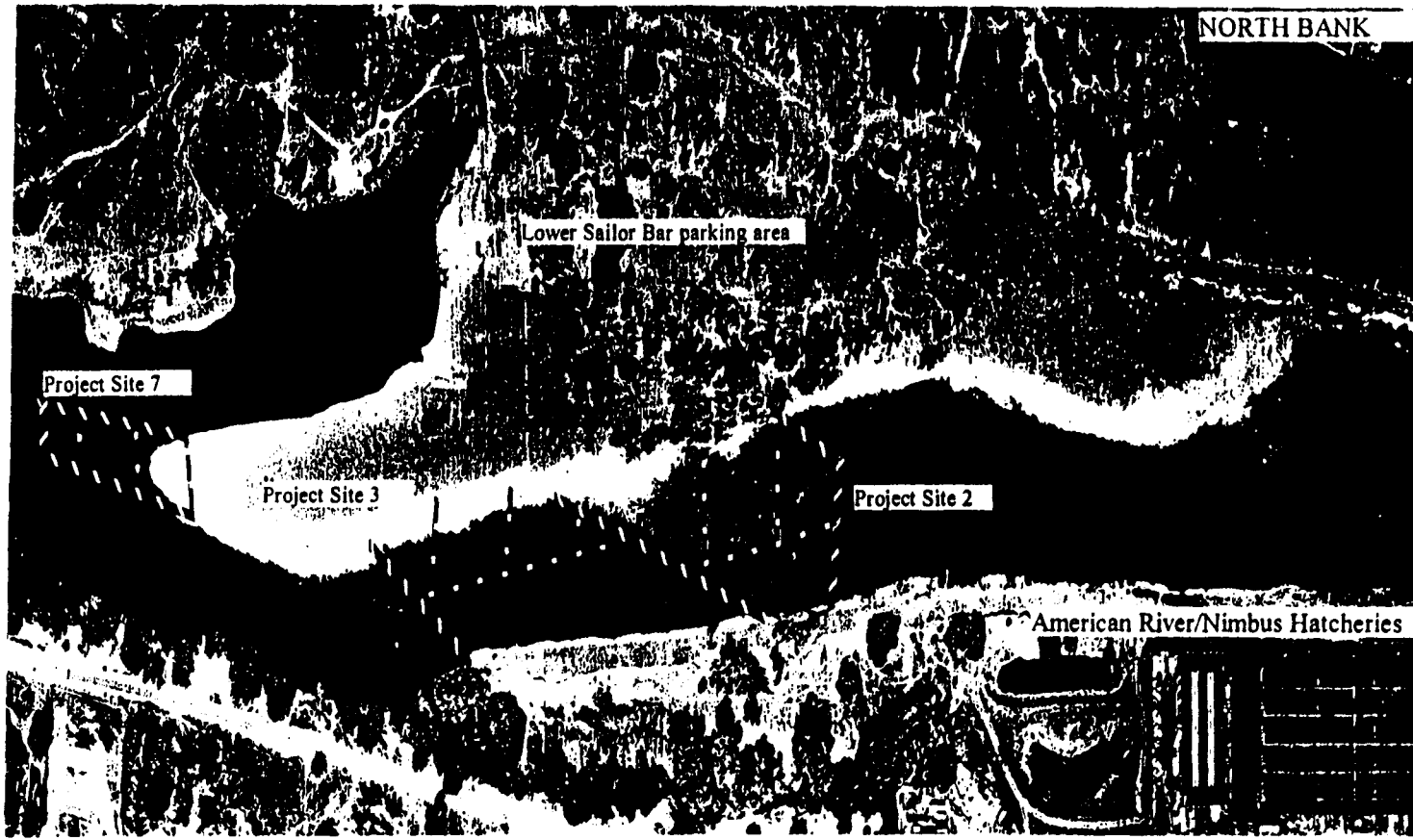
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Project Sites 37 and 39. Lower Sunrise Access area, American River Parkway, Sacramento, CA. River access: north on Sunrise Blvd. Right on South Bridge St. Through entrance kiosk and left to lower Sunrise parking area. Through first parking area to end of road and right into second and last parking area. North towards river and dirt road down to project site. The red and white dashed lines define habitat units 37 and 39. The black and white dashed lines define the limits of the project area.

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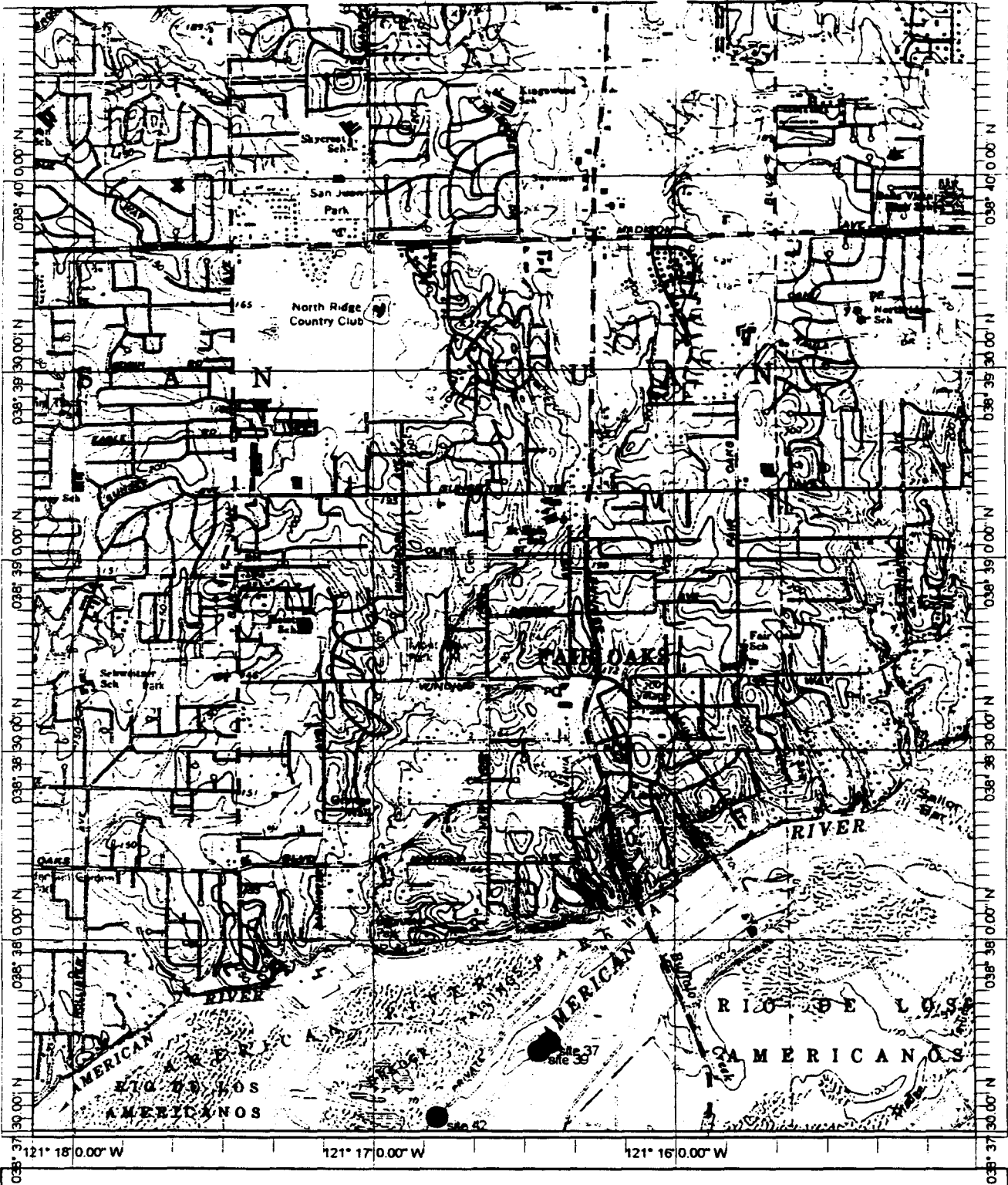


Project Sites 2, 3, and 7. Sailor Bar, American River Parkway, Sacramento, CA. River access: Highway 50 east to Hazel Ave. North on Hazel Ave. Left on Winding Way. Left on Illinois Avenue, through entrance kiosk bearing to the left to lower Sailor Bar parking area. The red and white dashed lines define habitat units 2, 3, and 7. The black and white dashed lines define the limits of the project area.

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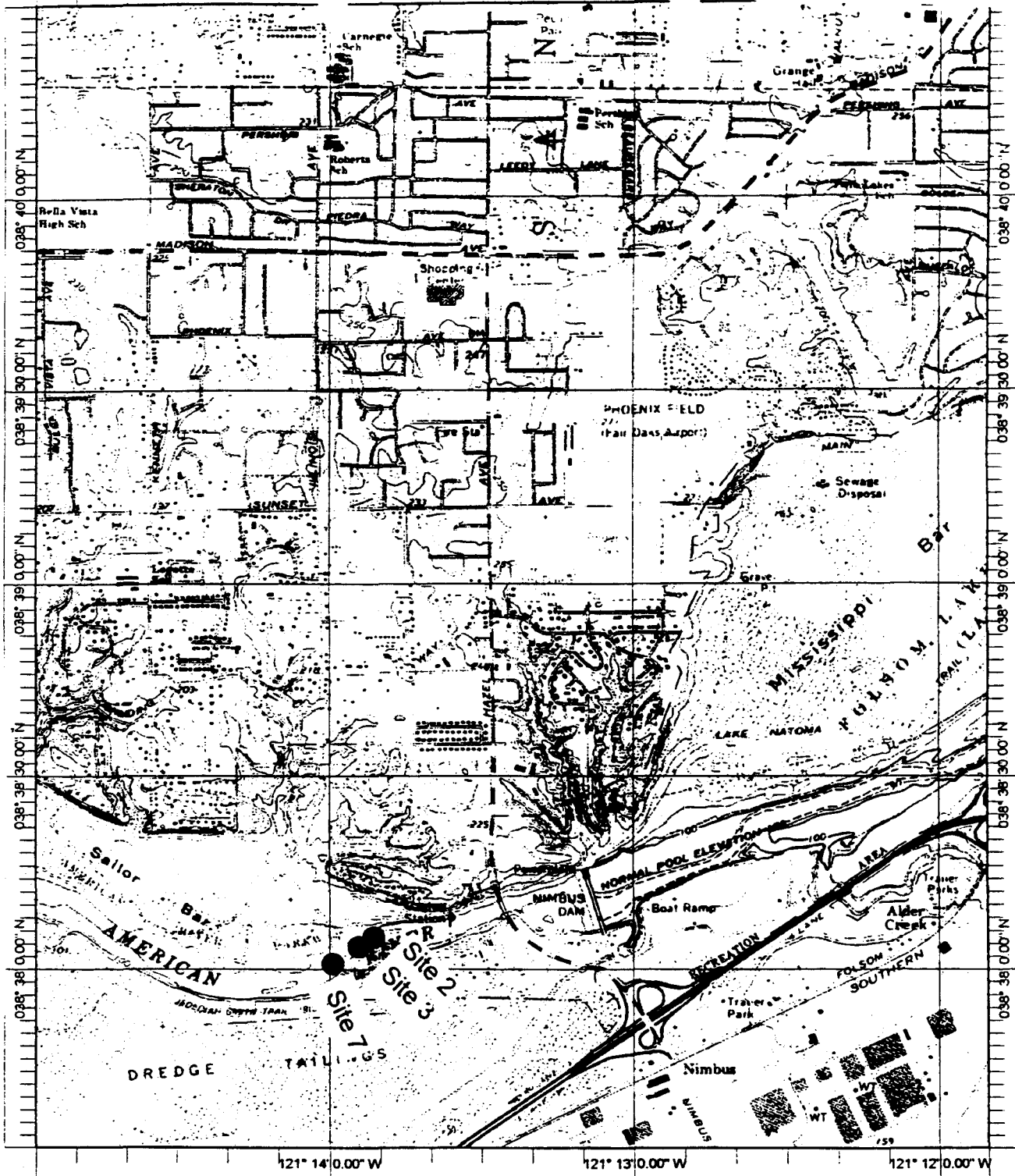


Name: CITRUS HEIGHTS  
 Date: 4/21/99  
 Scale: 1 inch equals 2000 feet

Location: 038° 38' 58.1" N 121° 16' 34.2" W  
 Caption: Pilot Salmon and Steelhead Spawning Habitat Improvement  
 Project, sites 37, 39 and 42, American River Parkway.

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Name: FOLSOM  
 Date: 4/21/99  
 Scale: 1 inch equals 2000 feet

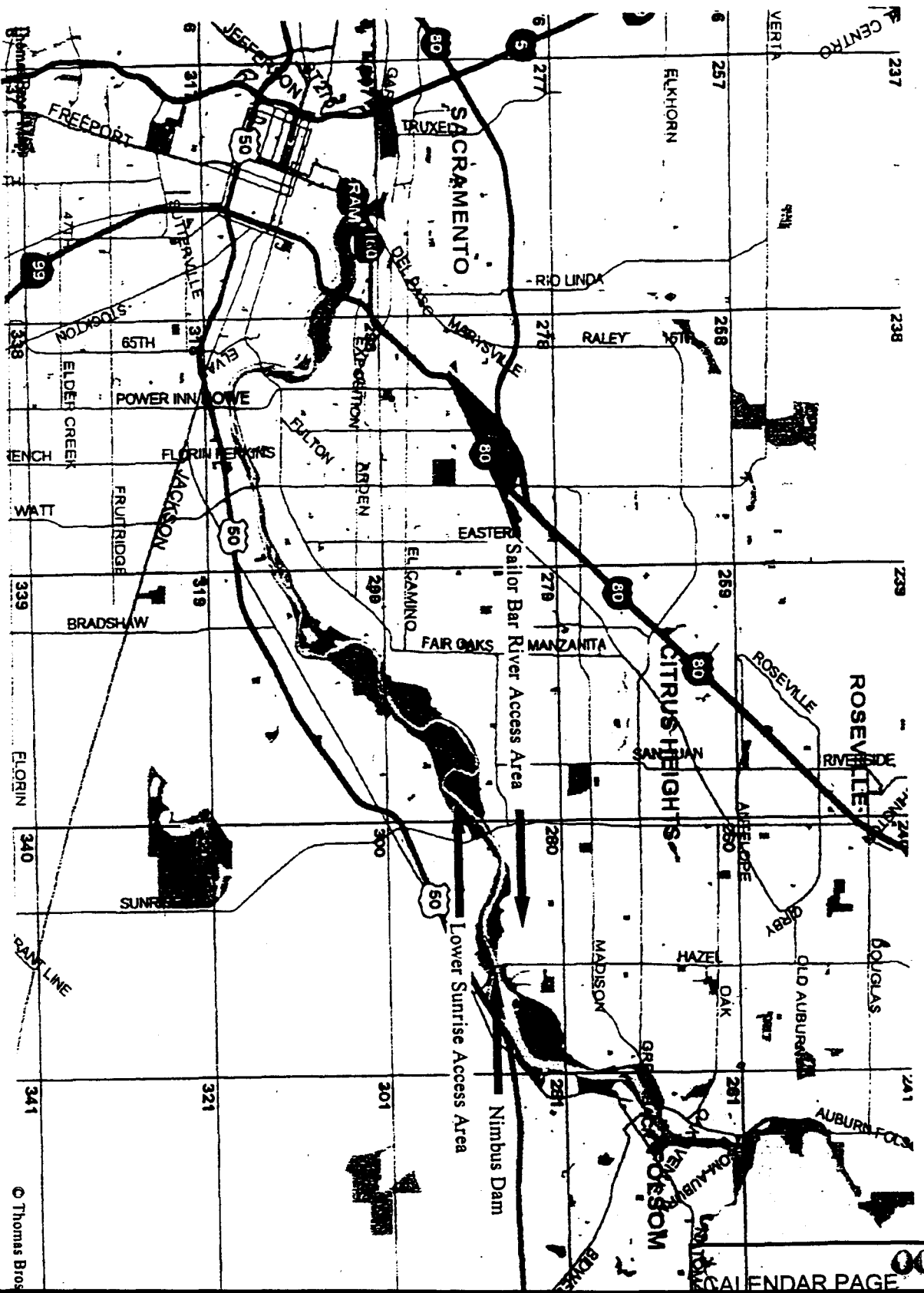
Location: 038° 39' 01.0" N 121° 13' 24.2" W  
 Caption: Pilot Salmon and Steelhead Spawning Habitat Improvement  
 Project, sites 2, 3 and 7. American River Parkway

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 MINUTE PAGE **Exhibit B-2006254**  
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AMERICAN RIVER AREA LOCATION MAP



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EXHIBIT C

American River  
Pilot Salmon and Steelhead  
Spawning Habitat Improvement Project

Initial Study - Response

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# INITIAL STUDY RESPONSE SHEET

## American River Pilot Salmon and Steelhead Spawning Habitat Improvement Project

### IV. WATER. Would the proposal result in:

- c. Discharge into surface waters or other alteration of surface water quality (e.g., temperature, dissolved oxygen, or turbidity)?
- d. Changes in the amount of surface water in any body of water?

This project proposes to use large construction equipment to loosen the gravel substrate and to add a total of 6000 tons of appropriately sized gravel to several salmon spawning sites or potential spawning sites within the 5 mile reach of the American River downstream of Nimbus Dam.

Extensive sampling of the gravel substrate has shown that silt and fine sands generally are not abundant in the project reach. Further, where fine sediment occurs it rarely occurs in the range of sizes or amounts detrimental to salmon and steelhead spawning or subsequent incubation of their embryos. Nevertheless, some fine sediment will inevitably be mobilized by the equipment working in the river.

In order to allow safe and effective operation of construction equipment at the project sites river flows at or below 2,000 cubic feet per second (cfs) are necessary. Flows in the lower American River are controlled by releases from Folsom and Nimbus dams. April projections of late summer 1999 dam releases indicate there is a 90 percent chance that flows will be at least 2,500 cfs, and a 50 percent chance that flows of at least 4,000 cfs will occur. Therefore, it's possible that a temporary reduction in the predicted flows may become necessary.

**Mitigation Measure: c. turbidity.** This project has been designed and will be implemented consistent with the requirements of the CDFG Streambed Alteration Agreement (1601 permit) and the Regional Water Quality Control Board (RWQCB) Basin Plan objectives for turbidity and sedimentation. All project gravel will be washed according to RWQCB requirements prior to placement in the river (Method of Test for Evaluating Cleanness of Coarse Aggregate, Department of Transportation, California Test 227, July 1, 1982).

The biological effect of the short-term episodic generation of turbidity has generally been found to be temporary— probably due to the behavioral avoidance of turbid water by most mobile aquatic species. Project-related work at each site will be constrained to 50 percent or less of the overall channel width at 2,000 cfs in order to provide fish or other mobile aquatic species present ready access to undisturbed habitat adjacent to and upstream of each project site.

	average channel width @ project sites at 2,000 cfs	portion of channel width disturbed by project	portion of undisturbed channel and habitat available immediately adjacent to project site
project site 2	230'	80'	150' or 65% undisturbed channel x-section
project site 3	150'	46'	104' or 69% undisturbed channel x-section
project site 7	345'	92'	253' or 73% undisturbed channel x-section
project sites 37&39	253'	115'	138' or 55% undisturbed channel x-section
project site 42	230'	115'	115' or 50% undisturbed channel x-section

**Mitigation Measures: c. and d. temperature and surface water flow.** If flow is reduced from 2,500 cfs or greater, to between 1,750 and 2,000 cfs for equipment operation, river temperatures will likely increase dependant upon ambient air temperatures. Some bank and bar edges may be dewatered as well.

c. In order to assure that temperature does not increase, one or more of the following project-related changes will be needed, dependant upon preproject flow and water temperatures:

- Maintain river flows at pre-project levels and scale back the in-channel portion of each project area requiring equipment access.
- Decrease projected river flows to project design levels (1,750 to 2,000 cfs) and maintain pre-project ambient river temperatures with cold water pool releases from Nimbus Dam. Cold water pool releases will be analyzed in the context of availability and the impact of its use on aquatic resources that may be dependant on post-project pool releases.
- Increase the level of effort or reduce the project scope to shorten the time period that flows are reduced.
- Cancel the project.

d. Preliminary results of a flow fluctuation study currently being conducted by the CDFG indicate that during August and September the projected flow levels of 2,500 and 4,000 cfs are unlikely to result in the stranding and isolation of juvenile steelhead. The aquatic habitat most affected by changes in flow below 4,000 cfs tends to be low profile banks and mid-channel bars. A few isolation ponds are also created by reductions in flow between 4,000 and 1,750 cfs. Low profile bars are sensitive to small decreases in stage that can dewater or partially dewater the slopes of the bars. Pre-project seining surveys (1996, 1998) indicate juvenile steelhead ranging from 89 to 154 millimeters fork length likely occur at the project sites during project-related

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reductions in flow. Given their size and swimming ability any juvenile steelhead present in low profile bar habitat will leave the area per the following ramping schedule: a maximum ramping rate for flow reductions below 5,000 cfs is 500 cfs per day and 50 cfs per hour.

**VI. TRANSPORTATION/CIRCULATION.** Would the proposal result in:

- a. Increased vehicle trips or traffic congestion?
- b. Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e. Hazards or barriers for pedestrians or bicyclists?
- g. Rail, waterborne, or air traffic impacts?

The project sites have, in part, been selected to minimize the likelihood of conflict between the construction equipment necessary for the project and the activities of pedestrians, equestrians, bicyclists, and boaters using the parkway. However, some interaction is inevitable. To minimize the impact on the natural environment, existing parking lots, roads, and portions of the parkway bike path used for public access will be used or crossed during project construction. The construction equipment necessary to transport and place gravel at the project sites will temporarily increase local vehicle traffic in and around each project site.

The project sites are all located in areas that receive moderate late summer and fall recreational use. The major use at each site is fishing, kayaking, and rafting. The project will be constructed before the peak fall fishing season begins, and after the peak commercial and private rafting season has past. However, individual fisherman, rafters and kayakers may be affected.

**Mitigation Measures: a. b. and e.** All project-related access of the parkway in general, and to the project sites specifically, will be planned in consultation with Sacramento County Department of Regional Parks, Recreation and Open Space personnel.

Equipment access, maintenance, refueling, parking and staging areas will be identified in consultation with Sacramento County Department of Regional Parks, Recreation and Open Space personnel prior to project implementation.

The work will be carried out with the least possible inconvenience to the general public, and all barricades, signs, flag men, or other warning devices necessary to ensure the safe passage of all parkway users will be in place prior to project implementation.

**Mitigation Measures: g.** Public notices will be distributed to local papers, recreational publications, and local radio and television stations. High-visibility signs describing the project work and warning anglers and boaters of active construction will be posted at parkway boating

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ramps and public access points in the vicinity of the project sites, as well as in the river up- and downstream of the project sites.

**VII. BIOLOGICAL RESOURCES.** Several sensitive plant and animal species or potential habitats for these species are known to occur in the project reach. Based on the results of pre-activity surveys, changes in project scope or location will be made as necessary to avoid negative impacts to these species and their habitats.

Information on the occurrence of sensitive species and habitats in the project reach and specific project sites was compiled from past and ongoing survey work by California Department of Fish and Game (CDFG) project staff, and a search of the California Natural Diversity Data Base (NDDDB) for USGS quadrangles encompassing the immediate project area (Carmichael, Citrus Heights, Sacramento East, and Folsom 7.5 mm quadrangle sheets), as well as adjacent quadrangles (Pilot Hill, Rocklin, Roseville, Pleasant Grove, Rio Linda, Taylor Monument, Sacramento West, Clarksburg, Florin, Elk Grove, Sloughouse, Buffalo Creek, Folsom SE, and Clarksville). Species lists may be found in Appendix II.

**Mitigation measures; a, b, c, d and e.** The occurrence of sensitive aquatic species and the measures to avoid deleterious impacts to them are discussed below:

**Aquatic Biota.** The lower American River supports approximately 40 species of fish. Splittail and four species of anadromous fish — fall run chinook salmon, steelhead, striped bass, and American shad — are of primary management concern. During the last half of August and first half of September, when project construction is planned, over summering steelhead and early arrival fall run chinook salmon will be in the river. Sacramento Splittail (*Pogonichthys macrolepidotus*)(CDFG species of special concern, federal status threatened) have not been found in the project reach of the river at anytime during the past eight years of fish community surveys conducted by the CDFG.

**Steelhead (*Oncorhynchus mykiss*).** Federal status threatened. Adult steelhead returning to spawn are not expected to be adversely affected by the project. Although the proposed project sites are in areas known to be used or are potentially usable by steelhead as spawning habitat, steelhead typically do not spawn in the lower American River until late December or early January.

Juvenile steelhead have been found in habitat units up- and downstream stream of the project sites during August and September. Pre-project seining surveys (1996, 1998) found juvenile fish ranging in fork length from 89 to 154 millimeters in four habitat units in the project reach. Three of these habitat units are proximal to, and have water depths and velocities similar to, the proposed project sites. Therefore, the potential exists that juvenile steelhead may be present at the project sites during the proposed construction window.

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As with the behavioral avoidance of turbid water by most mobile aquatic species, juvenile steelhead approaching or exceeding 100 millimeters are physiologically able to leave disturbed areas of the channel and, if provided the opportunity, are expected to leave the project area with the onset of construction. Project-related work at each site will be constrained to 50 percent or less of the overall channel width in order to provide adult or juvenile fish (or other mobile aquatic species) present ready access to undisturbed habitat adjacent to and upstream of each project site.

**Fall run chinook salmon (*Oncorhynchus tshawytscha*).** Proposed for federal status as a threatened species. Fall run chinook salmon are not expected to be adversely affected by the project. Although early arrival fall run chinook salmon are expected to be in the river, they tend to hold in deeper, run and glide habitat to await the drop in water temperatures typically coincident with the onset of spawning. Based on the results of spawning surveys (1991-98), fall run chinook salmon are not expected to move into and begin spawning in habitat typical of the project areas until October.

The proposed work is not expected to redistribute fine sediment in amounts detrimental to anadromous fish spawning activities. Sampling of the gravel substrate has shown that silt and fine sands generally are not abundant in the project reach. Further, where sand and fine gravel is abundant it rarely occurs in the range of sizes or percentages detrimental to salmon and steelhead spawning or subsequent incubation of their embryos.

Prior to initiation of the project, consultation with the National Marine Fisheries Service (NMFS) will be conducted to refine the allowable construction period and any other procedures necessary to avoid adverse impacts to the anadromous fish that are listed (steelhead, *Oncorhynchus mykiss*) or proposed for listing (fall run chinook salmon, *Oncorhynchus tshawytscha*) under the federal Endangered Species Act. All measures recommend by NMFS for protection of these species will be implemented.

**Western pond turtle (*Clemmys marmorata marmorata*).** CDFG and federal species of special concern. Western pond turtles are common to uncommon in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest, and is the only abundant native turtle in the state. The species is associated with permanent or nearly permanent water in a wide variety of habitat types including ponds, lakes, streams and irrigation ditches. Nesting takes place during spring or early summer.

A single reported occurrence of western pond turtles in the project reach of the lower American River is from a small pond in Ancil Hoffman Park— a site completely within a nature study area and not proximal to any of the project sites. It is unlikely that project activities will have any affect on the species. However, western pond turtles have occasionally been observed basking along the edge of the river in the project reach (personal observation, K. Vyverberg, CDFG, and

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marginal habitat for the turtle may exist near several of the project sites. Therefore, before construction begins, CDFG staff will conduct a site survey to identify the presence of the species and its habitat. Construction activities will be altered to ensure no damage occurs to either the species or its potential habitat.

**Aquatic invertebrates.** Although no sensitive aquatic insects or other aquatic invertebrates are known to occur in the project reach, it is anticipated that the planned project-related changes to the river substrate will have a local negative impact on any aquatic invertebrates present. It is anticipated that invertebrate losses related to project activities will be highly localized and short-term due to the propensity of aquatic invertebrates from undisturbed substrate areas to quickly re-colonize adjacent habitat. Further, the planned changes in the substrate may result in a net increase in community abundance and diversity. The necessary stream bed alteration permit (DFG 1601 ) will be acquired.

A multi-season, multi-year survey of community composition has been implemented. In addition to pre-project community composition, the survey will quantify immediate post-project impacts to the community, and monitor the rate of recovery. The first of two pre-project surveys are complete. A taxonomic list from the first pre-project survey of the benthic macroinvertebrates present at each site may be found in Appendix II.

**Terrestrial Biota.** No special status plants or animals are known to occur on the project sites, although several sensitive plant and animal species or potential habitats for these species are known to or may potentially occur in the general vicinity of the project sites. Pre-activity inspections and minor project alterations will prevent impacts to these species and their habitats. CDFG biologists and Sacramento County Department of Regional Parks, Recreation and Open Space personnel will survey each project site before construction and flag areas to be avoided because of possible damage to sensitive terrestrial species or habitats.

The project will not permanently affect existing vegetation. However there will be minimal disturbance to staging areas and river banks. Trimming of vegetation will take place. All project sites will be cleaned up and returned as close as possible to the pre-project condition. This will include removal of all brush and plant trimmings, and the compaction and restoration to grade of any earth moved for equipment access to the project sites. Restoration of the site to its pre-project condition will be done in consultation with and to the satisfaction of the Parkway Supervisor. Revegetation of any disturbed access points, and the gravel stockpile and project staging areas will take place at the appropriate time in the fall following construction.

The occurrence of sensitive terrestrial species and the measures to avoid deleterious impacts to them are discussed below:



**Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) Federal status threatened.** Elderberry bushes (*Sambucas mexicana*) are the obligate host plant for the valley elderberry longhorn beetle larvae, which feed on the pith of the plant. Collection dates for adult beetles range from February to October, but are commonly between March and May. The larvae feed on the pith of the elderberry bush from one to two years and, therefore, are potentially present year round in appropriate habitat. The plant is known to occur along the American River from Lake Natomas downstream to the end of Goethe Park. Although no elderberry bushes occur on the project sites, the plant is found along the access routes to several of the sites. Pre-project surveys ( March '98, April 99) found no adult beetles or evidence of larvae on elderberry bushes found along the periphery of the various access roads to the project sites. Prior to initiation of work, all stream banks and riparian areas to be crossed or utilized during the proposed activity will be re-surveyed by a CDFG biologist to identify and flag elderberry bushes to be avoided during vehicle travel along the access routes to the project sites, and to insure no habitat for Valley Elderberry Longhorn Beetle is present in the construction areas.

If habitat or the species is present on the project sites no work will be conducted in these areas unless approved by the U. S. Fish and Wildlife Service (FWS). For work approved and conducted in areas where habitat or the species has been determined to be present, the standard FWS protocol for the protection of the species will be implemented.

**Giant garter snake (*Thamnophis gigas*). State and federal status threatened.** Historically, the snake most likely inhabited natural freshwater marshes and low gradient streams. The current distribution of giant garter snake habitat coincides for the most part with the major flood basins that historically formed along the Sacramento River. The known habitats of the giant garter snake contain permanent to seasonal water, usually still or slow moving, with a mud bottom and vegetated banks— habitat attributes commonly found in the man-made irrigation supply ditches and drains associated with agricultural fields. There are no known reports of the species occurrence anywhere along the American River or in the parkway in general. However, appropriate habitat is known to occur near the mouth of the river, ten miles downstream (personal observation, K. Vyverberg, CDFG). Given the presence of potential habitat on the river, and that the giant garter snake is highly aquatic, prior to initiation of work, all stream banks and riparian areas to be crossed or utilized during the proposed activity will be re-surveyed by a DFG biologist to insure no garter snakes or habitat for the snakes is present in the construction areas.

If habitat or the species is present on the project sites no work will be conducted in these areas unless approved by the FWS. For work approved and conducted in areas where habitat or the species has been determined to be present, all measures recommended by the FWS for the protection of the species will be implemented.

**Swainson's Hawk (*Buteo swainsoni*), State status threatened; Bank Swallow (*Riparia riparia*), State status threatened; Cooper's Hawk (*Accipiter cooperii*), CDFG species of concern; Great Blue Heron (*Ardea herodias*); Great Egret (*Ardea alba*), and White-tailed Kite (*Elanus leucurus*):** nesting occurrences of these birds have been reported along the river in the project reach. No nesting sites have been reported or observed on specific project sites, although adult Bank Swallow, Great Blue Heron, Great Egret, and White-tailed Kite have been observed foraging along the river in the project reach (personal observation, K. Vyverberg, CDFG). The proposed construction window is well after the nesting and fledging period, but adults and any young of the year present will likely continue to forage along the river in the project reach. Therefore, before construction begins, CDFG staff will conduct a site survey to identify the presence of the individual species. Construction activities will be altered to ensure no damage occurs to either the species or its potential habitat.

**Burrowing Owl (*Athene cunicularia*), CDFG and federal species of concern.** There are no reports of owls or owl habitat in the immediate vicinity of the proposed project, and the gravel bars of the individual sites does not support burrowing owl nesting habitat. Similarly, there are no known reports of nesting occurrences adjacent to or in the general vicinity of the project sites. However, the characteristic nesting habitat of low-growing vegetation and grasslands with pre-existing burrows (e.g. ground squirrels) does occur along a number of the parkway roads that will be used to access the project sites. Burrowing owls are known to use characteristic habitat for breeding, wintering, foraging, and migrating stopovers and, therefore, may be expected to occupy some portion of the habitat throughout the year.

To determine the presence or absence of burrowing owls, winter, nesting and pre-construction surveys of potential habitat in the project area will be conducted per the CDFG Staff Report on Burrowing Owl Mitigation (October 17, 1995). The initial winter survey (January 1999) found no evidence of potential owl burrows or occupied owl habitat in or proximal to the various project areas. A nesting survey and pre-construction survey will be conducted in April and August, respectively. Any occupied or potential burrows found at that time will be located on aerial photographs of the project area. Construction activities will be altered to ensure no damage occurs to the species, its immediate nesting habitat or surrounding foraging habitat (as defined in the CDFG mitigation report).

**Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), Federal status threatened; California Linderiella (*Linderiella occidentalis*); Sacramento Orcutt grass (*Orcuttia viscida*).** State and federal status endangered. Vernal pools and their associated species are known to or may occur within the project reach of the parkway on the bluffs above the river. No vernal pools or seasonal wetlands were found on the project sites, which are all located on well drained gravel bars, a substrate that typically would not be expected to support this habitat. However, vernal pools and seasonal wetlands do occur adjacent to many parkway roads and parking lots (personal observation, K. Vyverberg, CDFG, February 1999 survey). These areas have been located on

aerial photographs of the project area. No existing or potential vernal pools or seasonal wetlands were found in or proximal to the various project sites or the selected staging areas.

**IX. HAZARDS.** Would the proposal involve:

- a. A risk of accidental explosion or release of hazardous substances (including but not limited to: oil, pesticides, chemical, or radiation)?

Because the construction equipment and vehicles used to access the parkway all contain some type of petroleum-based product (gasoline, oil, hydraulic fluid), some risk of explosion or release exists. The risk of explosion is considered unlikely. The risk of equipment failure or damage and release of a petroleum-based material into the environment is considered minimal, but a possibility.

**Mitigation Measures:** An emergency response plan developed in consultation with the CDFG's Oil Spill Prevention and Response unit will be in place prior to construction, and temporary reusable absorbent booms will be deployed downstream of each project site to immediately capture any accidental releases of deleterious material from the equipment. All construction equipment required for project implementation will be steam-cleaned before being brought to the project site. Onsite, the equipment will be checked and maintained daily, to prevent leaks of materials that if introduced to the water could be deleterious to aquatic life.

Staging and storage areas for equipment, materials, fuels, and lubricants will be identified in consultation with Sacramento County Department of Regional Parks, Recreation and Open Space personnel prior to project implementation. Staging and storage areas will be located outside the river's normal high water area. Equipment will be moved out of the normal high water area for refueling and lubrication.

- e. Increased fire hazard in areas with flammable brush, grass or trees?

The construction equipment and vehicles used to access the parkway are large and can become warm with operation. Additionally, at least one piece of construction equipment is likely to be a tracked vehicle. The steel tracks of construction equipment have been known to strike cobbles hard enough to generate sparks. All project sites are located on sparsely vegetated gravel bars, on which the fire hazard is considered minimal. However, heavily vegetated woods and grass lands do occur adjacent to the parkway roads and parking lots that may be used as staging areas and project site access points.

**Mitigation Measures:** An emergency response plan will be developed and implemented in consultation with the Bureau of Reclamation, Sacramento County Department of Regional

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Parks, Recreation and Open Space personnel, and the local fire departments prior to the start of project activities.

Staging and storage areas for equipment, materials, fuels, and lubricants will be selected, and construction activities will be altered as necessary, to comply with the emergency response plan recommendations. Water trucks equipped with fire fighting hoses will be onsite each day of construction activities, and all equipment required for project implementation will be appropriately equipped to minimize the fire hazard.

**XV. RECREATION.** Would the proposal:

b. Affect existing recreational opportunities?

The operation of large construction equipment may temporarily affect equestrian activities, and will temporarily prohibit recreational boating, rafting, and fishing for a day or two in the active work area of each site.

**Mitigation Measures:** The impact will be less than significant because all work will be done during the week days, and after the peak of the summer rafting season and before the peak of the fall fishing season. Further, in all cases, project-related work will be constrained to 50 percent or less of the overall channel width (at 2,000 cfs), leaving 50 percent or more of the active channel passable to boat and raft traffic.