

January 28, 2000

Hillary E. Gitelman
Environmental Review Officer
Planning Department, City and County of San Francisco
1660 Mission Street
San Francisco, CA 94103

Re: Comments on the DEIR for the Alameda Watershed Management Plan

Dear Hillary Gitelman:

Attached are comments on behalf of the Alameda Creek Alliance regarding the Draft Environmental Impact Report (EIR) for the Alameda Watershed Management Plan. The Alameda Creek Alliance is a watershed protection group whose mission is to protect and restore the natural ecosystems of the Alameda Creek watershed. Accordingly, our comments mostly address impacts to special-status wildlife species in the watershed. The Alameda Creek Alliance has 110 members who reside in or near the watershed.

Although the Management plan proposes some commendable actions and displays a degree of sensitivity regarding the natural environment in some areas, we are disappointed with the focus and completeness of the EIR. The EIR is notable for its omissions and inadequate analysis of management impacts, with correspondingly insufficient mitigations. Accurate and sufficient research on the presence of several special-status wildlife species in the watershed was not done. Glaringly absent for us was any serious consideration of steelhead/rainbow trout populations in the watershed. Even for species which were presumed present in the watershed, any meaningful analysis of the impacts of SFPUC management activities on these species and their habitat was missing. In particular many significant impacts from operation of SFPUC dams, cattle grazing, and gravel mining were either ignored or not analyzed in any meaningful way. Many significant impacts are not analyzed, let alone mitigated to a less than significant threshold. Many of the proposed mitigation measures are ineffective or meaningless, or do not mitigate numerous significant impacts. The EIR also sorely needs a mitigation monitoring plan to ensure that some of the positive mitigations are actually implemented.

A final issue is the confusing format of the document; the SFPUC cannot expect to have an adequate EIR without a clear statement of the impacts of its actions. Almost without exception, EIRs are usually done in numbered or lettered Impact and Mitigation Measure format. Without this structure, the impacts and mitigation measures are indiscernible from other discussion. Conventional format for the EIR should be adopted to avoid confusion.

Sincerely,

Jeff Miller

1. Significance Threshold for Impacts to Natural Resources and Inadequate Mitigation

The SFPUC considers a management action to have a significant impact on biological resources if it: has a substantial adverse effect on any endangered, threatened, candidate or sensitive species; has a substantial adverse effect on the habitat of these species; has a substantial adverse effect on wetlands, riparian, or marsh areas; or substantially interferes with movement or migratory or dispersal corridors of native fish or wildlife (page III.E-23). As documented below, many SFPUC management actions which are not analyzed (but should be analyzed) in the report have one or more of these effects, which are not mitigated for or reduced to a level of less than significance. Many of the management actions which are analyzed have additional significant impacts which meet the criteria above which were not considered.

Many of the management actions which are analyzed by the report are presumed to be mitigated by other management actions summarized in Table II-1. In other words, many of the management actions in Table II-1 are being promoted as reducing substantial adverse impacts to less than significant. However, all of these mitigations are qualified by the statement that “Inclusion does not ensure that funding, staff, or equipment will be made available to implement these actions, nor does it obligate the SFPUC to implement actions it chooses not to,” essential rendering the mitigations meaningless. There is no assurance in the EIR that proposed mitigation actions will be undertaken, leaving potentially significant impacts unmitigated. Inclusion of this qualifier calls into question the validity of the entire EIR, and the sincerity of the SFPUC in mitigating for the impacts of its management actions. The SFPUC needs to include a specific mitigation monitoring plan as part of the EIR, which will ensure that adequate mitigations for its management actions actually occur on the ground.

2. Omitted or Incomplete Assessment of Presence of Special-Status Wildlife Species.

The Draft Environmental Impact Report has some serious failings in its assessment of the natural resources of the watershed. Section III.E inadequately addresses the presence of numerous special-status wildlife species found in the watershed. It is also acknowledged that a comprehensive special-status species survey has not been conducted on the Watershed. Without knowledge of the presence and extent of special-status species, it is impossible to analyze or mitigate for potentially significant impacts to those species.

Steelhead trout (*Oncorhynchus mykiss*)

The presence of central California coast (CCC) steelhead, a Federally Threatened Species, is dismissed on page II.E-17. The report states: “Due to a downstream impoundment in Alameda Creek, this stream is not accessible to steelhead. Lower Alameda Creek contains a small population of steelhead, which is currently known to extend upstream to a barrier associated with the Bay Area Rapid Transit (BART) tracks in Fremont.” Table IX.B-2 lists steelhead trout as having a low potential to occur within the watershed. These assertions are incorrect.

The EIR needs to analyze the impacts of SFPUC management actions on CCC steelhead for the following

reasons:

- Juvenile CCC steelhead are documented to already be present in upper Alameda Creek within SFPUC watershed lands;
- The best currently available science indicates that native rainbow trout in Alameda Creek within SFPUC watershed lands should be managed as part of the CCC steelhead population, and resident native rainbow trout below major dams have the ability to become anadromous steelhead;
- Ongoing fish transport efforts of CCC steelhead past barriers in the lower creek (under permit from the California Department of Fish and Game and the National Marine Fisheries Service, in cooperation with the East Bay Regional Park District and the Alameda County Flood Control District) have moved adult steelhead into Niles Canyon the past 3 winters, and will likely continue to move adult fish in the foreseeable future;
- Management agencies in the lower creek are pursuing funding and permits to construct fish passage facilities past barriers in the lower creek, to ensure long-term access for adult steelhead to the upper watershed. As the EIR addresses a 20 year management plan, CCC steelhead of all age classes are highly likely to continue to be present within SFPUC watershed lands during the time period analyzed by this EIR;
- The EIR needs to address and analyze the downstream impacts of SFPUC management actions on steelhead habitat. The impacts of dam operation, water diversions, cattle grazing, and gravel mining do not stop at the boundaries of SFPUC watershed lands.

Through its involvement with the Alameda Creek Fisheries Restoration Workgroup (Fisheries Workgroup), the SFPUC is well aware of steelhead restoration measures being proposed by management agencies which will allow steelhead to bypass the mentioned barriers in the lower creek, as well as ongoing efforts to transport adult steelhead attempting to migrate upstream past these barriers until fish passage structures are constructed. The SFPUC is also well aware that CCC steelhead are already present within Alameda Creek within watershed lands managed by the SFPUC, and downstream within stream reaches impacted by upstream land and water management actions undertaken by SFPUC. A feasibility study prepared for the Fisheries Workgroup has been released which documents and details steelhead restoration efforts in the creek. The SFPUC participated in preparation of this study, “An Assessment of the Potential for Restoring a Viable Steelhead Trout Population in the Alameda Creek Watershed” (Gunther et al. 2000).

The Fisheries Workgroup, which is a stakeholders group composed of representatives of all the management agencies on the creek, including SFPUC, is preparing to undertake restoration measures in the lower creek which will ensure that CCC steelhead have a high potential to occur within the watershed within the short-term and long-term framework of the proposed watershed management plan. If the report is indeed a “long-term regulatory framework for decision-making” as claimed by the SFPUC, and covers up

to 20 years of implementation, then the impacts of management actions on CCC steelhead habitat should be analyzed on this basis alone.

At least 15 adult CCC steelhead have been moved over the barriers in the lower creek and into Niles Canyon since 1998. The East Bay Regional Park District, under permit from the California Department of Fish and Game (CDFG) and the National Marine Fisheries Service (NMFS), is likely to continue to move adult migrants over these barriers until permanent fish passage facilities are constructed. Additionally, SFPUC is aware that over 250 juvenile CCC steelhead were restored to upper Alameda Creek within Sunol Regional Wilderness in 1998, with the approval of CDFG and NMFS.

Resident rainbow trout below major dams in the watershed may have ability to become anadromous steelhead. Genetic studies by a leading salmonid genetics expert (Neilsen 1999) which analyzed fin clips from returning adult steelhead in Alameda Creek in 1998 and 1999 showed that these fish were part of the listed CCC population. The over 250 fry referred to above were offspring of these CCC fish. Additionally, rainbow trout from numerous creeks within SFPUC watershed lands (Upper Alameda Creek, Indian Joe Creek, Pirate Creek, Welch Creek, and W-Tree Creek) were shown to have close genetic affinity with CCC steelhead. Dr. Jennifer Neilsen recommended managing for these trout populations as part of the listed CCC steelhead population (Neilsen 1999). Dr. Neilsen's report is attached as Appendix 1.

NMFS cites water diversions and mining as factors affecting the decline of the species (62 Federal Register 43937, at 43942). NMFS also considers the following activities very likely to injure or kill steelhead, which by July of 2000 (when the 4(d) rules go into effect) may result in a violation of 4(d) of the Endangered Species Act (64 Federal Register 73479):

- “physical disturbance or blockage of the streambed where spawners or redds are present concurrent with the disturbance...from creating push-up dams, gravel removal, mining, or other work within a stream channel, trampling or smothering of redds by livestock in the streambed”;
- “blocking fish passage through...dams...”;
- “water withdrawals that impact spawning or rearing habitat”;
- “land-use activities that adversely affect salmonid habitat (e.g. ...grazing...)”; and
- “pesticide and herbicide applications that adversely affect the biological requirements of the species.”

The potential impacts of SFPUC management actions on CCC steelhead and their habitat in Alameda Creek and its tributaries, including impacts from dams, water capture and diversion, cattle grazing, gravel mining, and pesticide use need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

Pacific lamprey (*Lampetra tridentata*)

The EIR does not mention the Pacific lamprey, a native anadromous (migratory) species that has been documented historically in the watershed (Gunther et al. 2000). Larval lampreys (ammocetes) were documented in 1998 throughout upper Alameda Creek between the Sunol Water Treatment Plant and Leyden Creek (Trihey 1999). Adults have been seen in the last few years in Sunol Regional Wilderness (Joanne Freemire, EBRPD Naturalist, pers. comm., 1999), and the species is reported to occur downstream through Niles Canyon (Smith 1998). At least 3 adult lampreys have been captured below the BART weir and moved into Niles Canyon this year (Pete Alexander, EBRPD Fisheries Specialist, pers. comm, 2000). The Pacific lamprey is a Federal Species of Concern. The potential impacts of SFPUC management actions on Pacific lamprey and their habitat in Alameda Creek and its tributaries, including impacts from dams, water capture and diversion, and gravel mining need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

Alameda whipsnake (*Masticophis lateralis euryxanthus*)

The EIR assumes a high potential for the Alameda whipsnake to occur in the watershed, but does not confirm the presence of the species. The SFPUC has done no surveying for the presence of the Alameda whipsnake within the watershed (Mark Muller, San Francisco Water Department, pers. comm. 1999). However, the Sunol-Cedar Mt. population (Wauhab Ridge to Cedar Ridge area) of the species, one of only five significant sub-populations remaining, occurs adjacent to and within SFPUC lands in the Alameda watershed (U. S. Fish and Wildlife Service (FWS) files, 1999). The East Bay Regional Park District (EBRPD) reports that whipsnakes are known to currently occur in Sunol and Ohlone Regional Wildernesses, which are within SFPUC watershed lands (Joe DiDonato, EBRPD Wildlife Specialist, Threatened and Endangered Species list, 1999). A quick review by the Alameda Creek Alliance of FWS files on historic sightings revealed two adults were observed in Alameda Creek by EBRPD personnel upstream of Camp Ohlone in 1990; a snake was collected from Indian Joe Creek in 1975; another was collected from Alameda Creek in Sunol Regional Park in 1972; and one collected 10 miles south of Livermore on the road to Mt. Hamilton in 1956 (FWS files 1999).

The species is known to occur historically and there is suitable habitat throughout much of the SFPUC Alameda watershed lands. The EIR acknowledges that suitable resident habitat and travel corridors occur for the species around both San Antonio and Calaveras Reservoirs (page III.E-22). The species has been well-documented on Pleasanton Ridge. Alameda whipsnakes have been shown to be associated with native Diablan sage scrub, to forage in adjacent grasslands, and to migrate along riparian corridors. The U. S. Fish and Wildlife Service, in listing the whipsnake as a threatened species in 1997, identified important dispersal corridors within SFPUC watershed lands (Alameda Creek where it crosses under Hwy. 680 and at Scott's Corner along Vallecitos Creek) necessary for genetic interchange among sub-populations (62 Federal Register 64306, at 64308). Comprehensive protocol surveys for the species need to be conducted throughout SFPUC watershed lands. The EIR acknowledges that inappropriate grazing practices and

alteration of suitable habitat from fire suppression are primary reasons for the decline in population numbers of the species. The potential impacts of SFPUC management actions on the Alameda whipsnake and its habitat in the watershed, including impacts from gravel mining and roads need to be analyzed, and the significant impacts avoided or mitigated. This has not been done. The analysis of the potential impacts from cattle grazing and fire suppression are completely inadequate.

Foothill yellow-legged frog (*Rana boylei*)

The EIR assumes a high potential for the foothill yellow-legged frog to occur in the watershed, but does not confirm the presence of the species. Foothill yellow-legged frogs are present along Alameda Creek in Sunol and Ohlone Regional Parks, which are within SFPUC watershed lands (Joe DiDonato, EBRPD Threatened and Endangered Species list, 1999; Pete Alexander, EBRPD, pers. comm. 1999; Jennings and Hayes 1994). These frogs are a Federal Species of Concern and a State Species of Special Concern. The management needs of the Foothill yellow-legged frog are different than those of the California red-legged frog, in that they generally require faster water and rock pools and riffle habitat. In streams with foothill yellow-legged frogs, poorly timed water releases from upstream reservoirs can scour egg masses, and decreased water flows can force adult frogs to move into permanent pools where they may be more susceptible to predation (Hayes and Jennings 1988). The SFPUC should presume the species is present within the watershed, and conduct comprehensive protocol surveys for the species. The potential impacts of SFPUC management actions on the foothill yellow-legged frog and its habitat in the watershed, including impacts from dam operation, water diversions, cattle grazing, gravel mining, and pesticide use need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

Callippe silverspot butterfly (*Speyeria callippe callippe*)

The EIR assumes a moderate potential for the Callippe silverspot to occur in the watershed. Populations of the Callippe silverspot found within the Livermore Valley, which are presumed to be intermediate between two subspecies of silverspot are mentioned. However, a recently discovered butterfly population in Happy Valley in southern Pleasanton, adjacent to SFPUC watershed lands, was identified by entomologist Dick Arnold to be Callippe silverspot (David Wright, FWS entomologist, pers. comm., 1999). The U. S. Army Corps of Engineers (Public Notice #23275S, November 8, 1999) and FWS (David Wright, FWS entomologist, pers. comm., 1999) are treating this population as *Speyeria callippe callippe* for regulatory and management purposes. The SFPUC should presume the species has a high potential to be present within the watershed, and conduct comprehensive protocol surveys for the species. As mentioned in the EIR, excessive livestock grazing is a threat to the species, because of the risks of trampling, cattle eating food and host plants, and creating disturbed soil conditions that favor the spread of invasive weedy plants at the expense of native species necessary for the survival of the butterfly (62 Federal Register 64306). Also, the adult and early larval stages of the Callippe silverspot are prone to mortality from dust because their respiratory apparatus (spiracles) are easily clogged, and FWS believes that dust from nearby quarrying operations may adversely affect the species (62 Federal Register 64306, at 64310). According to FWS, the use of insecticides would threaten the callippe silverspot if use occurred in proximity to occupied habitat.

Silverspot butterfly larvae are extremely sensitive to pesticides, and even the accumulation of runoff in the soil after spraying has proven lethal to larvae of butterflies of the same genus (*Speyeria*) (62 Federal Register 64306, at 64314). The potential impacts of SFPUC management actions on the Callippe silverspot and its habitat in the watershed, including impacts from gravel mining and pesticide use need to be analyzed, and the significant impacts avoided or mitigated. This has not been done. The analysis of the potential impacts from cattle grazing is completely inadequate.

Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*)

The EIR makes no mention of the Berkeley kangaroo rat. The Berkeley kangaroo rat is a Federal Species of Concern which was decimated by ground squirrel poisoning campaigns in the 1940's and 1950's. It was presumed extinct by some biologists, with the last reported sightings of the species occurring in the 1980's near Mt. Diablo and San Pablo Reservoir. However, biologist Gary Beeman, a local expert on the species, believes it may still be extant, and that the areas around Calaveras Reservoir may have the best remaining population (Gary Beeman, pers. comm., 1999). Beeman believes the species has not been detected during other rodent trapping because improper survey methods are used, including not using the preferred foods of the species in traps (Beeman, pers. comm., 1999). If shown to still exist, the species would certainly be a candidate for federal listing. The SFPUC should presume the species has a moderate potential to be present within the watershed, and conduct comprehensive protocol surveys for the species. If found to be extant, the potential impacts of SFPUC management actions on the Berkeley kangaroo rat and its habitat in the watershed, including impacts from cattle grazing, construction activities, and roads need to be analyzed, and the significant impacts avoided or mitigated.

California tiger salamander (*Ambystoma californiense*)

The EIR assumes a high potential for the California tiger salamander to occur in the watershed, but does not confirm the presence of the species. California tiger salamanders are present in ponds and nearby refugia in Sunol and Ohlone Regional Parks, which are within SFPUC watershed lands (Joe DiDonato, EBRPD Threatened and Endangered Species list, 1999; Jennings and Hayes 1994). The California tiger salamander is a Federal Candidate Species and is currently under litigation to compel listing under the Endangered Species Act. The SFPUC should presume the species to be present within the watershed, and conduct comprehensive protocol surveys for the species. The potential impacts of SFPUC management actions on the California tiger salamander and its habitat in the watershed, including impacts from dam operation, water diversions, and cattle grazing need to be analyzed, and the significant impacts avoided or mitigated. This has not been done. The analysis of the potential impacts from gravel mining is completely inadequate.

California horned lizard (*Phrynosoma coronatum frontale*)

The EIR assumes the California horned lizard has a low potential to occur within the watershed (Table IX.B-2). The California horned lizard is known to be present in Sunol Regional Park, which is within

SFPUC watershed lands (Joanne Freemire, EBRPD, pers. comm., 2000). Additionally, Jennings and Hayes (1994) document several known collected specimens and verified sightings within SFPUC watershed lands. The California horned lizard is a Federal Species of Concern and a State Species of Special Concern. The species can occur in several habitat types, including areas with exposed gravelly-sandy substrate containing scattered shrubs, and in clearings in riparian woodlands. The SFPUC should presume the species to be present within the watershed, and conduct comprehensive protocol surveys for the species. The potential impacts of SFPUC management actions on the California horned lizard and its habitat in the watershed, including impacts from gravel mining and cattle grazing need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)

The EIR makes no mention of the Western yellow-billed cuckoo. The Western yellow-billed cuckoo is known to be present in Sunol Regional Park, which is within SFPUC watershed lands (Joe DiDonato, EBRPD Threatened and Endangered Species list, 1999). The cuckoo is listed as a State Endangered Species, and is currently under petition for federal listing, with a listing decision from FWS due in early 2000. This bird is a riparian-dependent species (typically nests in willows), and Sunol Park is one of the few areas in California where it is still present. According to CDFG, the major threat to the species is loss and degradation of its riparian habitat, including adverse impacts from water projects and livestock grazing (CDFG 1992). The SFPUC should presume the species to be present within the watershed, and conduct comprehensive protocol surveys for the species. The potential impacts of SFPUC management actions on the Western yellow-billed cuckoo and its habitat in the watershed, including impacts from dam operation, water diversions, and cattle grazing need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

Townsend's big-eared bat (*Plecotus townsendii*) and the Pallid bat (*Antrozous pallidus*)

Both of these bat species, which are Federal Species of Concern, are presumed in the EIR to have a moderate potential to occur within the watershed. However, both species are known to be present in Sunol Regional Park, which is within SFPUC watershed lands (Joanne Freemire, EBRPD, pers. comm., 2000). The SFPUC should presume the species to be present within the watershed, and conduct comprehensive protocol surveys for the species. The potential impacts of SFPUC management actions on the Townsend's big-eared bat and the Pallid bat and their habitat in the watershed need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

American badger (*Taxidea taxus*)

The American badger is presumed in the EIR to have a moderate potential to occur within the watershed. However, the species has been sighted at Flag Hill in Sunol Regional Park, which is within SFPUC

watershed lands (Joanne Freemire, EBRPD, pers. comm., 2000). The SFPUC should presume the species to be present within the watershed, and conduct comprehensive protocol surveys for the species. The potential impacts of SFPUC management actions on the American badger and its habitat in the watershed need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

3. Incomplete Analysis of Impacts to Special-Status Wildlife Species.

California red-legged frog (*Rana aurora draytonii*)

The EIR confirms that the California red-legged frog is present within the watershed. Sightings along Alameda Creek in 1993 and 1997 are mentioned (page III.E-22). Sightings were also made in 1998 in upper Alameda Creek at two locations below Little Yosemite and near the confluence with Welch Creek near the site of the proposed recapture facility (Trihey & Associates, Inc. 1999) and frogs were also seen in this area in 1999 (Tom Taylor, Entrix, Inc., pers. comm., 1999). The species was also seen at several sites along upper Alameda Creek in 1999 during electro shocking surveys by EBRPD personnel (Pete Alexander, EBRPD, pers. comm., 1999). FWS believes that the timing and duration of water releases from reservoirs can render a stream unsuitable for California red-legged frog reproduction and maintain populations of exotic predators in downstream areas (61 Federal Register 25813, at 25825). FWS has also published considerable information about the threats to the frog due to habitat alteration from livestock grazing (61 Federal Register 25813, at 25826-25827). This information is attached as Appendix 2. The potential impacts of SFPUC management actions on the California red-legged frog and its habitat in the watershed, including impacts from dam operation, water diversions, and cattle grazing need to be analyzed, and the significant impacts avoided or mitigated. This has not been done. The analysis of the potential impacts from gravel mining is completely inadequate.

Bay checkerspot butterfly (*Euphydryas editha bayensis*)

The Bay checkerspot butterfly is noted in the EIR to have a moderate potential to be present in the watershed. However, no mention is made of the fact that livestock grazing and invasion by exotic plants (acknowledged in the EIR to result from livestock grazing) have helped to greatly reduce its numbers (Murphy and Weiss 1988). Overgrazing by livestock has been implicated in extinctions of several colonies of the butterfly, and grazing can adversely affect plant species of serpentine grasslands which are food plants for the species (52 Federal Register 35366). According to FWS, Bay checkerspot have been documented to have been crushed by cattle (Elam, et al. 1998), and research has shown that a substantial fraction of eggs, larvae and pupae could be lost to crushing in areas that are heavily grazed (White 1986). Comprehensive protocol surveys for the species should be conducted. If the species is found to occur, the potential impacts of SFPUC management actions such as cattle grazing on the Bay checkerspot butterfly and its habitat in the watershed need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*)

The Myrtle's silverspot butterfly is noted in the EIR to have a moderate potential to be present in the watershed. However, no mention is made of the fact that livestock grazing and invasion by exotic plants (acknowledged in the EIR to result from livestock grazing) have helped to greatly reduce its numbers (U. S. FWS 1997). According to FWS, overgrazing can reduce the abundance of native nectar sources, which influences the number of eggs produced by female butterflies. Grazing disturbance eliminates the native plant species and disturbs the site, allowing the establishment of invasive non-native weedy plant species. Comprehensive protocol surveys for the species should be conducted. If the species is found to occur, the potential impacts of SFPUC management actions such as cattle grazing on the Myrtle's silverspot butterfly and its habitat in the watershed need to be analyzed, and the significant impacts avoided or mitigated. This has not been done.

4. Unanalyzed Impacts of Dam Operation

The operation of SFPUC dams and accompanying diversion and retention of water which would otherwise flow down Alameda Creek and its tributaries has not been analyzed. The SFPUC must analyze the operation of Calaveras Dam, San Antonio Dam, Upper Alameda Diversion Dam, Sunol Dam, and Niles Dam on steelhead/rainbow trout, Pacific lamprey, and other native fish species, Western yellow-billed cuckoo, California red-legged and foothill yellow-legged frogs, and California tiger salamander. The SFPUC must mitigate for any significant impacts to these species due to dam operation.

Sufficient flow for fish and amphibian survival

The SFPUC needs a fisheries management study to analyze the impacts of the dams on fisheries downstream and mitigate for any significant impacts. SFPUC's own study of the stream reach of Alameda Creek from Calaveras Dam to Sunol Water Treatment Plant determined that the "primary factors affecting creek ecology in this area are therefore grazing and the historic reduction in the water supply due to Calaveras Dam. Reduction in the water supply has resulted in insufficient flow to keep water temperatures within an acceptable range for trout in many parts of this reach"; and that "Probably the most serious problem limiting a trout fishery in the study area is the lack of sufficient stream flow resulting from the construction of Calaveras Dam." (Bookman-Edmonston 1995D). SFPUC dams divert the majority of the natural stream flow in Alameda and Calaveras Creeks. As a result, many of the downstream reaches are no longer perennial and have higher water temperatures than historical conditions. As mentioned above, the timing, duration, and volume of water releases can have significant impacts on the ability of steelhead and red-legged and yellow-legged frogs to survive downstream. Steelhead need suitable flows to complete all of their life-cycle - for spawning, rearing, and migration. SFPUC needs to analyze and mitigate for the impact of its dams on special-status species downstream.

Inadequate flows below SFPUC dams and diversions constitute a potential violation of California Fish and Game Code 5937. Fish and Game Code 5937 reads:

5937. Passage of Water Through Fishway or Over Dam For Fish Below Dam

The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by the department of the owner of any dam to allow sufficient water to pass through a culvert, waste gate, or over or around the dam, to keep in good condition any fish that may be planted or exist below the dam, when, in the judgement of the department, it is impractical or detrimental to the owner to pass water through the fishway.

The SFPUC needs to ensure compliance with 5937. Flow release from Calaveras Reservoir to benefit trout populations downstream are planned by SFPUC, under the terms of a Memorandum of Understanding signed with CDFG. The SFPUC needs to begin these flow releases immediately.

Barriers to fish migration

The EIR acknowledges that Niles and Sunol Dams may block upstream steelhead migration if fish are able to surmount downstream barriers (page III.E-1). These dams may also block migration of Pacific lamprey. As noted above, adult CCC steelhead have already bypassed the downstream barriers during the last 3 years with human assistance and are highly likely to be able to bypass them in the near future due to the planned construction of fish passage facilities. Neither dam has a functioning fish ladder. The maintenance of these dams in their current condition is an SFPUC management action which meets the significance criteria of having a substantial adverse impact on a threatened species, as they substantially interfere with the migratory corridor of native fish.

These dams may also violate California Fish and Game Code 5901, which makes it unlawful to prevent or impede fish passage upstream or downstream. Fish and Game Code 5901 reads:

5901. Prevent or Impede Fish from Passing in Streams: Unlawful

Except as otherwise provided in this code, it is unlawful to construct or maintain in any stream in Districts 1, 1 ½, 2, 2 ½, 2 ¾, 3*, 4, 4 ½, 23, and 25, any device or contrivance which prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream.

* SFPUC watershed lands and Alameda Creek are in District 3.

These dams may also soon violate section 4(d) of the Endangered Species Act (ESA). The National Marine Fisheries Service has proposed 4(d) rules for threatened steelhead which would consider blocking fish passage through dams or impassable culverts illegal “take” of the species (64 Federal Register 73479).

SFPUC considers these structures to be “attractive nuisances”, in that they draw people who trespass,

swim, drink alcohol, and leave behind trash and graffiti, and pose a potential liability risk for the SFPUC. They currently serve no purpose for water supply or infrastructure for the SFPUC. The SFPUC has expressed interest in removal of these structures and has produced a cost estimate for this (previous from Josh Milstein, City and County of S. F., pers. comm. 1999). The Alameda Creek Alliance has proposed removal of these structures to the SFPUC. Removal of these dams, allowing steelhead and lamprey to migrate upstream to spawning and rearing habitat would promote the SFPUC's stated primary goal of maintaining and improving source water quality by meeting policy WQ 27 (which is to prohibit swimming and body contact activities), would promote the stated secondary goal of protecting and enhancing aquatic resources by meeting policies AR1 (which is preserving biodiversity) and AR2 (which is protecting special-status species), and would promote the stated secondary goal of promoting safety and security by meeting policy S3 (which is reducing the likelihood of a dangerous condition liability).

Not analyzed in the EIR are the impacts of Calaveras, San Antonio, and Upper Alameda Creek Diversion Dams as barriers to steelhead and other anadromous fish migration. These dams will definitely block upstream steelhead and lamprey migration when fish are able to bypass barriers in the lower creek. Although removal of these dams has not been proposed, SFPUC needs to analyze and mitigate for the impact of these dams on steelhead. These dams block access to best historic spawning and rearing habitat in the watershed. The maintenance of these dams in their current condition is an SFPUC management action which also meets the significance criteria of having a substantial adverse impact on a threatened species, and substantially interferes with the migratory corridor of native fish. These dams may also violate California Fish and Game Code 5901 and section 4(d) of the ESA.

Barriers to genetic interchange of fish

The maintenance of Calaveras, San Antonio and Upper Alameda Creek Diversion Dams by the SFPUC is an ongoing management action which results in barriers to genetic interchange between steelhead/rainbow trout populations in Alameda Creek, except during reservoir spills. It is well documented that landlocked descendants of the original steelhead run in Alameda Creek persist above both dams. These dams prevent genetic interchange between these fish and rainbow/steelhead trout populations in upper Alameda Creek and its tributaries below the dams. This is contrary to the SFPUC stated secondary goal of protecting and enhancing aquatic resources, through policy AR1 (which is to conserve the biodiversity, genetic integrity, and habitat of aquatic resources). The SFPUC needs to analyze this impact to determine if it meets the significance criteria, and if so, to mitigate for this ongoing management action.

Recruitment of spawning gravels

SFPUC maintenance of Calaveras, San Antonio, and Upper Alameda Creek Diversion Dams all block to some degree the recruitment of spawning gravels downstream of the dams. Steelhead/rainbow trout need suitable gravels for successful spawning and emergence of fry. This is an ongoing management action which potentially meets the significance criteria, in that it adversely affects the habitat of threatened steelhead/rainbow trout. SFPUC needs to analyze and mitigate for this potential impact on trout habitat.

Recruitment of woody debris

SFPUC maintenance of Calaveras, San Antonio, and Upper Alameda Creek Diversion Dams all block to some degree the recruitment of woody debris in the stream reaches downstream of the dams. Steelhead/rainbow trout need woody debris in the stream for cover and development of deep pools. This is an ongoing management action which potentially meets the significance criteria, in that it adversely affects the habitat of threatened steelhead/rainbow trout. SFPUC needs to analyze and mitigate for this potential impact on trout habitat.

Lack of scouring flows

SFPUC storage of peak winter flows behind Calaveras and San Antonio Dams, and diversion of flows behind Upper Alameda Creek Diversion Dam prevents to some degree periodic scouring of the stream channel reaches downstream necessary to maintain healthy habitat for steelhead/rainbow trout. Due in large part to water capture behind these dams, and lower than historic flows below the dams, the system is unable to move sediment downstream as efficiently, which tends to eliminate spawning habitat and can smother trout eggs and fry. Without periodic scouring flows, spawning gravels can become significantly embedded with fine sediment. This is an ongoing management action which potentially meets the significance criteria, in that it adversely affects the habitat of threatened steelhead/rainbow trout. SFPUC needs to analyze and mitigate for this potential impact on trout habitat.

Insufficient flow for migratory fish passage

Diversion of flows from Alameda Creek by the Upper Alameda Diversion Dam and detention of water in Calaveras Dam may impact upstream fish passage in the Sunol Valley and in the Little Yosemite areas of Alameda Creek. The SFPUC also needs to analyze whether sufficient flows are being provided downstream of the dams for successful out-migration of steelhead smolts.

Impacts on riparian vegetation

Flows below the reservoirs can impact the extent of riparian vegetation. Sufficient flows for healthy riparian zones is important, especially with the impacts of cattle grazing. Insufficient flows can potentially impact riparian-dependent species such as steelhead, frogs and salamanders, and the cuckoo.

5. Unanalyzed Impacts of Gravel Mining

Impacts of gravel mining on special-status species

The EIR acknowledges that “historic and current gravel mining operations in Sunol Valley have...altered surface and ground water flow as well as ground water storage” (page III.D-7). The EIR does not analyze

the impacts of this altered flow, nor the potential future impacts of further alteration of surface and ground water flows likely to occur with continued and expanded quarrying operations. Additionally, the effects of noise, lights, roads, dust, vehicles, and increased human activity the proposed quarry expansion will bring extend beyond the footprint of the site itself, and these effects have not been analyzed for potentially significant impacts on special-status species.

The EIR claims that bentonite in the quarry pits prevents inflow of shallow ground water (page III.D-7), but inflow of shallow ground water appears to be visible at the site. A previous report prepared for SFPUC contradicts this claim, noting that “Gravel mining in this area has probably further increased the depth to water table since the pits created by such excavation tend to draw down the water table in their vicinity. There has been some attempt to isolate these draw down effects by requiring the construction of clay cutoff walls between the creek channel and the mining pits but this effort has been localized and incomplete.” (Bookman-Edmonston 1995D).

Sand and gravel mining have “left the lower portion of the watershed in a highly disturbed state with very little if any riparian vegetation cover” (Bookman-Edmonston 1995D). Impacts of this on special-status species have not been determined, nor future impacts.

The EIR relies on environmental analysis conducted for the Mission Valley Rock Surface Mining Permit conducted in 1985, 1992, and 1994. It notes that several species have been listed as sensitive species since that time, and purports to restudy the environmental impacts on those species. However, the EIR leaves out analysis of impacts of gravel quarrying on numerous sensitive species, and the analysis for the species it does consider is completely inadequate.

Steelhead trout

The EIR states that Alameda Creek is not accessible to CCC steelhead. As noted above, this is incorrect, and there are also downstream impacts of the quarrying operations that have not been analyzed. As noted above, mining of the current leases and the proposed expansion will alter surface flows and ground water in a manner likely to be harmful to CCC steelhead. The stream will dry out sooner in the spring and begin flowing later in the fall, impairing migration, rearing, and possibly breeding of steelhead. These impacts are not limited to the footprint of the mines, as they have the potential to impact hydrology both upstream and downstream of the quarries. CCC steelhead/rainbow trout are currently known to migrate, spawn, and rear in nearby Pirate Creek, and are currently known to migrate and possibly rear in Niles Canyon downstream. SFPUC has not surveyed the creek for current spawning, rearing or migration of CCC steelhead/rainbow trout in the area of the quarries, nor analyzed the potential impacts of quarrying on CCC steelhead habitat. CCC steelhead/rainbow trout potentially could migrate, spawn, and rear in the portions of Alameda Creek adjacent to the quarries in the near future. Discharge from the quarries contributes sediment to the creek (sometimes in excess of legal limits, as noted below), posing the risk of smothering or silting any trout redds downstream. None of these potential impacts has been analyzed.

Pacific lamprey

The potential impacts of the proposed mining on the hydrology of the creek mentioned above may limit the migratory ability of Pacific lamprey. This potential impact has not been analyzed.

California red-legged frog

California red-legged frogs have been found just upstream of the quarries, near the Sunol Water Treatment Plant. The EIR claims that the quarry site is not suitable habitat for the frog, but SFPUC has not surveyed for the species in Alameda Creek in the area of the quarries or downstream, or in Pirate Creek. Altering the surface flow and ground water in the area of the quarries could have negative impacts on the breeding, sheltering, and foraging of the species in nearby creek areas. An additional problem is the proposed mitigation if frogs move in to colonize the site. The EIR proposes to relocate these frogs, which would constitute illegal take of the species. SFPUC would need an Incidental Take Permit to do this legally, and would have to analyze the impacts of moving any frogs. The issuance of this permit is not a foregone conclusion, as the EIR assumes. Moving individual frogs may pose a problem, as the frogs may be moved into habitat that is already occupied by other individuals of the species, and displace them or be unable to survive. The mitigations also propose to survey for frogs on an annual basis, in other words, once a year. What about frogs that may colonize the site between the yearly visits, who may get crushed, run over, or ground up by mining equipment? The EIR does not mention the time of year which surveys would be conducted, which could influence visibility and location of frogs. Merely moving pesky listed species out of the way is not adequate mitigation. These mitigations are completely inadequate, and many impacts have not been analyzed.

Alameda whipsnake

The EIR claims that the quarry site is not suitable habitat for the Alameda whipsnake, but SFPUC has not surveyed for the species. As noted above, this area may be a critical dispersal route for genetic interchange between subpopulations of the species. One of the biggest threats to the survival of the whipsnake is lack of genetic interchange due to fragmentation of its habitat. Whipsnakes can occupy home ranges up to 25 acres, and have been documented to move over one mile while traversing their ranges (62 Federal Register 64306). There is potential for the species to occur on the proposed quarry expansion site. The heavy equipment, machinery, roads, noise, and human presence associated with quarrying may prevent whipsnake dispersal through this area.

California tiger salamander

The EIR claims that the quarry site is not suitable habitat for the California tiger salamander, but SFPUC has not surveyed for the species in Alameda Creek in the area of the quarries or downstream, or in Pirate Creek. Altering the surface flow and ground water in the area of the quarries could have negative impacts on the breeding, sheltering, and foraging of the species in nearby creek areas. An additional problem is the

proposed mitigation if salamanders move in to colonize the site. The EIR proposes to relocate these salamanders. Moving individual salamanders may pose problems, as the salamanders may be moved into habitat that is already occupied by other individuals of the species, and displace them or be unable to survive. The mitigation proposing to survey for salamanders on an annual basis is inadequate, for the reasons mentioned for the frog above.

California horned lizard

The proposed quarry site may have suitable habitat for the California horned lizard. The SFPUC has not conducted surveys to determine the presence of this species in the area, nor analyzed the potential impacts of the proposed quarrying.

American badger

The proposed quarry site may have suitable habitat for the American badger. The SFPUC has not conducted surveys to determine the presence of this species in the area, nor analyzed the potential impacts of the proposed quarrying.

Callippe silverspot butterfly

As noted above, the Callippe silverspot butterfly has been documented near SFPUC watershed lands, not far from the proposed quarry. SFPUC has not surveyed for the species in the area. As noted above, dust from quarrying operations could have a significant impact on this species, and quarrying may remove host or food plants for the butterfly.

Other native species

Many other native species which are not special status species occupy or travel through the proposed quarrying area. Bobcats, coyotes, and deer have all been seen within the last year near the Sunol Water Temple (Jeff Miller, Alameda Creek Alliance, pers. obs., 1999). The proposed quarrying activities will likely disrupt migration, and possibly feeding and sheltering of these species.

Violations of existing quarrying permits

The EIR notes a review of records indicating that both leaseholders for quarrying on SFPUC lands have violated their air quality permits over the last five years (page III.F-7). RMC Pacific Materials was cited for 2 permit violations in 1994, and Mission Valley Rock Company had 15 violations, 10 of which were in 1993.

SFPUC apparently did not correspondingly review for discharge water quality violations. However, the Alameda Creek Alliance viewed the records on file at the Regional Water Quality Control Board and noted

many self-reported violations of water quality permits for RMC Pacific Materials, including exceedances of allowed turbidity levels, and non-reporting violations. Mission Valley Rock Company had not filed self-monitoring reports for the past five years.

How can the SFPUC be considering expansion of quarrying leases, let alone continuation of existing leases to leaseholders which violate the terms of their permits and the terms of their leases (which require compliance with all permits)?

6. Unanalyzed Impacts of Cattle Grazing

General impacts on riparian and aquatic habitat

SFPUC maintains cattle grazing leases on the majority of its Alameda Creek watershed lands. Habitat degradation due to grazing has potentially significant impacts on listed aquatic and riparian-dependent species within the watershed such as steelhead/rainbow trout, Pacific lampreys, Foothill yellow-legged and California red-legged frogs, California tiger salamanders, and the Western yellow-billed cuckoo. Cattle grazing in riparian corridors has well-documented negative effects on riparian and aquatic ecosystems. Cattle can eat and trample riparian vegetation, erode streambanks, increase sediment loads, alter stream channel morphology, add excessive nutrients and pollutants to creeks, and alter hydrology, with cumulatively significant impacts that negatively affect riparian and aquatic wildlife. Nowhere in the EIR are the negative aquatic and hydrologic impacts of grazing analyzed.

Ecologist A. J. Belsky (1999) recently conducted a systematic literature review of peer-reviewed experimental studies on the effects of livestock grazing on stream and riparian ecosystems in the west. Livestock grazing was found to negatively affect water quality and seasonal quantity, stream channel morphology, hydrology, riparian zone soils, instream and streambank vegetation, and aquatic and riparian wildlife. These impacts obviously have significant cumulative negative effects for aquatic and riparian special-status species. No positive environmental impacts were found. This study is included as Appendix 3. The following assertions about grazing impacts are based on verifiable scientific data, have been published in peer-reviewed technical and scientific journals, and are referenced in Appendix 3. The negative influences of cattle grazing on riparian and aquatic ecosystems can be summarized as follows:

- **Water quality**

Cattle grazing increases nutrient concentrations and bacteria and protozoa. Sediment load and turbidity are increased, as well as water temperature. Dissolved oxygen levels possibly decline.

- **Stream channel morphology**

Channel width increases, and water depth decreases with cattle grazing. Gravels in the channel bed tend to be lost in the erosional environment and fine sediments increased in the depositional

environment. Streambank stability is reduced, streambank undercuts are reduced in quality and quantity, and pools decrease in number and quality.

- **Hydrology (stream flow patterns)**

With cattle grazing, overland flow from runoff increases, and peak flow and flood water velocity also increase. Summer and late-season flows decrease, and the water table is lowered.

- **Riparian zone soils**

Grazing increases erosion, the amount of bare ground, and soil compaction. Infiltration of water decreases. Litter layer decreases and soil fertility declines.

- **Instream vegetation**

Algae growth increases with grazing, but higher plants (submerged and emergent) often decline in abundance.

- **Streambank vegetation**

Herbaceous cover, biomass, productivity, and native plant diversity decline due to grazing. Overhanging vegetation and tree and shrub biomass and cover decline. Plant species composition is altered and plant structure (horizontal and vertical) is simplified. Plant age structure becomes even-aged and plant succession is impeded.

Although these are generalizations, these effects are well-documented in the scientific literature, and most of these effects can be found to occur in the watershed where there is cattle grazing. Cumulatively, these impacts can be devastating to aquatic and riparian species. The potential impacts of all these negative effects of cattle grazing on special-status species within the watershed will be considered below.

Documented site-specific impacts of grazing in the watershed

Site-specific damage of this nature has been documented in several surveys in Alameda Creek and brought to the attention of SFPUC.

In 1993 fisheries biologist Peter Moyle recommended excluding cattle from the riparian zone below Calaveras Dam to allow riparian plants to shade the stream and provide cover for native fish (Moyle 1993). Moyle noted that fencing the stream alone would likely increase trout populations because the water would be cooler in the summer.

In 1992, fisheries biologists with Bookman-Edmonston Engineering, Inc. walked the length of Alameda

Creek from its confluence with Calaveras creek downstream to about Welch Creek, as part of a fisheries habitat survey for the SFPUC for the proposed Calaveras stream release project. Degradation of riparian habitat due to cattle grazing was noted (Bookman-Edmonston 1995). The lower reach surveyed had a “lack of deep-water habitat for adults and some degradation of the riparian community because of grazing in certain areas” (3-22), and the biologists observed that “cattle access to the streambed adversely affected riparian vegetation which could impact the fisheries” (7-2). They recommended restricting cattle access to the streambed and riparian zone. Cattails were observed to be numerous in Sunol Regional Park which may hinder fish movement and occupy habitat that would otherwise be suitable for fish. The report recommended increased riparian vegetation to help exclude cattails from the stream.

In 1992 a riparian vegetation assessment along Alameda Creek from the confluence with Calaveras Creek downstream to Hwy. 680 noted severe impacts to riparian vegetation at the downstream end of the study (Bookman-Edmonston 1995C), a “result from cattle grazing and trampling.” The assessment noted that “Cattle browse the herbaceous plants and tree saplings which initiate the re-vegetation of open portions of the creek. They also trample the vegetation and creek banks causing erosion and siltation...The greatest level of disturbance attributable to cattle activity appears to be from the western property boundary of the Sunol Regional Park downstream to the Rosedale Bridge. Cattle activity in some areas has severely reduced vegetative cover and has greatly disturbed the creek banks and bottom.”

An Alameda Creek re-vegetation and restoration report in 1993 reached the same conclusions (Bookman-Edmonston 1995D). The report stated “Cattle grazing has denuded many areas of vegetation cover along the creek causing increased siltation detrimental to trout spawning and also resulting in higher water temperatures due to lack of vegetation cover” (p. 3). Significant damage was also documented from Calaveras Dam to the Sunol Water Treatment Plant; “There are no barriers preventing cattle grazing on the lease areas west of the creek from crossing the creek and entering onto the wilderness areas to the east...Grazing practices on the western side of the creek have created continuing degradation of riparian vegetation in all areas of this reach where cattle can reach the creek edges. As a result most areas of riparian vegetation found through this reach show either less than 50 percent canopy cover or disturbance...Cattle grazing has continuously degraded vegetation along the edges of the creek and in some sections has done damage to the bank structure. Complete removal of grazing from this reach is recommended...Grazing along the creek has denuded banks in many areas and degraded stream bank profiles...The extensive beds of cattails and thick algal mats found in this reach are probably the result of lowered water flows resulting in sedimentation and stagnant water conditions combined with higher water temperatures brought on by lack of vegetation cover due to grazing.”

A stream inventory study of Alameda Creek conducted by the California Department of Fish and Game in 1995 documented damage to stream banks, erosion and sedimentation, and water pollution caused by cattle (Murphy and Sidhom 1996). CDFG biologists walked Alameda Creek from upstream of Calaveras Creek to the confluence with Welch Creek. The report stated “large areas of bank erosion were noted which were actively depositing sediment in the stream, especially in the lower reaches...the result of the presence of cattle in and near the stream. Numerous stream banks have been broken down as the direct result of cattle entering the stream.” The report expressed concern that if cattle were not excluded from the

stream, then spawning areas could become significantly embedded by fine sediment and useable spawning habitat limited. The report noted large amounts of cow manure in the stream median, leaching pollutants into the stream.

Impacts of grazing on special-status species

Steelhead trout

Due to the general impacts of grazing on aquatic and riparian habitat mentioned above, cattle grazing decreases steelhead/rainbow trout abundance and productivity. Higher water temperatures increase salmonid mortality (by breaking down physiological regulation of vital processes such as respiration and circulation), and negatively affect fish spawning, rearing, and passage. Greater water turbidity, increased siltation bacterial counts, lower summer flows, and low dissolved oxygen in the water column and intragravel environment reduce fish survival. Sedimentation and actual trampling damage spawning beds. There is less protective plant cover, and fewer insects and other food items. Streambank damage and filled in pools due to sedimentation decreases the hiding cover for steelhead.

California red-legged frog and Foothill yellow-legged frog

Due to the general impacts of grazing on aquatic and riparian habitat mentioned above, cattle grazing decreases frog abundance. Grazing results in a decline in the structural richness of the vegetative community, with a loss of thermal cover and protection from predators. Vegetation is a crucial component of the frog's habitat. Grazing increases aridity and raises water temperatures to levels lethal to early life stages of the frog. The frogs can also lose much of their prey base, as aquatic insects are negatively impacted by grazing. Emergent vegetation, upon which the frogs deposit their egg masses can be trampled and eaten. Eggs can be smothered by sedimentation, and deep pools necessary for escape cover filled in. For California red-legged frogs, the loss of undercut banks and reduced water levels is particularly critical because refuge plunge pool habitat is reduced or eliminated. Frogs run the risk of being trampled by cattle, especially in the egg and early larval stages. Frogs require rodent burrows for estivation, which are often trampled by cattle. Cattle grazing also creates conditions favorable to colonization by bullfrogs, which predate on red-legged frogs, and can eliminate frogs from entire drainages. These impacts are discussed in depth in the FWS listing decision for the frog, attached as Appendix 2.

California tiger salamander

Since it is also a species which inhabits aquatic habitat, many of the above mentioned impacts of grazing on frogs are similarly detrimental to the salamander. The decrease in leaf litter and woody debris in heavily grazed areas also reduces habitat for the salamander, as does trampling of rodent burrows required for estivation..

Western yellow-billed cuckoo

As mentioned above, the cuckoo is a riparian dependent species, and usually nests in willows. Cattle damage to riparian areas eliminates habitat for this species.

Callipe silverspot butterfly

The Callipe silverspot requires *Viola* (a native wildflower) as its host plant. Overgrazing and the resultant soil erosion (plus loss of the soil seed bank and the mycorrhizal layer) has reduced or extirpated this species from much of the watershed. This plant should be common in the watershed. Cattle both eat this host plant and create disturbed soil conditions which favor invasive species, and eliminate the native wildflowers. The documented threat of trampling by cattle has been noted above.

Bay checkerspot butterfly

The Bay checkerspot requires *Plantago erecta* and *Castilleja exserta* (native wildflowers) as host plants. Overgrazing and the resultant soil erosion (plus loss of the soil seed bank and the mycorrhizal layer) has reduced or extirpated these species from much of the watershed. Cattle both eat these host plants and create disturbed soil conditions which favor invasive species, and eliminate the native wildflowers. The documented threat of trampling by cattle has been noted above.

Alameda whipsnake

Livestock grazing that significantly reduces or eliminates shrubs and grass cover can be detrimental to the whipsnake. The species avoids such open areas because of the increased danger from predators and the lack of prey (McGinnis 1992). Soil disturbance from grazing may replace native vegetation with non-native plants, potentially degrading the habitat and reducing the prey base. Inappropriate grazing practices are cited as a specific threat to the Sunol-Cedar Mountain sub-population of the snake by FWS (62 Federal Register 63406).

California horned lizard

The California horned lizard utilizes small mammal burrows or burrows into loose soils under surface objects during extended periods of inactivity or hibernation (Zeiner et al. 1988). Soil compaction and trampling of rodent burrows by cattle can degrade habitat for this species.

Impacts of grazing on other native species

Tule elk

Tule elk are negatively affected by cattle grazing, due to competition with cattle for preferred forage and browse, the possibility of disease spread by livestock, and the effects of fences on their mobility. Numerous

studies have documented that elk will leave an area where cattle are introduced and prefer those areas ungrazed by cattle (Wagner 1978). A study by Jon Skovlin (1968) found that elk use was significantly lower on ranges cohabitated by cattle than in those where cattle use was restricted. Cattle serve as vector to spread disease and parasites, both native and exotic, to wild animals. Cattle have been documented to pass numerous diseases to wildlife, such as brucellosis, circling disease, encephalitis, tuberculosis, pneumonia, and bluetongue. Wyoming Game and Fish Department officials believe that widespread ranching that forces elk to concentrate in localized areas is the main reason the number of elk calves born in the state has declined in recent years (previous from Jacobs 1991). The elk herd in the watershed has not increased significantly in population since it migrated from Mt. Hamilton (EBRPD Sunol Naturalist, pers. comm., 1999). Cattle grazing may be a factor.

Inadequacy of proposed mitigation for grazing impacts

The EIR asserts that implementation of the *Grazing Resources Management Element* of the Alameda Watershed Management Plan “would reduce the potential physical effects from overgrazing by livestock to a less than significant level” (page III.E-35), and concludes that “mitigation measures are not required” for grazing impacts. The EIR has deferred mitigation for grazing impacts, in an attempted shell game with mitigation measures that has not worked. The *Grazing Resources Management Element* does not even mention, let alone analyze or mitigate for any impacts to special-status wildlife species, nor does it address or mitigate for any of the significant impacts mentioned above.

The mitigations offered in the *Grazing Resources Management Element* which could possibly begin to reduce impacts to special-status species (although not to a less than significant level) are the proposed structural protection measures, primarily stream and reservoir buffers restricting all cattle access, and development of off-stream water improvements. Figure 2 in this element shows the creek areas which would be fenced, which appears to be along all of Alameda Creek proper within cattle grazing allotments on SFPUC lands, from above the Upper Alameda Diversion Dam downstream to approximately the confluence with Welch Creek. The portions of Alameda Creek through Sunol Valley or in Niles Canyon do not appear to be proposed for these stream buffers, although there are grazing leases adjacent to the stream in these areas. Nor do any tributaries to Alameda Creek within the Calaveras watershed appear to be proposed for stream buffers.

These buffers would be a positive step if implemented. However, they apparently have not been implemented as promised by the *Grazing Resources Management Element*. The actions for the San Antonio Watershed Area were supposed to be completed by November 1, 1997 (page 6). How much of this has been done? The actions for the Calaveras Watershed Area were supposed to be completed by November 1, 1998. These have not been completed. Cattle have been observed standing in Alameda Creek at the confluence of Welch Creek numerous times in 1999 (Jeff Miller, pers. obs., 1999), and in Alameda Creek above Little Yosemite in 2000 (Jeff Miller, pers. obs., 2000). EBRPD and Alameda County fisheries biologists noted cattle damage and cow feces in the upper creek in late 1999 throughout upper Sunol and Ohlone Parks (Pete Alexander, EBRPD, pers. comm., 1999). A quick tour of upper

Alameda Creek will demonstrate that cattle have unlimited access to most of the creek. The actions for the Lower Alameda Creek Area were supposed to be completed by November 1, 1999. How much of this has been done?

The *Grazing Resources Management Element* mentions funding for these improvements, but speaks of applying for funding and loans (page 13). Are these funding sources guaranteed? There is no discussion of how these actions will actually be implemented; no timetable, no plan, no commitment, no mechanism, no identified funding. The proposed watershed monitoring to ensure implementation speaks in terms of “ideally” and “future monitoring”, which “could” or “would” verify completion of watershed protection improvements (page 13). There is no mechanism to ensure these improvements actually happen, and they cannot be relied on as mitigation measures. Indeed, these measures have not been implemented within the promised time period. Additionally, were these measures to actually be implemented, they still would not address many of the significant impacts to special-status species, nor mitigate for them. Additionally, all of the proposed mitigations for grazing (listed in Table II-1 of the EIR as grazing 1 - grazing 14) are also qualified by the statement that “Inclusion does not ensure that funding, staff, or equipment will be made available to implement these actions, nor does it obligate the SFPUC to implement actions it chooses not to,” essential rendering the mitigations meaningless. The EIR needs to state clearly how much grazing will be done, and what the mitigations are. The current EIR is inadequate regarding grazing impacts.

Water quality

The EIR purport to improve water quality through these management actions, which would be true if the protection measures are actually implemented. However, even the “reduced” level of grazing would still have impacts on water quality, since cattle will have access to tributary streams, and the SFPUC has not shown that these impacts would be less than significant, especially for aquatic special-status species.

Invasive plant species

The EIR acknowledges the role of cattle grazing in spreading invasive habitat species such as star thistle as a result of land disturbance (page III.E-31). The EIR acknowledges this increase in invasives could cause a decline in distribution of native wildlife habitat, especially for special-status butterfly species, decrease plant diversity, modify plant communities, and transform native perennial grasslands to non-native weedy grasslands (already occurring throughout the watershed). The EIR proposes to mitigate for these significant impacts through management actions veg1 and veg6, implementing a Vegetation Management Plan, and removing non-native species. Aside from the fact that these mitigations are subject to the famous SFPUC qualifier, and may never be implemented, the SFPUC would have to hire an army of employees to follow the cattle around mitigating for the damage from cattle to actually make an impact on invasive plants in the watershed. The Vegetation Management Plan is not implemented, and can not be relied upon to reduce impacts to a less than significant threshold.

Random comments on grazing

The EIR has not analyzed the potential impacts of the 24 miles of fencing proposed in the *Grazing Resources Management Element* to create the stream and reservoir buffer zones. This fencing may hinder the movement of wildlife. Page 2 of the *Grazing Resources Management Element* claims that without cattle grazing, the rodent population will increase 50%. There is no citation for this estimate - where did it come from? Without grazing and its associated infrastructure, populations of predators which feed on rodents would likely increase. Additionally, the watershed has one of the densest concentrations of raptors in the western U. S., which would keep rodent populations in balance. On page III.B-11, decreased grazing intensity is cited. What is the “historic” level and what is the new level of grazing? On page III.B-11, grazing impacts on erosion, vegetation and wildlife habitat are not cited. For coherence and to avoid confusion, the mitigations included in the *Grazing Resources Management Element* should be incorporated by reference in this EIR.

7. Pesticide use

Nurseries on leased SFPUC land in the watershed use a number of pesticides and insecticides adjacent to the creek, as revealed by a SFPUC survey (Bookman-Edmonston 1995D). Many of the pesticides currently used by nurseries in the Sunol Valley, such as diazinon, malathion, durzban, and Rice Mollinate are known to be toxic to frogs. Pesticide residues in water, sediment, and aquatic vegetation can harm amphibians in aquatic environments by delaying or altering larval development or by reducing breeding or feeding activity (Hall and Henry 1992, Berrill et al. 1993). Insecticides obviously have harmful effects on butterflies, which are insects, even in minute concentrations. The impacts of pesticide and insecticide runoff on macroinvertebrates in Alameda Creek which are the food base for fish and amphibians has not been studied or analyzed. Alameda Creek was declared an impaired water body in 1999 by the U. S. Environmental Protection Agency due to diazinon poisoning. The Management Plan proposes to expand nursery use in the valley and expand the existing golf course, which will increase diazinon and other pesticide runoff to the creek. Pesticide use should be discontinued, especially since downstream water is used for municipal water supply, and Integrated Pest Management methods of pest control should be employed.

8. Growth inducement

Section III.O-1 of the EIR claims that creating water storage reservoirs from reclaimed mining pits will not induce growth because the source of water to fill the reservoirs is not known. These pits are intended to be filled as water reservoirs, and will be likely be filled - just because the source of water is not known does not mean there is no growth-inducing potential. Growth is not possible without additional water, and creating additional water storage almost ensures that the water will be used. The EIR also claims that the created reservoirs would be used as a supply resource in dry years. However, the EIR references a future SFPUC project, the Sunol Valley Water Treatment Plant Improvement Project (page III.P-3). The description of this project states that the “ purpose of phase 2 is to develop a Future Facilities Plan for the Sunol Valley to accommodate increasing water demand...” This seems contrary to the claim that the planned reservoirs will not induce growth.

End.

cc: California Department of Fish and Game
U. S. Fish and Wildlife Service
National Marine Fisheries Service
East Bay Regional Park District
Regional Water Quality Control Board
Sierra Club
Audubon Society
Save Our Sunol

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