

Cattle Grazing
As a Resource Management Tool
In the Sunol-Ohlone Wilderness

A Response to
“Alternative W: The Wilderness Alternative”

Prepared by

The East Bay Regional Park District

Stewardship Department



Executive Summary

The proponents of Alternative W and the East Bay Regional Park District (EBRPD) are in agreement that the Sunol and Ohlone Wilderness Regional Preserves are rich in native plant and animal resources. The EBRPD recognizes that these resources have existed in this area for almost 200 years in the presence of livestock grazing. Moreover, the "pristine" grasslands received considerable pressure from such disturbances as fire and native grazing animals for millennia, and the introduction of domestic livestock essentially replaced this grazing pressure rather than adding a new impact.

Livestock grazing is closely regulated by the EBRPD to achieve resource management and fire prevention objectives. The EBRPD enters into grazing license agreements with local ranchers who pay fair market value rent for the use of park land. The grazing operations maintain suitable habitat conditions for resident plants and animals and dramatically lower the costs for fuel management and wildfire prevention. Grazing revenues cover the District's costs for funding infrastructure needs to support the program.

The California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) support livestock grazing as a management tool. EBRPD wildlife biologists work in cooperation with these agencies in conducting research on California red-legged frog, tiger salamander, and other special-status species found on park land. The CDFG and USFWS recognize the value of livestock grazing in supporting a variety of wildlife species. Other research has indicated that the area of the Mt. Diablo Range encompassing Sunol and Ohlone Regional Wilderness Preserves has the highest density of golden eagle breeding pairs in North America due to the habitat conditions maintained by livestock grazing.

Most natural grasslands in California are dominated by non-native grasses and herbs, which were introduced to California by early settlers and have since exploited most grassland environments. These non-native grasses and herbs tend to monopolize the landscape and inhibit the germination and growth of other species through the capture of water and mineral resources and the physical and chemical effects of accumulated plant litter. Some type of management intervention is often necessary to alleviate their dominating influence over indigenous plants, and to achieve wildland fire prevention objectives, as even the proponents of Alternative W acknowledge.

Livestock grazing has been historically used as the primary vegetation management tool on EBRPD land, with prescribed burning, mechanical, chemical, and biological methods used in more site-specific situations. Alternative W proposes prescribed burning and elk grazing as vegetation management options. The use of prescribed burning is costly and limited on a landscape scale as vast as the 16,500 acre Sunol and Ohlone Regional Wilderness Preserves. Air quality considerations and logistical realities render this alternative impractical. The EBRPD also has consulted with the California Department of Fish and Game, who have expressed no interest in reintroducing elk to the area as a substitute for livestock grazing.

The majority of the Alameda Creek corridor is owned and operated by the San Francisco Water Department (SFWD) and not the East Bay Regional Park District. The SFWD, in its 1997 Alameda Creek Watershed Grazing Resources Management Plan, identified the need to construct

fencing along the length of the creek to more effectively control livestock grazing within the Alameda Creek corridor. The EBRPD and SFWD are working cooperatively to install this fencing and have identified a funding source for the project through the Environmental Quality Incentives Program (EQIP), managed in partnership with the USDA Natural Resources Conservation Service (NRCS) and the Farm Services Agency (FSA). EQIP is a conservation program that promotes agricultural production and environmental quality as compatible goals.

The majority of the discussion in Alternative W relative to grazing is centered around the impact of livestock on riparian resources and aquatic animals. All existing ponds on the Sunol and Ohlone Wilderness Regional Preserves were constructed many decades ago by previous landowners to provide water for livestock and became colonized by aquatic plants and wildlife in the presence of livestock grazing. The ponds and the habitat they provide would not occur here otherwise. There has been a coexistence of these plant and animal species with livestock grazing over the past two centuries. The Sunol and Ohlone Wilderness Regional Preserves support some of the highest concentrations of California red-legged frog and California tiger salamander populations in the San Francisco Bay Area. Ongoing research indicates no significant difference in California red-legged frog and California tiger salamander populations within fenced and unfenced ponds.

Alternative W implies that livestock are impacting oak trees and rare plants in the Sunol and Ohlone Wilderness Regional Preserves. Recognized experts in these disciplines indicate that no conclusions can be drawn about oak regeneration and rare plant survival. The oaks that occur on California's hardwood rangelands are quite long-lived, and a regeneration assessment cannot focus solely on the presence or absence of seedlings at one point in time. Sporadic recruitment of seedlings into the sapling and overstory class may be all that is needed to balance mortality and maintain the oak stand over time. In the case of rare plants, the experts conclude that it is impossible to generalize about why species are rare. Some particular aspect of their biology (such as poor seed dispersal or germination) may have some bearing on their rarity. Other plants are naturally on the decline as a result of genetic deficiencies.

The EBRPD employs a professional staff of biologists, each having decades of hands-on, everyday, practical experience in the management of wildlands in California. There is consensus among these dedicated professionals and their peers in the scientific community that livestock grazing is a valuable and useful resource management tool. Ongoing research continues to confirm this reality. If livestock grazing were as detrimental to the environment as suggested by the proponents of Alternative W, it would not be allowed or condoned on park land.

I. Introduction

The EBRPD and the proponents of Alternative W share the same vision regarding the conservation of our wildland areas. In fact, many of the “key elements” contained in Alternative W have been an ongoing part of Park District management for decades. The essence of several of these key elements has been incorporated into the draft Sunol and Ohlone Wilderness Regional Preserves Land Use Plan as resource management activities the EBRPD routinely undertakes in the stewardship of its lands. In fact, there are more similarities than differences to be found in the recommendations contained in Alternative W and the EBRPD’s environmental policies and management.

The underlying premise of Alternative W, however, revolves around the issue of livestock grazing and its effect on natural resources. Numerous literature citations and allusions to alternative management by other agencies are provided as supporting evidence for eliminating livestock from the parks. The “evidence,” however, is at times misrepresented and outdated, applies to other regions of the country with different soils, vegetation, and climatic conditions, or indicates an unfamiliarity with current scientific thinking. This report provides an explanation of the rationale behind the EBRPD’s resource management decision making process and responds to many of the implications of natural resource mismanagement and of impacts to special-status species leveled against the agency in Alternative W by providing a clarification of the facts surrounding these issues. The Alternative W proposal has received widespread media attention and publicity without the opportunity for the EBRPD to adequately respond.

The proponents of Alternative W consider Sunol and Ohlone Wilderness Regional Preserves as the “crown jewels of the East Bay Regional Park System.” They acknowledge that these parks “support numerous wildlife species, ...aquatic and riparian habitat for native fish and amphibians, ...and springtime explosions of native wildflowers.” The EBRPD concurs with this assessment. That noted, it is important to realize that these resources have existed in this area for almost 200 years in the presence of livestock grazing. Many of these resources require livestock grazing for their continued survival, a fact that was borne out during the EBRPD Grazing Review Task Force process of 2000-2001, and which continues to be supported by scientific research conducted in California. Alternative W mentions that “information submitted to the EBRPD includes a reference list of over 150 scientific, peer-reviewed research papers and articles detailing the detrimental environmental impacts of livestock grazing in the *western U.S.*” However, a careful review of many of these papers reveals that they refer to studies undertaken in other states or regions and are not applicable to California or the San Francisco Bay Area.

II. Alternative W Grazing Proposal

Alternative W suggests that “the EBRPD should phase out the existing cattle grazing program in the Preserves,” then goes on to propose an assortment of steps and procedures to facilitate the process over a 15 year period in order to lend the proposal some biological legitimacy. A monitoring program is proposed that would evaluate resource conditions during this time period. The monitoring program would exclude the EBRPD because “the EBRPD upper management and grazing program staff have shown significant bias toward the status quo grazing program to the point where clearly identified problems have been denied and ignored rather than addressed (e.g. Friends of Sycamore Valley 2002).” The EBRPD is already financing and conducting an extensive, long-term, scientifically-based grassland monitoring study under the guidance of U.C. Berkeley researchers on grassland and riparian habitats throughout the District. This monitoring study was a recommendation of an EBRPD-sponsored Grazing Review Task Force.

The EBRPD Board-appointed Grazing Review Task Force was comprised of three members of the District’s Board of Directors and five members of the public Park Advisory Committee. The review consisted of eight public hearings, four public workshops, and four weekend field trips that were held from April 25, 2000 through April 10, 2001. Each background session was focused on a particular topic. Prospective participants who could provide information appropriate to the subject matter were formally invited to attend. The workshops reviewed the information presented at the public hearings. The field trips were designed to acquaint participants with the regional parks and the resource management activities taking place within them. All meetings and field trips were open to any member of the public with a desire to present their viewpoints to the Task Force. The recommendations of the Grazing Review Task Force were approved by the EBRPD Board of Directors, following a public hearing, on June 5, 2001.

III. Livestock Grazing

Livestock grazing has been an existing use in the area comprising the Sunol and Ohlone Wilderness Regional Preserves since the “rancho” days of the early 1800’s, when large tracts of land were granted to individuals by the Mexican governors of California to encourage settlement. The landscape developed under the influences of fire and grazing animals over millennia. Vast herds of native herbivorous horses, mammoths, elk, bison, scrub ox, and woodland musk ox wandered throughout the Coast Ranges as recently as 10,000 years ago. Large congregations of elk and deer ranged across the region in more recent times prior to European settlement. The pristine grasslands received considerable

pressure from native grazing animals, and the introduction of domestic livestock essentially replaced this grazing pressure rather than adding a new impact. Land managers in California now use livestock grazing as a substitute for the loss of native herbivores and wildfire as natural ecological forces in the landscape.

Most natural grasslands in California are dominated by non-native grasses and herbs, which were introduced to California by early settlers and have since exploited most grassland environments. These non-native grasses and herbs tend to monopolize the landscape and inhibit the germination and growth of other species through the capture of water and mineral resources and the physical and chemical effects of accumulated plant litter. Some type of management intervention is often necessary to alleviate their dominating influence over indigenous plants, and to achieve wildland fire prevention objectives, as even the proponents of Alternative W acknowledge. Livestock grazing is used to reduce the biomass generated by the more productive non-native vegetation so that smaller, slower-growing, and often native, species can regenerate and coexist with it. Reduction of the vegetative biomass can also prevent or minimize the spread of wildland fires.

Certain plants achieve a competitive advantage over others by growing faster, producing more foliage, occupying more space, and generating more plant litter than their counterparts. The dominant plants produce an expanding mass of foliage concentrated in a dense overstory layer, beneath which smaller plants and seedlings are severely restricted by shading, the depletion of water and mineral nutrients, the deposition of leaf litter, and the release of phytotoxic compounds. Once established, the dominant plants will persist and reproduce indefinitely in the absence of disturbance (fire, grazing) and will act to impede the germination, establishment, and reproduction of other plants. If the growth of the dominant plants remains unabated, other plants will be excluded from the flora, and this may eventually reduce the plant composition to a limited number of species.

The District has learned from past experience that eliminating grazing from productive grassland areas leads to the loss of native plant and animal life. A grassland area above the Sunol park headquarters referred to as the "hayfield" was removed from grazing as an experiment and soon became inundated by weeds, such as black mustard, poison hemlock, fennel, and thistles. The site was characterized by the Director of the EBRPD Botanical Garden as a "biological desert." The area reverted back to a natural grassland following the return of livestock grazing. The Jacobs Valley portion of Sunol Regional Wilderness Preserve is currently ungrazed and provides a graphic example of how the land responds following the removal of livestock.

IV. Private Agricultural Operations

Livestock grazing has been historically used as the primary vegetation management tool on the Sunol and Ohlone Wilderness Regional Preserves, with prescribed burning, mechanical, chemical, and biological methods used in more site-specific situations. The EBRPD enters into grazing license agreements with local cattle ranchers who pay fair market value rent for the use of park land. The ranchers use EBRPD land in conjunction with their own private and leased grazing lands as part of an overall livestock grazing operation.

Livestock grazing is closely regulated by the EBRPD to achieve resource management and fire prevention objectives. The ranchers benefit by being afforded the use of a renewable natural resource for their livestock in the way of the grassland forage. Grazing revenues cover the District's costs for funding infrastructure. The grazing operation dramatically lowers the District's costs for fuel management and wildfire prevention.

Alternative W proposes to "phase out commercial agricultural operations in the parks" claiming that this use is incompatible with wilderness areas. The EBRPD knows of no livestock operation that is not "commercial" as the raising of domestic animals for agricultural purposes is usually a business enterprise. Furthermore, the use of the term "wilderness," as in Sunol and Ohlone *Wilderness* Regional Preserves, is a reference to the relative remoteness of the land in the San Francisco Bay Area, and has no relationship to the federal government definition of wilderness, which, by law, imposes certain restrictions on land use.

V. California Environmental Quality Act Compliance

Alternative W states that "grazing in the preserves proceeds without any existing park Land Use Plan and with no meaningful environmental review process." Both the acquisition of the land comprising the Sunol and Ohlone Wilderness Regional Preserves as public open space and the livestock grazing that occurs on it are exempt from California Environmental Quality Act (CEQA) consideration. CEQA Guideline 15316 exempts "acquisition ...of land in order to establish a park where the land is in a natural condition," and applies only "when a management plan is proposed that will change an area from its natural condition..." Grazing has been an integral part of the ecosystem of these lands for millennia, including domestic livestock grazing since the early 1800's, and was part of the "natural condition" of these lands when they were acquired by the EBRPD. Nothing in the draft Land Use Plan or the Grazing Unit Management Plan being prepared for this property or the continued allowance of grazing thereon "change the area from its natural condition."

The EBRPD uses livestock grazing as a resource management tool to benefit native plant and animal life, consistent with the most recent scientific research on the subject. CEQA Guideline 15301 provides a specific exemption for “the operation, repair, maintenance, or minor alteration of existing public or private structures, facilities, mechanical equipment, or *topographical features*, involving negligible or no expansion of use beyond that previously existing,” and includes as examples the “[m]aintenance of *existing landscaping*, [or] *native growth*” and the “[m]aintenance of *...wildlife habitat areas...*” Additionally, CEQA Guideline 15304 exempts “minor public or private alterations in the condition of *land, water, and/or vegetation*, which do not involve the removal of mature, scenic trees except for forestry and agricultural purposes.” Furthermore, grazing practices under the Sunol and Ohlone Wilderness Regional Preserves Land Use Plan will remain at or below current levels as now proposed.

VI. Land Management and Inter-Agency Cooperation

The EBRPD has managed the Sunol and Ohlone Wilderness Regional Preserves for the past 40 years in accordance with accepted, scientific rangeland and resource management principles and standards in lieu of a Land Use Plan. These rangeland and resource management concepts have been incorporated into the draft Land Use Plan and its accompanying Grazing Unit Management Plan. The EBRPD and the San Francisco Water Department (SFWD), from whom the EBRPD leases a portion of the land comprising the Sunol Regional Wilderness Preserve, collaborated and achieved consensus on a comprehensive livestock grazing management strategy for the combined properties. This strategy is outlined in the draft Grazing Unit Management Plan, which is incorporated in the Land Use Plan.

Alternative W implies that the EBRPD is in conflict with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) regarding habitat management policies and recovery plans for special-status amphibian species. EBRPD wildlife biologists have been in the forefront in conducting research in cooperation with these and other government agencies to learn more about the habitat needs of such species as the California red-legged frog, foothill yellow-legged frog and tiger salamander, all of which occur in significant numbers in Sunol and Ohlone Wilderness Regional Preserves. Much of what has been discovered as a result of these efforts indicates that livestock grazing is compatible with the protection of these species and may even be necessary to maintain suitable habitat conditions for their continued survival.

The EBRPD received direction from the U.S. Fish and Wildlife Service during the Grazing Review Task Force process in a letter stating that the agency was:

"concerned that any change in rangeland management as it relates to grazing or other issues could result in negative impacts to federally listed threatened and endangered species. Many of the federally listed species which occur on the District's lands have existed with some level of grazing pressure. Appropriate levels of this type of disturbance regime may be essential to maintaining listed species habitats."

This conclusion by the U.S. Fish and Wildlife Service, affirming the benefits of the District's grazing program, contradicts much of what the proponents of Alternative W have represented in their document.

VII. Elk as an Alternative to Livestock Grazing

Alternative W, while recommending the eventual elimination of livestock grazing in the Sunol and Ohlone Wilderness Regional Preserves, proposes other land management methods, one of which includes the use of elk grazing in lieu of cattle grazing. This is an interesting concept in that it constitutes an acknowledgment of a need for vegetation management using grazing, albeit with a different animal. The EBRPD is unaware of any difference in how elk would use the land more appropriately than cattle. In fact, elk are a browsing animal that would tend to focus their attention more on the consumption of woody vegetation, including the oak trees that Alternative W allege are being impacted by cattle, which graze mostly on herbaceous vegetation. In any event, the EBRPD has consulted with the California Department of Fish and Game, who have expressed no interest in reintroducing elk to the area.

Alternative W recommends that "the EBRPD consult with National Park Service biologists and staff at Point Reyes National Seashore regarding the management and potential enhancement of tule elk grazing in the preserves." The EBRPD has done this, and has reviewed a study conducted by U.C. Berkeley researchers on the impact elk are having on the area of the Point Reyes National Seashore where these animals are contained. The elk are confined in the Tomales Point portion of the park by 10-foot high fences and are prohibited from expressing their natural migratory tendencies, much like caged animals in a zoo. The U.C. Berkeley study has indicated that the elk population has exceeded the carrying capacity of the land, which is causing an undesirable change in the native vegetation. Population numbers must be regulated through the expensive use of contraceptives, because of the sensitivity of culling the animals through other means, such as euthanization. The entire elk herd is infected with Johnne's disease, for which

there is no cure. The animals are quarantined in the park and cannot be moved elsewhere for fear of infecting other wild and domesticated ungulate animals with this disease. Some minimal trials to relocate elk within Point Reyes National Seashore are planned.

VIII. Prescribed Burning as an Alternative to Livestock Grazing

Alternative W also proposes the use of prescribed burning as an alternative to livestock grazing, once again acknowledging the need for vegetation management. Prescribed burning is the intentional ignition of grass, shrub, and forest fuels for specific purposes. It is designed for confinement to specific areas, is regulated in intensity, and is controlled to achieve desired results. Prescribed burns must be carefully orchestrated and implemented. On-site personnel, firefighting equipment, and construction of control lines are necessary to conduct safe and effective burns and to minimize the potential for escape. The work is labor intensive, can be dangerous to those involved, and the escape of "planned" fires can have catastrophic results. The burns must be conducted under specific climatic conditions and receive approval from various regulatory agencies, particularly local air quality control boards. Written burn plans must be prepared that describe the procedure, timing, and conditions under which the burn will be conducted.

does not account for native plants

The EBRPD has its own fire department and yet is limited to implementing only several hundred acres of prescribed burning projects each year because of logistical and regulatory considerations and restrictions. Livestock grazing generates revenue of \$14.00 to \$15.00 per animal per month, whereas the cost of burning is estimated to be \$70.00 per acre. The use of this alternative, therefore, is limited on a landscape scale as vast as the 16,500 acre Sunol and Ohlone Wilderness Regional Preserves. Indeed, livestock grazing may very well be the only viable, practical, functional, and cost-effective vegetation management option for such large-scale landscapes.

not every acre needs to be burned every year

IX. Alternative Fire Management Techniques

A hands-off land management approach that allows nature to take its course can have detrimental repercussions. The loss of unmanaged grasslands to encroaching brush, non-native grass proliferation, and invading weeds diminishes overall biodiversity by displacing or eliminating significant numbers of the associated plant and animal species that rely on open habitats and managed grasslands for their survival. The threat of wildfire is intensified under these conditions, and landowners risk legal responsibility in failing to abate the fire hazard inherent in the accumulated dried vegetation in the event of a wildfire that spreads to and jeopardizes life and property on adjacent land. Public agencies, which manage open space, are equally responsible for abating fire hazard conditions on wildlands under their jurisdiction.

The proponents of Alternative W suggest that the EBRPD should consult with the California Department of Parks and Recreation regarding its experience with “standing biomass and fire hazard reduction on Mt. Diablo State Park,” implying that they have solved this problem in the absence of livestock grazing. The EBRPD instead contacted local fire district officials to obtain an impartial assessment of fire hazard conditions on the park since the cessation of livestock grazing in 1990. Their assessment is that the fire management plan which was adopted as part of the General Plan for the park has gone largely unimplemented. The Contra Costa County Resource Conservation District has measured the fuel load on the more productive grasslands on the mountain, which constitutes the majority of the park. The accumulated biomass has been estimated at more than 13 tons per acre. The average amount of natural vegetation produced on grasslands locally in any given year is one to two tons per acre and fire district officials recommend a reduction of this biomass to less than one-half ton per acre to achieve fire prevention objectives.

X. Riparian and Wetland Resources

The majority of the discussion in Alternative W relative to grazing is centered around the impact of livestock on riparian resources and aquatic animals. Indeed, 32 of the 49 literature citations (65%) in Appendix B of the Alternative W document are related to this subject matter. The EBRPD is well aware of riparian and wetland management issues. Policies that provide for the conservation of these sensitive resources are embodied in all EBRPD planning documents from the District’s 1997 Master Plan to the Wildland Management Policies and Guidelines (revised 2001), the latter of which prescribes vegetation management strategies for park land. The draft Sunol and Ohlone Wilderness Regional Preserves Land Use Plan and Grazing Unit Management Plan also address management of riparian and wetland resources in some detail.

All existing ponds on the Sunol and Ohlone Wilderness Regional Preserves were constructed many decades ago by previous landowners to provide water for livestock and became colonized by aquatic plants and wildlife in the presence of livestock grazing. The ponds and the habitat they provide would not occur here otherwise. There has been a coexistence of these plant and animal species with livestock grazing over the past two centuries. The Sunol and Ohlone Wilderness Regional Preserves support some of the highest concentrations of California red-legged frog and California tiger salamander populations in the San Francisco Bay Area. Ongoing research indicates no significant difference in California red-legged frog and California tiger salamander populations within fenced and unfenced ponds. Aquatic and emergent vegetation continues to persist in and around these water bodies.

XI. Alameda Creek

The majority of the Alameda Creek corridor is owned and operated by the San Francisco Water Department (SFWD) and not the East Bay Regional Park District. However, both the SFWD and EBRPD are actively involved with other environmental and community organizations in efforts to reintroduce steelhead into the upper reaches of Alameda Creek. The SFWD identified the need to construct fencing along the length of the creek to more effectively control livestock grazing within the Alameda Creek corridor. This fencing recommendation was incorporated into the 1997 Alameda Creek Watershed Grazing Resources Management Plan. An environmental impact report was prepared in association with the development of this plan per the California Environmental Quality Act. The EBRPD and SFWD are working cooperatively to install this fencing and have identified a funding source for the project through the Environmental Quality Incentives Program (EQIP), managed in partnership with the USDA Natural Resources Conservation Service (NRCS) and the Farm Services Agency (FSA). EQIP is a conservation program that promotes agricultural production and environmental quality as compatible goals.

Alternative W is replete with references to the Alameda Creek corridor and the impact of livestock grazing on riparian resources, citing studies by consultants as evidence. These "studies" seem to have been conducted without any scientific basis and involved mostly personal observations. The SFWD, on the other hand, has been working with U.C. Davis researchers to establish baseline conditions for a long-term monitoring study to determine stream conditions. This scientific study is using three protocols developed by the Environmental Protection Agency, Bureau of Land Management and Natural Resources Conservation Service to make the assessments. Permanent transects have been established for measuring such variables as vegetation, bank stability, water turbidity, chemical composition, and macroinvertebrate concentrations.

Alternative W implies that livestock grazing is having detrimental effects on trout and other salmonids, such as steelhead, the latter of which no longer exist in the creek. Steelhead did occur in Alameda Creek in large numbers through the middle of the twentieth century in the presence of over 150 years of livestock grazing, which was more intensive than what occurs there today. The reason for the steelhead's decline here, as elsewhere, has less to do with livestock grazing than with the deleterious effects of downstream concrete stream channelization, housing development, water diversions into local reservoirs to support the domestic water needs of a burgeoning population, and dam construction impeding the upstream migration of fish.

XII. Wildlife

The proponents of Alternative W allege numerous impacts to wildlife as a result of livestock grazing, often citing themselves or others, such as the Friends of Sycamore Valley, as sources of the information. Alternative W contains statements such as, "frogs require rodent burrows for estivation which are often trampled by cattle," and "over-grazing exacerbates the threat of bullfrog expansion." The authors further state that "...the negative impacts of cattle grazing on stream and riparian habitat in Alameda Creek and on habitat for other sensitive species within Sunol and Ohlone Preserves ...have been *extensively researched* by the U.S. Fish and Wildlife Service, California Department of Fish and Game, and private biological consultants..." The EBRPD is unaware of any "extensive research" conducted by any of these entities in Sunol and Ohlone Wilderness Regional Preserves, other than the research mentioned earlier in this document, in which EBRPD biologists are involved in cooperation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service. These cooperative studies, initiated by EBRPD biologists, have been recording data on the number of frogs, egg masses, breeding productivity, and the effect of water releases in Alameda Creek.

One particular study of interest, not included in Alternative W, is worth mentioning because it exemplifies the interrelationship between livestock grazing and the habitat needs of a variety of wildlife, including many threatened, endangered, and special status species that the proponents of Alternative W claim are being harmed by grazing. The Predatory Bird Research Group, as part of the Golden Eagle Population Project, conducted an intensive field investigation of the ecology of golden eagles in the Diablo Range and discovered that the area of this mountain range that includes the Sunol and Ohlone Wilderness Regional Preserves has the highest density of golden eagle breeding pairs in North America. This, they concluded, was a result of the habitat conditions maintained by livestock grazing.

Golden eagles forage most effectively in open landscapes and the habitat structure of the vegetation directly influences prey vulnerability. The study determined that California ground squirrels were the most important prey species for golden eagles nesting in the interior Coast Range of California, and that the largest populations were associated with low grass height. The ground squirrel is considered a "keystone" species, an animal whose presence signifies the suitability of the habitat for a variety of other wildlife. This is because their burrows provide cover and shelter for numerous other animals, including many special-status species, such as kit fox, badger, California red-legged frog, and tiger salamander -- many of the same species Alternative W alleges are being adversely impacted by livestock grazing.

XIII. Oak Regeneration

Alternative W implies that livestock are impacting oak trees in the Sunol and Ohlone Wilderness Regional Preserves. It uses as evidence of this a personal observation that "areas of the preserves with heavy cattle grazing exhibit poor or no oak regeneration." In regard to oak regeneration, recognized expert, Richard B. Standiford, Forest Management Specialist with the Integrated Hardwood Range Management Program at U.C. Berkeley has concluded that:

"Since the oaks that occur on California's hardwood rangelands are quite long-lived, a regeneration assessment cannot focus solely on the presence or absence of seedlings at one point in time. Sporadic recruitment of seedlings into the sapling and overstory class may be all that is needed to balance mortality and maintain the oak stand over time. The absence of seedling reproduction and recruitment does not indicate a 'failure' in regeneration if mortality is not occurring in the stand" (Oaks 'n Folks, The Newsletter of the Integrated Hardwood Range Management Program, vol 4, issue 2, Dec. 1989).

Since the life span of most oaks is on the order of one to several hundred years, the presence of livestock in the area for at least that amount of time should have, by now, diminished or eliminated the entire oak population if one were to believe the statements contained in Alternative W. Rather, oak woodlands are one of the most ubiquitous plant communities in the park covering 5,900 acres, or 36% of the total acreage. These trees have persisted and regenerated in the presence of livestock grazing during the past two centuries, verifying Mr. Standiford's professional hypothesis.

XIV. Rare and Unusual Plants

The introduction of the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, which is used as a literature citation in Alternative W to imply that livestock grazing in Sunol and Ohlone Wilderness Regional Preserves is impacting rare plants, is authored by Peggy L. Fielder, an Associate Professor in the Department of Biology at San Francisco State University. She concludes:

"And although some taxa are rare because of some particular aspect of their biology (such as poor seed dispersal or germination), and still others may be rare because they are old, genetically depauperate, and 'on their way out' (Stebbins 1942), it is impossible to generalize about why species are rare."

The Sunol and Ohlone Wilderness Regional Preserves support a significant number of plants considered to be "locally rare and unusual" by the East Bay Chapter of the California Native Plant Society, all of which occur in areas grazed by livestock. It is important to note that these plants have continued to exist in the presence of livestock grazing for almost 200 years.

XV. Conclusion

The EBRPD employs a professional staff of biologists, each having decades of hands-on, everyday, practical experience in the management of wildlands in California. There is consensus among these dedicated professionals and their peers in the scientific community that livestock grazing is a valuable and useful resource management tool. Ongoing research continues to confirm this reality. If livestock grazing was as detrimental to the environment as suggested by the proponents of Alternative W, it would not be allowed or condoned on park land.

Livestock grazing will always be a highly controversial and emotionally charged issue for some individuals. Well-meaning people will continue to oppose livestock grazing on public land without understanding or acknowledging the important role it plays relative to resource management and fire prevention on California wildlands. Public agency managers and elected officials will need to make a long-term commitment to livestock grazing and demonstrate resolve when it is challenged. Education must play a role in counteracting negative stereotypes regarding livestock grazing, which is often likened to clear-cutting and strip-mining by its more vocal opponents. Livestock grazing and public recreation must coexist harmoniously with efforts to conserve natural resources. The EBRPD will continue to strive toward developing constructive working relationships with the public, other government agencies, experienced biologists and researchers, area ranchers, surrounding landowners, and local community and environmental leaders in this regard in a cooperative effort to achieve mutual goals. }!