



Midpeninsula Regional
Open Space District

PLANNING AND NATURAL RESOURCES COMMITTEE

R-20-149
December 15, 2020

AGENDA ITEM 2

AGENDA ITEM

Amendments to the Grazing Management Policy Pertaining Specifically to Reimbursements for Cattle Predation and Research on Safe Livestock and Wildlife Protection Measures

GENERAL MANAGER'S RECOMMENDATIONS

1. Review and discuss the proposed amendments to the Grazing Management Policy pertaining specifically to reimbursements and research work, including public and stakeholder feedback received.
2. Forward a recommendation to the Board of Directors for approval consideration of the proposed Grazing Management Policy amendments with any additional changes requested by the Committee.
3. Forward a recommendation to the full Board to authorize the General Manager to make amendments to existing grazing leases to implement the proposed Grazing Management Policy amendments.

SUMMARY

The Planning and Natural Resources (PNR) Committee received a status update on the Grazing Management Policy Amendment process on October 22, 2019 (R-19-139). At this meeting, the PNR requested additional public, stakeholder, and partner feedback on the various policy considerations to further refine the draft policy amendments before returning to the PNR Committee for further direction. In response, the Midpeninsula Regional Open Space District (District) held a meeting with the San Mateo County Farm Bureau (SMFB) Executive Committee, a public stakeholder workshop, a wildlife advocacy workshop, and two phone conference calls with the California State Senate Natural Resources and Water Committee, soliciting feedback on the following two specific concepts for safeguarding native wildlife while addressing predation of livestock:

- 1) **Reimbursement for Cattle Loss and Reduced Rent Rate:** Economic compensation for conservation grazing tenants experiencing livestock loss due to predation; and
- 2) **Research of Safe Livestock and Wildlife Protection Measures:** Supporting research on safe means for reducing wildlife and livestock conflicts that remain protective of both livestock and local wildlife.

District ordinances prohibit lethal removal of predators in response to livestock losses. The take of native predators allowed through California Department of Fish and Wildlife (CDFW) code as

well as depredation permits has never been allowed on District owned and managed lands and will not be considered as a response to livestock losses to native predators. Specific policy language has been included in the draft grazing management policy amendment to re-emphasize and re-state the District's commitment to protect native wildlife and prohibit lethal take in response to livestock losses.

The District is proposing reimbursement for cattle that have been lost to predation as well as a reduction in the rent rate paid by conservation grazing tenants who graze on District preserves. These economic measures will support the partnership with conservation grazing tenants by safeguarding against economic hardship while enabling the District to continue to utilize conservation grazing as a viable tool to manage coastal grassland habitats.

Because of the lack of region-specific research on the efficacy of wildlife and livestock protection methods, the General Manager is proposing a five-year research and review period to determine which methods are appropriate for reducing wildlife and livestock conflicts in conservation grazing areas.

BACKGROUND

In the late 1990s, coastside residents expressed their support for extending the District's boundaries to include the San Mateo County Coast, where development was beginning to threaten the area's rural character and agricultural heritage. When District boundaries expanded in 2004, a commitment to preserve agricultural land and rural character, and encourage viable agricultural use of land resources was made to the Coastside community and embedded in the District's Coastside mission statement:

To acquire and preserve in perpetuity open space land and agricultural land of regional significance, protect and restore the natural environment, preserve rural character, encourage viable agricultural use of land resources, and provide opportunities for ecologically sensitive public enjoyment and education.

To date, the District has protected more than 11,000 acres of open space and agricultural land on the San Mateo County Coast, including more than one third of San Mateo County's actively grazed ranchlands. The District has invested nearly \$20 million in land preservation, environmental restoration, and ecologically sensitive public recreation on these preserved coastal properties.

Coastal grasslands are one of the most biodiverse and threatened ecosystems in North America, and in many cases depend on regular disturbances like grazing or fire to prevent encroachment by introduced species, shrubs, and forest. These disturbances were historically provided by wildlife herds and Native American burning practices.

Conservation grazing is distinguished from basic livestock production in that the primary purpose for the use of livestock is to further the conservation goals of protecting and increasing grassland habitat biodiversity, including important pollinators. To accomplish these goals, a Rangeland Management Plan is customized for each grazing site that sets specific management parameters, such as stocking rates, class of livestock, seasonality, and duration of grazing activity. The District uses conservation grazing as a critical tool for managing approximately 8,500 acres of coastal lands for ecological health, biodiversity, and wildland fire safety. The

District's Conservation Grazing Program is a mutually beneficial partnership with small-scale local ranchers on the San Mateo County Coast to accomplish multiple goals aligned with the District's mission.

The District began its conservation grazing program in 2007 to maintain and enhance the diversity of native plant and animal communities by preserving grassland habitat, manage fuel loads for fire protection, sustain the local agricultural community, and preserve the region's rural agricultural heritage. In 2013, grazing tenants began to report livestock losses due to predation by mountain lions and coyotes. In response, under the General Manager's authority, the District began compensating conservation grazing tenants in 2014 for confirmed livestock losses to predators by offering a reimbursement based on the per pound market price of the animal at the time of the loss. As an example, if a conservation grazing tenant lost a young calf, and the loss was confirmed to have been caused by a predator, the District would reimburse that tenant for the estimated value of that animal at the time of loss based on the weight and market rate of the calf. District conservation grazing tenants have since continued to experience periodic livestock losses from mountain lion and coyote predation. In 2017, the District began to explore whether changes to existing policies could reduce predation and/or more adequately address the economic losses to conservation grazing tenants while continuing to support wildlife populations and ensure the viability of conservation grazing as a land management tool to protect grassland biodiversity. Natural Resources staff conducted a grazing tenant survey and interviews in 2017 to identify the scope of the issue as well as potential solutions. In 2018, the District contracted with a Wildlife Conflict Specialist to develop a scientific literature review of existing methods for addressing livestock/wildlife conflict to guide policy development.

As the District continues to acquire new lands that may be included in the conservation grazing program, there is a growing need to define the individual roles of the District and its tenants in addressing wildlife and livestock conflicts when they arise. Amendments to the Grazing Management Policy that provide clear guidance to the District's conservation grazing tenants for reducing wildlife conflicts while protecting local wildlife, including mountain lions and coyotes, are recommended. The amendments would specify the District's role and strategy in managing these conflicts while assuring a clear understanding by the grazing tenants of District provisions for addressing these issues and at the same time assuring the general public that the District remains committed to protecting local wildlife, including native predators.

The proposed amendments that are being presented to the PNR on December 15, 2020 are strictly focused on reimbursements and research. In addition, consistent with other District policies and ordinances, language that restates the District's long-standing prohibition of lethal take of wildlife, including mountain lions, in response to livestock loss would be explicitly included in the policy to re-emphasize the District's protection of native predators. This language is consistent with comments received from the Center for Biological Diversity (Attachment 1), the Defenders of Wildlife (Attachment 2), and members of the public (Attachment 3).

DISCUSSION

Summary of Public Outreach Post-October 2019 PNR Meeting

District staff held a public stakeholder workshop, a meeting with the San Mateo County Farm Bureau Executive Committee, two phone interviews with the California State Senate Natural Resources and Water Committee, and a wildlife advocacy workshop in late 2019 and early 2020

to solicit feedback on refinements to the draft policy amendment language. A high-level summary of each meeting is provided below. More detailed findings from the public and wildlife advocacy workshops are presented in Attachment 4.

San Mateo County Farm Bureau (SMFB) Executive Committee meeting

District staff met with the SMFB Executive Committee on December 6, 2019 to discuss the latest refinements to the draft policy amendment language and discuss public and wildlife advocacy group feedback. The SMFB was supportive of District efforts in addressing wildlife and livestock conflict and indicated that the existing reimbursement rates for cattle loss due to predation offered by the District are too low and do not adequately address the economic losses to grazing tenants. The SMFB indicated that a reduction closer to 50% in the rental rate is preferred to offset losses.

California State Senate Natural Resources and Water Committee

District staff spoke with the former Chief consultant for the Senate Natural Resources and Water Committee (SNRWC), Bill Craven, on November 21, 2019. During the discussion, the District discussed the wildlife and livestock protection measures under consideration.

On February 21, 2020 District staff had a phone conference with the Wildlife Corridor Working group and Katharine Moore, consultant for the SNRWC. The discussion centered around wildlife-safe options for limiting conflicts between mountain lions and domestic animals. The SNRWC is exploring legislative options to protect mountain lions and limit the issuance of depredation permits by the California Department of Fish and Wildlife (CDFW) in response to predation of domestic animals.

Public Workshop

On December 17, 2019, the District hosted a public workshop with a total of 35 members of the public attending the event. One (1) written comment was received during the comment period as part of this event. The meeting content focused on the District's dual mission statement and commitment to agriculture as part of the Coastside Service Plan that specifies the District's role and practices within the San Mateo County Coast. Presenters gave detailed information on conservation grazing practices and the benefits of well-managed conservation grazing, including grassland habitat enhancement; reduction of fuel loads for fire protection; and support of the local agricultural economy and cultural heritage. Meeting attendees expressed concerns about the District's conservation grazing program, citing greenhouse gas emissions, water quality impacts, and the use of public lands by ranchers as key concerns. Some meeting attendees also expressed opposition to the premise of grazing on public lands. Many of the attendees were not aware of the District's Coastside Mission or that the conservation grazing program has been in place since 2007. Some attendees expressed an interest in conducting research on the effects of conservation grazing and wildlife and livestock protection measures. There was limited support for economic relief for conservation grazing tenants, with the majority of those in attendance feeling that the conservation grazing tenant should be aware of the risks of grazing on public lands.

Wildlife Advocacy Stakeholder Workshop

On January 23, 2020, the District held a wildlife advocacy stakeholder workshop to receive feedback from regional wildlife advocacy groups. A total of ten (10) representatives from eight (8) wildlife advocacy organizations attended the workshop. Meeting attendees offered valuable feedback on the refined draft policy language and gave recommendations to

strengthen the language around protecting wildlife. After the workshop, the Center for Biological Diversity and Defenders of Wildlife provided written recommendations for the draft policy language (Attachments 1 & 2). There was support for wildlife and livestock protection measures as long as methods are approved and monitored by the District and considerations are made to reduce any unintended negative effects on wildlife populations. Workshop attendees were interested in alternatives to conservation grazing, including prescribed fire and using native ungulates like tule elk, as well as removing grassland management activities entirely. The group was supportive of research that deters predation and was also interested in seeing research on the effects of conservation grazing by comparing grazed and non-grazed areas in a paired study. There was mixed feedback on the proposed economic compensation program. There was greater support for reimbursement of confirmed cattle losses to predators as opposed to a reduction in rent rates for grazing tenants.

Science Advisory Panel Grazing Report

A Science Advisory Panel (SAP), comprised of the San Francisco Estuary Institute (SFEI) and Point Blue Conservation Science (Point Blue), was tasked by the District Board of Directors with assessing the impacts of grazing on native ecosystems, its utility as a vegetation management tool, and its greenhouse gas emissions and sequestration potential. SFEI and Point Blue, in consultation with a Technical Advisory Committee, carried out an extensive review of the scientific literature and have produced their final report (R-20-129). The report concludes that grazing can benefit native plants and wildlife; that it is a valuable tool for reducing fire fuels and protecting grassland habitats from shrub encroachment; and that the greenhouse gas emissions inherent in any grazing operation are a tradeoff that can be partially offset by other land management activities to increase carbon sequestration. The proposed policy amendment is consistent with the review from the SAP.

Proposed Grazing Management Policy Amendment

A proposed amendment to the Grazing Management Policy to address livestock predation on District lands that is protective of native wildlife (Attachment 5) is provided for PNR review and feedback. The proposed policy amendment was informed and refined by the findings of a comprehensive literature review (Attachment 6), partner discussions, stakeholder meetings, and conversations with grazing tenants, the SNRWC, and members of the SMFB. The proposed policy amendment is specifically focused on the following:

- 1) ***Reimbursement for Cattle Loss and Reduced Rent Rate:*** Economic compensation for conservation grazing tenants experiencing livestock loss due to predation; and
- 2) ***Research of Safe Livestock and Wildlife Protection Measures:*** Supporting research on safe means for reducing wildlife and livestock conflicts that remain protective of both livestock and local wildlife.

In addition, consistent with other District policies and District ordinance, the language would explicitly include the prohibition of lethal take of predators in response to predation of livestock to re-state and re-emphasize the District's commitment to protecting native wildlife that may be involved in the predation of livestock and domestic animals.

Adoption of the proposed policy amendment would result in the following changes to the conservation grazing program related to economics and research on wildlife and livestock protection methods:

Economics:

The proposed policy amendment would allow for reimbursement of cattle loss based on the projected market rate of the animal at the time of planned sale (had the animal reached maturity) and a 25% rent reduction as a means to support the economic sustainability of conservation grazing, as described below.

Reimbursement for Confirmed Cattle Losses:

To date, the General Manager has used discretion to provide reimbursement for cattle losses confirmed to have resulted from predation, on a case-by-case basis, based on the weight of the animal at the time of the loss. The proposed policy amendment would update and formalize this reimbursement policy and apply it to eligible grazing tenants who meet specific performance criteria, remain in good standing with the District, and comply with all lease provisions.

The District would pay reimbursement for confirmed cattle losses due to predation for the market value of that animal at time of planned sale (had the animal survived) rather than at time of loss. The value of the animal at the time of planned sale would be determined by averaging the value of all cattle sold by the individual conservation grazing tenant in the year that the loss occurred. This reimbursement would coincide with the same time when the grazing tenant would otherwise typically sell the cattle had they survived. The recommended change is intended to reflect the actual loss in revenue to the grazing tenant.

To be eligible for reimbursement, tenants would be required to (1) agree to a provision in the grazing lease requiring them to provide annual data on livestock losses from predation and other causes and (2) work with the District and CDFW to report the loss in a timely manner and confirm the cause of loss. The District's current practice of expunging the rent for the mother cow, in instances where a calf is lost to predation, would remain in place.

Reduced Rental Rate:

A reduction in the rental rate is proposed in conjunction with cattle loss reimbursement as a means of supporting the economic sustainability of the conservation grazing program as a viable tool for the District to manage the natural resources and grassland habitats. This rate reduction responds to the economic impacts faced by conservation grazing tenants in light of the District's long-standing policy that prohibits the lethal take of predators threatening or taking livestock. Staff heard from grazing tenants that the District's remote, rough terrain makes timely discovery of cattle carcasses difficult. As a result, the cause of losses are often impossible to confirm, often negating the potential for reimbursement of cattle loss to help make grazing tenants whole and keep the conservation grazing program viable. Active predation pressure can also significantly stress the cattle, leading to reductions of weight gain that affect final market rates. The proposed rent reduction takes these factors into consideration. The rent reduction would be offered to existing and future grazers who agree to report annual livestock loss data. As always, grazing tenants will continue to be required to meet the District's resource management objectives and abide by lease requirements and District ordinances as they manage cattle on District lands as part of the District's conservation grazing program.

If the Board approves this policy amendment regarding reimbursements, the General Manager would also seek Board authorization to amend and update existing leases to incorporate these policy changes.

Research:

The proposed policy amendment also includes language that highlights District support for research on the effectiveness of wildlife and livestock protection methods and their effect on wildlife behavior (e.g. deterring predation), grazing productivity, and livestock health. Research may include wildlife camera studies, marking, collaring, and monitoring predators, and/or evaluating environmental DNA (scat and hair snare surveys) to identify predators that have adapted to consuming livestock. The District would work with wildlife research organizations to develop appropriate scientific research on wildlife and livestock protection methods, including: enhanced fencing and barriers; passive and active deterrents; use of livestock protection animals; removal of attractants (such as livestock carcasses); landscape feature alterations (such as removing vegetative cover around water troughs and other areas that livestock congregate); changes in cattle operations; increased human presence; and hazing. Wildlife and livestock protection methods would only be used in conjunction with research.

Results of these studies would be evaluated on a five-year basis. If feasible, predators that attack livestock will be carefully tracked. If possible, a DNA sample from carcasses may be obtained to identify whether an individual has habituated to taking cattle. The District would also investigate the appropriateness and effectiveness of a pilot Volunteer Livestock Protection Program that can assist willing conservation grazing tenants with tracking livestock losses and predator activities.

If the proposed policy amendment related to research is adopted, the District would have an opportunity to consider implementing safe deterrent methods that are newly identified based on the findings of the five-year research work.

Mountain Lion Listing Petition Under the California Endangered Species Act

On June 25, 2019, the Center for Biological Diversity and the Mountain Lion Foundation filed a Notice of Petition to list an Evolutionarily Significant Unit (ESU) of six mountain lion populations, including the Santa Cruz Mountains population, as threatened under the California Endangered Species Act (CESA). The justification for this petition relied on genetics studies that indicate that these populations are genetically compromised and therefore face a risk of extinction. This petition is based on the current assessment by environmental conservation groups of the lion population in California, and more specifically within the Santa Cruz Mountain region.

Based on the Board-approved 2020 Legislative Program, legislative policy positions: *Goal 2 Section 12: Support maintaining state and federal lists of endangered species justified through conclusive biological evidence*, the District wrote a letter of support for evaluating the listing of mountain lions in the Santa Cruz Mountains (Attachment 7) and joined as signatories on a letter of support from the Center for Biological Diversity (Attachment 8). For additional mountain lion protections to be successful, increased funding for CDFW wardens is needed to expand public education on wildlife-safe predator deterrents and to issue permits to allow predation deterrent alternatives such as hazing. In addition, there will need to be more enforcement of illegal poaching. The District also advocates for expanded research on wildlife-safe deterrents as well as

estimates of lion populations and genetic health within the Santa Cruz Mountains ESU and throughout the state.

The petition lists numerous Recommended Management and Recovery Actions to protect mountain lions. One measure relates to reducing depredation (legal lethal removal) of mountain lions by expanding CDFW’s “three-step depredation permit policy” to include all mountain lions across the state. On February 13, 2020, CDFW released a memorandum officially expanding the “three-step” policy to cover the entirety of the recommended ESUs in the Santa Cruz Mountains and Southern California. Under this policy, CDFW will only issue a lethal depredation permit after a third loss of a domestic animal to predators is confirmed in those areas. For the first two losses, CDFW will allow the person experiencing the losses to deploy non-lethal livestock protection methods. This change to how CDFW addresses livestock losses will increase the need for research on viable non-lethal methods for reducing conflicts. CDFW held a meeting on April 15, 2020 and announced its unanimous approval of the petition to list mountain lions under CESA. Protections took immediate effect and lions are now protected as a candidate species during a one-year review period.

The District’s proposed grazing policy amendments are well aligned with the intentions of the petition, and in fact comparatively more protective of mountain lions. The protections under the petition will support District efforts in protecting mountain lion populations across the Santa Cruz Mountains in lands not owned or managed by the District.

FISCAL IMPACT

Developing amendments to the Grazing Management Policy to address livestock predation has been staff led, with an external contract utilized for scientific advisory services. If adopted by the Board, implementation measures (as discussed above) will result in budgetary and staff impacts as estimated in the table below. Funding for research and economic compensation would be requested in future year budgets as part of the annual Budget and Action Plan process. Staff time is broken into two categories: program development and implementation.

To date, the District has reimbursed tenants for a total of ~~eighteen~~ twenty three (1823) head of cattle. The average amount that the District has paid per lost livestock is \$867817. Under current market rates, these livestock would have been valued at roughly \$941 per head (if sold after grazing for a single season). The proposed change in reimbursement practices would result in an increase reimbursement of roughly \$74124 per lost animal.

Policy Component	Year 1 Budget	Subsequent Annual Budgets	Staff Time Program Development	Staff Time Implementation/ Year
Economics	\$10,000 - \$15,000	\$10,000 - \$15,000	40 hours	100 -125 hours
Research	\$75,000	\$45,000 - \$65,000	150 hours	100 -125 hours
Totals	\$85,000 - \$90,000	\$55,000 - \$80,000	190 hours	200 – 250 hours

In addition to the items above, a reduction in the rental rate paid by tenants would result in reduced rental income for the District’s Conservation Grazing Program. The expected District-wide reduction in annual rental income is included in the table below. This is based on current stocking rates and the rental income to the District from 2019. Alternatives grassland

management tools, including prescribed fire, mechanical mowing, and herbicide treatments are all valuable tools for maintaining grasslands but would not be economically viable on the same scale as the District’s current conservation grazing program. The cost to implement these alternatives over the same geographical are estimated to be orders of magnitude higher than the current cost of our conservation grazing program. The proposed reduction in rental rate is insignificant when compared to the cost of replacing grazing with other methods. In addition, the available alternatives do not offer the same low-intensity continuous disturbance regimes that grazing does and require greater oversight during implementation to protect sensitive resources.

Total Lease Income (FY 2019/20)	Reduction in Rent	Reduction in Annual Lease Income	Adjusted Lease Income
\$72,023	25%	\$ 18,005	\$54,018

BOARD COMMITTEE REVIEW

The draft Grazing Management Policy Amendment and process were reviewed by the PNR on April 9, 2019 (R-19-40) and on October 22, 2019 (R-19-139). The results of the Science Advisory Panel Grazing Report were reviewed by the full Board on November 4, 2020 (R-20-129)

PUBLIC NOTICE

Public notice was provided as required by the Brown Act. Notification was provided to 1329 individuals, including interested parties that signed up through the project webpage, the SMFB, partner agencies, wildlife advocacy groups, and District grazing tenants.

CEQA COMPLIANCE

The District’s existing Resource Management Policies were adopted in 2011 and their environmental impacts were evaluated under the California Environmental Quality Act (CEQA) with an Initial Study/Mitigated Negative Declaration (IS/MND, Attachment 9). There are no changes to the circumstances or new information that has become available since adoption of the IS/MND. In accordance with the CEQA Guidelines Section 15162, this minor policy amendment is covered by the existing IS/MND because the addition of language supporting predator deterrence research and economic relief for conservation grazing tenants are not substantial changes to the Resource Management Policies nor will they result in any new significant environmental effects. The existing mitigation measures set forth in the IS/MND will reduce any potential environmental effects to less-than-significant levels.

Additionally, consideration was given to the temporary aspect of the predator deterrence research described in the policy amendment, which constitutes information collection, categorically exempt under CEQA Guidelines section 15306.

NEXT STEPS

Following PNR review of the proposed amendments to the Grazing Management Policy and receipt of public and stakeholder feedback, and, if recommended to the full Board for approval,

staff will incorporate any additional changes requested by the PNR. Staff anticipates bringing the item to the Board on February 10, 2021.

Attachments:

1. Public Policy Comments
2. Public and Wildlife Advocacy Workshop Feedback
3. Center for Biological Diversity Policy Recommendations
4. Defenders of Wildlife Policy Recommendations
5. Draft Grazing Management Policy Amendment
6. Wildlife and Livestock Protection Literature Review
7. District Letter of Support for Mountain Lion Listing
8. Center for Biological Diversity Letter of Support for Mountain Lion Listing
9. Initial Study/Mitigated Negative Declaration

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Policy GM-9 Ensure-Promote the sustainability of conservation grazing while safeguarding native wildlife and plants and wildlife connectivity in areas where predation of livestock may occur.

◆ Provide economic relief, for grazing tenants that are actively utilizing non-lethal livestock protection methods, in response to confirmed losses from predation to sustain conservation grazing as a viable tool for natural resource management. Coordinate with grazing tenants to document livestock losses due to predation as well as the total annual non-predation-related losses.

◆ Reduce-Minimize conflicts between livestock and wildlife by promoting and implementing non-lethal livestock protection methods that limit/~~reduce~~ livestock losses while safeguarding native wildlife and plants/populations. Select methods on a site-specific basis ~~and prioritize the protection of~~ that address wildlife livestock conflict by the most ecologically sustainable means available. Develop and implement an adaptive administrative Livestock Protection Protocol to standardize wildlife and livestock protection methods and procedures, and designate responsibilities for implementing livestock protection methods.

◆ Support, ~~and~~ promote, and provide funding for scientific research on the effectiveness of livestock protection methods, and their influence on native wildlife and wildlife populations. Monitor results and modify methods over time as conditions change and techniques improve.

GLOSSARY AMMENDMENT

Livestock Protection Methods – a variety of nonlethal wildlife and livestock conflict mitigation tools ranging from physical barriers to visual and auditory frightening devices to hazing that promote the protection, humane treatment, and continued conservation of wildlife (Grazing Management)

Population – the number of organisms in a particular species that occupy the same geographic region at the same time and are capable of interbreeding (Vegetation Management, Wildlife ~~Magagement~~Management, Water Resources, Ecological Succession, Habitat Connectivity, Wildland Fire)

I. GRAZING MANAGEMENT

BACKGROUND

The vegetation of the Santa Cruz Mountains is comprised of a rich and diverse assemblage of plant species. This wealth of diversity was most evident within the grassland **ecosystems** that evolved under a variety of disturbance pressures including fire and grazing by large herds of **ungulate animals**, which are now mostly extinct. The **flora** that emerged has been described as one of the most diverse and species rich ecosystems in the United States.

The arrival of early Spanish and Anglo settlers initiated a particularly dramatic change in species composition of California grasslands, primarily as a result of tilling the grasslands for agricultural crop production, reduction of **native** grazing animals and introduction of cattle herds brought over from Europe and let loose on the new rangeland. This introduction of **non-native** plants and animals, coupled with the concurrent suppression of fire on the landscape as the western United States was settled, resulted in the substantial replacement of the native grassland vegetation with a predominantly **exotic**, annual flora. The exotic vegetation is often more competitive, productive, and prolific than the native plants within which it coexists, and tends to dominate and replace existing native grasses and wildflowers. Over the last 150 years, coastal grassland areas have also experienced large-scale conversion to agriculture or urban development. The remaining undeveloped grasslands face continued development pressure and are severely impacted by exotic, invasive organisms.

The District's **open space** preserves contain large acreages of grasslands that in many areas have been degraded due to the pressures described above. Management of these grassland habitats is desirable to reduce the risk of wildfire and to maintain viable native plant communities. **Vegetation management** using **livestock** grazing or other **resource management** tools can be a substitute for native grazing animals and recurring fire to achieve the District's objective of preserving, protecting and restoring the **natural** environment.

The greatest diversity within California's coastal grasslands can be seen in the forbs or wildflowers that emerge in the spring following winter rains. Sites with adequate management of non-native vegetation will reward these efforts with bountiful displays of colorful spring wildflowers.

By some estimates, nearly 80 percent of the vegetation cover within California grasslands is exotic vegetation.

District lands currently contain approximately 5300 acres of grassland habitat. The largest contiguous grassland areas are within District lands in western San Mateo County.

Livestock ranching is a small but vital part of the Bay Area's agricultural economy. As with any business that depends on local infrastructure and services, livestock ranching is increasingly threatened with each ranch that goes out of business. Every livestock rancher depends on services and supplies including veterinary care, feed sales and delivery, farm and ranch infrastructure supplies, and livestock transportation services. As land is taken out of ranching, all of these services and supplies are incrementally affected and may cease to operate, increasing the burden for families and businesses that choose to keep ranching.

*Typical fencing used to control livestock movement is **five-strand barbwire fencing**. Other fencing types that may be used include four-strand barbwire for interior fencing, wood rail fencing and temporary electric fencing that can be installed to seasonally restrict livestock to target areas or exclude livestock from sensitive areas. Wildlife-friendly fences enable virtually all wild animals to move through an area without harm and with minimal impediment.*

In 2003, the District completed the Service Plan and accompanying Environmental Impact Report for the San Mateo Coastal Annexation Area expansion of the District's boundaries to include coastal San Mateo County. The Service Plan recognized the unique value of the San Mateo County coastal area and established Agricultural Policies to preserve and encourage viable agricultural use of land. The Policies and Implementation Measures established in this Grazing Management Policy are intended to supplement and complement the Agricultural Policies in the Service Plan. Furthermore, these Grazing Management Policies will be implemented in a manner that is consistent with the Service Plan.

GRAZING MANAGEMENT GOALS, POLICIES, AND IMPLEMENTATION MEASURES

<p>Goal GM- Manage District land with livestock grazing that is protective of natural resources and that is compatible with public access; to maintain and enhance the diversity of native plant and animal communities, manage vegetation fuel for fire protection, help sustain the local agricultural economy, and preserve and foster appreciation for the region's rural agricultural heritage.</p>

Policy GM-1 Ensure that grazing is compatible with and supports wildlife and wildlife habitats.

- ◆ Inventory and assess sensitive habitats to identify areas requiring special management practices. The conservation of these areas will take precedence over other uses and management practices that are determined to have an adverse effect on these **resources**.
- ◆ Prepare site-specific grazing management plans by a certified rangeland manager including **best management practices (BMPs)** for preserves where grazing will be utilized as a resource management tool. The site-specific grazing management plan will be a component of the

agricultural production plan developed through the Use and Management Planning process. The Use and Management Planning process provides for public input and Board approval of site-specific grazing management plans.

- ◆ Manage agricultural leases and easements to protect and enhance **riparian** areas and to maximize the protection or **enhancement** of **water quality**. (See WR-4)

Policy GM-2 Provide necessary infrastructure to support and improve grazing management where appropriate.

- ◆ Utilize fencing that allows wildlife movement and fosters habitat connectivity. (See WM-3:Measure 3)
- ◆ Manage access to existing water features and where needed supply supplemental drinking water through stock ponds and **water** troughs to preserve clean water for livestock, protect water quality, and enhance habitat for wildlife.
- ◆ Encourage and assist grazing tenants on District land to provide range improvements to **restore** or conserve **wildland** resources and to enhance range condition.
- ◆ Inventory and assess roads and trails on District lands to identify significant erosion and sediment sources – abandon and where feasible restore to a natural condition poorly designed or sited roads. (See **WR-4**)

Policy GM-3 Monitor environmental response to grazing on District lands.

- ◆ Monitor forage utilization and distribution by grazing animals to assure appropriate amounts of **residual dry matter (RDM)** remain on the ground to achieve desired resource management objectives. In the course of RDM monitoring, evaluate and report on wildland fire **fuel** levels that may result in an increased risk of wildland fire (See WF policies).
- ◆ Monitor livestock use levels and **agricultural infrastructure** condition to insure conformity with lease provisions to contribute to improved management.

Residual Dry Matter (RDM) is a measure of the amount of vegetation left on the ground, typically measured at the end of the summer or fall. Appropriate levels of RDM strive to minimize thatch, which can inhibit new plant growth, while maintaining adequate levels of vegetation to prohibit soil erosion.

Fire reduction is a great concern for some landowners. However, cattle are not able to graze all land areas effectively for fire protection purposes, such as steep slopes or slopes partially vegetated with brush. In these instances, goats may be an effective alternative. Goat herds can be rented for a short period of time and can be moved with a goat herder and dog(s) along with portable fence enclosures.

- ◆ Monitor wildland conditions with an emphasis on documenting the location, distribution and abundance of native grasses, wildflowers, and other native flora and fauna.
- ◆ Monitor water quality in ponds, **wetlands**, and **watercourses** with unrestricted livestock access.
- ◆ Monitor non-native vegetation response to grazing with an emphasis on documenting the location, distribution and abundance of **target, invasive species**.
- ◆ Use information collected from monitoring to annually review rangeland conditions and response to livestock grazing. Use **adaptive resource management decision making framework** within grazing management plans.

Policy GM-4 Utilize different livestock species to accomplish vegetation management objectives.

- ◆ Research the effective use of cattle, goats, sheep, and horses to manage vegetation on District lands.
- ◆ Utilize appropriate species depending on management needs.

Policy GM-5 Preserve and foster existing and potential grazing operations to help sustain the local agricultural economy.

- ◆ Establish longer term grazing leases to promote financial viability for the operators and efficient land stewardship for the District.
- ◆ Seek grants or other economic support for agricultural infrastructure maintenance and improvements.
- ◆ Ensure site-specific grazing management plans are economically feasible and practical for grazing operators.

Policy GM-6 Provide information to the public about the region's rural agricultural heritage. (See PI-1)

- ◆ Install display boards and give presentations highlighting historical and educational facts about ranching families and industry at appropriate sites.

Policy GM-7 Provide public access in a manner that minimizes impacts on the grazing operation. (See PI-1)

- ◆ Grazing operators on District lands or lands under easement to the District shall be consulted when public access is being planned and considered for the property to minimize conflicts between the public and the grazing operation.
- ◆ Prepare and distribute a brochure to educate visitors about etiquette for use of open space property with livestock animals.
- ◆ Install signage where appropriate to educate the public about the resource benefits of grazing and to educate visitors about approaching animals, closing gates, and other etiquette appropriate for moving through lands with livestock animals.

Policy GM-8 Grazing operations on District lands **in San Mateo County in the Coastside Protection Area** will be managed in accordance with the policies established in the Service Plan for the San Mateo Coastal Annexation Area.

- ◆ Consult with appropriate agencies and interest groups, including the San Mateo County Farm Bureau and San Mateo County Agricultural Advisory Committee in the development of site-specific Use and Management plans and agricultural production plan components in the Coastside Protection Area.

Policy GM-9 Ensure the sustainability of conservation grazing in areas where **predation of livestock** may occur.

- ◆ Provide economic relief, for grazing tenants that are actively utilizing non-lethal **livestock protection methods**, in response to losses from **predation** to sustain conservation grazing as a viable tool for natural **resource management**. Coordinate with grazing tenants to document livestock losses due to **predation** as well as the total annual non-predation-related losses.
- ◆ Reduce conflicts between livestock and wildlife by promoting and implementing non-lethal **livestock protection methods** that reduce livestock losses while safeguarding **native wildlife** populations. Select methods on a site-specific basis and prioritize the protection of

livestock by the most ecologically sustainable means available. Develop and implement an adaptive administrative Livestock Protection Protocol to standardize **wildlife** and **livestock** protection methods and procedures, and designate responsibilities for implementing **livestock protection methods**.

- ◆ **S**upport and promote scientific research on the effectiveness of **livestock protection methods**, and their influence on **native wildlife** populations. Monitor results and modify methods over time as conditions change and techniques improve.

GLOSSARY AMENDMENT

Livestock Protection Methods – a variety of wildlife and livestock conflict mitigation tools ranging from visual and auditory frightening devices to hazing (Grazing Management)

Population – the number of organisms in a particular species that occupy the same geographic region at the same time and are capable of interbreeding (Vegetation Management, Wildlife Management, Water Resources, Ecological Succession, Habitat Connectivity, Wildland Fire)

Comments received from Pamela Flick of Defenders of Wildlife on 1/28/2020 on previous draft Grazing Management Policy Amendment language.

Page 5: Policy GM-2: Measure 2: Consider adding something about providing access/escape ramps for small wildlife species

Page 5: Policy GM-2: Measure 4: Without having gone to WR-4 myself, I'm not sure if you already have this there or elsewhere in your policies. If upgrading roads or trails, consider installation of larger culverts (and/or dry culverts) to facilitate wildlife crossing/habitat connectivity and enhance stream flow for climate change adaptation.

Page 6: Policy GM-6: Measure 1: You may want to consider also hosting tours that help bridge the urban-rural gap re: food production and sources of clean water.

Page 8: Policy GM-9: Measure 3: This is something that is of keen interest to Defenders of Wildlife. You may want to reach out to our Senior Scientist, Jennie Miller and Serda Ozbenian for some of their latest thinking around research on the efficacy of predator-livestock conflict reduction tools and strategies.

Page 8: Glossary Amendment: Amendment and mitigation in first sentence below are misspelled.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#36]
Date: Saturday, November 16, 2019 8:29:58 PM

EXTERNAL

Name *

Email *

Zip Code * 94085

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am totally against the proposed killing of mountain lions based on the reasoning presented, and considering the data offered.

I believe that both the number of cattle killed and the MIDPEN expense is too low to justify such measures. You could increase the recompense to cover more of their loss for example. Even if you double it, it will still be a very low annual expense.

Also, I would like to know what scientific basis do you have for adopting this approach. While trying to find information in this respect I came across this article:

http://mountainlion.org/Community_Conservation.php

"But killing a mountain lion due to the loss of a domestic animal usually does little to protect the rancher's livestock or the homeowner's pet. Unlike canids such as wolves, coyotes and foxes, and unlike bears, science has not demonstrated that mountain lions commonly become habituated to livestock depredation. In the case of these large cats, depredation seems to be much more opportunistic. Removing resident mountain lions may in fact cause more livestock losses by opening a territory to younger, less capable, and inexperienced lions." I might add that removing a mountain lion might also mean the increase in deer population, which might lead to increase in car accidents (see all the problems in other parts of the US) and also increased grazing (which might mean decreased need for cattle, therefore less revenue for farmers). You could maybe have a look at all these kind of consequences and see if the overall cost is justifiable (not only from your point of view, but from the point of view of the entire society).

Even you list this measure as only Moderately Effective, which means you know that it might not work...but still propose it????!!!! It makes no sense.

I'll be keeping an eye on the developments, but I really hope you will take another look at the data, and decide to stop this process.

Regards,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#14]
Date: Saturday, November 16, 2019 8:41:19 AM

EXTERNAL

Name *

Organization self

Email *

Zip Code * 94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I just read the article in the Mercury News about your proposal to cull coyotes and mountain lions to protect the interests of cattle farmer who least land from the MPOSD. Oh my gosh I was just astonished that you would put the interests of cows above those of wildlife in the MPOSD lands. I strongly oppose the hunting proposal, and recommend you raise the leasing rates and simply compensate the ranchers for the damages they sustain due to putting their cattle into a naturally wild environment. Nobody donates to MPOSD to have you protect the interest of cattle ranchers over mountain lions, that's just so wrong. I run and hike in our amazing parks from Sweeny Ridge, Purissima and Pulgas Ridge to Huddart, Wunderlich, Windy Hill, Russian Ridge, Mont Bello, Rancho San Antonio. And you want to make the open space that we have painstakingly assembled over several generations more hospitable to cows than mountain lions? How did this ever come to seem like a good idea? Thank you for your work to protect open space. Please change your priorities in terms of the kinds of animals you protect. Regards,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#15]
Date: Saturday, November 16, 2019 9:18:29 AM

EXTERNAL

Name *

Organization

None

Email *

Zip Code *

94547

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Please do not allow additional killing of mountain lions and coyotes on open space lands. Instead, change the policy to forbid ranchers grazing their livestock there. Yes, cattle can graze down grasses and vegetation to reduce fire risk, but so can deer and other wild animals that live in the open space. If you continue to allow ranchers to graze cattle there, then make sure the risks are crystal clear (I'm sure you already do) and that the ranchers agree to be responsible for them. You are already bailing them out with very low lease rates and compensation for cattle they lose to predators. Those advantages and benefits are more than enough. Thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#16]
Date: Saturday, November 16, 2019 10:20:38 AM

EXTERNAL

Name *

Email *

Zip Code *

94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

This is ludicrous. How about you cancel the ranching
contracts and see where that gets those 7 ranchers? Tell
them to lease private land.
You cannot take public space paid for by taxpayer money
and kowtow to 7 ranchers. The point was to preserve
wildlife, not enrich ranchers!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#17]
Date: Saturday, November 16, 2019 12:41:34 PM

EXTERNAL

Name *

Organization private citizen

Email *

Zip Code * 94708

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? YesOptional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.I am horrified by the proposal to increase the killing of
mountain lions on our public space! 22 lions killed since
2013 is not significant! PLEASE oppose this proposal
benefitting private interests!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#18]
Date: Saturday, November 16, 2019 1:29:16 PM

EXTERNAL

Name *

Organization: Freelance Environmental Writer & Environmental Writing Professor

Email *

Zip Code *: 94606

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am a professor in Environmental Humanities and an environmental writer. I find it highly irresponsible that the "grazing management policy" proposes to kill mountain lions after three cow kills. This is not a conservative approach at all. The 80+ mountain lions in the Santa Cruz region would be potentially killed. Their biological integrity is of long-lasting worth, whereas losing a few cows for a rancher is a smaller loss of value. This proposal is biased toward ranchers' financial margins and protection of your lessees, but as a public lands district, you should protect those stakeholders who are most vulnerable--wildlife in an increasingly urbanized area.

Please reject this irresponsible proposal.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#19]
Date: Saturday, November 16, 2019 1:29:31 PM

EXTERNAL

Name *

Email *

Zip Code *

80526

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am a former California Bay Area resident and a writer, and I am embarrassed and horrified to read of plans to kill Mountain Lion in the Midpeninsula Regional Open Space District because of threats to grazing animals. We need more mountain lions, not more cattle. Why put a sensitive native species at greater risk? This is not the 19th century. There are ways to raise cattle, if we must, without killing native species. Shame on you!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#20]
Date: Saturday, November 16, 2019 1:29:56 PM

EXTERNAL

Name *

Organization

Self

Email *

Zip Code *

94019

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

What method(s) of predator removal are being considered?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#21]
Date: Saturday, November 16, 2019 1:38:44 PM

EXTERNAL

Name *

Organization

Local taxpayer and donor

Email *

Zip Code *

94040

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am 100% against destroying our wildlife for ranchers.
I want to participate in your next meeting about this.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#24]
Date: Saturday, November 16, 2019 3:41:49 PM

EXTERNAL

Name *

Email *

Zip Code * 95054

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Mountain lions and coyotes already face many human caused dangers. Their habitat has shrunk due to development. Dangerous freeways bisect their terrain, killing almost all cats crossing and now your organization who is championing for the environment is planning to add another threat over mountain lions population. We must not take the lives of the last remaining cats simply because it is to easy for them to get a livestock. Grazing should not even be allowed in mountain lion territory. We must not turn around and shoot healthy cats simply because they found a hole in a fence. Instead please encourage ranchers to be more proactive in implementing defense strategies so the cats are not attracted to their properties. Mountain lions are in crisis on all fronts; please don't allow more casual killing of them.

Thank you for your consideration.

Voice of the voiceless lions

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#26]
Date: Saturday, November 16, 2019 4:42:38 PM

EXTERNAL

Name *

Organization

Self

Email *

Zip Code *

95003

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Do NOT start killing mountain lions to make cattle ranchers feel better. Let them buy their own lands to graze their cattle on if they don't like it. The lions belong here and are threatened. We cannot afford to lose more of them because that will seriously impact the balance of nature in those areas. When cattle start getting wasting disease from the deer overpopulation, maybe they'll wise up. (This does not happen in nature now, but let the deer population explode, and see what happens.)

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#27]
Date: Saturday, November 16, 2019 4:45:40 PM

EXTERNAL

Name *

Email *

Zip Code *

96003

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The first thing Midpen did wrong was to allow cattle grazing in the first place. It never ends well. Wildlife is under attack all over the world due to agriculture and cattle grazing. Mountain lions have enough trouble surviving already. Depriving the mountains of their lions will result in an explosion of deer, which will have other unintended consequences. Let the ranchers find more humane methods to protect their cattle, or leave. Since Midpen likes cattle grazing to reduce fire danger, let them hire some goats. Do not kill the wildlife!!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#28]
Date: Saturday, November 16, 2019 6:12:13 PM

EXTERNAL

Name *

Email *

Zip Code * 34684

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I strongly oppose any hunting and killing of lions do to cattle ranching! This is ridiculous unethical unnecessary and unfair. Our addiction to consuming animals is causing so much destruction to not only the environment but ourselves our health and the animals. Please do not do this and cave in and bow to cattle ranchers once again.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#29]
Date: Saturday, November 16, 2019 6:31:36 PM

EXTERNAL

Name *

Organization

Taxpayer

Email *

Zip Code *

95006

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Thank you for the balanced scientific research and the
opportunity to comment on proposed changes to grazing
management policy.

I oppose allowing any additional destruction of puma and
coyote in the district.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#30]
Date: Saturday, November 16, 2019 7:01:34 PM

EXTERNAL

Name *

Email *

Zip Code *

95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Thank you for the opportunity to comment on proposed
changes to grazing management policy. I completely oppose
allowing any additional destruction of puma and coyote in
the district. You have completely lost my support if you
continue to pursue this to the benefit of vested minority
interests.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#31]
Date: Saturday, November 16, 2019 7:14:20 PM

EXTERNAL

Name *

Email *

Zip Code * 95073

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Thank you for the opportunity to comment on proposed changes to grazing management policy.

I oppose allowing any killing of puma and coyote in the district. Fencing, guard dogs and lighting should be enough deterrent to predators.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#32]
Date: Saturday, November 16, 2019 7:27:49 PM

EXTERNAL**Name ***

Organization Midpeninsula Legacy member

Email *

Zip Code * 94087

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

As a Legacy Member of Midpen, I am totally opposed to the
proposed killing of mountain lions on grazing land that is
being leased to ranchers. I have read the information both
pro and con. If this goes through, I will cancel my provision
in my trust.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#33]
Date: Saturday, November 16, 2019 7:39:07 PM

EXTERNAL

Name *

Email *

Zip Code *

92117

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Mountain lions, and other predators, deserve to live human conflict free in their home range. Humans have already taken over so much of their territory, let them keep the little land they have left without the stress they will be killed. The mountain lion population is already shrinking and we must protect them before they go extinct. Please help protect the mountain lion and other predators as they are crucial to having a healthy ecosystem and environment!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#34]
Date: Saturday, November 16, 2019 7:44:21 PM

EXTERNAL

Name *

Email *

Zip Code *

93726

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

shame on you

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#35]
Date: Saturday, November 16, 2019 7:51:13 PM

EXTERNAL

Name *

Email *

Zip Code * 93921

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Have we learned nothing? Ronald Reagan banned the trophy hunting of mountain lions. Are you really going to fly in the face of all that has been accomplished to allow for the coexistence of wild life and humans in this century in California by beginning again with the depredation failure or will you accept present day innovation in creating dialogue and effective nonviolent solutions to ranchers coexisting with wildlife? really? can we rise above the petty partisan shortcuts and sit down like adults and commit to a future for our children that acknowledges our ecosystem is dependent on these wild creatures and it is our responsibility to choose morale courage above our partisan disagreements?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#37]
Date: Saturday, November 16, 2019 8:49:58 PM

EXTERNAL

Name *

Email *

Zip Code * 94404

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Protection of wildlife should take priority.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#38]
Date: Saturday, November 16, 2019 9:05:09 PM

EXTERNAL

Name *

Organization

Wildlife Diversity Interest

Email *

Zip Code *

94403

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Hello,

Thank you for inviting comments and input . I would like to attend the meeting in January. I am a dog professional and I would like to support options to keep cattle safe while protecting our biodiversity of our mountain lion habitats.

I would like to offer an option to help create and manage a program in which imprinted flock guardian dogs protect the cattle from predators and therefore deter mountain lions. I would be happy to discuss further.

Thank you for your consideration.

Regards,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#43]
Date: Saturday, November 16, 2019 10:04:34 PM

EXTERNAL

Name *

Organization

LittleGrove Farm

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am concerned that the proposal would neither end kills of
cattle by lions nor benefit the stability of the lion
population. Where is the data to support this being an
effective course of action?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#44]
Date: Saturday, November 16, 2019 10:30:39 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

"Taxpayers didn't preserve some of the Bay Area's most scenic forests, meadows and wild areas from development so that the wildlife living there could be shot to help commercial businesses"

No killing mountain lions

No killing coyotes

No giving them money for cows killed. This can easily lead to abuse (oh darn, the 'mountain lion' killed 5 this week, time to pay up)

No cows in the land. They are Not good for the soil (major compaction that leads to runoff and the inability for trees to establish, come on MidPen, you should know this) raise sheep or goats if you must raise meat. They do less damage to the soil and do a Much better job of fire management.

This land should not be used for cattle in the first place. The trees and stabilizing shrubs will never come back so long as cattle are crushing and stomping everything. You are keeping the land fallow and dead by having cattle on that property

Killing lions and coyotes will further impact the ecosystem. They eat rabbits and gophers and other vermin. A calf or 2 a year is the price you pay for raising cattle on Extremely Cheap land

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#45]
Date: Saturday, November 16, 2019 10:47:08 PM

EXTERNAL

Name *

Email *

Zip Code * 94598

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

No way should mountain lions, coyotes or any other animal
be killed to just so cattle ranchers can profit more. Come up
with non-lethal solutions to coexist with with the
wildlife...better yet, have the ranchers start growing crops
and stop raising cattle just to be slaughtered - problem
solved!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#39]
Date: Saturday, November 16, 2019 9:18:27 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I am NOT in support of killing mountain lions and coyotes because of cattle predation. Your table shows that is not effective. They are an important part of a healthy ecosystem. Thanks for listening.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#46]
Date: Sunday, November 17, 2019 5:56:36 AM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The proposed amendment is inappropriate. Ranchers are benefiting from land that was purchased (by the public with public money) for wildlife habitat maintenance. They are paid for their losses. The amendment will also encourage fraud on the part of the rancher: they have no way to accurately state that a single mountain lion killed more than one calf (so they will simply presume). Finally, the policy would be ineffective: killing a single mountain, while being a tragedy, will not prevent other mountain lions from moving into the same territory. In the past, I have donated money directly to the Midpen Open Space fund and I am appalled that you are considering this modification to your policies. If this policy change goes through, I will never donate to your organization again.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#47]
Date: Sunday, November 17, 2019 7:27:01 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Mountain lions and coyotes should NOT be killed. The open spaces are their home, the cattle ranchers are guests. This lands was preserved to protect open spaces and the wildlife in it. The mountain lions and coyotes are already struggling with the drought and wildfires. The proposal to allow the killing of these beautiful animals is absolutely UNACCEPTABLE.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#48]
Date: Sunday, November 17, 2019 7:37:21 AM

EXTERNAL

Name *

Email *

Zip Code * 95066

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

This Open Space was created to preserve the wild lands of the peninsula and protect it from being developed. Leasees using the land for private management of non wildlife purposes are taking a known risk that predators will impact their business. Do not allow them additional means of removing pumas from these protected areas.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#49]
Date: Sunday, November 17, 2019 7:42:02 AM

EXTERNAL

Name *

Email *

Zip Code * 95062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am contacting you to register my strong opposition to allowing wildlife depredation permits for ranchers on the MidPen property. I support paying the ranchers additional compensation for animals killed by mountain lions or coyotes. One of the main purposes in protecting the MidPen habitat is to protect the wildlife that lives in and visits this area. Allowing mountain lions and coyotes to be killed by ranchers is antithetical to that purpose.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#52]
Date: Sunday, November 17, 2019 8:32:04 AM

EXTERNAL

Name *

Organization representing self

Email *

Zip Code * 95014-4837

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

It is very clear to me that the purpose of open space is to maintain an environment for wildlife, not for livestock. This plan inverts those priorities. We have plenty of livestock and a significant issue in maintaining genetic diversity in our depleted population of apex predators. I'll be sharing this with all friends and neighbors.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#53]
Date: Sunday, November 17, 2019 8:52:02 AM

EXTERNAL

Name *

Email *

Zip Code * 95062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I was outraged to read today that you are proposing allowing the killing of mountain lions and coyotes.

I believe that the land set aside by your organization had the intent to preserve nature. If any animals needs to go, it should be the livestock. They are not part of the natural environment. Further, livestock are a threat to the environment due to their impact on the environment due to their emissions, water requirements and more.

California needs to be forward thinking and we are on many points. Don't let this be a stain on the Mid Peninsula Open Space District.

Sincerely,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#54]
Date: Sunday, November 17, 2019 9:00:20 AM

EXTERNAL

Name *

Email *

Zip Code * 95076

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I was considering a significant donation via my living trust to the Mid Peninsula Open Space District until I read about this policy. If approved I will not go forward with this donation.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#55]
Date: Sunday, November 17, 2019 9:26:44 AM

EXTERNAL

Name *

Email *

Zip Code * 95126

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am very concerned about this proposed change and I am in strong opposition for two reasons. 1. While I support grazing on these public lands, I do NOT do so as a priority over wildlife. If ranchers choose to graze on public lands, they must accept this risk. Prioritizing livestock over wildlife goes against EVERY reason these lands have been protected. 2. It is bad science. Disrupting the natural life cycle of wild animals will not fix this problem. While I recognize there are challenges specific to our region that affect the lives of lions, I will never support killing of wildlife. I implore MROSD to re-focus efforts toward making corridor connections that will allow these majestic creatures, who serve to keep our ecosystems in check, to expand their range. DO NOT KILL LIONS!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#56]
Date: Sunday, November 17, 2019 9:30:51 AM

EXTERNAL

Name *

Organization

None

Email *

Zip Code *

95065

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I studied wildlife biology and worked for the California State Parks doing wildlife and habitat studies. I'm against allowing the killing of predators on public land. These lands are first and foremost to be preserved for the natural flora and fauna that occur there. Secondly leasing land to ranchers was not the intention to protecting these lands. If we are going to allow grazing on our public land, then ranchers need to conform to the flora and fauna of the region, not the other way around. If it is too expensive, then they should find lease options elsewhere or buy their own land. Suggestion: Why not provide trained Great Pyrenees to protect the herds.

<https://www.mountainlion.org/portalprotectguardanimals.php>

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#57]
Date: Sunday, November 17, 2019 9:53:52 AM

EXTERNAL

Name *

Email *

Zip Code * 94117

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Wow, this plan is so ... 1950s pseudo-environmentalism. If you really want to protect the environment, then follow the 21st century science and get rid of ranching. According to numerous studies, including the UN report from a couple of months ago, animal agriculture is a leading cause of climate change. Point Reyes National Seashore is a perfect example. Look at the areas where the cattle are: they are heavily eroded and the land is quickly becoming a desert (as happens eventually to all cattle-grazed lands). Cow feces runs along these eroded paths down to the ocean, creating algae blooms. In 2018, a Point Reyes ranch had the largest case of E. coli in the state. Even if you were clean this up, it would only be addressing the symptom, not the cause, of the land degradation that is going on in Point Reyes. Then we have the areas where the Tule Elk live: these are much healthier lands because the Tule Elk and other wildlife heal the land. Ranching and wildlife can never co-exist because by its very nature, ranching is much too polluting and toxic to the environment. You need to face reality and honor the earth, not continue exploiting it. You need to think of the future and focus on healing our planet. Helping these outdated industries of animal agriculture will kill our future, not enrich it.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#58]
Date: Sunday, November 17, 2019 9:55:20 AM

EXTERNAL

Name *

Email *

Zip Code * 95061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am absolutely shocked at the thought of wildlife being shot for any reason besides presenting a serious danger to humans. You are going to kill our wildlife at the behest of private business?!?? I don't understand. Why are you not exploring bringing back the natural grazers who were part of the ecosystem?
No, killing wildlife is not the answer. Wilder Ranch state park and others do just fine without private cattle grazing. cattle. Get rid of the cattle.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#59]
Date: Sunday, November 17, 2019 11:26:19 AM

EXTERNAL

Name *

Organization

The Kings Grove

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Do NOT support the plan to open condoned killing of
mountain lions or other species of native wildlife in San
Mateo County
Cattle ranchers have existed for centuries in concert with
native wildlife, do not give them permission to unbalance
this co existence.
If you have no other options, creat a fund to compensate
cattle companies for their losses.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#60]
Date: Sunday, November 17, 2019 11:34:01 AM

EXTERNAL

Name *

Email *

Zip Code *

94061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

please do not kill wildlife of any kind. we have encroached
on their territory and it is only right to allow wildlife
(mountain lions, etc) the right to their space. please try to
manage this in a humane way for all involved.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#61]
Date: Sunday, November 17, 2019 12:11:02 PM

EXTERNAL

Name *

Email *

Zip Code * 95129

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Saving a few hundred cattle from natural predators isn't the right direction. Subsidize the replacement of the cattle (supposedly around 1-2% of the population of a non-native species) or perhaps choose to retire this program. As the population grows, open space is as important as ever to provide habitat for the native populations. Cows can grow anywhere, mountain lions can't.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#62]
Date: Sunday, November 17, 2019 12:24:35 PM

EXTERNAL

Name *

Email *

Zip Code * 94566

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. I don't agree with it. These lands are protected for wild life,
not cattle grazing. If there is a conflict, either accept that
cattle gets killed or don't let them graze there.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#63]
Date: Sunday, November 17, 2019 1:28:59 PM

EXTERNAL

Name *

Organization

Write to the Heart

Email *

Zip Code *

95073

Would you like to be added to the Grazing Management Policy Amendment e-mail list?

• Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am opposed to the absurd and and misguided plan to kill lions and coyotes on Open Space land. What a complete contradiction! Haven't we all had enough of "management" of wild animals. Cattle have no business in an Open Space area. The ranchers need to manage them. Stop leasing these lands to cattle ranchers. Cattle degrade the land. This land was purchased to protect mountain lions, among other species. This is a blatant disregard of what we voted for, Go back to the drawing board.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#64]
Date: Sunday, November 17, 2019 3:07:46 PM

EXTERNAL

Name *

Organization

Mrs.

Email *

Zip Code *

95667

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I don't agree with the proposed policy to kill mountain lions for the benefit of cattle ranchers. There is so much scientific evidence that cattle (animal agriculture) is the cause of a huge part of our climate emergency, being that they contribute more CO2 and methane than all forms of transportation combined. I don't think we ought to sacrifice mountain lions for cattle and the ranchers that benefit financially in exchange for the acceleration of the climate crisis we are in. We all lose.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#65]
Date: Sunday, November 17, 2019 3:08:08 PM

EXTERNAL

Name *

Email *

Zip Code *

94110

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

At the rate we are extinguishing species on this planet I am appalled at this policy possibly put into place. I grew up deep in the santa Cruz mountains. The diverse ecology we have is the last thing we desperately need to hold onto. Haven't we already learned our lesson extinguishing the grizzly? This is NOT in the sensitive spirit santa cruz has always known. Do not jump into the current trend of greed over nature! If santa sant loses its conscience soul, .santa srucz has lost all reasons to exist. Don't take away the hope we do desperately need right now!!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#66]
Date: Sunday, November 17, 2019 3:16:25 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. This is insane. This is the mountain lions home and killing them will not solve the problem. Graze your animals for humane consumption is yet another example of selfishness in this day and age.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#67]
Date: Sunday, November 17, 2019 3:25:44 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am strongly opposed to killing mountain lions. They are in there natural habitat which is shrinking daily as we speak. Please do not kill mountain lions.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#68]
Date: Sunday, November 17, 2019 3:27:23 PM

EXTERNAL

Name *

Organization

Daleyfarms

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

With deer and rodent populations exploding, we are strongly
against any killing of coyotes or mountain lions.
Midpen was established to protect wildlife and land.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#69]
Date: Sunday, November 17, 2019 3:34:37 PM

EXTERNAL

Name *

Email *

Zip Code * 95003

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Wildlife in Open Space should be protected NOT killed. I stand with with Henry Coletto that this is ludicrous! Quote: "The people who voted for open space were buying those lands to protect the resources out there," said Henry Coletto, who served as game warden with the Santa Clara County Sheriff's office from 1988 to 2004. "Shooting mountain lions or coyotes is ludicrous," he said. "We're paying millions and millions of dollars for this land. I think if you took a poll about shooting coyotes and lions out there, you wouldn't have anybody agree with that other than cattlemen. People on private property can manage the land how they want, but on public lands, they should be managed for the protection of the wildlife, the water and the natural resources."

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#70]
Date: Sunday, November 17, 2019 3:35:49 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I oppose any plan to kill mountain lions. I suggest less grazing on Midpen's properties. This will promote more diversity in the environment. Without grazing or with minimal grazing, wildflowers, butterflies, ground nesting birds, and other wildlife will prosper. If brush becomes an issue, use goats. Control grass buildup using control burns.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#71]
Date: Sunday, November 17, 2019 3:44:18 PM

EXTERNAL

Name *

Email *

Zip Code * 94028

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I disagree with the idea of killing mountain lions to help cattle farmers.. first of all cattle farming is contributing to global warming. maybe we should shut them down. mountain lions are being driven from their environment by vicious humans and they deserve to live in a safe space. thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#72]
Date: Sunday, November 17, 2019 3:56:32 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. Mountain lions were here first. No way in hell should ANY ONE be allowed to kill them! We humans are increasing encroaching on their habitat. Ranchers and anyone else need to go elsewhere, or figure out how to co-habitate without the option of exterminating these beautiful bit cats.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#73]
Date: Sunday, November 17, 2019 4:02:44 PM

EXTERNAL

Name *

Organization

Ms

Email *

Zip Code *

94304

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Shooting mountain lions who are on Open Space lands is truly a bad idea. The mountain lions are in their own territory, which the Open Space district has apparently leased to cattle ranchers. Hard to have it both ways – if this is Open Space then let the mountain lions have what little territory is left to them. BAD policy to kill them because the land has also been leased to cattle ranchers. Time to come up with a more inventive solution that does not involve shooting the mountain lions!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#74]
Date: Sunday, November 17, 2019 4:04:08 PM

EXTERNAL

Name *

Email *

Zip Code * 95018

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. It seems counterproductive and contradictory to be shooting coyotes and mountain lions while at the same time we're spending \$11 million to construct a wildlife tunnel at Laurel Curve.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#75]
Date: Sunday, November 17, 2019 4:07:06 PM

EXTERNAL

Name *

Organization self

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

As a long-time San Mateo County resident and taxpayer, I am opposed to killing mountain lions and coyotes.

It is their land that you are allowing cattle farmers to invade. Cattle. if you continue to allow them, should use the land at their own risk.

Your mission is to preserve wildlife, protect open space, not to garner income from cattle at the expense of your mission.

Coyotes and mountain lions are a critical part of the natural ecosystem in the Bay Area. Cattle are not (and they actually contribute to global warming).

If there is an overpopulation of wild animals, you should not kill them but instead relocated the excess or manage their reproduction.

Taxpayers did not vote for you to gain income from cattle ranchers. If you want to continue leasing to them, it should be at their own risk and not counter to your mission

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#76]
Date: Sunday, November 17, 2019 4:19:57 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
 Grazing Management Policy
 Amendment e-mail list?

- Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I see the amount of effort that has gone into this proposal. However, the actual linked amendment is completely void of any of the checks mentioned on this page, such as the "3 time" rule or requirement for an individual predator to be "clearly identified." This is extremely concerning, as things like "clearly identified" are already extremely vague; omitting them from the actual amendment means they don't really exist.

I also don't see (in the amendment or on this page) any measures to hold this policy into account, such as timely public reports of each kill, or standards for identification of a predator. It's unclear who will be permitted to make these kills, and to what extent taxpayers and stakeholders can trust that the proposed policies are followed.

Also I want to reiterate the obvious: that the land in question is not private. While these interventions may be perfectly reasonable in the context of ranchers protecting their own herd on their own land, the livestock doesn't have to be here. To the extent that the district is using private livestock for its own purposes (such as fuel reduction) it is understandable to offer compensation for resulting losses. However, the cost of lost livestock should simply be calculated into any exchange. And if the costs are too high, then perhaps the arrangement itself should be called into question.

Finally, there appears to be an assumption that there are individual "problem predators," and this goes against common sense: if there were just a "few bad animals" then it's hard to imagine a loss large enough to warrant this kind of amendment. I suspect for this strategy to be effective, a large number of predators would need to die. And this is flagrantly out of character with the goals of your mission, even if that mission includes provisions to support agriculture.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#77]
Date: Sunday, November 17, 2019 4:19:54 PM

EXTERNAL

Name *

Organization citizen

Email *

Zip Code * 94061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I heard of the recent plan to kill mountain lions to help
cattle ranchers and I am very against this kind of policy. The
human population has killed so many animals to the brink
of extinction and beyond and it needs to stop.
If wildlife is "interfering" in the profits of ranchers then they
need to take their ranches elsewhere or find other ways to
protect their cattle without destroying our resources and
wildlife.
I hope you will take mine and other citizen's perspective on
this important matter and help protect wildlife, not destroy
it.

Thank you,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#78]
Date: Sunday, November 17, 2019 4:27:21 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I support your proposed predator management proposal.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#79]
Date: Sunday, November 17, 2019 4:34:37 PM

EXTERNAL

Name *

Email *

Zip Code *

94028

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am really disturbed by the notion that you would suggest
killing the natural animals like mountain lions in favor of the
human brought animals. I find that unconscionable and it
would mean that I can no longer support you as a group.
Please reconsider.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#80]
Date: Sunday, November 17, 2019 4:44:33 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Please do not kill mountain lions to help out the cattle ranchers. The mountain lions have every right to roam the land as the cattle do. Tell the ranchers to humanly figure out a way to protect their cattle.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#81]
Date: Sunday, November 17, 2019 4:53:56 PM

EXTERNAL

Name *	
Organization	Go Lucky Paws
Email *	
Zip Code *	95124
Would you like to be added to the Grazing Management Policy Amendment e-mail list?	<input checked="" type="radio"/> Yes
Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.	Protect native wildlife If a business wants to have there animals graze on public open space they should be the ones to pay for the risk of losing there cows... part of protecting the land is protecting its native inhabitants.... it's the mountain lions and coyotes home not big Ags land...

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#82]
Date: Sunday, November 17, 2019 5:00:18 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Preserves are created to protect the creatures that inhabit that region. The idea of killing off animals that inhabit a PRESERVE (no matter what kind of circles of life play out there) is antithetical, immoral, and, frankly, moronic. California stands tall in its progressive ideas, and allowing the killing of wild animals because those wild animals are eating someone else's livestock (really, are you seriously allowing someone's property to be prioritized over environmental and state rights?) is against the ideals that make California the wonderful, progressive state it is. If any solution is needed, have the livestock owners find another place to put their livestock. Protecting someone's property because it was attacked by a wild animal in a nature preserve is unnecessary and wrong. Don't put prey where predators are free to roam. This land belongs to the animals who roam the preserve, not the livestock breeders who blindly store their livestock in the home of a mountain lion or coyote. Besides, predators are good for controlling deer population. Livestock (especially cattle) are contributing to global warming. It's an easy choice.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#84]
Date: Sunday, November 17, 2019 5:18:08 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am outraged that MidPen would consider killing mountain lions on its (and our) open space lands. As you know, the lion preys primarily on deer, and predated livestock is much more rare. We must learn to live with our large predators...we need them in a balanced environment. And they are NATIVE to our area.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#85]
Date: Sunday, November 17, 2019 5:32:46 PM

EXTERNAL

Name *

Organization

Sierra Club

Email *

Zip Code *

95062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I do not believe that an open space district should be killing
mountain lions!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#86]
Date: Sunday, November 17, 2019 5:42:53 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Native mountain lions help balance the ecosystem. Cattle are imported, not native. Cattle, although tasty, are very destructive to the environment, and compete for resources with the native deer. Cattle grazing lands are also overrun with epidemic proportions of ticks and the diseases they carry.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#87]
Date: Sunday, November 17, 2019 5:44:32 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Please do not allow killing of mountain lions and coyotes on
OSD land. Cattle ranching is not particularly sustainable in
our changing climate. We should not make concessions to
accommodate this practice.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#88]
Date: Sunday, November 17, 2019 5:47:31 PM

EXTERNAL

Name *

Email *

Zip Code * 94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The idea of killing mountain lions on public land, to benefit a dozen ranchers is outrageous. Don't do it.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#90]
Date: Sunday, November 17, 2019 6:09:48 PM

EXTERNAL

Name *

Organization

Resident near by

Email *

Zip Code *

94020

Would you like to be added to the Grazing Management Policy Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I believe killing wild life is NOT a solution.
 I am strongly oppose the idea of killing mountain lions and coyotes to protect cattle.
 This is an open space PRESERVE and we must protect native wild life.
 While grazing cattle can help with managing the dry grass, the ranchers and Open Space should come up with another idea. Perhaps herd dogs or electrical wire fences.
 Kind regards,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#91]
Date: Sunday, November 17, 2019 6:13:54 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I disagree with killing coyotes or mountain lions. I live adjacent to MPROSD land and to Wunderlich Park. The coyote population has gone mostly extinct here. I've only seen a couple of mountain lions in the 30 years I have lived here. They are endangered in this area. Cattle are not.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#92]
Date: Sunday, November 17, 2019 6:21:36 PM

EXTERNAL

Name *

Email *

Zip Code * 94566

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

It is completely ridiculous for an agency charged with the preservation of the natural environment to advocate the killing of predators to reduce livestock mortality. This is against everything we are trying to teach farmers and livestock owners. Reimbursement for lost livestock is the best course and it would be ludicrous to argue that this is not economical. What is the point of making money from grazing leases and then turning around and killing predators? Making profit from grazing is not a primary goal for the open space district!

In short a big resounding "no" to killing predators of livestock on open space district land. Make the compensation method work!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#93]
Date: Sunday, November 17, 2019 6:24:12 PM

EXTERNAL

Name *

Email *

Zip Code *

CA 94303

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I do not claim experience of ranching in California. My opinion is generated from a long gone experience of cattle ranching in Zimbabwe, Africa: Sickly calves were killed by predators. Mother cows protected any viable calf valiantly from lion and leopard. Midpen advocates sharing land: farmers with wildlife and logically can expect predation. Human predators are deciding the future of non-human predators. Human predators have clearly demonstrated our instinct. Non-human predators are out-gunned and out-numbered. What is the loss of a when compared with the loss of a lion? Human predators are going to kill the calf and replace it with another. I think lions are more jeopardized.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#94]
Date: Sunday, November 17, 2019 6:43:51 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I oppose "lethal removal" of natural wild predators (especially mountain lions) to protect domestic animals, especially livestock. As others have pointed out, preserving and protecting wildlife, including mountain lions, is a fundamental reason for the existence of the Open Space District. Leasing land for grazing is not and is thus acceptable ONLY as a fire-prevention measure and only if the ranchers accept the fact of wild predation.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#95]
Date: Sunday, November 17, 2019 7:16:44 PM

EXTERNAL

Name *

Email *

Zip Code *

94028

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The solution to the problem of livestock-wildlife interactions is simple: just pay the ranchers the market value of each one of their livestock lost to wildlife predation. You will find many people in Silicon Valley who would each gladly sponsor one or two cows for the cougars. Easy peasy!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#96]
Date: Sunday, November 17, 2019 7:19:04 PM

EXTERNAL

Name *

Organization n/a

Email *

Zip Code * 94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I'm very saddened to think that Mid-Pen ROSD would consider killing any sort of predator on the property set aside as a preserve. I feel for the ranchers, but c'mon: FOUR cows killed and we want to shoot, poison, or trap the coyotes and mountain lions for whom the district was, in large part, set aside?

I would be in favor of charging a bit more for each cow/calf pair, and paying a slightly higher price per grazing animals killed. But please! Don't consider wiping out the predators there. I'm betting they eat a lot more rabbits (destructive little buggers) and rodents than they do cattle. And suburban gardeners close to the preserve are already run to ruin by THOSE critters. Balance of nature, folks!!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#97]
Date: Sunday, November 17, 2019 7:21:46 PM

EXTERNAL

Name *

Email *

Zip Code * 94028

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Respect the native species and let them live their life in
peace. It is our responsibility to protect them. Selling them
out for money is really not acceptable. We have enough
cattle on the planet.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#98]
Date: Sunday, November 17, 2019 7:29:34 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. The process needs to take into account the need for our wildlife including mountain lions and cayotes to be able to exist. They didn't ask us to have our barnyard animals graze. They need to be protected

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#99]
Date: Sunday, November 17, 2019 7:30:45 PM

EXTERNAL

Name *

Email *

Zip Code * 94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The creation of the mid pen open space was to protect that land from development, to protect the native plants and animals that live there and to provide opportunities for the public to enjoy the beauty of these protected spaces. This protected land should not provide any protection to commercial ranching and seems counter to the mission of MPOS to lease land to ranching in the first place. Every native species is connected to the next and dependent on each other for balancing the habitat. Destruction of keystone species, pumas and coyotes would be disrupt this delicate balance – we're lucky we have the remaining native animals here that we do. "Grazing management" should not involve any lethal removal. Seems to me if you want to be a rancher and raise cattle, perhaps you should start with your own ranch and keep your cattle off these protected lands.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#100]
Date: Sunday, November 17, 2019 7:32:44 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The idea of killing coyote and Mt. lion to protect cattle is ill advised. The scientific data is clear that top predators are critical for a healthy ecosystem. Mid-Pen Open Space is meant to be stewards of the land. Grazing cattle is already a questionable practice (tolerable if done well). Suggesting killing wildlife to help out ranchers is the antithesis of conservation. Habitat for top predators is being reduced and fragmented at an accelerated pace. Open space is the only safe haven for these creatures. If you want to lease land to ranching best to create a fund to pay for the loss of livestock, or better yet train ranchers in the many practices that help reduce livestock loss.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#101]
Date: Sunday, November 17, 2019 7:51:12 PM

EXTERNAL

Name *

Organization

PMAC

Email *

Zip Code *

94021

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I think it is unconscionable to allow depredation permits on Open Space land. I support the work of MidPen because of your commitment to conservation and land preservation. This proposal goes against MisPen's mission, while not even providing a long-term solution to the rancher's problem.

As a tax-paying resident of San Mateo County I have as much right to demand that those animals live as the ranchers have to demand they die.

The proposed is not only damaging to the ecosystem, it's counter-productive: the killing of mature lions has been demonstrated to increase the amount of young, inexperienced individuals searching for easy meals in human inhabited areas. Killing mature lions increases the interaction with humans and the amount of attacks on domestic animals. Your proposal will only put San Mateans at greater risk.

I have been a long-time supporter and defender of MidPen, happy to pay tax increases to enable their work, but this decision would turn my opinion. I will vote against ballot measures that give you more money if you allow those ranchers to obtain depredation permits.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#102]
Date: Sunday, November 17, 2019 8:52:15 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Please do not amend the Grazing Management Policy to allow the killing of mountain lions and coyotes. This runs counter to the original mission of the MPOSD, paid for by taxpayers, which is to protect wildlife. Removing the top predators in this ecosystem will have negative effects on the entire ecosystem. It is also in humane and unnecessary. Please deliberate carefully and find a better solution. Thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#103]
Date: Sunday, November 17, 2019 9:05:10 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The mountain lions and coyotes and bobcats were there long before Mid Pen bought the properties from our local residents. Maybe you shouldn't be leasing our land to the ranchers if they object to mountain lions being in their native habitat. I thought Mid Pen's policy was to protect the land it purchases. The ranchers are my friends, too, but they don't deserve the right to have the native habitat killed. Shame on you for even considering such a program.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#104]
Date: Sunday, November 17, 2019 9:32:49 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The “decision” to kill mountain lions seems... brash, and forgive me, stupid. There must be more creative ways to solve this issue. Hire an ecologist – we live in the most scientifically advanced area of the state – It’s not 1650 anymore – surely there is a more rational solution than “let’s just shoot the damn mountain lions!” I mean really. I will for sure be contacting every hiking, biking, conservation, and environmental leftist group I can think of to counter this completely idiotic idea that your “organization” has even considered. Thank you!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#105]
Date: Sunday, November 17, 2019 9:33:23 PM

EXTERNAL

Name *

Organization Kings Mountain Resident

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Interesting that Mid-Penn would condone killing indigenous species in favor of domesticated animals. As a docent for San Mateo County Parks, SF Water Department and Djerassi Resident Artist Program I find Mid-Penn's actions somewhat counter intuitive, and disappointing.

FWIW,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#106]
Date: Sunday, November 17, 2019 9:33:29 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I believe that you should not be killing mountain lions (or coyotes for that matter) to protect grazing cattle. While aggressive by instinct, they are NATIVE CALIFORNIA ANIMALS, and an important one at that. One who's numbers are not that large in the Bay Area looking at the Santa Cruz Puma Projects Data from Chris Wilmers of UCSC. There are other ways, even shown on your chart, that prove effective for ranchers to protect their livestock, all of which don't involve killing such creatures. It makes me sad to think that this draft policy has been even proposed as an option.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#108]
Date: Sunday, November 17, 2019 10:41:19 PM

EXTERNAL

Name *

Organization

Self

Email *

Zip Code *

94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The idea that we would kill wildlife on public land specifically purchased and protected to preserve nature for the benefit of ranchers leasing the land is outrageous. The public are the owners and this land should be managed according to the principles behind the MROSD. Renters who don't like what they're getting can go to the central valley where there is no nature left due to ranching and cattle raising practices. No mountain lions or coyotes to worry about there.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#109]
Date: Sunday, November 17, 2019 10:43:36 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

DO NOT KILL MOUNTAIN LIONS!!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#110]
Date: Monday, November 18, 2019 12:00:10 AM

EXTERNAL

Name *

Email *

Zip Code * 94074

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I would like to voice my strong opposition to any policy that authorizes take of pumas (mountain lions) on MROSD land. As a taxpayer, I support the development and maintenance of open spaces, including the use of cattle as a management tool. Part of the benefit of having open space in our county is that we can leave some room for the wildlife that was here before us. Authorizing ranchers to hunt lions is unethical and an unsustainable solution. I urge you to consider alternative options, such as mandatory protective measures such as livestock guardian dogs and/or other deterrents. In other open spaces, I have heard of a reimbursement program for ranchers who lose cattle to wildlife. Whatever expense is associated is acceptable. Killing animals that have not harmed human beings is not.

Thank you,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#111]
Date: Monday, November 18, 2019 12:46:39 AM

EXTERNAL

Name *

Email *

Zip Code * 94306

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Comment: MROSD is coming at this upside down. If the cattle are there to help with fire, that's about preserving the land. The land was preserved IN THE FIRST PLACE to keep it wild and that includes lions. Population increase in lions is the result of long-term efforts and prioritizing cattle over them is going against the public's wishes when we agreed to pay for buying this space.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#112]
Date: Monday, November 18, 2019 1:04:11 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I do not agree with the killing of mountain lions or coyotes to benefit cattle ranchers. The land was bought partly with taxpayer money for conservation, not for cattle ranching.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#114]
Date: Monday, November 18, 2019 4:23:57 AM

EXTERNAL

Name *

Email *

Zip Code *

94610

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Shame on the government and those murdering ranchers for attempting to kill wildlife because they decided to farm animals (aka torture and murder) in the wild animals natural habitat and are worried the wild predators are going to do the same thing to their animals that they are doing. This is NOT ok and beds to be protested. Fuck the ranchers They can choke on turds!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#115]
Date: Monday, November 18, 2019 5:42:04 AM

EXTERNAL

Name *

Email *

Zip Code *

CO1 2JG

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

No need to shoot potential predators. Get guard donkeys.
Sounds insane but don't dismiss. Do some research. It
works.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#116]
Date: Monday, November 18, 2019 7:24:24 AM

EXTERNAL

Name *

Organization

Peninsula resident

Email *

Zip Code *

94061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Very against depredation as a strategy. It's their natural
habitat that we're encroaching on for profit. It is hard to
prove which animals have been causing the issues and not a
humane solution for an animal that is only doing as nature
intends. There are many other strategies for protecting
herds from predation risk or compensation to farmers for
lost cattle, etc.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#117]
Date: Monday, November 18, 2019 7:46:40 AM

EXTERNAL

Name *

Organization

Resident San Mateo County

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Even w/ 3 strikes, ranchers may abuse the policy. Aside from that, it's the habitat of wildlife not cattle. If a lion hurts a human that's a different story. We need mountain lions to curb the deer population everything has to be in balance not just the cattle. Ranchers should calculate their margins based on the assumption that they will lose some cattle to wildlife. They should not be given permits to kill Mtn lions.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#118]
Date: Monday, November 18, 2019 7:51:33 AM

EXTERNAL

Name *

Email *

Zip Code *

93923

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

You need to find a new and better way to protect your livestock, one that doesn't involve killing mountain lions or other predators. Please research how the Cheetah Conservation Fund in Namibia Africa is using Anatolian Shepherd dogs to protect livestock from cheetahs.
<https://cheetah.org>

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#119]
Date: Monday, November 18, 2019 8:00:24 AM

EXTERNAL

Name *

Organization

Self

Email *

Zip Code *

94061-1430

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Please PROTECT our wild life in the open spaces!!
If it means no cattle ranching, so be it!!
PROTECTION is why we approved this open space
Thanks!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#120]
Date: Monday, November 18, 2019 8:03:20 AM

EXTERNAL

Name *

Email *

Zip Code *

95060

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I urge you NOT to allow killing of Mountain Lions and other predators on grazing land. Cattle are the invasive species here, and if they are allowed to graze on public land their owners must be willing to lose some to wildlife. Vote NO on allowing predators to be killed.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#121]
Date: Monday, November 18, 2019 8:10:59 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am appalled at the idea that we would kill our irreplaceable
top predators already unfolded threat by environmental
changes for the convenience of business like cattle grazers.
This is an unacceptable plan. They were here first (the lions)
and we need them for biodiversity and to balance the
ecosystem. California has to do better!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#123]
Date: Monday, November 18, 2019 8:26:15 AM

EXTERNAL

Name *

Email *

Zip Code *

94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I oppose killing coyotes or mountain lions if they have killed livestock. Instead, let's make grazing fees less expensive and increase the amount of money we give ranchers who lose livestock – if we really feel that we must have livestock on these lands. Livestock tend to displace native prey so it is only natural for native predators to turn to livestock from time to time but native wildlife must take precedence on our wildlands.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#124]
Date: Monday, November 18, 2019 8:41:15 AM

EXTERNAL

Name *

Email *

Zip Code * 95042

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I Do Not Support killing of wildlife for cattle ranchers. They should build barns and manage their herds so they are protected. Tee are doing them a favor letting them lease public lands

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#125]
Date: Monday, November 18, 2019 8:45:51 AM

EXTERNAL

Name *

Organization We the People

Email *

Zip Code * 95422

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

This land was not reserved with tax payer money for you to put private businesses over the environment and the wild animals that inhabit that environment. The taxpayers demand to see the wildlife there respected and preserved. Stop leasing the land to cattle ranchers, stop being greedy caring about the cattle ranchers' money, and do your job which is to keep this land safe as a reserve for wildlife. Do not even think about allowing the killing of wild animals especially the wild predators to occur to a greater degree. If the cattle ranchers don't like it, they can lease some where else. I see your top goal is to protect cattle. You have it all mixed up. We the People demand your top goal be protecting wildlife.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#126]
Date: Monday, November 18, 2019 9:14:09 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I strongly oppose the proposal to allow ranchers to kill mountain lions to help with their ranching business.. These are public lands that were primarily set up for conservation and public use. Those who lease this land, can use other methods to reduce predation and/or find non-public, non-regulated venues for cattle grazing. This is not an industry that is critical to the local (or national) public good. If the fees are reduced, I and most would support alternative sources of revenue if needed. thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#127]
Date: Monday, November 18, 2019 9:54:30 AM

EXTERNAL

Name *

Email *

Zip Code *

95070

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I've lived adjacent to Open Space for 47 years. I lost 2 goats to a mountain lion.
The space has been set aside for nature, Not ranchers.
I think killing coyotes or mountain lions is an INCREDIBLY BAD IDEA!
There will be NOTHING left in my will for MidPen, if any animals are killed.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#128]
Date: Monday, November 18, 2019 9:55:42 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I have been notified that the mid-pen space district is considering extermination of mountain lions to help local cattle owners. I am strongly opposed to this. What is the justification for doing this? There are other means to protect cattle and killing important predators that help balance our ecosystem is not the answer. I hope there will be public discourse on this matter.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#129]
Date: Monday, November 18, 2019 10:13:48 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Don't kill the local wildlife. I thought the mission of Open Space was to protect our ecosystem. I vote no on killing the mountain lions and coyotes. The cattle should not be the priority.
Thank you for soliciting and considering feedback on this issue.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#130]
Date: Monday, November 18, 2019 10:44:08 AM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I do not support the new 3-strike predator depredation proposal. While I do support sustainable ranching on Mid-Peninsula Open Space Lands, these areas are set aside and supported by taxpayers as native species conservation areas. Prioritizing cattle over native species is incompatible with this primary goal. Thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#131]
Date: Monday, November 18, 2019 11:02:25 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

So this is what passes for open space and natural resource
stewardship in your organization now. How pathetic. Anna
Ruiz please resign now and take your planning staff with
you. I'm sure the cattle lobby can find you jobs. You seem to
have forgotten who you work for and what your mandate is.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#132]
Date: Monday, November 18, 2019 11:02:48 AM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Please don't kill the mountain lions or coyotes. As a resident near open space, it seems that the coyote population is way down. We used to see and hear them frequently. I haven't seen any in many months. From my understanding of the monitoring of mountain lions by the Bay Area puma society, there aren't many mountain lions in the area, and taking an apex predator significantly changes the dynamics for both that species and other species,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#133]
Date: Monday, November 18, 2019 11:04:52 AM

EXTERNAL

Name *

Organization

None

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Please do not eliminate bobcats and coyotes. They belong
there, not the cattle.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#134]
Date: Monday, November 18, 2019 11:19:53 AM

EXTERNAL

Name *

Email *

Zip Code * 94061

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. Do not hurt these precious mountain lions. It is there land to live on and look for food. Find another way with the cattle ranchers.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#135]
Date: Monday, November 18, 2019 11:37:47 AM

EXTERNAL

Name *

Email *

Zip Code *

94025

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Are you seriously thinking about killing wild animals for cattle? In California, outside of SF. This must be a crude joke.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#136]
Date: Monday, November 18, 2019 11:43:32 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Your proposal to shoot mountain lions in cattle grazing areas is NOT a viable option. In the past 20 years in the US, a total of 5 people have been killed by mountain lions, while approximately 440 people have been killed by cows. Mountain lions are a critically important part of our ecosystem, as are coyotes. Citizens / residents / tax payers in this area are vehemently OPPOSED to shooting mountain lions. The cattle ranchers and Midpen Grazing Management must find a different solution.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#137]
Date: Monday, November 18, 2019 12:06:59 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

It's ridiculous to even consider allowing ranchers to kill
coyotes and mountain lions. Losing stock is a risk they take
by choosing to graze their stock in that area. You know they
won't follow the guidelines and will kill any chance they get.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#138]
Date: Monday, November 18, 2019 12:14:29 PM

EXTERNAL

Name *

Organization

Santa Clara Valley/Sequoia Audubon; Felidae

Email *

Zip Code *

94040

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Interested in volunteer pilot program to assist with
implementation of livestock protection methods, predation
research and monitoring

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#139]
Date: Monday, November 18, 2019 12:19:38 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I'm against the killing of our mountain lions to protect domestically raised cattle. Find some other way to keep the cattle safe.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#140]
Date: Monday, November 18, 2019 1:01:08 PM

EXTERNAL

Name *

Email *

Zip Code * 95061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Wow. I have been contributing \$1,000 a year for about 5 years to build a tunnel under Hwy 17 to protect wildlife and help protect genetic diversity in local wildlife. To think that just down the road another conservation(?) group is allowing them to be shot is just horrible. Seems like the ranchers are already getting a good deal with the low rent and payment for killed animals. Does openspace really need ranching income?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#141]
Date: Monday, November 18, 2019 1:50:42 PM

EXTERNAL

Name *

Email *

Zip Code * 95014

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Please stop using public owned wilderness for grazing ,
ranching a.k.a commercial purposes

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#142]
Date: Monday, November 18, 2019 1:54:23 PM

EXTERNAL

Name *

Organization WildEarth Guardians

Email *

Zip Code * 80212

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#143]
Date: Monday, November 18, 2019 1:57:12 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

You have created a PR nightmare for yourselves by considering Puma hunting in order to encourage ranching on your land. This is one of the worst cases of inverted priorities I can imagine.

If you can't make grass fuel management work with cattle, then do something else. Falling down the rabbit hole of cattle leads to leasing to ranchers leads to puma attacks leads to unhappy ranchers leads to shooting pumas illustrates a gross lack of perspective. Please walk this back as fast as you can.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#144]
Date: Monday, November 18, 2019 2:05:23 PM

EXTERNAL

Name *

Email *

Zip Code * 95628

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The science is clear enough that this proposed policy will not only not work but is likely to actually exacerbate depredation. So one must assume the reason for it is not based in science. However, this proposed policy is also not likely to go well for MidPen politically (see Prop 117 and Prop 197 ballot results). I think MidPen may have forgotten it has benefitted financially from Prop 117 (which funded deer, mountain lion and native oak habitat) and its supporters. Many Prop 117 signatures were gathered in the midPen orbit. This proposal, if adopted, is likely to generate legal and public support consequences. I encourage you to reject this disproven and out-dated notion as soon as possible and move on to your core functions.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#147]
Date: Monday, November 18, 2019 4:05:26 PM

EXTERNAL

Name *

Email *

Zip Code *

94022

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

My vote would be to continue the Midpen grazing program while at the same time avoiding any killing of mountain lions (I'm neutral on killing problem coyotes). My solution for the ranchers would be to compensate them at a higher rate for losses caused by lions. If in the end it comes down to cattle or mountain lions, I choose the native lions. Thank you for preserving the beautiful open space and the creatures so important to a healthy ecosystem!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#148]
Date: Monday, November 18, 2019 4:18:03 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I was saddened to hear this is even a possibility, particularly in a preserve. Paying ranchers for their losses seems reasonable, especially given that they are renting the space at below-market rate for the area. Someone mentioned the possibility of using dogs to protect the cows. I know that has worked for goats that graze hillsides commercially. Relocating the lions/other wild animals is also a no-go as far as I'm concerned. Apex predators are critical to the health of the ecosystem and, thus, to humans. We cannot be shortsighted in resolving the issue, as it will only cause issues that are more difficult to remedy.

Bottom line: I am against this change in management policy and I will forward this comment page to others so they can weigh in.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#149]
Date: Monday, November 18, 2019 7:16:23 PM

EXTERNAL

Name *

Email *

Zip Code *

89450

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Besides the fact that grazing animals create a lower fire risk, why are you allowing grazing at all on public lands? Oh, that's right, ranchers are paying you money. To kill the native predators that live there. Please stop this hare-brained policy.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#151]
Date: Monday, November 18, 2019 8:09:32 PM

EXTERNAL

Name *

Email *

Zip Code * 93301

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Losing cattle is the cost of doing business on public lands. I get it, you need cattle to sustain the health of the land. However the survival of wildlife in places where they can thrive is just as important. How many animals will you kill for the benefit of 7 people? Go ahead give them more compensation for losses but don't lower the monthly fees, they are already paying a low enough fee. The article says loss is under 2%, I think that is perfectly acceptable. If the rancher can't afford to ranch they need to find a new business.

As far as the department of fish and wildlife, most conservation groups are opposed to their practices and are trying to change them. Making money and protecting ranchers is not the business of the government, protecting the environment and its wildlife is. As one person shared in a different post, the impact of so many cows is devastating to to the environment. We need to balance the needs of the world against the needs of humans. We after all are not in danger of extinction and neither are cows.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#154]
Date: Monday, November 18, 2019 8:22:56 PM

EXTERNAL

Name *

Email *

Zip Code * 95042

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I do not support the shooting and killing of wild animals for ranchers. Ranchers need to protect their livestock and not take a a lazy way out with unprotected livestock. Predators go after week and young animals. Put of fences, have a herder or use other methods to protect the herd. They already receive huge discounts making a business on public land by not paying their fair share. ENough! No killing!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#156]
Date: Monday, November 18, 2019 9:19:31 PM

EXTERNAL

Name *

Email *

Zip Code *

94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am really shocked by a proposal to kill mountain lions. This is not what I would expect from an organization dedicated to protecting lands. As someone who has donated to various organizations in the hopes that we can protect land and extend habitats for mountain lions, I would not support an organization that kills them.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#157]
Date: Monday, November 18, 2019 9:31:58 PM

EXTERNAL

Name *

Email *

Zip Code * 95032

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Thank you for the balanced scientific research and the opportunity to comment on proposed changes to grazing management policy.

I oppose allowing any additional destruction of puma and coyote in the district. The responsibility to protect their business investment should be on the business owner. Ranchers should use non lethal means to protect their business property from wild animals.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#158]
Date: Monday, November 18, 2019 9:44:05 PM

EXTERNAL

Name *

Email *

Zip Code * 94061

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I'm opposed to killing mountain lions. We have so little wildlife left, even in species that are not particularly endangered. Has trapping and relocating the animals been considered, and then only if they are clearly habituated to killing livestock? Also, your table lists other methods that are at least moderately effective, can't they be used instead? Question: are the 16 losses for just this year, or over some period of years? Why not just accept some livestock will be lost, and reimburse the ranchers for the cost of the cattle?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#159]
Date: Monday, November 18, 2019 11:26:01 PM

EXTERNAL

Name *

Email *

Zip Code *

95020

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I fully support the District working with the Ranchers so that the ranchers continue to be a viable management option for our wildlands. We can't expect them to lose livestock to problem predators all the while they are helping manage our Parks system. Without controlled burns the cattle ranchers are really the only management option that we have.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#163]
Date: Tuesday, November 19, 2019 9:01:10 AM

EXTERNAL

Name *

Organization private

Email *

Zip Code * 94002

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I don't think that wildlife should be killed to protect cattle on land that was set aside for nature conservation. This is not in line with the primary objectives of the open space district.

From: [General Information](#)
To: [Leigh Ann Gessner](#); [Matthew Chaney](#)
Subject: Fw: NOT ok with me to allow killing coyotes & mountain lions to protect cattle
Date: Tuesday, November 19, 2019 2:52:19 PM

Hi Leigh Ann and Matt,

Please see message below regarding grazing article. Please let me know how you would like me to respond.

Kind regards,

Carmen Lau
 Midpeninsula Regional Open Space District
 330 Distel Circle, Los Altos, CA 94022
 P: (650) 691-1200 F: (650) 691-0485
www.openspace.org | twitter: [@mrosd](#)

From:
Sent: Sunday, November 17, 2019 4:41 PM
To: General Information <info@openspace.org>
Subject: NOT ok with me to allow killing coyotes & mountain lions to protect cattle

EXTERNAL

There must be a more sustainable way to manage our wildlife in areas where someone also raises food.

Have you not seen “The Biggest Little Farm” ?? I HIGHLY recommend it! Fabulous film!

<https://www.biggestlittlefarmmovie.com>

There is always a BETTER way to work WITH nature.

I am not willing for my money to go towards killing native wildlife. If there are too many coyotes, encourage more owls and hawks, by making available places for nesting or nest boxes.

If these are indeed PUBLIC lands, I want the wildlife safe there, and if there are too many of some species, find a way to balance with other species, but not hunting and please tell me you would NEVER trap our wildlife.

Why are these cows grazing public lands anyway? If it is properly managed to maintain the land, and the herds are moved appropriately to do so, then offer a different deal to those who own the cattle.

But do NOT kill our native animals.

https://www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change.html#/discussion

This company is restoring the prairie with the way they raise buffalo:

<https://wildideabuffalo.com>

Thanks for reading my letter, and forgive me if you are already aware of these resources.

This is such an important issue - the mountain lions and coyotes were here long before the cattle farmers!

Darshana Maya Greenfield

Menlo Park, CA 94025

a neighbor posted on Nextdoor:

MidPen Regional Open Space District to Kill Mountain Lions/Coyotes for Cattle

In a move that is raising the ire of wildlife advocates, one of the Bay Area’s largest open space agencies is drawing up plans that could allow the killing of mountain lions and coyotes to protect cattle owned by ranchers who lease its lands if they kill cattle.

<https://www.mercurynews.com/2019/11/16/bay-area-open-space-district-proposes-killing-mountain-lions-to-help-cattle-ranchers/> We

paid for these public lands and if you think that our wildlife should take precedence over cattle, let MidPen know. It is my understanding that the cattle are being used for fire suppression so it is important to be respectful. Options including lowering grazing fees and offering more recompense when cattle are lost. MidPen can be reached through any of the links below: <https://www.openspace.org/contact-us>

<https://www.facebook.com/midpenopenspace/> <https://www.instagram.com/mrosd/>

From: [General Information](#)
To: [Leigh Ann Gessner](#); [Matthew Chaney](#)
Subject: Fw: Mountain Lions
Date: Tuesday, November 19, 2019 2:38:46 PM

Hi Leigh Ann and Matt,

Please see comment below.

Kind regards,

Carmen Lau
Midpeninsula Regional Open Space District
330 Distel Circle, Los Altos, CA 94022
P: (650) 691-1200 F: (650) 691-0485
www.openspace.org | twitter: [@mrosd](#)

From:
Sent: Sunday, November 17, 2019 6:53 AM
To: General Information
Subject: Mountain Lions

EXTERNAL

Leave the mountain lions and coyotes alone. How much are the ranchers paying your officials? We don't need any more cattle!

Sent from my iPhone

From: [General Information](#)
To: [Leigh Ann Gessner](#); [Matthew Chaney](#)
Subject: Fw: No killing of Coyotes and Mountain lions!!!
Date: Tuesday, November 19, 2019 3:53:44 PM

Hi,

Please see the very angry mountain lion email below. Over the weekend we received at least 7 emails with this similar type of feedback from the info email. I think this person is also confusing us with POST.

Please let me know how you would like me to respond.

Kind regards,

Carmen Lau
Midpeninsula Regional Open Space District
330 Distel Circle, Los Altos, CA 94022
P: (650) 691-1200 F: (650) 691-0485
www.openspace.org | twitter: [@mrosd](#)

From:
Sent: Monday, November 18, 2019 6:38 PM
To: General Information
Subject: No killing of Coyotes and Mountain lions!!!

EXTERNAL

Stop it!!!

Our taxpayer dollars and major donors who have paid a fortune to protect open space and wildlife for decades didn't do so you can give all that value away to a bunch of dishonest cattle ranchers.

Everyone of you who thought killing coyotes and mountain lions to protect cattle is how you manage open space should be fired and never be allowed to work in open space protection ever again!

You are all acting liking criminals who are stealing the public trust and giving it away to a massively destructive cattle industry that is the primary cause of historic native plant extinction in the SF Bay Area.

You have turned into a horrible, shameful operation and I will be contacting your donors to make sure you lose your funding to operate...

I will do everything possible to make sure none of you have a future in the protection of open space in the SF Bay Area because you have no idea what that even means.

You just ended your careers and we won't forget!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#160]
Date: Tuesday, November 19, 2019 7:27:16 AM

EXTERNAL

Name *

Organization

n/a

Email *

Zip Code *

95070

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I voted for the Open Space trust and I vehemently object to killing any of the wildlife I voted to protect. The cattle are the invaders. If the ranchers object to the risk to their livelihood, I suggest they take their cattle elsewhere. Thank you for protecting our wildlife.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#161]
Date: Tuesday, November 19, 2019 8:09:42 AM

EXTERNAL

Name *

Email *

Zip Code * 94038-9717

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am totally against this new predator control policy amendment.

You were founded in 1972 to preserve wildlife, protect open space and provide public recreation. This new policy is totally the opposite of that.

Stop leasing the land for grazing and let the ranchers use their private lands. If any predator attacks livestock on the privately owned lands it comes under the state law.

Please preserve wildlife, protect open space and provide public recreation. Do not kill wildlife because livestock move into their territory!!!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#162]
Date: Tuesday, November 19, 2019 8:55:56 AM

EXTERNAL

Name *

Organization

BERGER TRANSCRIPTION

Email *

Zip Code *

91324

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Anyone who knows wildlife knows if you kill one coyote family, another coyote family moves in. Better you should increase your guard dogs than get a bunch of gun toting idiots (or just as bad, poisoners) trying to clear land

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#164]
Date: Tuesday, November 19, 2019 9:37:14 AM

EXTERNAL

Name *

Organization	Santa Cruz
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Email *

Zip Code *	95003
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Would you like to be added to the Grazing Management Policy Amendment e-mail list?	<input checked="" type="radio"/> Yes
--	--------------------------------------

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

The Santa Cruz Sentinel had a front page article on the developments regarding the Midpeninsula Regional Open Space District Plan to consider a "three strikes" policy for the depredation of indigenous mountain lions.

When I was a resident in Los Altos from 1977–2001, we supported and considered our property taxes, well spent to preserve open space for biodiversity and natural succession to occur without human encroachment. Regretfully, ranchers are now allowed to graze cattle on 11,000 acres of this land.

I wholeheartedly agree with J.P. Rose attorney for the Center for Biological Diversity and Henry Colletto former game warden who both criticize your Board for allowing ranchers to dictate their concerns for killing predators of their cattle! There should not be any cattle on those lands in the first place. As a science teacher in San Jose for 23 years, I taught students about the need and critical importance of biodiversity, ecology and natural habitats for our planet. What a shock to learn that cattle are preferred over indigenous plants, animals and natural habitat for beef!

Do not proceed with allowing ranchers to dictate to your Board or allow them to continue to encroach upon the beautiful Midpeninsula Regional Open Space! I am informing my friends and former neighbors in Los Altos and Los Altos Hills about these developments and will ask you to stop allowing the grazing of livestock on these lands. Also, where are the studies that support your claim that livestock grazing is preferred for the grassy areas? If there wasn't livestock on the lands, perhaps more deer and other prey in the food chain for mountain lions, bobcats and coyotes would reappear?

Former taxpayer in Santa Clara
Santa Cruz

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#165]
Date: Tuesday, November 19, 2019 9:43:59 AM

EXTERNAL

Name *

Email *

Zip Code * 94070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

We have been monetary supporters of POST and are quite dismayed at the proposal to allow grazing and institute predator control up to and including "targeted lethal removal" of problematic predators. The proposal is flawed in many ways including the absence of any proposal to manage deer populations – a primary food source of large predators on the Monterey peninsula – in areas surrounding the Open Space Preserves. The fenced cattle will essentially be captive meals for the large cats and the proposal is almost guaranteeing wildlife/grazing animal conflicts. Local deer populations in large numbers are free to infiltrate into surrounding suburbs where the animals browse on non-native plants and are often illegally fed by well meaning people. It's possible that grazing fenced cattle in the open spaces will further increase this problem as the large predators may prey on the cattle rather than follow deer into the surrounding neighborhoods.

Growing up in Colorado and being a veterinary pathologist I am well aware of the problems associated with grazing domestic animals in areas inhabited by large feline predators. I am discouraged that MPOS is considering cattle grazing as a potential solution for fire suppression given the high potential for conflict with local wildlife. In my experience the wildlife will always be valued less than the domestic animals that are assigned a dollar value by the owner.

I clearly understand the need to evaluate solutions to decrease the risk of wildfires that have impacted California, especially over the past several years. However, this plan is flawed in many different ways and does not include a holistic plan for addressing wildlife management on the Monterey peninsula in general which very likely will impact the proposed plan.

If this is the chosen path we will no longer contribute monetarily to the Open Space organization.

Sincerely,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#166]
Date: Tuesday, November 19, 2019 9:50:37 AM

EXTERNAL

Name *

Email *

Zip Code * 95032

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Grazing is only a predictable way that allows the cattle owners to eventually lobby for the killing of predators in the wild. Please end all grazing and oppose any future grazing in your plants. We as tax payers passed more funding for wildlife protection, trail improvement and of course for the pay of staffers who keep our lands safe and managed.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#167]
Date: Tuesday, November 19, 2019 9:51:08 AM

EXTERNAL**Name ***

Organization self

Email *

Zip Code * 94531

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I totally disagree with your arguments to allow killing of any wildlife. Many of the arguments that you put forth are comparing public recreation areas with private land owners – they are not the same. If the interactions with wildlife are so onerous to the cattle men they are free to move their cattle to a different location. Unless an animal poses a direct threat to human life there is no acceptable excuse for taking it's life.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#169]
Date: Tuesday, November 19, 2019 10:37:33 AM

EXTERNAL

Name *

Email *

Zip Code * 94038

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I do have comments about the proposed changes. I have supported Open Space over many years, including involvement in coordinating fundraising events at my former employer and donations over many years. I support protecting the land and the wildlife, which is why I have supported Midpen Open Space.

Ranching tenants leasing Midpen land have always been well aware of the potential for loss of cattle to predation by mountain lions and coyotes. They should rent elsewhere if they wish to kill wildlife for their personal profit – Open Space should not be supporting profitability of raising cattle over protection of wildlife. The reality is the loss due to this predation is very low and the ranchers would not be staying on these lands if they were not making a good profit.

If Midpen Open Space truly loses sight of the important goal of protecting wildlife I will no longer be supporting this organization with my money or activism – that would be me working to help line the pockets of ranchers that kill the animals I have worked to protect. I previously thought Midpen Open Space was committed to protect these animals and am shocked to see this proposal.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#170]
Date: Tuesday, November 19, 2019 10:52:47 AM

EXTERNAL

Name *

Organization resident

Email *

Zip Code * 94301

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I read with dismay your consideration of a plan for lethal removal of wildlife when you believe there has been on-going predation on livestock.

It is my view that livestock should not be grazing on public lands, whatever the the supposed benefits are, we need fewer cattle and more wildlife to move us closer to that balance nature intended. If, as I expect, you will continue to support cattle grazing on open space public lands, then can support providing compensation for every documented case of livestock lost by wildlife predation.

If you move forward with authorizing lethal removal of wildlife, I will work to end support for your organization.'

Sincerely,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#171]
Date: Tuesday, November 19, 2019 11:24:15 AM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I do not support killing Mountain Lions. We're living in their back yard.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#172]
Date: Tuesday, November 19, 2019 11:27:34 AM

EXTERNAL

Name *

Email *

Zip Code * 94040

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am vehemently opposed to the killing of wildlife on public lands, for the benefits of ranchers and livestock. Ranching and livestock raising is ruining our natural ecosystems and causing global biodiversity to plummet. It is one of the most significant forces that is leading to mass wildlife extinction, on a global scale. It is ludicrous that our government can be asked to kill wildlife – including threatened and endangered species – to benefit a handful of private ranching operations. Leasing of public lands to ranching operations MUST stop, especially where the public lands are intended to remain natural spaces where wildlife should flourish. Please do not allow the killing of wild animals for the benefit of ranchers and farmers.

Mountain View Resident

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#173]
Date: Tuesday, November 19, 2019 11:49:44 AM

EXTERNAL

Name *

Organization

Gumsaba

Email *

Zip Code *

94507

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am appalled at the current proposal to kill NATURAL predators in the peninsula open space. Though i read that your reasoning is sympathy for the farming community, this is absolutely unacceptable. These animals MUST be protected as they are part of our community. Not only is grazing cattle there invasive to them, the farmers should be willing to sacrifice a cow or two if they want to use the land r profit. The community does not profit from this, our value lies in our wild lands and as someone who hikes all over these beautiful United states I can say that some of the worst damage is done by cattle. Please reconsider, this policy is terrible for the natural environment.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#174]
Date: Tuesday, November 19, 2019 12:17:06 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am against giving the cattle ranchers the power to kill the mountain lions and coyotes in our open space lands. Something is very wrong with that arrangement. This land is not the ranchers but has been the habitat of the mountain lions and coyotes long before the cattle. Not ok to kill them.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#175]
Date: Tuesday, November 19, 2019 12:54:00 PM

EXTERNAL

Name *

Organization

Mrs.

Email *

Zip Code *

95032

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

It seems to me whenever man intervenes and kills apex
predators, nature rebels. My daughter lives in an area of the
Colorado foothills totally and completely over run by deer.
They eat everything and bring ticks!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#176]
Date: Tuesday, November 19, 2019 1:07:42 PM

EXTERNAL

Name *

Email *

Zip Code *

95020

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I just found out about this potential policy change from the November 19, 2019 article in the Mercury News. I have not read the draft policy yet but based on the article I have significant reservations. I see no practical way by which you can with certainty identify an individual predator that will be less expensive than alternative means. I think increasing the amount ranchers are compensated for loss is a better solution for which you can likely gain donor support and is better balanced to address human encroachment on both grazing lands and predator territory.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#177]
Date: Tuesday, November 19, 2019 1:09:36 PM

EXTERNAL

Name *

Email *

Zip Code *

93401

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

GET RID OF THE CATTLE, NOT THE WILDLIFE.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#178]
Date: Tuesday, November 19, 2019 1:31:04 PM

EXTERNAL

Name *

Organization none

Email *

Zip Code * 94530

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Seems a good process. The cattle kill numbers (your numbers) to me are not compelling. Continue to consider paying ranchers FMV for their confirmed losses; price of doing business in rural/urban interface park for grassland management per you goals. Consider criteria for identifying egregious animal activity and once met, harvest the animal. If corralling the cattle at night is feasible (consider funding for this activity) then do it. Good luck.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#179]
Date: Tuesday, November 19, 2019 2:35:18 PM

EXTERNAL

Name *

Organization

Planet Earth

Email *

Zip Code *

95033

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am a long-time resident of the Santa Cruz Mountains and I am completely opposed to all killing of mountain lions, coyotes or other predators to appease cattle ranchers. I have always voted yes to increase our protected lands in the Bay Area, which I have understood to be protected for wild animals to live in peace. I have not voted yes to give government welfare to ranchers, and I do not want my tax dollars used as such. Healthy ecosystems need large predators to keep deer and rodent populations in check. Killing coyotes and mountain lions will not work anyway because more mountain lions and coyotes will move into the habitat of those who were killed. There are also multiple studies that show killing predators often increases conflict between humans and wildlife.

Actually, cattle should not be allowed in our open space, as this is private enterprise using public lands for their financial gain. You, Midpen, have given these 7 ranchers the privilege of grazing on our supposedly protected land, and now they want more – they want to be able to kill native predators. The ranching industry is trashing land which is supposed to be safe from any business – which was set aside by Bay Area residents to be a place where nature reigns supreme and we can relax, and a place for wildlife to exist unharassed by human enterprise.

The cows are an invasive species, and they need to go. And if Midpen is so worried about fire danger, start a habitat restoration program to restore native vegetation, which is far less flammable than the grasses cattle eat.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#181]
Date: Tuesday, November 19, 2019 2:51:54 PM

EXTERNAL

Name *

Organization

Synopsis

Email *

Zip Code *

94028

Would you like to be added to the Grazing Management Policy Amendment e-mail list?

- Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I do NOT support the killing of the mountain lions who have lived here long before the cattle and the ranchers. WE continue to push into their wild environment and then want to kill them because they are eating our pets or cattle? Shame on us for not having the foresight expect this. Leave the lions alone. If they get a pet (and they have caught one of mine) the owner is fully responsible to bring them in at night.

The predators scarcely have space to live and we need to help control the deer and other prey animals who reek havoc on property in many ways.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#182]
Date: Tuesday, November 19, 2019 3:05:28 PM

EXTERNAL

Name *

Email *

Zip Code * 94061

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I am against the killing of wildlife, including mountain lions and wolves, to protect grazing cattle. Ranchers can make the investment and have the ability to protect their assets without hurting the wildlife that we are trying to protect for generations to come.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#183]
Date: Tuesday, November 19, 2019 3:21:17 PM

EXTERNAL

Name *

Email *

Zip Code *

94040

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

If you are utilizing cattle for the main purpose of vegetation management there is no requirement for the cattle to reproduce. Calves are the primary target for the larger predators. Healthy adult (over 3 years old) cattle are not a primary target for predators. Graze your own herd of adult steers and cows if you really need cattle to manage your public land.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#168]
Date: Tuesday, November 19, 2019 10:13:55 AM

EXTERNAL

Name *

Email *

Zip Code * 94087

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. I am opposed to it. Wildlife is a bigger priority than a
commercial venture.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#184]
Date: Tuesday, November 19, 2019 4:13:13 PM

EXTERNAL

Name *

Organization

Mr.

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Get ranchers off our public lands. Maintain the wildlife, dont
kill them. And dont have anything to do with the killing
organization known as Wildlife Services. I'm a San Mateo
resident and I dont want my taxes to subsidize ranchers
profits and their (or your) "kill wildlife" point of view. My
taxes can go to preserving and maintaining wildlife, thank
you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#185]
Date: Tuesday, November 19, 2019 5:21:09 PM

EXTERNAL

Name *

Email *

Zip Code * 94952

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Is there a comment period in place now for you to accept comments on the Grazing Management Policy Amendment process? If so, can you please advise me of the comment period deadline, date and time for close of comment period? Also, can you please advise of what the entire process consists of, from start to finish, of the Grazing Management Policy Amendment process?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#186]
Date: Tuesday, November 19, 2019 6:09:38 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Taxpayers didn't preserve some of the Bay Area's most scenic forests, meadows and wild areas from development so that the wildlife living there could be shot to help commercial businesses!

A total of 7 calves have been killed in the last 6 years? This is hardly a decimation. Allowing a 3x rule is impossible to calculate, you would have to go on a massive killing spree to remove the Mt. Lions & Coyote's and this is anti, ethical! Anti, Open Space trust and Anti taxpayer agreed.

I am indeed helping spread the word to fight this. Please do not amend the Grazing Management Policy in favor of commercial businesses.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#187]
Date: Tuesday, November 19, 2019 6:44:00 PM

EXTERNAL

Name *

Email *

Zip Code *

94024

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I guess I should start by saying I oppose using protected open space for private commercial purposes, particularly cattle ranching. Cattle have an overall negative impact on the natural environment. And now to allow this open space to allow hunting in order to preserve this private endeavor is wrong. This open space is for the preservation of the wild land and wildlife, not the advancement of commerce.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#188]
Date: Tuesday, November 19, 2019 8:25:01 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

How many deer have mountain lions and coyotes killed compared to domestic cattle? If you remove the predators in a decade or so you will have the ranchers demanding that we start shooting deer because they'd are competing for fodder. I agree with removing lions that pose an ongoing threat to places like Deer Hollow Farm. this could be either by shipping them off to the wilds or shooting them, but unless they are a specific threat to people I think balancing natural predators and prey should be the only consideration, not balancing domestic cows and predators.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#189]
Date: Tuesday, November 19, 2019 8:38:42 PM

EXTERNAL

Name *

Email *

Zip Code * 94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

This has got to be the most ludicrous idea I have ever heard and I cannot believe you are seriously entertaining the idea of killing off wildlife in order to protect livestock. It's open space and is intended to be preserved. Grazing cattle are at risk of predators no matter where they are in the country. The number of cattle lost to mountain lions in the last few years is very small and in NO way justifies killing them. WE have encroached on their territory, their home, not the other way around. Mountain lions are doing what they do to survive. You start killing them you might as well stop calling it an open space preserve.

I can't even believe this is on the table for discussion.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#192]
Date: Wednesday, November 20, 2019 7:35:36 AM

EXTERNAL

Name *

Organization

Exploring New Horizons Outdoor School

Email *

Zip Code *

94021

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I read an article in the Mercury News this morning about plans to kill mountain lions and coyotes if they predate on cattle on our public lands. I'm emailing to express my passionate opposition to such a policy. These are our taxpayer funded public lands, not a private ranch where wildlife can be killed for threatening domestic livestock. Mountain lions in the Bay Area have dramatically decreased habitat and their genetic diversity suffers as a consequence. We have no more grizzlies, have no more salmon, we have no more condors, no more elk, no more antelope. Our ancient oaks have been almost entirely lost, migrating bird populations are plummeting. Must we also kill what few wild predators remain?

In the name of preserving cattle?

I sincerely hope sufficient community and scientific input will be gathered before this policy goes into effect. I'm sure you can expect much resistance. Thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#193]
Date: Wednesday, November 20, 2019 8:25:07 AM

EXTERNAL

Name *

Email *

Zip Code * 95033

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I oppose any moves to allow or expand private enterprise on MidPen space, especially if it interrupts the free range of wildlife. I oppose any proposal to allow or increase allowances for killing any native species, especially top predators. I live on property adjacent to MidPen space, and will speak about this to any rangers I encounter.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#195]
Date: Wednesday, November 20, 2019 10:28:08 AM

EXTERNAL

Name *

Email *

Zip Code * 78676

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

We do not want our wildlife sacrificed for the cruel cattle industry and their profits. These ranchers are raising these cows for slaughter, they are not worried for their safety out of any concern other than their bottom line. Our wildlife is under attacked due to climate change, loss of habitat due to development, common poisons, you name it and we do NOT need another way to kill them and decrease their numbers. We need to co-exist and not use lethal methods time and time again. Cruel, unnecessary and not wanted by tax payers!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#196]
Date: Wednesday, November 20, 2019 11:40:22 AM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I oppose shooting mountain lions or coyotes for the benefit of reducing the predation of cattle.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#197]
Date: Wednesday, November 20, 2019 1:09:39 PM

EXTERNAL

Name *

Email *

Zip Code * 95030

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

We, the people, did not create and subsidize the Midpeninsula Regional Open Space District (MROSD) to subsidize commercial ranching operations. We did it to preserve native plants and animals. If put to a vote of the citizens who pay for your agency, only those who happen to be cattle ranchers and their friends would agree to killing pumas, coyotes or any other natural predator. Human activities in general are endangering the wildlife of the region, MROSD should not be another killer of wildlife.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#199]
Date: Wednesday, November 20, 2019 4:56:07 PM

EXTERNAL

Name *

Email *

Zip Code * 94061

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I was recently told by researchers that we are down to a single digit population of Mountain Lions in San Mateo County. killing just one would be a dramatic reduction in a very vulnerable population.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#200]
Date: Wednesday, November 20, 2019 5:21:49 PM

EXTERNAL

Name *

Organization

King's Mountain home owner

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

MPROS has been provided with public funds to protect and preserve open space, which is what you should do, protect wild lands of San Mateo County. Leasing land for farmers and ranchers should only be done when the farmers and ranchers shall adhere to protection of the lands for open space. All of us who live in the King's Mountain area interact with wildlife on a daily basis. We know when we moved here we are living in wilderness and we know that we are living in their territory. We make certain we do not leave pet food out because it attracts predators. We do not leave our pets out at night, because wildlife will eat them. We do not kill wild predators because we have made a mistake and left a pet or farm animal exposed to wild predators. Ranchers and farmers who lease protected lands must understand that they will encounter wildlife and loss of stock to predators. It is the rancher and farmer who must do everything they can do live sustainably within the area they are leasing from the public. Use of electric fences, herd dogs, and bringing in livestock at night are all good ways to ranch and farm within a wilderness zone. Keep the wilderness zone wild, and allow wildlife to thrive in their home. Do not allow farmers and ranchers leasing public lands to kill wildlife. If they cannot make a profit ranching in open space land then they should ranch and farm elsewhere. The fire reduction benefits which farmers and ranchers provide do not outweigh the benefits of having wild lands and wildlife in our county.

If I had known about this plan before today, I would have attended previous public meetings and expressed my concerns about leasing open space lands to ranchers and farmers who will eventually negatively interact with wildlife. Keep our wildlife's homes intact and safe for wildlife.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#201]
Date: Wednesday, November 20, 2019 5:29:52 PM

EXTERNAL

Name *

Email *

Zip Code *

94025

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am definitely AGAINST killing wildlife for the protection of livestock, assuming that someone is making money off said livestock.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#203]
Date: Wednesday, November 20, 2019 9:41:27 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Measure R didn't sound like something that should condone killing off a native species to support a non-native commercial interest. Please do not implement a lethal removal policy for mountain lions.

Measure R will preserve open space by creating the Midpeninsula Regional Park District (currently named the Midpeninsula Regional Open Space District). Open space is our green backdrop of hills. It is rolling grasslands – cool forests in the Coast Range – orchards and vineyards in the sun. It is the patch of grass between communities where children can run. It is uncluttered baylands where water birds wheel and soar, where blowing cordgrass yields its blessings of oxygen, where the din of urban life gives way to the soft sounds of nature. It is the serene, unbuilt, unspoiled earth that awakens all our senses and makes us whole again ... it is room to breathe

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#204]
Date: Wednesday, November 20, 2019 9:43:24 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

It has come to my attention that the killing of mountain lions has been proposed as a way of protecting cattle. As we face rapidly declining native species and animals forced out of their habitats as humans encroach on the land they are entitled to live on, how on earth could anyone propose such a preposterous policy? There is no excuse for killing these beautiful creatures. None whatsoever.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#205]
Date: Wednesday, November 20, 2019 9:23:56 PM

EXTERNAL

Name *

Email *

Zip Code *

94062

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

please do not put rancher/domestic animal wellbeing over the wild and native animals. this goes against mid-pen's mission and policy. while i disagree with leasing land to ranchers to some degree, i strongly disagree with lethal removal of wild creatures. please protect and preserve our wild spaces.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#206]
Date: Wednesday, November 20, 2019 9:29:20 PM

EXTERNAL

Name *

Email *

Zip Code * 94044

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I have a question. Do grazing permittees utilize MPROSD lands year round? Stated another way, must livestock owners expose their animals to predatory risk on MPROSD lands year round in order to be profitable and to support MPROSD grazing management objectives? I would like to be on the email list for the GMPA process. Thank you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#207]
Date: Wednesday, November 20, 2019 10:38:56 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

It is abhorrent that the only solution is to kill pumas and coyotes so that you can subsidize the cattle industry with their blood. Too gruesome for you? Well, killing our wildlife, especially on Open Space lands to enable 'ranchers' to slaughter cattle for profit is too gruesome for me.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#208]
Date: Thursday, November 21, 2019 8:05:19 AM

EXTERNAL

Name *

Email *

Zip Code *

94025

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

This is an absolutely disgusting policy. Let wildlife be. We don't need more cattle around, just eat vegetables!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#209]
Date: Thursday, November 21, 2019 8:25:27 AM

EXTERNAL**Name ***

Organization docent, Mid-Pen Regional Park District

Email *

Zip Code * 95014

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I'd like to see some environmental evaluation presented
from the non-ranching side of the conversation.
These studies are available.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#210]
Date: Thursday, November 21, 2019 10:49:08 AM

EXTERNAL

Name *

Email *

Zip Code *

94070

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I am opposed to harming wildlife for the benefit of cattle, just as I am opposed to raising cattle for meat. This industry contributes to global warming and the depletion of natural resources. We already have more than enough beef cattle in the United States.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#211]
Date: Thursday, November 21, 2019 7:34:50 PM

EXTERNAL

Name *

Organization

Committee for Green Foothills

Email *

Zip Code *

94061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

• Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

The small number of cattle losses attributed to predators
does not make a case for a policy to allow for killing them.

Since light grazing is needed to maintain a balanced
ecosystem on these lands, we should investigate the
possibility of reintroducing native tule elk in some areas.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#212]
Date: Thursday, November 21, 2019 10:22:52 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

This is an absurd proposal; killing an animal that is uncommon in these parts just to increase ranchers profits is disgusting. The loss of cattle is sad and unfortunate, but mountain lions and coyotes live in this area naturally, while cattle were moved here.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#211]
Date: Thursday, November 21, 2019 7:34:50 PM

EXTERNAL

Name *

Organization

Committee for Green Foothills

Email *

Zip Code *

94061

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

The small number of cattle losses attributed to predators
does not make a case for a policy to allow for killing them.

Since light grazing is needed to maintain a balanced
ecosystem on these lands, we should investigate the
possibility of reintroducing native tule elk in some areas.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#213]
Date: Friday, November 22, 2019 10:15:59 AM

EXTERNAL

Name *

Organization Sierra club member

Email *

Zip Code * 95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

The idea of predatory management by killing mountain lions is absolutely and vehemently opposed by me. I was thinking of leaving a legacy gift for Midpeninsula Regional Open Space District in my trust. Is this policy's enacted You lose all support and goodwill for me. What the heck are you guys thinking. I'm very sorry to even read that you were considering this.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#214]
Date: Friday, November 22, 2019 10:38:01 AM

EXTERNAL

Name *

Email *

Zip Code *

94031

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Please do not support killing of mountain lions. In years of hiking in the hills, they have never disturbed me. I like to think of them living in our hills .

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#215]
Date: Friday, November 22, 2019 10:48:30 AM

EXTERNAL

Name *

Email *

Zip Code * 95008

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. Mountain lions need to be protected not shot. They populated this land before cattle and cattle ranchers.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#216]
Date: Friday, November 22, 2019 11:22:35 AM

EXTERNAL

Name *

Email *

Zip Code * 94040

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am opposed to the grazing policy amendment that would allow ranchers to kill mountain lions and coyotes within Mid-Peninsula Open Space lands. These public lands were established in large measure to support and protect the wildlife present here. The idea that ranching considerations should weigh so heavily in policy decisions regarding these lands is antithetical to the trust that the public has placed in Mid-Pen in establishing these protected areas. Ranchers should have no more say over that of any individual person.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#217]
Date: Friday, November 22, 2019 3:17:32 PM

EXTERNAL

Name *

Email *

Zip Code * 94306

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Political forces are behind the attempts by ranchers here and on other public land (PT Reyes) who want to set precedent for weakening the protections of predators. Ranchers should account for potential loss of stock when they decide to take the lease on public land. It should be mandatory that they use *all*the non-lethal methods available (protective dogs, better fencing, etc that are known to be helpful before they are allowed to apply for a depredation permit. Harley Farmd goat dairy in Pescadero is using dogs and they are successful. If their business model can't afford those measures and the occasional loss of stock then they can give up the lease. Cattle aren't your only option for fire suppression and these aren't the only ranchers around.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#218]
Date: Friday, November 22, 2019 3:33:08 PM

EXTERNAL

Name *

Organization

UNITED AIRLINES

Email *

Zip Code *

94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Lethal removal of mountain lions should not ever be an
option regarding cattle, ranchers, or any commercial
operation on the preserve.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#220]
Date: Friday, November 22, 2019 4:32:09 PM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. The farmers should be producing less meat given the facts about climate change. We need the mountain lions! They are important! We don't need the meat

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#221]
Date: Friday, November 22, 2019 4:51:09 PM

EXTERNAL

Name *

Organization 560 Conservancy Loop, Santa Cruz, CA 95065

Email *

Zip Code * 95065-9723

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I do not believe that agriculture, whether "viable" or not,
should be a goal for an open space preserve. Cattle are not
native to these areas in California. How about other grazing
animals that are?

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#223]
Date: Friday, November 22, 2019 5:48:03 PM

EXTERNAL

Name *

Email *

Zip Code * 95033

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I have a solution to the conflict between cows and wildlife. Move the cows off public land. Thank you for not killing wildlife. I am still very angry. Will never think of you the same way.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#225]
Date: Friday, November 22, 2019 7:33:03 PM

EXTERNAL

Name *

Email *

Zip Code * 94301

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. No predator killing please
No grazing should be allowed they contribute greatly to
climate change
Don't eat meat it helps your carbon footprint to refrain from
meat

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#226]
Date: Friday, November 22, 2019 7:55:20 PM

EXTERNAL

Name *

Organization California Nativescapes

Email *

Zip Code * 95112

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

I strongly oppose allowing ranchers to cull any animals – especially mountain lions.

Ecosystems are not like car options to pick & choose what we like & don't like. I was shocked to learn Midpen is even considering allowing ranchers to cull mountain lions. I have been a volunteer and supporter of Midpen for decades, and this is so counter intuitive to the mission of MROSD.

I've heard many arguments for positive attributes of cattle on public lands, but I know the damage I have seen first hand. The cattle do way more harm than good: trails are destroyed, plants are destroyed, and the cattle are a public safety concern (I have been charged at). Allowing cattle to graze has no part in the mission statement that Midpen was created for "to acquire and preserve a regional greenbelt of open space land in perpetuity, protect and restore the natural environment, and provide opportunities for ecologically sensitive public enjoyment and education." Cattle grazing provides neither public enjoyment or education and is definitely not part of the natural environment. I am appalled that MROSD is even considering cattle based conservation, rather than ecosystem based conservation.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#227]
Date: Friday, November 22, 2019 9:27:57 PM

EXTERNAL

Name *

Email *

Zip Code * 95008

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Let the ranchers shoot the mountain lions

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#228]
Date: Friday, November 22, 2019 10:03:26 PM

EXTERNAL

Name *

Organization

Mrs.

Email *

Zip Code *

95032

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Keystone predators keep ALL other animals in check. If you
begin to eliminate them, the deer, with their ticks, will run
rampant! We do not know better than the nature!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#229]
Date: Friday, November 22, 2019 10:06:11 PM

EXTERNAL

Name *

Email *

Zip Code *

94061

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Killing mountain lions to protect cattle is totally irresponsible & would exacerbate the effects of climate change. Apex predators like mountain lions are necessary to our eco system. They are also one of the few predators for coyotes. Just move the cattle elsewhere or deal with it. The mountain lions are behaving as they should in their natural habitat. This plan will seriously backfire.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#230]
Date: Saturday, November 23, 2019 7:38:55 AM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. I do not support this policy. Ranchers are already
reimbursed for any cattle loss. Mountain lions are an
important species in our ecosystem.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#230]
Date: Saturday, November 23, 2019 7:38:55 AM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. I do not support this policy. Ranchers are already
reimbursed for any cattle loss. Mountain lions are an
important species in our ecosystem.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#231]
Date: Saturday, November 23, 2019 7:55:35 AM

EXTERNAL

Name *

Organization

NAIL

Email *

Zip Code *

95033

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

No cows, no conflict. Wake up Mid Penn. solution is clear.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#232]
Date: Saturday, November 23, 2019 8:20:22 AM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

This isn't grazing management, don't label it something gentle when you're talking about stopping heartbeats for the sole purpose to protect someone's INCOME.

I am sickened to my core that you are judging our native wildlife through the eyes of cattle ranchers. Cattle ranchers are not necessary for a healthy habitat and healthy wildlife populations. All they are doing is creating meat, killing cows. for stores and restaurants to dine on *temporary indulgences, and for that you wish to end entire, whole lives of our mtn. lions and coyote?!

The same mtn. lions and coyotes we are trying to protect by putting wildlife fencing on the freeways, no less!

I implore you to explore other methods to prevent animals from getting to their cows. Do not kill our wildlife.

You have no right.
Sincerely,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#233]
Date: Saturday, November 23, 2019 8:22:58 AM

EXTERNAL

Name *

Organization

Institute for Historical Ecology

Email *

Zip Code *

94022

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

It's high time to translocations elk for this. We have seven
herds in eastern Santa Clara County and the GCRCD is
leading an effort for a wildlife overcrossing at the Coyote
Narrows so its just a matter of time until they cross Hwy
101.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#234]
Date: Saturday, November 23, 2019 9:10:00 AM

EXTERNAL

Name *

Email *

Zip Code * 95076

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I appreciate the benefits of grazing, but given the climate change issues with cattle, I wonder what other grazing species would be a better alternative? I would prefer native wild animals that would have multiply benefits to the regional ecology.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#235]
Date: Saturday, November 23, 2019 11:42:04 AM

EXTERNAL

Name *

Email *

Zip Code * 94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Re: proposed "lethal take": If ranchers will just bring in guardian dogs, this won't need to happen! I know from experience that guardian dogs work – owned a sheep ranch for several years, and we never lost a lamb to a predator because we had three beautiful, sweet, protective Great Pyrenees dogs who lived with the sheep. I agree with ALL the comments in the recent Mercury News article that point out that the open space district was created to preserve the local land & ecosystem, to which predators like cougars and coyotes are key. Ranchers need to live with a certain amount of losses if they aren't willing to take the measures THEY SHOULD TAKE to protect their stock. They have NO right, none, to expect their private and commercial interests to be protected by the public trust.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#236]
Date: Saturday, November 23, 2019 12:16:51 PM

EXTERNAL

Name *

Organization

Retired

Email *

Zip Code *

95125

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Thank you for standing up for the survival of mountain lions and coyotes, both important linchpins in the environment over easily replaceable cows.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#238]
Date: Saturday, November 23, 2019 3:50:36 PM

EXTERNAL

Name *

Email *

Zip Code * 94025

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Please do not kill native predators to facilitate grazing.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#239]
Date: Saturday, November 23, 2019 5:53:34 PM

EXTERNAL

Name *

Organization

EBCNPS

Email *

Zip Code *

94618

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I am writing as an individual, not EBCNPS.

Thank you for listening to public input, “ staff removed the
lethal removal option from consideration.”

Look at the research Audubon Canyon Ranch is doing on
mountain lions in Sonoma and Marin County.

Thank you,

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#240]
Date: Saturday, November 23, 2019 6:37:37 PM

EXTERNAL

Name *

Email *

Zip Code *

94128

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

oh goodie, now the dumb @\$ \$ bleeding hearts, cam become, a happy meal, hope they suffer immeasurable pain & suffering, in their last.dieing.moments, serves them right, for.being stupid

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#241]
Date: Saturday, November 23, 2019 6:54:31 PM

EXTERNAL

Name *

Organization docent

Email *

Zip Code * 95014

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Were the grazing rights necessary to acquiring the land?
Were any properties open to grazing even if
it was not a prerequisite to acquiring the land? Is this
ranching of beef cattle or is it raising calves for
early slaughter? Thank you for adding to our understanding.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#243]
Date: Saturday, November 23, 2019 8:43:03 PM

EXTERNAL

Name *

Email *

Zip Code * 4084769389

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process.

Protection of the wildlife should be the end. Running livestock may be necessary towards that end, but killing wild lives because they are doing what they are supposed to survive is definitely opposite of the end. Ranching is not viable agricultural practice the Bay Area. There are plenty other places in the country where ranching is more viable than here. Just because someone thinks some empty space is big enough to run cattle does not mean the public should make this person's plan viable. Let wildlife roam and let the unintelligent plan fail.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#244]
Date: Saturday, November 23, 2019 9:37:47 PM

EXTERNAL

Name *

Email *

Zip Code *

94028

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Absolutely not in favor of killing Mt lions. Absurd. Cattle are part of the decline of our environment. We donate to POST and can't believe a related organization would even be entertaining this idea. Open space is not for farming priority.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#247]
Date: Sunday, November 24, 2019 9:17:41 AM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Livestock owners need to consider using guard dogs such as
Great Pyrenees. These are used to great success in parts of
Europe.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#249]
Date: Sunday, November 24, 2019 12:25:54 PM

EXTERNAL

Name *

Email *

Zip Code * 95070

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

I don't agree that cattle ranchers be allowed to kill mountain lions, deer, turkey or any of the wild animals in our area. It should be banned or made illegal. Remember the cattle rancher chose to buy a property close to an open space and he should be aware that wild animals can stray into their property . If they have an issue they need to move not the animals which are rightfully there.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#250]
Date: Sunday, November 24, 2019 5:16:04 PM

EXTERNAL

Name *

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process. Do not kill mountain lions!!! Please!!! They are part of our
natural eco-system.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#251]
Date: Sunday, November 24, 2019 5:30:44 PM

EXTERNAL

Name *

Email *

Zip Code * 95032

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. I learned that Midpeninsula Regional Open Space District wants to Let the cattle ranchers shoot mountain lions preying on their cattle in public funded Open Space preserves . This is wrong. There has to be a different approach.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#252]
Date: Monday, November 25, 2019 5:50:31 AM

EXTERNAL

Name *

Organization self

Email *

Zip Code * 94062

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

The description of the historical range of coyotes is not up
to date. See [https://phys.org/news/2018-05-coyotes-
conquered-continent.html](https://phys.org/news/2018-05-coyotes-conquered-continent.html) Updated data has shown the
range to be much larger thousands and even hundreds of
years ago than previously though. Coyotes have been native
to this area for thousands of years.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#254]
Date: Monday, November 25, 2019 1:05:15 PM

EXTERNAL

Name *

Email *

Zip Code *

31770

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Optional: Please let us know if you
have comments or questions about
the Grazing Management Policy
Amendment process.

Dear Sir/Madam,

To allow the killing mountain lions in a place meant as a
sanctuary for wildlife is unacceptable!

Do not pass this horrifying amendment!

For the only planet we have.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#255]
Date: Monday, November 25, 2019 4:19:27 PM

EXTERNAL

Name *

Email *

Zip Code * 93232

Optional: Please let us know if you have comments or questions about the Grazing Management Policy Amendment process. Do you have a contract in place for goat/sheep grazing for fire fuel reduction? If not we would be interested in providing the service. Thank you

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#263]
Date: Tuesday, November 26, 2019 7:52:29 PM

EXTERNAL

Name *

Organization self/santa clara county resident

Email *

Zip Code * 95032

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Do you have comments or questions about the Grazing Management Policy Amendment process? Yes

Comments or questions about the Grazing Management Policy Amendment process.

Please DO NOT kill mountain lions and other predators and wildlife. The occasional loss of cattle is fine. If you must, capture them alive and move them. In time there will be a corridor between the coastal range and the Diablo range making the mountain lion population healthier, more diverse in their DNA, and more healthy for longevity. Then, and maybe, some might be poached, but not for 20 or 30 more years until they are healthier and more numerous. For now, do not kill them.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#264]
Date: Wednesday, November 27, 2019 4:41:34 AM

EXTERNAL

Name *

Email *

Zip Code * 34287-3369

Do you have comments or questions about the Grazing Management Policy Amendment process? Yes

Comments or questions about the Grazing Management Policy Amendment process. Please stop the killing of the predators in nature because without them the balance will be lost forever of managing other wildlife and you know this.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#268]
Date: Friday, November 29, 2019 9:09:46 AM

EXTERNAL

Name *

Organization	N/A
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Email *

Zip Code *	11964
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Would you like to be added to the Grazing Management Policy Amendment e-mail list?	<input checked="" type="radio"/> Yes
--	--------------------------------------

Do you have comments or questions about the Grazing Management Policy Amendment process?	<input checked="" type="radio"/> Yes
--	--------------------------------------

Comments or questions about the Grazing Management Policy Amendment process.

One has to wonder, but not very deeply why a conservation area would permit private, for profit, cattle grazing on its land in the first place – thus displacing/competing for grazing with whatever wild browsing species there are, or should be there. One also has to wonder why, with predator deaths already subject to compensation that ranchers – heavily subsidized with below market land lease costs – have the moxie to demand the slaughter of the mountain lion that on "wild lands" should absolutely have priority and immunity from the usurping ranchers.. Humans already have dominated and destroyed most of the world wild ecosystems – but insanely assert their "right" to exploit and destroy the pitiful remnants of our once magnificent natural world.

There is already a glut of beef being produced – largely through the destructions of rain forests and other crucial climate preserving natural ecosystems. And these methane producing beef breeders only want to create more greenhouse gas to hasten the planet's destruction. Something has to give. Or we destroy life on earth.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Subject: Grazing Management Policy Amendment [#270]
Date: Monday, December 2, 2019 10:58:47 AM

EXTERNAL

Name *

Email *

Zip Code * 95006

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Do you have comments or questions about the Grazing Management Policy Amendment process? Yes

Comments or questions about the Grazing Management Policy Amendment process. I just read that you plan to slaughter the wildlife which it is your stated mission to protect, for the benefit of ranchers. This is a cruel betrayal of your mission, and of the people of the Bay Area.

Profit above everything, eh? Shame on you.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#273]
Date: Wednesday, December 11, 2019 10:04:55 AM

EXTERNAL

Name *

Organization

East Bay Regional Park District

Email *

Zip Code *

94605

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Do you have comments or questions
about the Grazing Management Policy
Amendment process?

- Yes

Comments or questions about the
Grazing Management Policy
Amendment process.

Hello! I was wondering if the Grazing Management Public Workshop on Tues Dec. 17 would be recorded at all, either for live streaming or to be posted for access afterwards. I work with the grazing management team at the East Bay Regional Park District, and although we would love to be at this public workshop, it is not feasible with our work schedules and the traffic. You can reach me at the email listed or at (510) 544-2345. Thank you very much!

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#274]
Date: Thursday, December 12, 2019 9:39:59 AM

EXTERNAL

Name *

Email *

Zip Code * 95050

Do you have comments or questions about the Grazing Management Policy Amendment process? Yes

Comments or questions about the Grazing Management Policy Amendment process.

After reading the Mercury News article on plans to reduce Mountain lion populations to protect grazing cattle, I am glad to see on your website that this is not the case. After reading your current grazing management proposed amendments, I would like to comment that GM-9 section 2 proposes to "prioritize the protection of livestock," but I feel it would be more appropriate with public trust and your mission to "prioritize the protection of wildlife." Thank you for managing the open space as a haven for our natural resources and wildlife.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#276]
Date: Monday, December 16, 2019 9:53:41 AM

EXTERNAL

Name *

Email *

Zip Code * 95121

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list? Yes

Do you have comments or questions
about the Grazing Management Policy
Amendment process? Yes

Comments or questions about the Grazing Management Policy Amendment process.

I cannot make it to the meeting so I will make my comments here.

1. I think giving ranchers access to public lands is subsidization and encouragement enough, we do not need to waste more tax dollars paying for dogs or electric fences or playing audio. The cost should be on the rancher.
2. This is a non-issue. Twenty-two animals lost to predation since 2007 is an incredibly small amount, especially when the rancher is compensated for the loss.
3. As far as I can tell, there is no definitive scientific research that shows that cattle ranching improves or preserves our lands, except in the case of tiger salamanders. I understand that it is part of your mission to promote the tradition of agriculture, but maybe it should be part of your mission to promote more traditional uses of the land by the Muwekma, since they are the reason our coastal grasslands remained grazable grassland in the first place.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#280]
Date: Thursday, December 19, 2019 11:32:37 PM

EXTERNAL

Name *

Organization	Slow Food California
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Email *

Zip Code *	95023
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Would you like to be added to the Grazing Management Policy Amendment e-mail list?	<input checked="" type="radio"/> Yes
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Do you have comments or questions about the Grazing Management Policy Amendment process?	<input checked="" type="radio"/> Yes
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Comments or questions about the Grazing Management Policy Amendment process.

I very much appreciate that you are not a priori anti-cow.

I very much appreciate that you are not a priori pro-native grazer.

The best environment would be an intact native cohort of animals, including grazers and predators. In the absence of predators, or their substitutes, Native grazers would become a problem for the land.

A reasonable environment is one that substitutes predators and possibly grazers. Cattle managed with a holistically managed grazing rotation can mimic native grazers 'managed' by predators and so be beneficial to the land, which expects such animal behavior.

Your plan implies this. It would be better if you called out your Best Management Practices and described a holistic management plan, rather than letting it be assumed. But you are to be applauded for managing grazing in this manner at all.

Thank you very much for setting an example this way, and for working collaboratively with our local agricultural community.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#281]
Date: Tuesday, December 24, 2019 8:08:08 PM

EXTERNAL

Name *

Email *

Zip Code * 92648

Do you have comments or questions about the Grazing Management Policy Amendment process? Yes

Comments or questions about the Grazing Management Policy Amendment process.

The mission of the Midpeninsula Regional Open Space is to protect wildlife first and foremost--not livestock! Management should maintain its focus on protecting wildlife and preserving the open space. If ranchers are going to have their livestock loss reimbursements and rent "adjusted", then it only makes equal sense to increase the cost for ranchers to graze on this PUBLIC LAND. Why should ranchers have access to prime grazing public lands for dirt cheap? What does the public get out of that? What do the land and wildlife get out of that? Nothing. So, if their rent and loss reimbursements are going to be "adjusted" accordingly, then the ranchers should also be charged more accordingly for the privilege to graze their livestock on Midpen.

Also, management states that "...once a mountain lion leaves public land, its chance of being killed increase significantly." In that case, every effort should be made to encourage mountain lions and other wildlife to stay on Midpen so that they don't get lured off the land and murdered by those who would wish to reduce their numbers 'legally'. Once again, when it comes to Midpen, ranchers do not have equal rights to mountain lions or other wildlife. Based on the original Midpen mandate, ranchers should have fewer rights and the focus should be strongly maintained on preserving the natural space and protecting the mountain lion, coyote, and bobcat populations.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#287]
Date: Wednesday, January 22, 2020 10:30:00 PM

EXTERNAL

Name *

Email *

Zip Code * 95060

Would you like to be added to the Grazing Management Policy Amendment e-mail list? Yes

Do you have comments about the Grazing Management Policy Amendment process? Yes

Please share your comments about the Grazing Management Policy Amendment process. Please place the priority on wildlife preservation. I recognize that invasive grasses have taken over and that cattle grazing sadly has a role to play, but killing predators should never ever be considered as an option. How about reintroducing native grazers to help preserve native plants? It is not about making cattle ranching attractive on public lands but about preserving our natural heritage: the animals and plants that were here long before we were.

From: [Wufoo](#)
To: [Matthew Chaney](#); [Jasmine Leong](#)
Cc: [Cydney Bieber](#); [Leigh Ann Gessner](#)
Subject: Grazing Management Policy Amendment [#288]
Date: Saturday, February 8, 2020 11:08:52 AM

EXTERNAL

Name *

Email *

Zip Code *

OX4 4QJ

Would you like to be added to the
Grazing Management Policy
Amendment e-mail list?

- Yes

Do you have comments about the
Grazing Management Policy
Amendment process?

- Yes

Please share your comments about the Grazing Management Policy Amendment process.

All living beings have the right to life, and all living beings have the right to live in their own habitat as nature intended. However, one living beings right is not more important than the rights of another being. Taking wild land for grazing livestock is abhorrent to safeguarding the habitat and the lives of those fauna and flora who depend on that habitat. There are many ways that livestock can be protected from predators – fencing, guard animals, guard people, sensors, etc. And when people actually 100% commit to these methods – these methods work. The biggest and most important thing that has to be taken in to account, is those ranchers and that livestock have taken wild areas – the habitat, range and territories of the fauna and flora who live there. Give predators enough land and space, and ensure that there are plenty of their natural prey species in that space, and predators will stay away from livestock. Livestock should not be allowed to roam free. Free grazing decimates the native flora, which inturn has negative effects on pollinators, insects, birds and all the way up through the ecological system of that area. Just looking at the main photo at the top header on your website shows this to be true. Where are the forests? The deer? The areas that mountain lions would normally hunt in? It is all grassland, decimated by livestock.

Change the entire system of how the livestock are fed and housed and use adequate perimeter fencing, plant more native trees, introduce more native species of fauna and in particular introduce many more prey species, and employ the use of guard animals or people. Do not kill mountain lions who have the right to live freely in their own habitat.

Wildlife Advocacy Workshop Notes

January 23, 2020

Takeaways from the Presentations**Hoped to Learn:**

- Learn Background
- 3rd Strike program
- Midpen should create situation for ranchers to increase value
- Public understanding of conservation grazing
- “Predator Friendly” and “Working with the Wild”
- More about conservation grazing
- Different opinions on conflict/understanding
- Long term viability of cattle in open space
- Why is there consideration of take?
- How to resolve profitability of grazing with conservation
- Why are there cattle in open space? They are non-native and contribute to climate change

Actually Learned:

- Current Rangeland
- Grazing management complexity, what to understand
- Grazing benefits and negatives
- Finding good tenants
- Interested in the effectiveness of deterrents
- Midpen doing good management
- Didn’t realize the extent to which public is engaging
- Managed vs. unmanaged rangeland are different
- Other environmental groups can learn from this
- That Midpen has cattle grazing in preserves

What you’ll Share with Others:

- Thought and effort that the District puts into the Grazing Program
- How ranchers make a living
- Would like a full lit survey online
- At least not using rangeland as a mall
- Depredation permits are not on the table
- Opportunity to amend leases
- Loss of wildlife observed by ranchers
- MOU with Coast side is to protect Agriculture
- Community involvement

Protection Methods

Which deterrent methods seem most beneficial to wildlife and livestock to you, and why?

- Berkeley doing foxlight study
- Justin Prochure
- Project Coyote—Wildlife management workshop offer
- Foxlights fladry
- Fencing dogs and dog loss reimbursement
- Share costs on deterrents for calving
- Playing voices for small pastures
- Discussion of TomKat Ranch, why no losses there?
- Volunteer program seems like a good approach
- Burros, cowbells, guardians animals
- Try multiple protection methods at once
- Depends on situation
- Based on science, not opinions
- No cattle, use other management options
- Wild horses as grazers
- Restore tule elk

Are the proposed changes to the policy language that require the use of non-lethal methods for reducing predator and livestock conflict satisfactory?

- Edits to show protection of native wildlife
- Put in policy language
- Study changes in non-managed VS grazing
- “Aim to prioritize [...] prioritize livestock” should be revised to “protect carnivores/wildlife”
- 3rd paragraph should also be changed from “livestock first” language
- Rancher responsibilities: rancher as privileged to graze Midpen land

Research

What areas of research do you see as being most beneficial to help promote healthy wildlife population and manage wildlife and livestock interactions to help them coexist throughout the region?

- Effects of grazed vs. non grazed
- Depredation tracking
- Predator populations
- Cant test of deterrent methods
- Cattle supplying ecosystem services
- Demonstrate effectiveness of livestock management in coastal grasslands
- Why is Midpen not using native ungulates?
- Frequent communication about progress and results
- Poll Bay Area Residents on cattle in open space
- Research deterrent with controlled experiments
- How many lions are being poached?
 - How many lions are being poached in the Santa Cruz mountains?

- Cameras on trails
- Are mountain lions running out of “natural” food?
- Are predators being unfairly blamed?
- Burros to protect cattle
- What is reducing/predating wildlife
- Why are lions in urban areas?

Economics

What is the best way to compensate for confirmed losses? Reimbursement, reduced rent, combined approach, other?

- Economic study needed, fund these
- From rancher perspective based on cost of other management could lower rates—use reimbursement to encourage prevention
- Native ungulates option?
- Like 2 tier approach, but have to make this economically viable
- Use research funding to fund use of deterrents
- Certification program (see hoped to learn)
- Public concern over “Providing economic relief”
 - Why are we subsidizing this private business enterprise?
 - Why do ranchers receive special treatment?
- Public concern over “using carnivore protection measures”
- Change language to reflect how ranchers are going to protect wildlife
- No livestock
- Reimbursement only, no decreased rent/AUM
- Reimburse dependent on cause
- Loss of cattle is rancher responsibility
- Research why there has been an increased loss of cattle
- Pilot programs/combined approach

GMPA Public Workshop Meeting Feedback

December 17, 2019

Takeaways from the Presentations

Hoped to Learn:

- People’s feelings toward the conservation grazing program
- Options to manage grasslands and saving predators
- Other options to protect mountain lions
- Economics involved, numbers
- Why did the grazing program begin in the first place?
- Costs of Comparative methods
- Why grazing? Re: Sierra Club
- Something new

- Research into recidivism
- Learn Midpen process, effects for other agencies
- Disagree with premises, we need agriculture
- Support mission on bay side
- Glad Midpen is stepping back to re-evaluate
- What thinking, Manage Ag. Business.
- Why are ranchers grazing if not making money?
 - No other type of grazing animals
- What our livestock policy is about
- Wildlife corridors
- History of the issue: Science and practice
- Rationalization for conservation grazing
- Cash Flow for Midpen for Cattle grazing? \$150k more per annum spent

Actually Learned:

- Good presentation
- Q&A option would be nice
- Openness and public input
- No grazing option dismissed quickly
- Skeptical about grazing policy
- Examples of non-grazing management
- Canada de los Osos, Carmel Preserve
- Methods of deterrents
- Scale and scope of program
- Desire to balance needs
- “problem” Mountain Lions
- Lots, want to see the slides again
- Cattle are cheaper than other methods
- How few mountain lions there are
- Process
- Loss seems shockingly low
- Like what Midpen is doing with research
- How does grazing take care of woody brush
- Why charge/reimburse
- Don’t agree with grazing as conservation management
- Land for the public first
- Small number of mountain lions
- Economics of grazing/ranching
- Cattle grazing

What you’ll Share with Others:

- Midpen has duo mission (with grazing and wildlife protection)

- Scientific basis of policy
- Scale and scope of program
- Balanced approach
- Midpen in a difficult position to balance
- Balance between interests will continue
- Conservation grazing not scientific, destroys biodiversity
 - No human intervention, methane emissions

Protection Methods

Which deterrent methods seem most beneficial to wildlife and livestock to you, and why?

- No to electric fencing
- Remove dead animals
- Feeding stations or dead animals in place away from livestock
- Livestock guard dogs work
- No to hazing/human presence
- What about changing types of animals used for grazing, no baby cows
- Whole herd can be native grazers
- Don't fence in prey
- Guard dogs
- Take the best approach regardless of cost and re-evaluate cost comparison with other methods of conservation management without grazing
- What is the goal of Midpen? How does it fit into that?
- Deterrents don't work on open range
- More research into what works
- Guard mules? No reproduction issues
- Skeptical of any method
- Not interfering with predators at all
- Hazing moves problem elsewhere
- Not control predators for livestock
- Fences interfere with other wildlife
- Okay with ranchers altering cattle operations
- Ranchers need to monitor herds, assure livestock there
- Consider salt licks
- Methods that are non-invasive and effective
- Many are labor intensive
- Separate calves
- Night penning
- Dogs (could be a public nuisance)
 - Question: How they impact other wildlife?
- Hazing (but habituate)

Are there beneficial functions and livestock protection volunteers could perform?

- Safety? Are volunteers interacting with predators?
- Wildlife habituation?
- Work on basic policies before investing in volunteer program
- No interference with predators at all
- Volunteers manage trail cams, predator monitoring
- Grassland data monitoring

Research

What areas of research do you see as being most beneficial to help promote healthy wildlife population and manage wildlife and livestock interactions to help them coexist throughout the region?

- Alternatives to grazing
- Deer population count
- Control livestock instead of control predator
- See what others are doing for biodiversity
- Explore dark green/more effective options
- Illegal kills
- Wildlife corridor options
- Native grazers
- Most common prey of mountain lions
- Research on habituation
- Impacts of deterrents
 - Are there problem lions
 - Trap and chip to determine recidivism
 - DNA research, multiple research?
- How many is too many mountain lions? Are they in-bred?
- Coyote numbers and how to control subjects
- Understanding illegal poaching, how it related to protection measures
- Mountain Lion range, habitat connectivity
- More coyote research
- Data/proof of grazing benefits
- Behavior of animals at human/wildlife interface
- Re-introduction of other animals
- Pre-European ecosystem data
- Question: What research is Midpen doing now?
 - Biodiversity comparison of grazed vs. none, including where we are

Economics

What is the best way to compensate for confirmed losses? Reimbursement, reduced rent, combined approach, other?

- For people who want to mitigate conflicts, economic help to protect calves
- Reduce rent and compensation

- Calving season, protection during this time
- Native wildlife should be a focus too
- Putting calves in an area that is easier to protect
- Do calves have to be on Midpen land?
- Money to protect wildlife in general, not compensating for cattle
- Reimbursing for proven kills
- Dislike decrease rent to ranchers
- Have your own Midpen heard of cattle
- Have steers, not baby cows to reduce kills
- Ranch at own risk
- Policies sound like BLM, overgrazed
- Only reimburse if follow all non-lethal
- Train ranchers along with predators
- Additional restrictions to graze
- Below Market Rate
- Accept losses as part of business
- Non-lethal methods, need additional data
- If there were no grazing, would we do a different type of research?
- Sierra club and others would disagree with our assumptions
- Time better spent with other wildlife groups
 - Not ag centric
- Compare grazed/non grazed impacts to habitat
- Felt presentation were pro-agriculture were biased toward grazers
- Research on viable wildlife trying to protect
- When would we say this doesn't work and cease programs?
- Gaps in research on effectiveness of invasive methods of control
- None (no compensation)
 - Losing money
 - Ranchers take chance if allowed on public lands
 - Climate change/emissions
- Direct reimbursement
- Business earnings fluctuate
 - Concern over "Guarantee"
 - Leaning towards reduced rent
- Question: What agreements does Midpen have with ranchers?
 - Answer: lease/grazing plan

Tabled for Future Discussion

- What are benefits of grazing
- No cows/grazing is good, not convinced
- Didn't show Henry Collectto debate
- No grazing alternative facts

- Grasslands have been there for 1000s of years before grazing
- Continued reimbursement
- Question if grazing should continue at all
- Reimbursement solves economic, but not emotional issues
- Need to reimburse, reduce rent for those doing the work
- If ranches are providing conservation services, should they be compensated?
- Combo of options?
- To what extent is ranching a necessity?
 - MOU with Farm bureau
- What is the legality of removing cattle totally?
- Respect various opinions
- Address balance/wildlife as a whole
- Are lions re-introduced?
- Observation: Grazers in LHC preserves are not overgrazing
- Question: When turnout, how many AUMs?
- Research, when a predator attacks, will they attack again?
- Removal of tired approach

XI GRAZING MANAGEMENT

BACKGROUND

The vegetation of the Santa Cruz Mountains is comprised of a rich and diverse assemblage of plant species. This wealth of diversity was most evident within the grassland **ecosystems** that evolved under a variety of disturbance pressures including fire and grazing by large herds of **ungulate animals**, which are now mostly extinct. The **flora** that emerged has been described as one of the most diverse and species rich ecosystems in the United States.

The arrival of early Spanish and Anglo settlers initiated a particularly dramatic change in species composition of California grasslands, primarily as a result of tilling the grasslands for agricultural crop production, reduction of **native** grazing animals and introduction of cattle herds brought over from Europe and let loose on the new rangeland. This introduction of **non-native** plants and animals, coupled with the concurrent suppression of fire on the landscape as the western United States was settled, resulted in the substantial replacement of the native grassland vegetation with a predominantly **exotic**, annual flora. The exotic vegetation is often more competitive, productive, and prolific than the native plants within which it coexists, and tends to dominate and replace existing native grasses and wildflowers. Over the last 150 years, coastal grassland areas have also experienced large-scale conversion to agriculture or urban development. The remaining undeveloped grasslands face continued development pressure and are severely impacted by exotic, invasive organisms.

The District's **open space** preserves contain large acreages of grasslands that in many areas have been degraded due to the pressures described above. Management of these grassland habitats is desirable to reduce the risk of wildfire and to maintain viable native plant communities. **Vegetation management** using **livestock conservation grazing** or other **resource management** tools can be a substitute for native grazing animals and recurring fire to achieve the District's objective of preserving, protecting and restoring the **natural** environment.

The greatest diversity within California's coastal grasslands can be seen in the forbs or wildflowers that emerge in the spring following winter rains. Sites with adequate management of non-native vegetation will reward these efforts with bountiful displays of colorful spring wildflowers.

By some estimates, nearly 80 percent of the vegetation cover within California grasslands is exotic vegetation.

District lands currently contain approximately 5300 acres of grassland habitat. The largest contiguous grassland areas are within District lands in western San Mateo County.

Livestock ranching is a small but vital part of the Bay Area's agricultural economy. As with any business that depends on local infrastructure and services, livestock ranching is increasingly threatened with each ranch that goes out of business. Every livestock rancher depends on services and supplies including veterinary care, feed sales and delivery, farm and ranch infrastructure supplies, and livestock transportation services. As land is taken out of ranching, all of these services and supplies are incrementally affected and may cease to operate, increasing the burden for families and businesses that choose to keep ranching.

Typical fencing used to control livestock movement that the District inherits as part of property acquisitions is five-strand barbwire fencing. The District standard for new/replacement cattle fence construction is wildlife-friendly 5-strand fencing with a smooth bottom wire approximately 16" above the ground unless conditions warrant an alternative fence type. Other fencing types that may be used include four-strand barbwire for interior fencing, wood rail fencing and temporary electric fencing that can be installed to seasonally restrict livestock to target areas or exclude livestock from sensitive areas. Wildlife-friendly fences enable

In 2003, the District completed the Service Plan and accompanying Environmental Impact Report for the San Mateo Coastal Annexation Area expansion of the District's boundaries to include coastal San Mateo County. The Service Plan recognized the unique value of the San Mateo County coastal area and established Agricultural Policies to preserve and encourage viable agricultural use of land. The Policies and Implementation Measures established in this Grazing Management Policy are intended to supplement and complement the Agricultural Policies in the Service Plan. Furthermore, these Grazing Management Policies will be implemented in a manner that is consistent with the Service Plan.

GRAZING MANAGEMENT GOALS, POLICIES, AND IMPLEMENTATION MEASURES

Goal GM- Manage District land with livestock conservation grazing that is protective of natural resources and that is compatible with public access; to maintain and enhance the diversity of native plant and animal communities, manage vegetation fuel for fire protection, help sustain the local agricultural economy, and preserve and foster appreciation for the region's rural agricultural heritage.

Policy GM-1 Ensure that **conservation grazing** is compatible with and supports wildlife and wildlife habitats.

- ◆ Inventory and assess sensitive habitats to identify areas requiring special management practices. The conservation of these areas will take precedence over other uses and management practices that are determined to have an adverse effect on these **resources**.
- ◆ Prepare site-specific grazing management plans by a certified rangeland manager including **best management practices (BMPs)** for preserves where **conservation grazing** will be utilized as a resource management tool. The site-specific grazing management plan will be a component of the agricultural production plan developed through the Use and Management Planning process. The Use and Management

Planning process provides for public input and Board approval of site-specific grazing management plans.

- ◆ Manage agricultural leases and easements to protect and enhance **riparian** areas and to maximize the protection or **enhancement** of **water quality**. (See WR-4)
- ◆ **Per the District's long-standing policy of protecting native predators, continue to prohibit the lethal take of predators in response to livestock depredation.**

Policy GM-2 Provide necessary infrastructure to support and improve grazing management where appropriate.

- ◆ Utilize fencing that allows wildlife movement and fosters habitat connectivity. (See WM-3: Measure 3)
- ◆ Manage access to existing water features and where needed supply supplemental drinking water through stock ponds and water troughs to preserve clean water for livestock, protect water quality, and enhance habitat for wildlife. **Provide wildlife escape ramps where necessary.**
- ◆ Encourage and assist grazing tenants on District land to provide range improvements to **restore** or conserve **wildland** resources and to enhance range condition.
- ◆ Inventory and assess roads and trails on District lands to identify significant erosion and sediment sources – abandon and where feasible restore to a natural condition poorly designed or sited roads. (See WR-4)

Policy GM-3 Monitor environmental response to grazing on District lands.

- ◆ Monitor forage utilization and distribution by grazing animals to assure appropriate amounts of **residual dry matter (RDM)** remain on the ground to achieve desired resource management objectives. In the course of RDM monitoring, evaluate and report on wildland fire **fuel** levels that may result in an increased risk of wildland fire (See WF policies).

*The goals of **conservation grazing** are to maintain and enhance biodiversity by moderating the impacts of exotic grasses, manage fuel loads to reduce risk of catastrophic wildfire, and to help sustain local agricultural heritage*

Residual Dry Matter (RDM) is a measure of the amount of vegetation left on the ground, typically measured at the end of the summer or fall. Appropriate levels of RDM strive to minimize thatch, which can inhibit new plant growth, while maintaining adequate levels of vegetation to prohibit soil erosion.

Fire reduction is a great concern for some landowners. However, cattle are not able to graze all land areas effectively for fire protection purposes, such as steep slopes or slopes partially vegetated with brush. In these instances, goats may be an effective alternative. Goat herds can be rented for a short period of time and can be moved with a goat herder and dog(s) along with portable fence enclosures. Goats and other small livestock must be penned in enclosures at night to protect them from predators.

- ◆ Monitor livestock use levels and **agricultural infrastructure** condition to ensure conformity with lease provisions to contribute to improved management.
- ◆ Monitor wildland conditions with an emphasis on documenting the location, distribution and abundance of native grasses, wildflowers, and other native flora and fauna.
- ◆ Monitor water quality in ponds, **wetlands**, and **watercourses** with unrestricted livestock access.
- ◆ Monitor non-native vegetation response to **conservation** grazing with an emphasis on documenting the location, distribution and abundance of **target, invasive species**.
- ◆ Use information collected from monitoring to annually review rangeland conditions and response to livestock **conservation** grazing. Use **adaptive resource management decision making framework** within grazing management plans.

Policy GM-4 Utilize different livestock species to accomplish vegetation management objectives.

- ◆ Research the effective use of cattle, goats, sheep, and horses to manage vegetation on District lands.
- ◆ Utilize appropriate species depending on management needs.

Policy GM-5 Preserve and foster existing and potential **conservation** grazing operations to help sustain the local agricultural economy.

- ◆ Establish longer term grazing leases to promote financial viability for the operators and efficient land stewardship for the District.
- ◆ Seek grants or other economic support for agricultural infrastructure maintenance and improvements.
- ◆ Ensure site-specific grazing management plans are economically feasible and practical for **conservation** grazing operators.

Policy GM-6 Provide information to the public about the region's rural agricultural heritage. (See PI-1)

- ◆ Install display boards and give presentations highlighting historical and educational facts about ranching families and industry at appropriate sites.

Policy GM-7 Provide public access in a manner that minimizes impacts on the **conservation** grazing operation. (See PI-1)

- ◆ **Conservation** grazing operators on District lands or lands under easement to the District shall be consulted when public access is being planned and considered for the property to minimize conflicts between the public and the **conservation** grazing operation.
- ◆ Prepare and distribute a brochure to educate visitors about etiquette for use of open space property with livestock animals.
- ◆ Install signage where appropriate to educate the public about the resource benefits of **conservation** grazing and to educate visitors about approaching animals, closing gates, and other etiquette appropriate for moving through lands with livestock animals.

Policy GM-8 **Conservation** grazing operations on District lands in **San Mateo County** will be managed in accordance with the policies established in the Service Plan for the San Mateo Coastal Annexation Area.

- ◆ Consult with appropriate agencies and interest groups, including the San Mateo County Farm Bureau and San Mateo County Agricultural Advisory Committee in the development of site-specific Use and Management plans and agricultural production plan components in the Coastside Protection Area.

Policy GM-9 Safeguard native plants and wildlife while promoting the economic sustainability of **conservation cattle grazing as a resource management tool** and reducing **predation of livestock**.

- ◆ **Consider the economic impact of predation in setting lease rates for conservation grazing tenants.**

- ◆ Provide economic relief for **conservation grazing** tenants who, as required per conditions of a Board of Directors approved lease, are performing resource management services and are in good standing with the District, in response to confirmed losses from predation to sustain conservation grazing as a viable tool for natural **resource management**. Require cattle grazing tenants to document annual livestock losses due to both predation and non-predation-related causes.
- ◆ Support and promote scientific research on the effectiveness of wildlife and **livestock protection methods**, and their influence on wildlife behavior, grazing productivity, and livestock health. Periodically review research results and consider findings in future policy development.

GLOSSARY AMENDMENT

Livestock Protection Methods – Wildlife and livestock conflict mitigation tools that promote the protection and continued conservation of wildlife while safeguarding conservation grazing as a management tool (Grazing Management).

Population – the number of organisms in a particular species that occupy the same geographic region at the same time and are capable of interbreeding (Vegetation Management, Wildlife Management, Water Resources, Ecological Succession, Habitat Connectivity, Wildland Fire).

Conservation Grazing – Conservation Grazing is the intentional use of grazing management to meet resource management objectives including protecting and enhancing habitat for native plants and animals that occur in grassland habitat and moderating the negative effects of invasive exotic plants on these species.
(Wildland Fire, Grazing Management)

Livestock and Carnivore Protection Policy Literature Review

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Executive Summary

In order to effectively manage livestock-carnivore interactions, it is important to understand how the ecological, legal, and management dynamics interact with one another. This review is designed to help District managers and producers evaluate which livestock protection tools may be most suitable for each particular operation on leased land.

This review can be broken down into the following five sections. The first provides an overview of relevant carnivore behavior and ecology for each of the three native focal species, mountain lion (*Puma concolor*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*). Second is a summary of the laws and regulations governing the management of each of the native focal carnivore species, as well as an additional non-native species, domestic dog (*Canis familiaris*). This information serves to guide how various preventative tools may be legally implemented. Additional carnivore species (such as wolves and bears) are present in other parts of California, however, they are not present on District properties and are not covered by this review. The third section provides a review of direct (mortality and injuries) and indirect (weight loss, reduced reproductive potential, etc.) impacts to livestock that are incurred during livestock-carnivore interactions. Next follows an overview of policies implemented by other local land management agencies (such as East Bay MUD, East Bay Regional Parks, National Parks Service, etc.) that could serve as a model for the District. The final section, and bulk of the review, synthesizes research on a variety of conflict mitigation tools, ranging from lethal removal to visual and auditory frightening devices. Each method is described in detail, outlining the means of protection, suitability for which species of livestock, suitability for which species of carnivore, potential drawbacks and benefits, and scalability (as tenant operations vary from small 200 to 500 acre ranches with 20 to 100 cattle to large ranches covering over 3,000 acres with a few hundred cattle). The District defines livestock as horses, cattle, sheep, and other useful animals kept or raised on farms or ranches; there are tools outlined below designed to protect each of those species. The ultimate goal is to promote and implement practical, effective animal husbandry practices that will allow livestock and carnivores to coexist on District properties.

Introduction

Midpeninsula Regional Open Space District's (hereafter "the District") mission is to provide opportunities for public enjoyment and education while conserving and restoring open space in perpetuity. Preserving these wild habitats requires maintaining the diverse array of native plant and animal species that play important roles in overall ecosystem health. One way in which the District achieves this goal is by implementing conservation grazing activities that simultaneously maintain natural processes in a landscape that coevolved with large grazing animals (Edwards 1996), help mitigate the impacts of nonnative species (Stromberg et al. 2007), as well as support the deep historic roots of livestock ranching in the Central Coast. Preserving the local plant community provides the foundation on which native wildlife persist. Among the species that indirectly rely on these healthy rangelands are the native carnivores, such as

mountain lions, coyotes, and bobcats. These populations both rely on and contribute to maintaining habitat integrity by helping regulate prey populations (Miller et al. 2001), reducing pest species density and disease transmission to humans (Ostfeld and Holt 2004, O'Bryan et al. 2018), etc.

Balancing these varied, and sometimes at odds, components of healthy open space habitats requires careful, dynamic management. The District is dedicated to fostering viable livestock production alongside a healthy carnivore community. To this end, this document explores strategies for preventing negative interactions between livestock and carnivores, thereby promoting sustainable conservation while protecting domestic animals, native carnivores, and human livelihoods alike.

The most common livestock on District property is cattle, however there are smaller operations with llamas, alpacas, sheep, goats, pigs, donkeys, mules, horses, chickens, and other species may be present in the future. This review addresses strategies to keep each of these types of livestock safe from predation by mountain lions, coyotes, domestic dogs, and bobcats.

Much of the current research on depredation prevention in North America has focused on interactions between coyotes and sheep, wolves and cattle, or wolves and sheep. In addition, experimental studies evaluating tool efficacy are rare (Eklund et al. 2017), and were most often developed in other parts of the country. Though there has been little research on mountain lion predation on cattle, especially in California, this review extrapolates results from studies focusing on interactions between other species, and combines that information with distinct facets of mountain lion behavior and ecology to provide guidance where rigorously tested data are lacking.

This document is meant to be as comprehensive as possible to allow District staff and tenants to weigh potential options, but it is by no means exhaustive. This review is informed by scientific research wherever possible, however, there is a significant scarcity of rigorous experimental testing within the field of livestock-carnivore conflict prevention (Miller et al. 2016, van Eeden et al. 2018). While the lack of research limits our ability to fully evaluate the efficacy of each method and weigh them against one another, there is appreciable amount information available to guide producer decisions. It should also be noted that there are legal restrictions on activities; some tools and techniques may be legal on a state or federal level, however they may not be currently permitted under District policies. All activities should be pursued in coordination with the District and granted written permission before implemented.

I. Carnivore Natural History, Management, and Ecology

Coyotes

Coyotes are a plains and grassland adapted species whose flexibility has allowed them to thrive in a wide variety of habitats. Before European settlers first arrived to the U.S., coyotes were mostly limited to the Central U.S. and Mexico. As humans extirpated wolves and expanded agricultural land throughout the 1800s, new habitat opened up for coyotes. Despite

heavy persecution via poisoning, trapping, and hunting, coyotes successfully expanded their range across the U.S. and into much of Canada (Agocs 2007, Levy 2012).

As human and livestock populations grew, so did conflict with coyotes. Though up to 90 percent of their natural diet consists of small mammals (Bekoff 1977), coyotes can predate on small to medium livestock (such as sheep, calves, fowl, etc.), and harass larger animals (such as cattle). The traditional approach to solving these problems has been to reduce or eradicate coyotes with the goal of reducing depredations. However, in order for these programs to be successful, a significant portion of the coyote population, roughly 75 percent, needs to be eliminated each year (Connolly and Longhurst 1975). This kind of eradication program is resource intensive, not practical in most locations, and runs counter to the District's mission. In addition, public attitudes have shifted over time and acceptance of predator eradication programs has diminished, making it increasingly important to find new tools for preventing conflict (Andelt 1996, Reiter et al. 1999, Bruskotter et al. 2009, Slagle et al. 2016).

New research has also begun to shine light on the important ecological role coyotes play by regulating smaller carnivores and indirectly increasing songbird and water fowl diversity and abundance (Soule et al. 1988, Rogers and Caro 1998, Crooks and Soulé 1999). Coyotes can also benefit livestock and their human counterparts. Coyote removal can allow rodents and rabbits to become more abundant, in some cases to the point of competing with livestock for forage (Henke and Bryant 1999, Ranglack et al. 2015). In addition, rodents can also have significant negative economic impacts on California's agriculture (Gebhardt et al. 2011). Left intact, coyote populations control rodent and rabbit populations as their primary prey species, which can help alleviate rodent-caused economic burdens on agricultural producers. A benefit extending beyond rangeland managers, by helping control rodent populations, coyotes can reduce the prevalence of rodent-borne zoonotic diseases as well (Ostfeld and Holt 2004, O'Bryan et al. 2018).

Tenant survey respondents indicated that solo coyotes do not pose a significant threat to cattle, but that group hunting is an issue (see Supplementary Materials Tenant_Survey). Research on pack formation suggests that coyotes may coalesce in groups in response to decreases in small prey and switch to larger animals, such as deer (Bowen 1981). In order to prevent coyotes from forming social groups, it could be beneficial to look into whether small prey item abundance has decreased on District properties (such as from rodenticide use), and whether there are ways to avoid reducing lagomorph and rodent populations. Research suggests that coyotes prefer native prey, and bolstering these populations may reduce feeding on livestock (Linnell et al. 1995, Sacks and Neale 2002). Other research suggests that coyotes may form packs in order to ensure pup survival (Messier and Barrette 1982). One way to manage this aspect of pack formation could be to modify or halt activities that decrease pup survival (such as culling adults during breeding season, restricting domestic dog access to areas with known dens, rodenticide use, etc.).

Informal tenant reporting also suggests that livestock grazing in pastures containing coyote dens or in close proximity to den sites are at greater risk of being harassed or killed. Coyotes living on District property appear to routinely use established den sites for rearing pups year after year, and many of these site are readily identifiable (Chaney, personal

communication). If a particular pair of resident coyotes has a history of living in the area without depredating livestock, it may be in the producer's best interest to let them be; as removing the pair would open the territory, and it could become occupied by coyotes with a greater tendency to prey on livestock. However, if there have been injuries or depredation incidents, CDFW personnel suggest disrupting denning behavior (collapsing the den or filling it in with rocks) close to pupping season (usually May through June). A variation that might more closely align with District objectives would be to disrupt the den site during a time of year when the site is vacant (usually August through February). With the established den rendered inoperable, the breeding pair may decide to choose a new location in an area with fewer livestock, thereby reducing local depredation risk. CDFW has no specific restrictions on how property owners may alter unoccupied coyote dens on their property.

In general, coyote predation may be higher in pastures that contain rough terrain, creeks, or brush sufficient to conceal a coyote – therefore, stocking younger or sick calves in more open habitat (where possible) could help improve safety (Pearson and Caroline 1981) (see *Altering Pasture Vegetation and Grazing Regimes* below). Similar to mountain lions, coyotes are more effective predators on cattle in closed habitat and/or rugged conditions than in open areas (Hulet et al. 1987, Jones 1987). Coyotes select for newborns, calves, and birthing cattle over adults, making it prudent to keep these groups in open pastures, behind coyote-proof fences (see fencing section for description), or protected by some other method to decrease risk to predation (Jones 1987, USDA 2015a).

Mountain Lions

Historically, mountain lions had the widest distribution of any terrestrial mammal in the western hemisphere, occupying habitat from the Yukon to the southern tip of South America (Logan and Sweanor 2001). Native to California, including San Mateo, Santa Clara, and Santa Cruz Counties, they were once widely distributed across the state and resided in nearly any type of habitat, from the Mojave to the Sierra. As an effective ungulate predator, almost everywhere deer were found, mountain lions could be found too.

As European settlers moved West and their population in California grew, conflicts with mountain lions increased. Mountain lions and other carnivores were subject to government eradication programs in an attempt to reduce their potential impact on livestock. Starting in 1907, mountain lions were classified as a "bountied predator," and over 12,000 mountain lions were harvested before the bounty was lifted in 1963 (data available from CDFW). Habitat models created by CDFW estimate that California's mountain lion population could have been as high as 6,000 (CDFW 2018), but by 1921, they speculated that eradication efforts had successfully reduced this "varmint" down by as much as 90 percent of the natural population statewide (CDFG 1921). This large scale population reduction made mountain lion occurrences rare in many parts of the state, including San Mateo County, and is likely the source of the perception that mountain lions are a newcomer or introduced to the Central Coast, despite historic records indicating their longstanding presence (Lawrence 1913, CDFG 1921, MVZ 1940, Field, 2003, Williams 2003, Marciel 2006, Dougherty 2007).

The bounty was repealed in 1963, and the species was reclassified as a "non-protected mammal." Six years later, they were once again reclassified as a "game mammal" so that wildlife managers could use regulated hunting in an attempt to curtail livestock depredations. Proposition 117 was passed in 1990, designating mountain lions a "specially protected mammal." Mountain lions were not state or federally threatened or endangered, but Californians decided to protect the state's last remaining apex carnivore. This title confers special protections against take of any variety without a depredation permit. In the years since the bounty was lifted and protections were put in place, mountain lion populations have made a significant recovery.¹ This relatively recent population rebound has likely contributed to the rise in depredations and human encounters with mountain lions.

Despite the attention mountain lion management has received over the last 100 years, surprisingly little is known about the size of California's mountain lion population. Their cryptic nature and lack of individually identifiable traits, makes mountain lions notoriously difficult to survey. Recent habitat models created by CDFW suggest the statewide population is close to 3,000 individuals, however further research is currently underway to create a more finely tuned estimate (Dellinger 2018).

Mountain lions prefer to hunt away from human development, and even in rural or exurban environments with abundant secondary prey, roughly 98 percent of the biomass consumed by mountain lions comes from deer (Yovovich 2016, Wilmers et al. 2013). Though mountain lions strongly select for deer, they may opportunistically eat other prey items, such as opossums, raccoons, feral pigs, elk, or domestic pets and livestock (Yovovich 2016). Like most other carnivores, they will also opportunistically scavenge carcasses they encounter.

When mountain lions take livestock, it is more common that they take sheep or goats. Less than 10 percent of statewide lethal take permits are cattle-related (Dellinger 2018), despite there being far more cattle than goats or sheep in California (CDFA 2014). In most cattle depredation cases, calves are taken when they are smaller than 140kg (308lbs) (Shaw 1977). Keeping cattle in close proximity to human activities or in protective structures during vulnerable times can successfully prevent depredations (Shaw et al. 1988, Linnell et al. 1996, Larson 2018). Though more appropriate for small-scale livestock operations, this may be a useful tool for temporarily isolating and protecting injured, sick, or other high-risk individuals.

¹ Monitoring mountain lion population size at the state level is a logistically difficult and resource intensive. Though there is little direct measure of mountain lion populations in California through time, by piecing together data from a variety of sources, one can piece together indirect estimates of population size and trajectory. Harvest rates are often used as an index for population trends when suitable monitoring data are not available (Cattadori et al. 2003). Holding hunting effort constant, a change in the ability for hunters to harvest animals indicates a change in the animal population. Using bounty records in this same way could reflect patterns in the mountain lion population. Data collected by the state show a marked decline in bounties collected between the early 1900s and when the practice was ended in 1963, indicating that the mountain lion population likely declined during this period. State records of mountain lions harvested between the late 1960s and now, this time through hunting and depredation permits, remain low until the late 1970s, then rise through the 90s, and level off in the mid 90s. This could indicate that the population was greatly reduced by the early 60s, began to recover in the 70s and 80s, reaching a high point in the 90s, and has leveled off to some degree since then. (Bounty records and depredation data are available from CDFW)

Mountain lions rely on stealth when hunting, making habitats with thick vegetation a higher risk for livestock. Feeding and watering livestock in open habitat where there is little cover to hide and stalk within a close distance can help increase livestock safety.

Bobcats

Bobcats inhabit a wide variety of habitat types across southern Canada into central Mexico. They primarily feed on rabbits, and rodents, though they may also consume birds, insects, ungulate fawns, and small livestock or domestic animals. Bobcats can be significant predators to pronghorn or deer newborns/fawns; however, predation risk rapidly decreases as wild ungulate young grow (Linnell et al. 1995). Bobcat predation on wild ungulate young is typically higher in forests than in mountainous or open areas (Linnell et al. 1996).

Though bobcats may prey on wild ungulate young, there is little evidence that they pose much risk to livestock. Research at Hopland Research Extension Center suggests that bobcats may scavenge sheep carcasses, but are not likely to hunt medium to large livestock, not even lambs (Neale et al. 1998). There is scant information in the scientific literature about the relationship between beef cattle or calves and bobcats, which could indicate that there has been little conflict between the two. One study addressing this directly found that bobcats were not responsible for cattle depredations of any variety (Scasta et al. 2017). This result is reflected in the livestock operator surveys conducted by District staff (see Supplemental Material Tenant_Survey). With all of this in mind, it is very likely that cattle and calves are simply too large for bobcats to pose a significant threat, however, they could prove problematic to chickens, fowl, or other small livestock.

II. Legal Status and Regulations

Coyotes

In California, coyotes are designated as a nongame mammal and may be hunted any time of year with no limit on number, provided that all other hunting laws and local regulations are followed (CCR14 §472). Any body-gripping traps, including Conibear traps, and snares are prohibited for recreational or commercial purposes (FGC §3003.1 and CCR 14, §465.5). As nongame mammals, coyotes that injure livestock may be taken at any time or in any manner in accordance with the Fish and Game Code by the owner, tenant of the premises, or employees thereof (FGC §4152 and §4180) assuming no conflict with local ordinances or regulations. In San Mateo, Santa Cruz, or Santa Clara Counties, dogs may be used by federal and county animal damage control officers or permittees authorized under a depredation permit to pursue or take depredating coyotes (FGC §265). CDFW does not live trap and relocate problem coyotes.

Bobcats

Bobcats are considered non-game mammals in the state of California. As such, they may be hunted in season, and hunters with appropriate tags may take up to 5 bobcats of either sex per

season (14 CCR §478(b)). FGC §3960.6 allows livestock operators to use livestock guarding dogs to protect their domestic animals and property from bobcats as long as the dogs are maintained within or in close proximity to the property.

A bobcat caught in the act of injuring or killing livestock may be taken immediately, as long as a permit is obtained within 24 of the incident (14 CCR §401(a)). This depredation permit allows a landowner to use up to three trailing hounds to pursue, haze, or lethally remove the offending bobcat. The permit is valid for up to 20 consecutive days and may be renewed if depredations continue (14 CCR §401(b), FGC §3960.2). It is illegal to use steel-jawed leghold traps or poison, and the animals must be dispatched in a humane manner in which death is delivered instantly. Third party compensation for performing depredation services is illegal (FGC § 3960.2).

Coyote and Bobcat Hazing and Hunting Regulations

In 1998, California voters passed Proposition 4, which banned the use of sodium cyanide and sodium fluoroacetate (Compound 1080), two poisons employed by federal USDA WS trappers for killing coyotes, bobcats, and other carnivores. It also prohibited the use of steel jawed leg-hold traps and body-gripping traps for commercial and recreational trapping (CDFG 1998). Both non-lethal (with the proper permits) and lethal snares remain legal for trapping, animal damage management, and predator control purposes.

Hazing is legally permitted by CDFW code (14 CCR § 251.1 § 251.1. Harassment of Animals), which states the following, “except as otherwise authorized in these regulations or in the Fish and Game Code, no person shall harass, herd or drive any game or nongame bird or mammal or furbearing mammal. For the purposes of this section, harass is defined as an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering. This section does not apply to a landowner or tenant who drives or herds birds or mammals for the purpose of preventing damage to private or public property, including aquaculture and agriculture crops.” The CDFW code does not enumerate every legal tool, however, yelling; throwing rocks; advancing on coyotes; shooting them with a water gun, rubber bullets, or other less-than-lethal munitions are permissible; as are other non-lethal tools (Kasteen, personal communication; Monroe, personal communication).

Mountain Lions

Though California Department of Fish and Wildlife does not currently have a formal mountain lion management plan, laws do restrict how humans may interact with them. Proposition 117 (FGC §4800-4809), passed in 1990, designated mountain lions a “specially protected mammal” in California, permanently banning mountain lion hunting, possession, and take of any variety. The only context in which take is legally permissible is if a mountain lion poses an immediate safety threat, or a mountain lion threatens a human’s personal safety or the safety of their livestock or companion animals. In those cases, state law requires CDFW to issue a depredation permit for the offending animal, or appropriate responding agents can lethally remove an individual animal. A game warden or other authorized agent may visit the site in

person to verify that the animal responsible for the incident was a mountain lion, however in some cases, a permit may be issued over the phone. A mountain lion caught in the act of injuring or killing livestock or domestic animals, may be lethally taken immediately by the owner of the property, an employee, or agent of the property owner, provided the incident is reported to CDFW within 72 hours. At that point, CDFW personnel will investigate and verify the incident (FGC §4800-4810).

A depredation permit allows one mountain lion to be killed or harassed, and expires 10 days after it is issued. The permittee is allowed to begin pursuing the mountain lion no greater than one mile from the depredation site, and the pursuit is limited to a 10-mile radius from the initial incident. Under a depredation permit, a mountain lion must be dispatched in an efficient and humane manner in which death is delivered instantly; they may not be poisoned, trapped by leg-hold or metal-jawed traps, or snares. If depredations continue to occur, the livestock operator may apply for additional permits (FGC §4800-4810).

There are two notable exceptions to the general depredation process, the Santa Ana Mountains and the Santa Monica Mountains. These two locations have a few characteristics in common; they are each home to an isolated population of mountain lions in danger of extirpation within the foreseeable future (Ernest et al. 2014, Benson et al. 2016), and a growing number of ranchette-style development and associated small-scale livestock. This intersection of vulnerable livestock and a precarious mountain lion population elicited special attention from state biologists. In 2017, CDFW decided to provide extra support to livestock operators in the region and redefine how the state manages depredation incidents in these two areas.

In these two locations, if a confirmed depredation event occurs (FGC §4803), CDFW will grant permission to the livestock operator to haze the depredating mountain lion if “the immediate pursuit will assist in the non-lethal removal of the mountain lion from the property” (FGC §4805). In addition, the responding agent will discuss potential preventative tools for preventing further depredation incidents. If a second depredation event occurs in a timeframe that “suggests an affinity for the site,” the livestock operator is again granted permission to haze the offending individual and the issuing agent will suggest additional preventative tools. If a third event occurs in a similar time window, and the livestock operator requests a lethal removal permit, the permit will be granted.

In 2013, Senate Bill 132 (FGC §4801.5) was passed, creating new protocols and protections for “no harm no foul” mountain lions that wander into human-populated areas and do not pose an immediate public safety threat. This law allows CDFW staff to partner with other qualified organizations or individuals to safely tranquilize and transport mountain lions a safe distance from humans and re-release the individual into habitat from which it may have come. Animals are usually released in a location within their likely home range, which makes this tool distinct from translocations in which animals are transported into new habitat with the goal of reestablishing that animal in a new territory where it is unlikely to encounter humans. In the case of translocations, animals may return to the area in which they were captured, resume their previously problematic behavior, and/or suffer high mortality rates in their new location. Translocation as a conflict management tool is resource intensive and does not improve the

underlying husbandry context in which the issue arose (Linnell et al. 1997). CDFW does not currently use translocation as a tool for resolving conflicts between mountain lions and humans. As mentioned above, there are rare situations in which CDFW will move a mountain lion a short distance, such as in the event that a one is found in an urban or suburban area and it is displaying nonaggressive behavior. In such a case, local agents may tranquilize and move the mountain lion back into the nearest suitable habitat from which it most likely originated (with permission from the owner of the release site property).

Domestic Dogs

Fish and Game Code governs how to manage interactions between dogs and native ungulates (see FGC § 3961), while Civil Code manages dog-livestock interactions. Section 31103 states that "any dog entering any enclosed or unenclosed property upon which livestock or poultry are confined may be seized or killed by the owner or tenant of the property or by any employee of the owner or tenant," and goes on to say that "if a livestock owner suffers injuries from livestock killed by dogs and the owner cannot be identified, he may recover from the county in which the damages occurred." The dog owner may be liable for up to twice the amount of the actual damages inflicted by the dog (Cal. Food & Agric. Code § 31501). Civil Code (Ch 5 §31102) allows any person to kill dogs caught in the act of killing, wounding, or harassing livestock on land or premises which are not owned or possessed by the owner of the dog, or if proof is presented that conclusively demonstrates that the dog has been recently engaged in killing or wounding on land not owned or possessed by the dog's owner.

District Land Use Regulations

The District follows management policies that ensure proper care of the land, that provide public access appropriate to the nature of the land, and that are consistent with ecological values and public safety. All District lessees, contractors, consultants, agents and representatives shall abide by all provisions of the below ordinances unless the provision(s) conflicts with a written contract or agreement with the District. Some of these regulations directly relate to potential actions meant to deter depredation. Exceptions to these regulations can be made by written agreement. Pertinent ordinance sections are detailed below:

Section 403. Firearms, Traps, Weapons, and Dangerous Devices

403.1 General.

- a) No person shall carry, possess, use, set, leave or deposit, fire or discharge, or cause to be fired or discharged, across, in, on, or into any portion of District Lands any gun or firearm, spear, missile, bow and arrow, cross bow, sling shot, trap, snare or hunting device, ammunition, throwing knife, hatchet, axe, sword, machete, martial arts throwing device, any device capable of firing or launching a projectile, or any other weapon or device not otherwise specified, capable of injuring or killing any person or animal. Violation of this sub-section is punishable as a misdemeanor.

- b) No person shall carry, possess, set, leave or deposit, fire or discharge, or cause to be fired or discharged, across, in, on, or into any portion of District Lands any paint ball gun, BB gun, air gun or similar device.

403.2 Exceptions. This section shall not apply to:

- a) the possession of otherwise lawful unloaded firearms or dangerous weapons on public roads solely for the purpose of transporting such firearms or dangerous weapons through District Lands for lawful purposes;
- b) the possession of otherwise lawful firearms or other dangerous weapons at a place of residence or business located on District Lands by a person in lawful possession of the residence or business;
- c) the possession and use of such firearms or weapons granted by written permit for resource management or educational purposes

Section 700. Hunting, Fishing, Collecting, and Feeding

700.1 Hunting.

No person shall possess, hunt, pursue, molest, disturb, injure, trap, snare, take, net, poison, introduce, release or harm or attempt to hunt, pursue, molest, disturb, injure, trap, take, net, poison, introduce, release or harm any mammal or bird, or any other wild animal living or dead. This section shall include taking of any part of the mammal or bird. Violation of this sub-section is punishable as a misdemeanor

Section 701. Animals.

701.1 Dogs.

- a) No person shall have more than three dogs per person within areas where dogs are allowed on District Lands.
- b) No person shall allow or have a dog on District Lands except in those areas designated by the District. This subsection shall not apply to:
 - 1) guide and service dogs under physical control, specifically trained to assist the blind, deaf, or disabled;
 - 2) guide and service dogs in training to assist the blind, deaf, or disabled, and under physical control, and participating in a training program,
 - 3) use authorized by written permit.
- c) Leash Required.

No person shall allow or have a dog on District Lands, unless the dog is at all times under control, and on a leash not to exceed 6 feet, or on a self-retracting leash with a maximum extended length of 25 feet. The leash must be held by person responsible for the dog and must be made of material and construction sufficient to restrain the dog. Electronic or other “invisible leashes” do not meet the leash requirement. The self-retracting leash must have the capability of being retracted and locked in a position not to exceed 6 feet.

Within a designated area, no person shall have or allow a dog on a lead greater than 6 feet when:

- 1) Within 100 feet of any parking area, trailhead, picnic area, campground, horse stable, public roadway, restroom, visitor center, ranger station, or other place or structure of public assembly;
- 2) Within 50 feet of any person that is not the person or persons who entered District lands with the dog; or
- 3) Within 50 feet of any District Water Area.
- 4) When the dog is not visible to the owner

d) Off-Leash Areas.

Dogs shall be permitted off leash only in areas specifically designated and signed by the District as off-leash areas. No person shall allow or have a dog in an off-leash area unless the dog is at all times under the verbal or radio collar control, and in sight of, its owner or person responsible for the dog. The owner or person responsible for the dog shall have a leash in his/her possession at all times.

e) Nuisance Dogs.

No person shall allow or have on District Lands a dog that is a nuisance to people, other animals, or property. This includes, but is not limited to: growling, excessive barking, scratching, jumping on any person or animal, or challenging in any manner, people, animals, or property.

f) Dogs in Water Areas.

No person responsible for a dog shall allow said dog to enter any District Water Area unless it is specifically designated to allow such entry.

g) Dangerous Dog.

No person shall allow or have on District Lands a dog that exhibits dangerous behavior including, but is not limited to: attacking, biting or causing injury to any person or animal. Violation of this section is a misdemeanor.

701.2 Disturbance or Injury to Wildlife.

No person shall allow a dog, cat, or domesticated animal, even if leashed, to disturb, chase, molest, injure, or take any kind of wildlife, whether living or dead, or remove, destroy, or in any manner disturb the natural habitat of any animal on District Lands. Violation of this sub-section is punishable as a misdemeanor.

701.3 Horses and Livestock.

No person shall keep, raise or allow cattle, horses, sheep, or other livestock on District Lands, unless pursuant to a lease, license, written permit, or other entitlement of use granted by the District. Violation of this sub-section is punishable as a misdemeanor.

701.4 Other Pets.

No person shall allow or have any pet, domesticated animal, or other animal on District Lands, unless specifically permitted by another section of these regulations.

III. Direct and Indirect Predation Impacts

Carnivores can have direct (such as injuring or killing) as well as indirect (such as harassing, persistent stress, etc.) impacts on livestock. Regardless of the outcome, these impacts can deliver significant economic costs to producers (Muhly and Musiani 2009). When ranchers are able to locate a carcass and determine whether the animal was lost to a carnivore, the economic impact to the producer can be quantified to some degree. However, indirect predation costs are far more complex. Recent research has begun to attempt to measure the impacts that carnivore presence and activities may have on livestock, and quantify the costs related to increases in stress, such as failure to gain weight, reduced reproductive output, additional livestock handling labor, etc. (Ramler et al. 2014). In addition, indirect costs may arise from lost genetic stock held within a depredated individual, training, and other difficult to measure internal factors. Every livestock animal represents generations of selective breeding. When that animal is killed, the profit from that individual is lost, and it also represents lost cost in the years invested by the rancher, as well as an opportunity cost to the future genetic potential of that lineage (Naughton-Treves et al. 2003). In fact, new research has shown that while ranches with resident wolves may not experience negative indirect impacts from wolf presence alone, ranches with a confirmed depredation incident may incur indirect costs greater than the cost of the depredation loss itself (Ramler et al. 2014).

National and Local Depredation Losses

Nationwide, and in California, non-carnivore sources of mortality, such as respiratory illness, foul weather, or calving related problems, dwarf the impact of predation. In 2015, carnivore predation accounted for 2.4 percent of cattle mortality and 11.1 percent of calf mortality across the U.S., whereas non-carnivore sources accounted for 97.6 percent and 88.9 percent of cattle and calf mortality respectively. It is important to recognize, however, that depredation rates vary regionally and by livestock operation type. For example, beef calves and cattle may have depredation rates several times higher than dairy operations, and grizzly bear depredations are much more likely to be an issue in Idaho than in Oklahoma (USDA 2015a). On a more local scale, depredation rates can vary dramatically on a parcel-by-parcel basis (Treves et al. 2004). For example, overall livestock loss for the District as a whole has not exceeded 2 percent for any given year in the last 4 years. However, loss to a single producer has been as high as 14 percent in a year (see Table 2).

In California, 1.1 percent of reported mature cattle mortality was attributed to carnivore predation, and 5.8 percent of reported calf mortalities were attributed to carnivore predation in 2015. Non-carnivore mortality sources accounted for 98.9 percent of adult cattle mortality, 94.2 percent of calf mortality. These various mortality sources amounted to an overall 2.4 percent of cattle inventory lost, and predation accounted for less than 0.1 percent of this overall lost inventory. For calves, non-carnivore mortality sources accounted for 6.6 percent overall calf

crop loss, and predation accounted for 0.4 percent overall calf crop loss (see Table 1). Even at such low rates, predation cost the state's livestock industry \$1,896,631 in lost cattle and \$4,789,565 in lost calves, and can have far greater proportional impact on individual operations (USDA 2015a).

Mortality Source	Percent Livestock Inventory Lost	
	Cattle	Calves
Predation	>0.1	0.4
Non-Predation	2.4	6.6
Respiratory Problems ¹	0.6	2
Mastitis	0.3	>0.1
Digestive Problems ²	0.3	1.5

Table 1: Percent California's overall cattle and calf inventory loss derived from the most common mortality sources. Predation mortalities are the pooled losses to any carnivore found within California (wolves, mountain lions, bears, coyotes, domestic dogs, etc.). Non-predation mortalities are the pooled losses from any non-predation source (including respiratory issues, mastitis, lameness, etc.). At the state level, illnesses from respiratory or digestive issues are responsible for more calf and cattle deaths than depredations from mountain lions or coyotes, or all of the carnivore species combined. However, mortality sources on a local level may vary widely. (Data calculated from USDA 2015a)

¹Such as pneumonia or shipping fever.

²Such as bloat, scours, parasites, enterotoxaemia, or acidosis.

On District grazing allotments, there has been a growing incidence of livestock depredation. Though livestock producers operating in the Central Coast have been ranching alongside carnivores for generations, and under District management since 2007, as local carnivore populations have recovered in recent years, depredations and other conflicts between livestock and carnivores have increased. In recognition of this growing trend, the District started a compensation program in 2014. Between the program's inception and 2017, overall carnivore-derived cattle mortality ranged from 0.15 to 1.16 percent between 2014 and 2017 (Table 2). This costs the District an average of \$2,647 a year in livestock compensation, and \$13,235 total (Table 3). Tenants reported livestock harassment by groups of coyotes, but none was able to quantify the costs incurred (see Supplementary Material Tenant_Survey). Some mentioned that they thought stress, failure to gain weight, and failure to rebreed were likely costs. None of the tenants surveyed listed increased labor or preventative tools as added costs (See Appendix 1 and Appendix 2 for additional information on mountain lion depredations in California).

Year	Stocking Rate	Animals Lost			Percent Lost
		Heifers	Calves	Total	
2014	509	4	2	6	1.18
2015	575	0	4	4	0.70
2016	554	0	1	1	0.18
2017	563	0	2	2	0.36

Table 2: Reported cattle losses to carnivore depredations on Midpeninsula Regional Open Space District grazing allotments (See supporting document *Grazing_Data.xlsx* and *Depredation 2014 to 2017.xlsx*). The percent loss is expressed as the overall loss for the District. Individual livestock operation loss ranged from 0 to 8.5% of livestock managed. Of the 14 total confirmed losses reported between 2014 and 2017, 8 were determined to be from mountain lions, and 6 were lost to coyotes between 2015 and 2016. At the time of writing, an additional 4 calves were lost in 2018, all were likely coyote predation.

Year	Animals Reimbursed		Reimbursement Costs
	Heifers	Calves	
2013	NA	2	\$1,890.00
2014	6	2	\$7,330.00
2015	4	4	\$4,308.00
2016	1	1	\$693.00
2017	2	2	\$1,399.00
Total			\$15,620.00
Yearly Average			\$3,124.00

Table 3: Depredation reimbursement costs to Midpeninsula Regional Open Space District for 2013 to 2017 (See supporting document *Predation reimbursement.xlsx* and *Depredation 2014 to 2017.xlsx*). Bold and italicized numbers include heifers that were killed as well as those who were not killed but did lose their calves were. As such, rent for heifers that lost calves was expunged.

While Tables 2 and 3 account for livestock killed by carnivores, harassment and injuries can bring about indirect costs such as failure to gain weight, spontaneous abortions, increased labor, and other expenses that are difficult to measure (Ramler et al. 2014). Data on livestock harassment and the resulting potential changes in stress, movement patterns, productivity, susceptibility to disease, etc. are poor and the overall picture is not well-understood (Ramler et

al. 2014, Clark et al. 2017). Clark et al. (2017) found that cattle living in wolf country had shorter daily movement patterns than those living in wolf-free areas, but these results were not tied to any sort of fitness outcome. Ramler et al. (2014) found that the weight of calves living on ranches with a confirmed wolf depredation decreased by 3.5 percent, or 22 pounds, for that year. This translated into an average of \$6,679 loss across the 264 calf herd at the time of sale.

Obviously wolves are not an issue with which the District's producers need to be concerned, but there are no similar data available for cattle harassment by coyotes, bobcats, or mountain lions. One can imagine that wolves present a more extreme version of coyote damage, and this could provide a helpful context for anticipating potential damages on District properties.

The USDA (2015a) provides some data enumerating the cost of wounds dealt to cattle in California by carnivores. They estimate these costs at \$550,000 for injured cattle and \$571,000 for injured calves in California for 2015 (these estimates assume that the animals had no value after they were injured). Unfortunately, these costs are not broken down by carnivore species.

Impacts by Species

According to national data collected by the USDA (2015a), the four main carnivores discussed in this review can be ranked in order of potential negative impacts to cattle and calves as follows:

Coyotes >> Dogs > Mountain Lions > Bobcats

In California, where mountain lions are more common than in other parts of the country, the relative ranking changes slightly:

Coyotes > Mountain Lions > Dogs > Bobcats

According to the District's tenant survey, the ranking is as follows:

Mountain Lions > Coyotes > Dogs

Half of the tenants surveyed classified predation as a critically important management issue, two thirds ranked it as important, and the remaining tenant ranked predation as not important. Other than the producer who thought predation was not important, all of the tenants have had predation issues on leased land, and almost all of the conflict was with mountain lions. Some tenants felt that coyotes pose little threat to cattle unless they form packs, or attack young or sick calves. There was also concern expressed about the stress of coyotes harassing cattle. None of the District tenants surveyed gave accounts of incidents involving domestic dogs or bobcats.

Mountain Lions

The level of impact mountain lions have on livestock operations varies greatly depending on the habitat (open grassland, rugged mountains, etc.), livestock species (cattle, goats, or sheep), operation type (cow-calf, steer, etc.), and location (California, Midwest, Colorado, etc.). Accounting for less than 1 percent of cattle or calf deaths across the U. S., mountain lions do not appear to have a nationally significant impact on cattle operations (USDA 2015a). However, it

is important to remember that mountain lions were extirpated from the Eastern U.S. and Midwest over a century ago; excluding livestock that do not live in mountain lion country will increase the percentage of cattle or calf deaths in this calculation considerably (Shaw et al. 1988, Cougar Network 2018).

In most western states with healthy mountain lion populations, cattle depredation is an infrequent issue. For example, mountain lion research conducted in Colorado found that with over 200 mountain lions collared, and ample cattle on open range, there was not a single incidence of loss to mountain lions between 2004 and 2013 (Logan, personal communication). In New Mexico, mountain lion researchers documented cattle, including newborn calves, and mountain lions sharing habitat without any cattle killed in 10 years of study (Logan and Sweanor 2001). In that area, herds were composed of cow-calf groups with few bulls.

However, research conducted in Arizona, where there is a more temperate climate and year round grazing, found contrasting results. This work indicated that livestock operations with year round grazing and early season calving may be more susceptible to depredations (Shaw et al. 1988) (For a chart of seasonal versus year round grazers on District property, see Appendix 3). These data support observations on District properties where mountain lion depredations are the most common form of carnivore conflict and are the greatest concern with respect to depredation management (see Supplemental Material Tenant_Survey).

Significant differences in mountain lion versus wolf hunting styles likely makes the indirect impacts mountain lions may have on livestock far lower than is the case with wolves. Wolves are cursorial predators, which means they use a prolonged chase that can last upwards of several miles to select and subdue their prey (Kauffman et al. 2007, Wikenros et al. 2009). Mountain lions, on the other hand, are ambush predators that rely on stealth and surprise to capture their prey (Williams et al. 2014). As such, mountain lions are much less likely to chase or harass cattle and other livestock, and ranchers operating in mountain lion country are much less likely to suffer from these indirect predation costs.

Coyotes

Nationally, dogs and coyotes are responsible for more livestock depredations than all other carnivores combined (USDA 2015a, USDA 2015b). This elevated risk could be related to the fact that coyotes are also the most widely distributed carnivore in the U.S., so probability alone would work in their disfavor. That being said, coyotes can reach higher population densities than mountain lions, live in closer proximity to people, and make use of more marginal habitat, potentially putting them at greater odds with livestock (Fedriani et al. 2001, Gehrt et al. 2010). Though they tend to pose a more substantial risk to sheep and goats, among carnivore-derived mortality across the U.S. in 2015, coyotes accounted for the highest percentage of cattle (40.5 percent) and calf (53.1 percent) depredations (USDA 2015a). Coyotes present a higher danger to newborns, sick calves, and cows giving birth than to adult cattle, and tend to be more lethal to dairy calves than to beef calves (USDA 2015a). There are numerous mentions of coyotes harassing and/or injuring cattle in scientific literature, however, data on rates, impacts, and associated costs are scant (Dorrance 1982, Jones 1987, Shwiff et al. 2016, Larson 2018).

The size difference between cattle and coyotes may work in cattle's favor. Cattle often stand their ground and may even cooperatively charge coyotes threatening their calves. This type of aggressive behavior may also deter further harassment. In some situations, cattle have been added to groups of sheep to protect them against coyote predation (Hulet 1987).

Domestic Dogs

In some geographic locations, domestic dogs may pose a significant risk to livestock. In 2015, dogs were responsible for 11.3 percent of cattle and 6.6 percent of calf losses to predation, and in 2014, dogs were responsible for 21.4 percent of sheep and 10.3 percent of lamb depredations across the U.S. (USDA 2015a, USDA 2015b). Direct as well as indirect impacts on livestock by dogs can be significant, and in some areas, greater than other sources of predation (Young et al. 2011). Even when dogs fail to kill livestock, they can injure or persistently worry animals. Dog depredation or harassment is generally more of an issue on the urban-wildland interface, making it a potential concern for the District. Domestic dogs guilty of livestock harassment or depredation are often friendly to humans, increasing the difficulty of determining the culprit. Further interfering with a proper identification, dogs can deliver injuries difficult to distinguish from other predators, and may participate in "excess killing" where multiple animals are injured or killed and not consumed (Jennens 1998). One study found that free-roaming domestic dogs consumed, and likely killed, more livestock than local wolves (Echegaray and Vilà 2010). In addition, dog predation may be a growing concern; California producers anecdotally report an increase in free-ranging dogs associated with marijuana production in some regions (Macon et al. 2017). Though dogs are not currently allowed on any of the preserves that have cattle, this could also be a future concern as this policy may change in the coming years.

Bobcats

Bobcats pose little threat to large livestock, especially cattle. As such, it is likely unnecessary to put specific animal husbandry practices in place to protect cattle or any other large livestock from bobcat depredations or even injury. In 2015, bobcat and lynx predation combined accounted for 1.4 percent of beef cattle predation losses nationally, and 0.0 percent in California (USDA 2015a). In 2014, bobcat and lynx predation accounted for 0.11 percent of lost lamb, and 0.2 percent of adult sheep crop nationally, and 0.0 percent in California (USDA 2015b). Other studies found that bobcats may scavenge livestock carcasses, but are unlikely to be responsible for killing any large livestock, such as cattle, sheep, or equines (Neale et al. 1998, Scasta et al. 2002). They may take smaller animals, such as chickens, turkeys, fowl, or piglets. These sentiments were shared by the District livestock operators surveyed, who said that bobcats may eat chickens, but were not considered a threat to cattle (see Supplementary Material Tenant_Survey).

IV. Local Indemnification and Depredation Prevention Programs

Most local land management agencies do not have formal depredation prevention or response policies. For many of these agencies, depredations do not pose a significant challenge, allowing them to handle each depredation on case-by-case basis (e.g. EBMUD and NPS). For example, Point Reyes National Seashore and the Golden Gate National Recreation Area, operated by NPS, have had very little depredation pressure and have been able to deal with incidents as they arise. Others, on the other hand, have had significant depredation challenges and have designed policies to help support local livestock operators. Marin County implemented the most formal of these policies, a depredation prevention and indemnification program called the Marin County Livestock Protection Cost-Share and Livestock Loss Compensation Programs. This program compensated livestock operators for losses to carnivores and helps cost-share preventative tools for livestock protection.

National Park Service Point Reyes (NPS) Livestock Grazing

NPS operates 28,000 acres of rangeland with around 6,000 head of cattle run by 24 ranching families (six dairy operations and 18 beef), and a couple other smaller sheep and chicken operations in Marin County. Ranch size ranges from 30 to 35 head on 230 to 330 acres to 856 head on 1076 acres. There are bobcats, coyotes, and mountain lions in the area, but depredation has not been a significant issue in the recent past. Since 2011, there have been fewer than a dozen reported depredations. In each of these instances, coyotes took beef calves that had wandered away from the herd. There was one case that may have been a mountain lion, but the parties involved were unable to confirm the species of carnivore involved. Lethal removal is usually reserved for animals that pose an immediate human safety risk, rather than for depredation, and no animals have been lethally removed for livestock depredations since before 1997.

On these NPS lands, federal law supersedes state law, so CDFW does not have jurisdiction and the depredation policies governing the rest of California are not applicable. Incidents are reported to NPS and a course of action is decided for each individual situation. Any preventative tool is subject to review by NPS before it can be implemented. Livestock guarding dogs have been approved for one small sheep operation and one chicken operation. None of the other operations are currently utilizing any approved depredation prevention techniques, but NPS would consider other alternative tools, such as frightening devices, or livestock guarding donkeys or llamas.

The NPS Management Policies (2006) state, “native predators, scavengers and prey are all integral to healthy native ecosystems and are protected by NPS Management Policies. The occasional damage that is caused by wildlife, to fences, ranching structures, agricultural animals and livestock forage, is to be expected on permitted lands. Lessee shall not engage in any activity that causes harm to or destroys any wildlife. Conversely, Lessee shall not engage in any activity that purposely supports or increases populations of non-native or invasive animal species. On a case-by-case basis, the Lessor will evaluate incidences of depredation and choose a course of action. The nature of the course of action taken, if any, will be determined by the wildlife species, the extent and frequency of the damage and park-wide management objectives.” On

Point Reyes National Seashore and the Golden Gate National Recreation Area properties, ranchers are indirectly compensated for any predation costs they may incur by offering a reduced grazing fee of \$7.00 per AUM. This reduced cost takes into account the overarching principle that local ranchers are operating under strict NPS guidelines and are not able to manage their operations with as much flexibility as they could under other land designations (Press, personal communication).

Local Compensation and Depredation Prevention – Marin County Program (MCP)

The Marin County Program was one generally focused on sheep depredations, however, the principles and structures may serve as a model for a program geared toward cattle or livestock more broadly. Before 1999, Marin County was spending \$60,000 each year on lethal coyote control, however, livestock (mostly sheep) losses were still a regular occurrence (Agocs 2007). In 2001, the County decided to discontinue its contract with Wildlife Services (WS) and replaced it with a county-run preventative program originally designated the Marin County Strategic Plan for Protection of Livestock and Wildlife. The WS federal trapping program was phased out, however, the new program did not impede ranchers from lethally removing carnivores from their own property. Slated to run for a five-year pilot period, the program redirected county funding that would have supported USDA trappers into assistance for ranchers implementing non-lethal carnivore deterrent tools, such as livestock guarding dogs, fencing improvements, birthing sheds, etc. When the pilot program ended in 2005, the County shifted to approving funding on an annual basis, and now the MCP has become an established county program. Each year, the Marin County Department of Agriculture conducts a meeting with ranchers to evaluate the program and to solicit recommended changes to program operations (Larson 2006, Fox 2008).

Indemnification Program Overview

The original county-run program design did not include an indemnification program, but one was added at the request of the local ranching community. In order to receive compensation for depredations, ranchers were required to be an active participant in the proactive cost-share predation prevention program and to have at least two non-lethal livestock predation deterrents in place. These deterrents were verified and documented during an onsite ranch visit by the County Agricultural Commissioner's office. Once a ranch has been deemed qualified for indemnification, any losses suffered from that date on are eligible for compensation. When losses occurred, livestock operators needed to report losses to the Marin County Agricultural Commissioner's office by telephone, as well as to the University of California Cooperative Extension (UCCE) through a monthly mailed "livestock loss" card. UCCE provided third party loss verification and maintained a central database for depredation records. When necessary, onsite verification visits were performed by the Marin County Agricultural Commissioner's office (Larson 2006, Fox 2008).

Depredation compensation payments were made for each animal based on market value (calculated on a 3-year average of market rates for lamb at a weight of *ca.* 100 lbs.), up to \$2,000

per year for ranchers managing operations larger than 200 head, and up to \$500 per year for ranchers managing fewer than 200 head. Operations below 200 head were not considered commercial and were ineligible to participate in the MCP. In addition, show animals and special breeding stock were not eligible for indemnification. Confirmed depredation payments were made twice a year, once in June and once in December, through the Marin County Agricultural Commissioner's office. If the cumulative market value for the animals lost that year exceeds the available funds, compensation payments were prorated. At the end of each year, ranchers were required to sign an affidavit verifying their livestock loss claims (Larson 2006, Fox 2008).

Cost-Share Program Overview

The initial proposal was to have cost-share funds administered by a third party, such as the California Woolgrowers Association. However, after meeting with local livestock operators, it was decided that Marin County Agricultural Commissioner's office would administer the program. The MCP was designed in collaboration with ranchers, the Agricultural Commissioner's office, and the Farm Advisors office. Projects eligible for cost-share reimbursement were any material or property improvements that deter depredation, such as fencing, barriers, and birthing sheds; as well as animal husbandry strategies such as shepherding, penning, livestock guardian animals, noisemakers, and any other non-lethal carnivore protection measures or animal husbandry practices (Larson 2006, Fox 2008).

To submit a reimbursement claim, livestock operators needed to complete a form documenting the specific activity employed, and the costs for which funds were being requested. Ranchers were required to contact the Agricultural Commissioner's office and set up an on-site review to be conducted by either the Agricultural Commissioner's staff or the Cooperative Extension's local Livestock and Range Management Advisor. After the activities were verified, the County Inspector and/or the Livestock Advisor would submit the claim to the Agricultural Commissioner for review. Once approved, an invoice for the amount of the claim would be submitted to the Treasurer's office and a check in the name of the respective rancher was issued. Once a year, a County Inspector or the Livestock Advisor would visit each participating ranch to verify that subsidized predation deterrents were in place, as well as make recommendations for additional potential deterrents or animal husbandry practices (Larson 2006, Fox 2008).

The most common purchases that the program helped cost-share were fences (electric, patch, and cross fencing), livestock guardian animals (dogs and llamas), and protective pasture corrals. Ranchers utilizing guardian animals were eligible to receive \$250 to help defray animal maintenance costs, such as vet bills and food. This \$250 pool of funding for animal care counted towards the cap set for that livestock operation size (\$2,000 for operations greater than 200 head and \$500 for operations smaller than 200 head) (Larson 2006, Fox 2008).

Outcome

Nearly all of the commercial sheep operations in the region participated in the MCP (Fox 2008), however, by 2009, program officials decided that the benefits provided by the indemnification program were outweighed by the implementation cost. The compensation

portion of the MCP was terminated, and funds were redirected to support cost-sharing preventative tools such as fencing improvements, shepherding, changes in animal husbandry, livestock guarding animals, etc.

Overall, this program has increased the use of non-lethal deterrents, reduced depredations, reduced lethal removal, and increased support for preventative tools (Fox 2008). A study on the program indicated that livestock losses decreased by over 25%, while program costs were reduced by nearly 20% per year (Agocs 2007, Fox 2008). Participating livestock operators indicated that they were with the MCP, with most ranchers reporting a high degree of satisfaction with the program's level of cost-sharing and depredation compensation rate. In addition, overall lethal carnivore removal decreased by over 50% (Fox 2008).

Key Points to Consider

As the MCP ultimately found, compensation schemes can be very expensive and difficult to administer. In many cases, locating dead livestock and having them inspected in the timeframe required for positive verification can be incredibly difficult (Linnell and Brøseth 2003). Some research goes so far as to suggest that compensation schemes may be counterproductive, rewarding passivity and failing to motivate producers to adopt effective mitigation strategies (Boitani et al. 2010). There are, however, ways to overcome some of these issues, such as attaching conditions on the payments (e.g. setting minimum husbandry requirements, or stepwise payments scaled to the level of preventative measures in place), cost-sharing, or compensating producers for carnivore presence rather than depredations. This last approach of conservation performance payment scheme could help encourage producers to adopt carnivore-compatible husbandry practices by incentivizing coexistence. In this type of system, financial incentives reward stewardship that allows livestock and carnivores share habitat; the payments offset the risk, as well as the indirect impacts carnivores impose on livestock (see “Direct and Indirect Predation Impacts” above) rather than paying for difficult to measure damages after they are incurred. The main requirements for a payment-for-presence system are that the parties involved agree on a fair rate of payment, fiscal support for the payments is secured, and a system is put in place to accurately document carnivore activity². In addition to

² In order to create a successful conservation performance payment program, administrators must first select indicators of carnivore presence, decide how these indicators will be monitored, and determine how the monitoring results will be used to inform compensation payments. Other programs have used the presence of carnivore offspring as the indicator for carnivore presence (Zabel and Holm-Müller 2008), however, depending on the monitoring technique, it may prove logistically simpler to use any age individual. Carnivore presence could be monitored indirectly via camera traps or scats (e.g. surveys, such as in Gese 2001; or genotyping scats, such as in Prugh et al. 2005), or directly through mark-recapture (review in Gese 2001). For a review of monitoring methods, see Gese 2001 or Gompper et al. 2006. The amount of payment should be calculated by the monetary damage the offspring are expected to cause over the course of their life. Because depredation rates on District properties are relatively low, this calculated amount could be too small for a pay-for-presence program to be attractive to tenants. Benefits to a pay-for-presence program include compensating livestock producers for hard to document costs, such as livestock harassment; removing the burden of searching for animals killed by carnivores in the timeframe necessary for validation; removing the administrative burden of verifying predation events; eliminating potentially contentious verification events in which trust between producers and administrators may be eroded. The largest

promoting coexistence, a payment-for-presence program would support monitoring native wildlife on District properties, an outcome aligned with the District's mission.

V. Conflict Prevention Tools

Creating and maintaining a livestock operation in which livestock and carnivores may flourish is an iterative and dynamic process. It will involve producers leveraging intimate familiarity with their particular operation to select appropriate preventative tools, and adaptively managing their practice as new situations arise. There are many different strategies and tools available to help livestock operators protect their livestock and coexist with carnivores. These tools can work on one or more pathways by altering human behavior, carnivore behavior, and/or livestock husbandry practices (Shivik 2004). A lack of consensus on when a particular tool or set of tools will be most effective makes it difficult to determine when to use which approach. The practicality and efficacy of any particular tool will depend on the type of operation, livestock species and products being produced, topography, carnivore community, native ungulate community, producer familiarity with and confidence in a given tool, associated cost-benefit considerations, public perception, and many other factors (Miller et al. 2016, Eklund et al. 2017). For a summary table of tool efficacy for each carnivore species, see Appendix 4. Every ranch is different, and local producers must weigh a unique set of site-specific considerations when selecting appropriate tools. It is also important to recognize that every producer has a unique perspective and set of experiences that make some tools more palatable than others.

Ultimately, the most reliably effective protection will likely come from applying multiple tools (Koehler et al. 1990, Shivik 2006, Miller et al. 2016, Stone et al. 2017). Carnivores are smart, adaptive, and have a great deal of motivation and time to dedicate to finding prey. The more impediments livestock producers can provide, the more incentive there will be for carnivores to hunt native prey instead of livestock. The tools that follow are potential options to consider; clearly not every tool will be practical or suitable to every operation.

Lethal Control

Improving animal husbandry practices can reduce carnivore predation on livestock, but there are certain situations in which lethal removal of habitual problem animals may be the most appropriate course of action. There are two forms of lethal control - indiscriminate hunting and targeted removal. Indiscriminate control operates on the principle that decreasing the overall carnivore populations reduces encounters between livestock and carnivores, making it less likely for negative interactions. This approach seldom reduces conflict and can actually increase depredations (Shaw et al. 1988, Conner et al. 1998, Harper et al. 2008, Peebles et al. 2013, Wielgus and Peebles 2014). Centuries of lethal control on coyotes (hunting, trapping, and

benefit this type of program creates is that it provides producers with a higher incentive to both keep carnivores alive, and to be proactive about protecting livestock.

bounties) have had little impact on coyote cattle depredations unless the population is reduced by greater than 75 percent each year (Connolly and Longhurst 1975, Boggess et al. 1978). Increasing mountain lion hunting quotas may cause nuisance complaints and livestock depredations to increase by 36 to 240 percent (Peebles et al. 2013). Hunting removes territory-holding adults and disrupts social structure. When a resident male is removed, his territory becomes vacant. Multiple males may disperse into that vacancy and compete for exclusive rights to the area, a process that may locally increase the mountain lion population until the territorial boundaries are resettled. Further exacerbating the situation, the open territory makes space for young dispersal-aged males (Lambert et al. 2006), a demographic more likely to run into conflict with people (Peebles et al. 2013). A similar pattern could occur in areas where there is heavy poaching or an abundance of lethal removals under depredation permits.

Selective, targeted removal may be a more effective option. For this tool to be applied appropriately, certain criteria should be met to ensure that the tool is being used effectively, namely that 1) an individual is a repeat offender, and 2) the correct individual is targeted. Most carnivores will take easy to kill prey, such as livestock, when given the opportunity. In some situations, producers may experience “excess killing,” when a carnivore kills more prey than it can practically consume in one night. This is certainly very upsetting and costly to the producer, however, it does not necessarily indicate the presence of a problem animal. Carnivores evolved to eat prey that can potentially escape, but when livestock are corralled or penned, they cannot retreat to safety. In this situation, the carnivore is presented with a novel situation far beyond the context in which it evolved. Natural carnivore behavior, pursuing and killing prey, in this scenario can result in killing an unnaturally high number of animals, as multiple confined animals repeatedly trigger a predatory response from the carnivore. It is a mismatch between the context in which the carnivore evolved over millennia (available prey is dispersed and able to flee), and the context in which it now lives (available prey is confined in relatively high numbers). The behavior is problematic, but it does not mean that the individual itself is necessarily predisposed to causing further conflict (Linnell 1999). A carnivore exhibiting this natural behavior does not indicate the presence of a problem animal, instead it indicates the presence of a novel situation and highlights the importance of proper penning, fencing, and other animal husbandry practices needed to protect livestock.

A problem individual is one that has developed specialized skills that allows it to seek out and access well protected livestock, and the individual has demonstrated this ability on multiple occasions, especially when appropriate protective animal husbandry practices have been put into place. If lethal control is deemed appropriate for such a case, that specific animal needs to be properly identified and targeted appropriately. Neither mountain lions nor coyotes have spots, stripes, or other markings that facilitate individual identification. In addition, their population densities are high enough in the Central Coast that there are likely a few members of each species that occupy any given location. This makes targeting the appropriate perpetrator very difficult, unless it is caught in the act. The following section on “Identifying Recidivists” explores tools for distinguishing individuals.

When the targeted individual is successfully removed, this can lead to a temporary reduction in depredations. Targeted removal outcomes practiced on coyotes were improved when the breeding individuals of the territory in which that depredation occurred were killed (Eklund et al. 2017). However, in most cases, without further changes in animal husbandry practices, further depredations are likely to occur (Linnell et al. 1996). Ultimately, the conflict is most often created by placing attractive and easy to kill prey in habitat occupied by opportunistic carnivores. An additional consideration, removing a specifically targeted individual can produce the same dynamics that occur when there is carnivore hunting – that is, when a territorial individual is removed, multiple young individuals may move in to fill the vacancy and cause additional conflicts.

As discussed above, carnivores play an important role in maintaining a healthy and balanced ecosystem, however, lethally removing a single individual carnivore in a stable population is unlikely to have a significant impact on the overall long-term ecosystem viability. In contrast, in systems where there are several threatening forces, such as habitat degradation, loss of connectivity, rodenticides or other environmental toxins, etc., the larger the impact will be for each individual removed. This is the case in the Santa Monica Mountains and the Santa Ana Mountains in Southern California. Urbanization, isolation, and lack of connectivity have driven what used to be thriving mountain lion population to the brink of local extinction (Ernest et al. 2014, Benson et al. 2016). In these two areas, livestock producers experiencing livestock or companion animal losses are given more extensive help in preventing further conflict rather than being issued lethal take permits when a depredation occur.

Identifying Recidivists

In order to employ targeted lethal removal, it is necessary to be able to identify individual carnivores, determine that there is a behavioral pattern, and select that individual for intervention. It can be very difficult to identify individuals members of a species that lacks unique features (such as coyotes and mountain lions), however, researchers have developed some methods that can facilitate this process. There are two main alternative pathways for identifying individuals; methods that allow remote identification in real time, and methods that enable identification after the fact.

Marks, Tags, and Collars

One set of tools for identifying animals in real time is to capture the offending animal and mark it with a collar, unique ear tag, or unique dye marking. These three strategies allow anyone observing the animal, be it through direct observation or via camera traps or other indirect means, to identify the individual. In order to employ these strategies, the animal must first be captured using CDFW-approved protocols, then processed by trained personnel that can safely set and monitor traps, as well as immobilize, handle, and release the animal.

Capturing animals is a resource intensive process, and is frequently unsuccessful. Cage traps set for mountain lions must be monitored every 20 minutes from the time they are opened at sunset, until an animal is caught or until they are closed (usually at sunrise). If trailing hounds

are used, it requires specially trained dogs, the dog handler, and the gear and personnel for darting, extracting, and handling the mountain lion. Most hound capture days require long hours, often starting before sunrise and ending around dark. When trapping bobcats or coyotes, the process is much simpler and less time intensive, as the traps do not usually require as frequent monitoring, but it still make take many capture attempts before an animal is trapped. Capture success will be greatest if the animal is targeted soon after the depredation event; odds of capturing the offending individual drop significantly with each night that passes after the incident. Any area where trapping is being conducted should be closed to the public to avoid tampering with traps or trapped animals, driving wildlife away from traps, accidentally trapping pets, etc. The traps permitted by CDFW for capturing mountain lions, bobcats, or coyotes tend to be fairly selective when used properly, however, protocols should be in place for even occasional non-target capture situations. Some species may be safely handled without chemical immobilization, such as coyotes, while others need to be tranquilized, such as mountain lions and bobcats.

With a trapped animal in hand, it can be marked with a unique ear tag or fur dye that will allow it to be identified from a distance. Fur dye is a technique commonly used in species monitoring in which a unique marking is dyed onto an animal's fur, providing a large, easily visible, distinct identity that will last up to several months, depending on the type of dye, the environment, hair shedding schedule, etc. This method can be deployed quickly and inexpensively, and it is minimally invasive. Ear tags provide a permanent identification that is also commonly used in wildlife monitoring. It is marginally more invasive, provides a longer lasting mark, but care must be paid to other tags in the area to make sure that similar ear tags are not deployed in overlapping territories. Though the tags often have a unique number printed on the tag itself, these number are often not visible from afar, so it may be necessary to use color, shape, and other features to distinguish between tags. If ear tags are not placed properly, they can tear out, injuring the animal and making it difficult to identify that individual.

Tracking collars are the most invasive of these tools, impose the greatest risk of injury to the animal, but they also provide the greatest amount of information about the animal and its habits. There is a wide range in collar types; more basic collars emit a high frequency radio signal that can be monitored with a handheld telemetry receiver, while others collect real time tracking data that can be monitored remotely. There are a corresponding variety of collar prices ranging from a couple hundred dollars to a few thousand dollars, depending on the features required. Collar battery life can last up to a couple years before the collar needs to be replaced, however, this timeline is highly dependent on the features being used and the size of the battery deployed; higher GPS acquisition rates and other energy intensive features dramatically shorten battery life. Fitting the collar properly is extremely important and should only be performed by trained personnel, as an ill-fitting collar can easily kill the animal that is wearing it.

In addition to being useful as a way to identify individuals, tracking collars can also be used as a preventative tool. High-end collars can be set to send an email alert when the animal wearing it enters a user-determined area, such as a particular pasture, allowing producers to proactively manage their livestock and respond to a potential threat. This is most useful when a

high portion of the local carnivore community is collared; in places where only a small fraction of the carnivores are collared it could provide a false sense of security when a known collared animal is not in the area, and potentially encourage practices that leave livestock vulnerable to predation from unmarked carnivores.

Biopsy Darts and Environmental DNA

Another set of tools make it possible to identify individual carnivores by their unique genetic signature, either through sampling it from the animal directly (as in the case with biopsy darting), or by collecting it from the environment. Whichever the method used, nuclear DNA extracted and the genetic sequence contained within the sample provides a unique identity that may be compared to other samples to find matches.

If the genetic material is collected via a biopsy dart, the animal must first be captured, treed, or located in another situation in which it can be safely shot with a collection dart. It is more common to use this tool on bears or mountain lions and less common with bobcats and coyotes. When used with mountain lions, the most common method is to tree the individual with trailing hounds and then shoot it with a sampling dart once it is stationary in a tree. The dart itself is outfitted with a sharp sampling tip that extracts a small flesh punch and falls off after impact. The dart is recovered by tracking a small telemetry beacon in the base of the dart, or by finding it visually.

A variation on traditional biopsy darts is a blunt dart outfitted with sticky tape that collects a small number of hairs on impact (method described in detail in Valderrama et al. 1999). Biopsy darts are somewhat invasive, whereas the sticky dart is far less so. In either case, it is important for the animal to be stationary and oriented such that the person collecting the sample can get a clear shot at the animal's its caudal thigh, and that the dart gun is set for an appropriate pressure level; a poorly placed dart or a dart gun that is firing with too much force can turn a nonlethal projectile into a lethal one.

Collecting DNA from the environment is completely noninvasive; does not require the animal to be trapped, treed or stationary; and can be applied to any species. However, it can also be difficult to get high quality samples suitable for analysis. Usually DNA is collected from hair or scats, but it is possible to sample urine, shed skin, or saliva as well. Scats and carnivore hair often remain at kill sites and may be collected for analysis. The genetic material in hair is found in the follicle at the base of the hair. Several hairs with the follicle present are required for analysis; the greater the number of hairs available, the higher the chance of a successful analysis. Fecal DNA is collected from the outside of the scat where there are shed intestinal epithelial cells from the scat producer. There is also DNA from the prey, but there are methods for determining which DNA belongs to the scat producer. Saliva is also proving to be a successful sample material and can be collected from wounds left on the deceased animal. It is important to sample from hemorrhagic wounds, as those will reflect injuries inflicted when the animal was still alive rather than bites taken after the carcass was potentially scavenged by other carnivores (methods described in Mumma et al. 2013).

Regardless of the material used, there are a number of considerations that must be taken into account while designing data collection protocols and post processing. For example, the biologist needs to determine the number of microsatellites (short, repeated DNA sequences) necessary to be able to distinguish individuals. This number will depend on how closely related individuals are, how many individuals will be sampled, etc. In addition, how the sample is handled and stored will have a large impact on whether the sample can be successfully analyzed (specific methods are reviewed in Waits and Paetkau 2005).

Genetic tools are powerful, but implementation hurdles limit their practical utility. Genetic sampling is relatively new and growing field, and lab spaces set up to analyze genetic samples for outside entities are limited, expensive, and can take a long time for processing. Much of the current work currently conducted using eDNA occurs at university labs where the focus is on research. This tool could become more accessible to the District if the data were to align with lab research objectives, but as a management tool there are many logistical constraints.

Fencing

Separating livestock and wildlife with fencing has been one of the most common practices since livestock were first domesticated. Fences can provide protective physical barriers, psychological barriers (such as by delivering an unpleasant shock), or both. As is the case with other tools, practical considerations, such as habitat type, pasture size, livestock species and number, carnivore community, native ungulate community, topography, etc., are especially influential in determining which type of fencing is most feasible and effective. Additional regulatory constraints, constructions and maintenance costs, etc. will further restrict fencing options. An important point to keep in mind is that nearly any fence that will successfully exclude carnivores will exclude other non-avian wildlife as well. This tool could be in conflict with District fencing guidelines that deem wildlife passage a high priority. Fencing capable of hindering carnivores will likely be most useful at a small spatial scale, so as to avoid obstructing local wildlife from utilizing large swaths of habitat on District land.

Most research to date has evaluated the efficacy of using fencing to prevent coyote and dog depredation (Thompson 1976, Gates et al. 1978, Wade 1982, Acorn and Dorrance 1994). Little work has been conducted to determine proper fence construction for excluding mountain lions (Linnell et al. 1996). Fencing is likely best employed in combination with other tools, however, if producers wish to use fencing as a stand alone tool, they may find it to be most successful and cost-effective for preventing canid entry on small pastures with flat and relatively open habitat (Macon et al. 2017). Mountain lions are skilled climbers; they can scale nearly any type of fence practical for use in a livestock operation. Most electric fences are not high enough to be an effective tool for excluding mountain lions.

Fencing to exclude carnivores is likely an option best suited to small-scale use. Any fence appropriate for blocking carnivore passage will likely be effective at excluding other wildlife, which runs counter to the District's mission. Producers and the District must carefully weigh the tradeoff between the level of protection afforded by fencing and the cost of effectively

losing that area as wildlife habitat. Impacts to non-target wildlife may be minimized by making sure that fences are well maintained, wires are kept taught, the top of the fence is clearly visible (fladry or flags may be used to increase visibility), installing sections of lay-down fence in seasonal pastures for when they are not in use, and that appropriate materials are used for game trails and other areas of high wildlife activity. However, any concessions afforded to other species will likely make it easier for carnivores to cross the fence line as well.

Permanent Wire Fencing

As a physical barrier, conventional 5- or 6-strand barbed wire fences may be effective at confining cattle to a pasture, but coyotes, dogs, and mountain lions can generally penetrate this type of fence. Many producers prefer permanent steel-wire net fences. An adult coyote can climb fences less than 66 inches high, and can fit through openings greater than 4 inches by 6 inches (Thompson 1976, Linnell et al. 1996). Combining conventional woven wire fencing outfitted with an electrified top strand to prevent climbing, or adding an exterior tripwire makes them more effective than traditional fencing alone (Gates et al. 1978; Acorn and Dorrance 1994). Coyotes are expert diggers; placing a barbed wire at ground level or using a buried wire apron can discourage this. However, these additional features can become expensive, even for small pastures. Such elaborate fencing materials tend to be expensive and may be best used in calving areas or other places where calves may be vulnerable to coyote and dog predation.

Permanent Electric Fencing

Depending on the type of fence used, this tool can provide livestock and carnivores with a physical and/or psychological barrier. These fences provide an unpleasant stimulus that is uncomfortable, but ultimately not actually harmful to livestock or wildlife. The number of wires required and voltage depends on the carnivore species the producer wishes to exclude. For coyotes, there are a few designs that are considered effective. Twelve-strand smooth wire fences with alternating hot and ground with an external electrified trip wire were deemed “coyote proof” (Gates et al. 1978). Similarly, 9-strand high-tensile smooth wires with alternating hot and ground were also deemed effective options (Acorn and Dorrance 1994). In either design, the bottom strand should be hot and placed no higher than 5 inches above the ground to ensure that a coyote attempting to dig beneath the fence will receive a shock (Acorn and Dorrance 1995). As vegetation allows, the lower the bottom hot wire can be, the better it will be for preventing digging. This type of fence can be difficult in rugged terrain, as it can be difficult to maintain tension on the wires to make sure they do not touch, and ensuring that wires are close enough together such that a coyote could gain entry. For any electric fence, reducing the spacing between wires and increasing the number of wires will make it more effective and also more expensive.

The most frequent problems encountered with permanent electric fences are 1) inadequate grounding, 2) the bottom hot wire is too high above ground level (>5 inches) to prevent coyotes from digging beneath the fence, 3) wires spaced more than 6 inches apart, 4) inadequate vegetation control causing short-circuiting, 5) issues with the energizer (Acorn and

Dorrance 1995; Macon, personal communication). Dry soil conditions can also decrease electric fence efficacy.

Temporary Electric Fencing

Temporary electric fencing is a more common practice in sheep and goat husbandry than it is for cattle. Most temporary electric fences are constructed from strands of poly-wire or tape woven with steel wire to conduct electricity. As a part physical, part psychological barrier, it is important to train cattle before they will respect the boundary. Introducing large livestock to the fence in a damp area or after wetting the paddock soil can make training bouts more effective. In addition, cattle and horses have a more difficult time recognizing thin wire as a barrier; producers may increase their success by using electric tape as a visual cue (Macon, personal communication). These fences tend to have a shorter expected lifespan (3 to 7 years) than permanent fencing, however, upfront costs and construction tend to be much lower (Macon et al. 2017). To reduce labor, producers may set the ground rods strategically so the rods stay put as paddocks are rotated.

Standard electronet fencing constructed 5 feet high can effectively deter coyote and dog predation, however, this is unlikely to be a helpful tool for producers operating on open rangeland (Larson and Salmon 1988, Linnell et al. 1996). This tool may be more suitable for protecting calving grounds or other areas where cattle (calf specifically) or other livestock use is concentrated. When used in a very small area where an intruding mountain lion is nearly certain to make contact with the fence, this tool can be effective protection for any type of livestock (Cavalcanti et al. 2012). Research on specific fence designs for mountain lions is lacking, but some producers have had luck with two types of designs. The first is electronet with 3 wires, and an additional external trip wire set 3 to 4 feet away from the perimeter fence. The external wire cannot be set any closer than 3 feet or a mountain lion will be able to clear both fences without receiving a shock. Second is 8-foot fence with an overhanging hot wire on top (UCANR 2017). Mountain lions may be able to scale the fence, but this design is devised to deliver a discouraging shock when they reach the top. Keep in mind, these two designs have been recommended by livestock producers and have not been experimentally tested.

Fladry and Turbo Fladry

Originally developed to funnel quarry for hunting, fladry is a cord from which brightly colored strips of cloth or plastic flags hang at regular intervals and flap in the wind to create a displeasing novel visual stimulus. Turbo fladry has an electrified wire running through the cord with the goal of adding an additional unpleasant physical stimulus. Studied extensively with wolves, the efficacy of this psychological barrier for other species is low or remains to be studied (Musiani et al. 2003, Shivik 2003, Miller et al. 2016). Fladry and turbo fladry rely on wariness to be effective. Though wolves are deterred by these flags blowing in the wind, coyotes may be too curious for these tools to provide much of a deterrent (Musiani et al. 2003, Shivik 2003). Results from studies looking at coyote responses to fladry have provided mixed results (Musiani et al. 2003, Shivik 2003, Young et al. 2015). However, over time, even wolves habituate to

fladry and turbo fladry, making this tool appropriate for small scale, short duration use at best (Linnell et al. 1996, Musiani et al. 2003, Shivik 2003). It appears that no studies to date have assessed the potential influence fladry or turbo fladry on mountain lions, domestic dogs, or bobcats.

Night Penning

One of the most consistently effective methods for protecting livestock from predation is housing them in a fully enclosed structure during times when predation is highest (Linnell et al. 1996, Miller et al. 2016, Eklund et al. 2017). This period could be when carnivores are most active (usually from dusk until dawn each day), or it could be a life stage when livestock are particularly vulnerable (such as lambing or calving). With proper construction, protective structures can be used for nearly any type of livestock and any type of carnivore (including humans). Different carnivore species require specific building considerations. For example, coyotes and other canids are capable diggers, so effective enclosures require a solid floor, placing a barbed wire at ground level, or a buried wire apron. Mountain lions, on the other hand, do not dig, but are expert climbers. Enclosures designed to protect against mountain lions must have a sturdy roof and any openings must be too small for a mountain lion to gain entry (4 inches by 6 inches at most).

When using night pens for a prolonged period of time or with a large number of livestock, sanitation becomes an important consideration. Livestock may need more frequent anti-parasite treatment and the enclosure will need regular cleaning (Linnell et al. 1996). Small ruminants in particular, are susceptible to orthopedic infections that may be exacerbated by being enclosed with conspecifics. One potential solution is to place a therapeutic footbath at the pen entryways so animals' feet are cleaned and treated as they enter the enclosure.

Some fear that enclosing livestock restricts their access to forage and will reduce their ability to adequately gain weight. Research conducted on cattle and sheep suggest that they compensate for lost grazing time and are able to gain weight as well as they would if left unconfined (Linnell et al. 1996). Night penning also permits daily contact and inspection of livestock.

Though enclosures can provide extremely effective protection, they are only suitable for small-scale operations in which a human can be present each morning and evening to let animals in and out. In the future, there may be technological tools available to operate enclosures automatically or remotely, but these tools are not currently commercially available. Night penning is likely the most effective option for District tenants with chickens, alpacas, horses, or other small-scale livestock operations; this is not likely a suitable tool for cattle producers on open range.

Livestock Guarding Animals (LGA)

One of the oldest practices in the livestock protection toolbox, livestock guardian animals make also be one of the best tools for keeping livestock safe and healthy. More common in sheep and goat operations, these animals may be used with cattle as well. Benefits to using

LGAs may include reduction in predation and labor, as well as more efficient pasture use, potentially without displacing predation risk onto neighboring pastures (Linnell et al. 1996, Webber et al. 2012, Miller et al. 2016). Similar to deciding on appropriate fencing, LGAs come in a wide variety of species and breeds, and choosing the right type of guardian animal, and number needed, will depend on a variety of criteria, such as the size and type of livestock operation, terrain, level of use by the general public, carnivore species present, etc. The cost to acquire and maintain LGAs varies greatly by species and breed, and requires proper training and years of commitment from the producer. Since people started using LGAs, they have employed a wide variety of species such as dogs, llamas, cattle, ostriches, and even baboons (cited in Linnell et al. 1996). This review will focus on the three most common species in North America, dogs, llamas, and donkeys. Livestock guarding dogs are likely the most effective option for protecting against the carnivores present on District properties. Llamas and donkeys are usually less expensive to acquire and maintain, easier to train, and live longer than dogs, but they are not as effective at protecting against mountain lions (Linnell et al. 1996, Smith et al. 2000, Miller et al. 2016, Macon et al. 2017, Scasta et al. 2017). There is an extensive literature on training livestock guarding animals, breed selection, care, and maintenance, the details of which are beyond the scope of this review (see Smith et al. 2000, Dawydiak and Sims 2003).

Livestock Guarding Dogs (LGDs)

There are many breeds of livestock guarding dogs that have been developed over thousands of years of selective breeding. Though many more exist, commonly found breeds in North America include Great Pyrenees, Bernese Mountain Dog, Anatolian Shepherd, Komondor, Akbash, and Maremma (Linnell et al. 1996). Animal Plant Inspection Services in collaboration with Utah State University is currently conducting research to determine whether additional breeds developed in other countries, such as Kangal, Karakachan, and Cao de Gado Transmontano, may provide reliable carnivore protection while remaining safe for use on public lands that overlap with human recreation (Kinka, personal communication). Much of the research on LGDs has focused on protecting sheep, however this is a tool that has been successfully used with cattle and other livestock species as well.

Likely to be the most effective for District producers, however, LGDs are the most expensive LGA in time and money. In order for them to be effective, LGDs must be properly trained and strongly bonded to the herd. The average time spent supervising, training, and feeding averages 9 to 10 hours each month (cited in Smith et al. 2010). If they are improperly trained and treated as pets, “the only thing they will effectively guard is the front porch” (Macon, personal communication). Initial costs range from \$240 to \$1000 depending on age and breed, and first year costs of shipping, food, vet bills, travel, damages caused by dogs, etc. average \$700 to \$900. Subsequent mean annual expenses range from \$250 to \$290 (cited in Smith et al. 2010). Not all dogs are appropriate for the job, roughly a quarter of LGDs injure or kill the livestock they are protecting, making selecting the right individual important. However, LGDs are more commonly used with sheep and goats, which may be easier for the dogs to harm than cattle.

Depending on their personality, guarding dogs should be temporarily removed when using shepherding dogs, as conflict between the two may arise.

If properly trained and bonded, LGDs can be highly effective, reducing depredations by up to 100% (Linnell et al. 1996, Gehring et al. 2010, Smith et al. 2010, Miller et al. 2016). They are among the most highly praised tool available. In a survey of 400 producers using over 700 dogs, 82% of respondents deemed dogs an “economic asset” and 9% ranked them as a “break even” investment, and the remaining 9% categorized them as lower value (cited in Smith et al. 2010). Compared with other preventative tools, LGDs are likely the most effective tool for operations ranging from a few animals in a small paddock to large herds on open range (cited in Macon et al. 2017).

LGDs are effective against felids as well as other canids. Properly trained LGDs with appropriate dispositions can also be effective against free-ranging dog depredations, a concern for producers operating on the urban-wildland interface (Larson and Salomon 1988). LGDs can help keep encourage herding behavior in livestock, making this tool especially effective for large-scale open range situations, and helpful to for gathering and moving livestock. In addition, LGDs disrupt a carnivore’s behavior without displacing it. That is, the carnivore can still live alongside the livestock operation and maintain its territory, so protection of one pasture does not necessarily mean increased predation on a neighboring pasture or ranch (Coppinger et al. 1988). In effect, an LGD can “train” the local carnivores to respect the boundary between the dog and the carnivore. Together, the LGD and the resident carnivore, in turn, defend that area from intrusion by other members of the carnivore’s species (Macon, personal communication).

A major concern for livestock operators working on District properties would be how LGDs interact with park visitors and domestic dogs. Different breeds of dogs differ in their level of aggression toward people, as do individuals within a breed. LGDs intended for use on District land where they may encounter members of the public and their pets need to be carefully screened, as overly aggressive LGDs could pose a significant risk to the public as well as companion animals. Producers may wish to post signs alerting the public to LGD presence, and temporarily bar domestic dog access. In order to bolster support and compliance, it may be wise to include information on the proactive conflict prevention program, and provide information on how to handle potential interactions with LGDs. The USDA has produced informational material to help avoid conflict between recreationalists and LGDs (USDA 2010a, USDA 2010b). Before considering LGDs, it would be prudent to consult the District’s legal counsel for advice on potential liability created by their presence.

Llamas

Llamas are a member of the South American camelid family that includes alpaca and others. Though some people use alpaca as LGAs as well, llamas tend to be more territorial and aggressive than alpaca, making them better suited to livestock protection (Linnell et al. 1996). Some llamas are naturally aggressive towards dogs and coyotes; however, they are not an effective tool against mountain lions. This feature likely makes them ill suited for use by District producers, unless threats shift and District producers find a growing need to protect against

domestic dog predation. In addition, there is scant information on using llamas for protecting cattle. All of the following information is from studies addressing llamas protecting sheep. These results may or may not be transferable to cattle.

Gelded males are most commonly used and can be purchased for \$700 to \$800. Maintenance costs are low, as they have similar dietary and management requirements to cattle (other than needing to be sheared) (Smith et al. 2010). There is virtually no need for training, as llamas usually assimilate to sheep herds within a couple of hours to one week, however data are not available for bonding time between llamas and other species of livestock. Llamas may work best in small- to mid-sized operations on pastures up to 300 acres. Average operators recommend one gelded male llama for 250 to 300 sheep; using more than one llama per group often results in the llamas bonding with one another rather than to the herd (Andelt 2004). When confronting a carnivore, typical behaviors include alarm calling; approaching; chasing, kicking, spitting; or positioning themselves between the carnivore and the herd. It is important to note, llama's aggression towards canids makes them incompatible with LGDs or shepherding dogs. Llama size and alertness are positively correlated with aggression, making large, alert llamas likely to be the best guardians (cited in Macon et al. 2017).

Donkeys

Similar to llamas, donkeys tend to be used for protecting sheep more often than for protecting cattle, and most of the literature pertains to the former. Again, the principles may or may not be transferable to cattle operations.

Donkeys are less expensive to purchase than LGDs or llamas (between \$65 and \$250), and inexpensive to maintain (\$66 per year on average, with a range of \$0 to \$300) (Smith et al. 2010). The most common varieties of donkeys used are standard or mammoth. Single jennies or gelded males are most effective, and generally need to be introduced to the herd between 3 to 6 months of age. Herd bonding should be solidified for 4 to 6 weeks before donkeys are turned on pasture with livestock. They are longer lived than LGDs, with an average life expectancy of 10-20 years. Llamas and donkeys are compatible with other depredation prevention, livestock management tools (other than shepherding dogs), and are less likely to wander beyond fence lines than LGDs (cited in Macon et al. 2017).

Typical guarding behaviors include braying, running towards or chasing the intruding carnivore, biting, and kicking. Individual donkey personality and propensity for aggression toward canids vary greatly, so introducing a donkey to a dog to evaluate their reaction before relying on that animal to protect livestock would be wise (Smith et al. 2010). Donkeys that display aggressive behavior to carnivores are most effective at deterring coyotes and dogs in small (up to 600 acres), relatively open pastures (Macon et al. 2017). Donkeys are less effective against mountain lions than LGDs.

Some donkeys are aggressive towards lambs or kids, so caution should be used when calving. It is often ineffective to use donkeys in pastures adjacent to other donkeys, horses, or mules, as they may bond with their fellow equines rather than with the target herd. Donkeys have similar dietary requirements to cattle; however, it is critical that donkeys do not have access

to feeds with ruminant-only feed additives (like Bovatec, Rumensin, and other ionophores), which are extremely toxic to all equines.

Frightening Deterrents

Various frightening devices, primarily visual and auditory, have been used to prevent livestock depredation. Some carnivore species have a tendency to avoid novel stimuli, such as randomly flashing lights (eg. Foxlights), radios, propane cannons, etc. Very little is known about the effect of acoustic and visual deterrents on livestock predation by mountain lions or bobcats, however, some research suggests that randomly emitting strobe/siren devices may temporarily deter coyote depredation. In one study with fenced-pastured sheep, coyotes were deterred for up to 91 days and reduced lamb losses by 44 to 95 percent (Linhart 1984, Linhart et al. 1992, Linnell et al. 1996). In another, random strobe lights were found to be effective at reducing coyote predation on sheep by 60 percent for the 3 months they were deployed (cited in Linnell et al. 1996). The only study addressing the efficacy of flashing lights on preventing mountain lion depredation found Foxlights to be an effective deterrent for protecting camelid bed sites for up to 4 months (Ohrens et al. 2018). A study measuring the efficacy of timed gas exploders set to go off every 7 to 8 minutes from dusk until dawn found that they were effective against coyote predation for an average of 31 days to 6 weeks before animals became habituated to the sounds (cited in Linnell et al. 1996). Acoustic devices alone seem to be less effective, but they have only been rigorously tested on bears (Miller et al. 2016). Unfortunately, there has been little rigorous testing of these methods, and the few studies that exist are often hampered by small sample sizes, poor experimental control, lack of strong inference, and limited ability to reliably inform management (Miller et al. 2016, Eklund et al. 2017, van Eeden et al. 2018).

Some tools are designed to emit an unpleasant stimulus at random intervals, while others are triggered by animal presence. Foxlights, Predator Guard, and other similar devices belong in the former group of tools that randomly emit bright, displeasing lights from sunset until sunrise when most carnivores are most active. Motion-activated sprinklers, lights, and sound devices, on the other hand, are only triggered when an animal is present. Each of these tools provides a psychological barrier by making the immediately surrounding area more unpredictable and frightening, however motion-sensitive sprinklers are the only tool that deliver a physical penalty for trespass, which could increase the amount of time it takes for carnivores to habituate to them.

While deterrent devices may provide some immediate short-term protection, animals may become habituated to these tools in a matter of days or weeks, depending on the species and context in which they are being used. When used alone, these tools are likely best suited for high-risk, short-duration, small-scale use, such as calving paddocks (Koehler et al. 1990, Linnell et al. 1996, Shivik 2006, Miller et al. 2016, Ohrens et al. 2018). Combining acoustic and visual techniques may enhance efficacy and increase the time before carnivores habituate (Koehler et al. 1990, Miller et al. 2016). Additionally, tools that are behaviorally triggered (i.e. motion-sensitive devices), or provide a physical penalty (eg. sprinklers) are more likely to remain effective for a longer period of time (Shivik and Martin 2001).

Changing Cattle Breed and Operation

Generations of breeding have selected for livestock with traits that decrease their ability to identify, respond to, and avoid predation threats (Johansson 2001, Price 1999, Muhly 2010). Behavioral traits, such as docility, and physical traits, such as exaggerated meat growth, leave livestock more vulnerable than their wild ancestors (Flörcke and Grandin 2013). Switching from a more docile breed to one better equipped to protect itself could help prevent depredations. For example, changing from a gentle breed, like Hereford cattle, to a more territorial one, such as Raramuri Criollo or San Martineros, could provide more robust stock (Shaw et al. 1988). The USFWS is currently experimenting with a mixed herd of traditional beef cattle and Raramuri Criollo cattle (11 cows and 1 bull) to see whether mixing in this species of cattle will result in fewer losses to federally endangered Florida panthers. This experiment has only been running for a short duration and it is too early to tell whether this will be a successful strategy (Lotz, personal communication). Similarly, San Martineros, a little-known subspecies of Criollo cattle that descended from Spanish fighting bulls, are being introduced to mixed herds in Columbia. This breed is reportedly docile with humans, but fiercely defensive of their young and territory, even against carnivores (Economist 2017, Hoogesteijn and Hoogesteijn 2014). Maintaining docile temperaments in cattle ranging on land shared with the general public is likely an important factor to keep in mind on District property; there is an important balance to be struck between reducing the changes of livestock predation and increasing the chances that a member of the public could be hurt by cattle.

In addition to changing cattle breed, altering the type of operation can also shift the level of predation risk. Some demographics are more vulnerable than others (newborns, calves, females giving birth), and converting from a cow-calf operation to steer only could reduce depredations and be effective on any spatial scale (Shaw 1977, Shaw et al. 1988). The idea is to stock animals that are large enough to be able to escape predation, which means running only cattle that have reached 140kg or greater (Shaw 1977). Again, these considerations need to be weighed against producer preferences and public safety. Combining different livestock types (such as mixing cattle and sheep) may decrease risk as well, this may be especially beneficial for the smaller livestock (USDA 2015a).

Altering Pasture Vegetation and Grazing Regimes

Ideal carnivore hunting habitat is often determined by a combination of habitat type, topography, prey species habits, and hunting modality. Coursing predators, such as wolves, prefer open habitat where they can locate their prey and chase them for long distances, during which time they may select for weaker members of the herd (Kauffman et al. 2007). Ambush predators, such as mountain lions, rely on more heavily structured environments in which they may conceal their presence and pounce on their prey at close range (Williams et al. 2014). Altering pasture vegetation on a scale that would alter predator-prey dynamics between livestock and native carnivores likely falls outside the mission of the District, however, there are actions that could be taken on a small scale.

Rather than altering the pasture vegetation, producers can use vegetation as a guide for where and how to graze particular areas. Depredations may occur in particular “hot spots” where topography, vegetation, and animal behavior coincide to produce locations where livestock are more vulnerable (Jackson et al. 1996, Linnell et al. 1996, Miller et al. 2016). In the Santa Cruz Mountains, this is likely to be areas with rough terrain and shrubby vegetation. Oak savanna, grasslands, and other open habitats are likely to be safer areas for livestock (Yovovich 2016). Livestock producers may wish to select open habitats for calving and grazing cattle until they reach a size less vulnerable to predation (>140kg), and avoid grazing young calves in shrubby pastures where possible (Shaw 1977).

Mapping depredation occurrences to look for spatial patterns could help inform stocking decisions as well. Areas deemed higher risk could be avoided or stocked with a less vulnerable livestock demographic, or more aggressive breeds or individuals could help improve livestock safety. For example, if producers wish to graze in shrubby habitat, they could replace cow-calf pairs with bulls or individuals they know to be more aggressive.

Altering Production Calendar

Carnivores tend to optimally forage, selecting prey that is easiest to find and subdue (Lima and Dill 1990). Most carnivores will select newborns and young juveniles over adult members of the same species, as they are generally easier prey to consume. In addition, many species have a seasonal birth pulse during which time there may be an abundance of young animals afoot. Livestock producers can time their own calving to coincide with deer fawning to take advantage of easy alternative prey source that may draw mountain lions and coyotes away from livestock (Shaw 1977, Shaw 1981, Linnell et al. 1995, Sacks and Neale 2002). Research has shown that the number of cattle taken by mountain lions is likely inversely related to the abundance of local prey (Shaw 1977, Shaw 1981). Coyotes are better suited to eat small prey than they are to hunt down cattle, equines, camelids, or large pigs. Research suggests that coyotes eat livestock opportunistically, and in proportion to its availability. This means that bolstering native alternative prey could help take predation pressure off of livestock of any species (Linnell et al. 1995, Linnell et al. 1996, Sacks and Neale 2002). A different way to apply probability to protect livestock is to synchronize births. When births are staggered, a resident carnivore can predate a calf in one pasture, and then move to the next pasture when the next calf is born. If all of the calves, kids, lambs, etc. are born at the same time, it reduces the opportunity for carnivores to rotate between pastures (cited in Linnell et al. 1996)

Attractant Removal

Although they are primarily hunters, coyotes, mountain lions, dogs, and bobcats are all opportunistic scavengers as well. Dead and downed animals may attract these carnivores into areas where other livestock are grazing and can increase depredation (cited in Linnell et al. 1996). Removing sick, injured, and dead livestock may help reduce attractants that are appealing to carnivores, and may prevent further injuries to live animals. Some evidence suggests that carnivores are attracted to bone yards and may be more likely to kill livestock grazing in adjacent

pastures, and bone yards may attract livestock guarding dogs away from the livestock protection duties (cited in Macon et al. 2017). The risk to suffering additional depredations is highest immediately following an initial depredation, as the carnivore returns to feed and may injure or kill additional animals.

When possible, it is best to isolate sick or injured animals and place them in a protected area or structure. For animals that have already died, it is best to bury or remove the carcass as soon as possible, as is stated in the current District policy, to discourage carnivores from returning to the site to feed. On open range, it may be difficult or impossible to locate and retrieve carcasses. In addition, extracting and transporting carcasses to a rendering facility may be resource intensive and expensive (Antonelli et al. 2016). In these cases, the best option may be to bury carcasses as far as possible from live animals or recreational trails, while making sure to follow local laws dictating burial depth, regulations on limiting potential disease transmission, ensuring the site is appropriately far from waterways, etc.

Carcasses may be treated with lithium chloride, cupric sulphate, anthelmintic thiabendazole, emetine hydrochloride, or alpha-naphthyl-thiourea to reduce palatability, however producers will need to seek CDFW permission before applying any of these chemicals (cited in Linnell et al. 1996). These chemicals are known to cause severe nausea and could be a useful tool in conditioning carnivores against preying upon cattle, however, results on taste aversion conditioning have been mixed. If the chemicals and dosages are carefully selected, this technique is thought to have limited negative effects on non-target species (Linnell et al. 1996). Many of these chemicals have been safely used on a wide variety of species (For example, emetine hydrochloride has been safely used with coyotes, raccoons, opossums, striped skunks (cited in Linnell et al. 1996); lithium chloride has been safely used with coyotes, domestic dogs, bears (Linnell et al. 1996), amphibians and reptiles (Paradis and Cabanac 2004), and avian scavengers (Nicolaus et al. 1989); etc.). It is possible that emetic chemicals could cause aversive behavior in scavengers. Whether or not chemical aversion is a successful tool, it is best to remove a carcass where possible, as the smell of rotting meat may attract carnivores and cause further depredations even if the meat is not palatable.

Current District regulations regarding animal remains are as follows:

701.7 Depositing of Animal Remains.

No person shall bury, leave, scatter or otherwise deposit animal remains on District lands, except for cremated animal remains as specified in Section 807.

807. Scattering of Cremated Remains

807.1 Regulations for the Scattering of Cremated Remains.

No person shall scatter any cremated human or animal remains (cremains) without first having obtained a written permit from the District, and shall abide by the permit conditions which shall include, but not be limited to, the following conditions:

- a) The scattering of cremains is prohibited: within 1,000 feet of any residence or dwelling, within 500 feet of any creek, stream, or other body of water, or within 50 feet of any road or trail.

- b) Cremains must be scattered, must not be left in a pile, and must not be readily visible to the public.
- c) No containers for the cremains, identification tags, vases, flower pots, or other associated non-organic materials, or non-native plants, may be left at the site.
- d) No memorial, plaque, or other site marker may be left at the site.
- e) Any person scattering cremains on District lands shall possess and present a valid District permit when scattering cremains.
- f) The scattering of cremains for commercial purposes is prohibited.

E-Shepherd Collars

Designed for sheep, this tool is an electronic collar that monitors the animal's movement, recognizes when it is running, and triggers an ultrasonic alarm along with a set of LEDs with the goal of deterring the carnivore. The collar is only effective for the individual wearing it, unless the animal wearing the collar responds to a fellow animal being harassed and is close enough to the incident for the collar to discourage the predator. Collars cost roughly \$130 (plus shipping from South Africa), manufacturers recommend 1 unit for every 10 sheep, and batteries last from 16 to 19 months (replacement batteries cost roughly \$16 plus shipping). These collars have been successfully used on cattle in India and Namibia (Delpert, personal communication), however, since the collars are triggered by fleeing behavior, this may not be an effective tool for use with ambush predators, such as mountain lions. E-Shepherd Collar manufactures make no claims on efficacy against free-roaming dogs. There are no data on the efficacy of these collars on any type of livestock operation, as these collars have not been subject to rigorous scientific testing to date.

Cowbells

Producers may outfit livestock with bells to help locate animals, or to alert shepherds to when an animal is being chased, but there are little data established on whether this practice helps deter predation. Bells on sheep alone had no impact on coyote predation (cited in Linnell et al. 1996). There were no data on whether livestock guarding dogs and bells could be used together to help alert dogs to an animal in distress. There were also no data on whether cowbells could allow livestock to keep closer track of one another and aggregate when threatened. If a range rider, a shepherd who stays with livestock to protect them against predation, is within earshot of the herd, a loud bell could allow them to intervene in the event that a carnivore is harassing an animal or the herd, but this would require a person to be on site at all times, making it a very resource-intensive tool. As a standalone tool, cowbells are unlikely to be helpful for District producers unless the livestock were being grazed near a ranch home or other site where people would be within earshot.

Human Presence

Intermittent human presence among widely dispersed livestock and low-density carnivores is unlikely to have a significant positive impact (Linnell et al. 1996). However,

human presence, via herding, range riding, etc., can be highly effective in preventing depredations, as the shepherd can keep the herd together, monitor their safety, and intervene in the event of an intrusion. Unfortunately, this tool is incredibly labor and cost intensive, and likely infeasible without some form of subsidy.

Some carnivores, mountain lions in particular, are somewhat sensitive to human presence and will avoid hunting in areas with high human activity (Wilmers et al. 2013). However, other carnivores may recognize that human activities are often restricted to daylight hours and may instead shift their activities to after sunset (cited in Macon et al. 2017). Similar to visual and auditory deterrents, it is important to alter human activities so carnivores do not become habituated to certain routines and able to respond to times when they know the shepherd is absent. The key is to create an unpredictable landscape that carnivores prefer to avoid.

Since wolves were reintroduced in the mid 1990s, range rider programs have become a relatively common form of shepherding in the Northern Rockies. Some ranchers perceive range rider programs to reduce depredations, as well as a variety of social benefits (including reduced stress, reduced trespass and littering, improved public perception, and community trust building). Easier to verify benefits include identifying and treating sick animals, as well as finding and removing carcasses (Parks 2015). Many range rider programs rely on guest worker (H-2A) shepherds, most of whom come from South America. Changes in U.S. immigration policies may influence access to guest workers and could significantly affect the cost of range riding programs (American Sheep Industry Association 2015).

Volunteer Range Shepherd Program

In addition to range riders, or perhaps as an alternative, some projects have had success with volunteer range shepherds. The Wood River Wolf Project (WRWP) in Idaho designed a program in which volunteer shepherds helped protect bands of sheep against predation from black bears, grizzlies, mountain lions, coyotes, bobcats, and of greatest concern, wolves. Wolves were reintroduced to Idaho in 1995 and 1996, and as their population increased, so did conflict with livestock. The Wood River watershed is home to the “sheep superhighway,” one of the largest grazing sectors in the state, and also experienced some of the highest sheep losses to wolves. A collaboration between conservation organizations, ranchers, scientists, federal government agencies, and county officials, the WRWP was started to implement and test predation deterrent strategies in an attempt to ameliorate the growing conflict between livestock producers and carnivores. Ultimately, the strategies the WRWP put in place reduced their depredation rate to 90 percent lower than neighboring sheep grazing operations (WRWP 2018). One of the strategies they utilized to achieve this remarkable success was a volunteer range shepherd program intended to deter carnivores by increasing human presence near livestock.

The WRWP worked with herders who managed bands of 1,000 to 2,000 sheep, and organized a fleet of volunteers to support the herders. These volunteer shepherds provided predation deterrence by increasing human presence near sheep bands, as well as contributing non-technical support to field staff and herders by shuttling supplies to the herders; assisting with injured animals (sheep, guard dogs, herding dogs or horses); installing, monitoring, and

collecting game cameras in the field; collecting and entering data; driving personnel to and from the field; transmitting information between herders and field staff; and implementing other nonlethal deterrents. The volunteer range shepherds performed scheduled duties, and in the event that wolves were detected nearby, they were rapidly deployed to guard a specific band. It should be noted that a program that incorporates impromptu scheduling requires a much larger supply of volunteers than a program that strictly relies on preplanned activities (Martin personal communication, WRWP 2018).

There are a few notable features that would need to be addressed make a program like the WRWP suitable for implementation on District properties. First, most of the livestock productions on District land are low-density cattle operations, whereas the WRWP runs bands of grouped sheep. A single person is much more effective monitoring and protecting a concentrated group of animals than it is for a group scattered across the landscape. Second, the local wolf packs in the Wood River watershed had one or more members collared, enabling a level of monitoring not possible for livestock producers on District land. Third, livestock in the WRWP were owned by 4 producers and protection efforts were coordinated by a single entity with staff dedicated to conflict prevention. In contrast, the District has a greater number of producers and does not currently have staff capacity earmarked for coordinating livestock protection efforts.

Aside from increasing human presence on the landscape and thereby reducing predation, range riders or range shepherds could also provide additional benefits to producers, as well as the general public. Previous range rider and range shepherd program users have reported appreciating extra help detecting injured animals and carcasses; maintaining and monitor camera traps, fencing, and other preventative tools (Foxlights, motion-activated sprinklers, etc.); detecting and reporting lost ear tags; collecting data on carnivore presence and habitat use patterns; etc. Potential benefits to the public would include increasing potential recreational activities on District land, including access to restricted areas, horseback riding, citizen science opportunities, etc. Even more importantly, this type of partnership between livestock producers and an increasingly urban general public would also provide a rare opportunity to teach Bay Area residents about the value of grazing and ranching, two frequently undervalued and often vilified practices.

When employing range riders or volunteer shepherds is impractical for producers, there are other strategies they can use to increase human presence. Feeding livestock each day could encourage herd aggregation and herding behavior, and human scent could act as a carnivore deterrent. In addition, frequent monitoring helps identify sick or injured individuals that could attract carnivores. Producers on District lands could use areas with high human recreational use as a potential shield against predation. Vulnerable livestock (such as cow-calf pairs when calves are young) could be give preferential access to highly frequented trails or camping areas to capitalize on increased human presence.

Hazing

When an animal is in an area that overlaps with vulnerable livestock, or is performing an unwanted behavior, a producer can deter the animal with unpleasant stimuli. Potential methods could include, but are not limited to, making loud noises in the carnivore's vicinity, chasing with trucks or hounds, throwing rocks, shooting with less-than-lethal munitions, etc. The target species and context will determine which tools are most appropriate. Hazing can be implemented as a general practice whenever a carnivore is seen in certain areas, or performing certain behaviors; or it can be used to target a particularly bold or aggressive individual. The most important components to hazing are to make sure the animal associates the negative stimulus with the undesired activity, and to follow through until the behavior has ceased. Though behavior-dependent, individually tailored hazing deterrents may be effective. Tools that rely on a direct interaction between a carnivore and a human potentially put both parties at risk of injury and are very resource intensive. Any person conducting hazing activities should be specially trained and following strict protocols. It would be wise to consult legal counsel before implementing any hazing program. In addition, potential hazing strategies are nearly limitless, and CDFW policy surrounding hazing is relatively vague; it would be prudent to consult local CDFW personnel before selecting any questionable methods.

Coyotes

When hazing coyotes, the person conducting the hazing activity should be sure to stand their ground; make eye contact to make sure the coyote is focused on them as the source of the disturbance. Hazing tools should be exaggerated, assertive, and when possible, should capitalize on as many senses as possible by using tools that involve sound, light, and motion. It is helpful to have variety in tools as well as the individuals administering the hazing. Coyotes can learn to recognize and avoid individual people, so varying both the tools and people involved or the clothing of the people involved (i.e. perform the hazing activity in street clothes rather than a uniform) will help avoid habituation and can decrease the number of hazing bouts necessary to teach the coyote to avoid the area more quickly.

If the coyote hesitates (freezes or moves away only a short distance), the person involved should intensify their efforts and advance toward it with the hazing tools (yelling, noisemaker, throwing rocks, waving arms, water gun, etc.). Always be sure to haze the animal until it has fully retreated to send a clear message that they should associate humans with discomfort.

It is critical to provide an escape path for the animal (i.e. never corner a coyote). It is most effective to haze on foot rather than from a building or a car where the coyote may not be able to see the person; the goal is to have the animal associate humans with danger, so it is best if they can clearly draw a link between the two. To ensure that coyotes do not return to displaying unacceptable behavior over time, it is helpful to maintain a practice of hazing in even casual interactions. Hazing should not take place if the coyote looks sick or injured, or if it has pups. In those cases, the best thing to do is to maintain eye contact and back away.

Mountain Lions

Mountain lions are very cryptic and secretive, making their behavior difficult to observe in a natural setting. As such, there is very little data on hazing practices and their efficacy; most of the information available comes from anecdotal reports. Washington Department of Fish and Wildlife uses Karelian bear dogs to haze bears, and on occasion, mountain lions, that have wandered into residential areas. They have been effective at reducing recidivism in bears, but there is insufficient data to determine whether this is an effective tool for mountain lions (Beausolei, personal communication). A study in Brazil found that targeted firecrackers and night patrolling were effective hazing tools for preventing jaguar and mountain lion depredations (Cavalcanti et al. 2012).

Increase Human Tolerance for Carnivores

Whether it is delivered when an animal is harvested, or prematurely from an unintended source, death will always be a certainty in livestock production. Perhaps more so than other sources, depredations are both an emotional and financial issue. Though it is difficult as an agency to tackle the emotional side of depredations, there are tools that can be used to lessen the financial burden. By removing some of the financial cost to operating livestock in carnivore country, perhaps the District can increase tolerance for carnivores and predation on livestock.

One option for improving producer experience with carnivores is to create or support labeling programs that allow producers access to markets where consumers are willing to pay a premium on products utilizing practices that support consumer values (in this case, carnivore friendly ranching). This has been very successful for promoting and mainstreaming practices such as organic, grass-fed, etc. For producers selling their beef locally, the Bay Area is likely a prime market for selling wildlife-friendly meat.

There are currently a few groups that certify and/or promote wildlife-friendly and/or carnivore friendly livestock management practices. For example, Wildlife Friendly Enterprise Network certifies a variety of livestock operation types and other agricultural producers from across the country who commit to a strict set of criteria to qualify for “Predator Friendly” status. Started in 1991, the program requires that participating producers employ only non-lethal preventative livestock predation deterrents. Each operation is audited and monitored annually to ensure that preventative practices remain in place. In turn, Wildlife Friendly Enterprise Network provides various marketing incentives for producers to join the program. Though this does not prevent conflict, it uses the market to help defray the cost of coexisting with carnivores and makes that relationship more profitable for producers. If producers operating on District lands can pass the cost of ranching alongside carnivores on to consumers willing to pay a premium on local products in which they believe, perhaps carnivores will become less of a burden to producers.

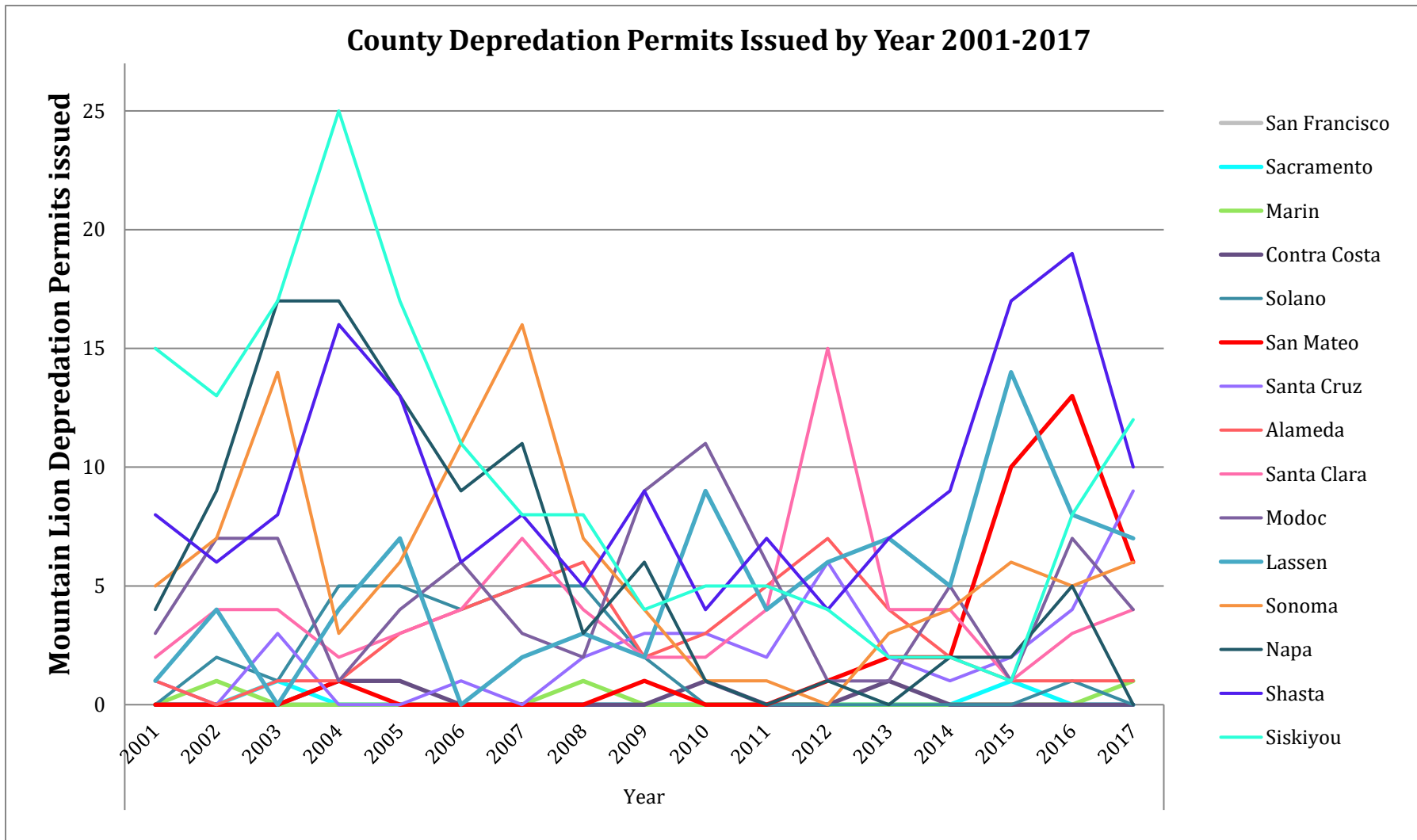
An alternative option for decreasing the cost of ranching alongside carnivores is to provide producers with reduced grazing fees. As mentioned above, this is a tool used at Point Reyes National Seashore, where livestock producers are indirectly compensated for costs associated with carnivores with a reduced grazing fee of \$7.00 per AUM. The District currently charges a reduced fee of \$16.15 per AUM in part to help defray costs associated with raising

livestock in rugged carnivore habitat. Producers that run cattle on federal land under the Bureau of Land Management and Forest Service were charged a grazing fee of \$1.87 per AUM for 2017 (BLM 2018). In contrast, this year the East Bay Regional Park District is charging \$20.75 per AUM (EBRPD 2018, Defreese, personal communication); East Bay Municipal Utilities District is charging \$26.40 per AUM (Swann, personal communication), and SFPUC is charging \$19.90 per AUM (Dakin, personal communication).

Communicate Dog Restrictions to the Public

Though District tenants do not report dogs as their main concern, there are a few things that the District could do to keep dog issues to a minimum. It could be beneficial to communicate the logic behind the District's leash policies. On the District's website addressing dog rules and regulations (<https://www.openspace.org/what-to-do/activities/dogs>), there is no mention of being vigilant around cattle, and especially calves. The District is home to a vast network of trails, and much of the adherence to following park rules is done so voluntarily. It could build support and leash rule compliance to create online materials and/or signage that let dog owners appreciate their roles as rangeland stewards. Additionally, alerting the public to their level of potential liability should their dog injure livestock (see Legal Status and Regulations - Dogs above) could help prevent negative interactions.

Appendix



Appendix 1: Reported depredation permits issued to each of the Bay Area counties and the counties in which wolves have had a significant presence. Overall, San Mateo County has lower reported depredation permits than neighboring counties, however, there has been an increase in the last 4 years (Data are available from CDFW 2018).

County	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alameda	1	0	1	1	3	4	5	6	2	3	5	7	4	2	1	1	1
Alpine	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Amador	15	13	8	7	5	3	7	8	6	3	5	3	4	16	4	5	3
Butte	0	3	3	5	6	1	3	0	5	5	5	1	3	7	8	6	10
Calaveras	7	10	13	22	19	9	13	6	7	16	9	6	14	30	13	10	6
Colusa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
Contra Costa	0	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0
Del Norte	0	0	0	4	1	3	0	1	0	2	1	0	0	1	1	0	2
El Dorado	22	14	19	19	5	7	4	4	4	17	13	16	16	23	29	13	15
Fresno	3	4	1	2	1	1	2	4	0	2	1	2	2	4	7	2	2
Glenn	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Humboldt	6	4	8	12	9	11	10	5	8	8	6	6	3	3	8	0	10
Imperial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inyo	0	2	0	2	1	0	0	0	0	0	3	1	0	0	0	1	0
Kern	3	4	2	1	4	4	3	0	4	1	1	2	3	1	8	7	1
Kings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake	1	2	3	1	5	1	2	3	1	1	1	0	4	1	1	3	1
Lassen	1	4	0	4	7	0	2	3	2	9	4	6	7	5	14	8	7
Los Angeles	1	1	1	1	1	0	2	1	0	0	0	1	0	5	1	1	0
Madera	0	3	1	1	0	2	1	0	3	4	1	3	2	3	11	5	4
Marin	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Mariposa	2	3	0	2	5	3	10	2	3	2	7	8	5	12	11	8	11
Mendocino	26	35	20	31	18	10	17	9	5	6	13	7	5	4	7	21	13
Merced	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	1	0
Modoc	3	7	7	1	4	6	3	2	9	11	6	1	1	5	1	7	4
Mono	1	0	0	0	1	1	0	1	0	1	0	2	0	0	1	0	0
Monterey	2	8	5	7	6	2	13	2	5	0	3	3	5	7	4	8	2
Napa	4	9	17	17	13	9	11	3	6	1	0	1	0	2	2	5	0
Nevada	2	6	5	12	4	7	6	1	2	2	5	3	5	4	7	14	10
Orange	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Placer	7	5	3	2	0	4	1	0	1	4	2	4	1	4	7	5	4
Plumas	8	7	4	3	8	4	4	2	0	0	1	10	3	4	2	4	4

County	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Riverside	4	6	2	9	2	4	1	0	4	0	0	1	7	4	1	0	0
Sacramento	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
San Benito	1	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0
San Bernardino	1	3	1	1	0	2	4	0	0	2	0	0	3	1	0	1	1
San Diego	7	4	1	0	0	1	1	0	0	0	2	2	2	5	2	6	2
San Francisco	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Joaquin	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Luis Obispo	3	5	7	16	8	9	6	6	2	1	7	3	10	11	24	6	7
San Mateo	0	0	0	1	0	0	0	0	1	0	0	1	2	2	10	13	6
Santa Barbara	1	2	0	1	7	2	7	3	3	2	0	0	3	3	4	6	1
Santa Clara	2	4	4	2	3	4	7	4	2	2	4	15	4	4	1	3	4
Santa Cruz	1	0	3	0	0	1	0	2	3	3	2	6	2	1	2	4	9
Shasta	8	6	8	16	13	6	8	5	9	4	7	4	7	9	17	19	10
Sierra	2	1	1	0	0	0	2	1	1	0	1	0	0	1	0	0	1
Siskiyou	15	13	17	25	17	11	8	8	4	5	5	4	2	2	1	8	12
Solano	0	2	1	5	5	4	5	5	2	0	0	0	0	0	0	1	0
Sonoma	5	7	14	3	6	11	16	7	4	1	1	0	3	4	6	5	6
Stanislaus	1	0	0	1	1	2	2	4	2	0	0	0	1	2	0	0	0
Sutter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tehama	1	1	0	3	2	1	1	0	1	4	0	0	2	1	4	4	1
Trinity	9	8	9	8	10	11	10	9	11	5	4	4	2	2	4	0	2
Tulare	1	1	1	3	2	2	0	0	0	0	0	0	0	0	0	2	0
Tuolumne	10	8	12	5	5	3	10	23	10	5	2	1	14	18	20	12	11
Ventura	0	0	1	2	1	4	3	0	1	0	0	0	1	1	1	1	0
Yolo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Yuba	0	0	4	1	1	0	0	3	0	0	0	0	1	0	2	6	2

Appendix 2: Reported depredation permits issued for all counties in California from 2001 through 2017. It is important to note that not all depredations are reported; these data may not reflect every depredation incident that occurred within that county for a given year. It should also be noted that not all of the permits issued resulted in mountain lions being removed (These data were used to make the graph in Appendix 1 and available from CDFW 2018).

Operation Timing	Acreage	Percent Grazed Acreage	AUM	Percent AUM	Operation Type	
					Stockers	Cow/Calf Pairs
Seasonal	2,096	19	1,096	23	1	3
Year Round	8,717	81	3,640	77	2	6

Appendix 3: Year round and seasonal grazing on District properties. There are 10 properties that have cattle grazing, 4 of which are seasonal (representing 19 percent of grazed land), and the remaining 6 are year round (representing 81 percent of grazed land). Both the type of operation and operation timing can influence predation risk. For example, whether an operation is running stockers versus cow/calf pairs (with higher predation risk for cow/calf pairs) or whether an operation is seasonal versus year round (with higher predation risk for year round operations). Factors may also interact, elevating or decreasing risk accordingly. For example, holding all other factors constant, the rank order of highest potential relative risk to least would be the following:

Year round cow/calf pairs > seasonal cow/calf pairs > year round stockers > seasonal stockers

Tool	Coyote	Mountain Lion	Bobcat	Dog
Lethal removal	Moderately Effective	Moderately Effective	No Data	No Data
Permanent wire fencing	Moderately Effective	Not Effective	Not Effective	Effective
Permanent electric fencing	Effective	Moderately Effective	Effective	Effective
Temporary electric fencing	Effective	Results Vary	Effective	Effective
Fladry / Turbo fladry	Results Vary	No Data	No Data	No Data
Night penning	Effective	Effective	Effective	Effective
Livestock guarding dogs	Effective	Effective	Effective	Effective
Llamas	Moderately Effective	Not Effective	No Data ⁺	Effective
Donkeys	Effective	Moderately Effective	No Data ⁺	Effective
Frightening deterrents	Moderately Effective	Moderately Effective [~]	No Data ⁺	No Data
Changing cattle breed	No Data ⁺	No Data ⁺	No Data ⁺	No Data ⁺
Altering pasture vegetation	No Data ⁺	No Data ⁺	No Data ⁺	No Data
Altering production calendar	Moderately Effective	Moderately Effective	Moderately Effective	No Data*
Attractant removal	Effective	Effective	Effective	Effective
E-shepherd collar	No Data ⁺	No Data*	No Data	No Data ⁺
Cowbell	No Data*	No Data*	No Data*	No Data*
Human presence	Results Vary	No Data ⁺	No Data ⁺	No Data
Hazing	Effective	No Data ⁺	No Data ⁺	No Data

Appendix 4: Livestock protection toolkit. The practicality and efficacy of any particular tool will depend on the type and scale of the operation, livestock species, duration of use, etc. In addition, each tool may have very specific implementation instructions, and deviation from those guidelines may render the tool ineffective.

⁺ Likely moderately effective to effective

* Likely ineffective

[~] Limited results - one study with small sample size 50

Appendix 5: Acronyms and Abbreviations

AUM	Animal Unit Month
BLM	Bureau of Land Management
CDFW	California Department of Fish and Wildlife (2013- present)
CDFG	California Department of Fish and Game (1909-2012)
CCR	California Code of Regulations
District	Midpeninsula Regional Open Space District
DNA	Deoxyribonucleic acid
EBMUD	East Bay Municipal Utilities District
FGC	Fish and Game Code
GPS	Global Positioning System
LGA	Livestock Guarding Animal
LED	Light emitting diode
LGD	Livestock Guarding Dog or Livestock Guardian Dog
MCP	Marin County Program
MVZ	Museum of Vertebrate Zoology
NPS	National Park Service
SFPUC	San Francisco Public Utilities Commission
UCANR	University of California Agriculture and Natural Resources
UCCE	University of California Cooperative Extension
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WS	Wildlife Services
WRWP	Wood River Wolf Project

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Midpeninsula Regional
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Midpeninsula Regional Open Space District

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April 1, 2020

Mr. Eric Sklar, President
California Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814

RE: Letter of Support for Evaluating the Listing of the Mountain Lion Under the California Endangered Species Act

Dear President Sklar and Commissioners:

The Midpeninsula Regional Open Space District (Midpen) would like to take this opportunity to offer the following comments in reference to the proposed listing of mountain lions (*Puma concolor*) as Threatened under the California Endangered Species Act (CBD & MLF, 2019). Midpen manages roughly 65,000 acres of prime mountain lion habitat in the Santa Cruz Mountains and is committed to protecting regional mountain lion populations by preserving habitat, increasing habitat connectivity, minimizing human-wildlife conflicts, promoting bans and restrictions on rodenticide use and supporting research that improves our understanding of lion populations, ecology, and behavior throughout our region of influence.

As detailed in the petition to list, the Santa Cruz Mountain (SCM) lion population shares many of the same issues as the Santa Ana Mountains (SAM), San Gabriel/San Bernardino Mountains (SGSB) and Santa Monica (SMM) populations. All of these populations suffer from reduced habitat connectivity, poor genetic diversity and small effective population sizes (Gustafson et al. 2018). For these reasons Midpen supports the decision to evaluate the SCM population for inclusion in the proposed Evolutionarily Significant Unit (ESU). Conversely, there are significant differences between these populations that should be considered when evaluating the SCM population for listing. Unlike the SAM, SGSB, and SMM, the SCM have high quality habitat with a surplus lion population that act as a source for neighboring populations (Dellinger et al. 2019). Seven dispersal aged males from the SCM found their way into urban areas between 2014 and 2017 and required relocation by CDFW (CDFW data) indicating that available lion habitat is already occupied by dominant males. The Florida Panther Recovery plan suggests minimum densities of 2-5 lions per 100 square miles (USFWS, 2008). There are 1,387 square miles in the Santa Cruz Mountains bioregion. Based on the conservative estimate of 33-66 adult mountain lions (Gustafson et al. 2018) the SCM reaches the recommended minimum density with 2.38-4.76 lions per square mile. Considering that sub-adults, juveniles, and cubs are not included in this estimate it is likely that lion densities are considerably higher in the SCM. This indicates that the SCM population is not suffering from low population numbers relative to available habitat, but rather a lack of genetic diversity within the population, limited habitat connectivity between neighboring populations, and

increasing human use within available habitat. If lions in the SCM are listed, the recovery criteria should be designed to reflect this distinction by including a threshold of minimum genetic diversity and improved connectivity for recovery. Furthermore, robust, multi-year population studies will be required to determine the effectiveness of additional protections for mountain lions.

As a public land management agency Midpen strives to minimize potential human-wildlife conflicts to the greatest extent possible. Many of our preserves offer high quality lion habitat that directly abut densely populated urban areas with considerable potential for interactions between humans and mountain lions. Midpen has a strong focus on public outreach and education through interpretive signage, on site tabling, interviews with persons reporting lion activity, and adaptive management of trail access in response to potential human safety issues. Unfortunately, two of the seventeen verified mountain lion-human attacks in California since 1986 have occurred on Midpen preserves. The most recent attack took place on February 16th, 2020 at Rancho San Antonio Open Space Preserve (Rancho). At this preserve, lion sightings are reported roughly once per month and lions have been seen at all times of the day throughout all months of the year. As both lion and human populations in the area increase, and human-lion interactions become more common, lions occupying habitat along the urban interface may become more likely to exhibit bold behavior around people. Mountain lion attacks, though rare, are a risk to human safety that cannot be ignored. Furthermore, when attacks do occur, lions are killed in response to protect human safety. Midpen believes that non-lethal behavioral modification research to keep lions wary of human activity would be a benefit to mountain lions and to public safety. Midpen is also interested in studying human recreational use and/or habitat modification to reduce conflict.

In addition to research needs for non-lethal behavioral modifications of mountain lions to increase public safety where there is high human/mountain lion interactions, there is also a need for research on non-lethal deterrence methods to reduce livestock predation by mountain lions. In the last 10 years, 42 mountain lions have been lethally removed using depredation permits in Santa Cruz, Santa Clara, and Santa Cruz counties (CDFW depredation permit data). These three counties encompass the Santa Cruz Mountains and are all within Midpen's jurisdiction. This is significant considering the best available estimate of the number of lions in the Santa Cruz Mountains is 33-66 adult lions (Gustafson et al. 2018). In addition to legal depredation of lions, instances of poaching are known to occur along the San Mateo County Coast. In supporting additional protections for mountain lions, non-lethal tools will become increasingly important as livestock operators look for viable alternatives to reduce conflicts. In support of ongoing wildlife and livestock protection policy work, Midpen hired Wildlife Conflict Specialist Dr. Veronica Yovovich to complete a comprehensive literature review detailing all available wildlife livestock conflict mitigation measures that have been evaluated through scientific research. This has been attached to this letter as a reference that may prove useful in determining appropriate non-lethal alternatives for livestock operators dealing with predation issues.

Midpen has worked closely with regional CDFW biologists and wardens in responding to both public safety issues and depredation caused by mountain lions. In this capacity we have learned that a key issue facing CDFW is their capacity to respond with existing staffing levels. If the recent decision to extend the "three-strikes" depredation permit process to cover the entire proposed ESU is to be successful, Midpen recommends that additional staff be hired to ensure that CDFW has capacity to issue and monitor these non-lethal permits, as well as to educate ranchers and the public on how to best protect their domestic animals. In addition, there needs to be more enforcement of existing protections for mountain lions to ensure that poaching is discouraged to the greatest extent possible. This may require coordinating with

local District Attorney's Offices to advocate that lion poaching cases be prosecuted to the fullest extent of the law.

Midpen is looking forward to continuing to work with CDFW to preserve mountain lions in the Santa Cruz Mountains and beyond. We believe that additional protections paired with robust research, support for habitat connectivity, further habitat preservation, and appropriate staffing for CDFW biologists and wardens, can ensure that mountain lion populations persist throughout the state

Sincerely,



Kirk Lenington
Natural Resources Manager

Sources Cited

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US Fish and Wildlife Service, 2008. Florida panther recovery plan (*Puma concolor coryi*), third revision. US Fish and Wildlife Service, Atlanta, 217.

Center for Biological Diversity and the Mountain Lion Foundation, 2019. A Petition to List the Southern California/Central Coast Evolutionarily Significant Unit (ESU) of Mountain Lions as Threatened under the California Endangered Species Act (CESA)

April 13, 2020

Mr. Eric Sklar, President
California Fish and Game Commission
1416 Ninth Street, Suite 1320
Sacramento, CA 95814

Submitted via email to fgc@fgc.ca.gov

RE: Petition to list Southern California and Central Coast mountain lions as threatened under the California Endangered Species Act – support advancement to candidacy

Dear President Sklar and Commissioners:

Thank you for the opportunity to provide comments on the petition to list Southern California and Central Coast mountain lions as threatened under the California Endangered Species Act (CESA).

The undersigned organizations, which represent millions of supporters throughout California, strongly support the recommendation of the California Department of Fish and Wildlife that listing of mountain lions in Southern California and along the Central Coast may be warranted. We urge the Commission to initiate a full status review and advance the mountain lion populations in the entire area of the proposed evolutionarily significant unit (ESU) to candidacy.

Lack of connectivity is the primary driver of what scientists have termed an “extinction vortex” for several mountain lion populations in California. Humans have extended roads and development into mountain lion habitat with little regard of their movement needs, which has led to the formation of dangerously isolated populations with poor genetic health and high levels of human-caused mortalities, including car strikes, depredation kills, rodenticide poisonings, disease, and wildfires^{1,2,3}. If nothing is done to preserve remaining corridors and enhance connectivity at existing barriers, scientists predict that the Santa Ana and Santa Monica mountains populations could become extinct within 50 years or less. If inbreeding depression occurs, scientists predict these populations could disappear within 12-15 years².

Other populations within the proposed ESU, including those in the Santa Cruz, San Gabriel, and San Bernardino Mountains, are showing similar patterns of an extinction vortex^{1,4}.

¹ Gustafson, K.D., Gagne, R.B., Vickers, T.W., Riley, S.P., Wilmers, C.C., Bleich, V.C., Pierce, B.M., Kenyon, M., Drazenovich, T.L., Sikich, J.A. and Boyce, W.M., 2018. Genetic source–sink dynamics among naturally structured and anthropogenically fragmented puma populations. *Conservation Genetics*, 20(2), pp.215-227.

² Benson, J. F., Mahoney, P. J., Vickers, T. W., Sikich, J. A., Beier, P., Riley, S. P., ... & Boyce, W. M. (2019). Extinction vortex dynamics of top predators isolated by urbanization. *Ecological applications*, 29(3), e01868

³ Benson, J. F., Sikich, J. A., & Riley, S. P. (2020). Survival and competing mortality risks of mountain lions in a major metropolitan area. *Biological Conservation*, 241, 108294.

⁴ Saremi, N. F., Supple, M. A., Byrne, A., Cahill, J. A., Coutinho, L. L., Dalén, L., ... & O'Connell, B. (2019). Puma genomes from North and South America provide insights into the genomic consequences of inbreeding. *Nature communications*, 10(1), 1-10.

Despite the large areas of open space and suitable mountain lion habitat in the Santa Cruz Mountains, roads and development have been shown to be formidable barriers for mountain lion connectivity and gene flow. Building wildlife crossings and preserving natural corridors have to be a priority at every level of government. Protections under CESA that would improve habitat connectivity between the isolated populations and throughout the entire proposed ESU area are needed to ensure these magnificent big cats continue to inhabit these landscapes and inspire future generations.

Protecting mountain lions would benefit not only the species itself, but also imperiled wildlife and plants that are the cornerstone of California's unique biodiversity. The presence of this wide-ranging top predator has been shown to help maintain diverse habitats that support a multitude of fish, amphibian, reptile, bird, mammal, insect, and invertebrate species. And mountain lion kills provide an important source of food for numerous scavengers and opportunists. Loss of the species could potentially lead to degraded ecosystems and decreased biodiversity.

Affording protections to mountain lions would also benefit public health and safety. About 100 mountain lions are killed on California roads every year, and thousands of collisions with large mammals (mostly deer) are reported to state agencies and insurance companies annually. Protecting mountain lions by facilitating their safe passage over roads would improve gene flow among isolated populations and allow for the safer passage of many other animals, like deer, which would help to reduce wildlife vehicle collisions.

The well-being of mountain lions is linked with ecosystem function and public health and safety, but the species is facing unprecedented threats to long-term survival. We therefore strongly urge the California Fish and Game Commission to accept the Department's recommendation that listing may be warranted and advance Southern California and Central Coast mountain lions to candidacy.

Sincerely,

RESOURCE MANAGEMENT POLICIES

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION





MIDPENINSULA REGIONAL OPEN SPACE DISTRICT

RESOURCE MANAGEMENT POLICIES

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

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Ward 3, Jed Cyr
Ward 4, Curt Riffle
Ward 5, Nonette Hanko
Ward 6, Larry Hassett
Ward 7, Cecily Harris

General Manager:

Stephen Abbors



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1 INTRODUCTION

This document is an Initial Study for the Resource Management Policies (RMPs) prepared by the Midpeninsula Regional Open Space District (the District). The purpose of this document is to determine if adoption and implementation of the RMPs would result in a significant environmental impact pursuant to the California Environmental Quality Act (CEQA). The District is a public agency that owns and manages open space preserves on over 60,000 acres of land in northwestern Santa Clara County, southeastern San Mateo County, and a small portion of Santa Cruz County. The RMPs would apply to open space preserve lands within the District's jurisdiction, and would be used to protect and manage plants, animals, water, soil, terrain, geologic formations, historic resources, scenic features, and cultural resources.

A. Report Organization

This Initial Study is organized into the following chapters:

Chapter 1: Introduction. This chapter provides an introduction and overview of the Initial Study document.

Chapter 2: Initial Study Checklist. This chapter summarizes pertinent project details, including lead agency contact information, project location, and General Plan and Zoning designations.

Chapter 3: Project Description. This chapter describes the location and setting of the District open space preserves, along with the objectives of the RMPs and the RMP development process. The chapter also provides an outline of the RMPs and the process by which they would be implemented.

Chapter 4: Environmental Checklist and Findings. Making use of the CEQA Appendix G Environmental Checklist, this chapter identifies and discusses anticipated impacts from adoption and implementation of the proposed RMPs, providing substantiation of the findings made. The chapter concludes with the determination, based on the analysis contained in this Initial Study, that a Mitigated Negative Declaration is appropriate for the proposed RMPs.

2 INITIAL STUDY CHECKLIST

1. **Project Title:** Resource Management Policies
2. **Lead Agency Name and Address:**
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
3. **Contact Person and Phone Number:**
Julie K. Andersen, Resource Planner
Tel. (650) 691-1200
4. **Project Location:**
The proposed Resource Management Policies (RMPs) would be implemented on properties owned and/or managed by the District in San Mateo, Santa Clara, and Santa Cruz counties, California, as shown in Figure 3-1, below.
5. **Project Sponsor's Name and Address:**
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
6. **General Plan Land Use Designation:**
See Project Description below.
7. **Zoning:**
See Project Description below.
8. **Description of Project:**
See Project Description below.
9. **Surrounding Land Uses and Setting:**
See Project Description below.
10. **Other Public Agencies Whose Approval is Required:**
RMP adoption and implementation does not require any approvals by other public agencies; however, the RMPs have been developed in col-

laboration and consultation with other Responsible Agencies and the general public, as described in Chapter 3 of this Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a Potentially Significant Impact, as indicated by the checklist on the following pages.

- | | |
|---|---|
| <input type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Population & Housing |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Geology & Soils | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Utilities & Service Systems |
| <input type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Mandatory Findings of Significance |

Determination:

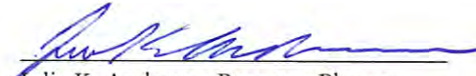
On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as de-

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
RESOURCE MANAGEMENT POLICIES CEQA REVIEW
INITIAL STUDY CHECKLIST

scribed on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Julie K. Andersen, Resource Planner

10/12/2011
Date


Ana Ruiz, Planning Manager

10/12/2011
Date

3 PROJECT DESCRIPTION

In accordance with the California Environmental Quality Act (CEQA), this Initial Study has been prepared to identify and evaluate potential environmental effects associated with the Midpeninsula Regional Open Space District's Resource Management Policies (RMPs). The RMPs would apply to District owned and/or managed lands. The RMPs would be used to protect and manage plants, animals, water, soil, terrain, geologic formations, historic resources, scenic features, and cultural resources.

A. Background

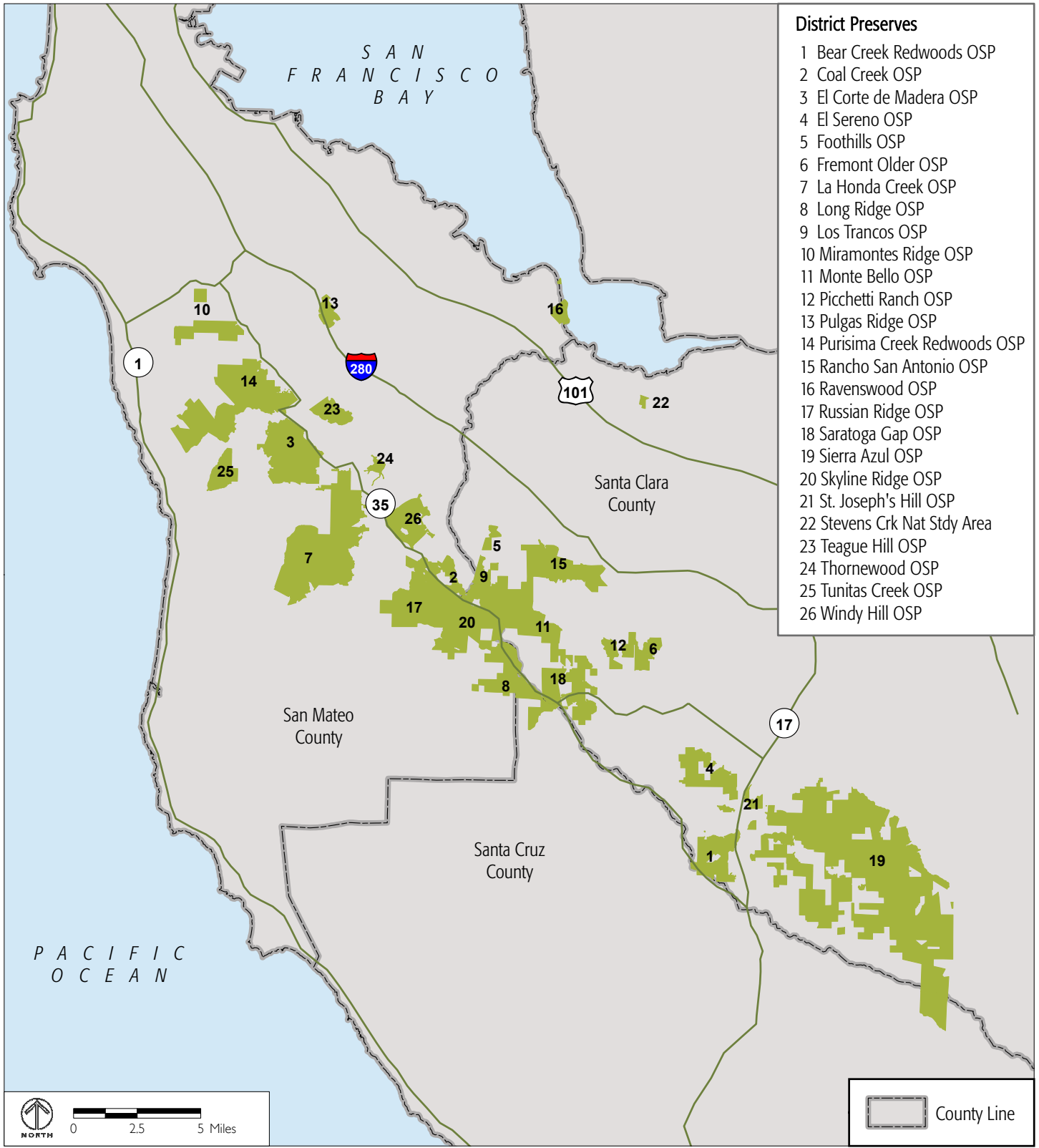
Created by a voter initiative in 1972, the Midpeninsula Regional Open Space District (the District) is a public agency that owns and manages 26 open space preserves on over 60,000 acres of land in northern Santa Clara County, southern San Mateo County, and a small portion of Santa Cruz County.¹ The District was created to acquire and preserve a regional greenbelt of open space land in perpetuity; to protect and restore the natural environment; and to provide opportunities for ecologically sensitive public enjoyment and education.

The District works to balance opportunities for low-intensity public recreation on its preserves with natural resource protection through a comprehensive planning approach in partnership with the community. The District currently employs a staff of approximately 100 employees in five departments: Administration, Operations, Planning, Public Affairs, and Real Property.

B. Project Location and Setting

Figure 3-1 shows the District's regional location, as well as its boundaries and the location of the 26 open space preserves under its jurisdiction. Extending from Montara in the north to the Lexington Hills in the south, the District

¹ Total acreage cited is accurate as of May 2011.



Source: MROSD, 2011.

FIGURE 3-1
LOCATION OF OPEN SPACE PRESERVES

directly serves more than 25 communities with a combined population of over 700,000 residents. The District's open space preserves vary in size; the smallest is Stevens Creek Nature Study Area at 59 acres, while the largest is the Sierra Azul Preserve, with over 17,000 acres of land. Elevations within the District range from sea level in the baylands preserves to 3,486 feet atop Mount Umunhum in the Sierra Azul Range.

District lands protect a range of habitats rich in both numbers and variety of plants and animals. The District includes tidal salt marshes in the east, which provide habitat for the endangered clapper rail and salt marsh harvest mouse, and are also used by thousands of migratory birds. The heart of the District straddles the eastern and western flanks of the Santa Cruz Mountains. These lands are covered in a diverse mix of oak woodland, grassland, chaparral, coastal scrub, and both evergreen and coniferous forests that form an impressive scenic backdrop for the densely populated San Francisco Bay Area and Central California Coast. Creeks and streams that run through District lands provide refuge area for endangered coho salmon and threatened steelhead trout.

The natural setting of District preserves provides a peaceful refuge for visitors seeking low-intensity recreational opportunities away from the pressures of urban life. The preserves are open to the public every day, free of charge, providing over 220 miles of public trails and inviting activities such as hiking, biking, jogging, horseback riding, dog walking, and picnicking. There are relatively few improvements on District preserves, other than gravel parking areas, public rest rooms, informational signs, and maintenance and staging facilities.

C. Project Objectives

The Midpeninsula Regional Open Space District (MROSD) has established the following objectives for the RMPs:

- ◆ Set the framework for the District's resource management program;
- ◆ Provide general guidance for issue-specific and site-specific planning;

- ◆ Provide staff and Board a tool for informed, consistent, and effective resource management decision making;
- ◆ Inform the public of the purpose and intent of the District's resource management program; and
- ◆ Provide a basis for evaluating the District's progress in reaching its resource management objectives.

The RMPs are intended as an overarching policy tool to guide the District in carrying out everyday functions and operations. The RMPs do not establish detailed plans for management of individual preserves or resources. Other more specific master plans, site plans, resource management plans and projects would implement the RMPs as required to address site-specific conditions and circumstances.

D. Policy Development Process

In developing the RMPs, the District has consulted and collaborated with a number of public agency and private organization partners. District staff worked closely with subject matter experts from partner agencies and organizations, including California State Parks, the California Department of Forestry and Fire Prevention (CalFire), the US Forest Service, the San Mateo County Farm Bureau, the Peninsula Open Space Trust, and the Presidio Trust. Additionally, between March 2005 and April 2011, the District held a series of 13 public workshops to invite comment and review of the Draft RMPs. Citizen participation is an essential part of the planning process for the development and use of the District's open space preserves.

In 2003, the District completed the Coastside Service Plan and accompanying Environmental Impact Report (EIR) for the San Mateo Coastside Protection Program. This Program expanded the District's boundaries to include coastal San Mateo County. The Service Plan was developed to guide the acquisition of land and the operation and maintenance of land on the coast. The Service Plan recognizes the unique value of the natural resources and open space located in the Coastside Protection Area and establishes Policies to protect these resources. In addition, the Service Plan incorporates all Mitigation Measures

adopted in the EIR to insure that potential adverse environmental impacts from the Program would be avoided. The RMPs and associated Mitigation Measures are intended to supplement and complement the Policies identified in the Service Plan for activities occurring in that Area. Furthermore, the RMPs will be implemented in a manner that is consistent with the Service Plan when project-specific or issue-specific activities occur in that Area.

Public review of the Complete Resource Management Policy Document is planned for October 2011. Staff expects to bring the RMPs to the Board for final approval and certification of the California Environmental Quality Act (environmental review) document at a public meeting in December 2011.

E. Outline of the RMPs

The RMPs are organized into chapters according to subject and resource category. Each chapter consists of a background section and a section containing goals, policies, and implementation measures. The background section provides rationale for the goal and policies that follow. Goals are phrased as broad, general statements describing the desired state or condition to be achieved, while policies identify what steps the District will take in order to attain that goal. Each policy includes one or more recommended implementation measures, which specify action items that can be undertaken, where feasible, to support related policies and goals.

The RMPs are grouped into the following 14 subject and resource categories:

- ◆ Vegetation Management;
- ◆ Wildlife Management;
- ◆ Invasive Species Management;
- ◆ Water Resources;
- ◆ Geology and Soils;
- ◆ Scenic and Aesthetic Resources;
- ◆ Cultural Resource Management;
- ◆ Research and Collection of Information;
- ◆ Public Interpretation and Environmental Education;
- ◆ Grazing Management;
- ◆ Forest Management;

- ◆ Ecological Succession;
- ◆ Habitat Connectivity; and
- ◆ Wildland Fire Management.

F. Implementation

The RMPs would be used to guide the overall planning, budgeting, and decision making processes for individual preserves and for District-wide programs. The suitability and scope of implementation of a specific RMP can only be effectively determined on a site- or issue-specific basis given the circumstances and conditions to be addressed. Therefore, the RMPs would be implemented through Use and Management Plans, Master Plans, and the District's annual Action Plan identifying existing and proposed resource management plans and projects. Each process would allow for evaluation of potential environmental impacts associated with the RMP, physical or other constraints, availability of funding, and feasibility of implementation as needed on a case-by-case basis. Site specific implementation projects or actions would also be subject to further environmental review under CEQA prior to implementation. Additionally, implementation of the RMPs would take place over time and would be subject to availability of funding, consideration of competing District needs, and overall feasibility.

4 ENVIRONMENTAL CHECKLIST AND FINDINGS

A. Discussion of Environmental Evaluation

Items identified in each section of the environmental checklist below are discussed following that section. Required mitigation measures are identified (if applicable) where necessary to reduce a potential impact to a level that is determined to be less than significant.

B. Sources

Copies of all documents and materials referenced herein are available for review at the Midpeninsula Regional Open Space District, 330 Distel Circle, Los Altos, CA, or are available online. These include the following documents:

- ◆ Draft Resource Management Policies, 2011
- ◆ State Water Resources Board Geotracker Website
- ◆ Bay Area Air Quality Management District CEQA Guidelines, 2010
- ◆ 2005 Bay Area Ozone Strategy
- ◆ Association of Bay Area Governments Earthquakes & Hazards Program
- ◆ Santa Clara County General Plan 1995-2015
- ◆ Santa Clara Valley Transportation Authority 2009 Congestion Management Program
- ◆ City of San Mateo General Plan Environmental Impact Report, 2009
- ◆ San Mateo Coastal Annexation Final Environmental Impact Report, 2003
- ◆ Mitigated Negative Declaration for Pond DR06 Repair, La Honda Creek Open Space Preserve, 2009
- ◆ Midpeninsula Regional Open Space District, Road and Trail Typical Design Specifications, prepared by: Best, T.C. Certified Engineering Geologist, 2008.
- ◆ California Salmonid Stream Habitat Restoration Manual
- ◆ GIS data from the California Department of Conservation Farmland Mapping & Monitoring Program, the California Department of Forestry and Fire Prevention (CalFire), and San Mateo and Santa Clara Counties

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
I. AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

District preserves protect and restore a wide range of natural settings and landscapes, from wetlands and tidal salt marshes, to grasslands, woodlands, and forests, as well as coastal mountains. The combination of rugged topography and a climate which includes hot sun, wind, and fog, creates dramatic and appealing contrasts in vegetation. The interplay of color, pattern, form, and light on the coastal mountains is a sight particularly valued by local residents and visitors alike.

The District's aesthetic and visual resources are visible from trails and facilities within the preserves, and they form magnificent scenic backdrops to the urbanized midpeninsula region. An officially designated California Scenic Highway, State Route 35 (SR-35), also known as Skyline Boulevard, runs through or adjacent to, a number of preserves as it passes through the District.

Discussion

a) *Would the project have a substantial adverse effect on a scenic vista?*

Goal SA of the RMPs seeks to preserve District lands with natural appearance, diversity, and minimal evidence of human impacts. This goal is sup-

ported by a number of specific policies and implementation measures designed to preserve and protect scenic vistas from vantage points on and off District preserves. Policy SA-1, for example, calls for minimizing evidence of human impacts within preserves and is supported by implementation measures which require clustering of facilities and signs so as to lessen their visual impact; locating power lines, telecommunication towers, and other infrastructure where terrain or vegetation provides visual screening; and establishing trails so as to minimize their visibility from a distance. Policy SA-2 calls for the maintenance of significant landscapes or features and is supported by implementation measures designed to maintain important scenic viewpoints and vistas through vegetation control. Overall, the RMPs outline a policy framework which would protect and enhance scenic vistas from vantage points on and off District preserves. Impacts related to RMP implementation would be less than significant. (*Less than Significant*)

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a State scenic highway?

As described above, SR-35 is an officially designated California Scenic Highway which runs through or adjacent to a number of District preserves. Policies SA-1 and SA-2 and their associated implementation measures, summarized above, would also serve to preserve and protect visual resources adjacent to and visible from SR-35. Therefore, impacts to scenic resources within a State Scenic Highway would be less than significant. (*Less than Significant*)

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

As described above, RMP Goal SA seeks to preserve District lands with natural appearance, diversity, and minimal evidence of human impacts. This goal is supported by Policies SA-1 and SA-2 and their associated implementation measures, summarized above. No site specific actions or improvements are proposed as part of the RMPs; however, Goal SA and its associated policies and implementation measures would guide future actions taken on District preserves, thereby protecting and enhancing the existing visual character of District preserves. Consequently, impacts would be less than significant. (*Less than Significant*)

d) Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

District preserves are composed predominantly of natural open space, with relatively few existing structures or improvements. Pursuant to District Ordinance 93-1, District Preserves are closed one-half hour after sunset and therefore do not constitute a substantial source of light and glare. District Preserves also contain few lighting facilities. The RMPs do not propose any specific actions or improvements which could add new sources of light or glare or directly increase light or glare from existing sources on District preserves. In general, Policy SA-1 implementation measures requiring clustering of infrastructure and signs would minimize the potential for impacts from lighting that could be added to District lands in future preserve-specific use, management, or master plans. Similarly, Policy SA-2 implementation measures which call for vegetative screening would serve to minimize glare impacts from on-site structures or vehicle windshields in parking lots on District lands. Overall, light and glare impacts from implementation of the RMPs would be less than significant. *(Less than Significant)*

II. AGRICULTURE AND FORESTRY RESOURCES	Less Than Significant			
Would the project:	Potentially Significant Impact	With Mitigation Incorporated	Less Than Significant	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

District lands currently contain approximately 5,300 acres of grassland habitat, including lands which were put into agricultural production with the arrival of early Spanish and Anglo settlers. The California Division of Land Resource Protection's Map of Important Farmland shows only a very small amount of Important Farmland and Unique Farmland within District borders. Four District preserves (Purisima Creek, La Honda Creek, Skyline Ridge, and Tunitas Creek) use grazing as a method of wildland fuel reduction and vegetation management. The District leases suitable agricultural lands to tenants with expertise in managing livestock for this purpose. All leases are subject to grazing management plans to support sustainable agriculture consistent with sound resource management practices. The Purisima Creek preserve has active commercial flower production on-site. Additionally, there are a total of 71 Williamson Act parcels on 13 District preserves, including Bear Creek, Coal Creek, El Sereno, La Honda, Long Ridge, Miramontes, Monte Bello, Purisima Creek Redwoods, Russian Ridge, Saratoga Gap, Sierra Azul, Skyline Ridge, and Tunitas Creek preserves.

District lands encompass approximately 30,000 acres of forest and woodland habitat, including roughly 11,500 acres of redwood and Douglas-fir associated coniferous forest and 18,500 acres of other hardwood forest and woodlands. In the past, the redwood and Douglas-fir forests of the Santa Cruz Mountains were the center of intense commercial logging activities; however, there are no ongoing commercial timber harvesting activities on District preserve lands today, except for the active Christmas tree farm (approximately 50 acres) at Skyline Ridge preserve. The primary role for the District is the preservation and protection of forests and woodlands on its preserves.

Discussion

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

As described above, there is only a minimal amount of Important and Unique Farmland within the District's borders. The RMPs do not specifically propose changes in land use on District preserves nor do the RMPs specifically propose the acquisition of new lands which could contain Important or Unique Farmland. Additionally, RMP Goal GM states explicitly that the District shall "help sustain the local agricultural economy, and preserve and foster appreciation for the region's agricultural heritage." Therefore, impacts related to conversion of Important Farmland would be less than significant. *(Less than Significant)*

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

There are a total of 71 Williamson Act parcels on 13 District preserves, including Bear Creek, Coal Creek, El Sereno, La Honda, Long Ridge, Miramontes, Monte Bello, Purisima Creek Redwoods, Russian Ridge, Saratoga Gap, Sierra Azul, Skyline Ridge, and Tunitas Creek preserves. However, the RMPs do not propose any changes in zoning or other activities which would conflict with agricultural activities on District preserves or surrounding lands. Further, as described above, Goal GM of the RMPs recognizes the importance of agriculture to the region and establishes that the District should help sus-

tain the local agricultural economy. As such, implementation of the RMPs would not result in a conflict with Williamson Act contracts and impacts would be less than significant. *(Less than Significant)*

c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

District preserves are predominantly zoned as open space and there are no ongoing commercial timber harvesting activities on preserve lands with the exception of the small Christmas tree farm. Implementation of the RMPs would not require rezoning of District lands and as such there would be no significant impact regarding conflicts with forest or timberland zoning. *(Less than Significant)*

d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

The RMPs include policies which would involve selective, controlled removal of trees for the purpose of forest and wild fire management; however, the primary role for the District is the preservation and protection of forests and woodlands on its preserves. Policy FM-4 of the RMPs calls for the District to manage conifer forests so as to maintain old growth (late seral) habitat conditions and includes implementation measures such as the restoration of degraded forest habitats and the protection of old growth trees and stands. Although some trees or other vegetation may be removed, the intent is to promote robust and healthy ecosystems, not to permanently convert forest land. Biomass lost initially through vegetation removal will be converted into growth in larger diameter overstory trees and other vegetation. Therefore, overall, implementation of the RMPs would result in a less-than-significant impact with respect to conversion of forest lands to non-forest uses. *(Less than Significant)*

e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farm-*

land, to non-agricultural use or conversion of forest land to non-forest use?

The RMPs outline policies and practices to be used in the protection and management of natural resources on District lands. As such, the RMPs are not in conflict with agricultural activity or preservation of forest and timberland in the surrounding area. As described above, the RMPs include goals which seek to support the local agricultural economy and preserve and protect forest and woodlands. Through policies such as Policy IS-3, the RMPs promote the use of Integrated Pest Management strategies which effectively control pests with minimum impact to human health, the environment and non-target organisms. Additionally, the wildland fire management and forest management practices outlined in the RMPs would reduce the risk of uncontrolled fires which could damage agricultural and forest resources on adjacent properties. Therefore, overall, implementation of the RMPs would not involve environmental changes which could result in the conversion of agricultural land to non-agricultural use or the conversion of forest land to non-forest use. Impacts would be less than significant. *(Less than Significant)*

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
III. AIR QUALITY				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative Standards for ozone precursors or other pollutants)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IV. AIR QUALITY	Less Than Significant			
	Poten- tially Signifi- cant Impact	With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
Would the project:				
d) Expose sensitive receptors to substan- tial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

Regional meteorological and topographical factors give the midpeninsula region a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin and provide a high potential for transport of pollutants to the east and south.

The California Air Resources Board (CARB) sets and enforces emission standards for motor vehicles, fuels, and consumer products, sets health-based air quality standards, and oversees and assists local air quality districts throughout the State. The Bay Area Air Quality Management District (BAAQMD) is the public agency entrusted with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay, including San Mateo, Santa Clara, and northern Santa Cruz counties. BAAQMD has adopted the 2005 Ozone Strategy, which provides a roadmap for compliance with California Clean Air Act planning requirements, and the 2010 Bay Area Clean Air Plan, a multi-pollutant plan which establishes emissions control measures to protect public health and the climate of the San Francisco Bay Area.

BAAQMD monitors air quality at several multi-pollutant monitoring sites in the San Francisco Bay Air Basin including Redwood City, in close proximity to the District. Historically, the most problematic criteria pollutants in the San Mateo area include ozone, particulate matter, and carbon monoxide.¹ Combustion of fuels and motor vehicle emissions are a major source of each of these three criteria pollutants. Ambient air quality monitoring data from

¹ Bay Area Air Quality Management District (BAAQMD), 2010, Clean Air Plan, <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx>, accessed on July 28, 2011.

the Redwood City station show no daily exceedance of federal or State standards for any of the pollutants tracked in 2008;² however, the District is within the San Francisco Bay Area Air Ozone non-attainment area as delineated by the U.S. Environmental Protection Agency (EPA).

Toxic air contaminants (TACs) are another class of pollutants generated from sources such as petroleum refining and chrome plating operations, operation of gas stations and dry cleaning equipment, and diesel engine particulate matter. Mobile sources, such as trucks, buses, automobiles, trains, ships, and farm equipment, are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections. The human health risks associated with TACs include cancer, birth defects, neurological damage, and death; however, no safe levels of exposure to TACs have been established.

Discussion

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Implementation of the RMPs could involve some relatively small fuel management projects and other controlled burns in order to reduce vegetative fuels and to re-establish ecosystem health. Controlled burns of this nature would generate ozone precursors, such as particulate matter and nitrogen oxides (NO_x); however, the BAAQMD's 2005 Ozone Strategy³ and 2010 Clean Air Plan both account for planned combustion such as the controlled burns proposed as a result of the RMPs. Additionally, BAAQMD Regulation 5 allows open burning for forest management on permissive burn days when air pollution generated is not expected to adversely affect ambient air quality or downwind populations. All prescribed burns on District preserves would be in conjunction with the California Department of Forestry and Fire Prevention (Calfire) and are subject to permits from BAAQMD. Prior to implementation, any potential future fire or fuels management projects that could conflict with air quality plans would be subject to further environmental review under CEQA. As such, implementation of the RMPs would not

² City of San Mateo, 2009, *General Plan Update Draft EIR*, page 4.5-4.

³ Bay Area Air Quality Management District (BAAQMD), 2005 Ozone Strategy, pages 14 through 20.

conflict with the established air quality plans for the region and impacts would be less than significant. (*Less than Significant*)

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative Standards for ozone precursors or other pollutants)?

As described above, recent ambient air quality monitoring data from the Redwood City station show no daily exceedance of federal or State standards for any of the pollutants tracked. While implementation of the RMPs could involve some relatively small controlled burns which generate particulate matter and NO_x as described above, open burning for forest management is allowed under BAAQMD Regulation 5, subject to permit. Prior to implementation, any potential future fire or fuels management projects that could generate pollutants would also be subject to further environmental review under CEQA. Additionally, the RMPs contain numerous measures which reduce the risk of wildland fires, including Policy WF-1 which calls for the implementation of fire and fuel management practices which reduce wildfires; Policy WF-2 which requires that the District aggressively support immediate suppression of wildfires; and Policy WF-6 which calls for interagency fire management partnerships. Implementation of these policies would minimize the risk of unplanned fires and, by extension, the risk that ozone precursors from unplanned fires on District preserves could contribute to a regional air quality violation. Therefore, overall, impacts associated with air quality violations from implementation of the RMPs would be less than significant. (*Less than Significant*)

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

District preserves are within the EPA-designated San Francisco Bay Area Air Ozone non-attainment area, although recent ambient air quality monitoring data from the Redwood City station do not indicate exceedance of federal or State ozone standards. Implementation of the RMPs could involve some relatively small controlled burns which would generate ozone precursors as described above; however, planned fires account for only a negligible amount of

the total Bay Area baseline emissions inventory⁴ and controlled burns of the type described in the RMPs would be limited to permissive burn days under BAAQMD Regulation 5, subject to permit. Prior to implementation, any potential future fire or fuels management projects that could expose sensitive receptors to substantial pollutant concentrations would be subject to further environmental review under CEQA. Additionally, as outlined above, the RMPs contain numerous measures which reduce the risk of wildland fires, thereby minimizing the risk that ozone precursors generated by unplanned fires on District preserves could contribute to a cumulatively considerable net increase in ozone. Consequently associated impacts from implementation of the RMPs would be less than significant. (*Less than Significant*)

d) Would the project create objectionable odors affecting a substantial number of people?

District preserves are tracts of open space generally removed from the urbanized areas where sensitive receptors such as children, seniors, and people with impaired lung functions are most likely to live and work. Furthermore, implementation of the RMPs would not generate substantial pollutant concentrations. RMP implementation would not increase the generation of vehicle related emissions from operation of maintenance vehicles on District preserves and employee commuting over existing conditions, and controlled burns permitted under BAAQMD regulations would generate only relatively small amounts of ozone precursors. Therefore, associated impacts would be less than significant. (*Less than Significant*)

e) Would the project create objectionable odors affecting a substantial number of people?

Implementation of the RMPs would involve livestock grazing as a method of vegetation management; however, District preserves are generally removed from urbanized areas with large populations. Livestock grazing is also generally compatible with land uses surrounding District preserves and the distance between grazing areas and residences on surrounding land would be sufficient to attenuate odors associated with livestock. Further, RMP Policy GM-1 is

⁴ Bay Area Air Quality Management District, January 4, 2006, 2005 Bay Area Ozone Strategy, Volume 1, page 19.

supported by an implementation measure which calls for the preparation of site specific grazing management plans for preserves where grazing would be used as a resource management tool so as to plan for and minimize potential conflicts with surrounding land uses. Consequently, implementation of the RMPs would result in a less-than-significant impact related to objectionable odors. (Less than Significant)

V. BIOLOGICAL RESOURCES

Would the project:

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
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a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, of special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption or other means?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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V. BIOLOGICAL RESOURCES	Less Than Significant			
Would the project:	Poten- tially Signifi- cant Impact	With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local ordinances or policies protecting biological resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Existing Conditions

The District harbors a wealth of biological resources, attributable to the interaction of climate, topography, soils, and the limited development that has occurred within its boundaries. The District is located along the western edge of the North American continent on a geologically active peninsula between the Pacific Ocean and San Francisco Bay, which limits migration of plants and animals. This unique location is dominated by the Santa Cruz Mountains which are influenced by a Mediterranean climate comprised of mild wet winters and long hot and dry summers cooled by cyclical coastal fog. The eastern edge of the District is heavily influenced by the urban areas of San Francisco, San Jose and other Peninsula cities which result in natural lands that are often used as a large “urban backyard” rather than a pristine wilderness. These and other factors have shaped diverse and dynamic native plant communities that are precisely adapted to these complex and varied conditions.

Native plant communities found on District preserves include the following general vegetation types: salt marsh and brackish marsh, freshwater marsh, redwood forest, douglas fir forest, coastal scrub, chaparral, mixed evergreen forest, riparian forest, native grassland, and oak woodland. The greenbelts of

District and neighboring public lands in the Skyline and Sierra Azul preserve areas are large and diverse enough to support such wide-ranging predators as black bear, mountain lion, coyote, bobcat, fox, badgers, and numerous hawks and owls. Appendix A of this Initial Study lists the special-status plant and animals likely to occur on District preserves.⁵

District open space lands also contain a variety of water resources, including such diverse habitats as freshwater wetlands and watercourses (including ponds and seasonal wetlands), salt water tidal wetlands within San Francisco Bay, and groundwater resources such as springs, seeps, and underground aquifers.

There are no habitat conservation plans that apply to District lands.⁶

Discussion

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species?

Table 4-1 lists the special-status plant and animals likely to occur on District preserves. The RMPs contain numerous goals, policies, and implementation measures designed to protect special-status species and preserve and enhance the habitats that support them. RMP Policy VM-3 calls for the District to protect and enhance the habitats and populations of special status plant species. This policy is supported by implementation measures requiring that the location and condition of special status plants and their habitats be identified; that surveys be conducted for special status plants during the appropriate season before significant site specific development or any unusual anticipated increase in use; and that areas with special status species be protected from human activities and other negative impacts.

⁵ Special status species are plant and animal species that are state or federally listed as threatened, rare, endangered, species of special concern, candidate species, or those plant species listed by the California Native Plant Society's list 1B and 2.

⁶ Julie K. Andersen, Resource Planner, Midpeninsula Regional Open Space District, personal communication with The Planning Center | DC&E, Monday July 18, 2011.

Policy WM-3.3 calls for the District to consult with responsible wildlife agencies to conserve special status species or to control problem wildlife when other significant natural resources are threatened. Policy WM-4 requires action to protect and enhance the habitats and populations of special status animal species. Policy WR-4.5 establishes that the District shall monitor water quality and condition of aquatic habitats containing spawning, breeding, or rearing habitat for special status fish, reptile, amphibian, or other aquatic species. Policy WR-5.1 states that the District shall monitor sediment delivery and transport within watersheds supportive of special status animals requiring aquatic habitat.

Additionally, Policy FM-1.3 calls for an inventory of District forest wildlife with a particular emphasis on special status species and indicator species. Policy FM-2 requires that the District ensure forest management activities are compatible with the protection of special status plant and animal species. Policy ES-1.4 requires the District monitor and manage grasslands for invasive species and biodiversity so as to promote use of grasslands by native and special status species. Policy ES-3 calls for the District to facilitate regeneration of disturbance-dependent special status, rare, or unique plants. Further, Policy HC-4.2 states that the District shall protect and restore known habitats of rare, endangered, or special status species, while Policy HC-4.6 calls for the District to collaborate with resource agencies to restore and enhance the habitats of protected and special status species known to utilize preserve areas.

Any future projects that could have a potential impact to sensitive or special-status species or essential habitat would be subject to further environmental review under CEQA prior to implementation.

In general RMP implementation would be beneficial for special-status plant and animal species and therefore would not result in a significant impact.
(Less than Significant)

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community type?

The RMPs contain numerous policies and implementation measures which would protect and enhance riparian habitat and sensitive natural communi-

ties. For example, RMP implementation measure WR-4.2 requires that the District manage agricultural leases and easements to maximize the protection and enhancement of riparian areas and water quality; measure GS-2.4 calls for the District to limit agricultural activities, facility development, and trail construction in riparian and other wetland areas to protect them from disturbance; and measure GM-1.3 requires the management of agricultural leases and easements to protect and enhance riparian areas and to maximize the protection or enhancement of water quality. Additionally, measure WM-2.1 calls for the District to inventory critical and sensitive wildlife habitats and develop management strategies for their protection; measure WM3.1 states that the District will discourage human intrusion into sensitive wildlife habitats by appropriate placement of facilities and trails; measure FM-2.3 calls for the continuation of regular consultation with regulatory agencies and experts to develop plans to protect and enhance habitat for sensitive species; and measure WR-6.2 requires that the District prioritize restoration and enhancement of areas providing habitat to sensitive species. Any future projects that could have a potential impact to riparian habitat or other sensitive natural community type would be subject to further environmental review under CEQA prior to implementation. As such, implementation of the RMPs is generally beneficial for riparian habitat and sensitive natural communities and there would result in no significant impact. *(Less than Significant)*

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruption or other means?

RMP Goal WR calls for the District to protect and restore natural water courses, wetlands, and hydrologic processes. Additionally, several other RMP policies and implementation measures seek to protect and preserve wetlands. For example, Policy WR-7 requires the District to preserve and enhance ponds and other wetland habitats by inventorying and assessing ponds and wetlands to identify opportunities for habitat maintenance and enhancement, as well as by monitoring sensitive reptile, amphibian, and aquatic organism populations dependent on District wetlands. Additionally, implementation measure GS-2.4 requires the District to limit agricultural activities, facility development, and trail construction in riparian and other wetland areas to protect them from disturbance. Implementation measure GM-3.4 calls for the

monitoring of water quality in ponds, wetlands, and watercourses with unrestricted livestock access; and finally, Policy ES-2 requires the preservation and enhancement of pond habitats and other wetlands. Any future projects that could have a potential impact to wetlands would be subject to further environmental review under CEQA prior to implementation.

Generally RMP implementation would be beneficial to wetlands and there would be no significant impact. (*Less than Significant*)

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, their wildlife corridors or nursery sites?

RMP Goal HC calls for the District to protect ecosystem integrity by maximizing habitat connectivity. In turn, this goal is supported by five policies which seek to facilitate adequate movement of migratory species and to protect and enhance migratory corridors. Policy HC-1 calls for the District to incorporate local and regional habitat connectivity into its land acquisition planning activities. Policy HC-2 requires the District identify and protect existing habitat networks to prevent further compromise to ecosystem integrity, including through the preparation of habitat connectivity and riparian corridor protection and restoration plans; the formulation of site specific habitat management goals; and the incorporation of construction practices that avoid the creation of unnecessary barriers to habitat connectivity. Additionally, Policy HC-3 requires that the District collaborate with neighboring land holders and surrounding agencies to support regional efforts to establish and maintain habitat networks. Policy HC-4 states that the District shall restore, maintain, or enhance local habitat networks formed within its preserves or which incorporate preserves and other protected lands. Finally, Policy HC-5 requires that the District preserve and enhance riparian, stream, and other wetland habitat locally and at a watershed level to provide important habitat connections. Any future projects that could have a potential impact to native resident or migratory fish or wildlife species, their wildlife corridors or nursery sites would be subject to further environmental review under CEQA prior to implementation. Therefore, RMP implementation would not adversely affect the movement of migratory species or substantially interfere

with wildlife migration corridors. Implementation would result in no significant impact. (*Less than Significant*)

e) *Would the project conflict with any local ordinances or policies protecting biological resources?*

The overarching aim of the RMPs is to preserve, protect, and manage natural resources on District lands. The numerous RMP goals, policies, and implementation measures cited above and throughout this Initial Study support this aim. Additionally, prior to implementing projects or activities, the District consults with federal, State, and local agencies having jurisdiction over biological resources in order to comply with all regulations, ordinances and policies and to obtain necessary permits. Some of these agencies include: California Department of Fish and Game, US Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and National Marine Fisheries Service. The District may also collaborate with non-regulatory agencies such as: California State Parks, California Department of Forestry and Fire Prevention (CalFire), the US Forest Service, and the San Mateo County Farm Bureau to provide assistance or to partner in the protection of biological resources. Therefore, RMP implementation would be consistent with local ordinances and policies designed to preserve and protect biological resources and associated impacts would be less than significant. (*Less than Significant*)

f) *Would the project conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or State habitat conservation plan?*

There are no adopted Habitat Conservation Plans which apply to District lands. Therefore, RMP implementation would result in *no impact* with respect to habitat conservation plan compliance. (*No Impact*)

VI. CULTURAL RESOURCES	Less Than Significant			
Would the project:	Poten- tially Signifi- cant Impact	With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

The San Francisco Peninsula has had a rich and diverse history, including settlement by Native American groups; the Spanish (1776-1821) and Mexican Republican (1821-1848) colonization of the region; the annexation of California by the United States in 1848; and subsequent industrial, agricultural, and residential development. There are remains from each of these periods on District lands, including Native American village sites and bedrock mortars, barns and other ranching features, orchards, wineries, historic homes, sawmills, mines, historic roads and trails, and outdoor recreational sites. As time passes, more recent periods of California’s history become historically significant. As such, some 20th century sites such as World War II and Cold War military sites are now considered historically significant resources throughout California. Collectively, these sites, structures, features, and artifacts comprise the cultural resources of the District.

Discussion

a) Would the Project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Generally, the preservation of open space land in the peninsula’s greenbelt provides the opportunity for the District to protect and interpret the rural

history of the Santa Cruz Mountains and San Francisco Bay for the benefit of present visitors and future generations. The District has adopted Policies Regarding Improvements on District Lands which provide a public process used to assess and determine whether District structures and improvements are historic or cultural resources, and how they can most appropriately be managed.

The RMPs are consistent with the Policies Regarding Improvements on District Lands, supplementing them with additional measures to protect and preserve historical resources on District lands. Goal CR of the RMPs states that cultural resources shall be identified, protected, preserved, and interpreted for the benefit of present and future generations. In turn, Goal CR is supported by a variety of policies and implementation measures, including Policy CR-1 which calls for maintaining an inventory of cultural resources for use in planning of trail development and other projects; implementation measure CR-2.3 which requires that trails, staging areas, new structures and other facilities be located so as to avoid loss or degradation of historically significant resources; and Policy CR-4 which calls for the preservation and maintenance of cultural resources through partnerships with private or non-profit groups to aid in the restoration, management, and use of historic structures, among other means.

Therefore, implementation of the RMPs would preserve and protect significant historical resources on District lands to the maximum extent practicable and associated impacts would be less than significant. (*Less than Significant*)

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

In general, the preservation of open space on District lands greatly reduces the potential disturbance or loss of archaeologically significant resources on lands managed by the District by minimizing the amount of development that can take place. The RMPs also contain measures to prevent disturbance or loss of known archaeological resources on District lands, including Policy CR-1, which requires documentation of known resources in the District's inventory of cultural resources, as well as implementation measure CR-1.3 of the same policy that requires archaeological site records be completed and filed with the

Northwest Information Center. Additionally, the RMPs include protocols for implementation in the event that archaeological sites are discovered in the course of developing trails, staging areas, new structures, or other facilities on District lands. Policy CR-3 states that cultural resources shall be protected from disturbance to the maximum extent feasible, including by preserving them in situ; by erecting protective fencing and establishing patrols to reduce vulnerability to vandalism and looting; and by following established guidelines for reporting, protecting, and recording archaeological sites and features in the event of unexpected discovery. Therefore, implementation of the RMPs would ensure that archaeological resources are protected to the maximum extent practicable and associated impacts would be less than significant. *(Less than Significant)*

c) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As described above, the preservation of open space on District lands greatly reduces the potential disturbance or loss of cultural resources, including paleontological resources and unique geological features, on District lands by minimizing the amount of development that can take place. Additionally, the same policies, implementation measures, and protocols described above would serve to preserve and protect known paleontological resources and also to minimize the risk of disturbance or loss of significant paleontological resources in the event of unexpected discovery to the maximum extent practicable. Policy GS-3 also specifically calls for the protection of unique geological features from human damage. Therefore, implementation of the RMPs would result in a less-than-significant impact with respect to destruction of a paleontological site or unique geographic feature. *(Less than Significant)*

d) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

As described above, the preservation of open space on District lands greatly reduces the potential disturbance or loss of cultural resources, including human remains, on District lands by minimizing the amount of development that can take place. The policies, measures, and protocols described above would also serve to protect known and as yet undiscovered human remains to the maximum extent practicable. Additionally, the RMPs include specific

measures to minimize potential impacts to human remains on District lands, including implementation measure CR-2.4, which requires the District to consult with Native American and other ethnic groups when developing plans for the management of resources related to their heritage. Further, California Public Resources Code Sections 21038.2 and 5097.9-5097.994, and the federal Native American Graves Protection and Repatriation Act of 1990 (NAG-PRA) stipulated protocols and measures to minimize adverse impacts associated with the disturbance of human remains. Therefore, implementation of the RMPs and continued compliance with applicable federal and State regulations would ensure that impacts to human remains would be less than significant. (*Less than Significant*)

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
VII. GEOLOGY AND SOILS				
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides, mudslides or other similar hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

VII. GEOLOGY AND SOILS	Less Than Significant			
Would the project:	Poten- tially Signifi- cant Impact	With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
d) Be located on expansive soil, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

District lands include a diverse set of dynamic geological resources characterized by steep slopes, earthquake faults, landslides, unstable and erosive soils, and attractive but fragile rock formations. General conditions on District preserves are discussed below under the respective impact criteria.

The California Building Code (CBC) is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. The California Building Code incorporates by reference the International Building Code with necessary California amendments. About one-third of the text within the CBC has been tailored for California geologic and seismic conditions.

Discussion

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) landslides, mudslides or other similar hazards?

(i) The San Andreas Fault passes through the midpeninsula region, and numerous District preserves fall within fault rupture hazard zones identified in the San Mateo County and Santa Clara County General Plans. Specifically,

the Bear Creek Redwoods, El Sereno, Fremont Older, Los Trancos, Monte Bello, Picchetti Ranch, Rancho San Antonio, Saratoga Gap, Sierra Azul, and St. Joseph's Hill preserves are located within identified fault rupture hazard zones.

The RMPs do not propose new habitable development, including housing, which would directly place a substantial number of people or structures at risk in the event of rupture along a known fault line. There are relatively few improvements that occur on District lands. Additionally, RMP Policy GS-1 states that facilities shall be located and constructed so as to avoid high-risk area subject to faulting. Further, implementation measure GS-1.1 calls for minimizing construction of buildings, roads, pipelines, septic tanks, and other major improvements in active fault zones. Implementation measure GS-1.3 requires that the District review available geohazard data for proposed facilities and infrastructure where geologic hazards may be present. As such, implementation of the RMPs would minimize the risk of injury, damage, or death in the event of fault rupture to the maximum extent practicable. With continued compliance with CBC standards, RMP implementation would therefore result in a less than significant impact. *(Less than Significant)*

(ii) The San Andreas Fault passes directly through several District preserves and all preserves are at risk of ground shaking during a severe seismic event. As described above, however, implementation of RMP Policy GS-1 as well as implementation measures GS-1.1 and GS-1.3 would serve to minimize the risk of damage, death, or injury associated with seismic ground shaking to the maximum extent practicable. As such, with continued compliance with CBC standards, RMP implementation would therefore result in a less than significant impact. *(Less than Significant)*

(iii) Liquefaction is most likely to occur in sandy or silty soils along riverbeds, beaches, and dunes. As such, the risk of liquefaction is greatest at the District's coastal preserves. United States Geological Survey (USGS) data for Bay Area liquefaction risk indicates that areas of the Stevens Creek Nature Study Area and the Ravenswood Open Space Preserve are at high risk of liquefaction in the event of a major earthquake. As described above, the RMPs do not propose development which would directly place a substantial number of people or structures at risk in the event of seismically induced liquefaction.

Further, the RMP policies and implementation measures cited above, including Policy GS-1 which requires the District to locate and construct facilities to avoid high-risk areas, would minimize liquefaction-related risks to people and structures, as would compliance with CBC standards. Therefore, liquefaction-related impacts from RMP implementation would be less than significant. *(Less than Significant)*

(iv) Areas in southern San Mateo County between Skyline Boulevard and the Coast have the highest landslide susceptibility, while the highest landslide risk areas in Santa Clara County are in the eastern part of the county or in the mountains along the border with Santa Cruz County.⁷ Low lying areas and flat lands are generally less at risk in the event of landslides. As such, portions of some inland District preserves are in areas with high landslide risk; however, given the very low and widely scattered population density on District preserves and low population density on lands adjacent to District Preserve, the potential for injury, damage, and death due to landslides is minimal. Additionally, the RMPs do not propose habitable development, including housing, which would directly increase the number of people living or working on District preserves and therefore RMP implementation would not directly increase the risk of injury, damage, and death due to landslides. Moreover, the RMPs contain numerous policies and implementation measures which seek to promote slope stability and minimize the potential for erosion, including those discussed in detail in Sections VI and IX of this Initial Study. Consequently, RMP implementation would result in a less-than-significant impact with respect to risks associated with landslides. *(Less than Significant)*

b) Would the project result in substantial soil erosion or the loss of topsoil?

Erosion can be caused by natural causes or human activity. Soil erosion is accelerated by loss of plant cover, disruption of natural drainage patterns, landslide activity, or recreation use. On District preserves, poor placement of roads or trails, shortcutting of trails, poor design, poor construction or placement of drainage systems, excessive grazing pressure, past cultivation practic-

⁷ Association of Bay Area Governments (ABAG), "Hazard Maps and Information," <http://gis3.abag.ca.gov/Website/Landslides/viewer.htm>, accessed on July 20, 2011.

es, and inappropriate development of facilities can also accelerate natural erosion.

The RMPs include numerous goals, policies, and implementation measures which address these potential causes of erosion. RMP Goal GS calls for the District to avoid or minimize soil loss. Policy GS-1 requires the District to locate and construct facilities so as to avoid high-risk areas subject to erosion by minimizing construction of major improvements in highly erodible areas and by designing roads, trails, and facilities to minimize soil disturbance. Policy GS-2 requires the District to minimize unnatural soil erosion and sedimentation through a variety of implementation measures, including identifying and monitoring areas with accelerated soil erosion or slope failure potential so as to limit construction activity in those problem areas by properly locating facilities and by installing drainage or erosion-control measures; reconstructing and stabilizing roads and trails with the potential for ongoing erosion problems; minimizing soil disturbance associated with construction and maintenance operations; reseeding disturbed ground; revegetating with native plant species to ensure long-term erosion control; and preventing the physical removal of naturally occurring soil wherever possible.

Consequently, implementation of the RMPs would reduce the potential for erosion and loss of topsoil to the maximum extent practicable and associated impacts would be less than significant. (*Less than Significant*)

c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Peat and other organic soils generally found in existing or former marshy areas may pose a subsidence hazard. Such soils are found on coastal District preserves. Additionally, landslide deposits are present throughout the mountains of San Mateo and Santa Clara counties, including on District preserves. However, as described above, the population density on and around District preserves remains low. The RMPs would not increase the population density and therefore implementation of the RMPs would not directly increase the number of people or structures at risk of soil instability hazards or increase

the potential for injury, damage, or death due to soil instability. Additionally, the RMP policies and implementation measures cited above, including Policy GS-1, would ensure that associated risks would be reduced to the maximum extent practicable and that, overall, impacts would be less than significant. *(Less than Significant)*

d) Would the project be located on expansive soil, creating substantial risks to life or property?

As described above, the population density is low on and around District preserves and the RMPs would not directly increase the number of people or structures on District preserves. Therefore, RMP implementation would not directly increase the risk of injury, damage, or death due to expansion or contraction of soils and associated impacts would be less than significant. *(Less than Significant)*

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Wastewater from District facilities is discharged to vault toilets, septic systems, or municipal wastewater treatment systems. The RMPs do not specifically propose construction of new or expanded septic or alternative wastewater disposal systems, nor would they result in substantial development that would require construction of such facilities. Future construction of wastewater treatment systems on District preserves, if any, would be planned for in separate Use and Management Plans or Master Plans. Site specific implementation projects or actions would be subject to further environmental review under CEQA prior to implementation. Therefore, RMP implementation would result in a less-than-significant impact associated with soils supporting septic tanks and other alternative wastewater disposal systems. *(Less than Significant)*

VIII. GREENHOUSE GAS EMISSIONS	Less Than Significant			
	Potentially Significant Impact	With Mitigation Incorporated	Less Than Significant	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture solar heat as it is radiated from the surface of the earth back into the atmosphere, creating a warming effect like that of a greenhouse. The accumulation of GHGs in the earth's atmosphere has been linked to global climate change, often described as changes in the climate of the earth caused by natural fluctuations and anthropogenic activities which alter the composition of the global atmosphere. California State law recognizes the following gases as GHGs: Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride.

The principal sources of GHG emissions in San Mateo and Santa Clara counties are transportation and electric power generation. Taken together these two sources emit approximately 74 percent of GHGs in the State.⁸ The Bay Area Air Quality Management District (BAAQMD) has established thresholds of significance for operations-related GHG emissions which apply to the Plan Area. The litmus test for a significant impact under the BAAQMD

⁸ City of San Mateo, "Our Carbon Footprint," <http://www.cityofsanmateo.org/index.aspx?NID=709>, accessed on September 1, 2010.

thresholds is either compliance with a qualified Climate Action Plan or a qualified General Plan or annual emissions of less than 1,100 metric tons per year.⁹

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which Statewide emission of GHGs would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

AB 32 establishes a timetable for the CARB to adopt emission limits, rules, and regulations designed to achieve the intent of the Act. CARB staff is preparing a scoping plan to meet the 2020 GHG reduction limits outlined in AB 32. In order to meet these goals, California must reduce their GHGs by 30 percent below projected 2020 levels, or about 10 percent from today's levels.

On September 30, 2008, Governor Schwarzenegger signed into law SB 375. SB 375 focuses on housing and transportation planning decisions to reduce fossil fuel consumption and conserve farmlands and habitat. SB 375 provides a path for improved planning by providing incentives to locate housing developments closer to where people work and go to school, allowing them to reduce vehicle miles traveled every year. Finally, SB 375 provides certain exemptions under CEQA law for projects that are proposed consistent with local plans developed under SB 375. MTC will prepare a Sustainable Communities Strategy for the Bay Area to implement this bill.

⁹ BAAQMD, CEQA Air Quality Guidelines, <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>, accessed on September 1, 2010.

Carbon sequestration, the process of capturing and permanently storing GHGs, is one of the most promising ways for reducing the buildup of GHGs in the atmosphere.¹⁰ Microbes and plants play substantial roles in the global cycling of carbon through the environment. Biomass, in the form of trees and plants, removes carbon dioxide from the atmosphere and effectively captures it as long as the trees and plants continue to grow.

Discussion:

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Significant GHG emissions result from activities which are sustained over long periods of time. Land uses which result in ongoing energy and water consumption or which generate regular vehicle trips can generate significant GHG emissions on an annual basis. However, implementation of the RMPs would not result in new residential or commercial development and would not substantially increase vehicle miles travelled as a result of employee commute trips or visits to District preserves, and as such, RMP implementation would not result in a significant level of GHG emissions. In general, the type of project that would stem from RMP implementation would be temporary in nature, such as trail improvements, parking lot construction, controlled burns for fuel management, or mowing projects which would not generate substantial GHG emissions over prolonged periods.

For the reasons outlined above, BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the 2011 BAAQMD Air Quality Guidelines establish screening level criteria to provide lead agencies and project applicants with a conservative indication of whether operation of a proposed project could result in potentially significant GHG impacts over time. Derived from the default emissions assumptions in the URBEMIS model, the screening level criteria indicate the size and scope of project that would result in significant GHG emissions impacts according to land use. According to BAAQMD screening level criteria, for a significant operational GHG emission impact to result for city park lands, the active recreational areas, such as lighted soccer fields, playgrounds, and well-travelled

¹⁰ US Department of Energy, "Carbon Sequestration," <http://www.energy.gov/sciencetech/carbonsequestration.htm>, accessed on June 14, 2011.

parking lots, would need to have a total area of over 600-acres. District preserves are predominantly areas of passive open space, where active recreational acreage is well below this threshold.

Additionally, biomass on District lands allows for the capture of carbon dioxide across the Midpeninsula region. Protection and management of plant resources on District lands is therefore beneficial for regional GHG reduction. As such, implementation of the RMPs would result in no adverse impact with respect to the generation of GHG emissions. (*Less than Significant*)

b) Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The Santa Clara County Board of Supervisors adopted a Climate Action Plan for Operations and Facilities in September 2009, and San Mateo County is currently in the process of developing an Energy Efficiency Climate Action Plan (EECAP) to build on its existing Energy Reduction Strategy and Adaptation Plan.

In general, the creation of a regional greenbelt of open space such as the District greatly benefits the GHG reduction initiatives undertaken in the San Francisco Bay Area. Biomass in the form of trees and plants on over 60,000 acres of District land preserved in perpetuity represents the potential for ongoing carbon sequestration. Implementation of the RMPs would ensure that District resources, including trees and plants, are managed sustainably and as such would support implementation of GHG reduction plans throughout the region. Therefore, impacts related to conflict with established GHG reduction plans would be less than significant. (*Less than Significant*)

IX. HAZARDS AND HAZARDOUS MATERIALS

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people living or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people living or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IX. HAZARDS AND HAZARDOUS MATERIALS				
Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

The District uses hazardous materials such as petroleum fuels and pesticides under specifically regulated circumstances. In general, however, the District employs Integrated Pest Management (IPM) techniques which target pests with minimum impact to non-target species, favoring non-chemical strategies where effective. Remnant contamination from previous industrial uses, particularly in Bayside areas, may be present on District preserves. Some active or abandoned agricultural sites may have residual material in soils or have hazardous materials present in containers or tanks. Table 4-1 shows the seven known sites of contamination on District preserves, including three sites currently under assessment or remediation.

Independent of the RMPs, the District uses the following best management practices (BMPs) to manage hazardous substances. When acquiring new properties, the District performs Phase I environmental site assessments to identify hazards and remediation actions as needed. The District also consults with a licensed Pest Control Adviser to assist with selection of herbicides for use on District lands, as well as the amounts, methods, and time of year for application. All herbicide application is done by qualified applicators in accordance with the 2006 State of California red-legged frog injunction. Additionally, the District runs an Injury and Illness Prevention Program (IIPP) that identifies BMPs for District staff when working with or around hazardous substances.

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
 RESOURCE MANAGEMENT POLICIES CEQA REVIEW
 ENVIRONMENTAL CHECKLIST AND FINDINGS

TABLE 4-1 **KNOWN CONTAMINATED SITES ON DISTRICT PRESERVES**

	Site 1	Site 2	Site 3	Site 4	Site 5
Preserve	Sierra Azul	Bear Creek Redwoods	Bear Creek Redwoods	La Honda Creek	Pulgas Ridge
Address	Mt. Umunhum Rd.	19480 Bear Creek Road	19480 Bear Creek Rd	5701 La Honda Road	Hassler
City	Alviso	Los Gatos	Unincorporated	La Honda	San Carlos
County	Santa Clara	Santa Clara	Santa Clara	San Mateo	San Mateo
ZIP	95033	95033	95030	94020	94070
Acres	17795.11	1377.75	1377.75	5712.46	364.90
Case Type	Military UST Site	LUST Cleanup Site	LUST Cleanup Site	Cleanup Program Site	Cleanup Program Site
Status	Remediated	Open – Site Assessment	Completed – Case Closed	Completed-Case Closed	Completed – Case Closed
Potential Contaminant	Benzene, Toluene, Xylene, Diesel, Gasoline, Heating Oil / Fuel Oil	Gasoline	Diesel	Other Insecticides / Pesticide / Fumigants / Herbicides, Diesel, Heating Oil / Fuel Oil	Diesel
Potentially Affected Resource	Groundwater (other than drinking), Soil	Soil, Surface water, Under Investigation	Soil	Soil	Groundwater (other than drinking), Soil

Source: State Water Resource Control Board (SWRCB) Geotracker database, 2011.

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
 RESOURCE MANAGEMENT POLICIES CEQA REVIEW
 ENVIRONMENTAL CHECKLIST AND FINDINGS

TABLE 4-1 **KNOWN CONTAMINATED SITES ON DISTRICT PRESERVES (CONTINUED)**

	Site 6	Site 7
Preserve	Ravenswood	Stevens Creek Nature Study Area
Address	2100 Bay Road	North Perimeter Rd. and Lindbergh Ave. Moffett Field
City	East Palo Alto	Mountain View
County	San Mateo	Santa Clara
ZIP	94303	94035
Acres	376	55
Case Type	Other - Industrial Area	Military Cleanup Site
Status	Open - Site Assessment	Open - Remediation
Potential Contaminant	None Specified	DDD / DDE / DDT, Lead, Other Metal, Polychlorinated Biphenyls (PCBS)
Potentially Affected Resource	Soil	Sediments, Soil, Surface Water

Source: State Water Resource Control Board (SWRCB) Geotracker database, 2011.

The biggest potential public hazard on District preserves is unplanned wildland fires. Factors contributing to higher risk of wildland fires are frequency of critical fire weather, slope and fuel load in grasslands or on forest floors. Coastal preserves are less at risk; however, the majority of inland preserves are classified as High or Very High risk areas by CalFire.¹¹

There are a total of eight airports in San Mateo and Santa Clara counties: San Francisco International, San Carlos, and Half Moon Bay County Airport in San Mateo County; and Palo Alto, Reid-Hillview, South County, San Jose International, and Moffett Federal Field in Santa Clara County. Stevens Creek Open Space Preserve is adjacent to Moffett Federal Field and Ravenswood Open Space Preserve is located within 5-miles of the Palo Alto Airport. District lands are primarily larger parcels of open space well removed from populated areas.

Discussion

a) Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

With implementation of the RMPs, the transport, storage, and use of petroleum fuels and pesticides on District preserves would not substantially increase. Continued implementation of existing District policies and practices regarding good housekeeping and routine vehicle maintenance would minimize potential hazards from petroleum fuels to less than significant levels. Existing District policies for pesticides, cited above, require selection of low toxicity products and application in accordance with a prepared integrated pest management plan. Further, any pesticide use would be in compliance with federal and State law, would be done only in accordance with the label and any safety and environmental restrictions, and per State law, would be done under a site specific prescription from a licensed Pest Control Advisor, and usage would be reported to the County Agricultural Commissioner monthly. Additionally, risks associated with use of pesticides would be further reduced through the implementation of RMP implementation measure IS-3.5 and IS-3.10. IS-3.5 requires that the District take all reasonable precautions to pro-

¹¹ California Department of Forestry and Fire Prevention (CalFire), Fire Hazard Severity Zones, GIS data, 2009.

protect the environment, the health and safety of District employees, adjacent lands and preserve visitors when using pesticides. IS-3.5 also requires the use of the least toxic, effective pesticides only where alternative methods are known to be ineffective or infeasible. IS-3.10 requires that the District keep records of all pesticides applied and submit monthly and annual reports to the County Agricultural Departments; obtain pest control recommendations and provide field staff safety training in the storage, mixing and application of pesticides; and continue to follow all federal, State, and local regulations regarding the use of pesticides. Therefore, implementation of the RMPs and continued compliance with applicable federal and State regulations would ensure that risks from the routine transport, storage, and use of hazardous substances are less than significant. (*Less than Significant*)

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Please refer to Section VIII, criteria a) of this Initial Study for a discussion of the transport, storage, and use of hazardous substances on District preserves. Implementation of the RMPs and continued compliance with existing District policies regarding hazardous materials, cited above, and with applicable federal and State regulations would ensure that risks from the release of hazardous substances are less than significant. (*Less than Significant*)

c) Would the project emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

In general, District preserves are tracts of open space well removed from developed urban centers where schools are most likely to be located. However, the following schools are located in close proximity to District Preserves: Kings Mountain Elementary School (Purisima and el Corte de Madera); La Honda Elementary School (La Honda); Lakeside Elementary School (Felton Station); Lexington Elementary school and Loma Prieta Elementary School (Sierra Azul); Monte Bello Elementary School (Picchetti); Regnart Elementary School (Fremont Older); Tunitas School (Tunitas); Corte Madera School (Windy Hill); Coastano and East Palo Alto School (Ravenswood).

Maintenance vehicles and equipment operated on District preserves could emit small quantities of toxic air contaminants (TACs); however, not at levels which would pose substantial human health risk. Additionally, as described above, RMP implementation measures IS-3.5 and IS-3.10 would reduce health risks associated with pesticides to the maximum extent practicable. Therefore, impacts associated with hazardous emissions in proximity to schools would be less than significant. (*Less than Significant*)

d) Would the project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

There are seven known sites of contamination on District preserves, including one site currently under assessment, as shown in Table 4-2. As described in detail below under Section XIII of this Initial Study, RMP implementation would not directly increase the number of visitors, residents, or employees on District preserves, and therefore RMP implementation would not increase the risks associated with these sites.

Additionally, the RMPs contain policies and implementation measures that would further minimize the associated risks to people and the environment. Policy WR-1 calls for the District to protect surface and ground water from contamination, and is supported by implementation measure WR-1.1, which requires that the District inventory existing facilities and uses that affect watercourses, riparian areas, and wetlands, and prepare plans for protection or restoration, as appropriate; as well as by implementation measure WR-1.1, which calls for the District to research and pursue cleanup of likely sources of pollution, such as buried fuel tanks, improperly dumped or stored material, and faulty waste or drainage systems. Policy GS-4 states that the District shall prevent or remediate contaminated soils. In turn, this policy is supported by implementation measure GS-4.2, requiring that the District investigate areas where soil contamination may have occurred due to previous land use, including disposal sites, mining areas, or leaks from storage tanks; and by implementation measure GS-4.3, which calls for the remediation of areas where contaminants pose a threat to human and ecological health through implementation of recommended treatment options including biodegradation, safe re-

removal of contaminated soils, capping of soils, or other methods as recommended by a remediation professional. Future land acquisitions and property interests will be subject to the same policies, BMPs, and Phase I environmental site assessment and remediation process in order to avoid or minimize hazards to the public or the environment.

As such, RMP implementation would facilitate the clean up of known and potentially present contaminated sites on District preserves. Therefore, associated impacts would be less than significant. (*Less than Significant*)

e) For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people living or working in the project area?

Ravenswood Open Space Preserve is not located within the Airport Safety Zone or the Airport Influence Area identified in the Palo Alto Airport Comprehensive Land Use Plan. While Stevens Creek Open Space Preserve is adjacent to Moffett Federal Field, RMP implementation would not directly increase the number of people living or working on that preserve, and therefore RMP implementation would not create or exacerbate an associated safety hazard. Overall, impacts would be less than significant. (*Less than Significant*)

f) For a project within the vicinity of a private airstrip, result in a safety hazard for people living or working in the project area?

There are no private air strips within the vicinity of any District preserves and therefore RMPS implementation would result in no impact associated with safety hazards from private airstrips. (*No Impact*)

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Implementation of the RMPs would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. As described in more detail below in Section XIII, Population and Housing, of this Initial Study, RMP implementation would not result in substantial growth or a substantial increase in the number of visitors to District

preserves. As such, RMP implementation would not directly increase the number of people visiting, living, or working in the Midpeninsula region and therefore would not significantly impair emergency response or evacuation. Associated impacts would be less than significant. (*Less than Significant*)

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires?

Prescribed fire is a powerful tool that not only has ecological benefit, but also considerable wildland fire management benefit. Unplanned wildland fires, however, are a hazard to people and property. Coastal preserves are less at risk; however, the majority of inland preserves are classified as High or Very High risk areas by CalFire.¹² The RMPs include a goal which specifically seeks to mitigate the adverse effects of wildland fires. Goal WF states that the District will manage land to reduce the severity of wildland fire and to reduce the adverse impact of fire suppression activities within District preserves and adjacent residential areas; manage habitats to support fire as a natural occurrence on the landscape; and promote District and regional fire management objectives.

Several associated RMPs specifically support the mitigation of the adverse effects of unplanned wildland fires, including Policy WF-1, which calls for the implementation of fire and fuel management practices necessary to protect public health and safety, protect natural resources, and to reduce the impacts of wildland fire. Additionally, Policy WF-2 calls for the District to aggressively support the immediate suppression of all unplanned fires that threaten human life, private property or public safety. Further, Policy WF-3 requires that the District work with adjacent landowners and fire agencies to maintain adequate fire clearance around qualifying structures. Grazing management policies cited above in Section II of this Initial Study and Vegetation Management policies described in Section IV would also serve to reduce the potential for adverse effects from unplanned wildland fires. Although wildland fire and fuels management is an overall goal of the RMPs, any site specific or preserve-wide fire or fuels management plans or projects would be subject to further environmental review under CEQA prior to implementation. Therefore,

¹² California Department of Forestry and Fire Prevention (CalFire), Fire Hazard Severity Zones, GIS data, 2009.

overall, implementation of the RMPs would result in a less-than-significant impact with respect to wildland fires. (*Less than Significant*)

X. HYDROLOGY AND WATER QUALITY	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a significant lowering of the local groundwater table level?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of runoff in a manner which would result in substantial erosion, siltation or flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

X. HYDROLOGY AND WATER QUALITY

Would the project:

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
f) Provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place occupied development within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Potentially be inundated by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

District open space lands contain a variety of water resources that include such diverse habitats as freshwater wetlands and watercourses, salt water tidal wetlands within San Francisco Bay, and groundwater resources such as springs, seeps, and underground aquifers. District preserves are located within 22 major watersheds extending from the Pacific Ocean in San Mateo County to the baylands in San Mateo and Santa Clara Counties. Many of the District's lands are located within the headwaters or uppermost sections of these watersheds.

Most preserve watersheds contain steep ridges and deep canyons typical of the Santa Cruz Mountains. Rainfall occurs mostly between November and April with seasonal rainfall totals varying greatly within the District. The greatest rainfall quantities occur along the west facing slopes near the summit of the mountain range where totals can reach 40 to 50 inches per year; however, averages around 20 to 30 inches per year are more typical. In the Santa Cruz Mountains, fog accounts for approximately 10-20 inches of this precipitation, much of which is delivered in the dry summer months. Many smaller creeks and streams are intermittent, reflecting this seasonal distribution of rainfall. Winter flows are higher, especially during and immediately following storms.

Discussion

a) Would the project violate any water quality standards or waste discharge requirements?

In general, implementation of the RMPs would protect and enhance water quality on District lands. RMP implementation would involve minimal development on District lands, and as such, would not result in the creation of substantial new sources of water pollution. Additionally, the District has entered into routine maintenance agreements with the Regional Water Quality Control Board (RWQCB) and the California Department of Fish and Game (CDFG). These agreements specify BMPs which the District must follow to avoid impacts to water quality. Potential sources of water pollution associated with RMP implementation include stormwater runoff carrying pollutants and septic tanks serving District facilities and public restrooms.

RMP implementation could result in the creation of some relatively small areas of new impervious surface in the form of staging areas, parking lots, or other structures on District lands; however, NPDES Provision C.3 standards governing stormwater treatment and control would apply for projects creating or replacing 10,000 square feet or more of hardscape. Prior to construction of such projects, the District would be required to prepare and implement stormwater pollution prevention plans (SWPPPs) detailing how runoff will be detained and infiltrated so that peak flows and durations match pre-project conditions. Additionally, RMP Policy WR-1 calls for the District to protect surface and groundwater from contamination and implementation measure WR-4.6 calls for the incorporation of stormwater BMPs to protect

water quality. Therefore, implementation of the RMPs, compliance with applicable State and local regulations, and adherence to BMPs specified in the above-mentioned routine maintenance agreements would minimize the risk of stormwater quality violations to the maximum extent practicable.

Installation and operation of septic tanks on District lands is subject to permit from the local County Department of Public Health in the applicable jurisdiction. Compliance with permit conditions would reduce the risk of water quality violation to a less-than-significant level. Consequently, Overall, RMP implementation would result in a less-than-significant impact with respect to water quality violations. (*Less than Significant*)

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a significant lowering of the local groundwater table level?

Agricultural activities at the Purisima Creek and Skyline Ridge preserves involve the use of irrigation water; however RMP implementation would not require an increase in the volume of water used over existing conditions. In general, irrigation water comes from surface waters on District lands where appropriative rights have been attained and RMP implementation would generally not require use of groundwater. Additionally, the preservation of open space in its natural condition on District lands provides ample opportunity for groundwater recharge which would more than offset groundwater use. Therefore, RMP implementation would not substantially deplete groundwater levels or interfere with groundwater recharge, and associated impacts would be less than significant. (*Less than Significant*)

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of runoff in a manner which would result in substantial erosion, siltation or flooding on- or off-site?

RMP Goal WR calls for the District to protect and restore natural watercourses, wetlands, and hydrologic processes. Goal WR is supported with policies and implementation measures to further this aim. Policy WR-2 requires

that interference with the natural flow of surface and groundwater be minimized through a variety of implementation measures, including installing erosion control measures and structures; removing culverts and drainage diversions where appropriate; minimizing soil disturbance during construction projects; locating trails to minimize slope erosion and sediment delivery; and minimizing the creation of impervious surfaces. Additionally, the District has developed and implements trail design standards separate from the RMPs which establish BMPs to limit and control erosion and sedimentations.¹³ As such, implementation of the RMPs would serve to protect and restore the natural drainage patterns on District preserves to the maximum extent practicable and impacts associated with substantial erosion would be less than significant. (*Less than Significant*)

d) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?

As described above, implementation of the RMPs would serve to protect and restore the natural drainage patterns on District preserves to the maximum extent practicable. Implementation of RMP Goal WR, Policy WR-2, and associated implementation measures, including implementation measure WR-2.5, requiring that creation of impervious surface be minimized, would ensure that impacts related to flooding as a result of substantial increases in the rate or amount of stormwater runoff are less than significant. (*Less than Significant*)

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?

District preserves are made up overwhelmingly of natural open spaces, with minimal areas of impervious surface. In general, implementation of the RMPs would serve to protect and restore natural open space, and would not create substantial new sources of stormwater runoff.

¹³ District trail design standards include Midpeninsula Regional Open Space District, prepared by: Best, T.C. Certified Engineering Geologist, 2008. Road and Trail Typical Design Specifications, and California Salmonid Stream Habitat Restoration Manual.

RMP implementation could result in the creation of new impervious surfaces in the form of parking lots, staging areas, or structures and facilities; however, such projects would be implemented through either site specific projects, Use and Management, or Master Plans, each subject to separate CEQA review. Individual projects creating or converting 10,000 square feet or more of hardscape would be subject to NPDES Provision C.3 requirements for control stormwater discharge. Compliance with these requirements would ensure that potential stormwater impacts are reduced to less-than-significant levels. Additionally, implementation measure WR-2.5, states specifically that the creation of impervious surfaces shall be minimized. Therefore, overall, implementation of the RMPs would result in a less-than-significant impact with respect to stormwater runoff and pollution. (*Less than Significant*)

f) Would the project provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality?

Overall, implementation of the RMPs would protect and enhance water quality on District lands. The RMPs contain policies and implementation measures which promote and protect water quality. RMP Policy WR-1 calls for protection of surface and groundwater from contamination. This policy is supported by implementation measures which require the District to take inventory of facilities that could affect water quality and develop plans for protection and restoration as appropriate; to research and pursue cleanup of likely sources of contamination such as buried fuel tanks; and to control activities having a high potential for pollution. Policy WR-4 calls for the District to restore, maintain, and enhance water quality on District lands. In turn, this policy is supported by implementation measures requiring vegetation management to improve water quality; management of agricultural easements to protect water quality; and regulation of human activity on District lands to protect water quality. Therefore, implementation of the RMPs and continued compliance with applicable State and local regulations described above would insure that impacts related to water quality degradation would be less than significant. (*Less than Significant*)

g) Would the project place occupied development within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No housing units are proposed and implementation of the RMPs would result in no impact with respect to placement of housing within a 100-year flood hazard area. *(No Impact)*

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The District's inland preserves are generally situated in mountainous terrain and are not located within FEMA-designated flood hazard areas. However, the Stevens Creek Nature Study Area and the Ravenswood Open Space Preserve are located in FEMA-designated 100-year flood risk areas near the shores of San Francisco Bay.¹⁴ RMP Policy GS-1 requires that the District locate and construct facilities to avoid high-risk areas subject to flooding. Additionally, Policy WR-2 calls for the District to minimize interference with the natural flow of surface water. Therefore, implementation of the RMPs would limit and control the placement of structures within areas of 100-year flood risk. Associated impacts would be less than significant. *(Less than Significant)*

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The Stevens Creek Nature Study Area, located in the levee inundation area at the south end of San Francisco Bay, is the only entire preserve at risk of flooding in the event of dam or levee failure. However, isolated portions of Preserves are at risk of small scale flooding if an earthen dam or levee failed at one of the District's small lakes or ponds. These are small water bodies that are generally located within isolated areas of a Preserve. As described in detail below under Section XIII of this Initial Study, RMP implementation would not directly increase the number of visitors, residents, or employees on District preserves, including Stevens Creek Nature Study Area, and therefore RMP implementation would not increase the risks of injury, damage, or death

¹⁴ Federal Emergency Management Agency (FEMA), Mapping Service GIS data, 2010.

associated with levee failure. Additionally, RMP Policy GS-1 states that facilities shall be located and constructed so as to avoid high-risk areas subject to flooding, and implementation measure GS-1.1 calls for minimizing construction of buildings, roads, pipelines, septic tanks, and other major improvements in flood hazard zones. Therefore, RMP implementation would minimize risks related to inundation to the maximum extent practicable and associated impacts would be less than significant. (*Less than Significant*)

j) Would the project potentially be inundated by seiche, tsunami, or mudflow?

Tsunamis are a relatively rare event and have not traditionally been a major problem in the San Francisco Bay Area; however, several coastal preserves are located within Association of Bay Area Governments (ABAG) identified Tsunami Evacuation Planning Areas.¹⁵ District preserves located adjacent to San Francisco Bay are also potentially at risk in the event of seiche. The 2010 Local Hazard Mitigation Plan, approved by the Federal Emergency Management Authority (FEMA) and adopted by ABAG, identifies regional hazards, including tsunami and seiche in San Francisco Bay, assesses vulnerability, and sets out specific risk mitigation actions for implementation. RMP implementation would not directly increase the number of people or structures in at-risk areas on District preserves, and therefore would not adversely affect the inherent risk to people or property in the relatively rare event of a tsunami or seiche in San Francisco Bay. Therefore, risks from tsunamis and seiches associated with RMP implementation would be less than significant.

Given the steep ridges and deep canyons found in some District preserves, there is potential for mudslides, particularly following heavy rainfall. In general, however, there are relatively few structures on District preserves and only daytime visitors and staff are potentially at risk in the event of mudslides. Daytime visitors and staff are dispersed widely in most Preserves and not located in fixed structures; therefore the likelihood of an impact to people is very low. The RMPs contain numerous policies and implementation measures which address slope stability and erosion. Policy GS-1 calls for the District to locate and construct facilities so as to avoid high-risk areas subject to

¹⁵ ABAG, Earthquakes and Hazards Program, <http://quake.abag.ca.gov/tsunamis/>, accessed on June 15, 2011.

landslides and erosion. Policy GS-2 requires that unnatural soil erosion be minimized and is supported by the implementation measures described above. Implementation of the RMPs would therefore reduce risks to people or property associated with mudslides to the maximum extent practicable and impacts would be less than significant. (*Less than Significant*)

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
XI. LAND USE				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Existing Conditions

The 26 District preserves have a total area of over 60,000 acres, serving 25 communities in the midpeninsula region. Predominant land uses on District preserves are open space, recreational facilities, agriculture, and timber production; however, many of the Preserves abut or surround low density residential development. Residential land uses adjacent to District preserves total approximately 75 acres of land, which is less than 0.2 percent of the total area of District preserves.¹⁶ There are no approved habitat conservation plans that apply to District lands.

¹⁶ Determined on the basis of GIS data on land use from the Counties of San Mateo and Santa Clara.

Discussion

a) *Would the project physically divide an established community?*

Residential land uses represent only a very small portion of the total land area of District preserves, which have been established to preserve and protect open space in its natural condition. The RMPs are designed to protect and enhance natural and cultural resources and to support low intensity recreational and agricultural use of District lands. As such, implementation of the RMPs would not involve substantial development which could physically divide an established community. Therefore, overall implementation of the RMPs would result in a less-than-significant impact with respect to dividing an existing community. (*Less than Significant*)

b) *Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

District preserves abut numerous jurisdictions in the midpeninsula region, including unincorporated San Mateo, Santa Clara, and Santa Cruz County lands as well as 17 incorporated communities. As such, conflicts with applicable land use plans, policies, or regulations could result from RMP implementation. Therefore, to ensure that the District's actions do not result in conflicts with any applicable land use plan, policy or regulation, the following mitigation measure is proposed for inclusion in the conditions of approval for the Project:

Mitigation Measure LU-1: In implementing the RMPs through (but not limited to) site specific projects, Use and Management Plans and Master Plans the District shall obtain all necessary permits and approvals from appropriate federal, State, and local regulatory agencies with jurisdiction over the project.

After implementation of the above-listed mitigation measure, impacts related to conflicts with applicable land use plans, policies, or regulations resulting from implementation of the RMPs would be less than significant. (*Less than Significant with Mitigation Incorporated*)

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

As described above, while there are no approved habitat conservation plans that apply to District lands, the overarching aim of the RMPs is to preserve, protect, and manage natural resources on District lands. The RMPs have been developed in collaboration with agency and organizational partners, including California State Parks, CalFire, the US Forest Service, the San Mateo County Farm Bureau, the Peninsula Open Space Trust, and the Presidio Trust. Therefore, there would be no substantial adverse impact with respect to habitat conservation plan compliance resulting from RMP implementation. *(No Impact)*

XII. MINERAL RESOURCES

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Existing Conditions

Mineral resources of significance found and extracted in Santa Clara County include construction aggregate deposits such as sand, gravel, and crushed stone, as well as salts derived from evaporation ponds at the edge of San Francisco Bay.¹⁷ In San Mateo County, the principal mineral resources found and

¹⁷ Santa Clara County, 1994 General Plan Draft EIR, page 5B-25.

extracted include mineral water, salines, and crushed stone.¹⁸ Rock suitable for road-base construction is found throughout the mountainous regions of both counties.

The San Mateo County General Plan identifies a significant mineral resource area adjacent to the Purisima Creek Redwoods and Tunitas Creek preserves, while the Santa Clara County General Plan EIR identifies valuable limestone deposits currently mined for cement in the Kaiser Permanente quarries along Monte Bello Ridge, near the Monte Bello and Picchetti Ranch preserves. Although there are no active quarries on District lands, the Kaiser Permanente and Stevens Creek quarries are in close proximity to the Monte Bello and Picchetti Ranch preserves respectively. The San Mateo County General Plan also identifies active quarries in proximity to the Miramontes and Russian Ridge preserves.

Discussion

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The overarching aim of the RMPs is to preserve, protect, and manage natural resources on District lands. The RMPs do not specifically propose any land use or zoning changes or any development which would result in the loss of availability of a known mineral resource. *(Less than Significant)*

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

As described above, there are no active mines located on District lands and RMP implementation would not result in land use changes or development which would result in the loss of an active recovery site on adjacent lands. Therefore, there would be no impact with respect to loss of a locally important mineral recovery site. *(No Impact)*

¹⁸ San Mateo County, General Plan Background and Issues, Chapter 3: Mineral Resources, http://www.sforoundtable.org/P&B/gp/GP%20Ch%2003_Minerals.pdf, accessed on July 14, 2011.

XIII. NOISE		Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
Would the project:					
a) Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b) Expose people to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c) Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d) Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e) Expose people living or working in the project area to excessive noise from a public airport?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
f) Expose people living or working in the project area to excessive noise from a private airport?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Existing Conditions

In general, the low intensity of development, activities, and uses on District preserves makes for a quiet noise environment. Noise levels are highest near heavily travelled roads and highways; however, the topography of District lands and the pervasive vegetative cover provides a degree of noise attenuation. Noise-sensitive receptors on or adjacent to District preserves would include wildlife species, preserve visitors, and occupied residences, although the latter are scattered in low-density development patterns, primarily along SR-35.

Under the Noise Compatibility Standards of the Santa Clara County General Plan, exterior noise levels above 55 dB Ldn are considered incompatible with open space preserves.¹⁹ The San Mateo County General Plan does not contain any directly applicable noise standards for open space use, however, if open space is considered a “noise sensitive land use,” enjoyment of open space would be impaired where noise levels exceed 60 dB Community Noise Equivalent Level (CNEL).

There are a total of eight airports in San Mateo and Santa Clara counties: San Francisco International, San Carlos, and Half Moon Bay County Airport in San Mateo County; and Palo Alto, Reid-Hillview, South County, San Jose International, and Moffett Federal Field in Santa Clara County.

Discussion

a) Would the project expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards?

In general, on trails within District preserves, noise levels are well below 60 dB CNEL.²⁰ Implementation of the RMPs would likely result in the development, redevelopment, or repair of trails and other facilities on District preserves, which could potentially result in construction noise in excess of established noise compatibility standards. However, potential construction noise impacts would be temporary and localized in the vicinity of the construction site. Additionally, the District develops noise and vibration control procedures on a site specific basis to account for sensitive receptors including wild-life species and human residences that are potentially present in the vicinity of a project site. These procedures are included in the site specific Use and Management Plans and Master Plans through which the RMPs would be implemented. The District also limits work dates and times in areas where noise sensitive species are likely to occur as a matter of standard procedure. Therefore, with continued implementation of site specific noise control procedures

¹⁹ Santa Clara County, 1994, General Plan 1995-2015, Book A, page I-30.

²⁰ Midpeninsula Regional Open Space District, October 30, 2009, Mitigated Negative Declaration for Pond DR06 Repair, La Honda Creek Open Space Preserve, page 26.

tailored to project circumstances, RMP implementation would result in a less-than-significant impact with respect to noise levels in excess of applicable standards. (*Less than Significant*)

b) Would the project expose people to or generate excessive ground-borne vibration or groundborne noise levels?

RMP implementation could potentially involve the felling of trees; however, the resulting groundborne vibration would be relatively minor and temporary in nature. Temporary groundborne vibration could also be generated in the construction of trails or other facilities on District preserves. However, as described above, the District develops general noise and vibration control procedures which are incorporated into site specific projects, Use and Management Plans and Master Plans through which the RMPs would be implemented. Continued implementation of these procedures would ensure that groundborne vibration impacts would be reduced to the maximum extent practicable and associated impacts would be less than significant. (*Less than Significant*)

c) Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

In general, RMP implementation would preserve natural open space on District lands and maintain or enhance the existing quiet noise environment. Implementation of the RMPs would not result in development or land use changes that would substantially alter existing ambient noise levels on District preserves or in the surrounding area. As RMP implementation would not directly increase the number of people employed on District preserves or the number of recreational visitors, vehicle-related noise would not substantially increase. Therefore, associated impacts would be less than significant. (*Less than Significant*)

d) Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

As discussed above, implementation of the RMPs would likely result in the development, redevelopment, or repair of trails and other facilities on District

preserves, which would potentially result in construction noise. Construction noise, however, would be temporary and localized in the vicinity of the construction site. Additionally, the District develops noise and vibration control procedures on a site specific basis to account for sensitive receptors including wildlife species, preserve visitors, and occupied residences that are potentially present in the vicinity of a project site. These procedures, when implemented through site specific projects, Use and Management Plans and Master Plans, would reduce potential construction noise impacts to the maximum extent practicable and associated impacts would be less than significant. (*Less than Significant*)

e) Would the project expose people living or working in the project area to excessive noise from a public airport?

Stevens Creek Open Space Preserve is adjacent to Moffett Federal Field and Ravenswood Open Space Preserve is located within 5-miles of Palo Alto Airport. However, implementation of the RMPs would not result in development that would directly increase the number of people living and working on District preserves, nor would RMP implementation substantially alter the exposure of noise-sensitive receptors currently on District preserves to airport noise. Therefore, associated impacts would be less than significant. (*Less than Significant*)

f) Would the project expose people living or working in the project area to excessive noise from a private airport?

There are no private air strips within the vicinity of any District preserves and therefore RMPS implementation would result in no impact associated with excessive noise levels from private airstrips. (*No Impact*)

XIV. POPULATION AND HOUSING	Less Than Significant			
	Potentially Significant Impact	With Mitigation Incorporated	Less Than Significant	No Impact
Would the project:				
a) Induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

The District directly serves 25 communities in San Mateo, Santa Clara, and northern Santa Cruz counties with a combined population of over 700,000 residents. District preserves are made up predominantly of natural open space and land in agricultural or timber production; however many preserves abut a small amount of low density residential development. Residential land uses adjacent to District preserves total approximately 75 acres of land, which is less than 0.2 percent of the total area of District preserves.

The District employs approximately 100 full time staff in its Administrative Services, Operations, Planning, Public Affairs, and Real Property departments. Additionally, District staff includes approximately 20 part-time and seasonal employees.²¹

²¹ Midpeninsula Regional Open Space District, "Human Resources," http://www.openspace.org/about_us/hr.asp, accessed on June 28, 2010.

Discussion

- a) *Would the project induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

Implementation of the RMPs would not result in the construction of housing or require hiring new employees. Neither would RMP implementation result in land use changes that would require an increase the number of agricultural or timber workers on District lands. Therefore, RMP implementation would not result in substantial growth, either directly or indirectly, and associated impacts would be less than significant. (*Less than Significant*)

- b) *Would the project displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?*

As described above, many District preserves currently surround or abut a small amount of low-density housing. The RMPs do not specifically propose the removal of any housing units, and RMP implementation would not result in the displacement of housing from District preserves or surrounding lands. Additionally, site specific plans, Use and Management Plans and Master Plans would be developed to implement the RMPs on District preserves and would be subject to separate CEQA review, ensuring an opportunity to evaluate and mitigate any potential site specific impacts related to housing displacement, if any. Therefore, overall, RMP implementation of the RMPs would result in a less than significant impact with respect to displacement of housing. (*Less than Significant*)

- c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The vast majority of land on District preserves is undeveloped natural open space and land in agricultural production. The RMPs would be used by the District to protect and manage natural and cultural resources on its lands. No land use changes are specifically proposed in the RMPs, and implementation of the RMPs would not result in land use changes which would displace substantial numbers of people from District lands or areas surrounding District

preserves. Associated impacts would be less than significant. (*Less than Significant*)

XV. PUBLIC SERVICES	Less Than Significant			
Would the project:	Poten- tially Signifi- cant Impact	With Mitiga- tion Incorpo- rated	Less Than Signifi- cant	No Im- pact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

Within the District, fire protection services are provided by local fire departments and volunteer fire companies, as well as the California Department of Forestry (CDF), which provides fire protection in the rural areas which comprise the majority of land on District preserves. Law enforcement services are provided by local police departments, and the respective County sheriff's offices serve unincorporated areas of San Mateo, Santa Clara, and Santa Cruz counties. The California Highway Patrol responds to vehicular accidents, including those involving pedestrians, bicyclists, and equestrians. State and county park rangers provide law enforcement within state and county parks, respectively.

The District also employs 18 rangers, 4 supervising rangers, and 2 area superintendents to augment police and fire protection services provided by other

agencies. Rangers are peace officers and patrol preserves to enforce federal, State, and local laws and to perform fire suppression duties as needed. Supervising rangers are responsible for overseeing the ranger activities as well as for coordinating with police, fire, and other park agencies regarding public safety concerns on or adjacent to District lands.

The District offers environmental science-based educational programming to school children and members of the general public at the David Daniels Nature Center at Skyline Ridge Open Space Preserve and other District facilities. The District's docent and volunteer programs also train adults in conducting activities such as environmental science-based field trips as well as interpreting District resources.

Discussion

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools?*

Fire Protection

Implementation of the RMPs would not increase the need for fire protection services on District preserves. As described above, RMP implementation could involve the use of prescribed burns for the purpose of vegetation management; however, pursuant to RMP Policy FM-5.6, planning and implementation of prescribed burns, if undertaken, would be done in coordination with responsible public agencies. The RMPs also include numerous measures which would reduce the risk of unplanned fires. Goal FM calls for the promotion of District and regional fire management objectives; Policy GM-3.1 requires the district to monitor the amount of residual dry matter on the ground from grazing and evaluate and report on any increased risk of wildland fire; and Policy FM-1.4 requires that the District identify access issues as well as fire concerns. Further, Policy FM-5 calls for the District to:

- ◆ Maintain essential roads for emergency fire access and forest management activities undertaken to reduce fire hazard;

- ◆ Maintain adequate fire clearance around District structures and facilities;
- ◆ Encourage neighboring property owners to maintain adequate fire clearance around existing development and consult with regulatory agencies to encourage that construction of new development maintains fire agency recommended setbacks for fire clearance between new development and District forest and woodland;
- ◆ Evaluate the potential to reduce forest fuel loading through the removal of smaller trees to reduce forest floor fuel buildup and ladder fuels; and
- ◆ Coordinate with fire agencies and local communities to define locations where fire protection infrastructure is desirable and practical.

For additional discussion of impacts associated with unplanned wildland fires, please see Section VIII.h, above. Overall, RMP implementation would result in a less-than-significant impact regarding physically altered fire protection facilities. (*Less than Significant*)

Police Protection

Implementation of the RMPs would not directly increase the number of visitors to District preserves or introduce development which could require substantially increased police protection services. Further, RMP Policy CR-3.3 requires that the District implement security measures such as protective fencing and patrolling to reduce vulnerability to vandalism and looting. Therefore, overall, RMP implementation would not require substantial construction or expansion of police protection facilities and associated impacts would be less than significant. (*Less than Significant*)

Schools

As described above in Section VIII of this Initial Study, there are a number of schools in close proximity to District preserves. However, RMP implementation would not result in the construction of new housing or the creation of substantial numbers of new jobs on District preserves or in surrounding areas, and therefore, RMP implementation would not substantially impact local schools. Although RMP implementation would not directly increase the number of visitors to District preserves, over time implementation of Policy PI-1, which calls for the District to provide interpretative facilities, could po-

tentially lead to the construction of new educational facilities on District preserves. These would be small scale environmental education and/or interpretive facilities that do not qualify as K-12 schools and would not affect service ratios and other performance objectives for K-12 schools. At this time there are no plans for the construction of new educational facilities and any future construction or expansion of such facilities would be proposed in the site specific Use and Management or Master Plans prepared for preserves. These plans would be subject to separate CEQA review prior to implementation. Therefore, overall, RMP implementation would result in a less-than-significant impact with respect to environmental impacts from the construction or expansion of school facilities. *(Less than Significant)*

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
XVI. PARKS AND RECREATION				
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include parks or recreational facilities or require the construction or expansion of parks and recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

The District manages land primarily to preserve a regional greenbelt of open space land. District preserves offer a variety of recreational opportunities to residents and visitors to the San Francisco Bay area. With over 220 miles of public trails inviting low-intensity recreational activities such as hiking, biking, jogging, horse-back riding, dog walking, and picnicking, District preserves serve as popular weekday and weekend recreational destinations. There are relatively few improvements on District preserves, other than gravel park-

ing areas, public rest rooms, informational signs, and maintenance and staging facilities.

Discussion

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?*

The primary purpose of the RMPs is to guide the District in protecting and managing natural resources on its lands. As such, implementation of the RMPs would not result in a substantial increase in the number of visitors to District preserves. While the RMPs include policies that call for the continued operation of existing interpretive and educational programs, such as Policy PI-1, and outreach activities, such as those identified in PI-3, these facilities and outreach activities are intended to promote visitor awareness and increase knowledge for current and ongoing visitors. As such, RMP implementation is not expected to substantially increase visitor use. Any new recreational facilities that could result in increased use would be planned for and evaluated in site specific projects, or in Use and Management plans or Master Plans, which would be subject to separate CEQA review prior to approval.

Additionally, the RMPs contain numerous policies and implementation measures to minimize adverse physical impacts and deterioration which come with visitor use of recreation facilities. For example, Policy WM-3 seeks to discourage human intrusion into sensitive wildlife habitats through the appropriate placement of facilities and trails; Policy GS-1.2 calls for the District to design roads, trails and facilities to minimize disturbance to vegetation and soil; and Policy SA-1.8 requires that areas degraded by human use be rehabilitated by restricting access or type(s) of use, rerouting trails and roads, removing unsightly human-made features and non-native plants, restoring natural contours, and revegetating with native plants. Further, Policy FM-3.2 requires that the District maintain essential roads to high standards, and Policy WF-8.6 prohibits smoking, firearms, fireworks and off-road vehicle use and limits trail use, picnicking, and camping to designated activities.

Therefore, overall, implementation of the RMPs would result in a less-than-significant impact with respect to physical deterioration of the District's parks and recreational facilities. *(Less than Significant)*

b) Would the project include parks or recreational facilities or require the construction or expansion of parks and recreational facilities which might have an adverse physical effect on the environment?

The RMPs would guide the construction and expansion of the District's parks and recreational facilities in the future. The RMPs contain numerous policies and implementation measures, including the policies and measures described above, which avoid or minimize the potential adverse environmental effects that could result from such construction or expansion. Additionally, the site specific projects, Use and Management plans, and Master Plans through which the RMPs would be implemented would be subject to separate CEQA review, ensuring an opportunity to evaluate and mitigate any potential site specific impacts related to the construction and expansion of the District's parks and recreational facilities in the future. Therefore, RMP implementation would minimize potential impacts associated with the construction and expansion of parks and recreational facilities and a less-than-significant impact would result. *(Less than Significant)*

XVII. TRANSPORTATION/TRAFFIC

Would the project:

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Existing Conditions

Major roadways providing access to District preserves include State Routes 9, 17, 35, 84, and 92, as well as Interstate 280. State Route 35 (SR-35), also known as Skyline Boulevard, runs adjacent to 15 of the 26 District preserves, serving as a key gateway to District preserves.

The San Mateo City/County Association of Governments (C/CAG) is the designated Congestion Management Agency for San Mateo County, while the Valley Transit Authority (VTA) is the designated Congestion Management Agency for Santa Clara County. Each agency is responsible for developing and updating the Congestion Management Program (CMP) in its respective jurisdiction. The San Mateo County Congestion Management Program (2009) identifies I-280, SR-1, SR-35, SR-84, and SR-92 as CMP roadways, while the VTA's Congestion Management Program contains a more extensive list of CMP roadways, including SR-17 and SR-35, which pass adjacent to District preserves. Additionally, each document also identifies CMP intersections, which are generally concentrated in more urbanized areas.²²²³

The San Mateo County Transit Authority (SamTrans) and the Santa Clara VTA operate public bus and rail service within the region, although there is no direct service to any District preserves.

Public parking is available at all of the District's preserves, except Bear Creek Redwoods, La Honda Creek, Miramontes Ridge, Teague Hill, and Tunitas Creek preserves. In the event additional parking areas were proposed in the future, such improvements would be identified in site specific projects, Use and Manage Plans, and Master Plans and would be subject to CEQA review prior to approval.

The use of private motorized vehicles is not permitted on District preserve lands, except in parking lots and on access roads leading to them. However,

²² Please see: City/County Association of Governments of San Mateo County, 2009, Final San Mateo County Congestion Management Program, Appendix A: Detailed Inventory of CMP Roadways and Intersections.

²³ Please see: Santa Clara Valley Transportation Authority, 2009, Congestion Management Program, Appendix B: CMP System Roadways.

District preserves offer a 220-mile network of hiking, bicycling, and equestrian trails for use by the general public.

Discussion

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

District preserves are located in multiple midpeninsula jurisdictions, including unincorporated San Mateo, Santa Clara, and Santa Cruz counties. Roadways providing access to District preserves are therefore subject to a wide variety of plans, policies, and ordinances governing the performance of the circulation system. However, as described above, implementation of the RMPs would not directly increase the number of people traveling to and from District preserves. As such, RMP implementation would not substantially affect the performance of roadways providing access to District preserves and associated impacts would be less than significant. *(Less than Significant)*

b) Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Although there are a number of CMP roadways and intersections which provide access to District preserves, because implementation of the RMPs would not directly increase the number of people traveling to and from District preserves, RMP implementation would not substantially affect the performance of CMP roadways or intersections. Therefore, associated impacts would be less than significant. *(Less than Significant)*

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

As described above, there are a total of eight airports in San Mateo and Santa Clara counties, including Moffett Federal Field, adjacent to Stevens Creek

Open Space Preserve, and Palo Alto Airport, located approximately 5-miles to the south of Ravenswood Open Space Preserve. However, RMP implementation would not involve land use changes or development which could affect air traffic patterns and therefore there would be no impact. (*No Impact*)

d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

Implementation of the RMPs would involve the maintenance of existing trails and roadways on District preserves, as well as the potential construction of new trails and access roads. RMP Policy SA-1.1 calls for the clarification and documentation of appropriate standards for designing and locating trails, parking areas, and buildings. Additionally, Policy WF-2.5 calls for the development of trail and road rehabilitation measures to address potential safety issues, while Policy WF-8.6 prohibits off-road vehicle use on District preserves. Therefore, RMP implementation would not directly increase roadway hazards and associated impacts would be less than significant. (*Less than Significant*)

e) Result in inadequate emergency access?

Preserve entrances are maintained to provide access for emergency vehicles and the RMPs contain several policies and implementation measures which are intended to ensure adequate emergency access. For example, Policy FM-5.1 calls for the District to maintain roads essential for emergency fire access and forest management activities undertaken to reduce fire hazard. Additionally, Policy FM-8.3 requires that trail alignments and access points be located so that they also serve as emergency access routes. Policy FM-8.3 also states that where feasible, emergency helicopter landing sites shall be provided for remote areas. Therefore, overall, RMP implementation would result in a less-than-significant impact with respect to inadequate emergency access. (*Less than Significant*)

f) Would the project conflict with adopted policies, plans or programs supporting alternative transportation?

The RMPs would not result in changes on roadways providing access to District preserves such that access by alternative modes of transportation (includ-

ing bus, bicycle, or horse) would be substantially affected. As described above, within its preserves, the District offers approximately 220 miles of hiking, bicycling, and equestrian trails for use by the general public. Therefore, implementation of the RMPs would not substantially decrease the performance or safety of public transit, bicycle, or pedestrian facilities and associated impacts would be less than significant. (*Less than Significant*)

XVIII. UTILITIES AND SERVICE SYSTEMS	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have insufficient water supplies available to serve the project from existing and identified entitlements and resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have insufficient wastewater treatment capacity available to serve the project's projected demand in addition to existing demand as determined by the wastewater treatment provider which serves or may serve the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

XVIII. UTILITIES AND SERVICE SYSTEMS

Would the project:

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
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<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Existing Conditions

District preserves are made up predominantly of natural open space and land in agricultural production. As such, in general, the need for water, wastewater, and stormwater infrastructure and solid waste disposal services is minimal.

Water for use in administrative buildings and public facilities on District preserves generally comes from local streams, creeks, and groundwater. Irrigation water for agricultural production on District preserves comes from on-site surface waters for which the District has obtained appropriative rights.²⁴ Wastewater from public restrooms and other facilities on District preserves is stored in on-site septic tanks before removal and disposal by local service providers. Trash bins are provided at select preserves in public parking areas and around restrooms and other public facilities. Visitors to most preserves are encouraged to take food wrapping and containers home with them for disposal. Solid waste disposal services on District preserves are provided for employee residents and tenants by local providers.

Discussion

a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Wastewater from public restrooms and other facilities on District preserves is stored in on-site septic tanks before removal and disposal by local service providers. Operation of on-site septic tanks is regulated by permit from the local

²⁴ Julie K. Andersen, Resource Planner, Midpeninsula Regional Open Space District, personal communication with The Planning Center | DC&E, Monday July 25, 2011.

Department of Public Health in the jurisdiction where the tanks are located. Implementation of the RMPs would not directly increase the number of visitors to District preserves or otherwise significantly increase the amount of wastewater generated. Therefore, continued compliance with local regulations and permit conditions would ensure that impacts related to wastewater treatment standards from RMP implementation would be less than significant. (*Less than Significant*)

b) Would the project require or result in the construction of new water or wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As described above, RMP implementation would not directly increase the number of people visiting or working on District preserves and therefore would not require the construction or expansion of water or wastewater facilities. Neither would the RMPs result in development or land use changes that would substantially increase the amount of water used or wastewater generated on District preserves. In the event any such construction or expansion of water or wastewater facilities and infrastructure on District preserves were ever proposed, the project would be part of a site specific project, Use and Management Plan, or Master Plan process, subject to separate CEQA review. Therefore, impacts related to the construction and expansion of water or wastewater facilities from RMP implementation would be less than significant. (*Less than Significant*)

c) Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

District preserves are made up predominantly of natural open space and land in agricultural production, with relatively few improvements. As such, there is relatively little impervious surface and only minimal stormwater infrastructure required to dispose of stormwater runoff. In general, RMP implementation would guide the protection and management of natural resources on District lands and would not result in development which would substantially increase the volume of stormwater generated on District preserves. Any construction of new or expansion of existing buildings, structures, or roadways that could increase the amount of impervious surface on District lands would

be subject to Provision C.3 guidelines requiring projects which create or replace 10,000 square feet of impervious surface to prepare a stormwater control plan for detaining runoff or promoting infiltration so that peak flows and durations match pre-project conditions. Therefore, continued compliance with State and local stormwater regulations, including Provision C.3, would ensure that impacts related to stormwater infrastructure resulting from RMP implementation would be less than significant. (*Less than Significant*)

d) Would the project have insufficient water supplies available to serve the project from existing and identified entitlements and resources?

Operation of administrative buildings and public facilities on District preserves requires a minimal amount of water which is either sourced from water utility companies or from on-site streams, creeks, and groundwater. Additionally, the District has developed an Agriculture Management Plan to ensure that the amount of irrigation water used in agricultural production at the Purisima Creek preserve does not exceed the amount allocated under the adjudication order. Further, as RMP implementation would not directly increase the number of people visiting or working on District preserves, implementation would not substantially increase the volume of water used. Overall, associated impacts would be less than significant. (*Less than Significant*)

e) Would the project have insufficient wastewater treatment capacity available to serve the project's projected demand in addition to existing demand?

As described above, wastewater from public restrooms and other facilities on District preserves is stored in on-site septic tanks before removal and disposal by local service providers. RMP implementation would not directly increase the number of people visiting or working on District preserves and therefore would not require additional wastewater capacity. Associated impacts would be less than significant. (*Less than Significant*)

f) Would the project not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs?

As District preserves are made up predominantly of natural open space and land in agricultural production, only a minimal amount of solid waste is gen-

erated from operations. RMP implementation would not directly increase the number of people visiting or working on District preserves or involve land use changes or development which would significantly increase the amount of solid waste generated on District preserves. Therefore, RMP implementation would result in a less-than-significant impact with respect to landfill capacity. *(Less than Significant)*

g) Would the project not comply with federal, State, and local statutes and regulations related to solid waste and recycling?

California's Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000, through source reduction, recycling, and composting. As described above, RMP implementation would not directly increase the number of people visiting or working on District preserves or involve land use changes or development which would significantly increase the amount of solid waste generated on District preserves. RMP implementation could result in construction activities on District preserves; however, solid waste generated from such activities would be subject to local Construction and Debris Ordinances, such as those required by the County of San Mateo.²⁵ Therefore, continued compliance with State and local regulations governing solid waste disposal would ensure that impacts from RMP implementation would be less than significant. *(Less than Significant)*

²⁵ California Department of Resources Recycling and Recovery (CalRecycle), <http://www.calrecycle.ca.gov/condemo/Ordinances/Jurisdiction/SanMateo.htm>, accessed September 29, 2011.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

	Poten- tially Signifi- cant Impact	Less Than Signifi- cant With Mitigation Incorpo- rated	Less Than Signifi- cant	No Im- pact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The overarching intent of the RMPs is to define policies and practices for use in the protection and management of plants, animals, water, soil, terrain, geologic formations, and historic, scenic, and cultural resources on District pre-

serves. As described in detail above, the RMPs contain numerous goals, policies and implementation measures which further this intent. Therefore, RMP implementation would be beneficial for the quality of the environment and wildlife on District preserves and associated impacts would be less than significant. (*Less than Significant*)

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The RMPs do not propose new land uses or substantial development on District lands, and RMP implementation would not induce substantial growth, either directly or indirectly. RMP implementation would not increase the number of people visiting or working on District preserves, and therefore would not substantially increase vehicle traffic associated with the preserves. As described above, prescribed burns for fire and forest management, if any, would be implemented in conjunction with local fire agencies, following any and all permit conditions, and limited to permissive burn days when air pollution generated is not expected to adversely affect ambient air quality or downwind populations. Additionally, biomass in the form of trees and plants on over 60,000 acres of District land preserved in perpetuity represents the potential for ongoing carbon sequestration. As such, RMP implementation would not substantially contribute to the degradation of regional air quality or ambient noise levels on and around District preserves, nor would RMP implementation result in a cumulatively considerable volume of GHGs. Overall, RMP implementation would not result in a significant cumulative environmental impact. (*Less than Significant*)

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, RMP implementation would protect and manage natural resources on District lands while promoting enjoyment of natural open space and awareness of the natural environment for visitors to District preserves. The RMPs do not propose new land uses or development which would have substantial adverse effects on humans. Nor would RMP implementation place

substantial numbers of people at risk of injury or damage from natural disasters - in fact, numerous policies and measures such as those cited in Sections II, IV, and VIII of this Initial Study, would serve to reduce risk to humans from such natural disasters. While RMP implementation would require the transport, storage, and use of hazardous substances such as petroleum fuels and pesticides, as described above, continued compliance with applicable federal, State, and local regulations as well as continued implementation of other existing District policies and practices would minimize potential risks to humans to the maximum extent practicable. Additionally, Policy IS-3 which requires the use of IPM techniques, favors non-chemical strategies where effective, thereby minimizing the potential for adverse effects to humans from pesticides. Consequently, RMP implementation would not result in substantial adverse effects on humans and associated impacts would be less than significant. (*Less than Significant*)

A P P E N D I X A

PLANT AND ANIMAL SPECIES
POTENTIALLY OCCURRING ON
DISTRICT PRESERVES



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TABLE A-1 SPECIAL STATUS SPECIES AND SENSITIVE RESOURCES POTENTIALLY OCCURRING ON DISTRICT PRESERVES

Species	Common Name	Federal Status	California Status	Global Rank	State Rank	Rare Plant Rank	Preserve
Animals							
Dipodomys venustus venustus	Santa Cruz kangaroo rat	None	None	G4T1	S1		Pulgas Ridge OSP, Teague Hill OSP
Reithrodontomys raviventris	salt-marsh harvest mouse	Endangered	Endangered	G1G2	S1S2		Stevens Creek Natural Study Area, Ravenswood OSP
Bats							
Corynorhinus townsendii	Townsend's big-eared bat	None	None	G4	S2S3		Long Ridge OSP
Lasiurus cinereus	hoary bat	None	None	G5	S4?		Windy Hill OSP, La Honda Creek OSP
Laterallus jamaicensis coturniculus	California black rail	None	Threatened	G4T1	S1		Ravenswood OSP
Birds							
Asio otus	long-eared owl	None	None	G5	S3		Coal Creek OSP, Los Trancos OSP, Monte Bello OSP, Russian Ridge OSP, Skyline Ridge OSP, Coal Creek OSP, Rancho San Antonio OSP
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	G4T3	S2		Bear Creek Redwoods OSP, El Sereno OSP, Felton Station OSP, Saratoga Gap OSP,
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	None	None	G5T2	S2		Ravenswood OSP
Melospiza melodia pusillula	Alameda song sparrow	None	None	G5T2?	S2?		Ravenswood OSP
Rallus longirostris obsoletus	California clapper rail	Endangered	Endangered	G5T1	S1		Ravenswood OSP
Fish							
North Central Coast	North Central Coast	None	None	G?	SNR		La Honda Creek OSP

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TABLE A-1 SPECIAL STATUS SPECIES AND SENSITIVE RESOURCES POTENTIALLY OCCURRING ON DISTRICT PRESERVES (CONTINUED)

Species	Common Name	Federal Status	California Status	Global Rank	State Rank	Rare Plant Rank	Preserve
Steelhead/Sculpin Stream	Steelhead/Sculpin Stream						
<i>Oncorhynchus mykiss irideus</i>	steelhead - central California coast DPS	Threatened	None	G5T2Q	S2		La Honda Creek OSP, Long Ridge OSP, Skyline Ridge OSP
Insect							
<i>Danaus plexippus</i>	monarch butterfly	None	None	G5	S3		Miramontes Ridge OSP, Purisima Creek Redwoods OSP
<i>Microcina edgewoodensis</i>	Edgewood Park micro-blind harvestman	None	None	G1	S1		Pulgas Ridge OSP
<i>Trimerotropis infantilis</i>	Zayante band-winged grasshopper	Endangered	None	G1	S1		Bear Creek Redwoods OSP, Sierra Azul OSP
Plants							
<i>Allium peninsulare</i> var. <i>franciscanum</i>	Franciscan onion	None	None	G5T2	S2.2	1B.2	Coal Creek OSP, Foothills OSP, Los Trancos OSP, Monte Bello OSP, Coal Creek OSP, Russian Ridge OSP, Skyline Ridge OSP
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	None	None	G2	S2?	1B.2	Saratoga Gap OSP, Long Ridge OSP, Purisima Creek Redwoods OSP, Saratoga Gap OSP
<i>Arctostaphylos regismontana</i>	Kings Mountain manzanita	None	None	G2	S2.2	1B.2	El Corte de Madera OSP, Long Ridge OSP, Purisima Creek Redwoods OSP, Teague Hill OSP
<i>Calyptridium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	None	None	G3G4T2	S2	1B.1	Sierra Azul OSP
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	None	None	G4T2	S2	1B.2	Stevens Crk Nat Stdy Area
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes bird's-beak	None	None	G4?T2	S2.2	1B.2	Ravenswood OSP
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	Endangered	None	G2T1	S1.1	1B.1	El Sereno OSP, St. Joseph's Hill OSP

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TABLE A-1 SPECIAL STATUS SPECIES AND SENSITIVE RESOURCES POTENTIALLY OCCURRING ON DISTRICT PRESERVES (CONTINUED)

Species	Common Name	Federal Status	California Status	Global Rank	State Rank	Rare Plant Rank	Preserve
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton fountain thistle	None	None	G2T2	S2	1B.2	Sierra Azul OSP
<i>Clarkia concinna</i> ssp. <i>automixa</i>	Santa Clara red ribbons	None	None	G5?T3	S3.3	4.3	Bear Creek Redwoods OSP, Saratoga Gap OSP, Sierra Azul OSP, Long Ridge OSP, Monte Bello OSP, Skyline Ridge OSP, Russian Ridge OSP
<i>Collinsia multicolor</i>	San Francisco collinsia	None	None	G2	S2.2	1B.2	Sierra Azul OSP
<i>Dirca occidentalis</i>	western leatherwood	None	None	G2G3	S2S3	1B.2	Rancho San Antonio OSP, La Honda Creek OSP, Russian Ridge OSP, Windy Hill OSP
<i>Eriogonum nudum</i> var. <i>decurrens</i>	Ben Lomond buckwheat	None	None	G5T2	S2.1	1B.1	Saratoga Gap OSP, Long Ridge OSP
<i>Eriophyllum latilobum</i>	San Mateo woolly sunflower	Endangered	Endangered	G1	S1.1	1B.1	Coal Creek OSP, Russian Ridge OSP
<i>Hoita strobilina</i>	Loma Prieta hoita	None	None	G2	S2	1B.1	El Sereno OSP, Sierra Azul OSP, St. Joseph's Hill OSP
<i>Lessingia arachnoidea</i>	Crystal Springs lessingia	None	None	G1	S1.2	1B.2	Pulgas Ridge OSP
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	None	None	G2T2	S2	1B.2	Sierra Azul OSP
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	None	None	G2Q	S2.2	1B.2	La Honda Creek OSP, Monte Bello OSP, Rancho San Antonio OSP, Sierra Azul OSP
<i>Monardella villosa</i> ssp. <i>globosa</i>	robust monardella	None	None	G5T2	S2.2	1B.2	Sierra Azul OSP, Rancho San Antonio OSP, Coal Creek OSP, Windy Hill OSP
<i>Monolopia gracilens</i>	woodland woollythreads	None	None	G2G3	S2S3	1B.2	El Sereno OSP, Picchetti Ranch OSP, Sierra Azul OSP, St. Joseph's Hill OSP, El Corte de Madera OSP, Foothills OSP, Monte Bello OSP, Rancho San Antonio OSP, Pulgas

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TABLE A-1 SPECIAL STATUS SPECIES AND SENSITIVE RESOURCES POTENTIALLY OCCURRING ON DISTRICT PRESERVES (CONTINUED)

Species	Common Name	Federal Status	California Status	Global Rank	State Rank	Rare Plant Rank	Preserve
							Ridge OSP
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	None	None	G3	S3.2		Ravenswood OSP
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	None	None	G4T2	S2.2	1B.2	Sierra Azul OSP
Piperia candida	white-flowered rein orchid	None	None	G2	S2	1B.2	Los Trancos OSP
Plagiobothrys glaber	hairless popcorn-flower	None	None	GH	SH	1A	El Sereno OSP, St. Joseph's Hill OSP
Serpentine Bunchgrass	Serpentine Bunchgrass	None	None	G2	S2.2		Pulgas Ridge OSP
Speyeria adiastrae	unsilvered fritillary	None	None	G1G2T1	S1		Long Ridge OSP
Streptanthus albidus ssp. albidus	Metcalf Canyon jewel-flower	Endangered	None	G2T1	S1.1	1B.1	Sierra Azul OSP, Bear Creek Redwoods OSP
Streptanthus albidus ssp. peramoenus	most beautiful jewel-flower	None	None	G2T2	S2.2	1B.2	Sierra Azul OSP, St. Joseph's Hill OSP
Usnea longissima	long-beard lichen	None	None	G4	S4.2		Purisima Creek Redwoods OSP
Reptiles and Amphibians							
Ambystoma californiense	California tiger salamander	Threatened	Threatened	G2G3	S2S3		Rancho San Antonio OSP
Emys marmorata	western pond turtle	None	None	G3G4	S3		Sierra Azul OSP
Rana boylei	foothill yellow-legged frog	None	None	G3	S2S3		Sierra Azul OSP
Rana draytonii	California red-legged frog	Threatened	None	G4T2T3	S2S3		Sierra Azul OSP, La Honda Creek OSP, Purisima Creek Redwoods OSP, Russian Ridge OSP
Thamnophis sirtalis tetrataenia	San Francisco garter snake	Endangered	Endangered	G5T2	S2		Ravenswood OSP, Thornewood OSP, El Corte de Madera OSP, La Honda

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TABLE A-1 SPECIAL STATUS SPECIES AND SENSITIVE RESOURCES POTENTIALLY OCCURRING ON DISTRICT PRESERVES (CONTINUED)

Species	Common Name	Federal Status	California Status	Global Rank	State Rank	Rare Plant Rank	Preserve
							Creek OSP, Miramontes Ridge OSP, Purisima Creek Redwoods OSP, Teague Hill OSP, Tunitas Creek OSP, Windy Hill OSP, Coal Creek OSP, Foothills OSP, Long Ridge OSP, Los Trancos OSP, Monte Bello OSP, Pulgas Ridge OSP, Rancho San Antonio OSP, Russian Ridge OSP, Saratoga Gap OSP, Skyline Ridge OSP

Notes:

The global rank (G-rank) is a reflection of the overall condition of an element throughout its global range.

G1 = Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.

G2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres.

G3 = 21-100 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres.

G4 = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.

G5 = Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii*. This plant is ranked G2TI. The G-rank refers to the whole species range i.e., *Chorizanthe robusta*. The T-rank refers only to the global condition of var. *hartwegii*.

The State rank is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.

S1 = Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres

S1.1 = very threatened

S1.2 = threatened

S1.3 = no current threats known

S2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

S2.1 = very threatened

S2.2 = threatened

S2.3 = no current threats known

S3 = 21-100 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres

S3.1 = very threatened

S3.2 = threatened

S3.3 = no current threats known

S4 - Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat. NO THREAT RANK.

S5 - Demonstrably secure to ineradicable in California. NO THREAT RANK.

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TABLE A-1 SPECIAL STATUS SPECIES AND SENSITIVE RESOURCES POTENTIALLY OCCURRING ON DISTRICT PRESERVES (CONTINUED)

Rare Plant rank (CNPS List)

Indicates the California Native Plant Society (CNPS) list to which the taxon is assigned (plants only).

List 1A: Plants presumed extinct in California

List 1B.1: Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California

List 1B.2: Plants rare, threatened, or endangered in California and elsewhere, fairly threatened in California

List 1B.3: Plants rare, threatened, or endangered in California and elsewhere, not very threatened in California

List 2.1: Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California

List 2.2: Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

List 2.3: Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California

List 3.1: Plants about which we need more information; seriously threatened in California

List 3.2: Plants about which we need more information; fairly threatened in California

List 3.3: Plants about which we need more information; not very threatened in California

List 4.1: Plants of limited distribution; seriously threatened in California

List 4.2: Plants of limited distribution; fairly threatened in California

List 4.3: Plants of limited distribution; not very threatened in California

Source: CNDDDB, 2011.

