



Midpeninsula Regional
Open Space District

R-20-79
Meeting 20-16
July 22, 2020

AGENDA ITEM 9

AGENDA ITEM

Authorization to enter into an Agreement with the University of California, Santa Cruz to conduct a Five-Year Mountain Lion Study and Site-Specific Management Plan

GENERAL MANAGER'S RECOMMENDATIONS

Authorize the General Manager to enter into an Agreement with the University of California, Santa Cruz for a base contract price of \$500,000 to conduct a mountain lion collaring study for five years to assess the lion population and movement, provide annual updates and research findings at public meetings, and develop a site-specific management plan for reducing potential human-mountain lion conflicts in high risk areas.

SUMMARY

In response to ongoing sightings between mountain lions and preserve visitors, the Midpeninsula Regional Open Space District (District) has worked with regional mountain lion experts and the California Department of Fish and Wildlife (CDFW) to determine a research-based approach for understanding and mitigating potential human-mountain lion conflicts. Researchers with the University of California, Santa Cruz Puma Project (Puma Project) are the foremost authorities on mountain lions in our region and are the only entity currently permitted to conduct mountain lion collaring activities in the Santa Cruz Mountains. The District is proposing to enter into an agreement with the University of California, Santa Cruz to develop and implement a five-year study of the factors that influence mountain lion and human interactions, and subsequently develop a site-specific management plan with recommendations for reducing the potential for human-mountain lion conflict at District preserves for a not-to-exceed total amount of \$500,000.

DISCUSSION

Mountain lions are apex predators that support ecosystem health by regulating herbivores and supplying nutrients to scavengers and decomposers, which feed on carcasses left behind by lions. The District has undertaken considerable efforts to conserve mountain lion populations in the Santa Cruz Mountains and beyond. To date the District has preserved nearly 65,000 acres of prime mountain lion habitat, has provided grant funding and supported research efforts by the Puma Project, CDFW, Pathways for Wildlife, and the Bay Area Puma Project, supported legislation to prohibit the use of second-generation anticoagulant rodenticides, provided public outreach and education on mountain lions, and worked to develop the Highway 17 Wildlife Crossing project that will connect fragmented mountain lion habitat. Additional information on District efforts to conserve mountain lions can be found in the Mountain Lion Conservation Efforts Study Session Board Report (R-20-71).

Mountain lions are quiet, solitary and elusive, and typically avoid people by nature. However, as human population expands into mountain lion habitat, more frequent sightings may occur, and human/mountain lion encounters may increase. Mountain lion attacks on humans are extremely rare. However, attacks have occurred in California. Understanding mountain lion behavior and how to act responsibly in mountain lion country may greatly reduce potential conflict with these majestic animals. While the majority of human-mountain lion interactions are non-threatening, mountain lions have occasionally displayed aggressive behavior towards humans and can present a risk to public safety. The District carefully tracks all reported mountain lion observations on District lands.

Rancho San Antonio Open Space Preserve (RSA) has by far the most reported mountain lion observations by staff and the public compared to other District preserves with 131 total observations (excluding wildlife camera observations) in the last ten years (Attachment 1). Since 2015, the District has utilized Wildlife Response Protocols and coordinated with CDFW to respond to nine instances of concerning behavior from mountain lions at RSA. Responses vary depending on the circumstance, ranging from increased signage to trail/preserve closures to removal of the mountain lion in the event of an attack. Prior incidents include an unfortunate mountain lion attack on February 16, 2020 in which a child was injured by a mountain lion. The child's injuries were minor, with an adult intervening by pushing the mountain lion away and likely preventing more serious injury. In response to this attack, CDFW captured the lion, used DNA evidence to confirm that the captured mountain lion was responsible for the attack, and made the decision to humanely euthanized the lion in the interest of public safety. While RSA has the largest number of human-mountain lion interactions on District lands, the potential for human-mountain lion interactions exists at almost all District preserves (excluding Ravenswood and the Stevens Creek Shoreline Nature Study Area where mountain lions are far less likely to occur due to lack of suitable habitat and prey base). While the risk to visitors remains extremely low, understanding the factors that influence human-mountain lion interactions will allow the District to reduce potential conflicts, with the goal of protecting both visitors and mountain lions.

Research Approach

The proposed research effort would involve a 5-year mountain lion collaring study with the following objectives:

- Capture and collar mountain lions at top priority study sites (RSA, Fremont Older, and Picchetti Ranch Open Space Preserves), secondary priority sites (Monte Bello, Foothills, and Los Trancos Open Space Preserves), and third priority sites (Saratoga Gap, Coal Creek and Windy Hill Open Space Preserves);
- Estimate the number of individual mountain lions within RSA using a District-provided wildlife camera grid;
- Compare collared mountain lion home ranges within the area to other parts of the Santa Cruz Mountains;
- Assess factors influencing human-mountain lion interactions;
- Experimentally test the efficacy of mountain lion behavioral modification methods;
- Develop a habitat use map that depicts mountain lion space-use, with attention to overlap between high human use and high mountain lion use areas; and
- Develop a site-specific human-mountain lion interaction management plan with actionable strategies for minimizing conflict that is informed by prior research and survey findings.

Human-Mountain Lion Interaction Management Plan

The proposed mountain lion study will inform the development of a human-mountain lion interaction management plan that will guide District efforts to reduce potential conflicts between preserve visitors and mountain lions. Potential strategies will be dependent on research results and may include the following:

- Preserve access modifications (by type, number, time of day, trail location, etc.);
- Habitat modifications along trails to reduce vegetative cover and discourage mountain lion activity in areas with high levels of human use; and
- Mountain lion behavioral modification methods, including the use of deterrents to discourage mountain lion activity in areas with high levels of human use.

Contractor Selection

In March of 2020, District staff collaborated with the following regional mountain lion experts to discuss potential research opportunities that would enhance the scientific understanding of human-mountain lion interactions:

- Dr. Chris Wilmers of the Puma Project;
- Dr. Winston Vickers of the University of California Davis;
- Dr. Veronica Yovovich of University of California Berkeley;
- Dr. Carolyn Whitesell of the University of California Cooperative Extension; and
- Dr. Justin Dellinger who is the lead mountain lion researcher with CDFW.

Through this process the District determined that the Puma Project was the appropriate organization to lead this research effort as they have the local expertise, are supported by CDFW, and currently hold a Scientific Collection Permit (SCP) for the study area to conduct mountain lion collaring activities. Collaring and tracking data are essential to the success of this project. It can take up to three years to obtain an SCP from CDFW and it is unlikely that CDFW would issue an additional SCP to another researcher for mountain lion collaring activities within the same geographical region to avoid the potential for interference with ongoing research and to promote building upon existing data collection in the region.

The proposed budget for this project would provide funding for the following:

- Research technicians who will perform tasks associated with capturing and collaring mountain lions during the first three years of the study;
- Postdoctoral fellow, for years four and five, tasked with analyzing the data generated by the study and writing reports and associated publications;
- Field equipment; and
- Gas and vehicle mileage.

In addition, Primary Investigator, Dr. Chris Wilmers, will act as the project lead for the University of California Santa Cruz.

FISCAL IMPACT

There are sufficient funds in the adopted Fiscal Year 2020-21 (FY21) budget to cover the cost of the recommendation. Funds to complete the contract work in future years will be proposed as part of the annual Budget and Action Plan process.

The recommended action is not funded by Measure AA.

BOARD COMMITTEE REVIEW

This item was first introduced at the July 8, 2020 Special Board Meeting regarding the District's Mountain Lion Conservation Efforts, indicating that this item and agreement would come before the full Board for consideration on July 22, 2020.

PUBLIC NOTICE

Public notice was provided as required by the Brown Act. Public notice was sent to the Resource Management interested parties lists by postal or electronic mail.

CEQA COMPLIANCE

This project consists of biological research to be conducted on District lands by qualified biological professionals under a study design approved by CDFW.

This project is categorically exempt from CEQA as it consists of basic data collection, research, experimental management, and resource evaluation which do not result in a serious or major disturbance to an environmental resource. The research project and associate activities are strictly for information gathering purposes, or as part of a study leading to an action that a public agency has not yet approved, adopted, or funded (CEQA Guidelines section 15306). Any proposed future actions of the District will be subject to environmental review to be completed at a later date, prior to implementation.

NEXT STEPS

Upon approval by the Board of Directors, the General Manager will execute an agreement with the University of California, Santa Cruz, to conduct a mountain lion collaring study for five years, provide annual updates and research findings at public meetings, and develop a site-specific management plan for reducing human-mountain lion conflict in high risk areas.

Attachment

1. Reported mountain lion sightings by preserve

Responsible Department Head:
Kirk Lenington, Natural Resources Department

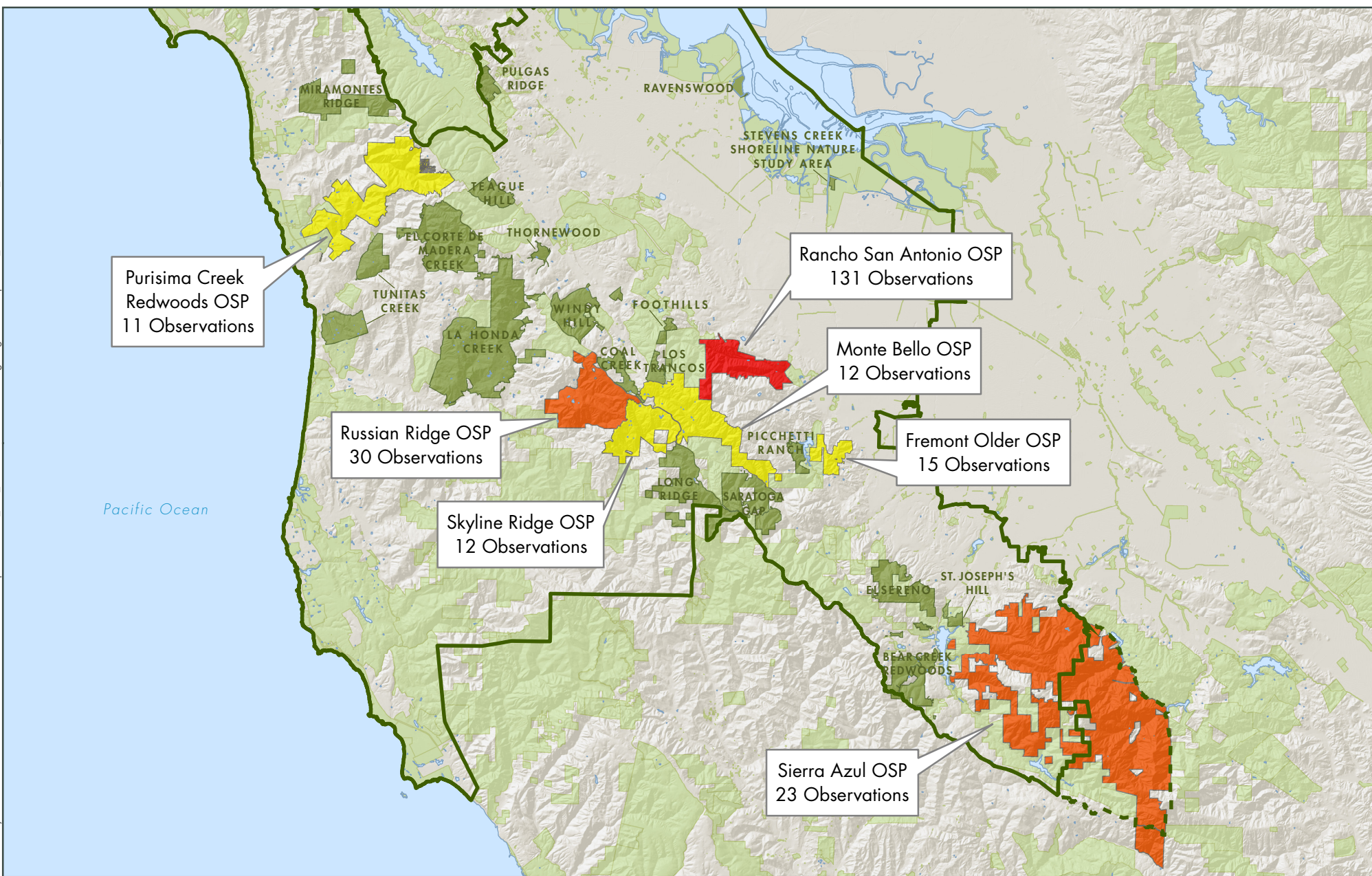
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Graphics prepared by:

Rachel Bu, Data Analyst I



Number of Reported Mountain Lion Observations by Preserve (June 2010 - June 2020)

- Preserve with > 30 Observations
- Preserve with 21 - 30 Observations
- Preserve with 11 - 20 Observations
- Preserve with <10 Observations
- Other Protected Lands
- District Boundary
- Sphere of Influence
- Private Property

Midpeninsula Regional
Open Space District
(Midpen)
6/19/2020

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While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.