

**PUENTE HILLS HABITAT PRESERVATION AUTHORITY  
CITIZENS TECHNICAL ADVISORY COMMITTEE  
*Endowment Provided by the Puente Hills Landfill***

**December 14, 2021, Tuesday, 7 p.m.**

**LOCATION:**

**This meeting will take place remotely in accordance with Government Code section 54953(e) et seq. (AB 361) and Resolution 21-04, adopted by the Board on November 22, 2021. Members of the public can observe and participate in the meeting as follows:**

**Join Zoom Meeting: <https://us02web.zoom.us/j/82080869555> Meeting ID: 820 8086 9555**

**- Or- Phone by joining at these numbers: +1 (669) 900 6833, +1 (346) 248 7799,**  
Meeting ID: 820 8086 9555, Find your local number: <https://us02web.zoom.us/u/kb2MuqLoiC>

|                         |                       |
|-------------------------|-----------------------|
| Charles Lawrence, Chair | Whittier              |
| Shelley Andros          | Whittier              |
| Ray Wong                | Whittier              |
| Roy Francis, Vice Chair | La Habra Heights      |
| Catherine Houwen        | La Habra Heights      |
| Adam Nazaroff           | La Habra Heights      |
| Karen Chang             | County of Los Angeles |
| John Houser             | County of Los Angeles |
| Gina Natoli             | County of Los Angeles |

**Members of the public may provide electronic comments by Monday, December 13, 2021, by 4:00 p.m. to [mmiller@HabitatAuthority.org](mailto:mmiller@HabitatAuthority.org). Please label the email in the subject heading as “Public Comments.” Public comments may also be verbally heard during item III of the meeting.**

Pursuant to Section 54954 of the Government Code, the Puente Hills Habitat Preservation Authority (Authority) will hold a regular meeting of the Citizens Technical Advisory Committee (CTAC) at the above time and location for the purpose of:

**AGENDA**

- I. Call to order.
- II. Roll call.
- III. Public comments.
- IV. Approval of Minutes for the November 16, 2021, Regular Meeting.
- V. Standing Reports:
  - a) Report by Board Liaison on November 22, 2021, Authority Board meeting.
  - b) Report from social media subcommittee.
  - c) Committee Member feedback from the public as it relates to the Habitat Authority.

- VI. Discussion, receive and file October 2021 Mountains Recreation and Conservation Authority (MRCA) Ranger Report.
- VII. Discussion, receive and file Authority comment letter to the County of Los Angeles regarding their General Plan Update to the Safety Element.
- VIII. Discussion and possible recommendation to the Board of Directors regarding authorizing Executive Director to execute a non-bid contract with Sage Environmental Group for goat-grazing services in Turnbull Canyon in the amount of \$76,894. This project is funded by a grant from California Department of Forestry and Fire Protection.
- IX. Discussion, Committee members' statements, Executive Director's comments, responses or questions.
- X. Adjournment and announcement of next meeting.

The Puente Hills Habitat Preservation Authority is a public entity established pursuant to the Joint Exercise of Powers Act by agreement between the City of Whittier, Los Angeles County, and Sanitation Districts of Los Angeles County. Regular meetings of the Citizens Technical Advisory Committee are scheduled for the Tuesday before the third Thursday of every month. NOTE: 72 hours prior to Citizens Technical Advisory Committee meetings, the entire Citizens Technical Advisory Committee agenda package is available for review, along with any meeting-related writings or documents provided to a majority of the Committee members after distribution of the agenda package, at the Authority's website, [www.habitatauthority.org](http://www.habitatauthority.org). Questions about any agenda item can be addressed to Andrea Gullo, Executive Director, 562.945.9003. NOTE: Members of the public may address the Committee on any item shown on the agenda. In accordance with the Americans with Disabilities Act of 1990, if you require a disability related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call Melissa Miller at the Habitat Authority office 562.945.9003, at least 48 hours prior to this meeting.

DRAFT Minutes  
PUENTE HILLS HABITAT PRESERVATION AUTHORITY  
CITIZENS TECHNICAL ADVISORY COMMITTEE  
November 16, 2021

This meeting took place remotely in accordance with Government Code section 54953(e) et seq. (AB 361) and Resolution 21-03, adopted by the Board of Directors on October 20, 2021. Members of the public could observe and participate in the meeting as follows:

**Via video (Zoom) and telephonically by joining at this address:**

**<https://us02web.zoom.us/j/85076119889>** Meeting ID: 850 7611 9889

**- Or - Phone by joining at these numbers:** +1 669-900-6833, +1 346-248-7799

Meeting ID: 850 7611 9889, Find your local number: <https://us02web.zoom.us/j/85076119889>

The special meeting of the Citizens Technical Advisory Committee was held on Tuesday, November 16, 2021, via video and telephonically.

**I. CALL TO ORDER.**

The Chair, Charles Lawrence, called the meeting to order at approximately 7:00 p.m.

**II. ROLL CALL.**

A roll call was taken, and there was a quorum at this time.

|                         |                         |                       |
|-------------------------|-------------------------|-----------------------|
| <b>Members Present:</b> | Shelley Andros          | Whittier              |
|                         | Charles Lawrence, Chair | Whittier              |
|                         | Gina Natoli             | County of Los Angeles |
|                         | Roy Francis, Vice Chair | La Habra Heights      |
|                         | Catherine Houwen        | La Habra Heights      |
|                         | Adam Nazaroff           | La Habra Heights      |

|                        |             |                       |
|------------------------|-------------|-----------------------|
| <b>Members Absent:</b> | Karen Chang | County of Los Angeles |
|                        | John Houser | County of Los Angeles |
|                        | Ray Wong    | Whittier              |

**Authority Representatives Present:**

Andrea Gullo, Executive Director  
Michelle Mariscal, Ecologist  
Melissa Miller, Administrative Assistant

**Members of the  
Public Present:**

Steve Huber, Whittier Area Audubon  
Jim Kelly, Friends of the Whittier Hills  
David Hoffman, Whittier resident

**III. PUBLIC COMMENTS.**

David Hoffman suggested that the Preserve could benefit from locating weather-data collection stations. Member Natoli stated that it would be good for the Committee to consider a proposal for including a prospective list of potential data categories at a future meeting.

Steve Huber advised that Whittier Area Audubon has resumed its Sycamore Canyon walks on the second Saturday of each month, adding that wintering bird species are now present.

**IV. APPROVAL OF MINUTES FOR THE OCTOBER 20, 2021, SPECIAL MEETING.**

|   |
|---|
| Member Natoli motioned to approve these minutes as drafted.<br>Member Houwen seconded this motion, and in a roll call vote the motion passed unanimously. |
|---|

**V. STANDING REPORTS:**

**a. REPORT FROM SOCIAL MEDIA SUBCOMMITTEE.**

Member Andros reported that there were a lot of good posts and images this past month, with much positive feedback. The Committee received and filed this report.

**b. COMMITTEE MEMBER FEEDBACK FROM THE PUBLIC AS IT RELATES TO THE HABITAT AUTHORITY.**

Member Andros reported that she attended the City of Whittier's meeting last week regarding potentially establishing a people-mover service in the city, at which Member Wong expressed reasons for including both Hellman Park Trailhead and Turnbull Canyon Trailhead as drop-off locations. The Committee received and filed this report.

**VI. DISCUSSION, RECEIVE AND FILE SEPTEMBER 2021 AND FIRST QUARTERLY 2021-2022 MOUNTAINS RECREATION AND CONSERVATION AUTHORITY (MRCA) RANGER REPORTS.**

The Committee received and filed these reports.

**VII. DISCUSSION AND POSSIBLE RECOMMENDATION TO THE BOARD OF DIRECTORS REGARDING FUNDING NEEDS FOR THE AUTHORITY AS IT RELATES TO FUNDING FOR WILDFIRE PREVENTION AND MANAGEMENT OF AGENCY PROPERTIES.**

Executive Director Gullo reported that, even with the Authority's substantial savings from its reduction in ranger patrol, trainings and outdoor education efforts, the grants it has also recently obtained still cannot make up for the losses in its investment income due to the continuing economic conditions.

Member Natoli commented that item g regarding vegetation restoration is unclear.

Vice Chair Francis motioned to recommend to the Board of Directors that they approve these funding needs of the agency; direct the Board subcommittee to pursue the exploration of funding fire prevention and safety, and natural resource management needs; and direct staff to prepare estimates for additional needs and submit for possible state funding. Member Natoli asked that this motion be modified to clarify item g. on the list and specify that this list is not in order of priority. Member Houwen seconded this motion, and in a roll call vote the motion passed unanimously.

**VIII. UPDATE, DISCUSSION AND POSSIBLE RECOMMENDATION TO THE BOARD OF DIRECTORS REGARDING THE WHITTIER CITY PEOPLE MOVER PROJECT THAT MAY POTENTIALLY PROVIDE ACCESS SERVICES TO HELLMAN PARK TRAILHEAD.**

Executive Director Gullo provided an update as presented in the staff report and noted that the City of Whittier has so far not yet mentioned the possibility of a stop at Turnbull Canyon Trailhead.

Member Natoli motioned to recommend to the Board of Directors that they support the City of Whittier's implementation of this project to facilitate access to Hellman Park while it is closed to vehicles, while also providing to the Authority the ability to remove that access if the trails are closed due to weather, emergency, maintenance or a long-term environmental issue, as well as to promote ride-sharing, lessen fossil-fuel emissions, improve congestion at the trailhead(s), and increase access to outdoor recreation opportunities. Member Andros seconded this motion, and in a roll call vote the motion passed unanimously.

**IX. DISCUSSION AND POSSIBLE RECOMMENDATION TO THE BOARD OF DIRECTORS REGARDING AUTHORIZING EXECUTIVE DIRECTOR TO EXECUTE A NON-BID CONTRACT WITH NAKAE AND ASSOCIATES FOR LANDSCAPE MAINTENANCE SERVICES IN AN AMOUNT OF \$20,000.**

Ecologist Mariscal noted that this proposed \$20,000 cost is the same as last year's contract with Nakae and Associates, Inc., for this service.

Member Natoli motioned to recommend to the Board of Directors that they approve this non-bid contract with Nakae and Associates, Inc., for landscaping services in the amount of \$20,000 for the period of one year and authorize the Executive Director to execute this contract. Member Andros seconded this motion, and in a roll call vote the motion passed unanimously.

**X. DISCUSSION AND POSSIBLE RECOMMENDATION TO THE BOARD OF DIRECTORS REGARDING AUTHORIZING EXECUTIVE DIRECTOR TO EXECUTE A NON-BID CONTRACT WITH NAKAE AND ASSOCIATES FOR NATIVE LANDSCAPING TO IMPLEMENT THE TURNBULL CANYON HABITAT ENHANCEMENT PROJECT IN THE AMOUNT OF \$41,179.**

Ecologist Mariscal noted the original mitigation project at this location was complicated by two changes in the mitigator's ownership.

Member Houwen motioned to recommend to the Board of Directors that they approve this non-bid contract with Nakae and Associates, Inc., in the amount of \$41,179 and authorize the Executive Director to execute this contract. Vice Chair Francis seconded this motion, and in a roll call vote the motion passed unanimously.

**XI. RECEIVE AND FILE AUTHORITY COMMENT LETTER TO COUNTY REGARDING THE SAFETY ELEMENT UPDATE.**

The Committee received and filed this letter.

**XII. RECEIVE AND FILE AUTHORITY LETTER OF SUPPORT FOR CALTRANS' "SR-91 WILDLIFE UNDERCROSSING IMPLEMENTATION PROJECT" GRANT PROPOSAL.**

The Committee received and filed this letter.

**XIII. UPDATE AND DISCUSSION REGARDING REDISTRICTING EFFORTS OF LOS ANGELES COUNTY SUPERVISORIAL DISTRICTS AS IT RELATES TO THE AUTHORITY.**

The Committee received and filed this update.

**XIV. DISCUSSION, COMMITTEE MEMBERS' STATEMENTS, EXECUTIVE DIRECTOR'S COMMENTS, RESPONSES OR QUESTIONS.**

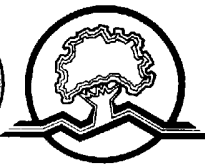
Vice Chair Francis described the status of the heli-hydrant installation in the City of La Habra Heights.

Chair Lawrence noted that an independent film about Turnbull Canyon has recently been screened for the Whittier Historical Society, and that the Whittier Daily News recently published articles about mountain lion populations and about restoration of a wildlife sanctuary adjacent to California Polytechnic University in Pomona.

Executive Director Gullo reported that 53 trees have already been removed from along Skyline Drive, and she also thanked everyone present for their continuing efforts on behalf of the Authority.

**XV. ADJOURNMENT AND ANNOUNCEMENT OF NEXT MEETING.**

There being no further comments, or business to be discussed, Chair Lawrence adjourned the meeting at 8:55 p.m. The next regularly scheduled meeting date is December 14, 2021.



**MOUNTAINS RECREATION & CONSERVATION AUTHORITY**  
Franklin Canyon Park  
2600 Franklin Canyon Drive  
Beverly Hills, California 90210  
Phone (310) 858-7272 Fax (310) 858-7212

October 31, 2021

**Puente Hills Habitat Preservation Authority  
Ranger Services Activities for October 2021**

- Continued general patrol for: providing visitor information, identifying hazardous conditions and correcting illegal activity.
- Continued general maintenance for: graffiti removal, vandalism repair, litter and dumping removal, fence and gate repairs, sign installations and repairs and trail maintenance.
- Monitoring the Conservation Corp from Long Beach clearing the fire roads in Arroyo Pescadero and Arroyo San Miguel.
- Attended L.A. County Sheriff Pico station briefing. Shared information about the Habitat Authority and the rangers.
- Monitored the dead tree removal project in La Habra Heights.
- Attended the Puente Hills Habitat Preservation Authority (Habitat Authority) Board meeting and the Citizens Technical Advisory Committee meeting.
- Responded to a brush fire at Colima Road. It was a 15ft x 15ft fire at the Arroyo San Miguel gate.
- Responded to a brush fire on Colima Road. It was a 30ft x 50ft fire at Colima Road West of Casino Drive.
- Participated in our ranger monthly management meeting.
- Participated in the Hacienda Heights Improvement Association monthly meeting.
- Attended farewell lunch for Habitat Authority staff Lina Ochoa.
- Responded to Powder Canyon for stolen water pump from Nakae.
- Continue to monitor the contractors installing the Heli-hydrant at the Diaz Property in La Habra Heights.



- Picked up dumping including:
  - Household debris at Arroyo Pescadero.
  - Rugs at Powder Canyon.
  - Bricks and mirror on Fullerton Road.
- Continue to notify the Habitat Authority staff of all unsuccessful animal road crossings that are observed at or near Habitat Authority property. During the month of October the following animals were observed.
  - Deer on Colima Road.
  - 2 Deer on Hacienda Road.
  - 1 Coyote on Colima Road.
- Continue to monitor the Harbor underpass. No activity to report.
- Responded to a dead deer stuck in the fence at Hellman Park.
- Assisted a dog owner with an overheated Husky at the Hacienda Hills Trailhead. The dog was stressed and dehydrated, but survived.
- Continue to pick up dog defecation at all the trailheads.
- Assisted Habitat Authority Ecologist install post on Quaker property for wildlife camera.
- Installed new signs at Sycamore Canyon that were damaged.
- Monitored a permitted filming at the Ford property.
- Discovered an illegal filming at Arroyo Pescadero. Turned out that they did get a permit through the City of Whittier for filming along Colima and the use of the parking lot. Notified Andrea Gullo.
- Searched for two lost hikers at Arroyo Pescadero. Found them in Arroyo San Miguel.
- Discovered a new encroachment on Skyline Drive. Working with the owner to resolve it.
- Assisted with home inspections at Sycamore Canyon and La Habra Heights.
- Continue to patrol the SCE, Brea 57 site and Monterey mitigation sites in Powder Canyon and the Olinda site in Arroyo San Miguel.
- Due to safety concerns and overcrowding at the Turnbull Canyon entrance this summer we worked with the owner of the property and Whittier Police Dept. to secure the vacant lot that is next to the entrance. We had to re-secure the chain once in October.

- Continue monitoring the surveillance cameras at various trailheads in attempt to catch the vehicle break-in perpetrators. We are also coordinating with Whittier Police and L.A. County Sheriff.
- Continue to contact the Los Angeles County Department of Street Maintenance regarding the graffiti along Turnbull Canyon Road.
- Removed a fallen branch in the fuel modification zone at Arroyo Pescadero.
- The Preserve was closed on October 26 due to rain.
- Dealt with various violations including:
  - In the Preserve after hours at Sycamore Canyon, Hacienda Hills, Powder Cyn., Hellman Park and Arroyo Pescadero.
  - Parking violations at Arroyo Pescadero, Hacienda Hills Trailhead, Sycamore Canyon and Ford property.
  - Loud music in the Hacienda Hills.
  - Smoking marijuana at Arroyo Pescadero.
  - Alcohol in Turnbull Canyon.
  - Warn and advise electric bikes in Powder Canyon and Hacienda Hills.
  - Dogs off leash in Turnbull Canyon.
  - Bikes in Arroyo Pescadero.
- Met with contractor for a bid to mow the Elderberry Trail. The bid was too high so the rangers mowed it.
- Received several calls during the month of October to our 24-hour ranger emergency services number including:
  - Hiker reporting a woman yelling at 5 children on the trail in Arroyo Pescadero.
  - Several calls regarding hikers locked inside the Preserve at the Hacienda Hills Trailhead.
  - Several calls regarding hikers locked inside the Preserve at Hellman Park.
  - Reporting suspicious vehicle at Arroyo Pescadero.
  - Reporting several people entering the Hacienda hills Trailhead after hours. It was the Sierra Hills Club.
  - Reporting an injured coyote on the Schabarum Trail.
  - Reporting the gate at the Hacienda Hills Trailhead had not been closed.
  - Reporting a dead deer on Hacienda Road.
  - Reporting a dead deer on the Ahwingna Trail.
  - Inquiring if the Preserve will be closed due to the rain.
  - Caller reporting that his house next to Hellman Park was broken into.
  - Call from Whittier Police for possible lost hiker at Arroyo Pescadero.

- Continue to check and re-post trail closure signs and rope-fence at unauthorized trails and restoration areas in Turnbull Canyon, Worsham Canyon, Powder Canyon and Hellman Park.
- Worked with Andrea Gullo on the tractor specifications and bids.
- Removed the Covid mask requirement signs from the kiosks.
- The rangers were notified of a meeting regarding an organized electric bike ride in Hacienda Heights. Arrived at the meeting location and spoke with the participants, advised them of the Preserve rules.
- Continue to conduct perimeter patrols of all property for fence damage, illegal access points, rope swings, and encroachments.
- Continue to work closely with Executive Director Andrea Gullo on various projects and assignments as requested.

If you have any questions, or would like any additional information, please feel free to contact me anytime. Thank you.

Sincerely,

*K E Hughes*

Kenn Hughes  
Deputy Chief Ranger

MEMORANDUM

Meeting Date: December 14, 2021

To: Citizens Technical Advisory Committee

Prepared by: Michelle Mariscal, Ecologist  
Through: Andrea Gullo, Executive Director

Agenda Item: **VII. Discussion, receive and file Authority comment letter to the County of Los Angeles regarding their General Plan Update to the Safety Element.**

Background:

The Los Angeles County Department of Regional Planning is updating the County's General Plan Safety Element which was last updated in 2015. This update was necessitated by three state laws relating to addressing climate adaptation and resilience strategies, evaluating emergency evacuation routes, and identifying residential developments in hazard areas that have fewer than two emergency evacuation routes. The public review draft of the Safety Element Update was released on October 5, 2021 for a 30-day review period. As reported to the Board during its November meeting, staff submitted a letter on October 28<sup>th</sup> in support of specific proposed Fire Hazard Policies which would be modified or added to the updated Safety Element.

On November 15, the Department of Regional Planning released the draft public hearing version of the Safety Element Update which was presented to the Regional Planning Commission on December 15. The public comment period was November 15 to December 15. This version of the document included slight modifications to the Safety Element text, including changes to Fire Hazard Policy S 4.1 which had been the focus of comments submitted by Habitat Authority staff. Among other comments, which were adequately addressed with the current version, staff had recommended that the policy prohibit new subdivisions in, **and adjacent to**, Very High Fire Hazard Severity Zones (FHSZ), however this language was not adopted. For comparison, the public review draft version is listed below along with the new public hearing draft version:

- Policy S 4.1 (public review draft): prohibit new subdivisions in Very High FHSZs unless located outside of the wildland urban interface, surrounded by existing development, and the level of service capacity of adjoining major highways can accommodate evacuation. Discourage subdivisions in all other FHSZs;

- Policy S 4.1 (public hearing draft): Prohibit new subdivisions in Very High FHSZs unless entirely surrounded by existing built development, will connect to public infrastructure, and the level of service capacity of adjoining major highways can accommodate evacuation. Discourage subdivisions in all other FHSZs.

Staff's recommendation that Policy S 4.1 prohibit new subdivisions in, ***and adjacent to***, VHFHSZs was aimed at rectifying a conspicuous flaw in the current map of FHSZs, namely that a portion of the open space property located adjacent to, and southeast of, Habitat Authority property in La Habra Heights is not mapped as a Very High FHSZ despite being surrounded by land with that designation. For that reason, staff recommend that the County Fire Department be granted the ability to designate areas as Very High FHSZs when local conditions warrant, consistent with the California Government Code.

The attached letter from Chair Hughes was submitted because the deadline for submitting public comments, December 15, was prior to the next scheduled Board meeting and because the letter fit the following agency correspondence policy criteria adopted in July 2020:

The Executive Director with Chair approval, or the Chair, has the authority to send letters of support to public and private organizations on time-sensitive matters that prevents a letter from being approved beforehand by the full Board that support the mission of the Authority without having a draft approved by all Authority Directors. These letters should be consistent with the mission of the Authority and include, but are not limited to, comments on developments, policies or legislation that could affect the Authority. The letters will be provided to the Board at the subsequent Board meeting.

Recommendation:

Receive and file.



December 8, 2021

Laura Shell, Chair  
Planning Commission  
Los Angeles County  
320 W Temple St  
Los Angeles CA 90012  
[comment@planning.lacounty.gov](mailto:comment@planning.lacounty.gov)  
[climate@planning.lacounty.gov](mailto:climate@planning.lacounty.gov)

**RE: Project No. PRJ2021-002039 / Safety Element Update and Amendment to Land Use Element, December 15, 2021**

Dear Chair Shell and Members of the Commission:

The Puente Hills Habitat Preservation Authority (Habitat Authority) appreciates the opportunity to comment on the Draft Safety Element Update.

The Habitat Authority is a public joint powers authority established pursuant to California Government Code Section 6500 *et seq.* with a Board of Directors consisting of the City of Whittier, County of Los Angeles, Sanitation Districts of Los Angeles County, and the community of Hacienda Heights. According to its mission, the Habitat Authority is dedicated to the acquisition, restoration, and management of open space in the Puente Hills for preservation of the land in perpetuity, with the primary purpose to protect the biological diversity. Additionally, the agency endeavors to provide opportunities for outdoor education and low-impact recreation.

In the Puente Hills, the Habitat Authority manages the open space in its ownership as well as open spaced of Board Member agencies, totaling over 3,880 acres, within the Cities of Whittier, La Habra Heights and the County unincorporated area known as Hacienda Heights. These lands are collectively referred to as the Puente Hills Preserve (Preserve). The Preserve and surrounding communities are almost entirely designated as a Very High Fire Hazard Severity Zone (FHSZ) within the respective State and Local Responsibility Areas. Additionally, the boundaries of the Preserve are almost entirely surrounded by development and therefore at the wildland urban interface which poses challenges for reducing wildfire risk due to increased ignition opportunity. A substantial portion of the Habitat Authority's annual operating budget goes towards brush clearance and fuel abatement at the wildland urban interface to create defensible space for our neighbors. For these reasons, the Habitat Authority expresses its support for prohibiting future subdivisions within Very High FHSZ, as defined in Fire Hazard Policy S 4.1.

The Habitat Authority thanks and acknowledges the Department of Regional Planning for incorporating some of its comments, submitted October 28, 2021, on the Draft Safety Element Update. Those comments included defining the limits of the Wildland Urban Interface in Policy S 4.1 (the Wildland Urban Interface criteria has since been removed from the current draft) and clarifying how “surrounded” by existing development a proposed subdivision site within a Very High FHSZ would need to be in order for the development prohibitions to be lifted (now clarified as “entirely surrounded”). However, a certain comment was not addressed in the current Draft Safety Element Update and is included below for reference, along with additional comments.

In its letter dated October 28, 2021, the Habitat Authority recommended the following modifications (in bold italics) to Policy S 4.1:

Policy S 4.1 (public review draft version, dated 10-5-21): Prohibit new subdivisions in ***or adjacent to*** Very High FHSZs unless located outside of the wildland urban interface, surrounded by existing development, and the level of service capacity of adjoining major highways can accommodate evacuation. Discourage subdivisions in all other FHSZs.

The Habitat Authority’s recommendation that Policy S 4.1 prohibit new subdivisions in, ***and adjacent to***, Very High FHSZs was aimed at rectifying a conspicuous flaw in the current map of FHSZs, namely that a portion of open space property in unincorporated Los Angeles County area located adjacent to, and southeast of, Habitat Authority property is not mapped as a Very High FHSZ despite being surrounded by open space with that designation. For that reason, the Habitat Authority is concerned that the current proposed policy language (public hearing draft version, dated 11-10-21) may present a loophole that could allow development to occur on that parcel resulting in additional fire hazards at the wildland urban interface with the potential to spread to nearby open space properties and residential neighborhoods. This is just one example of a FHSZ mapping inaccuracy that the Habitat Authority is aware of; other similar mapping inaccuracies may exist elsewhere. The Habitat Authority recognizes that its original proposed language to Policy S 4.1 may have been too vague for consideration, and therefore requests that the Safety Element Update includes language that would allow the Los Angeles County Fire Department the ability to impose stricter development prohibitions and identify additional areas as Very High FHSZs on a case-by-case basis. This would allow the County Fire Department to review and analyze outdated or inaccurate mapping to address local needs. This would be pursuant to the following California Government Code Chapter 6.8. Very High Fire Hazard Severity Zones [51175 - 51189]:

- *Section 51175:*  
*(c) It is not the intent of the Legislature in enacting this chapter to limit or restrict the authority of a local agency to impose more restrictive fire and public safety requirements, as otherwise authorized by law.*
- *Section 51179:*  
*(b) A local agency may, at its discretion, include areas within the jurisdiction of the local agency, not identified as very high fire hazard severity zones by the director, as very high fire hazard severity zones following a finding supported by substantial evidence in the record that the requirements of Section 51182 are necessary for effective fire protection within the area.*

Further, it is the Habitat Authority's understanding that Cal Fire is in the process of updating its FHSZ maps. As suggested, enabling the County Fire Department to impose restrictions based on their knowledge of specific site conditions would be beneficial in instances where current maps are outdated or inaccurate.

Thank you for your consideration, and feel free to contact myself or Ecologist Michelle Mariscal ([mmariscal@habitatauthority.org](mailto:mmariscal@habitatauthority.org)) at (562) 945-9003 for further discussion. Also, please maintain our agency on the contact list for this planning process.

Sincerely,



Mike Hughes  
Chair

cc: Habitat Authority Board of Directors and Advisory Committee



MEMORANDUM

Meeting Date: December 14, 2021

To: Citizens Technical Advisory Committee

Prepared by: Michelle Mariscal, Ecologist

Through: Andrea Gullo, Executive Director

Agenda Item: **VIII. Discussion and possible recommendation to the Board of Directors regarding authorizing Executive Director to execute a non-bid contract with Sage Environmental Group for goat-grazing services in Turnbull Canyon in the amount of \$76,894. This project is funded by a grant from California Department of Forestry and Fire Protection.**

Background:

During the current fiscal year, the Habitat Authority was awarded a \$617,862 grant from the California Department of Forestry and Fire Protection (CAL FIRE) Fire Prevention Grants Program to fund activities with the goal to reduce the wildfire fuel load in the Puente Hills Preserve which included \$77,000 for goat grazing. This project is exempt from the California Environmental Quality Act and has been filed with the County of Los Angeles and the state of California.

Staff have identified 36-acres in the southern portion of Turnbull Canyon with an accumulation of dead thatch material and predominantly non-native weed cover that would be suitable for goat grazing to reduce wildfire fuel load. Given this area's proximity to Turnbull Canyon Road and recreational trails, it has a history of being wildfire prone and several fires have occurred here over the past few decades. The map on page 3 of the attached proposal identifies the proposed grazing sites, which are located along emergency access roads (Elderberry Trail and Workman Ridge Trail). The proposed grazing project was reviewed for compliance with the Significant Ecological Areas Program by County of Los Angeles staff in May 2021.

Sage Environmental Group, established in 2007, is an environmental consulting limited liability company that, in part, offers goat grazing for wildland management. They have successfully provided wildland goat grazing services at the least to the Irvine Ranch Conservancy and the Center for Lands Management. Staff met with Sage Environmental Group (Sage) onsite in November 2020 to develop a scope of work and preliminary cost estimate (used to develop the grant application budget). Also, staff involved the rangers in planning for the project. The scope of work was subsequently refined to 36 acres which

would be grazed by a herd of 100-200 goats that would be mobilized for approximately 120 days during winter/spring in fiscal year 2021-22. The sites would be grazed a second time during winter/spring of fiscal year 2022-23. The goats would be contained within a solar-powered electrified fence and accompanied at all times by at least one pair of livestock guardian dogs for protection. The Habitat Authority ecologist will be in close contact with Sage staff during the grazing activities to determine the intensity of grazing across the sites; although non-native weeds are the predominant vegetation, the goats will be excluded from any areas that are deemed ecologically sensitive and will not be allowed to intensively graze intact native vegetation. For additional details, attached is the proposal by Sage Environmental Group in the amount of \$76,894. The contract amount includes a 10% contingency to cover unforeseen costs or circumstances.

Although not required for the goal of this project, a potential future element that could follow the second year of grazing is native habitat restoration. It would involve seeding a small portion of the sites with a locally sourced native seed mix, possibly provided by S&S Seeds at no cost per their current seed collection agreement with the Habitat Authority. Installation could be funded through the agency's typical annual General Landscape Maintenance contract if approved for that fiscal year. The site would be irrigated via rainfall. Treating a larger area for restoration could result in additional costs.

According to Section 3 of the Authority's Purchasing Policies, the Board can authorize non-bid contracts for services if, in part, prior experience and/or professional qualifications have proven that a particular service is more satisfactory or economical for Authority purposes. Sage Environmental Group is recommended as a non-bid contract because the proposed contractor is known to possess the needed experience and professional qualifications that are more satisfactory and economical for Authority purposes. Additionally, they have specific experience locally and are uniquely familiar with the topography and have experience conducting goat grazing and habitat enhancement in and adjacent to sensitive habitats on other open space preserves. Furthermore, they will directly oversee the grazing work conserving limited Authority staff resources. In accordance with the Authority's Purchasing Policies, contracts over \$10,000 need Board approval.

#### Fiscal Impact:

There is no fiscal impact other than the cost of potable water to supply the goat herd. The work will be funded by the Authority Grant Agreement with CAL FIRE (5GG20144).

Beyond the grant goal, if a small portion of the site is hand seeded with a native seed mix after the goat grazing is completed, the work could be funded under the General Landscape Maintenance contract during the fiscal year that the seeding work would occur resulting in no additional fiscal impact beyond of the typical annual operating budget.

Recommendation:

That the Committee recommends to the Board of Directors that they approve a non-bid contract with Sage Environmental Group in the amount of \$76,894 and authorize Executive Director to execute.

## Item VIII. Exhibit



December 7, 2021  
VIA ELECTRONIC TRANSMITTAL  
mmariscal@habitatauthority.org

Michelle Mariscal, M.S., Ecologist  
Puente Hills Habitat Preservation Authority  
7702 Washington Avenue, Suite C  
Whittier, CA. 90602

Subject: Year 2022 and Year 2023 Goat Grazing for Weed Abatement and Fire Fuel Load Reduction  
on ~36 acres at Altmark and Elderberry Sites within the Puente Hills Habitat Preserve

Dear Ms. Mariscal:

Sage Environmental Group (Sage), a licensed C-27 Landscape Contractor headquartered in Orange County, is pleased to submit its bid pricing and qualifications to the Puente Hills Habitat Preservation Authority (Authority) for the above-referenced project. We have reviewed the maps provided and information shared during our phone calls, emails and site visit. The two proposed sites would be excellent for annual goat grazing to meet the long-term management goals for weed abatement and fire fuel load reduction. Goat grazing is an excellent fuel load control and habitat restoration site preparation tool.

The Project is located at two sites: Altmark (27.2 acres) and Elderberry (8.5 acres) on preservation lands. The weed removal areas currently contain predominantly invasive mustard and non-native grasses with scattered patches of trees and brush.

We have recently completed grazing for habitat restoration on a purple needlegrass sites managed by the Irvine Ranch Conservancy. The grazing assisted in achieving Resource Agency sign-off for the site the following year. This year, we completed a habitat site preparation for a coastal sage scrub site managed by the Center for Natural Lands Management on very steep hillsides located above Mission San Juan Capistrano. This site is scheduled for hydroseeding this winter.

**Goat Grazing:** Sage will supply and manage approximately 100 (minimum) to 200 (maximum) head of goats (Boer and Spanish breed) for grazing at the designated areas. Along with the goats, one or two pair of livestock guardian dogs will be used to protect the goats. Sage will supply all other equipment and support personnel to graze the subject sites. We understand Sage will conduct all required site preparation to consist of removal of weeds toxic to goats and provision of potable water to the site(s) utilizing the Arroyo Pescadero staging area potable water source.

The optimal grazing schedule is between January and September annually. Mobilization, grazing and teardown would be for the duration of ~120 days annually. Mobilization can be accomplished within a few days for each site, which consists of setting portable fencing, setting up and stocking a temporary pen to contain the goats at night (supplemental food, water, and sanitary bedding), and delivering the goats to the sites. We envision a separate mobilization at each of the five sites.

Assumptions: The Authority will provide a nearby clean potable water point of connection, realistic points for site access for crew access to install/tear down low-impediment mesh fencing; and realistic trailer access point to load/unload animals (gooseneck). We understand that all sites have roads nearby with large turn-arounds plus ample parking.

To prevent overgrazing, particularly in areas containing native or mixed native vegetation, Sage staff will coordinate with the Authority to identify important resources that should be avoided or where grazing should be minimized. These areas generally include riparian, coastal sage scrub, native grasslands, and native tree areas. The light graze or avoidance areas are managed to ensure resource protection.

All work with animals will be carried out in accordance with the California Department of Food and Agriculture best practices, and any city-required animal permits. All animals will be maintained in good health and be supervised by qualified, experienced staff under the direction of our veterinarian.

Sage will complete any additional mechanical mowing, tree and shrub limb cutting, weed whacking and debris removal requested to complete the weed abatement and fire fuel load reduction at these locations as part of this contract. Overseeding with native seed can also be dispensed via animal near the end of the grazing effort, should seed be provided.

Alissa Cope will serve as the primary contact on this contract. Carson Helton will serve as the emergency contact and provide all oversight and management of field operations.

The 2022 cost estimate for annual treatment of ~36 acres is \$43,120 as follows: \$ 950 per acre, plus \$2,500 mobilization/teardown fees each for the two sites. Final mobilization/teardown fees will be confirmed prior to grazing setup and contract negotiation. We suggest a 10% contingency.

The 2023 cost estimate for annual treatment of ~36 acres is \$33,774 as follows: \$ 714 per acre, plus \$2,500 mobilization/teardown fees each for the two sites. Final mobilization/teardown fees will be confirmed prior to grazing setup and contract negotiation. We suggest a 10% contingency.

Our suggested TOTAL budget estimate for tow years of annual grazing , including contingency, is \$ 76, 894.

Please feel free to contact us directly with any questions. Thank you again for considering grazing in your long-term management toolbox.

Respectfully,

SAGE ENVIRONMENTAL GROUP



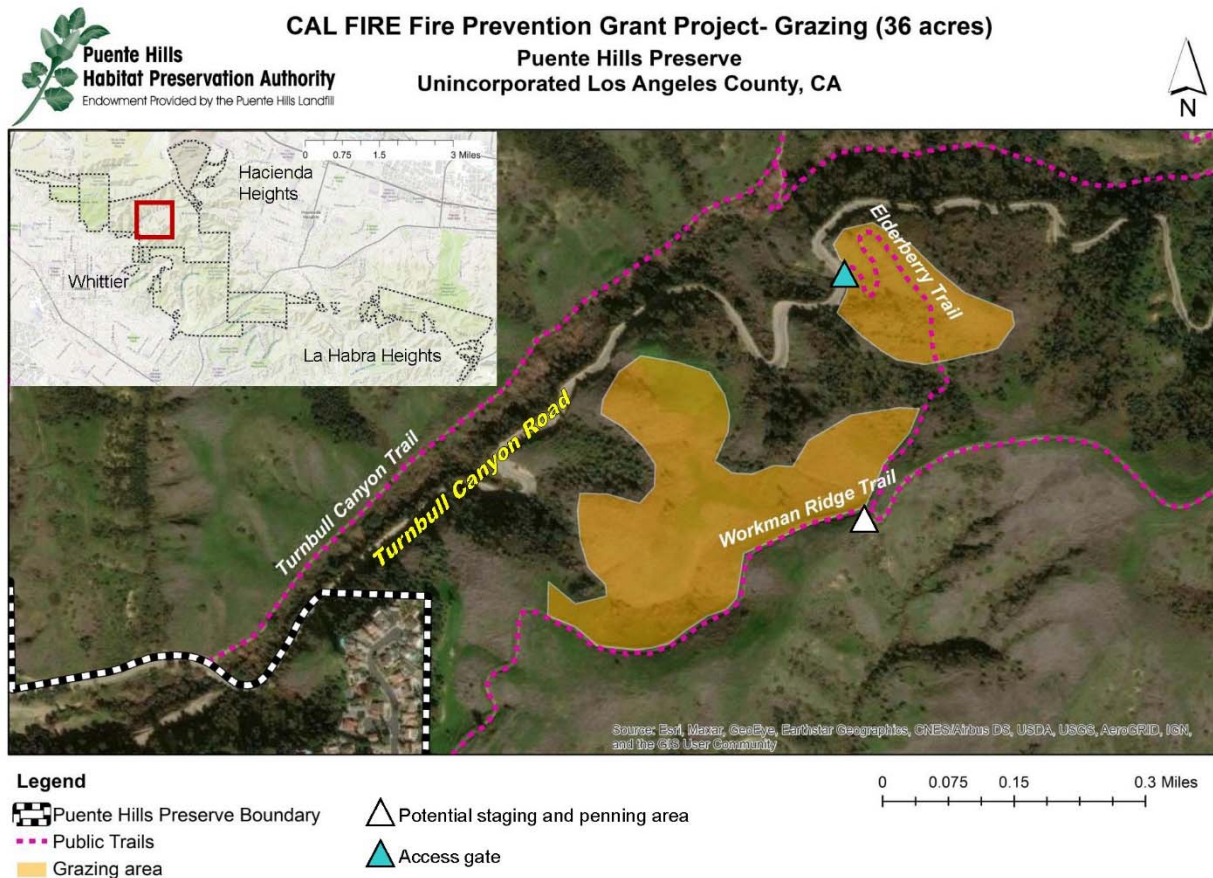
Alissa Cope  
Principal  
24040 Camino del Avion, #A77  
Monarch Beach, CA 92629  
(949) 243-2282 cell  
acope@sageenvironmentalgroup.com



Carson Helton  
Director of Habitat Restoration  
24040 Camino del Avion, #A77  
Monarch Beach, CA 92629  
(949) 444-9014 cell  
chelton@sageenvironmentalgroup.com

## Grazing Areas

Work will be conducted in the areas indicated on the map below as provided by the Authority.



## Licenses and Registrations

California State License Board

Landscape Contractor License (C-27) #947034 exp 10-31-2021

<https://www.cslb.ca.gov/OnlineServices/CheckLicense/LicenseDetail.aspx?LicNum=947034>

California Department of Industrial Relations

Registration #1000045073 exp 6-30-21

<https://cadir.secure.force.com/ContractorSearch?inputSearch=1000045073>

County of Los Angeles Department of Agriculture/CAL FIRE

Roster of qualified grazers

## Insurance

Sage carries the required levels of insurance for goat grazing and landscape contracting activities. Upon award, Sage will submit a Certificate of Insurance that names the Authority as Additional Insured.



## Grazing Equipment

The motorized equipment that supports our grazing activities consists of one large herd trailer, one recreational vehicle, several pickup trucks and an ATV. All equipment hauling and working on-site will be identified by our company logo and will be the same color.



## Guardian Animals

Along with the goats, one or two pair of livestock guardian dogs will be used to protect the goats. These are: one pair of Pyrenees dogs and one pair of Komondor dogs. All dogs follow the goats in the grazing areas during daylight areas then remain outside of the overnight pen in order to guard against predators (coyotes, bob cats, etc.) and humans (homeless, unauthorized visitors, etc.)



*Sage Pyrenees and Komondor guard dogs at fire fuel load reduction and habitat restoration grazing sites*

## Communication

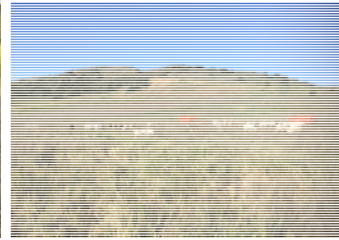
All proposed personnel are fluent in English. They can communicate effectively in written and oral English. Project managers, supervisors, field directors and labor crew/handlers all have cell phones that can send and receive voice calls, save voice mail messages, and send and receive text messages.

## Mobilization/Operations/Demobilization

Sage will coordinate with the Authority to establish logical points of ingress/egress, staging and holding pen locations, as well as potable water points of connection. A holding pen, portable shade, nighttime security lighting, several 100-gallon water troughs, supplemental feed for protein, and setting of electrified wire mesh grazing limits with solar powered charging are all part of mobilization. A small motor home and generator owned by Sage may also be utilized for the handler.



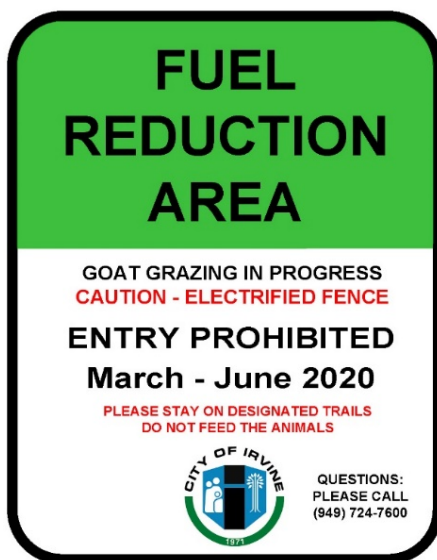
*Overnight pens and water resources are set up on the site*



*Solar-powered electric mesh or orange fencing protect desired plants and contain goats*

## Proposed/Sample Signage

Signs will be placed along the project boundary to provide safety warning and public education for the project.



*Safety signage to be posted in multiple, visible places along perimeter of grazing areas*



*Public education sandwich board to be posted at designated areas and moved with the grazing areas, as needed*



## Animal Care



Animal Care at Sage Environmental Group.

We employ Best Management Practices in Livestock Biosecurity to ensure the health of livestock and guard animals by preventing the spread of disease on location(s).

### **Item 1. Animal Guard Dogs**

Treated and cared for by:

Dr. Tillemma  
Tillemma Veterinary Clinic, Corona, CA  
708 N Main St #708, Corona, CA 92880  
(951) 547-1675  
[tillemavetclinic.com](http://tillemavetclinic.com)

**Annual vaccines for the following: Distemper, Parvovirus, Hepatitis, Rabies, Flea, Tick, Rattlesnake Bite and Boosters**

- a. Komondor Breed, Age 4 Name Boomer
- b. Komondor Breed Age 4 Name Sooner
- c. Great Pyrenes Breed, Age 5 Name Tuffy
- d. Great Pyrenes Breed, Age 2 Name Duke
- e. Border Collie, Age 2 Name Waylon

### **Item 2. Meat Goats for Weed Abatement and Vegetation Management**

Treated and cared for by:

Dr. Tillemma  
Tillemma Veterinary Clinic, Corona, CA  
708 N Main St #708, Corona, CA 92880  
(951) 547-1675  
[tillemavetclinic.com](http://tillemavetclinic.com)

**Annual, Semi Annual and Quarterly treatments for the following: Arthritis Encephalitis or Coccidias, Chronic Wasting, Worms, Lice, Scrapple for Interstate Transport, Hoof Trimming, ring worm and fly's.**

- a) Boer Breed
- b) Spanish Breed

Note: These breeds are selected due to their normal resistance to disease such as hoof rot, pink eye, ring worm and internal parasites.

### **Item 3. Nutrition and Feed Program.**

Vegetation Management goats require a minimum of 12% to 15% daily protein in their diets. While grazing is a good source of protein (8% to 10%) , SEG uses further supplemental feeds in their daily diet to assure they are getting a minimum protein and iron necessary.

#### **Supplemental Feed Daily.**

- Purina Grower Feed
- Purina Meat Goat Feed
- Orchard, Bermuda and Alfalfa Grasses or Hay
- Mineral Blocks to maintain iron and mineral requirements

## **Additional Materials**



November 23, 2021

Stephen Kirschenbaum, Esq.  
Law Offices of Gipson Hoffman & Pancione  
1901 Avenue of the Stars, Suite 1100  
Los Angeles, California 90067-6002

**Appreciation for Notification by Trustee**

Dear Mr. Kirschenbaum:

Thank you very much for your November 8, 2021, letter to the Puente Hills Habitat Preservation Authority (Habitat Authority) regarding the Notification by Trustee sent on behalf of Morse Taylor and Monica Albin, as Trustees of the Albin Family 2020 Trust, dated March 11, 2020.

The Albins' anticipated generous donation will greatly contribute to the Habitat Authority's mission of preserving and protecting the Puente Hills Preserve, especially at this critical wildlife linkage point, for the benefit of the regional wildlife populations and their habitat. The Habitat Authority greatly appreciates this future gift and wishes Mrs. Albin a long and healthy life.

We offer heartfelt condolences on the passing of Dr. Albin.

With Gratitude,

Michael Hughes  
Chair, Board of Directors

C: Board of Directors and Advisory Committee

## Local mountain lion inbreeding grows dire, but relief in sight

New study details biological evidence of inbreeding, which could lead to their local extinction.



*This female mountain lion appears to be posing for a trail camera in the western Santa Ana Mountain foothills, in this photo taken Sept. 17, 2021, as part of research by the UC Davis Wildlife Health Center. (Courtesy of UC Davis Wildlife Health Center)*

By [Martin Wisckol](#) | [mwisckol@scng.com](mailto:mwisckol@scng.com) | Orange County Register

PUBLISHED: November 10, 2021 at 7:01 a.m. | UPDATED: November 10, 2021 at 1:02 p.m.

Plans for wildlife crossings that would expand two key Southern California mountain lion ranges could be coming to fruition in the nick of time to save the animals, also known as cougars, pumas and ghost cats.

A new study details biological evidence that the lions of the Santa Monica and Santa Ana mountain ranges are experiencing inbreeding reactions that could lead to their local extinction. Hemmed in by freeways and urbanization, they're restricted to areas too small to support the genetic diversity needed for survival.

[Scientists in 2019 calculated](#) that those two populations will go extinct within 50 years unless the gene pools broaden, but the new study is the first to show that the consequences of inbreeding have already begun.

The study, published last month in the journal [Theriogenology](#), documents abnormal sperm, problems with testicle development, and kinked tails among Southern California cougars. All are symptoms of a level of inbreeding that can affect biological health — including the ability to reproduce.

“It wasn’t surprising exactly — it was what we thought would happen,” said Winston Vickers, a UC Davis researcher who has studied the region’s cougars since 2001 and who contributed to the new study. Leading the research was Audra Huffmeyer, who conducted the work while completing her biology Ph.D studies at UCLA.

But Vickers added that one finding was particularly alarming.



*A new study details biological signs of among Southern California mountain lions, which could lead to their local extinction. Above, a mother mountain lion with three kittens at Irvine Ranch Natural Landmarks in the Santa Ana Mountains. (Courtesy of Irvine Ranch Conservancy)*

Last year, National Park Service biologist [Jeff Sikich reported](#) two lions in the Santa Monica Mountains with kinked tails, one of which had only one descended testicle. That was an initial warning that inbreeding may be growing severe.

However, physical accidents can also lead to kinked tails and the sample size of a single incidence of testicle abnormality was exceedingly small.

Huffmeyer's study increased the kinked tail count in the greater Los Angeles area to four and added a second incidence of testicle abnormality. More dramatically, all five of the dead lions examined had abnormal sperm.

"The percentage of sperm that was abnormal surprised me," Vickers said. "It's still a low sample size but the fact that all five had it raises the level of alarm. There was an expectation that we would see this, but it was a bit surprising to see it at this stage."

### *Perilous roads*

Every year or so, a Southern California mountain lion tries to escape its confines for broader ranges nearby but gets killed crossing the freeway. In the Santa Monica Mountains, that usually happens on the 101 Freeway between Woodland Hills and Thousand Oaks. In the Santa Ana Mountains, it occurs on the 15 Freeway near Temecula.

Even rarer is a successful crossing, as those who try usually get hit by a vehicle and die.

But in mid October, a year-old female crossed the 15 Freeway from the Santa Ana Mountains at or near Warm Springs Creek in Murrieta. It was the first documented successful crossing to or from those mountains since at least 2016, when genetic testing determined a male in the Santa Anas had crossed from the much larger Eastern Peninsular Range east of the freeway.

The young female had been captured in February by the state Department of Fish and Wildlife after her mother was killed by a car on Antonio Parkway in South Orange County. Dubbed F291 by Vickers' research group, the animal was released with an electronic tracking collar in June, when it was determined to be old enough to survive on its own.

Vickers said it's not clear if F291 crossed over the freeway or under it, but noted that there's an underpass at Warm Springs Creek. Once east of the freeway, she followed the creek bed until reaching a high water area that would have forced her to the edge of the surrounding subdivision if she wanted to continue.



*This young female mountain lion was released in the Santa Ana Mountains in June 2021 after a four-month stay with a wildlife center. She'd been found with a sibling alone when their mother was hit by a car and killed near the Tijeras Creek Golf Course in Rancho Santa Margarita. In October 2021, she was tracked as crossing the 15 Freeway in Murrieta and then returning to the Santa Ana Mountains.(Courtesy of San Diego Humane Society)*

Instead, she went back to the other side of the freeway and returned to the Santa Ana Mountains. It's the first documented case of a lion successfully crossing the 15 Freeway in both directions — but that's not the only unusual aspect of her trip.

Of the seven previous animals documented to have successfully crossed that freeway, all were males, who are typically more motivated to seek out broader ranges. There are an estimated 16 adult lions in the roughly 600 square acres of Santa Ana Mountains, 11 females and five males. Males are far more territorial than females, typically guarding a home range of more than 100 square miles. They're also more likely to kill each other fighting, and to be hit trying to cross the freeway in search of undisputed territory.

Finally, F291's crossing location was not the path usually pursued by the region's cougars, who are deterred by the amount of urbanization east of the freeway. More common is a stretch beginning six miles to the south, at Temecula Creek — an area currently being studied for multiple possible crossings.

### *Relief in sight*

While few mountain lions try crossing the freeways at the Santa Ana and Santa Monica mountains, plenty appear to consider the possibility.

Vickers has documented mountain lions sitting for hours on the Santa Ana Mountain foothills near the 15 Freeway, as though gazing longingly at the promised land. The Eastern Peninsular Range on the other side is a wildlife area that extends into Mexico.

Similarly, to the north, the Santa Monica Mountains are separated by the 101 Freeway from the Santa Susanna Mountains, which lead to the vast Western Sierra Nevada range. There are an estimated seven adults lions in the 230 square miles of the Santa Monica Mountains, five females and two males.

Plans for a wildlife bridge over the 101 Freeway at Liberty Canyon in Agoura Hills have been underway for more than a decade, with construction expected to begin by February and be completed in late 2024, according to Beth Pratt, regional executive director of the National Wildlife Federation.

The group has raised nearly \$73 million toward its \$85 million goal for the project. So far, there have been 4,500 donors. They include the California Wildlife Conservation Board and the Annenberg Foundation, which each gave \$25 million. The bridge is awaiting final approval from Caltrans and then will be put out to bid.

"I can't wait to cut the ribbon and see the first wild creature to use it," Pratt said.





*An artist rendering of the Liberty Canyon wildlife crossing, which will help restore connectivity in the Santa Monica Mountains, enriching the gene pool of the threatened cougars in those mountains. Backers hope to begin construction by February. (Courtesy of National Wildlife Federation/Living Habitats)*

Things aren't quite as far along at the prime crossing area for the Santa Ana Mountains on the 15 Freeway, but they're moving in that direction.

At Temecula Creek, there is a broad, undeveloped freeway underpass connecting wildlife areas on either side that mountain lions have approached but rarely, if ever, used. The Nature Conservancy added \$117,000 to a \$400,000 grant from the Wildlife Conservation Board for detailed plans to make the underpass more attractive to the animals. Those plans are expected to be completed by fall 2023, with construction beginning the following year at a cost of \$500,000 to \$1 million, according to The Nature Conservancy's Trish Smith.

Meanwhile, Caltrans is completing a fencing project south of that underpass to prevent the lions from the usually fatal attempts at crossing the freeway — and which is also hoped to guide them toward the underpass.

Additionally, Caltrans has received a \$1.3 million Wildlife Conservation Board grant to study a possible wildlife bridge two miles south of Temecula Creek as well as a second underpass, with that study to be completed by March 31, 2025, according Caltrans' Scott Quinnell.

Cal Poly Pomona engineering faculty and students were recruited by Vickers to develop the [conceptual plans](#) now being fleshed out the Caltrans and The Nature Conservancy.

In addition to Caltrans and the conservation board, the lions have found a Sacramento friend in the Fish and Game Commission, which last year granted the animals temporary protective status in six geographic areas, including the Santa Ana, Santa Monica, San Gabriel and San Bernardino mountains.

The state is in the home stretch of a study to determine if that temporary status should be made permanent, with that work to be completed in the spring.

“There’s been this steady dawning of awareness of the possibility of local extinction,” Vickers said. “They can travel such long distances, and they would strike one as the least likely to be trapped. But by golly, that’s what we’ve done with our freeways and development.”

But the growing momentum for wildlife crossings is “definitely cause for optimism,” he added.

*Still not enough?*

Nonetheless, a 2020 study raises the question of whether wildlife crossings on the 15 Freeway will ultimately provide enough real estate for mountain lions — even by connecting the Santa Ana Mountains to the Eastern Peninsular Range.

Of the five male lions with abnormal sperm, one was from the Eastern Peninsular Range. That could be coincidence, as North American cougars are already more likely to have abnormal sperm than their South American counterparts. Or it could be because that male came from the Santa Ana Mountains, carrying the inbred genetics across the freeway. Genetic testing will help determine if that’s the case.

Finally, there already could be enough inbreeding east of the 15 Freeway to cause sperm abnormalities.

The 2020 study, led by state Fish and Wildlife biologist Justin Dellinger, suggests that the mountain lions ultimately need at least 10,000 square kilometers of range — 3,900 square miles — to survive in the long run. The Santa Ana Mountains are about 600 square miles. The Eastern Peninsular Range, which includes the San Jacinto and Palomar mountains, are about 1,800 square miles.

That would leave the two combined areas, known simply as the Peninsular Range, well short of Dellinger’s estimated need.

Also falling short of the mark would be the combined San Gabriel and San Bernardino mountains, a 1,150-square-mile area known as the Transverse Range.

But combine the Transverse Range with the Peninsular Range and there are 3,550 square miles of nature — nearly Dellinger’s minimum.

The Nature Conservancy is working with others, including Caltrans, to connect those two ranges. In April, the groups held a workshop on linking the two areas and a report on that idea is due to come out soon, according to The Nature Conservancy’s Trish Smith.

“Linkages and wildlife crossings in the greater I-10 area are important to connecting the Transverse Range to the Peninsular Range, especially for mountain lions,” Smith said.

“Lots of challenges there to securing connectivity, but we are starting to work on resolving those issues.”