Riparian hardwood habitat important for fisheries

by Angela Moskow, California Oaks

Riparian oaks benefit fishes by shading and cooling aquatic corridors, maintaining water quality through soil retention and capture of sediment and nutrients in runoff, minimizing channel erosion by slowing surface runoff, recharging groundwater, and providing plant and animal habitat. Oaks and other hardwoods also play a vital role within waterways. This is another facet of the story about oaks and biodiversity—a story about what is at stake and the need for California to protect its oak ecosystems.

Oaks and other hardwoods are a source of large woody debris, important in-stream habitat for fishes, including imperiled species. Large woody debris provides cover and shelter, facilitates pool formation, sustains aquatic food webs, and affects the deposition of sediment. Conifers have long been understood to provide this type of important in-stream fish habitat, yet many watersheds, including those that support anadromous fishes, have few or no conifers.

Dissertation research completed by Jeff Opperman, PhD, identified hardwood trees in Northern California that provided in-stream large woody debris but remained rooted and living. Many were living at the channel margin and were either standing or had fallen into the channel. A smaller percentage of hardwood large woody debris was from rootwads and logs with rootwads within the channel. Hardwood structures with a key living piece in these waterways were significantly larger, more persistent, and more likely to cause a pool than those without a living connection. The living root structure compensated for the smaller size of the trees and faster decay rate of hardwoods and it also provided stability during high flow events.

Subsequent analysis in other California riparian systems confirmed the importance of hardwoods for in-stream habitat. In a paper about Southern California steelhead (Oncorhynchus mykiss), federally designated as endangered and a candidate for state listing, the authors theorized that the in-stream role of hardwoods in pool formation is an important component of steelhead habitat in central-coastal California streams.

The research by Opperman and others informed Maintaining Wood in Streams: A Vital Action for Fish Conservation, a University of California publication for land managers, which discusses the role of large woody hardwood debris in providing in-stream habitat. These findings have not resulted in the development of new measures to protect oaks and the health of waterways that flow through oak woodlands and savannas.

The Spring-Summer 2021 issue of Oaks reported on endangered, threatened, and candidate vertebrate species dependent upon oak and tanoak (Notholithocarpus densiflorus) habitat and Quercus-associated listed and candidate plant and invertebrate species. The vertebrate listing was derived from the California Wildlife Habitat Relationship information system, which does not track aquatic vertebrates. Adding imperiled fishes to the 34 listed and candidate vertebrate species that are dependent upon oak habitat underscores the need for California to improve the regulatory regime for oaks. In addition to...
Oaks at Mount Diablo State Park

Oak protections necessary to sustain California’s unique biodiversity

California's environmental challenges require perseverance, innovation, and collaboration across multiple sectors. These are the attributes of projects described in this newsletter. Protection measures are also needed to keep the state's native oaks standing.

The 1994 Joint Policy on Hardwoods issued by California’s Fish and Game Commission and Board of Forestry and Fire Protection (then State Board of Forestry) states that their respective agencies should be guided by the position that hardwood harvesting and other land uses should be conducted in a sustainable manner that: “secures regeneration of all hardwood species, enhances the protection of fish, wildlife and plants of hardwood habitats, allows adequate recruitment of other native vegetation in hardwood habitats and meets state and federal water quality standards.” It also recognizes the role of hardwoods outside of waterways, but not in stream. Further, it identifies “the need for statewide legislation and…regulatory action, if necessary, to control harvesting and conversion of hardwood-rangelands using existing statutes” if current measures, which rely on local and county protections, fail to adequately address hardwood management and conservation.

As reported in the Spring-Summer 2022 issue of Oaks, California ranks at the bottom of the United States in conserving lands characterized by NatureServe as “areas of unprotected biodiversity importance.” Many of these unprotected areas are oak woodlands. Nonfederal timberlands, where conifers are dominant, are subject to California’s Forest Practice Act whereas rangelands and other landscapes where hardwoods dominate are not protected by comprehensive state regulations.

These different regulatory regimes have divergent ecosystem outcomes. For example, California’s Forests and Rangelands 2017 Assessment summarized water quality conditions in non-federal timberland compared to rangelands, finding 62% of forest streams in good condition compared to 34% for rangelands, with 21% of rangeland streams in poor and 21% in very poor condition.

California’s reliance on local oak protection efforts has failed. Threats to oaks from habitat conversion and fragmentation, changed rainfall patterns, diminishing groundwater supplies, greater climatic stresses, new pathogens, expansion of non-native annual grasses, wildfires of extreme severity, and grazing and browsing pressure have escalated since the joint policies were written. This prompted a member of California Oaks Coalition to pursue legal action to challenge El Dorado County’s oak removal policies. /The article on page 8 describes this effort.

It is past time for the state to act responsibly to achieve no-net-loss of oak ecosystems, California’s primary old-growth resource.

Sincerely,

Janet S. Cobb, Executive Officer
California Wildlife Foundation/California Oaks

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LandPaths
Lomakatsi Restoration Project
Loma Prieta Resource Conservation District
Los Padres ForestWatch
Lower Kings River Association
Mountains Recreation and Conservation Authority
Northern California Regional Land Trust
Placer Land Trust
Planning and Conservation League
Point Blue Conservation Science
Redbud Audubon Society–Lake County
Redlands Conservancy
Resource Conservation District of Santa Monica Mountains
River Partners
River Ridge Institute
Rural Communities United
Sacramento Tree Foundation
Sacramento Valley Conservancy
Santa Barbara Botanic Garden
Santa Clarita Organization for Planning and the Environment (SCOPE)
Save Lafayette Trees
Save Napa Valley
Sequoia Riverlands Trust
Shasta Environmental Alliance
Sierra Club Northern California Forest Committee–Oak Woodland Subcommittee
Sierra Club Placer Group
Sierra Foothill Conservancy
Tejon Ranch Conservancy
Tending the Ancient Shoreline Hill
Tuleyome
Tuolumne River Trust
Universidade de Trás-os-Montes e Alto Douro, Department of Forest and Landscape (Vila Real, Portugal)
University of California, Los Angeles, Mildred E. Mathias Botanical Garden
Woodland Tree Foundation

California Oaks provides four areas of support for coalition members:

1) Research and advocacy updates.
2) Information to educate and engage the public.
3) Tools for participating in planning processes and educating opinion leaders.
4) Materials to inform local, regional, and state governmental agencies of the opportunities for and benefits of protecting oak woodlands.

For more information, please contact Oaks Network Manager Angela Moskow, moskow@californiaoaks.org.

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supporting aquatic and terrestrial biodiversity, oak protection measures would improve watershed health, protect the sequestration of hundreds of millions of metric tons of carbon, and perpetuate culturally significant landscapes.


Acknowledgements

The Board of Directors supports the important conservation efforts of California Wildlife Foundation/California Oaks (CWF/CO). Thanks to Ellen Maldonado, Chair; Jim Lightbody, Treasurer; and Lynn Barris, Secretary, for their time and dedication to California’s environment.

Special thanks to CWF/CO Advisor Janet L. Byron, who provided editorial support and guidance in development of the newsletter; to David Lewis (Marin and Napa County Director, University of California Cooperative Extension and North Bay Watershed Management Advisor), Jon Rosenfield, PhD (Senior Scientist, San Francisco Baykeeper), and CWF/CO Advisor Diane Walton, PhD, who reviewed the article on oaks and fishes; and to Tom Gaman CWF/CO Advisor and Registered Professional Forester, who created the oak maps described in the Resources column.

Many thanks also to Stephanie Berger for helping with the newsletter, and to CWF/CO’s stellar volunteer, Rosemarie Aguilar, for her ongoing assistance.

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RESOURCES

RESOURCES FOR OAK IDENTIFICATION

Knowing where oaks are growing is critical to their survival.

The California OakWatch project (https://www.inaturalist.org/projects/california-oakwatch) on iNaturalist is a collaboration of California Native Plant Society (California Oaks Coalition member), Global Conservation Consortium for Oak (California Oaks Coalition member), and San Diego Zoo Wildlife Alliance that collects data on oaks native to the California Floristic Province—an area from Santa Barbara County to the 30th parallel in Baja California Norte, Mexico.

California OakWatch has two videos on oak identification and hosts the Identification Guide for Priority, Threatened California Oaks at https://www.inaturalist.org/projects/california-oakwatch/journal/archives/2022/11; the guide can also be downloaded at: bit.ly/3Yd2Yy. The guide includes six focal species of conservation concern: Cedros Island oak (Quercus cedrosensis), Nuttall’s scrub oak (Q. dumosa), Engelmann oak (Q. engelmannii), island scrub oak (Q. pacifica), Santa Cruz Island oak (Q. parvula), and island oak (Q. tomentella). It also includes two hybrid oaks, as well as interior live oak (Q. wislizenii) and shrub oak (Q. berberidifolia), which hybridize with some of the focal species.

Also consider joining California OakWatch, if you are able to contribute data to this platform.

OAK MAPS

The California Oaks website has a page (https://californiaoaks.org/oak-maps/) with downloadable maps that show estimated acreage for eight native California Quercus species: coast live oak (Quercus agrifolia), canyon live oak (Q. chrysolepis), blue oak (Q. douglasii), Engelmann oak (Q. engelmannii), garry oak (Q. garryana), California black oak (Q. kelloggii), valley oak (Q. lobata), and interior live oak (Q. wislizenii) as well as tanoak (Notholithocarpus densiflorus). Hardwood and conifer basal area maps are also presented.

The maps were produced by Tom Gaman, California Wildlife Foundation/California Oaks Advisor and Registered Professional Forester.

www.CALIFORNIAOAKS.ORG 3
or thousands of years, fire was a key tool used to steward California’s cultural landscape by cycling underbrush back into the soil, promoting germination and resprouting of fire-adapted plants, limiting pests, and promoting biodiversity. These practices are now commonly known as “cultural burning,” “good fire,” and “cultural fire.”

Fire suppression began in California with Spanish colonization and continues to this day across the West. Total bans on cultural fire practices were implemented in 1850 under California’s Act for the Government and Protection of Indians (https://www.courts.ca.gov/documents/IR.pdf), also referred to as the “Indian Indenture Act.” This legislation, which is known for its role in the forced servitude of California’s Indigenous peoples, also specifically banned the use of “prairie fire,” with punishment for any person who did not “use proper exertions to extinguish the fire.”

This and other measures, which resulted in genocide and the removal of Indigenous peoples as stewards of the land, heightened the risk of extreme fires. The risk is exacerbated by the introduction of nonnative plants, urban and suburban expansion, climate change, increased ignition sources, and alteration of the region’s hydrology. California, accordingly, has seen an increase in extreme fire events that severely impact human and nonhuman communities. Fire suppression messages have further complicated the public’s relationship with fire. Today, the practice of fire suppression is playing out across the landscape with catastrophic fire events that are capable of transforming our natural and human communities.

Fire is an inherent and necessary part of California’s ecology, a key tool in Western land management strategies, and a crucial component of cultural health for many fire-connected Indigenous communities. Cultural burning practices focus on land revitalization while prescribed-burn practices employed by federal and state agencies focus more narrowly on fuel reduction. Though cultural burning has been practiced for thousands of years, past and current regulations and requirements imposed on federal trust-lands are significant barriers. Legislation passed in 2022 and state strategic planning initiatives reaffirmed the rights of Indigenous peoples to cultural burning practices, while recognizing beneficial fire as a valuable tool and seeking to streamline permitting for its use (see: https://bit.ly/3JtzhYt).

Stewardship Pathways Training Program:
To leverage this opportunity, Climate Science Alliance, fiscally sponsored by California Wildlife Foundation, is working collaboratively with our Tribal Working Group (www.climatesciencealliance.org/tribal-working-group) to advance Tribal co-stewardship of all ancestral lands and safeguard Southern California’s Tribal communities and culture from negative impacts of climate change. The Stewardship Pathways Training Program (www.climatesciencealliance.org/stewardship-pathways) was launched by the working group in 2022 to focus on equal valuation of ways of knowing, with an emphasis on the integration of climate science and cultural knowledge into technical training, all under the umbrella of climate-informed conservation, stewardship, and restoration. The program invites Indigenous peoples from across California who are interested in creating or expanding a career focused on climate stewardship informed by traditional knowledge systems.

Many Indigenous communities are actively exploring different means for bringing cultural burning back to the land, supporting and leading prescribed fire management, and advancing a model for co-management of ancestral homelands that are managed by non-Tribal entities. The program was created to build capacity for economic and workforce development while ensuring that Indigenous communities are given the space to lead and advance fire stewardship and restoration actions on their lands. Stewardship Pathways also encourages collaboration and cooperation between state and local jurisdictional partners and Indigenous peoples on their ancestral homelands.

The Indigenous Fire Stewardship Pathway is working with agency partners including CALFIRE, U.S. Forest Service, Bureau of Indian Affairs, California State Parks, and other entities that oversee fire management in the region to establish Indigenous-led crews trained in fire, forestry, and fuels management.

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to advance resilient and adaptive pathways for conserving the land in the face of climate change. Serving as a model for equitable and sustainable economic and workforce development, the Indigenous Fire Stewardship Pathway is working towards a stand-alone, year-round, and Indigenous-led forestry and fuels hand crew to reduce the potential for high severity wildfire by creating defensible space and implementing fuels abatement.

Since its beginnings, the Stewardship Pathways program has hosted seven Indigenous Fire Stewardship events, including wildfire and fuels management, wildland fire safety, wildland fire chainsaws, and basic firefighter trainings. The trainings also include the 2022 Southwestern Tribal Climate Change Summit (www.climatescienceconsortia.org/2022-tribal-summit) and the more recent Cultural Burning Demonstration and Awareness Training, which were designed to connect cultural practitioners and Tribal and non-Tribal communities to focus on kinship with fire, build awareness, and overcome cultural burning challenges.

The first Cultural Burning Demonstration and Awareness Workshop was held to bring together elders, youth, practitioners, and non-Tribal fire managers to discuss Tribal fire stewardship and its role in Indigenous land stewardship in January 2023. The La Jolla Band of Luiseño Indians hosted over 100 practitioners and participants who shared knowledge and stories of fire throughout the day, fueling excitement and a spirit of collaboration.

“We’re starting to see the smoke; eventually we will see the flame,” said Wesley G. Ruise Jr., Fire Chief of the La Jolla Band of Luiseño Indians.

Acknowledgements: The Stewardship Pathways program began as a pilot effort through the Resilient Restoration project, funded by the California Strategic Growth Council, and has since grown due to funding and support — continued on page 7

Restoring the cloud forests of Santa Rosa Island

Off the coast of Southern California sits Santa Rosa Island, one of five islands in the area managed by the National Park Service. A forest of island oak trees (Quercus tomentella), surrounded by a dense mix of native chaparral, used to dominate the landscape across the highest reaches of this remote island. The ecosystem flourished due to the consistent fog cover that blanketed the island—a phenomenon caused by condensation of moist ocean air. “Cloud forests” persisted on Santa Rosa Island for generations.

Dense fog still covers the mountains of Santa Rosa Island, but the landscape has changed dramatically. In the late 1800s and early 1900s, livestock grazing, military development, and oil exploration reduced the native ground cover to nearly zero. Only small patches of native plants, found in the deepest corners of the island, were able to survive this period of rapid transformation. The once-mighty island oak forests were reduced to isolated, remnant stands.

When the National Park Service took over management of the island in 1980, one of its first acts was to remove all the livestock. Once these animals were eliminated from the ecological framework, the work of bringing this native landscape back to its former glorious state could begin. Restoration of this ecosystem is a huge task and many partners have contributed mightily to the effort, but none more than Kathryn McEachern, PhD, of the U.S. Geological Survey. Stabilizing and protecting the remaining oaks was her priority. But, Dr. McEachern and her team quickly realized that stabilization was reliant on restoring the understory of chaparral plants, whose root systems hold water and soil in place and provide shade for young oaks to become established.

Recreating an ecosystem from scratch was incredibly difficult and required a lot of experimentation. First, scientists had to devise methods to capture fog and direct it into the ground. So, many different fog collectors were developed, built, and deployed. Then Park Service restoration ecologists had to determine which native species would be best suited to pioneer restoration of the island. Greenhouses were built and stocked with plants grown from local native seeds. After decades of dedication and perseverance, the fruits of these efforts are manifest. Thousands of plants have been successfully placed into the ground and thousands more have come back on their own now that they are no longer under grazing pressure.

When walking through the island oak forests, I like to imagine what they looked like long ago and what they may look like in a hundred years. There are times when I feel disheartened that I may never see the forest in its full glory; but I always find hope knowing that the National Park Service, with the support of an incredible community of partners, is restoring this magical place to be enjoyed by future generations. To learn more about restoration efforts on Santa Rosa Island, please visit: bit.ly/3mu2Xgn.

California Wildlife Foundation is partnering with the National Park Service to provide fiscal administration for this important work, enabling the project to collect photographic images and develop science communications to educate and engage the public.

The restoration of Santa Rosa Island’s cloud forests advances the Oaks of the Californias effort, focused on conservation and recovery of six imperiled oak species of the California Floristic Province. Visit www.globalconservationconsortia.org/2022/08/16/oaks-of-the-californias-conservation-planning-2/ to learn more.
Oak lands used for conservation, restoration, teaching, and research

Oaks are the defining and unifying principle of River Ridge Ranch & Institute, an ecological conservation, research, and education facility located near the southern Sierra foothill town of Springville. The 722-acre ranch, within the ancestral home of the Yaudanchi Band of the Foothill Yokuts Tribe until European occupation in 1859, includes the north fork of the Tule River and borders the 323,000-acre Giant Sequoia National Monument. It is home to 100 bird, 37 mammal, and approximately 20 amphibian and reptilian species as well as plants (including four oak species), fungi, and thousands of species of insects and other invertebrates.1

Because every aspect of our oak lands is vitally important—to species diversity, hydrology, carbon cycling, Tribal communities, viewsheds, recreation, livelihoods, and lifestyles—River Ridge Institute, a member of California Oaks Coalition, is devoted to keeping these places physically and functionally intact.

When my wife, Barbara Brydolf, PhD, and I bought the old Negus Ranch in 1998, we did not have a specific plan in mind beyond conservation. We purchased what was to become River Ridge Ranch & Institute when it looked as if the land would end up as a major housing development. We thought we had a better idea—we just did not know exactly what it was!

River Ridge has become a unique combination of working ranch, biological field station, and recreation and education venue, which is protected by a conservation easement. A 501(c)(3) organization, the mission of River Ridge Institute is to educate about and demonstrate sustainable and regenerative land management. We recently produced a series of streambed restoration workshops that emphasized erosion prevention and repair for the middle watersheds of working landscapes where oaks grow. Intermittent or seasonal streams are of enormous importance to the hydrology of the arid West.2 They represent an untapped tool in improving water conservation for the benefit of working ranches and downstream populations.

The workshops trained ranchers, land managers, and personnel of nongovernmental organizations. We also produced a series of six videos explaining how to slow water, improve groundwater penetration and storage, improve downstream water availability, and enhance wildlife habitat. The videos are available on YouTube: https://tinyurl.com/mvu3yhb. Streambed improvements, such as excluding livestock and planting native trees and shrubs, have already yielded important conservation results. Willow Flycatcher (Empidonax traillii), a state designated endangered species, was documented on River Ridge in August 2022.

An outdoor classroom: Over the last two decades we have hosted 10,000 kindergarten through seventh-grade students for a day of conservation-based outdoor education called Trout in the Classroom. That curriculum was recently updated to utilize oaks and acorns rather than trout, and titled Acorns, Ecosystems and Classrooms.

We have also hosted university classes in archaeology, environmental science, policy, and geography. A five-year partnership with the Geography Department at California State University, Long Beach, has produced dozens of master’s theses and educated hundreds of college students about oaks and their importance.

Amanda Wu, PhD, a postdoctoral scholar at Stanford University, researched fire impacts on oaks in 2022 and will return to investigate fungi in the tops of blue oaks.

Creating access to higher education for Tulare County youth: River Ridge Ranch & Institute is embarking on a new project in the spring of 2023, A Taste of College, to provide Tulare County youth with first-hand experience in attending a college class by utilizing the ranch to introduce students to college classes. Tulare is California’s seventh largest county, yet it has no four-year college. So, how do high schoolers get an idea of what higher education is about? We are inviting first year and sophomore high school students—many of whom have no family members who have attended college—to observe college classes taught on the ranch.

High school students will visit River Ridge while college classes are in session. The program will provide transportation to the ranch as needed. The students will go on a walking tour to learn about how the land is being managed for biodiversity, ecosystem resilience, and sustainable income, making stops at various sessions being taught throughout the ranch. They will be able to visit faculty at information tables, interact with college students, take home new information, and gain insights into opportunities to continue their studies.

The classes include content such as Geographic Information System oak mapping studies using drones; monitoring the mortality and regeneration of oak and other tree species; learning methods for sampling soil and testing carbon content; and scientific sampling techniques. — continued on next page

Students planting valley, blue, and interior live oak amid livestock pastures at River Ridge Ranch.

by Gary Adest, PhD, owner of River Ridge Ranch and President of River Ridge Institute

Students, parents, and teachers learning about river ecology along the north fork of the Tule River on River Ridge Ranch.
for birds, seeds, and small mammals.

Youth participants of Native Star Foundation (https://www.native-star.org/), a Tule River Tribal nonprofit organization, will be among the first invited to “taste” college at River Ridge. “We believe that if we take care of the land, the land will take care of us,” observed, Willie Carrillo, founder of Native Star Foundation. “We believe in being good stewards of the land that we share. We believe strongly in higher education, and being able to continue to learn about the land and educating our communities.”

Taste of College program partners include the Tule River Tribe; California State University, Long Beach; University of California, Merced; and Porterville Unified School District. Visit River Ridge's website (river-ridge.net/) for information on how to support these programs.

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from the San Diego Resource Conservation District, California Departments of Conservation and Fish and Wildlife, Resources Legacy Fund, San Diego Gas and Electric, and San Diego Foundation. Training for the Indigenous Fire Stewardship Pathway and the Indigenous-led Forestry and Fuels Crew would not be possible without the Southern California Interagency Wildland Fire and Fuels Cadre, a group of agency partners who contribute their time and expertise to plan and implement fire certification training. A special thank you to Joelle Tamm and Chief Wesley G. Ruiser Jr. for their leadership, vision, and perseverance to bring the idea to life, the La Jolla Band of Luiseño Indians for hosting the gathering, and all members of the Tribal Working Group for their trust, guidance, knowledge, partnership, and dedication in helping advance climate resilience for the Southern California region. These local efforts of Indigenous-led fire stewardship are part of a film documentary, “Maathaw: The Fire Within Us,” to be released in 2024 by Climate Science Alliance affiliated artist Condor Visual Media. The Climate Science Alliance acknowledges the Indigenous peoples on whose traditional territory we work. We honor the continued presence and resilience of Indigenous communities and nations today and thank those we work with for your friendship and your good will in our efforts to collaborate.

1 Blue, canyon live, interior live, and valley oak trees grow at the ranch.

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In February 2023, the Southern California Association of Governments (SCAG)—a regional planning agency composed of 191 cities and six counties—adopted a policy framework for an innovative mechanism to offset impacts from transportation projects. Known as a regional advance mitigation program (RAMP), SCAG’s unanimous vote begins what could become a substantial investment in land preservation and restoration. The RAMP will bundle project impacts and their mitigation to provide a comprehensive and strategic approach to conservation. It will also allow quicker permitting of infrastructure projects. SCAG’s initial estimates for transportation projects in need of mitigation offsets includes a potential $1 billion investment in conservation.

Orange County-based nonprofit Friends of Harbors, Beaches and Parks (FHB), a member of California Oaks Coalition, shepherded this policy through many ups and downs since 2010. FHBP developed a RAMP with the Orange County Transportation Authority in 2005, committing $243.5 million for mitigation investments. One tool used by FHB was a map showing protected lands and identifying places in need of protection. Generally called a “Greenprint,” but to FHBP it is the “Green Vision Map.” The map provided a baseline inventory for the authority to determine where to invest RAMP funds. As a result, 1,300 acres are protected and 350 acres are being restored, with more money still available for investment.

One of SCAG’s key commitments, in addition to the adoption of the RAMP, is the creation of a Greenprint. This tool provides an online interface for decision-makers, planners, transportation agencies, developers, nonprofits, and the public to access information about the landscape, helping to answer questions ranging from parcel zoning and streams on the property, to its proximity to protected lands and disadvantaged communities, the frequency of wildfires, and more.

After 12 years of engagement by FHB and others, the RAMP policy was adopted by SCAG’s Energy and Environment Committee and its Regional Council. The decision incorporates the conservation community’s request for a seat on the Technical Advisory Committee. The next step is for SCAG to create the advisory committee and select its members. The new committee will review data layers related to the Greenprint, which is expected to lay the foundation to identify mitigation needs.

Southern California is blessed with many species of plants and animals unique to the local geography. From Ventura to Riverside there are a host of oak ecosystems, many with unique and imperiled oak species. The RAMP offers an opportunity to protect oak and other habitats impacted by transportation projects, meaning the entire suite of species living in and among the oaks benefit, including top predators such as the mountain lion (*Puma concolor*).1

FHBP is grateful that California Wildlife Foundation/California Oaks supported the RAMP along with more than two dozen other conservation and community groups. Our voices—united behind a common cause—are stronger together. FHBP will keep its broad coalition apprised of opportunities to engage in the data evaluation process, and we will assist SCAG with next steps of RAMP development and implementation.

1 The Southern California and Central Coastal Evolutionary Significant Units of mountain lions are candidates for state Endangered Species Act protection.
In November 2017, California Oaks Coalition member Rural Communities United (RCU) challenged El Dorado County’s adoption of a suite of oak policies based on the grounds that the adopted policies were in violation of the California Environmental Quality Act (CEQA). A settlement was reached in January 2023.

RCU’s lawsuit alleged that the county’s environmental review of the oak policies—the Biological Resources Policy Update to El Dorado County’s 2004 General Plan, and associated Oak Resources Management Plan and Oak Resources Conservation Ordinance—was deficient in its analyses of impacts on wildlife habitat. Thomas Lippe of Thomas N. Lippe Law Offices and Michael Graf of Michael Graf Law Offices represented RCU.

Under the approved policies, 145,552 acres (nearly 60%) of the county’s estimated 246,806 acres of oak woodlands at or below 4,000 feet could be lost to residential and commercial development, as articulated in the final environmental impact report (EIR). Importantly, most of the anticipated development will occur along the Highway 50 corridor, which runs east-west through the middle of the county. Loss of oak woodland habitat along this corridor has the potential to isolate wildlife populations in the north and south areas of the county. Such genetic isolation could be the most significant and calamitous impact of the adopted policies, carrying the potential for extirpation of vulnerable species from the county. The EIR did not provide an adequate discussion or mitigation of this impact. Instead, it simply admitted that the conversion of oak woodlands would have significant and unavoidable impacts with respect to the loss and fragmentation of wildlife habitat and movement corridors, but failed to provide habitat preservation in the critical Highway 50 corridor as mitigation.

RCU’s court action resulted in issuance of a Writ of Mandate directing the El Dorado County Board of Supervisors to partially decertify the EIR as it related to the county’s determination that preserving oak woodland habitat within the Highway 50 corridor was not a feasible mitigation measure to avoid the loss of north-south oak woodland habitat connectivity for oak-dependent wildlife.

Subsequently, a settlement agreement was reached in which the county agreed to set aside $250,000 plus 20% of oak woodland in lieu mitigation fees for the purchase of conservation lands, with lands within the Highway 50 corridor as a priority, until June 30, 2035. The American River Conservancy—a California Oaks Coalition member that protects wildlife habitat, native fisheries, scenic vistas, and recreation lands within the upper American River and Cosumnes River watersheds—has been selected to identify and acquire lands within the Highway 50 corridor that are important for north-south wildlife habitat connectivity.

RCU extends special thanks to our fellow California Oaks Coalition member organizations, which, through their continued efforts, ensure our oak woodlands are conserved and perpetuated.