THE VITAL LANDS INITIATIVE

A VISION FOR LAND CONSERVATION IN SONOMA COUNTY











Report availability

Find out more about the Vital Lands Initiative, access files for download, and explore interactive maps on the Sonoma County Ag + Open Space website: www.sonomaopenspace.org.

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A VISION FOR LAND CONSERVATION IN SONOMA COUNTY



Foreword

Board of Directors Chair

We live in one of the most beautiful and vibrant places on earth - Sonoma County. Home to a stunning undeveloped coastline; beautiful mountains, valleys and forests; and farms and ranches that support diverse and abundant agriculture. Our healthy watersheds and ecosystems are critical to wildlife and human communities, and our treasured parks, trails and recreational areas provide beauty, adventure, and solace. The voters of Sonoma County recognized the value of our open spaces and rural landscapes in 1990, and sought to preserve these lands for future generations. For the last thirty years, your Sonoma County Agricultural Preservation and Open Space District has carried out this vision - protecting and caring for over 122,000 acres of land that maintain our quality of life. Land conservation plays a critical role in addressing the climate crisis and making us more resilient to extreme events. The protection of open space and agricultural lands helps to protect our communities from flooding associated with more volatile weather patterns, and allows us to adapt to sea level rise in our bay and coastal areas. Open spaces, parks, and farms often play an important role in protecting our communities from wildfires. Preventing sprawl and conserving our working and natural lands helps to avoid the greenhouse gas emissions associated with commuting, and promotes the sequestration of carbon in our farms, ranches, and forests. The Vital Lands Initiative takes all of this into account and lays out an ambitious, long-term blueprint for a vibrant, healthy, beautiful, and climate resilient Sonoma County.

Lynda Hopkins

SONOMA COUNTY AG + OPEN SPACE BOARD CHAIR

General Manager

Sonoma County's visionary voters created the Sonoma County Agricultural Preservation and Open Space District (Ag + Open Space) to ensure that our natural and working lands would be protected for future generations and would continue to thrive, forever. From conserving redwood forests and coastal grasslands; safeguarding our rivers, creeks, and wetlands; preserving our community identity, rural heritage and agricultural economy; to providing public parks, trails, and preserves, Ag + Open Space is honored to be entrusted with the community's vision of a vibrant and beautiful Sonoma County. Every day we work with our partners to implement this vision. Over the past few years, we have worked with the community and our colleagues to develop a shared vision and strategy for the future of land conservation in our region – one that places a premium on climate change resiliency and social equity, while continuing to conserve our most critical lands. On behalf of Ag + Open Space, I am honored to share with you the Vital Lands Initiative - a comprehensive long-term plan that will guide our conservation work through 2031.

Caryl Hart

INTERIM GENERAL MANAGER





Acknowledgements

The Visionary Sonoma County Community.

The voters of Sonoma County created Ag + Open Space to protect natural and working lands on the edge of the rapidly urbanizing Bay Area, choosing to tax themselves to ensure that Sonoma County retains open space lands. These protected lands maintain our quality of life, including the beautiful scenic nature of our county, family farms and local food, our watersheds, ecosystems and native habitats, greenbelts that ensure the unique character of our cities and towns, and recreational lands. The community participated in the development of the Vital Lands Initiative, providing input and feedback throughout the planning process. As a result, this document reflects the goals of the community, first envisioned in 1990 and refined to meet the needs and priorities of today.

Board of Directors.

Ag + Open Space is governed by a Board of Directors, which consists of the five elected County Supervisors, one representing each Supervisorial District. Their direction and review of the Vital Lands Initiative was instrumental in developing a document that reflects the community they represent. The current Ag + Open Space Board of Directors includes:

Susan Gorin, 1st DistrictChris Coursey, 3rd DistrictLynda Hopkins, 5th District (chair)

David Rabbitt, 2nd District

James Gore, 4th District

Advisory Committee.

Ag + Open Space is guided by an Advisory Committee of community members appointed by the Board of Directors. This group provided invaluable input and advice throughout the development of the Vital Lands Initiative, representing a variety of stakeholders and communities throughout the County. At the time of publication, the Advisory Committee includes:

John Dell'Osso, (Chair) Mayors and Councilmembers **Sue Conley**, Second District

Don McEnhill, (Vice Chair) Environment

Jennielynn Holmes, Third District

Curt Nichols, (Chair Pro Tem) Business **Michelle Whitman,** Third District

Jan McFarland, First District

Bill Smith, Fourth District

Kristina Tierney, First District Doug Lipton, Fourth District

Paul Martin, Second District John Nagle, Fifth District

Evan Wiig, Fifth District

Neysa Hinton, Mayors and Councilmembers

Tawny Tesconi, Agriculture

Cary Fargo, Real Estate

Fiscal Oversight Commission.

Ag + Open Space receives guidance from a Fiscal Oversight Commission that provides independent fiscal oversight of the agency's expenditures. Their input in the Vital Lands Initiative helped ensure that the resources of Ag + Open Space are used in the most effective way possible and in accordance with the voter-approved Expenditure Plan. At the time of publication, the Fiscal Oversight Commission includes:

Michael J. Sangiacomo, First District

Todd Mendoza. Second District

Regina De La Cruz, Third District

Bob Anderson, Fourth District

Eric J. Koenigshofer, Fifth District

Jeff Owen, Alternate Commissioner

Land Conservation Partners.

Sonoma County is fortunate to have many partners informing and advising on land conservation, including individuals, easement landowners, organizations, tribes, environmental professionals, and agencies experienced in agriculture, ecosystems and habitats, land use, and landscape-scale mapping and prioritization. These conservation partners have spent hundreds of hours working with us and providing expertise and guidance to support the development of the Vital Lands Initiative.

Technical Consultants and Advisors

Conservation Biology Institute

Dr. Joan Florsheim (UC Santa Barbara)

Farm Stewards

GreenInfo Network

O'Connor Environmental, Inc.

Pepperwood Foundation

Prunuske Chatham, Inc.

Quail House Consulting

Reza Environmental Consulting

Soluna Outreach Solutions

Sonoma Ecology Center

Sonoma Land Trust

The Idea Cooperative

Topo Collective

Tukman Geospatial LLC





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Ag + Open Space Vital Lands Initiative

The Vital Lands Initiative is a long-range comprehensive plan to prioritize the land conservation activities (including planning, acquisition, and ongoing stewardship) of the Sonoma County Agricultural Preservation and Open Space District (Ag + Open Space) through 2031. It includes the following information:

- Background and accomplishments of Ag + Open Space since 1990
- The current state of land conservation in Sonoma County and expected trends
- Five goals and associated objectives focused on agricultural lands, community identity, healthy communities, water, and wildlife
- Criteria and processes for identifying conservation priorities
- Strategies and tools for implementing the vision

The Vital Lands Initiative was developed with the best available science and data, as well as extensive input from Ag + Open Space partners and the community, to ensure the document reflects the knowledge and expertise of stakeholders and the land conservation goals of the Sonoma County voters. To date, Ag + Open Space work has been directed by numerous Board-adopted policy documents, including the 2006 Acquisition Plan - Connecting Communities and the Land. Since adoption of the 2006 Acquisition Plan, Ag + Open Space has led the development of foundational countywide land conservation data. In addition to emerging research related to climate change, ecosystem services, and socio-economic trends, Ag + Open Space has incorporated these new data into the Vital Lands Initiative to enhance support for and better inform land conservation strategies and actions.







About Ag + Open Space

In 1990, faced with the conversion of working and natural lands on the edge of the rapidly urbanizing Bay Area, the visionary voters of Sonoma County approved Measures A and C to establish the Sonoma County Agricultural Preservation and Open Space District (Ag + Open Space). Measure A established Ag + Open Space pursuant to California Public Resources Code sections 5500 et seq., which allows for the creation of an open space district, furthering California state policy on the preservation of open space. Measure C called for a quarter-cent sales tax over a 20-year period to fund protection of agricultural lands and open space in perpetuity. In 2006, voters extended the sales tax through 2031 by passing Measure F with an impressive 76% of the vote. Measure F updated the Expenditure Plan which directs how the collected tax revenue can be spent.

Since its formation, Ag + Open Space has protected and continues to perpetually steward over 122,000 acres of high priority open space lands, preserving productive agricultural land and local food, healthy watersheds, functional ecosystems and biodiversity, and scenic landscapes and greenbelts, and providing a wide variety of recreational opportunities for Sonoma County residents and visitors.







Sonoma County General Plan

The 1989 Sonoma County General Plan called for consideration of a ballot measure to establish a district to protect open space lands. Both the 1989 Sonoma County General Plan and the updated Sonoma County General Plan 2020 (adopted 2008) provide fundamental direction for Ag + Open Space. Provisions that guide Ag + Open Space work include the direction to preserve open space between and around cities, protect land currently in and potentially suitable for agriculture, protect natural resources, and provide outdoor recreation opportunities. With regard to agriculture, the General Plan directs stabilizing agricultural use at the urban fringe, limiting intrusion of new residential uses into agricultural areas, and assistance with stabilizing farmers' economic situation. The General Plan encourages "conservation of undeveloped land, open space, and agricultural lands, protection of water and soil quality, restoration of ecosystems, and minimization or elimination of the disruption of existing natural ecosystems and flood plains" (Policy LU-11f).



COMMON QUESTIONS

What is open space?

Open space is an area of land or water that is primarily undeveloped and preserves natural resources, agriculture, outdoor recreation, greenbelts, and/or community separators.

What is "protected land"?

When Ag + Open Space "protects" land, it is protected forever. After the initial purchase of land or development rights, Ag + Open Space staff return to the property on a regular basis to ensure that the public's investment is protected. For more about this process, see "Achieving the Ag + Open Space Mission" (page 22).

What is "development"?

Development includes features on the landscape that are constructed by people, including homes and businesses, parking lots, fences, transportation corridors, and other paved surfaces. Ag + Open Space complements Sonoma County land use policies to limit development on working and natural lands and to promote strategic development within existing urban areas.

Where does Ag + Open Space protect land?

Ag + Open Space primarily protects land in the unincorporated areas of the County and also works with local cities through the Matching Grants Program (MGP) to protect urbanized areas (see page 34 for more information about the MGP).

How does Ag + Open Space work with private landowners to protect land?

Ag + Open Space works exclusively with willing landowners who wish to protect their working and natural lands for future generations. These landowners work collaboratively with Ag + Open Space to develop legal protections that benefit the public now and in the future.





The Sonoma County General Plan and Ag + Open Space

The origins of Ag + Open Space reach back to the original General Plan adopted in 1978, which marked a turning point in Sonoma County history. After several years of highly charged community debate over growth management, landmark United States Supreme Court case law, a recall election and statewide leadership in environmental policy, our community adopted policies aimed at reducing sprawl, protecting agricultural lands and open space, maintaining community character through the use of community separators, and directing future development into cities along the Highway 101 corridor where infrastructure could support a growing population.

The core goals and policies of the 1978 General Plan have been carried forward in the 1989 and 2006 updates. That first General Plan included important land use goals and policies including the following:



- "It shall be the goal of Sonoma County to accommodate both urban and rural lifestyles. This should be accomplished by commitments to the following: a community-centered concept, provision of greenbelts surrounding and separating urban areas, retention of agricultural resources, adherence to the principle of environmental suitability, and preservation of our natural resources."
- "Maintain existing types of communities including unincorporated villages and towns and incorporated cities preserving the identities of present communities."
- "To provide separation between communities and visual relief from urbanization, the General Plan proposes areas of open space called 'community separators'."

- "Assistance to agriculture should include but not be limited to such activities as the leasing of open space or the purchase and sale of development rights."
- "The Board of Supervisors should consider establishing a separate funding source, such as a special trust or bond issue, dedicated to financing the acquisition of the title or rights to open-space land."
- "Provision should be made for the management of the land to which title or rights will be acquired for the sole purpose of protecting scenic quality. At the time a funding source is established, the Board of Supervisors should also establish management criteria and assign responsibility for implementation."

In 1989 the 1978 General Plan was updated. The 1989 General Plan called for the "establishment of an Open Space District" with this direction:

"Consider a ballot measure to establish an Open Space District to acquire and administer open space lands. Include an appropriate funding source, such as a special tax, to finance the acquisition of partial or in-fee interests in lands, including purchase of development rights on a voluntary basis, in designated open space areas."

This array of policies set our community on a path which in 1990 resulted in creation of Ag + Open Space and funded the planned work of the organization with a quarter-cent sales tax. The initial 20-year authorization of the sales tax was extended for a second 20 years by voter approval in 2006. The current sales tax is authorized through March 2031.

In addition to voter-approval in 2006 to extend Ag + Open Space's sales tax, the General Plan has received additional updates that refine the policy direction for the agency. In addition to forward-thinking land use policies, Ag + Open Space continues to be a primary and effective action tool in the ongoing effort to keep Sonoma County a special place which values and protects open space, agricultural land, community separation and identity, along with critical habitats and natural features throughout the County. Ag + Open Space has also been the largest funding source for acquisition of land for expansion of parks and trails throughout the community. All this achievement has been based on the sound environmental and planning policy adopted nearly a half century ago. That initial work has been carried forward by several generations and hopefully this tradition will continue.



Expenditure Plan

The text on the following page appeared as "Exhibit A" to Measure F, which was passed in 2006 by Sonoma County voters. This Expenditure Plan defines how Ag + Open Space can spend the quarter-cent sales tax generated through Measure F until it is extended by the voters or sunsets in 2031. Adherence to the requirements of the Expenditure Plan ensures that taxpayers' money is spent as Sonoma County voters intended.



Agricultural Preservation and Open Space 2006 Expenditure Plan

The purpose of this expenditure plan is to implement the Sonoma County General Plan and the general plans of the County's incorporated cities by preserving agricultural land use and open space. This purpose will be accomplished primarily through the purchase of development rights from willing sellers in areas of the County which are designated in the County and cities' General Plan open space elements and may include the purchase of fee interests for outdoor public recreation where the public use would not be inconsistent with the open space designations listed below.

The open space designations eligible for protection under this expenditure plan include community separators, greenbelts, scenic landscape units, scenic corridors, agriculturally productive lands, biotic habitat areas, riparian corridors and other areas of biotic significance, and other open space projects.

- 1. Community separators and greenbelts are lands that function as open space to separate cities and other communities and protect city and community identity by providing visual relief from continuous urbanization. These lands are frequently subject to development pressures, and therefore, have been identified as priority sites for acquisition to prevent urban sprawl, to retain the rural and open character of the County and to preserve agricultural uses.
- 2. Scenic landscape units and scenic corridors are areas of high scenic quality including natural landscapes and backdrops that provide visual relief from urban densities and maintain the open nature of the County.
- 3. Agriculturally productive lands include working farms and ranches and other lands used for the production of food, fiber, and plant materials and the raising and maintaining of livestock and farm animals.
- 4. Biotic habitat areas, riparian corridors, and other areas of biotic significance include freshwater and tidal marshes, wetlands, special status species locations, woodlands and forests, wildlife habitat corridors and lands along creeks and streams critical to protecting fisheries and water quality.

These sensitive natural areas require protection, restoration, and resource management, and include the Petaluma River, Laguna de Santa Rosa, Russian River, Sonoma Creek and San Pablo Baylands.

- 5. Other open space projects include, but are not limited to, urban open space and recreation projects within and near incorporated areas and other urbanized areas of Sonoma County. Funds for these projects shall be available to cities, the County and other entities through a matching grant program, with preference given to acquisition and development projects that link communities. Examples of these projects include creek restoration and enhancement, such as along the Petaluma River, Santa Rosa Creek, and Laguna de Santa Rosa, trails, athletic fields, and urban greenspace.
- **6.** Operation and maintenance of land includes limited funding for initial public access, operation and maintenance of recreational lands purchased in accordance with this Plan. No more than 10 percent of total revenues generated over the life of the Measure shall be made available for operation and maintenance purposes.



Governance and Community Representation

As a voter-approved governmental entity, Ag + Open Space is accountable to the voters of Sonoma County. Ag + Open Space is a separate legal entity from the County of Sonoma, yet is considered a 'dependent special district' since the Sonoma County Board of Supervisors serves as the Ag + Open Space Board of Directors. There are two additional oversight bodies appointed by the Board of Directors: the Fiscal Oversight Commission, charged with providing independent fiscal oversight for Ag + Open Space appraisals and specific financial transactions, and the Advisory Committee, which advises on all aspects of Ag + Open Space work. Both bodies act as community representatives on behalf of Ag + Open Space.

Ag + Open Space benefits from the many opportunities to engage with and hear input and recommendations from the Sonoma County community. Meetings of the Board, Advisory Committee, and Fiscal Oversight Commission are all open to the public, with time on the agenda for public input. This allows for an ongoing conversation with the community. In addition to regularly scheduled meetings with governing and guidance bodies, Ag + Open Space staff regularly attend, present, and host public meetings on projects or policies to connect with the community in person. Staff also use surveys, polls, and interviews to gather input from the community regarding all aspects of Ag + Open Space's conservation work.



Lynda Hopkins, 5th District (Chair)



Susan Gorin, 1st District



David Rabbitt, 2nd District



Chris Coursey, 3rd District



James Gore, 4th District



Ag + Open Space Mission and Goals

The mission of Ag + Open Space is to permanently protect the diverse agricultural, natural resource, and scenic open space lands of Sonoma County for future generations. The "Outcomes on the Land" section includes objectives and prioritized maps for each goal, which are as follows:

- Agricultural Lands: Protect lands that support diverse, sustainable, and productive agriculture.
- Community Identity: Protect open lands that surround and differentiate the County's urban areas and contribute to the unique scenic character of the County.
- **Healthy Communities:** Protect open space and publicly accessible

- lands in and near cities and communities and connect people with protected lands.
- Water: Protect natural lands and aquatic habitats that support sustainable aquatic ecosystems and water resources.
- Wildlands: Protect natural lands and terrestrial habitats that support plants, wildlife, and biodiversity.

Guiding Principles

These guiding principles inform and direct all Ag + Open Space activities and provide a foundation for effectively accomplishing the Ag + Open Space mission and Goals:

- Permanently protect a diversity of the highest-priority lands in Sonoma County.
- Use the best available information to make decisions and enhance the effectiveness of the organization.
- Use taxpayer funds responsibly and transparently.
- Leverage outside funds to extend the impact of local sales tax dollars.
- Work with a diversity of individuals, community groups, organizations, and Sonoma County Tribes to develop shared strategies for land conservation that are equitable and inclusive.
- Collaborate with partner organizations to enhance land

- conservation outcomes.
- Maintain a culture of professionalism to produce the highest quality work.
- Protect the taxpayers' investment in perpetuity through ongoing stewardship and responsible fiscal practices.
- Engage with the community to gather input and share accomplishments.
- Ensure that all Ag + Open Space actions support resiliency to climate change and extreme events and the avoidance or reduction of greenhouse gas emissions.



Achieving the Ag + Open Space Mission

Ag + Open Space has four interconnected programs that together carry out the mission to permanently protect the diverse agricultural, natural resource, and scenic lands of Sonoma County for future generations.

Conservation Planning

Conservation planning entails data creation, collection, and maintenance; research, spatial analysis, and mapping; and the evaluation and summary of performance metrics related to conservation work. Ag + Open Space relies on a variety of data sources to support its conservation decisions – ranging from information on habitats and species, to agricultural, groundwater, climate, and socio–economic data. In addition to providing information and tools for prioritizing land conservation, these data development and planning activities enable Ag + Open Space to secure matching grants from outside organizations to leverage its sales tax dollars to do even more conservation work in the community.

Ag + Open Space reaches out to the community on a regular basis to share information and gather input on agency priorities and activities. Ag + Open Space also reaches out to the community through a public outings and youth educational program that is carried out in collaboration with local partners to connect students to working and natural lands of Sonoma County and to provide members of the public with recreational opportunities on protected lands. The Ag + Open Space outings and education program emphasizes engagement, inclusion and access for all members of our community.

Acquisition

Ag + Open Space works with willing landowners to negotiate the purchase of conservation easements and land. The acquisition process includes project evaluation, conservation easement design and negotiation, due diligence, ensuring sound transactions, appraisal oversight, purchase price negotiation, and escrow and closing coordination. Ag + Open Space uses high-quality data and information, as well as on-the-ground experience to design conservation easements that best protect identified conservation features.

Ag + Open Space also has a Matching Grants Program (MGP) which provides funds to cities, the county, other public agencies, and non-profit organizations for urban open space projects. This program offers funding for land acquisition, recreational improvements, agricultural improvements, and restoration of habitats within or near urban areas. For more information about the MGP, please see page 34.

Stewardship

Stewardship entails the perpetual protection of land and, where appropriate, enhancement of conservation features for Ag + Open Space-protected lands to safeguard the taxpayers' investment forever. Ag + Open Space establishes and maintains open communications with conservation easement landowners to ensure understanding of the terms and conditions of the easement, which is critical to successful land stewardship. Ongoing easement







stewardship includes documenting property conditions at time of easement acquisition, annual monitoring of lands protected by easements, addressing easement violations, and processing permitted use and amendment requests. Stewardship includes enforcement actions when necessary to bring landowners back into compliance with the easement terms. Ag + Open Space also connects landowners with various resources to help them in meeting land management challenges.

On the properties owned by Ag + Open Space, the agency conducts natural resource management, infrastructure maintenance, and capital improvements. For some properties, detailed management plans are developed to assess existing resources, identify compatible uses of the land, and develop a set of recommended management actions. Most of Ag + Open Space-owned properties are in some sort of agricultural use or are planned for grazing or

farming. Properties are monitored regularly by staff and volunteers and are maintained via contracts with service providers, including paid youth.

Administrative and Fiscal Services

Administration and fiscal responsibilities of the agency include managing the human resource function, developing the overall annual budget for review by Ag + Open Space management and the Board of Directors, establishing service contracts, preparing items for the Advisory Committee, Fiscal Oversight Commission, and Board of Directors' meetings, preparing and tracking project budgets, creating financial reports, reviewing bills and invoices before submittal to the County for payment, and initiating the annual independent audit process.



Ag + Open Space Finances: Funding and Structure

Ag + Open Space was created in 1990 by the Sonoma County taxpayers by Measure A and initially funded under Measure C, which authorized a quarter-cent sales tax. In November 2006, voters overwhelmingly approved Measure F, which reauthorized Ag + Open Space and extended the quarter-cent sales tax through 2031. Measure F and its associated Expenditure Plan began on April 1, 2011 and authorized Ag + Open Space to set aside up to 10% of the sales taxes received for initial public access, operation, and maintenance of Ag + Open Space-protected properties intended for recreational use. Since its inception through June 30, 2020, Ag + Open Space has protected over 122,000 acres worth over \$502 million at the time of purchase or acquisition.

Capital Assets - Land and Conservation Easements

Ag + Open Space has acquired conservation easements and properties in order to permanently protect the open space designations identified in the Expenditure Plan. As of June 30, 2020, Ag + Open Space has participated in acquisitions with a cumulative appraised value of \$502.2 million at the time of acquisition, with conservation easements valued at \$462.6 million and Ag + Open Space-owned properties valued at \$39.6 million, as shown in the green chart below.

Not all of the funding for these acquisitions has been from Measure C or

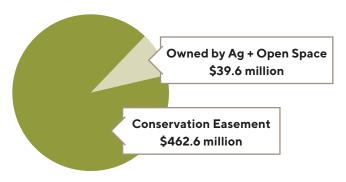
F sales tax revenue. As shown in the blue chart below, Ag + Open Space has leveraged sales tax dollars through partnership funding by \$173.2 million.

This made it possible to acquire land or conservation easements worth \$502.2 million while only spending \$329.0 million of local sales tax revenue.

Partnership funding includes private and public agency grants through numerous partners and generous discounts from landowners at the time of acquisition. Additional leveraged amounts come from recipients of grants from the Ag + Open Space Matching Grant Program, who leverage our dollars on at least a one to one basis.

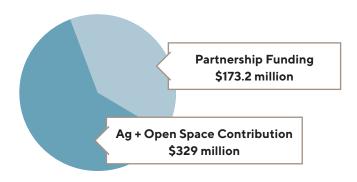
Value of Land Protected by Ag + Open Space at the Time of Acquisition

AS OF JUNE 30, 2020



Funding Sources for Land Acquisition

AS OF JUNE 30, 2018





Protecting the Community's Investment

Ag + Open Space must continue to steward the easements it holds forever.

To fund this work in perpetuity, staff is developing a long-term Stewardship

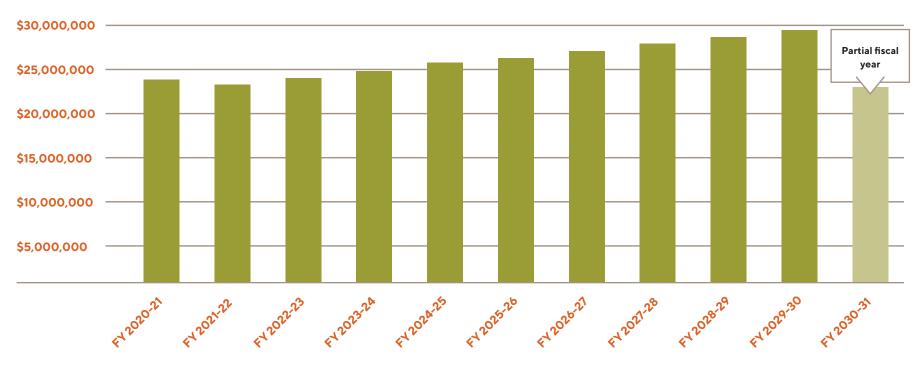
Reserve funding plan, in consultation with the Fiscal Oversight Commission
and Board of Directors.

Long-term Fiscal Planning

s shown in the chart below, the financial models that guide Ag + Open Space show conservative growth in sales taxes, after the impacts of the COVID-19 pandemic, between fiscal year 2020-21 and the sunset of the measure in 2031, with a projected total of \$336 million. These financial models suggest that a reasonable estimation of grants, interest, donations, and miscellaneous

revenue of \$389-442 million between 2021 and March 2031. Of this amount, \$132 million is dedicated to transfers to the Stewardship Reserve Fund, administrative overhead, and program expenditures. \$257-310 million will be allocated for acquisitions, the Matching Grant Program, and Initial Public Access, Operation, and Maintenance through 2031. The design of the long-term fiscal plan considers all estimated revenues to fund program commitments, debt service, Stewardship Reserve funding, and any other program expenditures, and then estimates the amount available for land and/or conservation easement acquisitions. Additional model considerations include staffing changes, additional revenue sources, or commitments towards current acquisitions to determine the availability of funds for new acquisitions.

Projected Annual Sales Tax

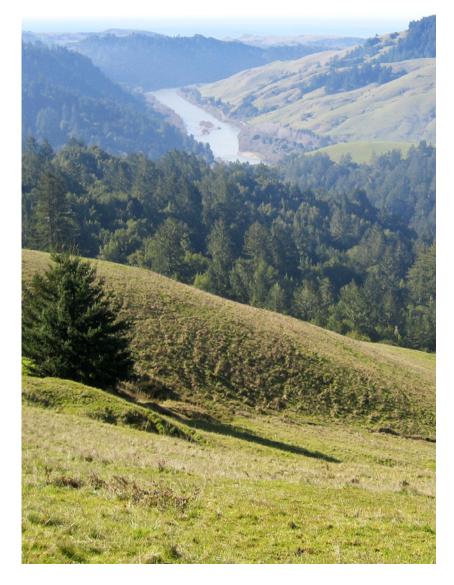




What Are Conservation Easements?

Ag + Open Space conservation easements are legal agreements between a willing landowner and the agency that permanently limit uses of the land to protect its conservation values – specific agricultural, natural, scenic, or recreational attributes of the property that provide a public benefit. Conservation easements are a popular and highly effective tool for ensuring protection of a community's most important open space, agricultural and natural resources, through non-regulatory means. When landowners sell or donate a conservation easement to Ag + Open Space, they are transferring to the agency certain property rights (such as development rights) which they can then no longer use. As the landowners, they can still sell the property or pass it on to their heirs, as before, and they can use and maintain their property as they wish, so long as it is consistent with the terms of the conservation easement. The conservation easement runs with the land forever, so new owners will be subject to the same rules and restrictions as their predecessors.

The conservation easement's greatest strength is that it is perpetual. The easement holder (in this case, Ag + Open Space) is permanently obligated to ensure that the terms of the conservation easement are being honored, even when the land changes hands. The easement holder must visit (i.e. monitor) the property periodically to ensure that the public's investment remains intact and the conservation features are still protected. As a result, conservation easements work best when the conservation purpose is clearly stated, and the terms of the easement are explicit and clearly support the conservation purpose. This specificity helps to reduce future misunderstandings regarding allowed uses. Ag + Open Space communicates with landowners on a regular basis through easement monitoring and other ongoing stewardship activities, and prioritizes meeting all new and successive landowners to discuss the terms of their particular easement agreement.





HOW CONSERVATION EASEMENTS WORK

Ag + Open Space and Public Benefit Interests

First, conservation goals are evaluated to determine what should be protected for public benefit, including conservation values such as sensitive natural areas, scenic vistas, and agriculture, among others.

Current Property Conditions

Before designing a conservation easement, Ag + Open Space documents the conditions that exist on a property – including natural features such as a forest or creek, or an agricultural operation.

Potential for Development

Ag + Open Space also assesses the potential for development on the property, meaning the potential to subdivide the land into smaller parcels and/or build houses and roads.

Landowner Interests

Ag + Open Space considers the landowner's interests, which may include uses and improvements they want to retain such as houses, agricultural infrastructure, and recreational amenities, among others.

Conservation Easement

Ag + Open Space then designs a conservation easement that satisfies the interests of the landowner and the agency, including designating building envelopes, scenic, agricultural, or natural areas, and specific locations for other uses on the property.

Perpetual Protection

Once the agreement is signed, it becomes the responsibility of Ag + Open Space to visit the property periodically and ensure that the values the public has invested in are protected. This process continues forever, regardless of changes in ownership.

The Financial Benefits of Conservation Easements

Purchasing a conservation easement costs, on average, 30-70% less than purchasing the same property outright. With that investment, the public derives many of the same benefits as ownership, for a fraction of the price. When a public agency purchases a property outright, that property is removed from the tax rolls, but when a conservation easement is purchased from a private landowner, the property remains on the tax rolls. Through the acquisition of an easement, public benefits such as clean air, clean water, natural beauty, and others are protected. The benefits cost less than purchasing the fee interest in the land outright. An easement protects the benefits, while leaving the cost of managing the land to the landowner. As a result, it is typically much less expensive to monitor and enforce the terms of an easement than the cost to maintain a property.

The landowner who partners with Ag + Open Space also receives a financial benefit. This benefit varies from project to project, but typically when an agreement is reached, the landowner receives a one-time payment based on the difference in appraised value of the land with and without the conservation easement. They also may see a reduction in property taxes. It is up to the landowner to use this income as they see fit, but often these funds are reinvested into the property, which can further enhance the conservation features protected by Ag + Open Space. Furthermore, landowners may choose to sell the conservation easement at a discount of the appraised value, which allows them to claim a charitable tax deduction. As a result, Ag + Open Space's return on investment increases, and the landowner also receives additional financial benefit.

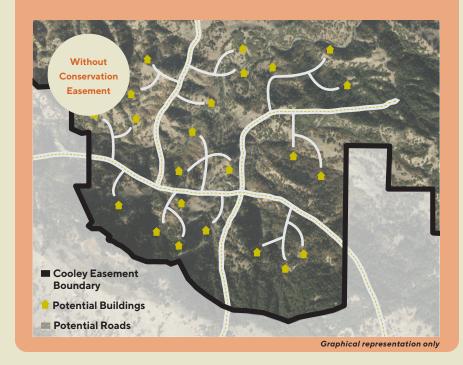


Protected Forever: Cooley Ranch

The 19,000-acre Cooley Ranch contains many conservation features that are priorities for protection: old-growth redwoods, oak woodlands, agriculture, and many miles of creeks and streams that make up the headwaters of a key water supply system. Ag + Open Space negotiated a conservation easement in partnership with the landowner that ensured the permanent protection of Cooley Ranch. The number of home sites was reduced from 56 to just five (all under a single ownership), and many important benefits are protected forever by this conservation easement.

What Cooley Ranch Could Have Been

This property could have been developed for 56 housing sites, including septic systems and wells necessary to support these residences. It would also require a complex network of roads and utility infrastructure, and would result in substantially greater carbon emissions due to vehicles traveling to and from these remote home sites.



What Cooley Ranch is Today

Because the landowners wanted to protect the open space and agricultural qualities that Cooley Ranch provides, this property now provides nearly 17,000 contiguous acres for grazing, and up to 1,000 acres of vineyard, while protecting large swaths of oak woodlands, grasslands, and key wildlife migration corridors. It also protects over a quarter of the Lake Sonoma watershed, which is integral to the county's water supply, and over 40 miles of sensitive riparian areas.





Montini Open Space Preserve

The Montini Open Space Preserve is located along the northern boundary of the City of Sonoma, providing the scenic background to the downtown area. Since 2014, the property has been operated by the City for low-intensity public recreation and natural resource preservation. The 98-acre property features oak woodlands and grassland, including several special status species. Ag + Open Space acquired the property in 2005 with the assistance of the State Coastal Conservancy, and worked with the City of Sonoma, California State Parks, the Sonoma Overlook Trail Task Force, and other partners to develop a trail plan and build the current trail system.

PROTECTED FOREVER

What it could have been...

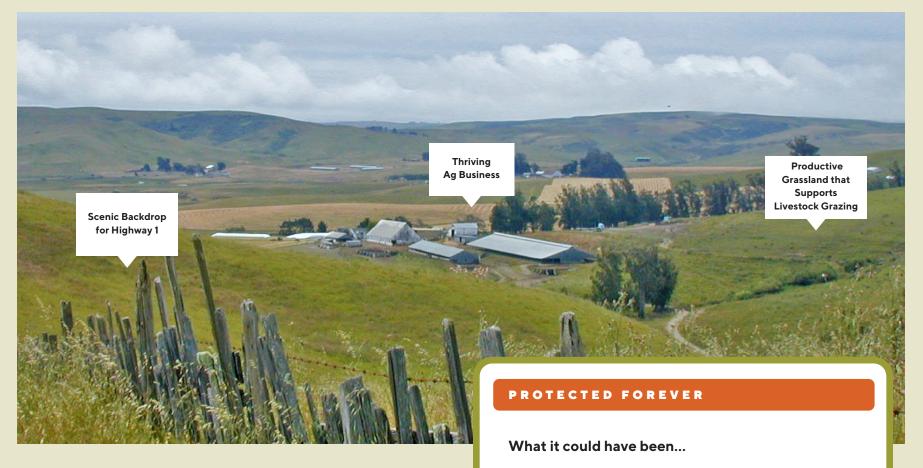
74 parcels with highly visible private homes and associated roads and infrastructure, including fencing and lights at night impacting scenic views and wildlife

What it is now...

PUBLIC OPEN SPACE PRESERVE

Part of a system of 4.5 miles of trails 55 acres of protected oak woodland 97 acres visible from downtown Sonoma





Bianchi Dairy

Nestled along Highway 1 in the rich coastal agriculture belt near Valley Ford, the Bianchi Dairy provides a beautiful rural vista of rolling hills and cattle grazing on the open grasslands. Three generations have been running the farm for the past 90 years, which milks Jersey cows and produces artisanal cheese through the family's own gourmet cheese company. The property includes a portion of Ebabias Creek, a tributary to the Estero Americano.

11 parcels, too small to support a viable dairy or agricultural operation, with associated houses and infrastructure.

What it is now...

PROTECTED WORKING DAIRY

566 acres of grazing land and hayfields Important scenic corridor Thriving agricultural business



Accomplishments to Date

Over the past nearly 30 years, Ag + Open Space has acquired and stewarded over 122,000 acres of conservation easements over farms, ranches, and natural lands; purchased key properties with partners for parks and open space preserves; and helped maintain greenbelts that preserve the unique character of each city and town in Sonoma County, preserving the community's quality of life through its conservation actions. Ag + Open Space has protected key components of the Sonoma County landscape, including:

- Farms and ranches stretching west from Petaluma to the coast, safeguarding the County's rural character, the capacity for local food production, and the critical connections necessary for thriving dairies and ranches.
- Key lands along the Sonoma coast that connect existing public lands, protect forests, wetlands, and streams, conserve miles of scenic corridors, support grazing, and give residents and visitors the opportunity to see and experience spectacular scenery.
- Protected properties along the Mayacamas Mountains and Sonoma
 Mountain that preserve wildlife corridors and stream headwaters, nurture
 biodiversity, agricultural uses, and provide hiking and outdoor experiences.
- Farms, wetlands, trails, and community parks along the Highway 101 corridor from Petaluma to Healdsburg that maintain buffers between cities, sustain the County's cherished open vistas and agricultural character, and provide outdoor recreation opportunities within easy reach of most residents.
- Open space preserves and parks within or on the edge of every city and town in Sonoma County and along the Russian River.
- Large properties along San Pablo Bay where land protection is critical
 for both wildlife and human adaptation to rising sea level, and near the
 Sonoma/Mendocino County line where sizeable areas of wild landscape
 in the County remain.



Since 1990, Ag + Open Space Has Protected...

35,825

ACRES

OF LAND

SUITABLE

FOR

GRAZING

45 **NEW PARKS**

PRESERVES

17 **MOUNTAINS**

RIDGETOPS

77

PROPERTIES PRODUCING LOCAL CROPS, DAIRY

PRODUCTS, & WINE

14,332

ACRES

OF

REDWOOD

FOREST

EQUIVALENT TO 12% 122,000 OF THE LAND IN **ACRES** SONOMA COUNTY

99 MILES

OF STREAMS THAT

ARE HOME

TO ENDANGERED

SALMON & TROUT

5,911 **ACRES OF WETLANDS** + **RIPARIAN HABITAT**

OVER 95 MILES OF TRAILS OPEN

TO THE PUBLIC

OF PROTECTED PROPERTIES WITHIN **COMMUNITIES** OR **SURROUNDING**

GREENBELT

AREAS

57%

64,898 **ACRES OF NATIVE OAK WOODLAND**

6 LOCATIONS PROVIDING PUBLIC ACCESS TO THE **RUSSIAN RIVER**

+ FOREST

38

COMMUNITY

OPEN SPACE

PROJECTS

IN CITIES +

UNINCORPORATED

COMMUNITIES



64,823 ACRES IN THE



Matching Grant Program

Every other year, Ag + Open Space, through the competitive Matching Grant Program, provides funding to public agencies and non-profits for the protection of open spaces within Sonoma County communities for local agriculture, public recreation, and natural resource restoration. Since 1994, this unique program has provided over \$30 million towards projects in all nine incorporated cities and in multiple unincorporated areas, allowing Ag + Open Space's partners to leverage that funding to develop diverse and innovative projects throughout the County.



IMPACT OF THE MATCHING **GRANT PROGRAM**

Acres of Habitats Restored

Over 515 acres of natural habitats have been protected through the Program. Nine projects have included restoration of urban creeks, marshes and wetlands, and riparian habitats.

New Recreation Opportunities

27 new parks have been opened to the public which were acquired and/or developed using Matching Grant Program funds. These parks are now permanently protected, and offer recreational opportunities including community gathering spaces, regional trails, places to play, and river access points. In many cases, these open spaces offer opportunities for the public to experience nature in communities where few options exist.

Total Acreage Protected

Ag + Open Space has permanently protected 581 acres via conservation easements through projects funded by the Matching Grant Program. Over 780 acres will be protected once projects accepted into the program (as of the 2018 cycle) are completed. Many of these spaces are also protected by a Recreation Conservation Covenant, an affirmative deed restriction that requires the property to remain open and accessible to the community forever.

Projects Across Sonoma County Communities

The Program has provided funding for projects in all nine incorporated communities in Sonoma County and in numerous unincorporated communities in West County such as Monte Rio, Graton, and Guerneville. See map on page 72 for location of completed projects.







There's More to Land Conservation

The goals and objectives outlined in the Vital Lands Initiative reflect the requirements of the voter-approved funding measure and associated Expenditure Plan, but that is only part of the story. The land conservation mission of Ag + Open Space, and the work of its many conservation partners, achieves other substantial benefits for Sonoma County residents. These benefits include protecting supplies of clean drinking water, avoiding greenhouse gas emissions, sequestering carbon, making ecosystems and communities more resilient to climate change and extreme events, enhancing health, food security, and preserving Sonoma County's cultural heritage. The following examples demonstrate the many ways in which land conservation contributes to the quality of life in Sonoma County.



A Healthy Farm and Ranch Economy.

How many places are there where the food on the table — from fresh crab or tender lamb chops, beautiful salads and vegetables, artisan cheese with seasonal fruit, a glass of world-class wine, even ice cream — comes from your neighborhood? With a range of microclimates, mild weather, and a long heritage of agricultural innovation, Sonoma County is fortunate to have an abundance of diverse, locally grown food. Land conservation plays an essential role in maintaining viable and productive agriculture even as land prices rise and development pressure grows. Keeping farms and ranches close to consumers assures a dependable local food supply, as well as fostering educated and appreciative consumers. Conservation easements can give farmers the economic boost they need to maintain the County's variety of food crops, which in turn strengthens the industry's resilience to changes in weather and market demand.







Healthy Lands and Healthy People.

Numerous studies have demonstrated that individuals and communities are healthier when they have access to parks and open space. In a recent study, the health benefits of community open space and parks in Sonoma County have been calculated at over \$57 million per year for the community. The total cost of physical inactivity is over \$274 million per year - a function of a variety of diseases and conditions associated with a sedentary lifestyle.

By protecting open space for community parks and preserves in an inclusive and equitable way, the health benefits associated with outdoor exercise and time spent in nature can be realized across all communities in Sonoma County. For more information on the multiple benefits of land conservation, see Healthy Lands and Healthy Economies.

Open Space: Bringing Communities Together.

Sonoma County Ag + Open Space is committed to ensuring equity, diversity and inclusion in its open space and land conservation investments and its day to day operations. In partnership with the Kashia Band of Pomo Indians, Ag + Open Space contributed to the return of their 800 acre homeland. Ag + Open Space uses its planning tools to determine where investments need to be made to ensure equitable access to parks and open space, and then makes investments to ensure that parks and open spaces exist in all parts of our county - serving communities from a diversity of cultural backgrounds, income levels, ages and levels of ability. The education and outings program - conducted in partnership with community based organizations - provides opportunities for a broad cross section of Sonoma County youth and other residents to learn about and visit Sonoma County open spaces.













Clean Drinking Water for Communities.

Water is life. Sonoma County is fortunate to have a water supply that is naturally filtered by healthy watersheds and river systems and stored in part in groundwater basins that underlie farms and natural habitats. This natural filtration is a function of the lands in Sonoma County that remain in open space, allowing the landscape to soak up and filter rainwater in forests, grasslands, cultivated agricultural areas, and rangelands. While the Ag + Open Space mission is focused on retaining natural and working lands in Sonoma County for agricultural productivity and ecosystem function, there is a substantial additional benefit to the community from protecting these watersheds, habitats, agricultural lands, and river systems – a benefit that residents experience every day when they turn on the tap. Land conservation by Ag + Open Space and its partners helps make it possible for Sonoma Water and other water supply entities to provide fresh, clean, naturally filtered water to over 600,000 people in two northern California counties.



Protecting Fish.

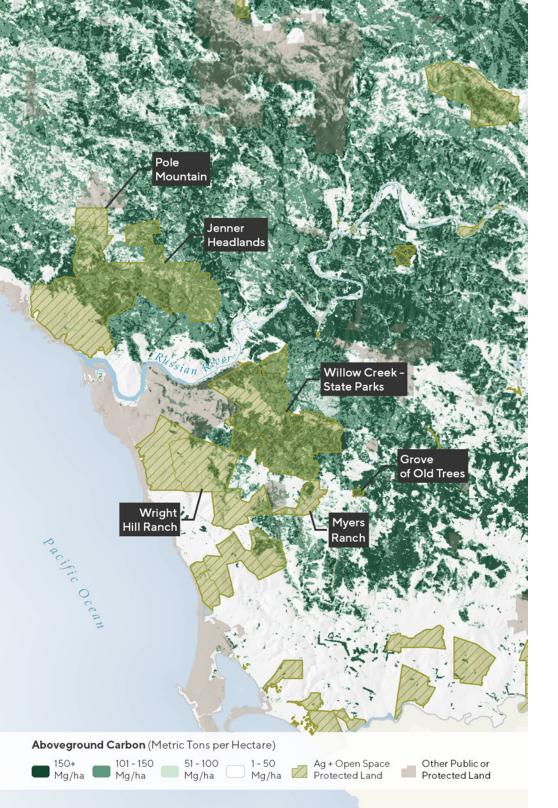
Sonoma County is home to three species of salmonids – steelhead trout, coho salmon and Chinook salmon. These amazing fish travel to the ocean from the streams where they were born, returning to the same stream to reproduce. The quality of the habitat in Sonoma County creeks and streams is critically important for their survival. Over the past 150 years, their numbers declined dramatically due to many changes including dam construction, development near streams, sedimentation from roads and farming practices, loss of riparian vegetation, and changes to water flows. The Russian River was once home to the largest steelhead trout population in the world, yet all three salmon species have experienced significant declines due to habitat loss and stream degradation.

In recent decades, intensive efforts have been undertaken to reverse this trend. These include conserving land adjacent to waterways, restoring habitat, supporting water conservation, removing fish passage barriers, and captive breeding programs. Successes have been documented for many of these projects, with fish observed spawning in habitat once blocked by dams, captive-bred fish reproducing successfully in the wild, and coho salmon populations improving relative to their near-extinction in the region in the early 2000s. Ag + Open Space has protected thousands of acres of land that will help these fish survive and thrive.









Carbon Sequestration and Avoiding Emissions through Land Conservation.

California and Sonoma County are leaders on climate action – driving innovation in renewable energy, transportation, and housing approaches that help the County and State reach their ambitious climate goals. Land conservation plays a significant role in addressing climate change, both by sequestering carbon in natural and working landscapes and by avoiding emissions associated with sprawl. Over 229 million metric tonnes (more than 250 million tons) of carbon dioxide (CO₂) equivalent are sequestered in the Sonoma County landscape – equal to 48 million passenger vehicles being driven for one year. Given that land use change, predominantly from forest conversion, contributes substantially to global CO₂ emissions, conserving Sonoma County's native habitats is an important element in the portfolio of climate action.

Reducing development potential in remote locations also results in avoiding emissions. New development brings additional vehicles traveling back and forth, often to remote locations in the County, yielding additional emissions. Numerous studies have demonstrated that regions where housing and commercial development are limited to towns and cities have lower greenhouse gas emissions when compared to areas with more dispersed development. The land protected by Ag + Open Space has substantially reduced future growth in vehicle miles traveled by purchasing development rights from willing sellers, reducing the amount of residential development that could otherwise occur far from jobs and services. Parks, trails, and nature preserves close to urban areas provide recreation opportunities easily reached by walking, bicycling, or a short drive.



Adapting to Climate Change and Extreme Events.

Conservation of natural and working landscapes can make plant, wildlife, and human communities more resilient to climate change and extreme events such as fires, floods and droughts. Although natural disasters will always be part of the human experience, protecting strategic swaths of land and managing them appropriately can lower the impacts of these events on local communities. Conservation easements can be used to minimize development in areas with extreme fire or flood potential. By setting these areas aside as open space, the public can enjoy a variety of benefits, while enhancing public safety. Ag + Open Space and its partners can use land conservation investments to surround communities with fire-resilient open space such as a mosaic of parks, agricultural lands and natural areas managed in a way to reduce the impacts of these events, while still providing benefits such as local food, environmental, scenic, and recreational values.

Current projections indicate that Sonoma County will experience increased fires, flooding, and drought as a result of climate change. Protecting groundwater basins, streams, and watersheds sustains a source of clean water for fish, wildlife, and people, even during years of drought or changing weather patterns. Sea levels are projected to rise from between 1.2 to 2.7 feet in California by 2100, destroying built infrastructure such as roads and residential and commercial development. Sonoma County is fortunate to have maintained open space and conservation lands along the coast and bayshore, as shown on the map on the right, as these areas can slowly and flexibly respond to rising seas. Unlike built infrastructure, salt marshes and estuarine habitats can adjust to sea level rise, and parks and coastal agriculture can be relocated inland and upslope to adjust to rising seas.

For more information on the multiple benefits of land conservation, see Healthy Lands and Healthy Economies.





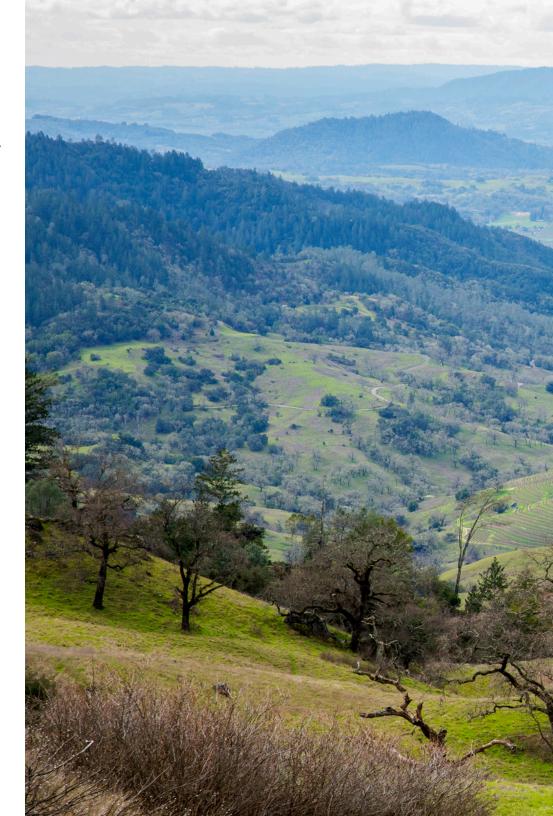




Sonoma County Present and Future

Ag + Open Space developed the Vital Lands Initiative with an understanding of current conditions and the outlook for Sonoma County's human population and natural resources in the future. This section provides a brief overview of existing land ownership and protection in Sonoma County and a discussion of trends that are shaping the County's future.

Of Sonoma County's 1.1 million acres, almost 220,000 are publicly owned or protected by a conservation easement, as shown on the map on page 49. Most of these lands are owned by federal, state, and county agencies, cities, tribes, and private non-profit organizations. Of the 126,000 acres of land protected by a conservation easement in Sonoma County, approximately one third are open to the public for recreation; another 15% offer restricted access (i.e. guided tours). Two-thirds of protected lands are publicly owned; the remaining 36% are privately owned and protected by easements, held by Ag + Open Space and other land conservation organizations.







Tribal Lands.

Tribes continue to steward land in Sonoma County, as they have for millennia. Tribes are sovereign nations and the tribal lands that are held in trust by the federal government are not subject to state or local land use controls. Although the tribes do follow tribal and federal guidelines, the tribal governments are the decision makers for these lands. Federally and non-federally recognized tribes in Sonoma County include the Dry Creek Rancheria Band of Pomo Indians, the Federated Indians of Graton Rancheria, the Kashia Band of Pomo Indians, the Mishewal Wappo, the Cloverdale Rancheria of Pomo Indians, and the Lytton Band of Pomo Indians.

In 2015, Ag + Open Space was one of several partners and funders for a conservation easement that facilitated the return of nearly 700 acres of ancestral coastal lands from private ownership back to the Kashia Band of Pomo Indians of the Stewarts Point Rancheria. This collaboration protects the natural and open space resources on this coastal land, establishes a coastal trail connection to Salt Point State Park, and preserves homeland for the Kashia to practice their cultural traditions.

Federal and State Lands.

In Sonoma County, over 48,000 acres are held by federal agencies, including the Lake Sonoma Recreation Area (U.S. Army Corps of Engineers), The Geysers and The Cedars (Bureau of Land Management), and San Pablo Bay National Wildlife Refuge (U.S. Fish and Wildlife Service). California state agencies, primarily the Department of Parks and Recreation, own over 49,000 acres of land. Sonoma County is home to 12 state parks that provide public recreation and education as well as resource protection. Ag + Open Space has helped add 6,100 acres to four state park holdings, including Trione-Annadel State Park, Sugarloaf Ridge State Park, Jack London State

Historic Park, Sonoma Coast State Park, and Austin Creek State Recreation Area.

Local Government.

Over 28,000 acres are owned by local government entities in the County, including the County itself. Nearly 13,000 acres are in the jurisdiction of Sonoma County Regional Parks. Five of these park properties, including Taylor Mountain Regional Park and Open Space Preserve, were originally purchased by Ag + Open Space. Upon transfer, conservation easements were placed on these properties to protect taxpayers' investment forever. Since 1990, Ag + Open Space land conservation efforts have doubled the acreage of publicly accessible lands held by Sonoma County Regional Parks.

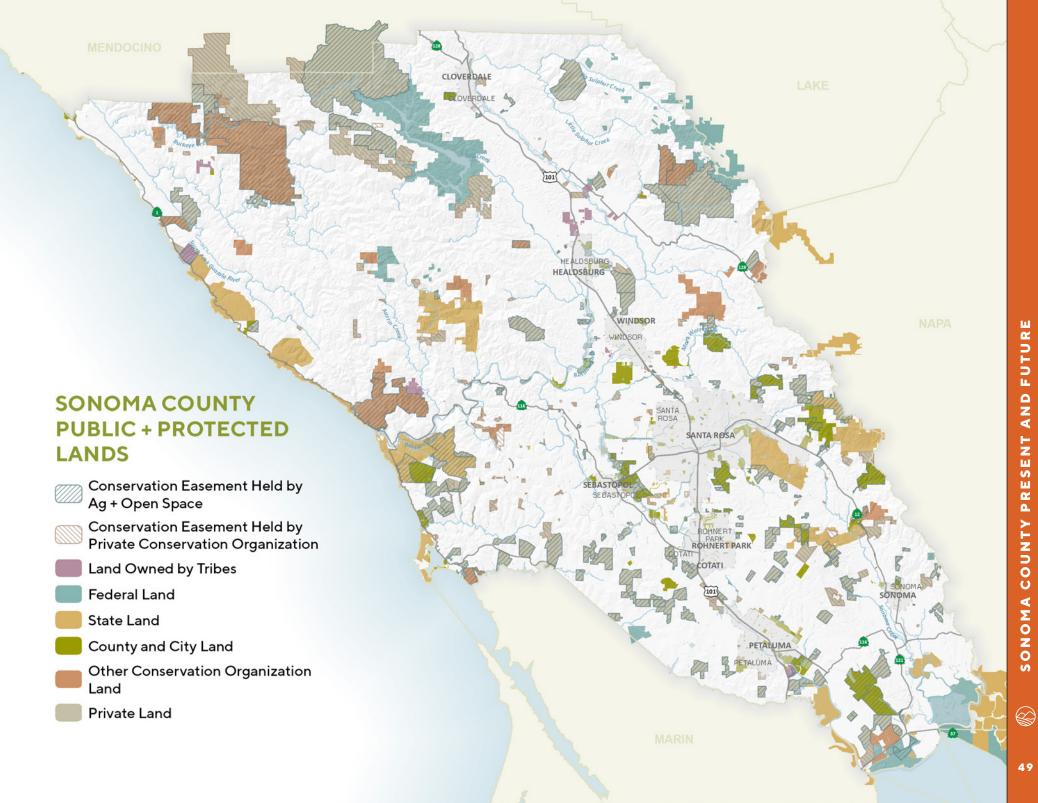
Other Land Conservation Organizations.

Sonoma County is rich in private organizations that own and/or hold conservation easements over land for open space protection. These include, but are not limited to, Sonoma Land Trust, Pepperwood Foundation, the Wildlands Conservancy, LandPaths, The Nature Conservancy, the Conservation Fund, Audubon Canyon Ranch, Bodega Land Trust, and the Humane Society Wildlife Land Trust. In total, 29,000 acres are protected by conservation easements held by organizations other than Ag + Open Space.

Private Land Ownership and Stewardship.

Private landowners steward the vast majority of land in Sonoma County – ranging from farms and ranches, wildflower and watershed preserves, to working forests. Sonoma County is fortunate to have a landowner community with a strong conservation ethic.





Trends Impacting Land Conservation

Successful implementation of the Ag + Open Space mission requires an understanding of the trends currently influencing land conservation in Sonoma County, including where open space and working lands are at risk of being developed or converted to a more intensive use. This understanding allows the agency to determine where conservation will provide the greatest benefit, and where Ag + Open Space goals align with the legislative and funding priorities of other agencies and organizations, allowing effective collaboration and leveraging of local funding.

Agricultural Trends

Crop Production Trends. For the first time ever, the total value of crops produced in Sonoma County in 2018 exceeded \$1 billion, a 24% increase over the previous year. The value of nursery crops increased 42.6%, wine grapes increased 34%, apples increased 10% and livestock and poultry increased 2%. In the 30+ years since winegrape production overtook milk production as the number one agricultural commodity in Sonoma County, dairy farmers have adapted by transitioning to organic production, and by producing value-added products such as cheese.

Sonoma County is a focal point for the rapidly growing cannabis industry and cannabis is already a major part of the local economy. The per-acre value of cannabis cultivation exceeds the per-acre value of all other crops grown locally, and interest in cultivation is increasing. Even though cannabis is rapidly becoming a significant part of the County's agricultural economy, Ag + Open Space cannot work on projects that involve the growing or processing of cannabis as long as cannabis remains illegal at the federal level.

Loss of Farmland. Nationally, the amount of productive farmland and grazing land continues to fall. A recent study calculated that between 1992 and 2012, 31 million acres of farmland were lost in the United States. In California, 20,000 acres per year of rangelands are lost or converted. In some parts of Sonoma County, agricultural lands are converted for development. This conversion and intensification of agricultural operations can raise potential conflicts with natural resource and open space protection.

Escalating Land Costs. The increasing cost of land in Sonoma County drives changes in agricultural production: a shift in crops produced, a transition to different production and marketing strategies, and a shift in land use from working agriculture to rural residential estates. High land prices also make it difficult for new farmers to purchase land to farm. Nationally, the average age of farmers and ranchers has increased from 55 years old in 1992, to over 60 years old in 2012. The number of beginning farmers in California has dropped 20% between 2007 and 2012, and represents the smallest portion of farm proprietors since 1982. It is also difficult to attract and retain enough farm workers, due both to issues with immigration and to the high cost of housing in the County.





Loss of Processing and Support Facilities. A viable agricultural economy requires a variety of support services, including places to process and store products, from local meat to fruits and vegetables; aggregation and distribution facilities; and locations to market and sell these products. As land

prices rise and the percentage of County residents who are farmers or who grew up on farms and ranches declines, establishing and maintaining agricultural support services where they are accessible, affordable, and welcome becomes more challenging.



Natural Resource Trends

The region's climate has warmed relative to historic conditions and that trend is expected to continue indefinitely. In the North Bay, summer temperatures are forecast to rise by approximately 6 to 8°F, on average, by the end of this century. The average number of extremely hot days (over 98.7°F) per year is predicted to rise from 4 (in 1961-1990) to 15 (in 2070-2099). The increase in temperatures and change in precipitation associated with climate change will have significant effects on water supply and quality.

The fires of 2017, 2019, and 2020 transformed over 230,000 acres (more than a quarter of the land) within the County. With changing climate, wildfires are predicted to be more frequent and more destructive in the future, especially in the wildland-urban interface where housing development is interspersed within fire-prone landscapes.

Habitat loss translates into a loss of biological diversity. A recent study by scientists working for the Center for American Progress shows that almost 9,200 acres of natural lands were developed in Sonoma County between 2001 and 2011. This is a higher rate of natural land loss than the state of California as a whole, or other western states, experienced in that time. Habitat fragmentation occurs when large expanses of land are broken into smaller patches, often a result of new roads, urban development, or agriculture in areas that were previously in a natural state. The resulting isolation of natural habitats can threaten plant and animal survival by limiting their ability to disperse or move to find resources and mates. Fragmented habitat also has more edges, which can change the habitat's microclimate and encourage invasive species. Invasive vegetation and non-native trees are widespread in Sonoma County, from eucalyptus groves to stands of broom, pampas grass, giant reed, and Himalayan blackberry. Invasive animal species are also a concern; wild turkeys, pigs, and bullfrogs all have dramatic and potentially

destructive effects on the County's landscape and native wildlife.

Economic and Demographic Trends

Housing Demand. Despite the slow rate of population growth, housing has not kept up with demand in Sonoma County. Even before the catastrophic fires of 2017, Sonoma County residents were faced with a crisis in both housing availability and affordability. After the fires, the situation has become significantly worse with the loss of over 5,000 housing units. The County Board of Supervisors has a goal of 30,000 additional housing units by 2023.

Tourism Growth

The combination of world-class wine and food, natural beauty, cultural diversity, and proximity to the San Francisco Bay Area means that Sonoma County is a highly desirable tourist destination. Trends in rural tourism could affect future land conservation efforts by increasing the cost or reducing a landowner's willingness to enter into an easement that restricts a potentially lucrative land use

Communication Technology

Recent changes in communication tools have changed the nature of work for many people as well as the nature of cities themselves, creating distinct advantages for denser, more compact urban areas while also allowing some workers to commute less. At the same time, the ability to telecommute may incentivize people to move into rural areas, thereby placing more pressure on working and natural lands.



Land Conservation and Smart Growth

Land conservation and compact, city-centered growth work together to protect Sonoma County's working and natural lands from sprawl while continuing to maintain the many benefits of these lands, including local food, scenic views, greenbelts and community separators, buffers around urban areas, parks and trails, clean abundant drinking water, and habitat for wildlife. The County General Plan, city urban growth boundaries, and various state land use policies have incentivized compact and smart growth in cities and communities, and these smart growth policies work hand in hand with land

conservation efforts to maintain the rural landscape that the Sonoma County community has voted to protect.

The results from recent studies in Sonoma County have demonstrated that maintaining open spaces and focusing growth in cities and towns can significantly reduce energy use, water use, and household emissions that contribute to climate change, while improving physical health. Avoiding sprawl into agricultural and natural landscapes allows these open space lands to cost effectively provide multiple benefits to Sonoma County communities.

	Standard Suburban Development 2 to 40+ Dwelling Units / Acre Less than 10 to 70 Employees / Acre	Compact Walkable Development 12 to 40+ Dwelling Units / Acre 10 to 70 Employees / Acre	Urban Development More than 40 Dwelling Units / Acre More than 70 Employees / Acre
Vehicle Miles Traveled	19,500 miles/year	12,000 miles/year	5,000 miles/year
Walking (per person)	4 minutes/day	6 minutes/day	12 minutes/day
Residential Water Use	62,000 gallons/year	40,000 gallons/year	22,000 gallons/year
Residential Energy Use	75,000,000 BTU/year	65,000,000 BTU/year	40,000,000 BTU/year
Vehicle Miles Traveled	12.3 metric tonnes/year	8.6 metric tonnes/year	5.3 metric tonnes/year
Carbon Emissions From driving, residential energy, water-related energy. Excludes commercial energy use.	\$16,100 dollars/year	\$10,400 dollars/year	\$4,800 dollars/year



Outcomes On The Land: Land Conservation Goals and Objectives

This section provides an overview of Ag + Open Space goals, objectives, and priorities on the land, all consistent with the voter-approved tax measure and Expenditure Plan. It is intended to provide an understanding of Ag + Open Space land conservation objectives for each of the goal areas and prioritized maps that depict where these objectives can best be achieved. Overview maps are provided for each goal area in the following pages, and more detailed maps are available on the Ag + Open Space interactive web map. Details about how these priorities will be accomplished – including strategies and tools – are included in the "Implementing the Vision" section.

All Ag + Open Space activities are informed by the guiding principles listed on page 21







Ag + Open Space Goals and Objectives

Ag + Open Space goals represent the primary outcomes to be achieved by the agency. Each goal is supported by objectives that outline detailed actions to support the achievement of the goal. The majority of the objectives directly result in the protection of land – either through the continued protection of existing conservation easements or through protection of lands identified as the highest-priority for future conservation. Maps identifying conservation features document the highest-priority areas for conservation, based on criteria, methods, and data sources established during the development of the Vital Lands Initiative. Not all objectives have associated maps in the Vital Lands Initiative, but nonetheless direct and inform Ag + Open Space's planning and prioritization efforts. Some objectives are universal – spanning more than one goal and applying across the mission.

UNIVERSAL OBJECTIVES:

- Protect areas with multiple conservation features.
- Protect properties that increase connectivity between protected areas.
- Protect areas most threatened with development or conversion.
- Protect areas important for climate change and extreme event resiliency and adaption, including projects that promote carbon sequestration and avoided emissions and enhance biodiversity
- Protect areas that achieve the open space goals outlined in the Sonoma County General Plan.
- Protect a variety of lands that ensure an equitable distribution of benefits to our diverse communities.



VITAL LANDS INITIATIVE GOALS

Agricultural Lands

Protect lands that support diverse, sustainable, and productive agriculture.

Community Identity

Protect open lands that surround and differentiate the County's urban areas and contribute to the unique scenic character of the County.

Healthy Communities

Protect open space and publicly accessible lands in and near cities and communities and connect people with protected lands.

Water

Protect natural lands and aquatic habitats that support sustainable aquatic ecosystems and water resources.

Wildlands

Protect natural lands and terrestrial habitats that support plants, wildlife, and biodiversity.



Agricultural Lands

Protect lands that support diverse, sustainable, and productive agriculture.

Sonoma County's rich soils and favorable climate make it a rich and productive area for agriculture. Although it lies on the edge of the rapidly urbanizing San Francisco Bay Area, Sonoma County has retained its rural farms and ranches due to the economic viability of productive agricultural lands and the active protection of these lands from development. Agricultural activities offer many benefits to the greater community including jobs and revenue to the local economy, as well as locally produced food, fiber, and other agricultural crops. Protection of agriculturally productive land also helps to maintain open space, scenic views, and greenbelts; protect aquatic ecosystems and groundwater basins; and provide habitat for native species of plants and wildlife. Because of these multiple benefits, protection of priority, at-risk agricultural lands is essential to the continued viability of agriculture as well as the quality of life in the County.

As a land use, agriculture is vulnerable to economic factors as well as environmental factors. As the market for agriculture products changes, farmers must adapt to these changes by adjusting their crops and operations to meet new demands. Farmers are particularly vulnerable to changes in climate that may affect the timing and volume of rainfall, the location and timing of frost events, and the emergence of new pests and diseases. Protecting a diverse range of agricultural landscapes and working farms and ranches will help preserve the capacity to produce world-class food, beverages, and fiber.

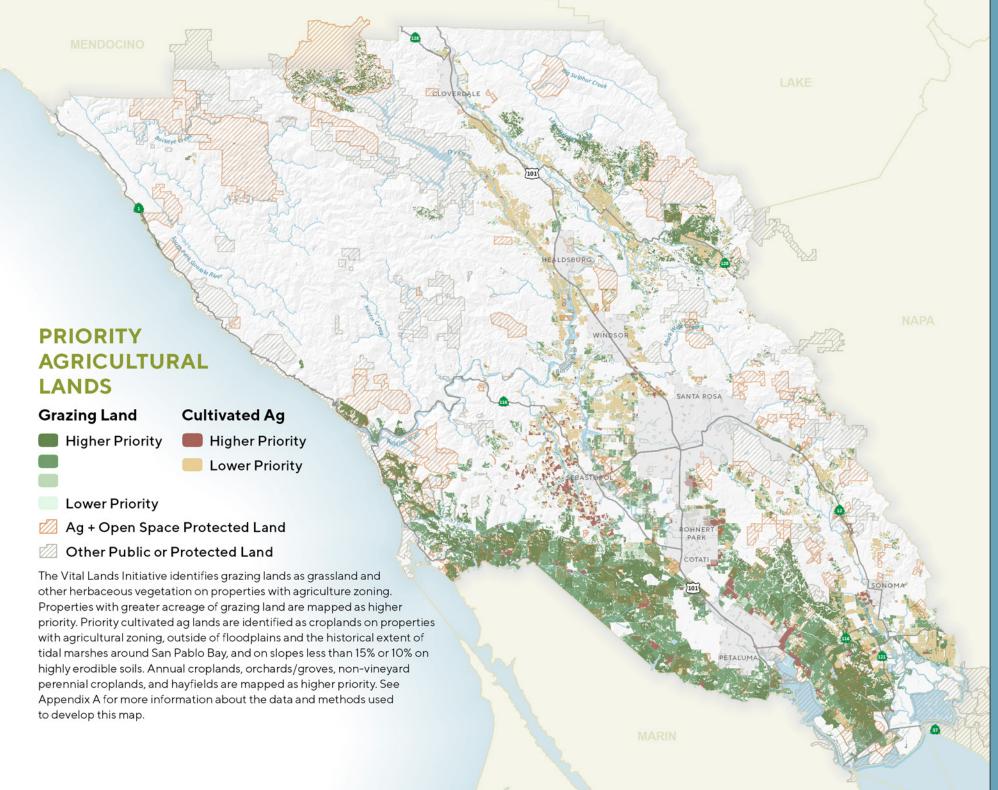
AGRICULTURAL LANDS OBJECTIVES:

- Protect the highest priority grazing lands and croplands.
- Create a balanced portfolio of protected lands that represents
 the diverse types of agriculture in Sonoma County.
- Support access to land for farmers and ranchers.
- Prioritize the protection of land that has infrastructure and facilities for agricultural processing, when compatible with other agricultural objectives and Ag + Open Space conservation features.

- Support agricultural use on Ag + Open Space protected lands.
- Ensure that grazing is allowed for vegetation management and fire protection in projects under the Wildlands and Water goals where it is consistent with the protection of Wildlands and Water conservation features.
- Ensure that at least 50% of all future Ag + Open Space projects under the Community Identity goal include agricultural use.







Community Identity

Protect open lands that surround and differentiate the County's urban areas and contribute to the unique scenic character of the County.

Sonoma County cities and communities maintain their character in part because of the open spaces between them – the working and natural lands that act as greenbelts and community separators. Ensuring protection of these lands helps maintain compact communities with easy access to natural settings. In addition, the landscapes and waterways throughout Sonoma County reinforce community identity – from the Petaluma River weaving through the downtown corridor, to Taylor Mountain filling the skyline in Santa Rosa; these places provide a strong identity for the places Sonoma County residents call home. These open spaces close to home also provide real benefits to residents: small farms and ranches provide local food and a place to see farming from urban communities; places for people to be outside and enjoy nature without having to travel long distances; habitat for rare plant and animal species that co-exist in local communities; and important watersheds and groundwater basins that provide drinking water.

Sonoma County's beautiful landscape attracts visitors and residents alike. Varied terrain, diverse and extensive open landscapes, and unique features combine to create a stunning backdrop to daily life. Distinctive peaks including Taylor Mountain, Fitch Mountain, Sonoma Mountain, Bennett Peak, Geyser Peak, and Mount Saint Helena are visible from most points in the County, serving as landmarks and orienting viewers within the landscape. The Petaluma, Russian, and Gualala Rivers, as well as the Laguna de Santa Rosa are also highly visible from Ag + Open Space-protected lands, as well as roads and local communities. Seeing these features regularly is not only enjoyable, but helps locals and tourists both understand and appreciate the region.

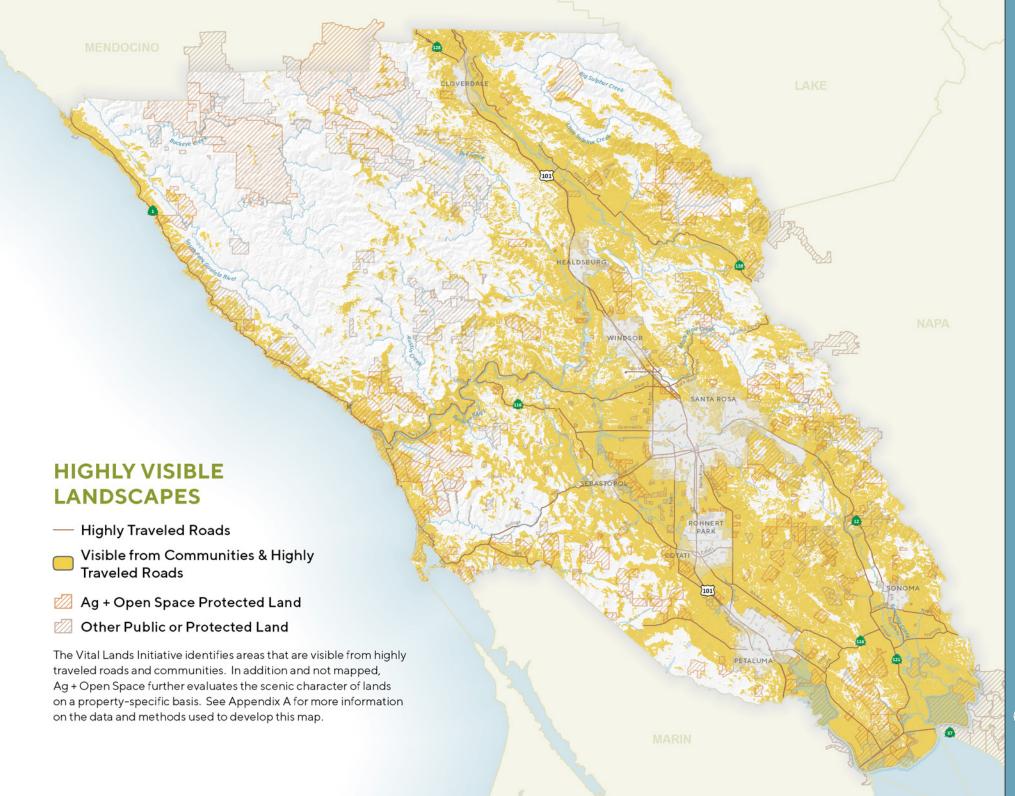
COMMUNITY IDENTITY OBJECTIVES:

- Protect unique and scenic landscapes.
- Protect priority greenbelt areas an area of open land that surrounds a community.
- Protect lands that provide visual relief from urbanized areas and highly traveled roads, including the most visible ridgelines and mountaintops and valleys.













Healthy Communities

Protect open space and publicly accessible lands in and near cities and communities and connect people with protected lands.

Sonoma County's diverse natural, scenic, and working lands provide a wide range of opportunities for people to explore and learn about their unique surroundings and the importance of land conservation. Recreational use of Ag + Open Space protected lands provides one of the most accessible ways for the community to experience the benefits of conservation work. Parks and open space preserves offer people the ability to directly experience the natural splendor and scenic beauty of the County, including ridges and mountains, forests and woodlands, rivers and creeks, meadows, and the coast. Public trails offer the community additional opportunities to experience Sonoma County working and natural lands, while guided tours on privately-owned protected lands offer opportunities to learn about healthy natural systems, plants and wildlife, and farms and ranches.

Sonoma County is fortunate to have communities that are designed with open space areas in mind. These areas help to create the character and vitality of a community and contribute to its beauty and sense of place. Ag + Open Space collaborates with public agencies and non-profit organizations to protect these open space areas in local communities through the Matching Grant Program. This program is intended to protect vibrant lands and inviting spaces within and near cities and communities, providing an opportunity for residents and visitors to experience open space. Community open space projects have the potential to transform communities, providing places to find solitude, host public gatherings, to recreate, and to experience and learn about natural resources and agriculture and their importance in the landscape. Community open space is also fundamental to the health of urban residents, allowing visual respite in urbanized areas and allowing people of all ages to get outside within a few minutes of their homes.



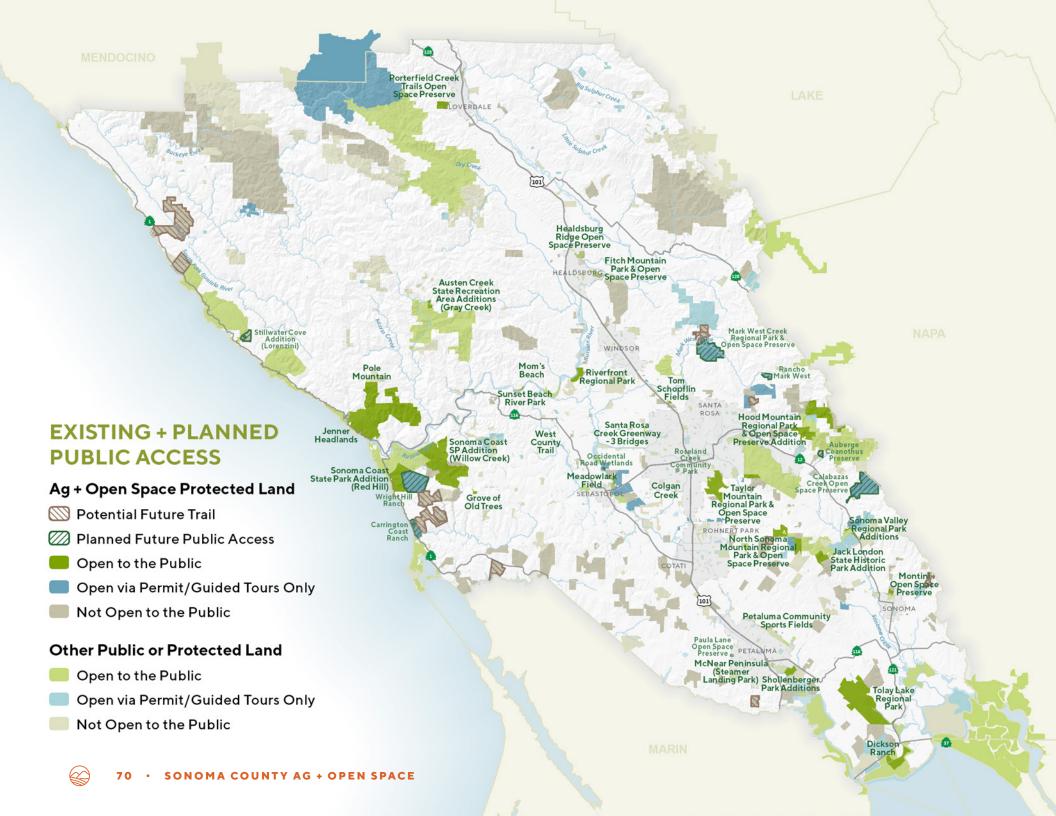




HEALTHY COMMUNITIES OBJECTIVES:

- Prioritize projects that increase passive or low-intensity recreational opportunities using easements and recreation covenants.
- Ensure that Ag + Open Space protected lands transferred to recreational partners are open to the public and continue to protect conservation features.
- Continue sustainable and climate friendly agriculture where appropriate on recreational lands.
- Acquire and convey trail easements in areas where regional or local trails are officially identified by recreational
 partners, particularly when such areas can link to existing segments of trail.
- Partner to provide funding for a diverse portfolio of community open spaces, supporting the protection of conservation features and the connection of urbanized areas with natural and agricultural landscapes.
- Provide a high quality and culturally relevant education and outreach program to help all communities make meaningful connections to the land.
- Partner with public agencies and non-profit organizations to ensure that all communities have open space to enjoy.
- Consider opportunities on future acquisitions that expand, create, or connect new parks and open space preserves, trails, or access points to identified water trails.
- Enhance connections between communities through open space investments.



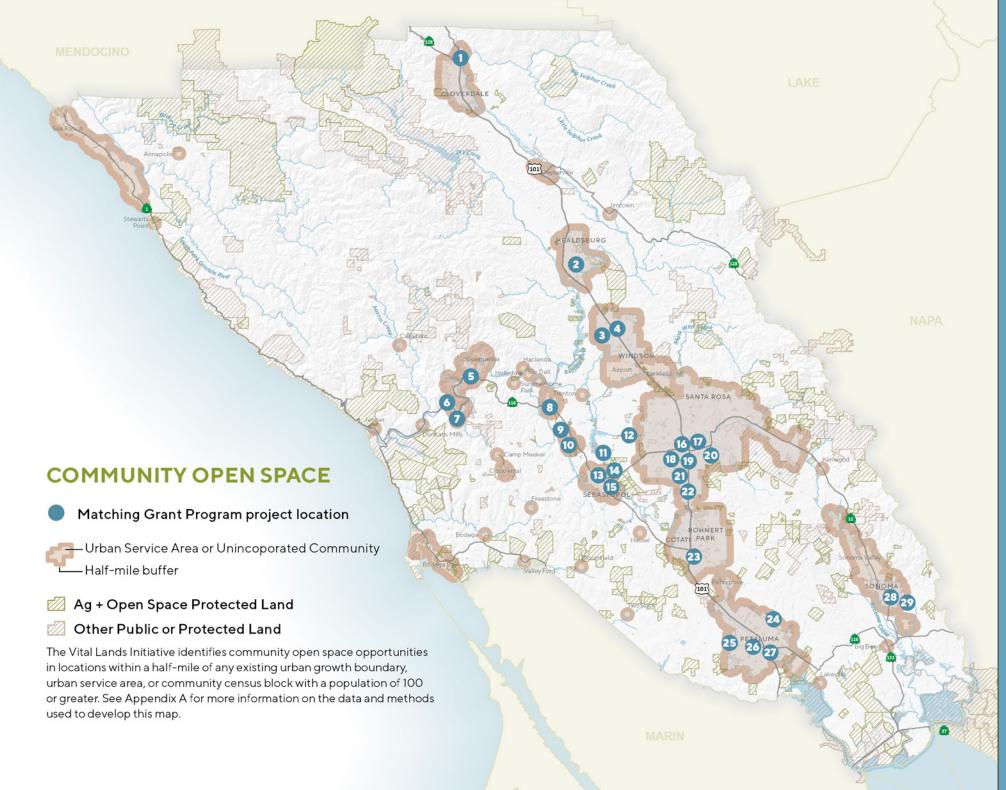






MATCHING GRANT PROJECTS

- Cloverdale River Park
- 2 Giorgi Park
- 3 Keiser Park
- 4 Windsor Town Green
- 5 Riverkeeper Stewardship Park
- 6 Patterson Point Preserve
- Creekside Park
- 8 Forever Forestville
- West County Trail
- Graton Green
- 11 Irwin Creek Riparian Restoration
- Santa Rosa Creek Greenway
- Sebastopol Skategarden Park
- 14 Meadowlark Field
- Tomodachi Park
- 6 Prince Memorial Greenway
- 17 Prince Gateway Park
- Roseland Creek Community Park
- Bayer Neighborhood Park + Gardens
- Taylor Mountain Regional Park & Open Space Preserve - Cooper Creek Addition
- 21 Colgan Creek
- 22 Andy's Unity Park
- Falletti Ranch
- Petaluma Community Sports Fields
- Paula Lane Open Space Preserve
- McNear Peninsula (Steamer Landing Park)
- Schollenberger Park Alman Marh & Petaluma Marsh
- 28 Nathanson Creek Preserve
- Sonoma Garden Park



Water

Protect natural lands and aquatic habitats that support water resources.

As weather patterns change around the world, a protected water supply is increasingly important for humans and natural systems, especially in Sonoma County where all drinking water is naturally filtered by healthy watersheds and river systems, and often stored in groundwater basins that underlie farms, ranches and natural habitats. Aquifers rely on open areas where water can slow its pace, filter into the soil, and recharge the basins below. Ag + Open Space's work ensures that these critical watersheds and aquatic habitats remain intact. Easements tend to restrict the number of roads and structures that can be built, therefore limiting potential impacts to streams as a result of development or an increase in impervious surfaces.

As the climate changes, Sonoma County is predicted to have increased flooding during rainy years, and wetlands will play an important role in flood-water management. The Laguna de Santa Rosa can store up to 80,000 acrefeet of water during a flood, reducing floodwaters in the lower Russian River by up to 10 feet, and thereby preventing the damaging effects of higher-level flooding in towns along the river.

Wetlands cover a small percent of land area, but store 30% of soil organic carbon, an amount greater than forests. This carbon is rapidly released to the atmosphere when those wetlands are degraded. Native species benefit from healthy wetlands and streams areas, which provide habitat for 11 of the County's 28 threatened and endangered species, including the California tiger salamander and three salmonid species. These areas also provide important habitat for birds and are critical movement pathways for wildlife. In California, over 95% of historical wetlands have been lost and studies show similar rates

of disappearance in Sonoma County. Protecting the highest priority riparian corridors, wetlands, and groundwater basins will help protect multiple important natural resources.

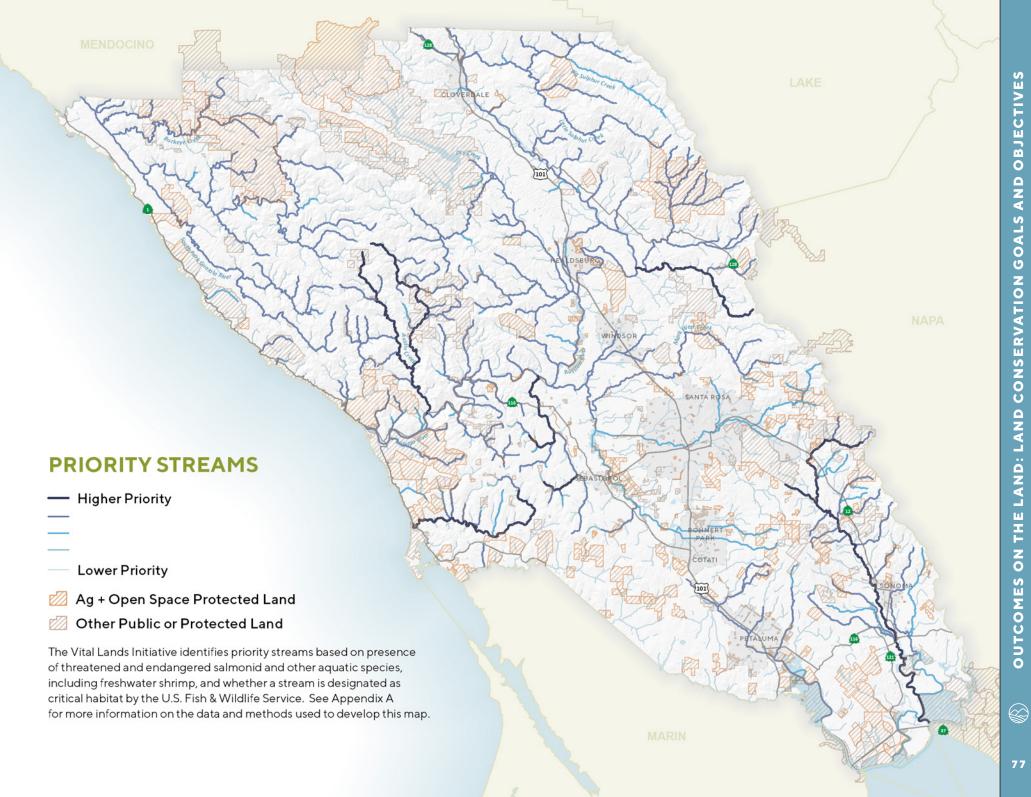
WATER OBJECTIVES:

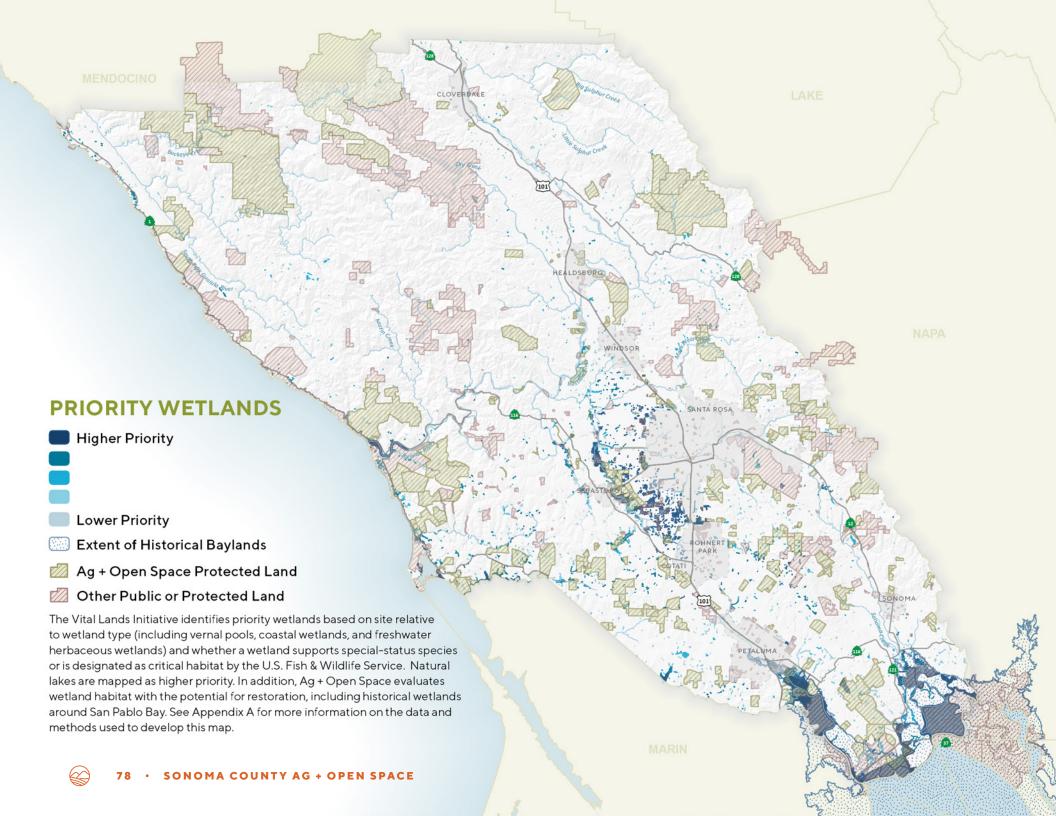
- Protect the highest priority riparian corridors and headwater streams.
- Protect the highest priority wetlands, including estuaries and marshes, vernal pools, and other freshwater wetlands.
- Protect the highest priority groundwater basins and recharge areas.
- Protect the highest priority aquatic habitats and associated upland areas that support rare, unique, or special-status aquatic plants and animals.
- Protect connected aquatic habitats and the lands that support this connectivity.

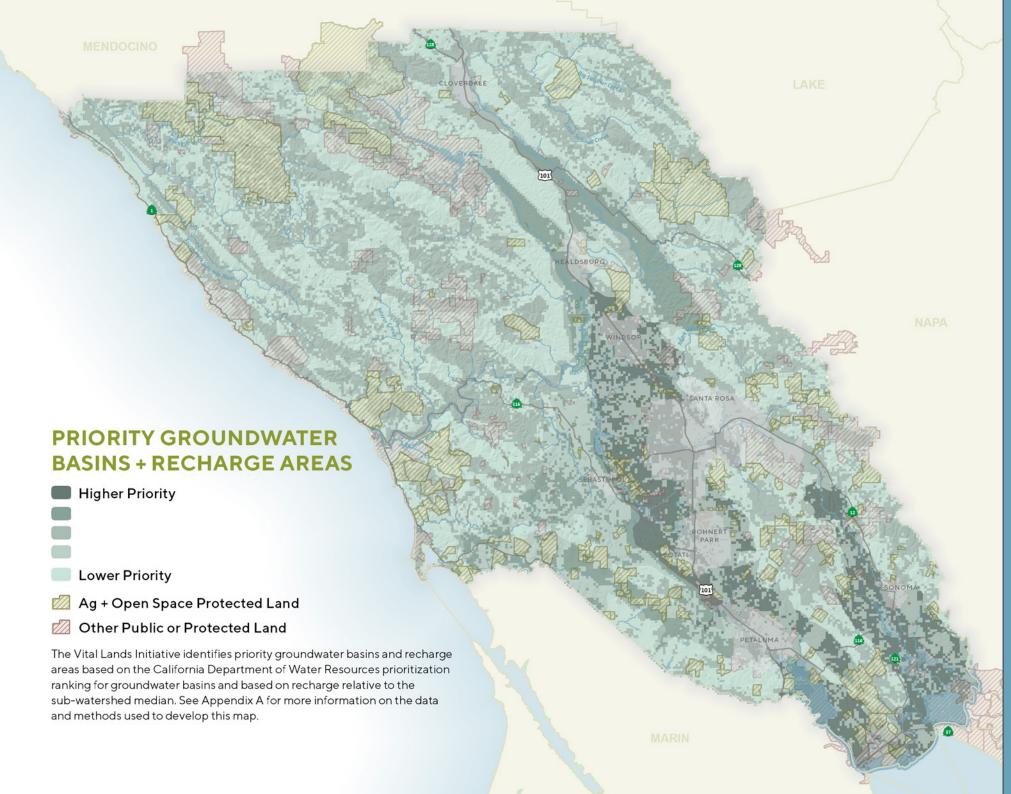












Wildlands

Protect natural lands and terrestrial habitats that support plants, wildlife, and biodiversity.

Sonoma County is home to a variety of habitats and ecosystems that make it one of the most biologically diverse areas of the world. The County's unique natural landscapes include miles of undeveloped coastline, densely forested mountains, oak woodlands, chaparral, rolling grasslands, tidal marshes, freshwater lakes, streams, and vernal pools. The varied nature of the Sonoma County landscape provides habitat for many species of plants and wildlife, including some that live nowhere else in the world. These natural landscapes also provide multiple benefits to human communities, including clean water and groundwater recharge, flood protection, pollination for crops, disaster

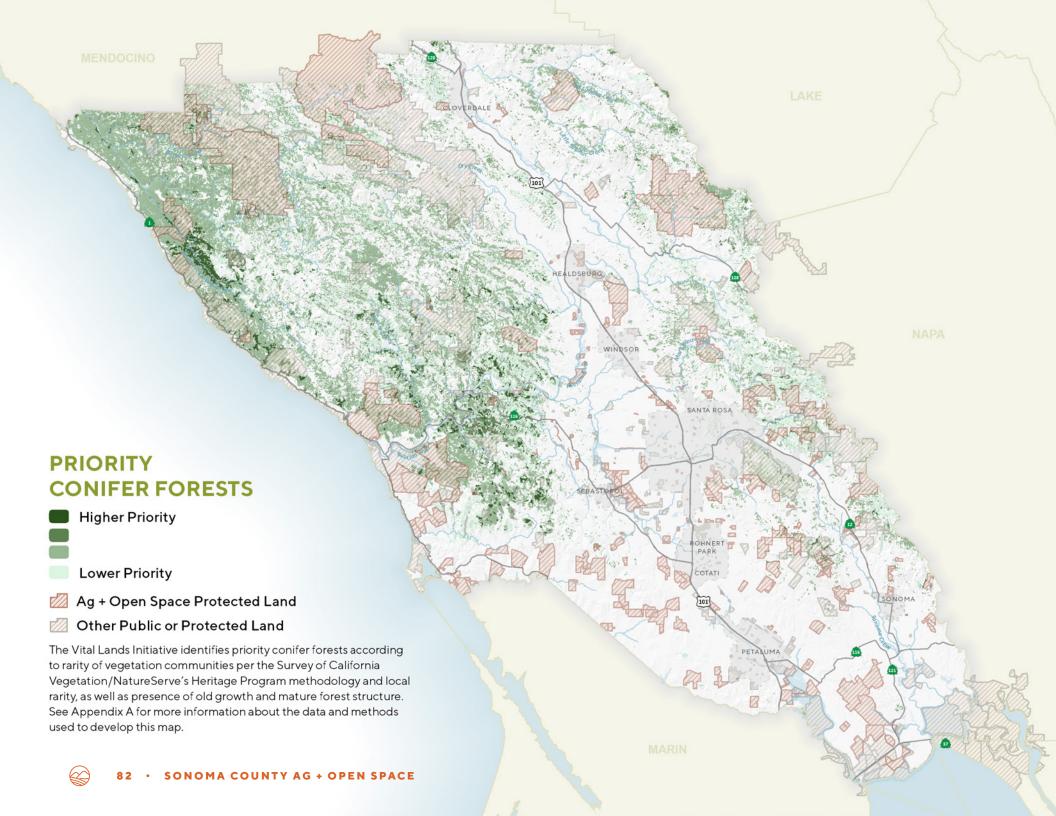
resiliency, carbon sequestration, adaptation to climate change, places to enjoy nature, and stunning natural beauty.

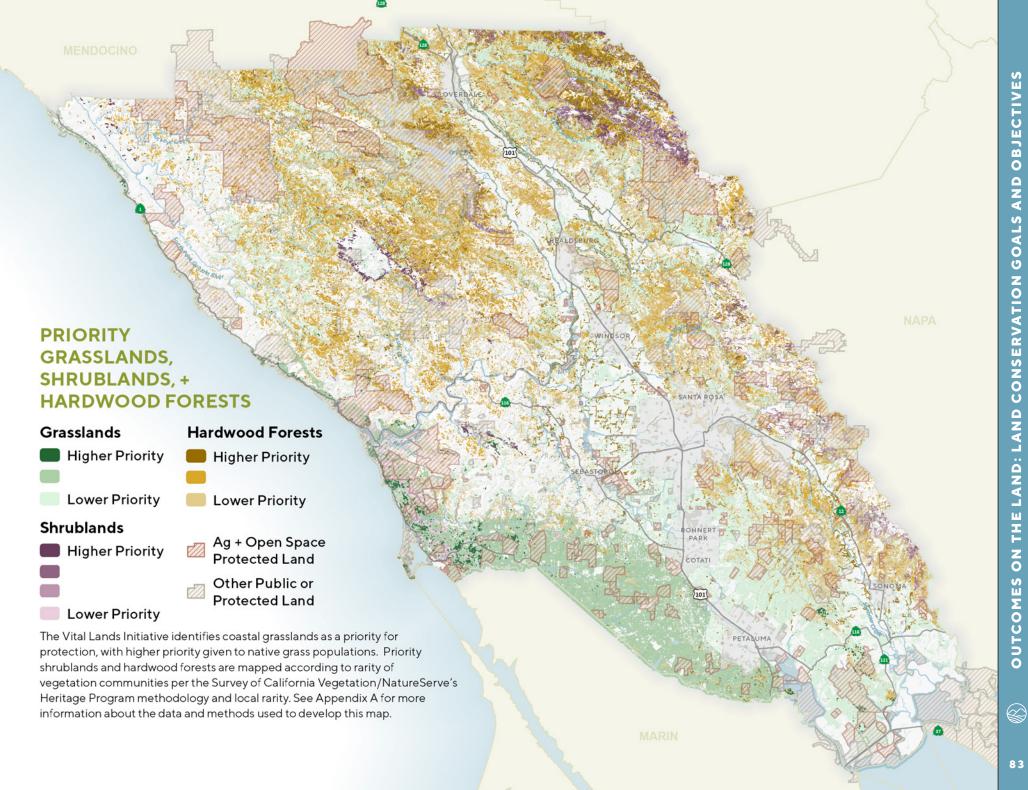
As development pressure increases and natural landscapes become more vulnerable to climate-related factors like drought and wildfire, it will be important to target land protection efforts to make sure that all the critical habitat types are protected. By acting proactively, Sonoma County retains the richness and diversity that makes it such an exceptional place.

WILDLANDS OBJECTIVES:

- Protect the highest priority old-growth and mature hardwood and conifer forests.
- Protect the highest priority oak woodlands, shrublands, grassland and other non-woody vegetation.
- Protect rare, unique, or particularly diverse vegetation communities.

- Protect the highest priority habitats for rare, unique, or special-status terrestrial plants and animals.
- Protect lands critical for supporting high native biodiversity.
- Protect critical wildlife movement corridors and intact habitat areas.







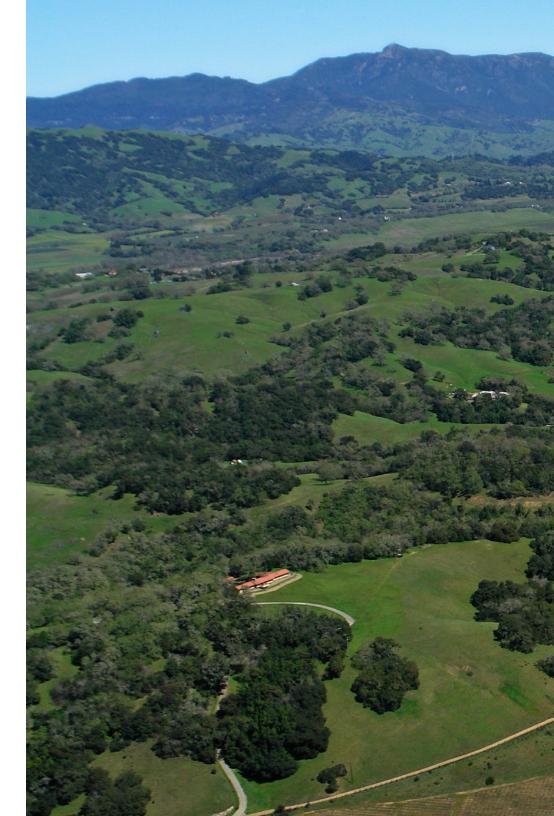


Implementing The Vision

Sonoma County voters have twice approved an ambitious land conservation vision for Ag + Open Space, including the preservation of lands that protect agricultural, scenic, natural resources, greenbelt and recreational values, many of which are at risk of conversion. Land prices continue to increase in Sonoma County and revenue from the Ag + Open Space tax measure is not enough to protect all lands that support the identified priorities outlined in the "Outcomes on the Land" section. Therefore, it is imperative that Ag + Open Space continue to prioritize its work to reflect the intentions of the voters, while using the best available data and information to ensure the protection of the most important lands.

Ag + Open Space's work relies on the ongoing collection of data and information, is informed by a set of guiding principles, and relies upon a set of standard practices that are outlined in the following pages. Staff use this data and analysis framework to map the highest priority conservation features on the landscape, identify potential risks of conversion or loss of these features, evaluate and prioritize potential land conservation projects on high priority properties, and to inform easement structure and perpetual stewardship.

The Vital Lands Initiative does not identify specific parcels out of respect for landowner privacy, but rather shares with the community the approach to prioritization, the data used, and the highest priority conservation areas that Ag + Open Space will work to protect in perpetuity. Below is an overview of the approach to prioritizing conservation at multiple scales – from countywide screening to property-specific transactions.







Maintain a Robust Data and Analysis Framework

The decisions Ag + Open Space makes – from what land to protect, to how much public money to spend, to whether or not to allow a requested use or improvement on a protected property – rely on high quality information and the ability to analyze it. The Ag + Open Space data and analysis framework includes the following elements:

- Ongoing collection and evaluation of existing data, including geospatial data such as GIS layers, maps, aerial imagery, and model outputs.
- Ongoing identification of key questions and data gaps, working in collaboration with the community and technical experts in agriculture, natural resources, recreation and land use.
- Ongoing creation of high priority data sets to fill data gaps that are
 critical to answering questions about land conservation in Sonoma
 County including data from spatial analyses, literature review, experts
 in specific technical areas, and knowledgeable community members.
- Regular updating of conservation prioritization criteria and ranking,
 both countywide and at the project scale.
- Ongoing mapping of high priority conservation areas to support the achievement of single goals and multiple goals.
- Developing data collection methods to better understand and document the condition and functionality of resources on protected lands.

Prioritize Individual Conservation Features at the Countywide Scale

The Ag + Open Space Expenditure Plan outlines a series of Open Space

Designations that identify important land conservation features worthy
of protection. The Vital Lands Initiative further refines these open space
designations into a set of goals and objectives that can be mapped countywide
and ranked by level of priority. These prioritized conservation features are shaped
using criteria that reflect the intentions of the voters, the best available science
and data, and input from experts and the community. For a complete list of
criteria and methods used to map countywide conservation features, please see
Appendix A.

Evaluate Areas with Multiple Conservation Features and Conservation Co-benefits

Ag + Open Space prioritizes conservation actions that address multiple conservation features on the landscape, where high priority areas across goals overlap. This information is used to identify priority areas where Ag + Open Space may take a proactive approach and reach out to landowners, as well as use this information to evaluate projects that come to us through landowner inquiry.

In addition to evaluating where conservation features from multiple goals overlap, Ag + Open Space also evaluates other co-benefits of open space protection, including areas that make Sonoma County more resilient to climate change, floods, fire, drought, and sea level rise, or factors that are important for carbon sequestration. These additional benefits are not called out in the Expenditure Plan, but are recognized as important elements in creating healthy and resilient ecosystems and communities.

Please visit the interactive map on Ag + Open Space's website to explore areas where multiple conservation features and co-benefits overlap.





Refine Conservation Priorities

After evaluating conservation priorities at the countywide scale, Ag + Open Space considers additional criteria based on landscape elements, development patterns, and community impacts to refine the identified mapped conservation features. This evaluation relies on parcel level data. These criteria include:

- Alignment with the open space goals outlined in the Sonoma County
 General Plan
- Maintaining a geographic balance in portfolio of protected lands
- Maintaining a balance in benefits received by the community through open space protection, including clean air and water, climate change and extreme event resiliency, public health, and local food security
- Adjacency or proximity to other protected land, to urban areas, or to other places of high conservation features
- Connectivity of open spaces for agricultural productivity, wildlife corridors, and trails
- Property size, where relevant to protecting identified conservation features

Evaluate Risk/Threats to Conservation Features and Values

Once the conservation features and values have been prioritized and mapped, Ag + Open Space considers the risk of losing the benefits that these places provide. The criteria to evaluate risk include potential for development (through zoning, subdivision maps, or Administrative Certificates of Compliance), conversion, changes in use, and other potential threats. The risk of loss or conversion is context specific – the things that threaten conservation features on large rangeland properties may be different than elements affecting conservation features on a small greenbelt property. For example,

a rangeland property may need to maintain a minimum undeveloped parcel size of 200-300 acres to be viable, whereas a berry farm may only be 3-5 acres in the midst of a greenbelt.

Property/Parcel Prioritization and Ranking Process

Properties may be identified for potential conservation by Ag + Open Space through proactive outreach to landowners that have high priority parcels, or by a landowner submitting an application to Ag + Open Space. In all cases, working with Ag + Open Space is voluntary. Once a property has been identified as eligible for conservation by Ag + Open Space, the property is evaluated using a rigorous ranking process that evaluates the specific ways in which the protection of the property can achieve Ag + Open Space goals and objectives.





Why Is Connectivity Important?

Connectivity is one of the criteria that Ag + Open Space uses to prioritize new projects or to help make decisions about changes in land use or additional development on protected lands. Maintaining large, connected areas of open space and agricultural lands is important for many reasons, including:



Wildlife Movement

Wildlife need large spaces with little or no human presence in order to freely move about and live their lives. In general, the larger the animal, the more space they need to roam - some animals found in Sonoma County have a home range of several hundred square miles. Protecting land that is adjacent to or near other protected land creates space for these animals to co-exist with humans in our region.



Agricultural Viability

The amount of land required to run a successful agricultural business varies depending on the crop or type of livestock. However, virtually all agricultural operations benefit from being adjacent to or near other similar types of operations. There are shared resources, common services, and a general understanding of the requirements of running a farm, ranch, or dairy – benefits that result from being in close proximity or connected to other similar properties.



Trail Connections

Protecting large swaths of land provides the space for existing trails to be connected or new trails to be constructed. Many hikers, cyclists, and equestrians enjoy these longer trail systems, many of which meander through multiple landscapes and ecosystems. These types of trails are also very attractive to visitors, and can provide a boost to the local economy.



Conservation Easement Structure and Negotiation

Once a property has been identified as a high priority for protection, the conservation easement process begins. The following are the steps in a typical easement transaction. Given private property rights and sensitive parcel-specific and financial information shared by the landowner during this negotiation phase, components of this process are confidential until the project is officially approved by the Ag + Open Space Board of Directors.

- Conservation Features: Refine maps of priority conservation features on the property
- Current Property Conditions: Evaluate and map existing property features, structures and uses (including information from site assessments, consultant surveys, permits, and violations)
- Potential for Development: Assess the potential for development on the property (ACC review, zoning, density, and permits)
- Landowner Interests: Learn and consider the landowner's interests and preferences (uses and improvements they want to retain such as houses, agricultural infrastructure, and recreational amenities)
- Conservation Easement: Design a conservation easement that
 satisfies the interests of the landowner while protecting identified
 conservation values (including designating building envelopes,
 scenic, agricultural, or natural areas, permitted and prohibited uses
 and designated areas for protection or specific uses such as building
 envelopes, natural areas, and agricultural areas)
- Appraisal: Contract with an independent appraiser to determine the fair market value of the conservation easement as a basis to negotiate the purchase price.

- Approvals: Present the conservation easement project to the Ag +
 Open Space Fiscal Oversight Commission and Board of Directors for
 necessary approvals.
- Baseline Documentation: Prior to recording a conservation easement,
 Ag + Open Space completes baseline documentation of the conditions of the property.
- Record Conservation Easement: Record the conservation easement so that it appears on the title to the property in perpetuity.

Perpetual Stewardship to Protect

Ag + Open Space Conservation Investments

The acquisition of a conservation easement does not guarantee the long term protection of conservation features and values. Long term stewardship is required to protect the investments made by the taxpayers. The lands that are protected by Ag + Open Space in perpetuity require continual monitoring to ensure that the conservation values protected continue to be maintained. Stewardship activities (including regular monitoring, following up on easement violations, review of permitted use and amendment requests, and meeting with new or transitional landowners) ensure compliance with the easement terms, and thus the protection of the taxpayers' investment and the perpetual protection of conservation features on each protected property.

Where Ag + Open Space owns fee title interest in a property, staff manage natural resources and maintain infrastructure until such time that the underlying fee title interest is transferred to a future landowner. Ag + Open Space in all cases will retain a conservation easement to ensure that the conservation features continue to be protected.



WHAT IS DEVELOPMENT POTENTIAL?

Ag + Open Space was originally envisioned to offer effective and voluntary tools for landowners who wish to protect the conservation values of their land. Ag + Open Space works with landowners to permanently protect these conservation values by purchasing development rights, thereby maintaining the many benefits the public receives from open space and agricultural land into perpetuity. There are a number of ways that development rights can be established in Sonoma County:

Zoning

The developability of a parcel is governed by a county or city's zoning ordinance and general plan. Many properties have density restrictions, expressed as "number of dwelling units per acre" or as "number of acres per dwelling unit". Ag + Open Space evaluates the potential for future residential development and/or subdivision based on the number of existing dwelling units and maximum number of units allowed per zoning, in addition to subdivision maps and Administrative Certificates of Compliance described below.

Subdivision Map Approval

If a parcel meets the legal requirements set forth by the California Subdivision Map Act and a jurisdiction's subdivision ordinance, zoning ordinance, and general plan, it is possible to subdivide it into smaller parcels. This can result in additional building or other types of development on a property, as compared to the original parcel. If a landowner obtains approval from a planning commission in the form of an approved subdivision map, Ag + Open Space may consider the property at greater risk of development.

Administrative Certificate of Compliance

An Administrative Certificate of Compliance (ACC) is a jurisdictional determination that a parcel was created in conformance with the State and County laws in effect at the time the lot was created. While the ACC alone does not necessarily mean that a parcel can be developed, it is one of many factors that can lead to additional buildings or other types of development on a property. If Ag + Open Space determines that an ACC has been issued, it may consider the property to be at greater risk of development.



Strategies and Tools

Given the tremendous amount of unprotected, high value land that exists in Sonoma County - more than could ever by protected with funds available through the Measure F sales tax measure - Ag + Open Space must be strategic about protecting these lands. Following is a set of tools, approaches and strategies that Ag + Open Space will use to implement the Vital Lands Initiative:

Expand and Improve Protections

- Increase Proactive Measures to Protect Land. In order to successfully implement the Vital Lands Initiative, a more proactive approach will be used, whereby Ag + Open Space will actively seek out willing landowners who may be interested in protecting their land.
- Primarily Use Conservation Easements to Protect Land.
 Conservation easements are the preferred tool for land conservation due to their cost-effectiveness, flexibility, and enforceability, and per direction in the voter-approved Expenditure Plan. Land may be purchased by Ag + Open Space with the intention of re-selling or transferring to another owner subject to a conservation easement, but not with the intention of holding it in fee.
- **Use Innovative Tools.** Evaluate, test and implement new tools and policies for effective and appropriate land conservation that best protects conservation values and features, including affirmative easement provisions, lease to own, auctions, payments over time, and right of first refusal.

Partner with Others

- Land Conservation Partnerships. Work with Sonoma County land conservation organizations to develop shared strategies and leverage mutual strengths.
- Tribal Partnerships. Develop shared strategies for land conservation with Sonoma County Tribes.
- City and County collaborations. Partner with Sonoma County public agencies and cities to work together on shared goals and objectives.
- Underrepresented Communities. Actively engage with communities
 that have not traditionally had access to Ag + Open Space funding to ensure a voice in land conservation priorities and access to protected lands.

Increase Efficiency, Effectiveness, and Impact

- Transfer or Sell All Ag + Open Space-Owned Properties.
 In order to most effectively accomplish the mission, all currently owned fee properties will be transferred or sold to other entities or individuals, with a conservation easement held by Ag + Open Space that protects the conservation features in perpetuity. These transfers will be completed by the end of the Measure (2031).
- Leverage Local Tax Dollars. Substantially leverage local sales tax dollars through outside grants and revenue sources and legislative outreach.



- Learn from Peers. Regularly evaluate policies and approaches used by other land conservation organizations to refine and improve Ag + Open Space policies, protocols and easement templates.
- Self-Evaluation. Regularly evaluate and refine policies, protocols, and templates, and adopt new tools and technologies to enhance the efficiency and effectiveness of the organization.
- Integrate principles of diversity, equity, and inclusion to ensure our
 work is informed by, reflects the priorities of, and provides benefit to the
 diverse communities of Sonoma County.
- Expand Resources for Landowners. Work with partner organizations to identify technical and financial resources available to easement landowners. Inform landowners of these resources, including connecting landowners with succession/estate planning experts.
- Connect Agricultural Producers with Available Land. Work with partner organizations to connect interested agricultural producers to available Ag + Open Space-protected agricultural land and improve access to land for beginning farmers and ranchers.

Ensure Scientifically Sound Decisions

- **Science-Based.** Continually confirm that decisions are based in the best available science and data, including biophysical and social sciences.
- Integrate Climate Change and Extreme-event Resiliency.
 Moving forward, staff will integrate the best available science and data about climate change and extreme events into all aspects of Ag + Open Space work, including project prioritization, easement design, fee land management, and agency operations.

Increase Transparency and Communication

- Increase Transparency and Share Successes. Regularly report accomplishments, activities and progress to the community, Board and advisory committees via website, social and print media and public meetings.
- Share an Annual Work Plan and Report with the Community.
 Each year, create a public-facing annual work plan as part of the Board budgeting process. This plan will include performance reporting for every goal and objective, updates on work underway, expectations for the foreseeable future, and assessments of remaining work under the current funding measure.
- Increase Understanding of the Benefits of Land Conservation.
 Educate the community about the multiple values and benefits of conservation of working and natural lands via papers, reports, blogs, social media, workshops, and robust, field-based outings and education programs.
- Connect People with the Land. Work with landowners and local partners to develop recreational and educational opportunities for youth and the public to learn about and connect with natural and working lands
- Share Value of Private Land Conservation Develop and implement
 a messaging and communications plan which highlights the value
 and public benefit of maintaining privately held land protected by
 conservation easements.
- Public Access. Regularly update Ag + Open Space website and printed materials to increase the visibility of publicly-accessible open space protected by the agency.



Looking Forward

Sonoma County Ag + Open Space has made significant strides in accomplishing many of the land conservation goals envisioned by the Sonoma County community in 1990, including implementation of the open space elements of the General Plan and protection of over 122,000 acres of high priority agricultural and open space lands most threatened with loss or conversion, as well as major additions to the County's parks, trails and recreational areas.

The work of Ag + Open Space benefits human communities and ecosystems—protecting the lands that sustain local food supplies, provide clean and abundant water, promote biological diversity and contribute to community health and well-being. Ag + Open Space has been and remains committed to better connecting our communities with the land through equitable access to open space, education, outings, and volunteer opportunities. In addition, the continued viability of working and natural lands is foundational to Sonoma County's goals for climate and extreme event resiliency.

The Vital Lands Initiative lays out an ambitious plan for the remainder of the current voter-approved funding measure—a plan that builds on thirty

years of successful collaborative work with land conservation partners, relies on the best available science and data, and integrates diverse, substantial input from an engaged and informed community. A compelling vision for land conservation, the Vital Lands Initiative outlines opportunities for expanding the impact of the community's investments by acting more proactively to protect threatened landscapes, and leveraging investments from partners within and outside of Sonoma County.

The success of Ag + Open Space relies on these partnerships, including agricultural organizations and landowners, land trusts, non-profits, Sonoma County Regional Parks and other recreational partners, Sonoma Water and other water agencies, resource conservation districts, cities and business groups. Together, Ag + Open Space and its many partners have carried out the community's vision, yet there is so much more to be done to ensure that Sonoma County agricultural and open space lands continue to thrive, especially given the increasing threat of climate change. With the Vital Lands Initiative as a guide, Ag + Open Space and its partners will continue to strive for a healthy, beautiful and climate resilient Sonoma County—for today and for generations to come. Onward, together!





Appendix A: Data and Methods

Agricultural Lands (Page 58)

PRIORITY GRAZING AND CULTIVATED AGRICULTURAL LANDS MAP (PAGE 61)

GRAZING LANDS

The following criteria were used to develop the priority grazing lands layer:

- Presence of herbaceous vegetation or irrigated pasture
- Within an agricultural zone, including Land Intensive Agriculture (LIA),
 Land Extensive Agriculture (LEA), and Diverse Agriculture (DA) per the
 Sonoma County General Plan 2020
- Absolute/total acreage of rangeland cover within an ownership

To develop the priority rangeland layer, herbaceous, grassland, and irrigated pasture vegetation classes from the Sonoma County Fine-Scale Vegetation Map were intersected with the following zoning code designations per the Sonoma County General Plan 2020: Land Intensive Agriculture (LIA), Land Extensive Agriculture (LEA), and Diverse Agriculture (DA).

The rangeland layer was then intersected with an ownership layer developed by Ag + Open Space whereby adjacent parcels with shared ownership are treated as a single unit. The total acreage of rangeland within the ownership boundary was calculated and continuous acre values were broken into five priority classes using the geometric interval classification method.

CULTIVATED AGRICULTURAL LANDS

The following criteria were used to develop the priority cultivated agricultural lands layer:

- Presence of annual croplands, perennial agriculture, orchards or groves, intensively managed hayfields, vineyards, and/or vineyard replant areas within the following locations:
 - Outside floodplain areas
 - Outside historical extent of tidal marsh around San Pablo Bay
 - Slopes <15%
 - Slopes <10% on highly erodible soils

Cultivated agricultural land priorities are mapped based on the Sonoma County Croplands data developed through the Sonoma County Vegetation Mapping & LiDAR Program. Croplands were digitized using aerial photos and represent the state of the landscape in 2013, and include the following classes:

- Annual Cropland Area is an irrigated annual cropland (e.g., vegetable crops)
- Perennial Agriculture (Non-vineyard) Area is a perennial cropland (e.g., lavender, berries, Christmas trees, rhododendron)
- Orchard or Grove Area is an orchard or grove of fruit or nut trees
- Intensively Managed Hayfield Area is an intensively managed hayfield that is mechanically turned over every year
- Vineyard Area is a vineyard
- Vineyard Replant Area is a vineyard completely cleared for replanting.
 To be considered a "Vineyard Replant," an area must be planted with mature vines per the 2011 aerial imagery and appear cleared in the 2013 aerial imagery. If there is evidence that the area is being converted to another crop or land use, a bare land or herbaceous label is applied.



For more information about the Sonoma County Croplands data, please visit www.sonomavegmap.org

Using the Erase tool in ArcMap, croplands within floodplain areas were excluded from the priority cultivated agricultural lands layer. Floodplains used in this exercise were developed for Ag + Open Space by Tukman Geospatial, with input from Dr. Joan Florsheim (UC Santa Barbara) and O'Connor Environmental, using object-based image analysis. Floodplains are based on geomorphic features extracted from topographic products from the 2013 countywide LiDAR. Floodplain extent is similar to the 100-year floodplain designated by FEMA.

In addition, croplands were excluded from the priority cultivated agricultural lands layer in areas where slopes exceed 15 percent (based on 30-meter DEM), and where slopes exceed 10% on highly erodible soils (including Diablo, Dibble, Goldridge, Laughlin, Los Osos, Steinbeck, and Suther).

Lastly, croplands which overlap the historical extent of tidal marsh around San Pablo Bay were excluded using EcoAtlas data from the San Francisco Estuary Institute.

DATA CITATION

San Francisco Estuary Institute (SFEI). (1998). "Bay Area EcoAtlas V1.50b4 1998: Geographic Information System of wetland habitats past and present."

Accessed 9/24/2019. http://www.sfei.org/content/ecoatlas-version-150b4-1998

Community Identity (Page 62)

HIGHLY VISIBLE LANDSCAPES MAP (PAGE 65)

The following criteria were used to develop the highly visible landscapes layer:

- Visibility from highly traveled transportation corridors
- Visibility from communities

Viewsheds were created from each highly traveled transportation corridor and each community associated with an Urban Service Areas using the Viewshed tool in ESRI ArcMap. A value of 1 was assigned to areas visible from highly traveled transportation corridors and communities; a value of 0 was assigned to areas not visible. Urban areas were removed from the viewshed rasters using the "Urban Mask" map class in the Sonoma County Fine-Scale Vegetation Map.

Note that this map helps Ag + Open Space identify areas that are highly visible from communities and transportation corridors and does not capture the full nature of what it means to be "scenic". Additional criteria such as percent imperviousness and road density may be calculated for individual properties in order to better define scenic and open space qualities of a property.

AREAS VISIBLE FROM HIGHLY

TRAVELED TRANSPORTATION CORRIDORS

Highly traveled transportation corridors were defined as all state highways and the most traveled transportation corridors according to Sonoma County traffic volume data. A shapefile was created of highways and top 24 most highly traveled roads based on average volume total (derived from Sonoma County traffic count data). Then a viewshed analysis was performed from a 10m DEM of Sonoma County and points spaced ½ mile along each road.



The following roads were included in the analysis:

• 5th Street	• Guerneville Rd	Old Redwood
(Sonoma)	• Hwy1	Hwy
 Adobe Rd 	• Hwy 101	• Petaluma Blvd
 Airport Blvd 	• Hwy 116	• Petaluma Hill Rd
 Arnold Dr 	• Hwy 12	 Petrified
 Bodega Ave 	• Hwy 128	Forest Rd
 Bodega Hwy 	• Hwy 37	• River Rd
 Broadway 	 Lakeville Hwy 	• Santa Rosa Ave
• Cotati Ave	• Leveroni Rd	 Sebastopol Rd

Mark West Rd

Napa Rd

• Stage Gulch Rd

Stonypoint Rd

AREAS VISIBLE FROM COMMUNITIES

Fremont Dr

Fulton Rd

Communities were defined as those census block groups that intersect urban service area boundaries. Census blocks were clipped by urban service area boundaries and centroids were generated from clipped block groups. Centroids were then grouped by urban service area and a viewshed was run from each group of centroids. A total of 589 centroids were used in the analysis.

The following urban service areas were used in the analysis:

The following dibarriservice areas were used in the analysis.		
 Airport 	 Guerneville 	 Rohnert Park
 Bodega Bay 	 Healdsburg 	• Santa Rosa
 Cloverdale 	 Larkfield 	• Sea Ranch
• Cotati	 Monte Rio 	 Sebastopol
 Forestville 	 Occidental 	 Sonoma
 Geyserville 	 Penngrove 	 Sonoma Valley
• Graton	 Petaluma 	 Windsor

PRIORITY GREENBELTS (PAGE 66)

The following criteria were used to develop the priority greenbelt areas layer:

Lands within a 1-mile buffer around urban areas, including Urban
 Growth Boundaries, Urban Service Areas, and contiguous parcels 0-20
 acres in size beyond these designated urban areas

Urban areas included in the analysis are based on Urban Growth Boundaries for the 9 incorporated cities (Sonoma, Petaluma, Cotati, Rohnert Park, Santa Rosa, Sebastopol, Windsor, Healdsburg, Cloverdale) and Urban Service Area boundaries for the Monte Rio, Forestville, Occidental, Geyserville, Airport, Penngrove, Graton, Bodega Bay, Sonoma Valley, Guerneville, and Larkfield communities. In addition, contiguous parcels 0-20 acres in size located beyond Urban Growth Boundaries and Urban Services were included in the urban areas layer.

A 1-mile buffer was generated from the urban areas layer; all areas within this 1-mile buffer represent potential greenbelt areas.

Note that this map is a conceptualization of greenbelts, represented as a simple 1-mile buffer. The mapped greenbelt area may include properties that do not meet Ag + Open Space's minimum project requirements (e.g. no development potential). As such, individual properties will be further evaluated internally to determine priorities for individual properties within the greenbelt areas.

Healthy Communities (Page 68)

EXISTING + PLANNED PUBLIC ACCESS MAP (PAGE 70)

Protected lands open to the public were mapped based on data from Sonoma County ISD/GIS and the California Protected Areas Database: http://www.calands.org/



COMMUNITY OPEN SPACE MAP (PAGE 73)

Urban areas that qualify for Ag + Open Space's Matching Grant Program were defined as areas within a ½ mile buffer of the 9 incorporated city boundaries (Petaluma, Sonoma, Cotati, Rohnert Park, Sebastopol, Santa Rosa, Windsor, Healdsburg, Cloverdale), Urban Service Area boundaries published in the Sonoma County's General Plan 2020, and the center of unincorporated communities with a population of 100 or greater per Census 2000 block data and which are more than ½ mile from an Urban Growth Boundary or Urban Service Area.

Urban Services Areas mapped:

Airport

- Graton
- Guerneville

- Bodega Bay Forestville
- Larkfield

Penngrove

Occidental

- - Monte Rio
- Sonoma Vallev

Geyserville

Urban Services Areas mapped:

- Annapolis
- Hacienda

Big Bend

Bodega

- Hessel

Bloomfield

Camp Meeker

Duncans Mills

- Hollydale

- Jenner

- Jimtown

- Kenwood
- I akeville
- Freestone

Cazadero

Rio Dell

- Stewarts Point
- Summerhome
 - Park
- Trenton
- Two Rock
- Valley Ford

Additional communities not mapped may be eligible for funding through the Matching Grant Program. Please see Ag + Open Space's Matching Grant Program Guidelines for more information.

Water (Page 74)

PRIORITY RIPARIAN HABITAT MAP (PAGE 76)

The following criteria were used to develop the priority riparian habitat layer:

Dominance of native riparian habitat

RIPARIAN CORRIDOR MAPPING OVERVIEW

Ag + Open Space worked with a team of technical experts, including Tukman Geospatial (geospatial consultants), Dr. Joan Florsheim (geomorphologist, UC Santa Barbara), and O'Connor Environmental (consulting hydrologist) to map channel and floodplains in Sonoma County for streams with a catchment area of 500 acres or greater. Riparian corridors were not mapped for areas with extensive human manipulation to water infrastructure, including parts of Petaluma River and Sonoma Creek. Channel and floodplain landforms maps were developed using a combination of object-based image analysis using elevation metrics extracted from the 2013 LiDAR point cloud, manual photo interpretation, and historic flood information.

NATIVE RIPARIAN HABITAT

Channel and floodplain areas were intersected with the Sonoma County Fine-scale Vegetation Map, which contains 83 classes for land cover. Riparian habitat within the riparian corridor was defined as water and native vegetation classes within the channel boundary, and native forest or native shrub vegetation classes within the floodplain. Additionally, in-stream gravel bars were manually classified as riparian habitat using the barren & sparsely vegetated class. Non-riparian habitat was defined as agricultural land cover classes, impervious surface classes, non-native forest and woodland, and herbaceous vegetation, as well as gravel pits along the Russian River.



PRIORITY STREAMS MAP (PAGE 77)

The following criteria were used to develop the priority streams layer:

- Presence of salmonid species
- Presence of freshwater shrimp
- USFWS Critical Habitat for salmonid species

PRESENCE OF SALMONID SPECIES

Streams which support threatened and endangered fish species, including coho (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss*), and chinook (*Oncorhynchus tshawytscha*) were ranked as high priority. Presence/absence of steelhead, coho, and chinook is based off of data from NOAA, CDFW, publications, and personal communication, including the following sources:

DATABASES

- NOAA California Central Coast steelhead distribution layer (June 2005)
- NOAA Northern California steelhead distribution layer (June 2005)
- NOAA California Coastal Chinook distribution layer (June 2005)
- CalFish Winter Steelhead Distribution layer (June 2012)
- CalFish Coho Distribution layer (June 2012)
- CalFish Steelhead Abundance data layer (June 2012)
- CDFW Biosample database

PUBLICATIONS

- California Department of Fish and Wildlife. (2002). Historic Status of CA
 Coho Populations North of San Francisco
- California Sea Grant. (2017). UC Coho Salmon & Steelhead Monitoring Report: Summer 2016
- California Sea Grant. (2018). UC Coho Salmon & Steelhead Monitoring Report: Summer 2017

- California Sea Grant. (2018). UC Coho Salmon & Steelhead Monitoring Report: Winter 2017/18
- California Sea Grant. (2019). UC Coho Salmon & Steelhead Monitoring Report: Summer 2018
- California Sea Grant. (2019). UC Coho Salmon & Steelhead Monitoring Report: Winter 2018/19
- · Cox, B. (2000). "Major Streams in Sonoma County".
- Jones, W. (2000). NMFS California Anadromous Fish Distributions:
 California Coastal Salmon and Steelhead Current Stream Habitat
 Distribution Table

Leidy, R. A., Becker, G. S., and B. N. Harvey (2005b). Historical distribution and current status of steelhead (*Oncorhynchus mykiss*), coho (*O. kisutch*), and chinook salmon (*O. tshawytscha*) in streams of the San Francisco Estuary, California. Unpublished report, Center for Ecosystem Management and Restoration, Oakland, CA.

PERSONAL COMMUNICATION

- Derek Acomb, California Department of Fish & Wildlife
- Caitlin Cornwall, Sonoma Ecology Center

PRESENCE OF FRESHWATER SHRIMP OR USFWS CRITICAL HABITAT

Additional priority was assigned to streams which are known to support endangered freshwater shrimp (*Syncaris pacifica*) per Cox, B. (2000), "Major Streams in Sonoma County", as well as streams designated by the United States Fish and Wildlife Service as Critical Habitat for threatened steelhead and chinook. For more information about Critical Habitat designated for threatened and endangered species, please see https://www.fws.gov/endangered/what-we-do/critical-habitats-fag.html



PRIORITY WETLANDS MAP (PAGE 78)

The following criteria were used to develop the priority wetlands layer:

- Part of historical extent of tidal marsh around San Pablo Bay
- Presence of natural lake
- Presence of vernal pools, coastal wetlands, and freshwater herbaceous wetlands
- · Size relative to wetland type
- Presence of special-status wetlands species
- USFWS Critical Habitat

EXTENT OF HISTORICAL BAYLANDS

 The historical extent of tidal marsh around San Pablo Baylands was mapped as an overlay to the priority wetlands layer using EcoAtlas data from the San Francisco Estuary Institute.

PRESENCE OF NATURAL LAKE

 Two natural lakes in Sonoma County (Tolay Lake and Laguna Lake south of Spring Hill Road) were mapped as highest priority using water features in the Sonoma County-Fine Scale Vegetation and Habitat Map.

PRESENCE OF WETLANDS

Wetlands were mapped using wetland classes in the Sonoma County
Fine-Scale Vegetation map, which was developed using a combination
of field work, photointerpretation, and computer-based machine
learning. Many of the vernal pools and herbaceous wetlands in the
southern part of the county were taken from existing San Francisco
Estuary Institute (SFEI) datasets (namely, the North Coast Aquatic
Resources Inventory and Bay Area Aquatic Resources Inventory

datasets). Extensive manual photo interpretation and field data collection/validation was used to refine existing SFEI datasets based on new imagery. For more information about the Sonoma County Fine-Scale Vegetation Map, please visit www.sonomavegmap.org

The following map classes were extracted from the Sonoma County Fine-Scale Vegetation and Habitat

Map and used in this analysis:

- North American Pacific Coastal Salt Marsh Macrogroup
- Pacific reed grass meadows (Calamagrostis nutkaensis Alliance)
- Tidal Panne
- Western North America Vernal Pool Macrogroup
- Western North American Freshwater Aquatic Vegetation Macrogroup
- Western North American Freshwater Marsh Macrogroup

Vernal pool features (depicted as individual ponds) were grouped into clusters using vernal pool complex data from the San Francisco Estuary Institute's Bay Area Aquatic Resources Inventory. For those vernal pool features not represented in this dataset, clusters were assigned based on assumed surface hydrologic connectivity using a digital elevation model, hillshade, and aerial imagery.

SIZE RELATIVE TO WETLAND TYPE

To develop ranked values for wetland size, wetland features were separated into coastal wetland, vernal pool, and freshwater herbaceous wetland types. For each wetland type, wetland acre values were broken into five priority classes using the geometric interval classification method.



PRESENCE OF SPECIAL-STATUS WETLANDS SPECIES

Next, wetland features were intersected with ranked special status species occurrence data derived from the California Natural Diversity Database (CNDDB). Special status species were assigned a ranked value as follows:

- 1 = known occurrence of threatened or endangered species (per CNDDB) or within 200 feet of California tiger salamander (CTS) breeding site or within CTS extant population area
- 0.8 = known occurrence of S1, S1S2, S1S3 ranked species
- 0.6 = known occurrence of S2, S2S3 ranked species
- 0.4 = known occurrence of S3, S3S4 ranked species
- 0.2 = S4, SH (possibly extirpated) ranked species
- 0 = unknown or not threatened, endangered, or species of special concern

The maximum ranked special status species value for each wetland feature was used to define the priority class for presence of special-status species.

USFWS CRITICAL HABITAT

Areas within USFWS Critical Habitat for threatened and endangered species were given high priority; areas not within Critical Habitat were given lower priority

For more information about Critical Habitat designated for threatened and endangered species, please see https://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html

Wetland priorities were calculated by summing values for wetland size, special status species, and USFWS Critical Habitat using equal weights. For the final layer, wetland values were broken into five priority classes using the geometric interval classification method.

PRIORITY GROUNDWATER BASINS

& RECHARGE AREAS MAP (PAGE 79)

The following criteria were used to develop the priority groundwater basins and recharge areas layer:

- California Department of Water Resources 2018 Sustainable
 Groundwater Management Act Basin Prioritization Ranking
- Groundwater recharge relative to watershed median

GROUNDWATER BASINS

Priorities for groundwater basins are based on basin prioritization conducted by the California Department of Water Resources (DWR) in 2018, which determine provisions that apply for the California Statewide Groundwater Elevation Monitoring and Sustainable Groundwater Management Act programs. DWR priorities account for populations overlying groundwater basins, current and projected population growth, number of wells, irrigated land, groundwater reliance as primary source of water, and documented impacts to groundwater basins. For more information about DRW's basin prioritization and SGMA, please see https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization.

The following ranked values were assigned to groundwater basins in Sonoma County per DWR priorities:

- 1 = High priority
- 0.75 = Medium priority
- 0.5 = Low priority
- 0.25 = Very low priority



GROUNDWATER RECHARGE

Relative groundwater recharge was calculated using the recharge layer from the 2017 California Basin Characterization Model (BCM) developed by the United States Geological Survey. The BCM is a water balance model and accounts for the amount of water in each of the components of the water budget: runoff, recharge, and evapotranspiration. For each CalWater 2.2 watershed, the median recharge value was calculated using the raster package in R. Recharge values exceeding the median recharge value for an individual watershed were assigned higher priority (value of 1); recharge values below the median recharge value were assigned low priority (value of 0).

The prioritized groundwater basin layer and prioritized groundwater recharge layers were summed (using equal weights) to generate the final priority groundwater basin and recharge layer.

DATA CITATION

California Department of Water Resources. (2018). SGMA Groundwater Management Act Basin Prioritization Process and Results.

Flint, L., Flint, A., Thorne, J., and Boynton, R. (2017). Provisional dataset:
California Basin Characterization Model v8 Historical Long Term Average
(1981–2010) Recharge and Runoff. U.S. Geological Survey data release.
Accessed 9/19/2019. http://climate.calcommons.org/bcm

Wildlands (page 80)

PRIORITY CONIFER FORESTS MAP (PAGE 82)

The following criteria were used to develop the priority conifer forests layer:

- Presence of old growth or mature conifer forests
- Vegetation rarity

OLD GROWTH

Old growth and mature conifer forests priorities are based on canopy structure information in the Sonoma County Fine-Scale Vegetation Map, for which canopy metrics were derived from the 2013 Sonoma County LiDAR point clouds. For each conifer vegetation class in the Sonoma County Fine-Scale Vegetation Map, mean canopy height values and maximum canopy height values were scaled from 0 to 1 using max-min normalization. Scaled values for mean canopy height and maximum canopy height were summed and the output was rescaled from 0 to 1 using max-min normalization. Additionally, canopy variance values were scaled from 0 to 1. The canopy height and canopy variance values were summed and rescaled from 0 to 1 using max-min normalization. Conifer vegetation polygons with values of 0.6 or greater were mapped as priority old growth/ mature conifer forests.

VEGETATION RARITY

Vegetation rarity was evaluated using global and state conservation status rankings from the Survey of California Vegetation/NatureServe's Heritage Program methodology, as well as local rarity. For a more detailed description of conservation status ranks, please see the Sonoma County Vegetation Descriptions prepared by CDFW VegCAMP and CNPS for the Sonoma Veg Map Program: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=115808&inline=1 A breakdown of vegetation classes by rarity priority class is described below.



Highest Priority: Critically imperiled (state rarity rank of 1) or locally very rare (<0.1% cover)

- Foothill pine leather oak woodland (Pinus sabiniana/Quercus durata Provisional Alliance)
- Grand fir forest (Abies grandis Alliance)
- McNab cypress woodland (*Hesperocyparis macnabiana* Alliance)
- Ponderosa pine Douglas-fir forest (Pinus ponderosa Pseudotsuga menziesii Alliance)

Medium Priority: Vulnerable (state rarity rank of 3) or locally unique (state rarity rank of 4 or 5 with <1% cover)

- Bishop/bull pine stand (*Pinus muricata* Alliance)
- Black oak woodland (Quercus kellogii Alliance); conifer-dominated stands
- Coast redwood forest (Sequoia sempervirens Alliance)
- Douglas-fir tanoak forest (Pseudotsuga menziesii Notholithocarpus densiflorus Alliance)
- Knobcone pine stand (*Pinus attenuata* Alliance)
- Oregon white oak woodland (Quercus garryana Alliance); coniferdominated stands
- Sargent cypress stand (*Hesperocyparis sargentii* Alliance)
- Sugar pine (*Pinus lambertiana* Alliance)

Lower Priority: Apparently secure (state rank 4 or 5) or locally common (>5% cover)

• Douglas-fir forest (*Pseudotsuga menziesii* Alliance)

PRIORITY GRASSLANDS, SHRUBLANDS,

& HARDWOOD FORESTS MAP (PAGE 83)

The following criteria were used to develop the priority shrublands and hardwood forests layers (priority grasslands are described on page 107):

Vegetation rarity

CRITERION: VEGETATION RARITY

Vegetation rarity was evaluated using global and state conservation status rankings from the Survey of California Vegetation/NatureServe's Heritage Program methodology, as well as local rarity. For a more detailed description of conservation status ranks, please see the Sonoma County Vegetation Descriptions prepared by CDFW VegCAMP and CNPS for the Sonoma Veg Map Program: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=115808&inline=1

A breakdown of vegetation classes by rarity priority class is described below.

Highest Priority: Critically imperiled (state rarity rank of 1) or locally very rare (<0.1% cover)

Shrublands

- Blue blossom chaparral (Ceanothus thyrsiflorus Alliance)
- Californian Serpentine Chaparral (Arctostaphylos (bakeri, montana)
 Alliance)
- Central and South Coastal California Seral Scrub (Eriodictyon californicum - Lupinus albifrons Alliance)
- Hairy leaf ceanothus chaparral (Ceanothus oliganthus Alliance)
- Interior live oak woodland (Quercus wislizeni (shrub) Alliance)



High Priority: Imperiled (state rarity rank of 2) or locally rare (state rarity rank of 3 or 4 with <1% cover)

Shrublands

- Californian Maritime Chaparral Group
- Hazelnut scrub (Corylus cornuta var. californica Alliance)
- Hoary, common, and Stanford manzanita chaparral (Arctostaphylos (canascens, manzanita, stanfordiana) A. glandulosa Mapping Unit)
- Leather oak chaparral (Quercus durata Alliance)
- Salal California blackberry tangles (Gaultheria shallon Rubus (ursinus) Provisional Alliance)
- Vancouverian Coastal Riparian Scrub Group
- Wedge leaf ceanothus chaparral/Buck brush chaparral (Ceanothus cuneatus Alliance)
- Whiteleaf manzanita chaparral (Arctostaphylos viscida Alliance)

Hardwoods

- Bigleaf maple forest (Acer macrophyllum Alliance)
- California buckeye groves (Aesculus californica Alliance)
- Fremont cottonwood forest (*Populus fremontii* Alliance)
- Interior live oak woodland (Quercus wislizeni (tree) Alliance)
- Valley oak woodland (Quercus lobata Alliance)

Medium Priority: Vulnerable (state rarity rank of 3) or locally unique (state rarity rank of 4 or 5 with <1% cover)

Shrublands

- California Coastal Evergreen Bluff and Dune Scrub Group
- Californian Mesic Chaparral Group
- Chamise dominated chaparral (Adenostoma fasciculatum Alliance)
- Poison oak scrub (*Toxicodendron diversilobum* Alliance)

Southwestern North American Riparian/Wash Scrub Group

Hardwoods

- Black oak woodland (Quercus kelloggii Alliance)
- Blue oak woodland (Quercus douglasii Alliance)
- Canyon live oak woodland (Quercus chrysolepis Alliance)
- Oregon white oak woodland (Quercus garryana Alliance)
- Pacific madrone dominated woodland (Arbutus menziesii Alliance)
- Tanoak woodland (Notholithocarpus densiflorus Alliance)

Lower Priority: Apparently secure (state rank 4 or 5) or locally common (>5% cover)

Shrublands

• Coyote brush (Baccharis pilularis Alliance)

Hardwoods

- California bay woodland (*Umbellularia californica* Alliance)
- Coast live oak woodland (Quercus agrifolia Alliance)
- Oak woodland (Quercus (agrifolia, douglasii, garryana, kelloggii, lobata, wislizenii) Alliance)

The following criteria were used to develop the priority grasslands layer:

- Presence of native grasses
- Within general extent of coastal grasslands

•

NATIVE GRASSES + COASTAL GRASSLAND

Native grasslands and the general extent of coastal grasslands were mapped in 2012 as a part of the Coastal Prairie Enhancement Feasibility Study, which was funded by the California State Coastal Conservancy, Ag + Open Space, the UC Natural Reserve System, and the UC Davis Office of Research. Partners



in the study included Ocean Song Farm and Wilderness Center, Sonoma State University, UC Davis Department of Plant Sciences, UC Davis Center for Spatial Technology and Remote Sensing, CNPS, CDFW VegCAMP, UC Bodega Marine Reserve, California State Parks, Bodega Pastures, Sonoma Land Trust, and Occidental Arts and Ecology Center.

Grasslands within the general extent of the coastal grassland area are mapped as a priority, with higher priority given to native grass populations.

PRIORITY AREAS FOR WILDLIFE HABITAT & MOVEMENT MAP (PAGE 84)

The following criteria were used to develop the priority areas for wildlife habitat and movement layer:

- Landscape Connectivity (The Nature Conservancy)
- Within a Bay Area Critical Linkage

LANDSCAPE CONNECTIVITY (THE NATURE CONSERVANCY)

The Nature Conservancy landscape connectivity layer represents wall-to-wall regional habitat connectivity for plant and animal species whose movement is limited by developed and agricultural uses. The layer was developed using a modified version of Circuitscape, a connectivity analysis software package with relies on electronic circuit theory to predict patterns of movement among plant and animal populations in heterogeneous landscapes.

To learn more about these data and to view the entire statewide dataset, please visit www.tinyurl.com/ca-connectivity

Landscape connectivity priorities were assigned as follows:

 Highest Priority = channelized connectivity (restricted to narrow corridor; often the last remaining option for connectivity between

- nature areas through a modified environments) and intensified connectivity (i.e. land use reduces options for movement between natural areas)
- Medium Priority = diffuse connectivity (highly permeable; many options for movement through natural lands with fewer fragmentation barriers)
- Low Priority = land use may limit movement (primarily agricultural land uses)
- Lowest Priority = developed/land use impedes movement

CRITICAL LINKAGES: BAY AREA AND BEYOND

Through the Critical Linkages: Bay Area and Beyond (2013) project, 14 landscape level connections were mapped within the Bay Area based on ecological integrity and habitat and movement requirements of 66 focal plant, insect, fish, amphibian, reptile, bird and mammal species. Areas within critical linkages were given high priority; areas not within critical linkages were given lower priority.

The final priority wildlife habitat and movement layer is based on maximum priority values between the prioritized Conservation Lands Network Critical Linkage layer and a prioritized Landscape Connectivity layer.

DATA CITATION

Penrod, K., P. E. Garding, C. Paulman, P. Beier, S. Weiss, N. Schaefer, R. Branciforte and K. Gaffney. 2013. Critical Linkages: Bay Area & Beyond. Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, CA. www.scwildlands.org in collaboration with the Bay Area Open Space Council's Conservation Lands Network. www.BayAreaLands.org.





Appendix B: Community Engagement

Sonoma County Ag + Open Space is a community-created, taxpayer-funded agency that provides lasting protections for agricultural and natural lands in Sonoma County. As a public agency, Ag + Open Space is committed to full transparency and community engagement to ensure the proper use of public funds and to maintain the public's trust and understanding of its work. With that in mind, Ag + Open Space engaged the community in all aspects of the Vital Lands Initiative planning process to ensure that this plan reflects the community's vision. In total, over 150 meetings and workshops were held, and input was received from over 600 community members to inform the Vital Lands Initiative.

Throughout the planning process, staff engaged in robust outreach and engagement with the public, partners, tribes, key stakeholders, technical advisors, and our Board of Directors, Fiscal Oversight Commission, and Advisory Committee. Ag + Open Space also identified the need to engage more deeply with Sonoma County Latino communities, and worked with Soluna Outreach Solutions to assist with outreach to our Spanish-speaking populations, including creating a Spanish-language web page and printed materials, providing simultaneous translation services at the public meetings, and conducting presentations to Latino groups throughout the county.

The robust community engagement process began with a presentation at a Board of Directors meeting on March 7, 2017. Agency staff screened a short film about the founding of the agency, followed by a presentation about the Vital Lands Initiative planning process. That Board presentation was followed by five public meetings – one in each supervisorial district and hosted by an Ag + Open Space Director – during March 2017.

To gather additional input to guide our comprehensive planning efforts,

the agency hosted a series of workshops in May 2017 with experts and stakeholders to collect detailed feedback on threats and potential strategies focused specifically on the following themes: natural resources; agriculture; greenbelts, community separators and scenic lands; and recreation and urban open space.

Between the months of June and October 2017, agency staff continued to gather community input by attending community events and farmers markets, engaging directly with tribes, key partners, stakeholders, and experts, and deploying an online survey.

In March 2018, Ag + Open Space hosted a second series of eight community meetings to receive feedback on the draft plan. Comments on the draft plan were also received via email and a web-based form hosted on the agency's website. A Board workshop for additional community input was held in December 2019.



Community Meetings | Scoping - March 2017

MEETING DATES & LOCATIONS

- March 14 Healdsburg Community Center, Healdsburg
 - Attendance: +/- 40 members of the public
- March 15 El Molino High School Library, Forestville
 - Attendance: +/- 50 members of the public
- March 21 Petaluma Community Center, Petaluma
 - Attendance: +/- 110 members of the public
- March 29 Santa Rosa Veterans Building, Santa Rosa
 - Attendance: +/- 90 members of the public
- March 30 Finnish American Heritage Hall, Sonoma
 - Attendance: +/- 30 members of the public

MEETING AGENDA

- Welcome & Introductions Bill Keene, General Manager
 & District Directors
- Founders Film Bill Keene, General Manager
- Ag & Open Space District Overview & Vital Lands Initiative Planning
 Process Karen Gaffney, Conservation Planning Program Manager
- Small Group Breakout Sessions Facilitated by District staff
- Gallery Walk of Listening Stations Hosted by District staff

MAJOR THEMES DISCUSSED

 Water quality and supply are important and at risk. The District should use a variety of tools to protect the community's water quality and supply.

- Many community separators throughout the county are at risk. These are important and need protection.
- Public access and alternative transportation routes are in high demand.
 The District should help provide additional public access and safe alternative transportation routes.
- Partnerships should be used to leverage the impact of the District.
- Cannabis may be a threat to the District's mission.
- Connections between protected places are important for people (recreation) and for animals (wildlife corridors).
- Climate change needs to be considered, and is a threat to the District's mission.
- Agriculture community needs new/additional tools for agricultural protection.
- Balance between land conservation and housing needs to be considered.
- Educating the public (especially youth) about agriculture and open space is important for future success.

Thematic Workshops - May 2017

MEETING DATES & LOCATIONS

- May 16: Greenbelts & Community Separators | Steele Lane Community
 Center DeMeo Room
- May 17: Agriculture | Steele Lane Community Center DeMeo Room
- May 23: Natural Resources | Finley Community Center Cypress Room
- May 25: Recreation & Urban Open Space | Finley Community Center Cypress Room



MEETING AGENDA

- Welcome & Introductions Amy Ricard, Community Relations
 Specialist
- Objectives & Outcomes Amy Ricard, Community Relations Specialist
- Ag + Open Space & Vital Lands Initiative Overview Karen Gaffney,
 Conservation Planning Manager
- Small Group Breakout Sessions Facilitated by District Staff
- Full Group Report Out / Q&A Facilitated by District Staff
- Gallery Walk Hosted by District Staff

MAJOR THEMES DISCUSSED

- Reinforcement & enhancement of themes heard at the community meetings
- Create an ambitious conservation vision.
- More public engagement, increase visibility
- Leverage partnerships to be strategic
- Consider integrated planning & a shared vision for the entire county

Community Meetings & Listening Sessions - October/November 2017

Ag + Open Space staff had planned five community meetings and seven listening sessions throughout the county during the months of October and November to first review the plan's draft core content (goals, objectives, strategies, and performance measures) and then the draft plan itself, but those meetings and listening sessions were cancelled due to the North Bay fires in October 2017. Staff took a three-month hiatus from the Vital Lands

Initiative planning process to respond to the immediate needs of the fires and to produce a report of recommended actions for recovery and long-term resiliency of our natural and working lands in the wake of the fires. Agency staff returned to the Vital Lands Initiative work in January of 2018.

Community Meetings | Draft Plan Review - March 2018

MEETING DATES & LOCATIONS

- Sat, Mar 17 Community Church of Sebastopol | 10:00am 12:00pm
 - Attendance: +/- 25 members of the public
- Mon, Mar 19 Sonoma Veterans Memorial Building | 6:00pm 8:00pm
 - Attendance: +/- 15 members of the public
- Tues, Mar 20 Bodega Bay Grange | 6:00pm 8:00pm
 - Attendance: +/- 20 members of the public
- Wed, Mar 21 Petaluma Veterans Memorial Building | 6:00pm 8:00pm
 - Attendance: +/- 35 members of the public
- Sat, Mar 24 Cloverdale Grange Hall | 10:00am 12:00pm
 - Attendance: +/- 10 members of the public
- Mon, Mar 26 Sea Ranch Hall | 6:00pm 8:00pm
 - Attendance: +/- 10 members of the public
- Wed, Mar 28 Healdsburg Villa Chanticleer | 6:00pm 8:00pm
 - Attendance: +/- 30 members of the public
- Thurs, Mar 29 Santa Rosa Veterans Memorial Building | 6:00pm 8:00pm
 - Attendance: +/- 45 members of the public



MEETING AGENDA

- Welcome & Introductions Amy Ricard, Community Relations
 Specialist
- Objectives & Outcomes Amy Ricard, Community Relations Specialist
- Ag + Open Space & Vital Lands Initiative Overview Karen Gaffney,
 Conservation Planning Manager; Alex Roa, Special Projects Planner
- Public Input Session Amy Ricard, Community Relations Specialist

MAJOR THEMES DISCUSSED

- More agricultural diversity is needed in Sonoma County and Ag + Open
 Space should provide more support of agricultural community.
- Vegetation and fuels management is needed now more than ever Ag +
 Open Space should prioritize this with conservation easements and fee
 lands.
- Pursue partnerships with cities and developers to create dense housing with adjacent open space.
- The community would like more public trails and trail connections/ networks on public/private lands.
- The agency needs to provide better communication and education to the community and provide more community engagement opportunities on land and online.
- The plan needs more specificity (priorities and strategies) and associated budgets.
- The plan should include more about resiliency to extreme events such as floods, fires, drought, etc.
- There is concern about carrying capacity and the impact of recreation and tourism, particularly in West County.
- However, across the county, people wanted a greater focus on public

- access and recreation with a geographic balance.
- Increase engagement with tribal groups on shared land conservation initiatives.

A list of all comments received from each of the public meetings can be found at LINK.

Agriculture Community Outreach

Ag + Open Space formed an Agriculture (Ag) Advisory team that included 19 members of the agriculture community to ensure that broad perspectives pertaining to agriculture were included. From October 2018 through August 2019, 11 meetings were held.

THE AG ADVISORY TEAM MEMBERS WERE:

- Renata Brillinger, CalCAN
- Bobby Camozzi, Camozzi Dairy
- **Jeff Carlton**. Dutton Ranch
- Pat Emery, Sonoma County Fair/Abbey Law
- Karen Giovanni, UCCE
- Brittany Jensen, Gold Ridge Resource Conservation District
- Eric Koenigshofer
- Wendy Krupnick, CAFF/The Farmers Guild
- Tony Linegar, Sonoma County Department of Agriculture
- Ken Martin. Martin Ranch
- Paul Martin, Martin Family Ranch
- Kerry McGrath, Farmlink
- Valerie Minto Quinto, Sonoma Resource Conservation District
- John Nagle, Ag + Open Space Advisory Committee
- Joe Pozzi, Pozzi Ranch



- Carmen Snyder, FarmTrails
- Nicole Temple, Rancher
- Tawny Tesconi, Sonoma County Farm Bureau
- Evan Wiig, CAFF/The Farmers Guild

MAJOR THEMES DISCUSSED

- How funds for agricultural land conservation could be designated, and
 VLI expenditures and long-term fiscal planning
- Affirmative agricultural conservation easements and agricultural conservation tools, including connecting farmers to farm lands
- Threats to agriculture in Sonoma County and role Ag + Open Space can play in addressing and reducing those threats
- Prioritization of protected lands, the appraisal process, cultivation of new willing landowners, and long-range planning and funding
- Public access on private lands and working with willing landowners, and education on working lands
- Recommendation to hire agriculture specialist at Ag + Open Space, and development of position description

Technical Advisor/Partner Organization Outreach

In addition to meeting with the Ag Advisory Team, Ag + Open Space staff spent more than 250 hours meeting with 30 different partner organizations, tribes, technical advisors, working groups, and members of the Ag + Open Space Advisory Committee and Fiscal Oversight Commission, to seek valuable input on goals, objectives, strategies, and performance measures. These technical advisors, partner organizations, and working groups also provided review of draft content and maps.

Latino Community Outreach

- Bilingual handouts and surveys
- Vital Lands Initiative webpages in English and Spanish
- Targeted outreach to Spanish-speaking communities to encourage participation in public meetings
- Simultaneous translation services at each public meeting
- Participation in specific community events:
 - Regional Parks 50th Anniversary Celebration
 - Guelaguetza
 - Roseland Village Health & Safety Fair
- Presentations to the following groups:
 - Graton Labor Center
 - Healdsburg Labor Center
 - Los Cien
 - La Luz
 - · La Esperanza Center

Community Events

Date	Event	City
2/11/17	Lake Sonoma Steelhead Festival	Healdsburg/ Geyserville
3/26/17	California Artisan Cheese Festival	Petaluma
4/28/17	Arbor Day Celebration	Sonoma
4/29/17	SEEC Day of the Child	Santa Rosa
5/20/17	Rose Parade & Festival	Santa Rosa
6/3/17	Regional Parks Trails Challenge Kick-Off	Sebastopol
7/16/17	Guelaguetza Sonoma County	Santa Rosa
8/7/17	Green Fest - Sonoma County Fair	Santa Rosa
8/12/17	Gravenstein Apple Fair	Sebastopol
9/16/17	Agrarian Games	Petaluma

Online Outreach

Ag + Open Space has had over 3,800 visitors to its Vital Lands Initiative web page, reached over 6,400 people via Facebook, and added over 600 hundred online and social media followers during the plan development process.

Advertising

MARCH 2017 MEETINGS

- Press Democrat
- La Prensa
- El Superior
- Impulso News
- Press Democrat online

PLANNED OCTOBER

2017 MEETINGS

- Press Democrat
- Petaluma Argus-Courier
- Sonoma Index-Tribune
- Sonoma West Times
- Windsor Times
- Healdsburg Tribune
- La Prensa
- El Superior
- Impulso News
- Fl Guardian
- Press Democrat online

MARCH 2018 MEETINGS

- Press Democrat
- Petaluma Argus-Courier
- Sonoma Index-Tribune
- Sonoma West Times
- Healdsburg Tribune
- El Superior
- Impulso News
- El Guardian
- Radio Lazar
- Exitos Radio
- FI Patron Radio
- KBBF Radio
- Press Democrat online



Appendix C: Sources and Photo Credits

Vital Lands Initiative Sources

- American Farmland Trust. Farms Under Threat. https://farmland.org/ project/farms-under-threat/
- Bay Area Council Economic Institute. (2017). Bay Area Balance:

 Preserving Open Space, Addressing Housing Affordability. July 2017
- Bay Area Open Space Council. (2011). The Conservation Lands
 Network: San Francisco Bay Area Upland Habitat Goals Project

 Report. Berkeley, CA.
- Bay Area Open Space Council. (2019). The Conservation Lands
 Network 2.0 Report. Berkeley, CA.
- Burd-Sharps, S. and Lewis, K. (Measure of America). (2014). A Portrait of Sonoma County.
- California Department of Conservation Farmland Mapping and Monitoring Program. (2015). California Farmland Conversion Report: Summarizing land use conversion between 2010 and 2012 with comparisons to historic data. Sacramento, CA.
- California Department of Conservation Farmland Mapping and Monitoring Program. Sonoma County Land Use Conversion Tables and Field Reports, 1984 through 2016. Retrieved from https://www.conservation.ca.gov/dlrp/fmmp
- California Department of Fish and Wildlife. California Natural Diversity Database (CNDDB). Retrieved from CDFW Data Portal on monthly basis
- California Department of Fish and Wildlife. (2002). Historic Status of CA
 Coho Populations North of San Francisco.
- · California Department of Water Resources. (2018). SGMA Groundwater

- Management Act Basin Prioritization Process and Results.
- California Department of Water Resources. (2019). Sustainable
 Groundwater Management Act Basin Prioritization, 2019 Release.
 Retrieved from https://water.ca.gov/Programs/GroundwaterManagement/Basin-Prioritization.
- California Sea Grant. (2017). UC Coho Salmon & Steelhead Monitoring Report: Summer 2016.
- California Sea Grant. (2018). UC Coho Salmon & Steelhead Monitoring Report: Summer 2017.
- California Sea Grant. (2018). UC Coho Salmon & Steelhead Monitoring Report: Winter 2017/18.
- California Sea Grant. (2019). UC Coho Salmon & Steelhead Monitoring Report: Summer 2018.
- California Sea Grant. (2019). UC Coho Salmon & Steelhead Monitoring Report: Winter 2018/19.
- CalFish Database. (2012, June). Coho Distribution layer. Retrieved from https://www.calfish.org/Home.aspx
- CalFish Database. (2012, June). Steelhead Abundance layer. Retrieved from https://www.calfish.org/Home.aspx
- CalFish Database. (2012, June). Winter Steelhead Distribution layer.
 California Department of Fish and Wildlife. Retrieved from https://www.calfish.org/Home.aspx
- Calthorpe Analytics (Urban Footprint). (2017). Land Development Categories: Comparison for Sonoma County.
- Center for American Progress. The Disappearing West. https:// disappearingwest.org/



- · Cox, B. (2000). "Major Streams in Sonoma County".
- Fisher, B.S., Nakicenovic, N., Alfsen, K., Corfee Morlot, J., de la Chesnaye, F., Hourcade, J.-Ch., Jiang, K., Kainuma, M., La Rovere, E., Matysek, A., Rana, A., Riahi, K., Richels, R., Rose, S., van Vuuren, D., and Warren, R. (2007). Issues related to mitigation in the long term context, *In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Inter-governmental Panel on Climate Change* [Metz, B., Davidson, O.R., Bosch, P.R., Dave, R., and Meyer, L.A. (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Flint, L., Flint, A., Thorne, J., and Boynton, R. (2017). Provisional dataset:
 California Basin Characterization Model v8 Historical Long Term
 Average (1981–2010) Recharge and Runoff. U.S. Geological Survey data
 release. Accessed 9/19/2019. http://climate.calcommons.org/bcm
- Geospatial Innovation Facility at University of California, Berkeley. Cal-Adapt Climate Tools. https://cal-adapt.org/tools/
- Greenbelt Alliance. (2017). At Risk: Bay Area Greenbelt. San Francisco,
 CA.
- GreenInfo Network. (2018). California Protected Areas Database. http:// www.calands.org/
- Johnson, J. (2017, October 2). Cannabis harvest heats up in Sonoma County. The Press Democrat.
- Jones, W. (2000). NMFS California Anadromous Fish Distributions:
 California Coastal Salmon and Steelhead Current Stream Habitat
 Distribution Table
- Klein, A., Keeler-Wolf, T., and Evans, J. (2015). Classification of the

- Vegetation Alliances and Associations of Sonoma County, California Volume 2 of 2 Vegetation Descriptions. California Department of Fish and Wildlife Vegetation Classification and Mapping Program and California Native Plant Society for the Sonoma County Vegetation Mapping and LiDAR Program. Retrieved from http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=115808
- Leidy, R. A., Becker, G. S., and B. N. Harvey (2005b). Historical distribution and current status of steelhead (*Oncorhynchus mykiss*), coho (*O. kisutch*), and chinook salmon (*O. tshawytscha*) in streams of the San Francisco Estuary, California. Unpublished report, Center for Ecosystem Management and Restoration, Oakland, CA.
- Metropolitan Transportation Commission & Association of Bay Area Governments. (2017). Plan Bay Area 2040: Draft Land Use Modeling Report.
- National Oceanic and Atmospheric Administration. (2005, June).
 California Central Coast steelhead distribution layer. Retrieved from https://www.calfish.org/Home.aspx
- National Oceanic and Atmospheric Administration. (2005, June).
 Northern California Coastal chinook distribution layer. Retrieved from https://www.calfish.org/Home.aspx
- National Oceanic and Atmospheric Administration. (2005, June).
 Northern California steelhead distribution layer. Retrieved from https://www.calfish.org/Home.aspx
- National Marine Fisheries Service. (2012). Final Recovery Plan for Central California Coast coho salmon Evolutionarily Significant Unit.
 National Marine Fisheries Service, Southwest Region, Santa Rosa, CA.



- Nature Conservancy, The. (2018). Landscape Connectivity Using Omnidirectional Circuitscape (unpublished dataset).
- North Bay Climate Adaptation Initiative. (2013). Climate Change in the North Bay for Residents of Marin, Sonoma, and Napa Counties. Climate Smart North Bay Fact Sheet Series. North Bay Climate Adaptation Initiative. Santa Rosa, CA.
- Penrod, K., P. E. Garding, C. Paulman, P. Beier, S. Weiss, N. Schaefer, R.
 Branciforte and K. Gaffney. 2013. Critical Linkages: Bay Area & Beyond.
 Produced by Science & Collaboration for Connected Wildlands, Fair
 Oaks, CA. www.scwildlands.org in collaboration with the Bay Area Open
 Space Council's Conservation Lands Network. www.BayAreaLands.org.
- Russian River Independent Science Review Panel. (2012). Conceptual Model of Watershed Hydrology, Surface Water and Groundwater Interactions and Stream Ecology for the Russian River Watershed
- San Francisco Estuary Institute (SFEI). (1998). "Bay Area EcoAtlas
 V1.50b4 1998: Geographic Information System of wetland habitats past
 and present." Accessed 9/24/2019.
- Santa Clara Valley Open Space Authority, Resource Conservation
 District of Santa Cruz County, Sonoma County Agricultural Preservation
 and Open Space District. (2018). Healthy Lands & Healthy Economies:
 Natural Capital in Santa Clara, Santa Cruz, and Sonoma Counties.
- Smith, M., Schiff, R., Olivero, A., and MacBroom, J. (2008). The Active River Area: A Conservation Framework for Protecting Rivers and Streams. The Nature Conservancy, Boston, MA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2000). Acquisition Plan 2000. Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2006). Connecting Communities and the Land: A Long-Range

- Acquisition Plan. Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2006). Stewardship Manual. Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2009). Strategic Plan 2009–2013. Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2012). Fee Lands Strategy: Options for District-owned Properties.
 Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2012). Work Plan July 2012-June 2015. Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District.
 (2018). Healthy Lands & Healthy Economies: The Multiple Benefits of Sonoma County Working and Natural Lands. Santa Rosa, CA.
- Sonoma County Agricultural Preservation and Open Space District and The Nature Conservancy. (2016). The Climate Action Through Conservation Project.
- Sonoma County Department of Agriculture/Weights and Measures.
 (2018). 2018 Sonoma County Crop Report. County of Sonoma, Santa Rosa, CA.
- Sonoma County Department of Agriculture/Weights and Measures.
 (2017). 2017 Sonoma County Crop Report. County of Sonoma, Santa Rosa, CA.
- Sonoma County Department of Agriculture/Weights and Measures.
 (2016). 2016 Sonoma County Crop Report. County of Sonoma, Santa Rosa, CA.
- Sonoma County Farm Bureau. Issues Facing Agriculture in Sonoma County. https://sonomafb.org/current-issues/
- Sonoma County Forest Conservation Working Group. (2013).



- Protecting Forests across Landscapes and Through Generations: The Sonoma County Forest Conservation Working Group. Santa Rosa, CA.
- Sonoma County Permit and Resource Management Department.
 (1978). 1978 Sonoma County General Plan.
- Sonoma County Permit and Resource Management Department.
 (1989). 1989 Sonoma County General Plan.
- Sonoma County Permit and Resource Management Department.
 (2008). Sonoma County General Plan 2020.
- Sonoma County Regional Climate Protection Authority. (2016). Climate Action 2020 and Beyond.
- Sonoma County Regional Parks. (2015). Sonoma County Integrated Park Plan (SCIPP). Draft report. Santa Rosa, CA.
- Sonoma County Vegetation Mapping and LiDAR Program [with funding from University of Maryland under grant NNX13AP69G from NASA's Carbon Monitoring System (Dr. Ralph Dubayah and Dr. George Hurtt, Principal Investigators)].
- Sonoma County Water Agency and Sonoma County Community
 Foundation. (2010). Biodiversity Action Plan Priority Actions to
 Preserve Biodiversity in Sonoma County. October 2010. Pp. 89
- Sonoma Land Trust. (2014). Sonoma Valley Wildlife Corridor Project:
 Management and Monitoring Strategy. Santa Rosa, CA. Pp. 98.
- United States Department of Agriculture. (2014). 2012 Census of Agriculture. Full Report. Retrieved from https://www.nass.usda.gov/ Publications/AgCensus/2012/
- United States Fish and Wildlife Service. (2016). Recovery Plan for the Santa Rosa Plain: Blennosperma bakeri (Sonoma sunshine); Lasthenia burkei (Burke's goldfields); Limnanthes vinculans (Sebastopol meadowfoam); California Tiger Salamander Sonoma County Distinct

- Population Segment (*Ambystoma californiense*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California.
- United States Fish and Wildlife Service. USFWS Threatened and Endangered Species Active Critical Habitat Report. Environmental Conservation Online System. https://ecos.fws.gov/ecp/report/table/ critical-habitat.html
- Wetlands Disappearing Three Times Faster than Forests. (2018, October
 1). UN Climate Change News, Article 01. Retrieved from https://unfccc.int/news/wetlands-disappearing-three-times-faster-than-forests



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