



Healthy Watersheds & Healthy Economies:
Multiple Benefits of Natural and Working Lands

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HEALTHY LANDS HEALTHY ECONOMIES



DEMONSTRATING THE ECONOMIC VALUE OF
NATURAL AREAS AND WORKING LANDSCAPES

Healthy Lands & Healthy Economies

Case Studies

- Land Conservation = Water Quality & Supply
 - Dry Creek & Cooley Ranch
 - Land Conservation & Groundwater
- Urban Open Space & Health
- Taylor Mountain
- Tourism
- Carbon and Land Conservation
- Sonoma County Rangelands
- Artisanal Cheese & Conservation
- The Sonoma Coast
- Sonoma Mountain
- Sonoma Baylands
- Riparian Ecosystems

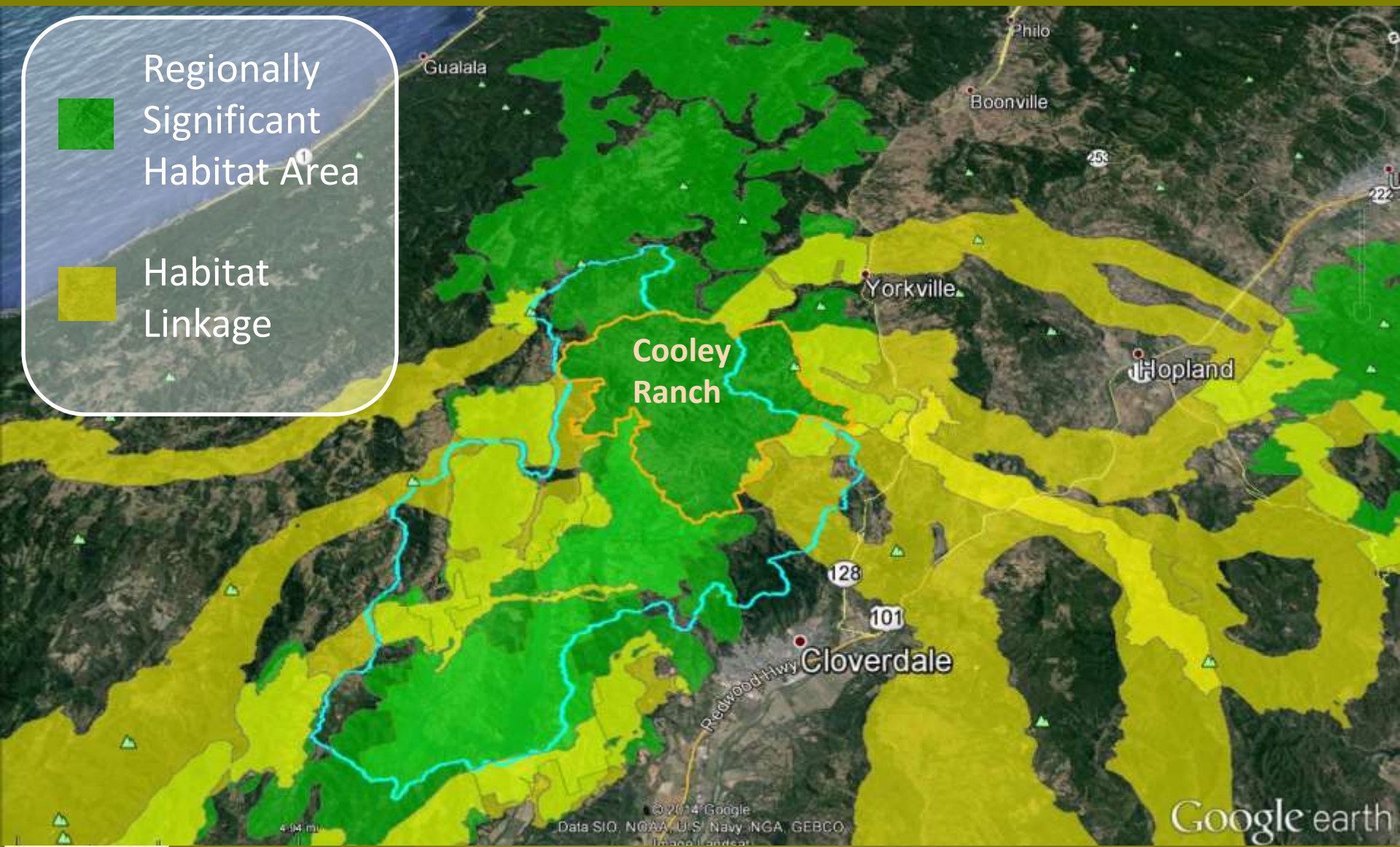


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Upper Dry Creek & Cooley Ranch

Regionally Significant Habitat Area

Habitat Linkage



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Upper Dry Creek & Cooley Ranch

- Water quality benefit = \$1.2 million per year
(exceeds cost of purchase in 20 years)
- Climate change benefits:
 - Avoids 67,000 additional Vehicle Miles Traveled (VMT)
 - Avoids loss of carbon sequestering forests
- Water supply: 60 million gallons per day
 - \$43 million per year
- Other benefits:
 - biodiversity, agriculture, recreation, partnerships



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Urban Open Space and Health



- Total cost of physical inactivity, adults: **\$274 million per year**
- Health benefits of urban open space & parks:
 - **\$500,000/year, kids**
 - **\$48 million/year, adults**
 - **\$9 million/year, seniors**



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Taylor Mountain Park and Open Space Preserve

- Recreation benefits: \$1.5 million/yr
- Carbon: 66,000 more tons than adjacent unprotected parcels
- developed like Fountain Grove:
 - loss of 514,000 tons of carbon
- developed like Farmers Lane:
 - Loss of 582,000 tons of carbon



“The economic benefits generated by the protection of Taylor Mountain far outstrip the \$26 million initial outlay....providing a generous return on investment to the people of Sonoma County.”

- Conservation Strategy Fund & Sonoma State University



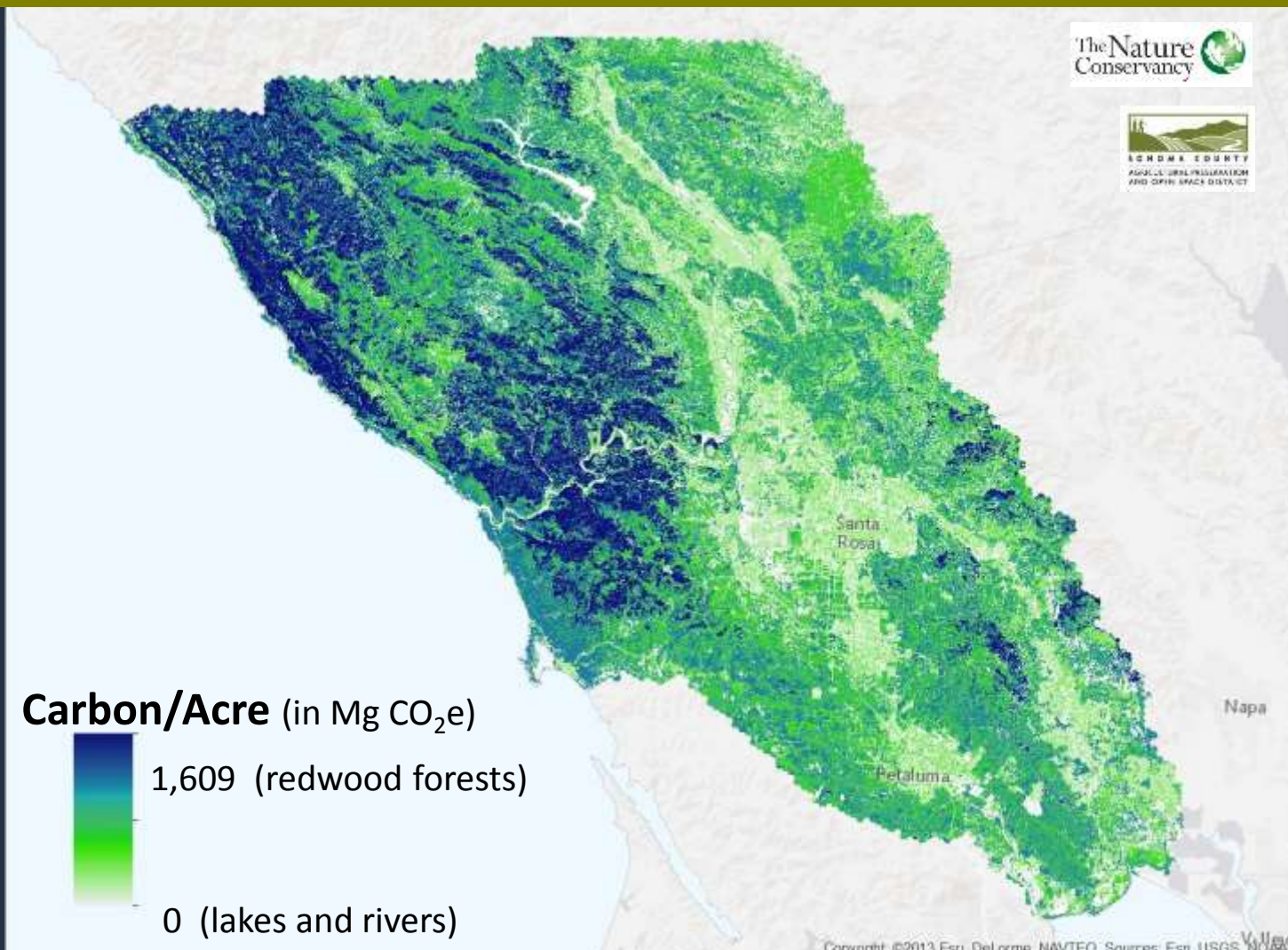
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Tourism and Open Space



Conservation & Climate Change

Climate Action Through Conservation



Conservation & Climate Change

Climate Action Through Conservation

Total C stock in Sonoma County:

229 Tg CO₂e
(229 million metric tons)

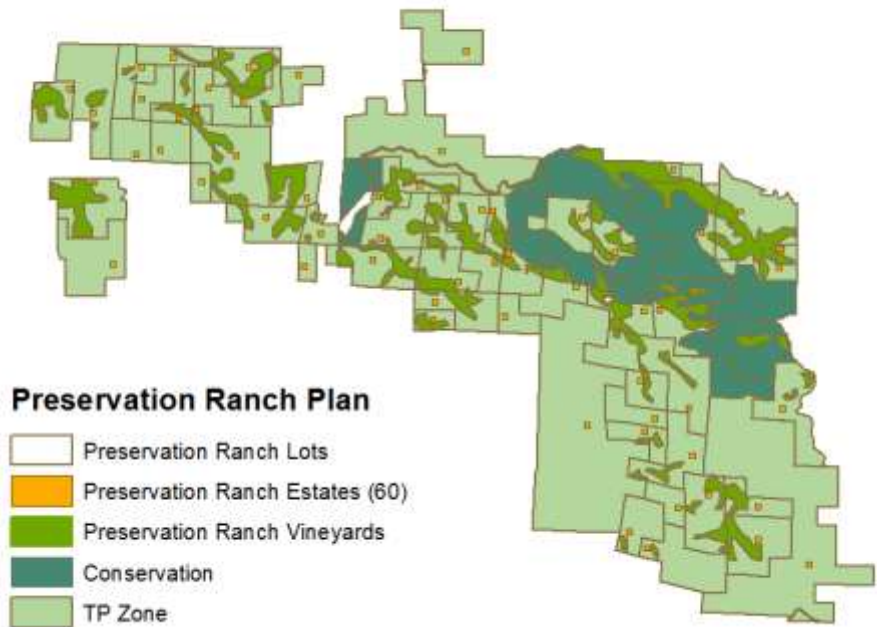
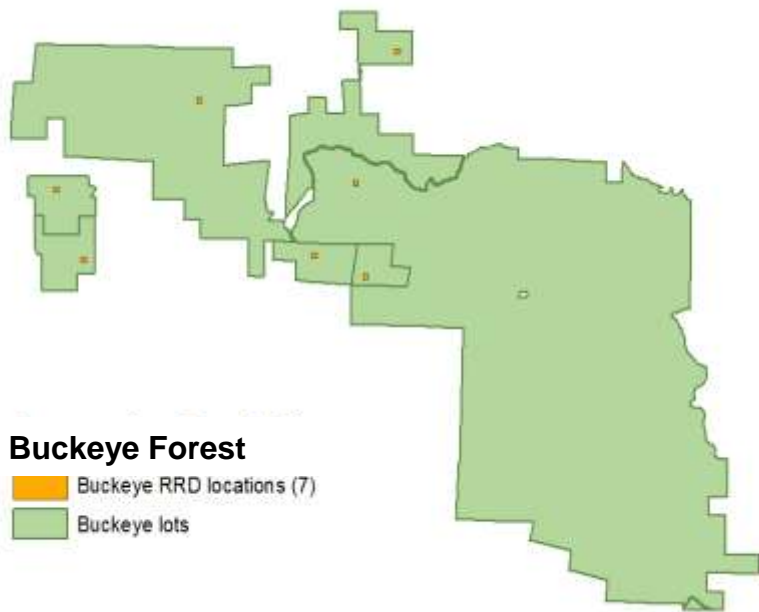
48,000,000

passenger vehicles driven for one year (EPA)

\$5,496,000,000

social cost of carbon





	Tonnes CO2e 1990	Tonnes CO2e 2010	Tonnes CO2e 2030
Buckeye Forest Scenario	7,719,722	8,685,577	9,491,862
Preservation Ranch Scenario	7,719,722	8,685,577	8,516,019

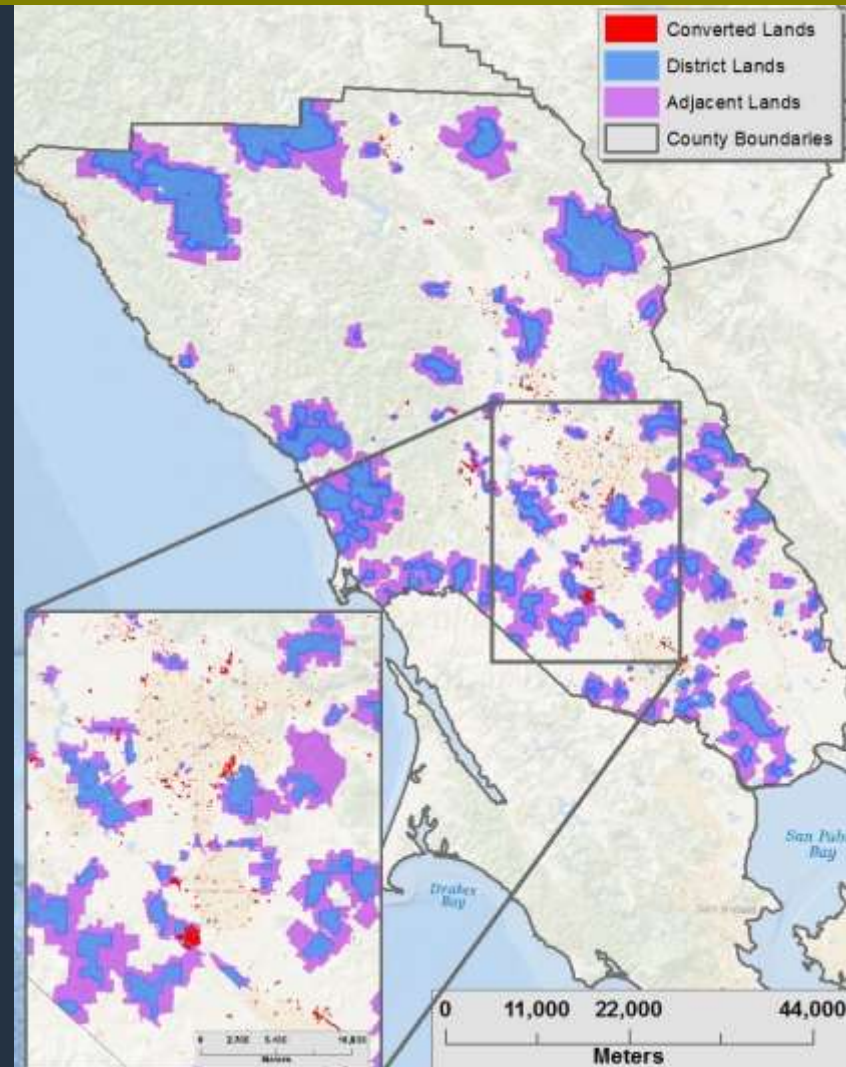
Social Cost of Carbon:
\$24 million in 20 years
exceeds purchase cost!

Plus:
water, biodiversity,
recreation, rangeland
ag, avoided VMTs!

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Rangeland and Ecosystem Services

- Collaboration with UCCE and UC Berkeley
- District lands have the highest mean carbon storage levels and water yield when compared with adjacent land



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Artisanal Cheese and Land Conservation

Explore the Sonoma Marin Cheese Trail

Tour the heart of artisan cheesemaking country in Sonoma and Marin counties—it's been called the Normandy of Northern California after the famous French cheese-producing region. View a beautiful agricultural landscape of family farms and working ranches, much of it protected from development with agricultural conservation easements. Experience historic towns and villages, Point Reyes National Seashore, nearby

oyster operations and world-renowned wineries in the 12 wine-growing regions of Sonoma County.



Popular goat breeds include Alpine, Saanen, Nubian and LaMancha.

22,000 acres of land in Marin and Sonoma are dedicated to making cheese and fermented milk products.

Open for Visits

Not all artisan producers are open to the public, so we've created two tours to sites that welcome visitors. Meet some of the cheesemakers, learn about the animals, and maybe even see cheese being made...and don't forget to ask for a taste! Make sure to call ahead or check company websites listed on the back for hours.



Cheesemakers of Marin and Sonoma County

- | | |
|--|---|
| 1 Achadinta Cheese Company | 14 McClelland Dairy |
| 2 Arclante Cheese | 15 Nicasio Valley Cheese Company |
| 3 Batinaga Ranch Farmstead Sheep Milk Cheese | 16 Point Reyes Farmstead Cheese Company |
| 4 Bellwether Farms | 17 Pugli's Leap |
| 5 Bleating Heart Cheese | 18 Ramini Mozzarella |
| 6 Bodega Artisan Cheese | 19 Redwood Hill Farm & Creamery |
| 7 Bohemian Creamery | 20 Saint Benoit Yogurt |
| 8 Clover Stonetta Farms | 21 Spring Hill Cheese Company |
| 9 Cowgirl Creamery | 22 Straus Family Creamery |
| 10 Epicurean Connection | 23 Toluca Farms |
| 11 Laura Chenell's Chevre | 24 Two Rock Valley Goat Cheese |
| 12 Marin French Cheese Company | 25 Valley Ford Cheese Company |
| 13 Matos Cheese Factory | 26 Vella Cheese Company |
| | 27 Weirauch Farm & Creamery |

A Working Landscape

Cheesemaking has long been a part of world cultures, but U.S., it dates back only about 200 years. In Marin and Sonoma counties, Spanish priests first made cheese from the milk of mission livestock in the early 1800s.

During the Gold Rush, European immigrants built dairies on the Point Reyes peninsula to supply butter and cheese to miners in San Francisco. The peninsula became known as "heaven" for its moderate climate and verdant grasslands, dairy ranches soon sprang up throughout Marin, making the county the top dairy producer in California for several decades. As demand grew, the story repeated itself in Sonoma County.

Settlers in both counties brought cheesemaking skills with them from Switzerland, Italy, the Azores, Portugal and Ireland, and began producing modest quantities on the farm or through cooperative creameries. But during WW II, small-scale manufacturing gave way to mass production to meet the needs of national defense and a growing population.

Today, artisan cheesemaking is experiencing a renaissance as both long-time dairy families and young, passionate cheese entrepreneurs enter the marketplace to meet an increasing consumer desire for distinctive, handcrafted cheese. Marin and Sonoma counties are home to the largest concentration of artisan cheesemakers in California. In combination with conscientious animal husbandry practices, they emphasize quality over quantity. Like vintners who attribute the distinctive characteristics of their wines to the terroir in which they're produced, cheesemakers here say the salt air, cooling fogs and abundant grasslands where their animals graze make their cheese unlike any others.



Holsteins are the most common and most productive dairy cows here.

To make one pound of cheese, it takes about five pounds of sheep's milk, seven pounds of goat milk or 10 pounds of cow's milk.

Protecting Farmland

This beautiful farmland located so close to San Francisco is under constant threat from sprawl and non-agricultural development. With your help, conservation organizations

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Artisanal Cheese and Land Conservation

Cows Helping Fish?

Dairies at risk

Market conditions

Development pressure

Regulatory pressure

Coho at risk

Habitat degradation

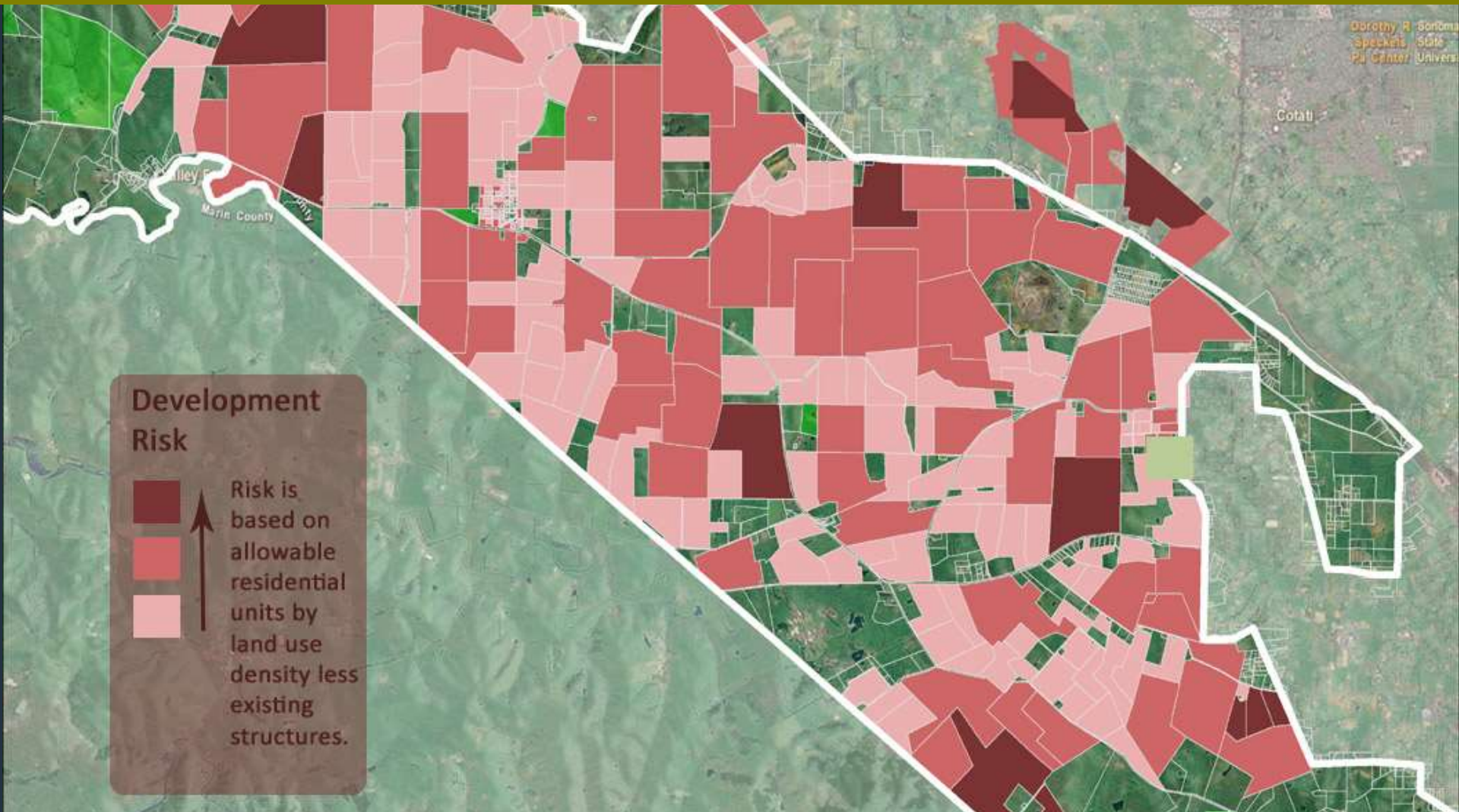
Poor water quality

In-stream flows



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Artisanal Cheese and Land Conservation



Multiple Benefits of Conservation: Cows, Fish, Open Space, Cheese, Jobs and \$\$\$\$

Sonoma & Marin Counties

- \$120 million
- 8 million pounds
- 332 people
- 22 plants
- 70% own the land and dairy



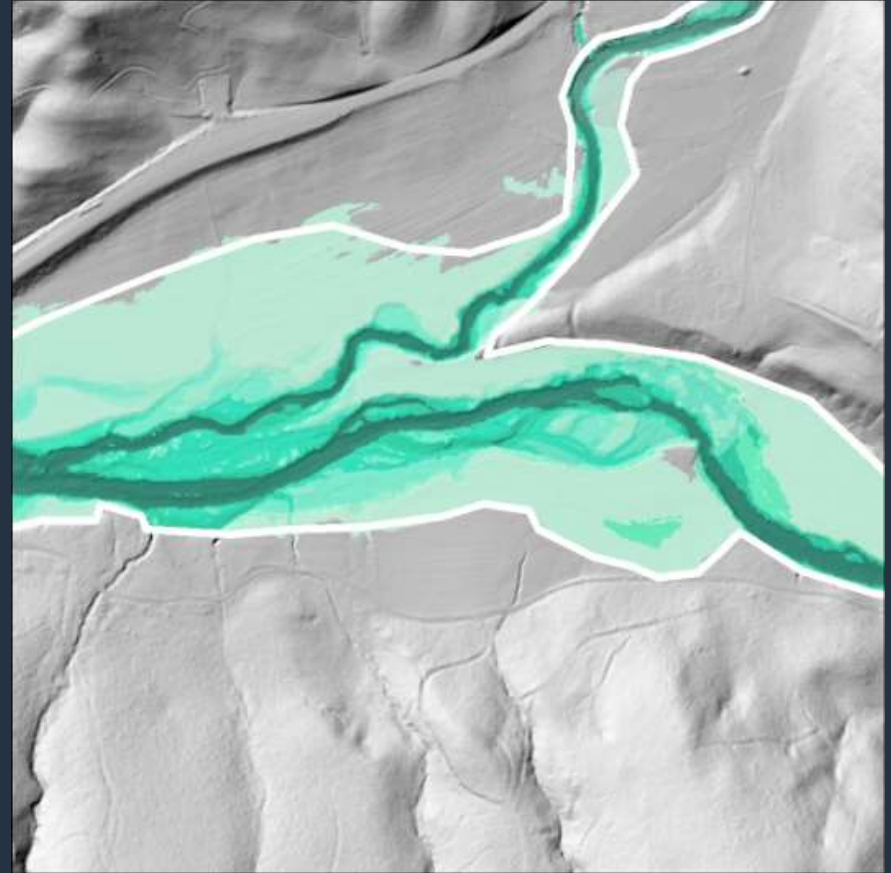
72% have agricultural conservation easements (**9,000 acres**) and used the proceeds to **capitalize** their transition

other benefits: climate, biodiversity, tourism, scenic, air/water quality



Sonoma County Vegetation Map and LiDAR

Riparian Corridor Mapping



Functional Riparian Corridors

Multiple Benefits



Sonoma County Agricultural Preservation and Open Space District

