Bay Area Balance

Preserving Open Space, Addressing Housing Affordability

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BAYAREA COUNCIL ECONOMIC INSTITUTE

Acknowledgments

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About the Institute

Since 1990, the Bay Area Council Economic Institute has been the leading think tank focused on the economic and policy issues facing the San Francisco/ Silicon Valley Bay Area, one of the most dynamic regions in the United States and the world's leading center for technology and innovation. A valued forum for stakeholder engagement and a respected source of information and fact-based analysis, the Institute is a trusted partner and adviser to both business leaders and government officials. Through its economic and policy research and its many partnerships, the Institute addresses major factors impacting the competitiveness, economic development and quality of life of the region and the state, including infrastructure, globalization, science and technology, and health policy. It is guided by a Board of Trustees drawn from influential leaders in the corporate, academic, non-profit, and government sectors. The Institute is housed at and supported by the Bay Area Council, a public policy organization that includes hundreds of the region's largest employers and is committed to keeping the Bay Area the world's most competitive economy and best place to live. The Institute also supports and manages the Bay Area Science and Innovation Consortium (BASIC), a partnership of Northern California's leading scientific research laboratories and thinkers.

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GREENBELT ALLIANCE

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PREFACE

What's "At Risk" Without Good Growth

Jeremy Madsen, CEO, Greenbelt Alliance
Trustee, Bay Area Council Economic Institute

The Bay Area is an amazing place to call home. Lots of people think so, and when I say lots, I really mean lots. The 2010 census counted 7.1 million people as residents of the nine counties that touch San Francisco Bay. Today's estimates are that there are over 7.6 million people living in our region. Projections have that number growing to 9 million by 2040, and there are many in the business of forecasting population growth who think that 9 million is a conservative estimate.

No doubt this growth will present the Bay Area with challenges. Earlier this year, with the release of *At Risk: The Bay Area Greenbelt*, Greenbelt Alliance took a comprehensive look at one of these challenges—what will happen to the Bay Area's iconic farms, ranches, and natural landscapes if we as a region get growth wrong. We found that even after decades of hard work and success at protecting the Bay Area's greenbelt, 293,000 acres of open space lands are in jeopardy of being lost to sprawl development over the next generation. That's an area 10 times the size of San Francisco.

Since the release of *At Risk*, I've been out and about making presentations on the report. As I have done so, I've thought about what else is "at risk" if growth is done wrong in the Bay Area.

For many of us, our quality of life is "at risk" in the form of traffic. I am talking mostly about the bone-crushing commutes that happen from, say, the East Bay to Silicon Valley. I am sometimes caught up in this traffic when I have to travel during rush hour to a South Bay meeting. It's not atypical for it to take two hours to move between my home in Alameda and San Jose. As the congestion gets me hot under the collar, I think about the people who have to do this every day—certainly losing family time, leisure time, and sleep in the process. Our traffic problems, some of the worst in the nation, are in no small part a result of the fact that the Bay Area has tended to build housing far away from jobs, forcing people into these epic commutes. As bad as it is today, things will only get worse if we get growth wrong.

For a huge percentage of our population, the very ability to call oneself a Bay Area resident is put "at risk" by our region's housing affordability crisis. With average home prices across the region topping $700,000, the typical Bay Area household has to save two years worth of income just to afford a down payment on a house—an impossible task for many. With average rents in many Bay Area communities in the range of $2,400 a month, we have entrepreneurs living in closets, low-income families living three families to an apartment, and people on the economic and cultural margins of our society living in places like Oakland's "Ghost Ship" warehouse and literally dying. Our housing affordability crisis is fueled by the fact that we've gotten growth wrong. Between 2007 and 2014, our nine Bay Area counties built only about 50 percent of the homes needed to keep up with total population growth and only about 25 percent of the homes necessary to meet the needs of low and very low-income residents. Our region has proven that not building housing as we grow does not keep people from coming to the Bay Area.

And these are just a few of the reasons getting growth wrong puts the Bay Area "at risk." To the threats to our greenbelt, traffic snarls, and housing unaffordability, you can add climate pollution: 40 percent of the Bay Area's greenhouse gas emissions come from the tailpipes of our cars and trucks, and more auto-dependent sprawl will make this problem worse. Growth gone wrong will leave us parched. Water guzzling subdivisions in far-flung suburbs are antiquated in this era where a changing climate will likely result in more and more droughts. And growth done wrong is bad for our health. Building more housing in far-flung subdivisions where one has to drive long distances to get to work, school, or the store only perpetuates an unhealthy lifestyle. The list can go on and on.

So if all of this is what is "at risk" if we get growth wrong, what should we do to get growth right?

We need to plan. Communities need to come together to craft innovative visions for how to accommodate new homes, jobs, park spaces, and other amenities to create "complete communities" in locations, within existing cities and towns, that are close to transit so people can walk, bike, or use transit instead of drive. Done right, this planning will lead to communities we will all be proud to call home. City councilmembers and other community leaders need to back up these plans with policies like zoning codes that encourage the types of development projects that will make what we plan a reality.

Most importantly, to get growth right we all have to get involved. We need to speak out to prevent development where it doesn't belong—on our iconic greenbelt of farms, ranches, and natural areas. And just as much, when a plan, policy, or project is being proposed that will lead to more affordable and accessible communities, we need to speak up and say yes to the right growth in the right places.

"Our housing affordability crisis is fueled by the fact that we've gotten growth wrong."
—Jeremy Madsen, CEO, Greenbelt Alliance

Mount San Bruno
"Atop Mount San Bruno" by Todd Lappin

Executive Summary

The Bay Area is a spectacularly beautiful place to live. It is also home to one of the most productive economies in the world. If not properly managed, these two assets can come into conflict. However, preserving the Bay Area's open space and at the same time increasing housing production do not have to be mutually exclusive goals.

The Bay Area's sustained economic growth has exacerbated long-developing housing and transportation crises. These have been reinforced by the region's inability—and in many cases unwillingness—to build housing, especially near major transit and job centers. In turn, the Bay Area's open space and working lands are put at increased risk as resistance to urban infill projects shifts development to suburban and rural greenfields.

Bay Area decision makers now face a critical challenge: to support continued inclusive economic growth while still maintaining a balance of open space that makes the Bay Area such a unique and beautiful region. This report provides a roadmap for those seeking to balance these goals. It makes the economic case for preserving open lands, identifies opportunities for responsible development, and presents policy recommendations that will support sustainable growth.

Las Trampas Regional Wilderness, San Ramon
"Las Trampas" by Stefan Klocek

Key Takeaways

- **The Bay Area's natural capital provides billions in benefits to citizens and the economy every year, yet significant portions of the Bay Area's greenbelt remain at risk.** Natural landscapes provide immense value via goods and ecosystem services such as clean air and water, food, natural resources, and mitigation from natural hazards and rising seas. Research suggests that the value of the annual flow of ecosystem services benefits provided by this "natural capital" in the Bay Area may be as high as $5 to $14 billion dollars a year. Better understanding the value of the finite supply of natural capital in the Bay Area can help the region make better-informed land use decisions.

  Since 2012, the total amount of open lands at risk in the Bay Area—lands that could be developed in the next 30 years—has dropped, from 322,800 to 293,100 acres. Despite this, significant portions of the Bay Area's greenbelt remain at risk and pressure remains acute in places, with 63,500 acres of Bay Area land facing a high probability of being developed within the next 10 years.

- **California loses 6 percent of state GDP, or $140 billion per year, as a result of the housing crisis.** Housing shortages in California and the Bay Area are a significant drag on the economy. The McKinsey Global Institute estimates that California loses over $90 billion worth of construction investment and more than $50 billion in consumption that is crowded out by high housing costs.

- **Facilitating infill development can help alleviate the housing crisis while also promoting sustainable growth patterns, yet the Bay Area is falling behind.** If every available infill parcel in California were developed to its fullest potential, the state would gain 4 million additional housing units while simultaneously sparing 350,000 acres of undeveloped greenfield. Yet the Bay Area is falling behind on meeting its obligations for sustainable development under California's climate change laws.

  The Bay Area was successful in locating only 57 percent of permitted housing units within what are called "Priority Development Areas" in the first two years of their implementation. Better balanced development patterns are essential to growing the Bay Area's economy, achieving California's climate goals, protecting open space and working lands, and maintaining quality of life.

- **New policies, tools—and maybe most importantly—new coalitions are needed if the Bay Area is going to make sustainable growth a reality.** The Bay Area economy and its population growth are showing no signs of slowing down. At the same time, transportation remains the largest contributor of greenhouse gas emissions in the state and these will be difficult if not impossible to reduce if we keep building housing that is distant from job centers. Preserving open space, reducing sprawl, and housing future generations will require both new policies and tools described in this report's conclusion, as well as a renewed commitment to working together across interests and groups.

Muir Woods National Monument
"Walking Among Giants" by Derek Bruff

Introduction

In many ways, the American dream thrives in the Bay Area. The economy in parts of the region is growing faster than China's, the regional unemployment rate has been 4 percent or less since early 2016,[1] and entrepreneurs from around the world dream of starting or moving their businesses here. Quality of life also remains high, in large part thanks to the thousands of acres of undeveloped landscapes that provide recreation, agricultural bounty, wildlife habitat, and ecosystem services.

In other ways, the American dream is quickly becoming unattainable in the Bay Area. The median price of a single-family home in the region is over $700,000,[2] over 100,000 commuters travel 90 minutes or more every day to reach their jobs,[3] and 293,100 acres of greenfield—the equivalent of ten San Franciscos—are facing a high probability of development.[4]

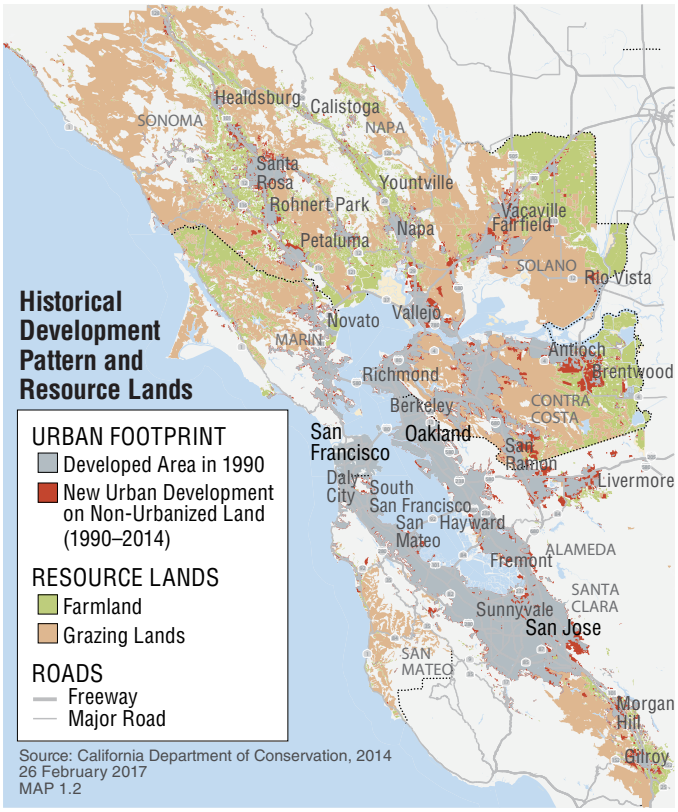
The rejuvenating effect that open space has on humans has been recognized for hundreds of years. However, it was not until the mid-1800s that significant tracts of land in the United States began to be set aside specifically for recreation and preservation purposes in and near urban areas.[5] Today, the benefits of natural and agricultural landscapes are much more widely accepted. Open lands are recognized not only for their ability to provide recreational opportunities, but also for providing clean air and water, food, natural resources, and mitigation from natural hazards and rising seas.

While the significant benefits provided to society by these undeveloped landscapes are appreciated, regular disagreements still come up regarding size, location, and use. These disagreements have only increased as the economy and demand for housing have grown. From a public policy perspective, weighing these uses is difficult. Traditionally, economic impact analyses have been able to scale the effect of land use decisions on property values or the labor market, but until more recently they have been unable to estimate the value of more indirect benefits.

Land Use in the Bay Area

Of the 4.5 million acres (just under 7,000 square miles) that make up the nine-county Bay Area, about 51 percent (2.3 million acres) are classified as agricultural land by the California Department of Conservation Farmland Mapping and Monitoring Program.[6] Approximately 18 percent, or about 787,000 acres, are urban or built-up land,[7] which is defined by the California Department of Conservation as land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures per ten acre parcel.[8]

Figure 1: Bay Area Land Use

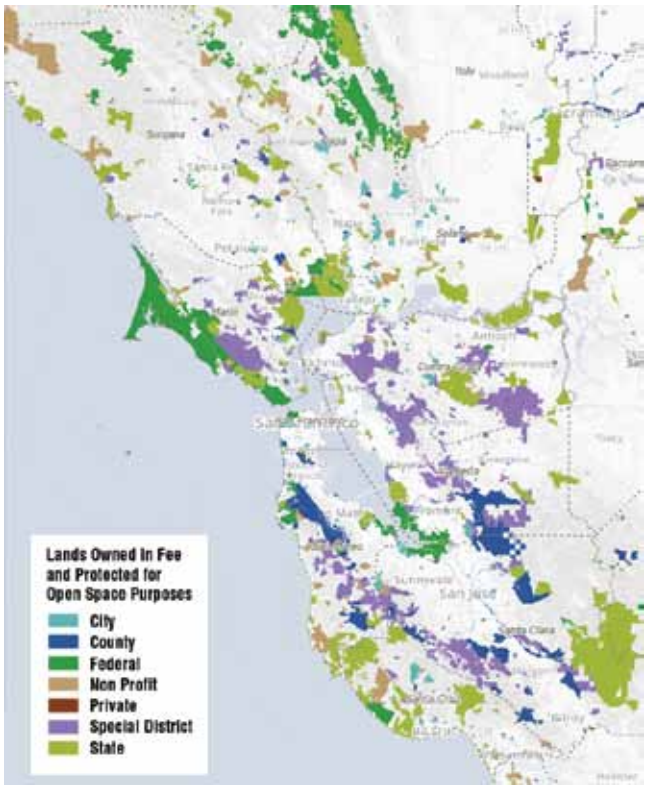


Source: Adapted from Plan Bay Area 2040 Draft Plan, March 2017, p. 17

According to Bay Area Open Space Council data as of 2014, approximately 29 percent of the region (about 1.3 million acres) are identified as protected open space. These areas can be parks, preserves, ranches, farms, forests, small, large, publicly accessible, and not publicly accessible.[9] Of these protected acres, slightly over 1 million (80 percent) are owned outright (property purchased "in fee") by 223 federal, state, and local agencies/departments and private conservation organizations (Figure 2), while the remaining (20 percent) are owned by private landowners who have sold conservation easements to 50 different open space districts and land trusts operating in the region.[10]

The residents of the Bay Area care deeply about open space protection and demonstrate their commitment to environmental stewardship through consistent support of funding measures and other policies that benefit the environment (e.g., early adopters of plastic bag bans). Every county except San Francisco and Solano has a voter-approved open space district. Of these, all but Napa has a voter-approved open space tax. Santa Clara County's Open Space Authority parcel tax, Measure Q, was passed in 2014 with nearly 68 percent of the vote.[11]

Figure 2:
Protected Areas Owned Outright by Owner Level



Source: Adapted from California Protected Areas Data (CPAD) Portal, May 2017, http://www.calands.org/map

Golden Gate Park
"Japanese Tea Garden, Golden Gate Park" by Kevin Oliver

Measuring the True Value of Our Open Space

Capturing the total economic benefit to society of natural and agricultural landscapes is a difficult task. There are, of course, ways to measure the direct economic benefits, such as revenue and employment at local, regional, and national parks. However there are also several levels of indirect benefits that are more difficult to measure. Early research focused on analyzing the impact of open space on traditional economic assets such as property values. As techniques became more refined, researchers began to attempt more comprehensive analysis, estimating the value provided by natural assets themselves or "ecosystem services," the term often used to describe the direct and indirect contributions of ecosystems to human wellbeing.

The more comprehensive economic valuation of natural landscapes and ecosystem benefits is difficult, because it requires a standardization system for evaluating natural systems and their interaction with their surrounding areas, but overcoming this obstacle has special urgency for the San Francisco Bay Area. The region is known for its beautiful natural landscapes that attract residents and companies alike, creating a robust economy and a culture of innovation and, because of such success, a severe housing crisis. The Bay Area has become one of the most expensive places to live, creating an extreme need to contextualize the economic importance of open space when considering how best to expand the housing supply through a model of sustainable growth.

View of Mount Diable from the Redwood Regional Park
"Mount Diablo" by Steve Wedwood

Two Types of Benefits Provided by Open Space

Direct Benefits

Parks and Natural Landscapes

Parks generate significant revenue for nearby communities. For example, according to the National Park Service's Visitor Spending Effects model, "26 million visitors to national parks in the San Francisco Bay Area spent $823 million in local communities in 2016. That spending supported 10,497 local jobs and had a cumulative benefit to the local economy of more than $1 billion."[12]

In 2017, the East Bay Regional Park District estimated that park users alone inject about $111 million annually into the East Bay economy through expenditures on durable and non-durable goods associated with using the parks. The District itself spends an additional $9 million a year on capital improvements. Altogether, the total impact on the economic output of the East Bay economy grows to $191 million annually when multiplier effects are taken into account.[13]

Parks contribute to local economies in other ways. For example, a 2016 economic benefits analysis of the City of San Jose's parks estimated that the 197 parks managed by San Jose's Department of Parks, Recreation and Neighborhood Services increased housing values in 2014 by $1 billion. That increased value would result in an additional $12 million in property tax revenue.[14]

Agriculture

The Bay Area's agricultural lands include 600,000 acres of farms and 1.7 million acres of ranchland. Agricultural Commissioners' 2014 crop reports for the nine counties showed the total annual gross production value of these farms and ranches to be almost $2.7 billion.[15]

The region's farmers and ranchers grow or raise an immense variety of agricultural products, including world-class wine grapes, dairy products and meat, wool and other fiber products, and orchard and row crops. The production of organic produce and dairy products has increased in the Bay Area, and the region's residents benefit from abundant access to ultra-fresh food through direct-to-consumer arrangements such as community-supported agriculture (CSA) programs and farmers' markets.[16]

According to a 2013 report by SPUR on the regional food system, Bay Area local farms, food manufacturers, distributors, grocers and restaurateurs provide more than 400,000 jobs.[17]

"The Bay Area's agricultural land is not a placeholder for future development, nor simply preserved open space that will help prevent urban sprawl and all of its undesirable consequences—though that is surely one of its important functions. The Bay Area Agricultural Sustainability Project envisions a working landscape that continues to enrich the region for many generations to come as an irreplaceable environmental, cultural, and historic resource that supplies healthy food to the region's residents and visitors, while supporting farm and ranch families who are pillars of the metropolitan community."[18]

—American Farmland Trust, Greenbelt Alliance, and Sustainable Agriculture Education (SAGE) in *Sustaining Our Agricultural Bounty*, 2011

Indirect Benefits

Recognizing the need for a methodology that more fully accounts for the benefits that our natural assets provide—and for the impact that human activities can have on them—in 2001 former United Nations Secretary-General Kofi Annan launched an international work program known as the Millennium Ecosystem Assessment (MEA). Published in 2003, its first report, *Ecosystems and Human Well-being: A Framework for Assessment*, provided a groundbreaking framework for assessing ecosystem services. The four categories of ecosystem services identified in the report have become the foundation for much of the subsequent analysis on the topic: "Ecosystem services are the benefits people obtain from ecosystems, which the MEA describes as provisioning, regulating, supporting, and cultural services."[19] Provisioning, regulating, and cultural services directly affect people, and supporting services are needed to maintain all the other services (Figure 3).

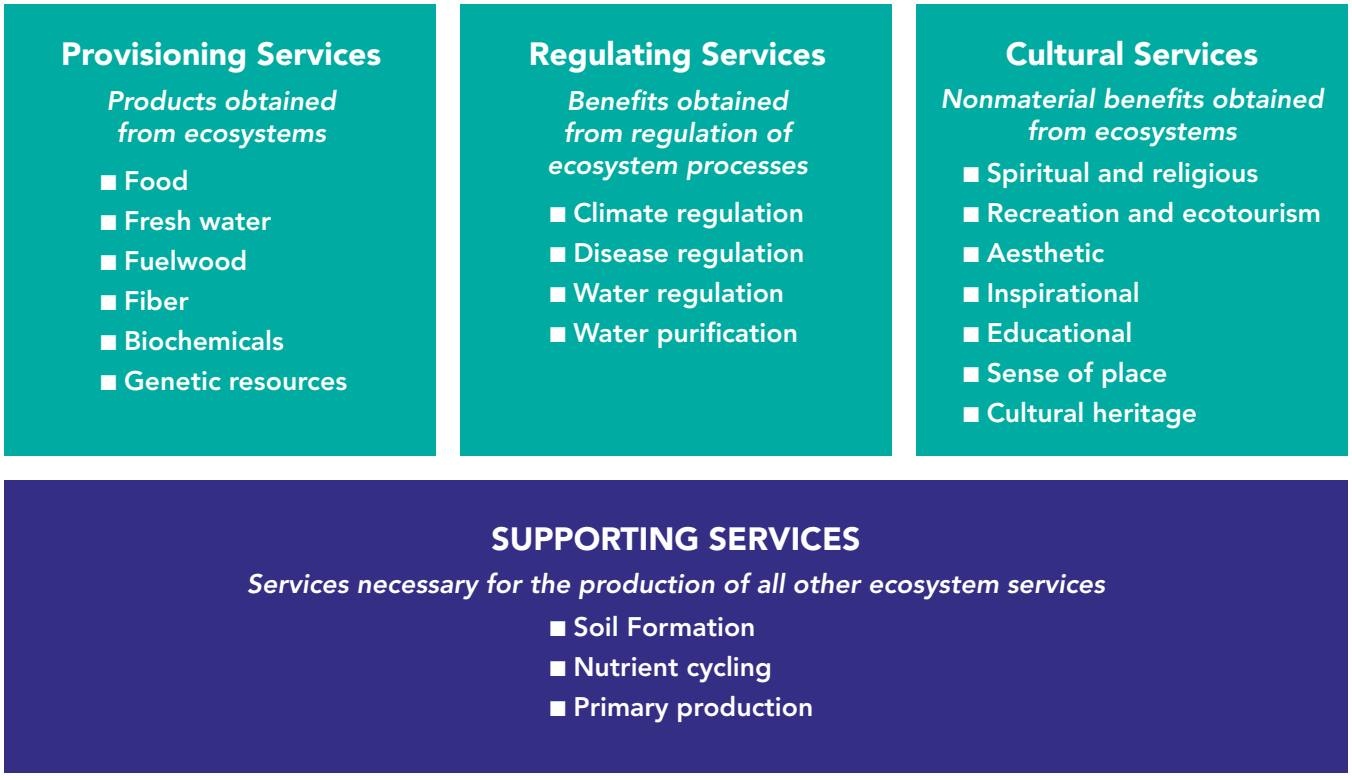
Supporting Services

Broadly defined, supporting ecosystem services provide the basis for life and growth including nutrient cycling, water cycling, soil formation, and photosynthesis. These are services that technology cannot mimic or replace. Sustainable management of industry, agriculture, open space, water, and climate is necessary in order not to exceed an ecosystem's natural capacity to provide these services.

Provisioning Services

Provisioning services refer to the physical elements that ecosystems provide to support life, such as food, water, wood, and fuel. Among the Bay Area ecosystem's most important provisioning services are water supplies and food production.

Figure 3: Ecosystem Services



Source: Millennium Ecosystems Assessment, *Ecosystems and Human Well-being: A Framework for Assessment*
Analysis: Bay Area Council Economic Institute

Municipal Water Supply

Bay Area municipal water utilities collectively rely on 2.6 million acres of Bay Area watershed land to filter, store, and transport drinking water to over 7 million residents.[20] Groundwater is another significant source for some water companies (e.g., San Jose Water Company gets roughly 40 percent of its supply from groundwater[21]) and often the sole source for rural residents. No number of reservoirs or storage tanks will come close to the water storage capacity of the Bay Area's aquifers.

All of the 101 cities in the nine-county Bay Area derive a portion or all of their drinking water from watersheds within the Bay Area. Water districts own and manage 190,000 acres in all Bay Area counties except San Francisco.[22] The entire Bay Area population relies to some degree on the surrounding open space for drinking water.

Although many Bay Area water utilities import water from outside the region (e.g., SFPUC, SCVWD, SCWA), most agencies utilize reservoirs situated within the Bay Area to store water. These reservoirs are the region's water safety net and often provide other public benefits (classified as cultural services by the MEA) such as boating, fishing, and swimming, while their surrounding watershed lands are often owned and managed by park districts for hiking and other outdoor recreation.

Agricultural Water Supply

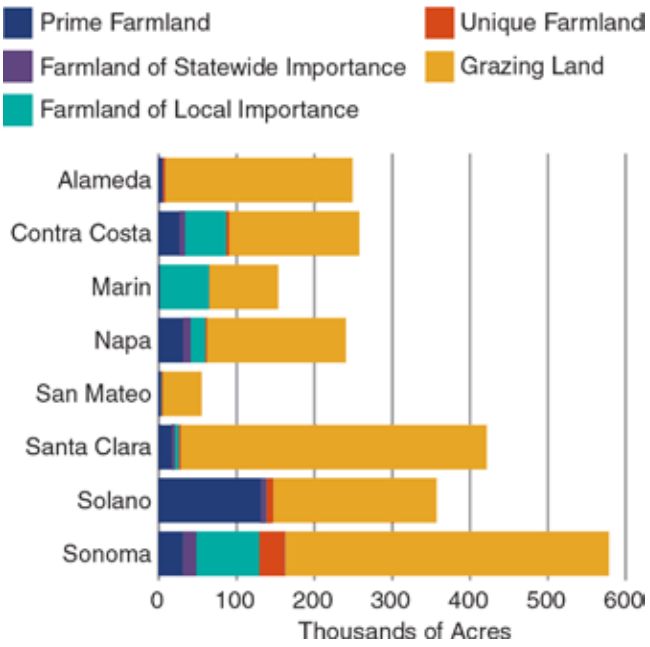
Water supplies for agriculture in the Bay Area are largely derived from groundwater and surface water (i.e., creeks and on-farm reservoirs).

There are about 1.7 million acres of suitable grazing land and 575,000 acres (about five times the size of the City of San Jose) of irrigated farmland in the Bay Area.[23] Springs and aquifer wells are essential for the region's many livestock operations. Agriculture, especially livestock grazing, is a common land use on natural floodplains where stormwater is temporarily stored and potentially destructive flood energy can dissipate. An important aspect of this process is the natural spread of water over permeable soils and geology, allowing stormwater to filter down into aquifers. In this way, agriculture both benefits groundwater and benefits from groundwater, as grazing's relatively minor impact on soil permeability (relative to concrete) allows water to infiltrate and be stored in the ground, which is essential for the region's agriculture (and rural residents). Of course, groundwater is essential to natural systems as well: without groundwater seeping into the region's salmon-bearing creeks during the Bay Area's mediterranean dry season, we would not have salmon and other native fish and shrimp in our rivers and creeks.

Locally-Grown Food

Food is one of the most important services ecosystems provide, and the Bay Area ecosystem allows extensive regional food production. The Bay Area's food system includes a total of over 2 million acres of agricultural land, which the California Department of Conservation categorizes into four categories: Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Unique Farmland, and Grazing Land.[24] Figure 4 shows the farmland categories and suitable rangeland for eight Bay Area Counties (excluding San Francisco County which does not have any land in these categories).

Figure 4:
Bay Area Farmland Acreage Categories by County



Data Source: California Department of Conservation
Analysis: Bay Area Open Space Council and Bay Area Council Economic Institute

Agricultural land forms the edges of 68 out of the region's 101 cities, making the Bay Area somewhat unique among metropolitan areas. Perhaps this is what leads to a deep association that Bay Area residents feel with agriculture. The 2011 Sustaining Our Agricultural Bounty report remarked that the region's farmers and ranchers have a potential competitive advantage in "their proximity to seven million Bay Area consumers, many of whom take pride in their region and its unique quality of life [and] who are sympathetic with the idea of preserving family farms, and many who have embraced the idea of eating locally."[25]

Cultural Services

The quality of life in the Bay Area benefits greatly from the cultural services provided by open lands in the region's ecosystem.

Outdoor Recreation and Education

There are over 3,000 unique publicly accessible parks in the Bay Area. These parks range from sub-acre pocket parks featuring dog runs, community gardens, and play structures, to large, remote wildernesses such as the 110,000-acre complex of connected and open-access park land formed by Point Reyes National Seashore, Golden Gate National Recreation Area, and surrounding state parks and Marin Municipal Water District watersheds. The Bay Area's network of parks offers diverse activities enabled by a wide range of park types, characteristics, and sizes. For example, for swimming and hiking, the East Bay Regional Park District alone offers six open-water lakefront beaches, three chlorinated lagoons, two pools, and two bay shoreline beaches, as well as 1,200 miles of paved and unpaved trails.[26]

There are numerous regional trails throughout the Bay Area that connect neighborhoods to downtowns, shopping and job centers, and surrounding open lands. Two notable trails, the Bay Trail and the Bay Area Ridge Trail, when completed, will together total 1,050 miles (500 miles and 550 miles, respectively).[27]

Health Benefits

The open recreation land in the Bay Area directly affects the health of the region's citizens. Outdoor activity significantly improves public health.[28] The Health Benefits of Parks report published by the Trust for Public Land cites two important findings. First, creation of new parks or enhancement of access to parks increases physical activity (by nearly 50 percent). Park use is more frequent and physical activity is higher when parks are within walking distance. Second, studies show that "mere contact with the natural world improves physical and psychological health."[29]

Regulating Services

The welfare of the Bay Area and its residents depends on the benefits received from the regulatory services of the region's ecosystem, in which open lands play a crucial role.

Climate Resilience

Storing carbon is a vital function of the ecosystem. Forests, woodlands, grasslands, and the ocean are all essential "carbon sinks" that remove atmospheric carbon and reduce the effects of climate change, such as catastrophic weather events and flooding. The health of a coastal region like the Bay Area depends on climate resilience for future population stability.

Ecosystem Health

Ecosystem regulating services ensure a diverse, resilient gene pool of local species. For example, if a large number of oak trees contract a disease, having a disease-resistant variant of the species around to take their place ensures that the ecosystem will retain its overall health and rebound from the losses.

Pollination

Regulating services are essential for agriculture as well as the growth of wild plants. One of the most striking examples is pollination, a service provided by local insects and some birds. Replacing animal pollination with manual labor (i.e., transferring fruit, corn, and other agricultural products' pollen by hand) could cost the agricultural industry millions of dollars[30] and have a catastrophic impact on Bay Area plant species such as wildflowers.

Measuring the Indirect Benefits in the Bay Area

The four categories of ecosystem services developed by the MEA have become foundational to modern economic valuations of natural assets. To apply values to these services and keep costs from being prohibitive, analyses have utilized "benefits transfer" in their methodologies. Benefits transfer methodologies use a collection of primary valuation studies conducted in other regions, but on similar cover types, to extrapolate the value of natural assets in their study area.

A pioneering study using this strategy was conducted by the New Jersey Department of Environmental Protection in 2006. The report, *The Value of New Jersey's Ecosystem Services and Natural Capital*, compiled and summarized over 100 academic studies encompassing 210 value estimates of different cover types. Using the benefits transfer approach, the study estimates the value of the flow of ecosystem services benefits in the state at a total equivalent to $24.4 billion per year in 2015 dollars.[31]

The Trust for Public Land has conducted a series of studies that measure the economic value of urban parks, with two of the most recent reports featuring Bay Area cities. These studies consider seven main economic benefits, which provide either direct or indirect value to governments and individuals: property value, tourism, direct use, health, community cohesion, clean water, and clean air. Although these measures don't include the full breadth of ecosystem services, they are a step in the right direction toward more fully accounting for the value of natural landscapes. The Trust for Public Land conservatively estimates that the San Francisco and San Jose parks and recreation systems contribute $959 million and $1.2 billion to their respective economies each year.[32]

The East Bay Regional Park District's 2017 update to its 2000 *Quantifying Our Quality of Life* study estimates the total annual economic value of the park district benefits at $500 million.[33] This total value incorporates five major factors: ecosystem services, recreation value, property value, healthcare value, and additional benefits. The report advances beyond the existing literature in two important ways. First, it manages to fully incorporate ecosystem services. Previous reports acknowledged the difficulty of translating natural capital into economic capital and therefore did not include a complete valuation of ecosystem services. Additionally, the East Bay Regional Park District report begins to address open space benefits at a larger regional level, rather than simply a city level. This is increasingly important as open space becomes part of the discussion of larger, regional issues, such as the Bay Area housing crisis.

San Bruno Mountain State and County Park
"San Bruno" Mtn 09" by Tom Hi

Healthy Lands & Healthy Economies

As a region valued immensely for its highly productive economy, the Bay Area faces enormous pressure to prioritize this economy in the midst of economic challenges like the housing affordability crisis. Until now, it was easy to quantify the value of the Bay Area economy in tangible, billion-dollar terms, but the natural capital that supported such a robust economy was defined vaguely as "priceless." Although the term "priceless" is intended to connote a value so large that it cannot be defined, it is difficult to comprehend that immense value, making it perhaps easier to sacrifice a priceless alternative than one with an enormous, albeit finite, price tag. In order to make the best possible land use decisions, a way to compare these abstract and concrete values is needed.

The work of the Healthy Lands & Healthy Economies initiative is of key significance in the efforts to measure the true value of the Bay Area's open space because it establishes the crucial connection between natural capital and land use decisions. Founded on collaboration between the Resource Conservation District of Santa Cruz County, the Santa Clara County Open Space Authority, and the Sonoma County Agricultural Preservation and Open Space District, this initiative has developed a framework to qualitatively and quantitatively analyze the economic value of open lands in Santa Clara, Santa Cruz, and Sonoma counties using the framework developed by the MEA.

Previous reports have quantified the value of one particular resource, the value of all open lands on one particular economic factor, or the value of a particular type of open space (e.g., parks) on a region's economy, but the Healthy Lands & Healthy Economies initiative is a landmark project in providing a comprehensive valuation. Although the project acknowledges that existing data limitations do not allow for a perfect valuation, its estimates include the impact of all ecosystem services within the Millennium Ecosystem Assessment's four defined categories: supporting services, provisioning services, cultural services, and regulating services. These categories serve to summarize the ways in which open space can economically benefit society, and the Healthy Lands & Healthy Economies initiative is among the first to incorporate all of these ecosystem services categories at a county-wide level.

The initiative is not only comprehensive with regard to resources, but also with regard to land type, with analysis spanning across different types of open space. To take the example of Santa Cruz County, data is collected on the number of acres of open water; deciduous forest; evergreen forest; mixed forest; shrub/scrub land; grassland; estuarine emergent wetland; palustrine emergent wetland; pasture/hay; estuarine woody wetland; palustrine woody wetland; and partially developed land in the county. This list is so thorough that to calculate the economic value of each acre of land type would seem an insurmountable goal, if not for benefit transfer methodologies, which enable estimation of the value of natural assets when time or resources do not allow for the conducting of primary valuation studies.

Using benefits transfer methodologies to apply the estimates of previous primary studies in comparable locations to the region being studied, the Healthy Lands & Healthy Economies initiative makes estimates for the value of the annual flow of ecosystem services benefits and for the asset values of natural capital in Santa Clara and Santa Cruz counties. For Santa Clara County, it is estimated that natural capital provides between $1.6 billion and $3.9 billion in benefits each year to people and the local economy.[34] In Santa Cruz County, the value of the annual flow of ecosystem services benefits is estimated to be between $800 million and $2.2 billion.[35] However, it would be misleading to consider the value of natural capital only in the short run, as natural resources can provide immense benefit in future years.

With a conservative estimate that assumes depreciation over time, Santa Clara County's minimum natural capital asset value is between $45 billion and $107 billion.[36] Performing a similar calculation yields an estimate of Santa Cruz County's natural capital minimum total asset value between $22 billion and $61 billion.[37] These estimates are conservative because they assume that the value of natural capital depreciates at the same rate as built capital, even though natural resources are largely self-sustaining and renewable. Estimates that treat natural resources as non-depreciating could yield values as high as $386 billion[38] and $220 billion[39] for Santa Clara and Santa Cruz counties, respectively. In addition to calculating the general asset value of all open lands in the counties, the Healthy Lands & Healthy Economies initiative emphasizes its practical applicability to land use decision making in the area. Using return on investment and benefit cost analysis examples, the analysis also provides instruction for assessing the value of specific conservation investments. Although the numbers depend on the exact investment, it is clear that investments in natural capital tend to yield high returns with low risk.[40]

The Healthy Lands & Healthy Economies initiative is highly informative for regional decision makers as they seek to balance the needs of supporting inclusive economic growth and at the same time protecting the open space that is so critical to the Bay Area's well-being. Extrapolating the results from the Santa Clara study, weighted by county area, would put the value of the annual flow of ecosystem services benefits provided by the Bay Area's natural capital at between $5 and $14 billion per year.[41]

The East Bay Regional Park District's 2017 update to its 2000 *Quantifying Our Quality of Life* study estimates the total annual economic value of the park district benefits at $500 million.

Briones Regional Park
"Winter (hah!) hike at Briones Regional Park" by Flickr User Albedo20

Challenges and Trends

A Growing Need for (the Right Type of) Housing

The Bay Area economy is once again the envy of the world. In 2015, the region's economy grew at a rate of 5.8 percent, and the San Jose-Sunnyvale-Santa Clara MSA grew at a rate of 8.9 percent[42]—two full percentage points faster than China did during the same time period.[43] Such rapid growth has exacerbated long-developing housing and transportation crises created by an inability—and in many cases an unwillingness—to build near major transit and job centers. In turn, the Bay Area's open space and working lands are put at increased risk as resistance to urban infill projects shifts development to suburban and rural greenfields.

Despite the Bay Area's robust GDP growth, housing shortages in the Bay Area and other parts of California weaken the state's economy as a whole. A 2016 McKinsey Global Institute analysis, *A Tool Kit to Close California's Housing Gap*, found that 50 percent of the state's households are unable to afford the cost of housing in their local markets. Households that are spending a large share of income on rent or mortgage payments are spending less money elsewhere in the economy, and the housing shortage is also a lost opportunity for the construction industry, which is creating less economic output. The McKinsey study estimated that California loses over $90 billion worth of construction investment and more than $50 billion in consumption that is crowded out by high housing costs. That's a loss for California of over $140 billion per year in economic output—or 6 percent of gross state product—as a result of the housing crisis.[44]

Supply and Demand Mismatch

The strongest economic recovery in the US has resulted in commensurate job growth, but it has not fueled a parallel growth in housing units. In 2015, the nine-county Bay Area added 133,000 jobs but only 16,000 units of housing.[45] This surge in demand and dearth of supply has caused home prices to soar, displacement to increase, and sprawl to become more attractive to developers and future residents alike.

The median home price in the Bay Area is now just over $700,000, up 80 percent since 2009, and is fast approaching the 2007 pre-recession peak of $729,000.[46] Congestion in the region is also on the rise, climbing 33 percent from 2010 to 2014. The Bay Area is now tied with Los Angeles in hours of traffic delay and congestion cost per commuter and ranks just behind Washington DC, the most congested region in the country.[47] In 2013, over 100,000 commuters in the region traveled 90 minutes or more to reach their jobs.[48]

Failure to Build in Priority Development Areas

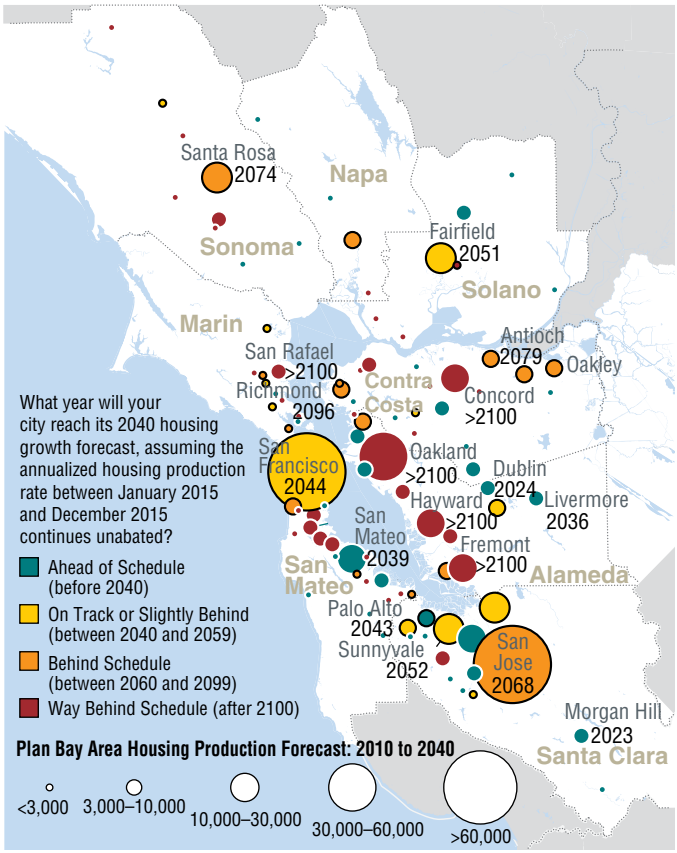
A 2005 analysis found that if every available infill parcel in California were developed to its fullest potential, the state would gain 4 million additional housing units—meeting all projected demand until 2025, while simultaneously sparing 350,000 acres of undeveloped greenfield.[49] The 2016 McKinsey Global Institute *Tool Kit* study found that one to three million housing units could be added within half a mile of major transit hubs in California.[50] The benefits to the climate would also be significant. Research has shown that more compact development coupled with investments in transit could reduce GHG (greenhouse gas) emissions from passenger vehicles by 9 to 15 percent, while also reducing energy costs significantly.[51] Despite these benefits, the Bay Area has fallen behind on its infill housing goals.

In order to plan for and monitor housing production, state law requires that local governments adopt a housing element as a part of their general plans. Each jurisdiction in the state must conduct a Regional Housing Needs Allocation (RHNA) assessment—a state-mandated process intended to identify by affordability level the total number of housing units that each jurisdiction must build in order to make room for new residents and maintain affordability. Under SB 375, a majority of these units are to be built within Priority Development Areas (PDAs).

Priority Development Areas were established following the passage of SB 375 to support future growth in a sustainable manner. Identified and approved by local cities or counties, these areas within existing communities are typically accessible to transit, jobs, shopping, and other services. Over 70 Bay Area local governments voluntarily designated nearly 200 PDAs which are intended to absorb about 80 percent of new housing and over 60 percent of new jobs on less than 5 percent of the region's land, in accordance with the Plan Bay Area strategy. The overall intended results are locally-supported, compact and efficient growth patterns that meet GHG reduction targets and provide adequate housing for the Bay Area's growing population.[52]

As a whole, the Bay Area was only successful in permitting 57 percent of its allocated housing during the 2007–2014 RHNA cycle, leaving a deficit of 91,402 units.[53] The majority of the unpermitted units (90,057) were allocated to be affordable for very low- to moderate-income households. Given the significant time and effort put into planning for infill development, the slow progress on housing development within PDAs is striking. During the first two years of Plan Bay Area's implementation, only half (54 percent) of all permitted housing was located within PDAs. A recent sample of 65 PDAs conducted for Plan Bay Area found that only 235,000 of 337,600 allocated housing units were likely to be built by the 2040 deadline.[54]

Figure 5: Bay Area Housing Production



Source: Adapted from Metropolitan Transportation Commission, Bay Area Housing Production: Forecast vs. Observed, Map of the Month: June 2016, p. 1

As a whole, the Bay Area was only successful in permitting 57 percent of its allocated housing during the 2007–2014 RHNA cycle, leaving a deficit of 91,402 units.

As the MTC Bay Area Housing Production map shows, the majority of cities in the Bay Area are significantly behind in meeting their RHNA obligations. Only a quarter of the region's cities are on track to meet their targets, and many of them are smaller communities, accounting for a relatively small number of units region wide. If the rate of new housing construction continues at the pace that it did between January 2015 and December 2015, San Francisco won't fill its housing allocation until 2044, just behind the 2040 deadline. However it will take San Jose until 2068 and Oakland well into the 2100s to meet their allocations.[55]

The RHNA process has proven itself repeatedly to be a flawed tool for projecting both housing needs and job growth. A 2017 report by the state's Legislative Analyst's Office, *Do Communities Adequately Plan for Housing*, examined the flaws in existing methodologies used in making housing projections and suggested improvements to the process: "The process of developing RHNA projections could be improved to better account for unmet housing demand and give communities a more realistic idea of their housing needs....Consistent with this, one option could be to adjust upward RHNA goals for communities with high rents by an amount proportionate to how much their rents exceed the statewide norm. For example, a community whose rents are 25 percent above the statewide average and whose current total RHNA goal is 1,000 could instead be assigned a goal of 1,250."[56]

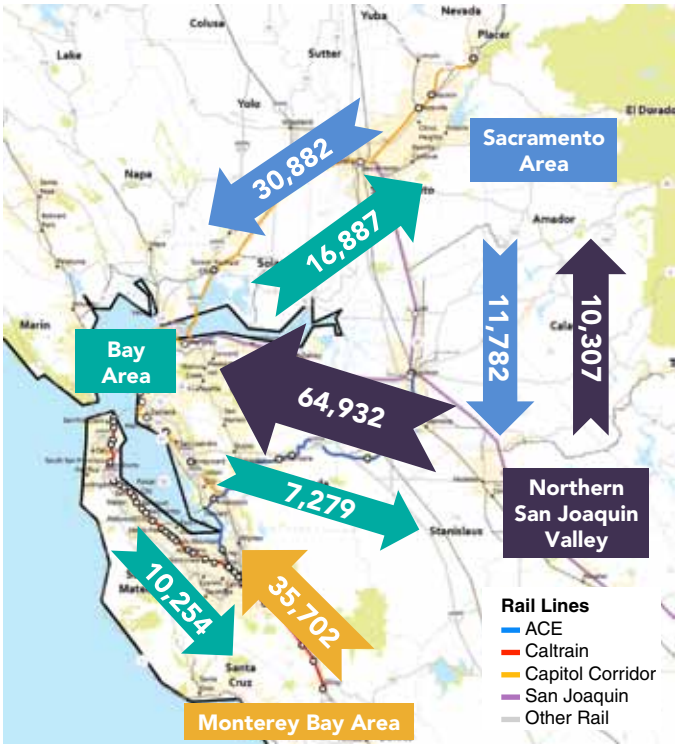
Outsourcing Housing to the Megaregion

The Healthy Lands & Healthy Economies initiative provides a quantitative framework that has extraordinary significance for evaluating the value of open space at the county level, but it is crucial to note that the Bay Area is at least a regional, if not a megaregional, economy. With median Bay Area home prices calculated at nearly three times those of nearby San Joaquin Valley homes, the cost of living in the Bay Area may no longer be offset by higher wages earned in the Bay Area's productive economy, driving many local residents to seek less costly housing in the San Joaquin Valley.[57]

High housing prices lead to a trend of megaregional sprawl that threatens both environmental and economic goals. Lengthy commute times and surges in vehicle miles traveled contribute to California's position as one of the largest greenhouse gas emitters in the world, with the biggest share (36 percent) of those emissions sourced from transportation.[58]

Composed of 21 counties grouped into four regions (Bay Area, Sacramento Area, Northern San Joaquin Valley, and Monterey Bay Area), the Northern California megaregion includes three of the fastest growing counties in the state. San Joaquin, Santa Clara, and Yolo counties were the second, third, and fourth fastest growing in the state in 2015. The California Department of Finance projects a continued population influx into the Sacramento and Northern San Joaquin areas in the years ahead. With inland regions leading the way, the Northern California megaregion is expected to add nearly 1.9 million more people by 2030.[59]

Figure 6:
Daily Commuters Crossing Regional Boundaries, 2013



Source: Adapted from University of the Pacific Center for Business and Policy Research analysis of data from Census Transportation Planning Products, 2009—2013

While the megaregional workforce has increased by 17 percent between 1990 and 2013, the number of commuters crossing regional boundaries has grown by 78 percent. Due to a lack of inter-regional transit, the vast majority of these workers are commuting by car to jobs in the Bay Area. Of the nearly 200,000 commuters crossing regional boundaries in 2013, 69 percent were commuting into the Bay Area for work.[60] Intraregional commute times are also rising, as transit and roads strain to accommodate increased traffic. The end result is undermining a decade of planning for climate change.

While California's coastal communities have underbuilt for decades, inland metros such as Bakersfield, Fresno, Riverside-San Bernardino, San Joaquin, and Sacramento have built housing at almost twice the rate of the average metro nationwide.[61] Much of this is a result of a combination of lower land prices, lower production costs, and more available land zoned for housing.

A high cost of living, primarily driven by high housing costs, has pushed many Bay Area residents to look for cheaper locales, including areas out of state. And because of the relative affordability of housing inland, many have had no choice but to relocate from urban areas to exurban areas within the megaregion. The California Department of Finance projects that the Central Valley's population will increase by 4.7 million by 2050, nearly twice the rate of growth as California as a whole.[62] This outsourcing of housing and its consequences has occurred despite the goals of SB 375 and years of planning efforts by metropolitan planning organizations. If development patterns continue in this fashion, significant investments in transportation will be needed to slow GHG emissions and, even then, 2050 reduction goals will be hard to meet.

Figure 7: Projected Population Increase, 2010–2050

Region	Population 2010	Projected 2050	Increase 2010–2050	% Change 2010–2050
San Joaquin Valley	3,971,659	7,498,870	3,527,211	89%
Sacramento Valley	2,826,246	4,020,957	1,194,711	42%
Central Valley (Total)	6,797,90	11,519,827	4,721,922	69%
California	37,253,956	51,013,984	13,760,028	37%

Data Source: State of California, Department of Finance, Population and Housing Estimates

While California's coastal communities have underbuilt for decades, inland metros such as Bakersfield, Fresno, Riverside-San Bernardino, San Joaquin, and Sacramento have built housing at almost twice the rate of the average metro nationwide.

The Impact of Land Conversion to Human Use

The San Francisco Bay Area attracts people from across the world to visit and work in its spectacular landscapes: golden hills and ridgelines, orchards and green valleys, all cradling the iconic Bay. These greenbelt lands frame our cities, draw us out on adventures, and provide a rich abundance of fresh local food in all seasons. The benefits add up, but despite its beauty and its value, the Bay Area's greenbelt is threatened.

The Greenbelt at Risk

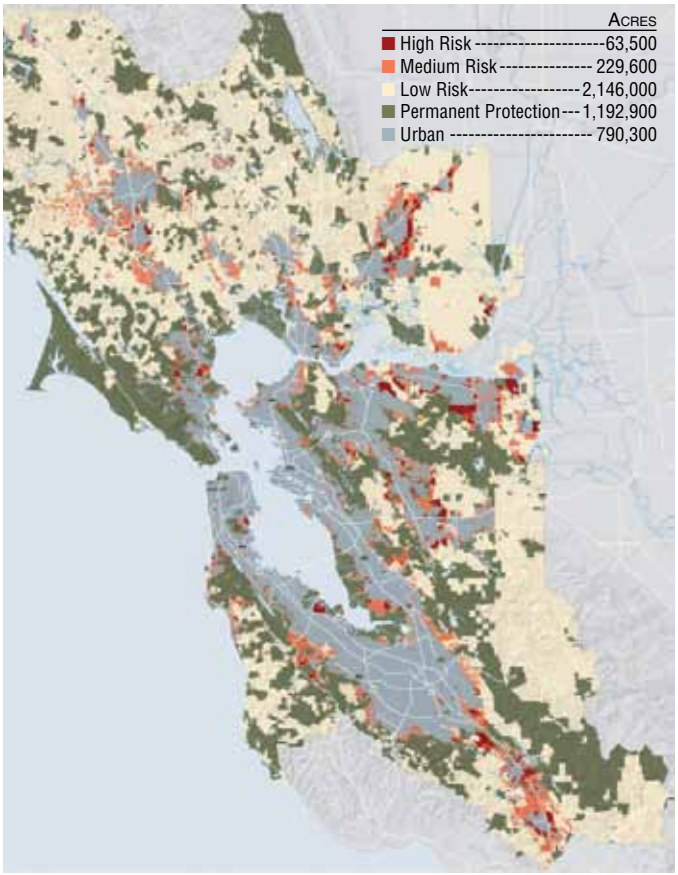
A comprehensive survey of city and county plans and proposals reveals that large areas of land face a high probability of being developed. Greenbelt Alliance's *At Risk: The Bay Area Greenbelt*, released in 2017 and adapted below for this report, analyzed those threats.

"The risks vary. In some areas, specific development proposals may already be adopted or are being considered—such as luxury housing on a Napa hilltop. Some lands may be zoned for development—for example, grazing land that is zoned for rural residential development. Other areas are designated for development in city or county plans, or included in proposed boundary expansions, like farmland outside of Brentwood. Some lands may be vulnerable to development based on qualities of being flat, or being close to roads and to existing development. Some have a long history of development proposals that so far have failed.

"For [the *At Risk*] report, these risks are scored relative to one another—an approved project, for example, puts an area at higher risk of development than zoning or historic threats. The land's risk score is then adjusted based on whether that given area is protected by policies to prevent development.

"The resulting At Risk Map [Figure 8] brings to light—out of the depths of city and county planning documents—what the region's future could hold."[63]

Figure 8: At Risk, Urban, and Protected Lands of the San Francisco Bay Area



Source: Adapted from Greenbelt Alliance, *At Risk: The Bay Area Greenbelt*, January 2017, p. 5

"Since Greenbelt Alliance's last *At Risk* report was released in 2012, the amount of total land at risk in the Bay Area—land that could be developed in the next 30 years—has dropped, from 322,800 to 293,100 acres."[64]

"This is an area of 458 square miles, almost 10 times the size of San Francisco, that could be paved over in a generation.

"Of that land, 63,500 acres are at high risk, meaning they face development within the next 10 years. These areas are under extreme market pressure; the bright red areas on the At Risk Map [Figure 8] reflect dozens of proposals that threaten the Bay Area's ranchland, farms, wildlife habitat, and wetlands."[65]

"Across the eight Bay Area counties addressed in this report, Contra Costa County has the most total land at risk; about one out of every five acres of threatened land in the region is in Contra Costa. Contra Costa also has the most land at high risk, land that could be developed in the near term; the next two counties with the most land at high risk are Santa Clara and Solano counties. There, developers have put forward many proposals to build on farmland and in valleys, and cities seek to expand out into the greenbelt."[66]

Urban Expansion and Parcelization for Rural Residences

The two largest drivers of open space conversion in the Bay Area are urban development expansion and rural residential development/parcelization. Together, the conversion risk over both the short term and the medium term threatens the values that attract people and businesses to the Bay Area.

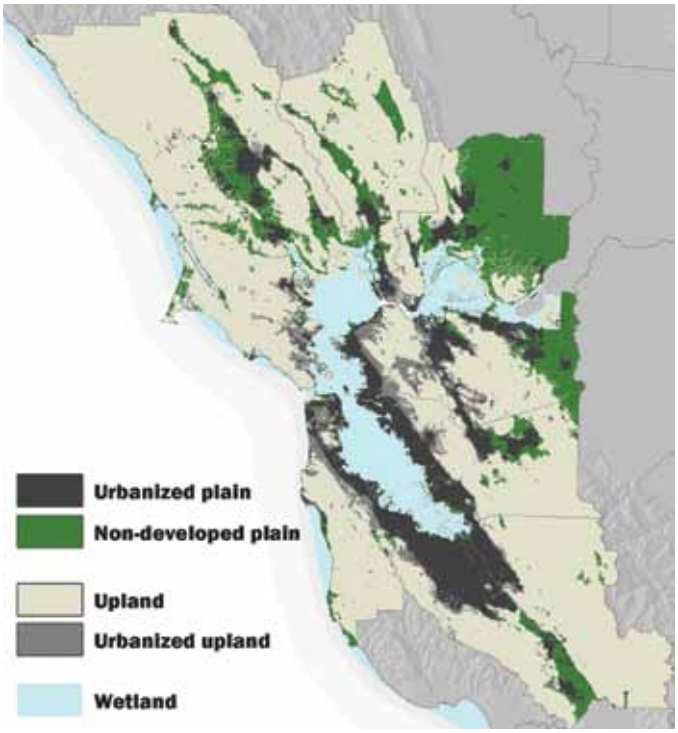
Between 1984 (the year the California Department of Conservation began monitoring urban expansion) and 2014, urban development in California has occurred at an average of 4,370 acres per year, the equivalent of adding another City of Pleasant Hill or Rohnert Park each year.[67]

When large rural parcels are subdivided and converted to rural residential uses (parcels of 10 acres or less in size) or other development and human uses, the aesthetic, recreational, and economic benefits of agriculture and open space tend to decrease. As part of the Conservation Lands Network, the Bay Area Open Space Council calculated an estimate of rural residential development in the nine-county region and found over 98,000 individual parcels of 10 acres or less covering approximately 150,000 acres.[68]

Parcelization brings with it more roads, fencing, competitive non-native species, and the use of pesticides, insecticides, and rodenticides that affect the health of natural plant and animal populations. Certain types of fencing can impede critical movement corridors for deer, mountain lions, and other wide-ranging wildlife.

Urbanization has centered on the region's valleys, with 45 percent of the developable (non-wetland) plains developed as of 2014 (Figure 9). Most of the remaining undeveloped plains are agricultural lands in Solano, Sonoma, Napa, and eastern Contra Costa counties.[69]

Figure 9:
Urbanization of the Bay Area's Valleys and Plains



Data Sources: California Department of Conservation, Farmland Mapping and Monitoring Program; US Geological Survey, Land Surface Form; US Fish and Wildlife Service, National Wetland Inventory

Analysis: Bay Area Open Space Council

Effects on Agriculture

Valleys are where deep fertile soils develop. The State of California maps prime farmland, which is defined as having the best combination of physical and chemical characteristics for producing food. Between 1984 and 2014 in the Bay Area, 69,000 acres or more than 100 square miles of prime farmland (a total area over twice the size of San Francisco) were converted to urban development.[70]

Losing farmland affects the region's long-term economic stability. Just as a diversified personal investment portfolio minimizes risk of monetary loss from any one event, a diversified regional economic base that includes agriculture minimizes impacts from the volatility of one single sector.

When a parcel is reduced through subdivision to below a certain acreage threshold—some rangeland experts say around 100 acres—it can no longer support a viable livestock operation that can compete with the large-scale agribusinesses of the California Central Valley. Parcelization has led many Bay Area livestock ranchers to seek grazing lease arrangements on multiple disparate parcels to meet the needs of their herds, adding to operation costs. Thus, when parcel subdivisions occur, the Bay Area loses its capacity to support agriculture and thus its rural agricultural heritage.

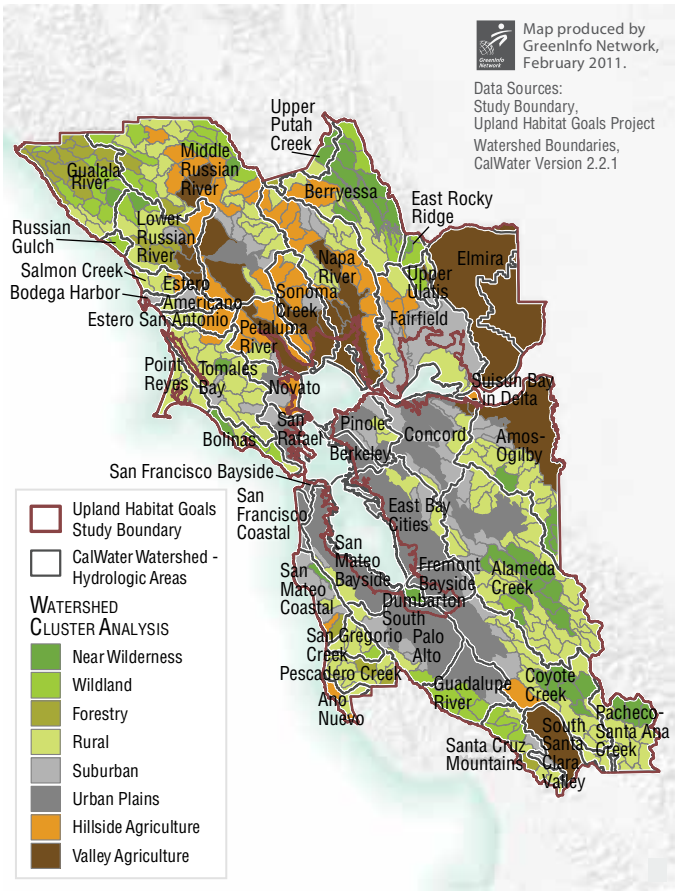
Effects on Water

Natural and agricultural flatlands are also where flood water is temporarily stored and flood energy is allowed to thin out. An important aspect of this process is the natural spread of flood water over permeable soils and geology, allowing aquifers to recharge. Water stored in the ground is essential to the region's agriculture and many of its rural residents. Groundwater also feeds the region's salmon-bearing creeks during the Bay Area's mediterranean dry season.

Developing land with high potential for groundwater recharge puts the region's water supply at risk. Once these important lands are paved over, aquifer recharge is effectively lost. Groundwater storage capacity far exceeds surface storage capacity, so groundwater is the Bay Area's best insurance against drought and decreased Sierra snowpack—the primary source of water for the SFPUC, EBMUD, and other utilities that import their water from the high mountains.

The Conservation Lands Network estimates that as of 2011, only 14 percent of the Bay Area's watersheds are in a relatively natural state (Figure 10).[71] The cluster analysis of watersheds combined potential impacts from roads and railroads, commercial and residential development, agricultural practices, logging, and fire to estimate watershed integrity. Near wilderness and wildland cluster types have the highest ecological integrity.

Figure 10: Watershed Integrity Cluster Analysis



Source: Adapted from Bay Area Open Space Council, Conservation Lands Network, Map Produced by GreenInfo Network, 2011

Creek channelization, as a flood control measure, often accompanies urbanization. Creek channelization increases runoff velocity and thus the erosive power of streams, which degrades water quality and streamside habitat condition. Confined channels also prevent the slowing and spreading of storm water, which in turn prevents infiltration into aquifers.

Conversion of porous natural surfaces to impervious surfaces reduces the amount of water recharged into aquifers and increases the speed with which storm water runoff funnels through streams and out to the ocean. A gauge of watershed health is the proportion of human-caused impervious surfaces versus natural cover. As little as 10 percent impervious surface can create unnatural conditions that result in increased stream velocities and reduced water quality and groundwater infiltration.[72]

Effects on Wildlife and Plants

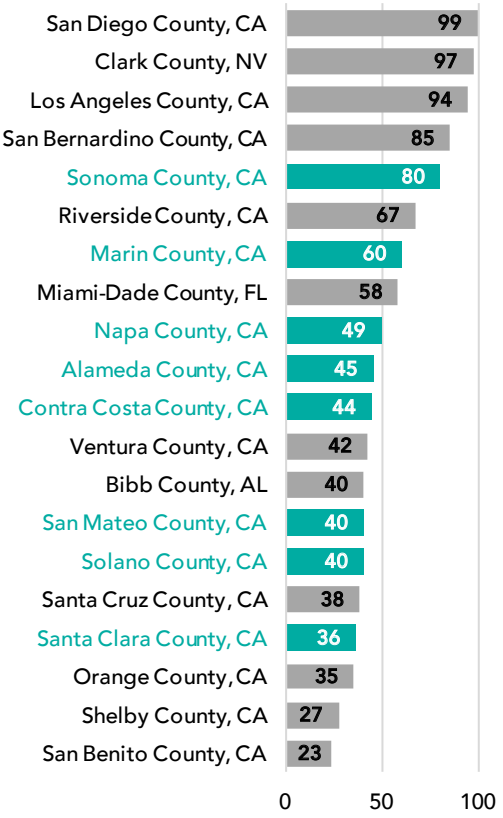
Compared to other metropolitan areas, the San Francisco Bay Area is fortunate to still have iconic species such as mountain lion, bobcat, golden eagle, and steelhead trout. Gone is the grizzly bear, but many species that represent the region's former biological richness are still present. The persistence of these species is in large part due to the amount of remaining available terrestrial habitat that rings the Bay. However, one has only to look at the long list of Bay Area imperiled species (97 endangered or threatened animals)[73] to know that remaining natural open space is just barely enough. And these species face even greater threats in the future. The Bay Area population is expected to increase by 2 million people between 2010 and 2040.[74] The effects of climate change such as prolonged drought, severe storms, and sea level rise will threaten species survival and stress natural communities. Unless we are willing to allow species in the region to go extinct and further destabilize our unique ecological communities, we must act to ensure that enough land is preserved and in the right configurations for species to adapt and survive.

The Bay Area is a global biodiversity hotspot, which means that there is an unusually high number of plants and animals that have evolved to this area compared to everywhere else on the planet. Urban expansion has disrupted the region's unique ecology and has resulted in the local extinction of at least 9 species over the past century.[75] Numerous populations of fish, wildlife, and plants are currently listed as either in near danger of extinction or threatened by extinction. Underscoring the outcome of urban growth in such a biologically diverse region, an examination of the top 35 fastest growing metropolitan areas, with a ranking of their counties in order of largest number of imperiled species within their boundaries, reveals that eight of the nine Bay Area counties are among the top 20 (Figure 11)—a dubious distinction.[76]

Channelization and damming of creeks and rivers to accommodate urban development are responsible for the near collapse of all the Bay Area's migratory salmon populations, with the notable exception being the Lagunitas Creek run of Coho salmon in Marin, where the watershed is particularly devoid of urban development.

Figure 11: Endangered by Sprawl

Imperiled species by county, for the top 20 counties among the nation's 35 fastest-growing metropolitan areas. Eight of the counties (shown in green) are within the Bay Area.



Source: Adapted from Ewing et al., *Endangered by Sprawl*, 2005

Effects on Future Recreation

Parcels can become too small for use as regional parks. Therefore, as large rural parcels are subdivided, opportunities are lost to create regional parks and meet the needs of a growing urban population. In addition, parks with many neighboring private parcels are more difficult to manage.

Climate Change

Climate change is presenting significant challenges for the Bay Area's open lands and the ecosystem services derived from them. Drought-level precipitation in California has stressed the Bay Area's ecosystem. "Across the state, rangeland conditions remain 70% very poor to poor due to lack of water resources. Similarly, topsoil moisture is 80% short and subsoil moisture is 85% short, leaving plants and residual matter excessively dry and susceptible to wildfires. While droughts are a natural part of climate, the Bay Area's [recent] 'exceptional' drought situation is stressing our resources and making the protection of land and water resources all the more important to ensure local supply and storage of water as well as healthy habitats."[77]

Economic and Demographic Disparity

Access to parks and open space is not equally distributed among all communities in the Bay Area. This disparity plays out in a number of ways. For example, the Trust for Public Land reports that less than half of all Bay Area children 15 years old and younger live within walking distance of a park.[78]

Black and Hispanic residents and those in lower income communities in urban areas have longer distances between them and open spaces. Studies have linked access to open space with exercise, linking accessibility to parks in these groups to high obesity rates.

There is a demonstrated correlation between access to open space and its usage for physical activity.[79] A study of youth between the ages of five and twenty in Atlanta demonstrated that those who live close to parks and open space are two to three times more likely to take walks within two-day periods than those without parks readily accessible to them.[80] Increased access to open space can lead to active lifestyles, thereby improving the health of park users. Developing and maintaining open space in socioeconomically disadvantaged communities are key to increased health and longevity for the people in these communities.

Muir Woods National Monument
"A Stream Through the Trees" by User Iceninejon on Flickr

Policy Recommendations

Protecting open space and at the same time accommodating growth in ways that make housing affordable for people at all income levels are equally important priorities for keeping the Bay Area economically resilient, sustainable and equitable. To that end, the region has reason to celebrate that its current Plan Bay Area has had a 100 percent success rate in preventing development in Priority Conservation Areas. Environmentalists and housing advocates alike, though, have reason to be concerned that the implementation of the regional plan has thus far fallen short of its housing targets in Priority Development Areas for concentrated growth. The region must continue to adopt and advance policies that preserve open space and working lands; it must also devote more attention to making infill development easier to achieve, which in turn will take development pressure off of less-transit-served suburban and greenfield areas.

Strategy #1

Secure broad-based funding for parks and for other natural and agricultural lands. Without long-term funding mechanisms, the acquisition, development, and maintenance of parks and open spaces will remain uneven and insufficient. This is particularly true for disadvantaged communities, which already lack the access to parks and open spaces that other communities enjoy.

Strategy #2

Adopt policies that protect the most valuable land. Sonoma's community separators, Santa Clara's Habitat Conservation Plan, and Dublin's urban limit line are examples of policies that protect the most valuable natural and agricultural lands. Agricultural mitigation plans and habitat conservation plans can be crucial tools for protecting open space and working lands closest to our cities. However, for these plans to be successful over the long term at balancing preservation of open space with accommodating equitable growth, they must be paired with the adoption of policies that promote sustainable development.

Strategy #3

Streamline approvals for new housing developments that meet state and local sustainability goals. Discretionary reviews and other appeals far too often delay or completely block developments that support sustainability goals and meet local planning and zoning requirements. New local, regional, and state approaches are needed to expedite approvals for infill housing—particularly within Priority Development Areas—to make real progress in addressing the region's housing needs. These processes should be streamlined while continuing to support long-term environmental quality and sustaining conservation values.

Strategy #4

Address the high cost of construction in the region—particularly for multi-family and infill projects—and the fiscal implications to cities of approving residential construction. Multi-family and infill residential developments are, by their very nature, expensive to build. In many communities, market rents are not high enough to support the densities proposed by local and regional plans, and developments therefore never proceed. Additionally, structures within the tax code incentivize municipalities to prioritize other forms of development—i.e., retail—over housing.

Strategy #5

Establish powers to acquire funding and assemble the necessary land for development in urban areas and in Priority Development Areas. With the loss of over 400 Redevelopment Agencies (RDAs) across California in 2012, it was estimated that California's affordable housing developers lost $1 billion annually in funding to build much needed housing. Thirty-five of those RDAs also had the power to create one developable plot of land by assembling the sorts of small and oddly shaped parcels that are common in urban areas. Absent that power, it becomes more difficult for developers to acquire land to develop in urban areas and in Priority Development Areas.

Strategy #6

Make the state's cap-and-trade program permanent. California's cap-and-trade program is essential for achieving its 2030, 2040, and 2050 climate goals. The program also provides essential funding for low carbon transportation, transit-oriented development, and affordable housing.

Strategy #7

Begin to seriously plan for the megaregion. Despite state planning goals, the growing megaregion has become the most rapidly accelerating new development pattern unfolding in California, and it can no longer be ignored. California's planning goals, including building sustainable communities, will not be achieved without major additional changes to infill development control policies. Land use policies must change in a profound manner to allow more infill to occur more affordably, and state planning efforts must expand their scale to more effectively address megaregional growth.

Strategy #8

Protect agricultural lands with farmland-specific policies. Adopt agricultural policies that support farmers' rights, avoid converting agricultural land out of agricultural uses, and mitigate unavoidable losses. Hire "farmbudsmen," county personnel dedicated to assisting and advocating for farmers and ranchers on local regulatory and planning issues, to help navigate permits and paperwork. Support direct farm sales to customers: promote and market local farm direct-sales efforts, such as U-picks, farmers' markets, and community-supported agriculture programs, to both residents and visitors.

Strategy #9

Inform development decisions with values of natural land and economic consequences of lack of sustainable development. The Bay Area Greenprint (bayareagreenprint.org) is a newly available tool that will allow people to map natural values and risks when considering development. Development decisions must also incorporate the consequences—in terms of rising poverty, cost of living, and economic stagnation—of failing to plan for and execute sustainable and equitable housing plans.

Notes

1 Stephen Levy, Bay Area Council Economic Institute Insights, "Bay Area Job Watch," January 2016 through March 2017, http://www.bayareaeconomy.org/insights/

2 Data Source: CoreLogic, 2017

3 Data Source: US Census Bureau, "American Community Survey," 2013

4 Greenbelt Alliance, *At Risk: The Bay Area Greenbelt*, January 2017, p. 4, http://www.greenbelt.org/at-risk-2017/

5 Central Park, the most visited urban park in the United States, was established in 1857.

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