

# BAY AREA MONITOR

 A Publication of the League of Women Voters of the Bay Area

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## Transporting Kids to Nature

Buffering the Bay Shoreline

Protecting Community Health

Looking to the Horizon

## Notes from Volume 43 and Other Places

The *Bay Area Monitor* has a quirky schedule, as our publication year begins in August and concludes in June. This edition is thus the final one of the current volume, wrapping up our 43rd year in print — but just our first in this full magazine format.

We hope you've liked the fresh look of this new format, which we implemented to help give additional vibrance to our reporting. It's a significant challenge for a grassroots nonprofit like the League to garner attention in a crowded media landscape, but we take great pride in the work of our team of journalists and we seek to showcase their laudable efforts as best we can.

In our continued attempts to do so, we were inspired by a recent panel discussion at the Bay Area Open Space Council's annual conference in May. Entitled "Notes from the Fourth Estate: Hot Topics on the Environmental Beat," the discussion featured the Maynard Institute for Journalism Education's Odette Alcazaren-Keeley, *The Mercury News* environmental reporter Paul Rogers, and Felicity Barringer, editor of the "... & the West" environmental blog at Stanford University's Bill Lane Center for the American West. These experts in the field offered many insights about the obstacles and opportunities facing those of us attempting to communicate with the public about important issues in our communities. Listening to the conversation, we were reminded that the *Monitor* will need to keep trying new ideas in order to remain a useful resource to its readers.

We encourage you, too, to listen to the conversation — we've posted the audio to [bayareamonitor.org](http://bayareamonitor.org). In fact, stay tuned to our website, where another exciting change is coming soon.

In the meantime, please enjoy this last edition of Volume 43. It leads off with Aleta George's coverage of the overlooked importance of transportation in allowing children to experience the outdoors. Her article features organizations that are filling that need, such as Environmental Volunteers, whose own Kristi Moos Wilson graciously provided our front cover photo of a second grade student exploring a grove of redwood trees during a class visit to Huddart

### Thank You for Your Support

The *Monitor* would like to acknowledge recent donations from Eloise Bodine in memory of Mim Hawley and from Sandra Moriarty and Louise Anderson. Such generous financial contributions are greatly appreciated, and help this publication continue to fulfill its mission. Donations to the League of Women Voters of the Bay Area, a 501(c)3 organization, are tax deductible.



Odette Alcazaren-Keeley, Paul Rogers, and Felicity Barringer at the Bay Area Open Space Council's May conference. photo by Alec MacDonald

Park in Woodside. Our back cover captures another source from the article, Professor Nina S. Roberts, from when she coincidentally spoke at the Bay Area Open Space Council's conference.

Other articles from this edition include Robin Meadows' glimpse at a possible solution to both sea level rise and nutrient pollution, Leslie Stewart's explanation of how Assembly Bill 617 (C. Garcia) is starting to give local communities hope for better air quality, and Cecily O'Connor's preview of a new regional planning initiative intended to better prepare us for the uncertain future.

And speaking of the future... we'll be back with you in August for the start of Year 44.

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## Transporting Kids to Nature

By Aleta George

Kids like to be outside, and it's good for them. Nina S. Roberts, a recreation and parks professor at San Francisco State University, said research shows that being outdoors benefits young people physically, emotionally, spiritually, and intellectually. It can improve cognitive functions; increase empathy; reduce isolation, loneliness, and stress; combat obesity; and enhance understanding in a cross-cultural world. "It's a way to get kids more socialized by using nature as a hook," said Roberts. "What better way to get kids to learn about each other than through the natural world?"

Many kids say they like being outside. A 2011 study of youth and nature conducted by The Nature Conservancy found that most of the young people ages 13 to 18 surveyed said being outdoors made them feel peaceful, calm, free, happy, adventurous, and alive. In addition, teachers know that being in nature can improve a student's attention span, grades, and attendance.

If youth, scientists, and teachers agree that being outdoors is good for young people, who spend most of their time at school, why is it that fewer than one-quarter of those surveyed in The Nature Conservancy study went on a school field trip on even a monthly basis?

"Transportation is the biggest barrier that schools have to getting kids outside," said Eileen Jones, education director for WildCare, a wildlife hospital and education center based in San Rafael. Like many environmental educators, WildCare has instituted a bus program to help teachers get kids on field trips with their organization. WildCare offers bus scholarships to schools in all nine Bay Area counties, and like other nonprofits that provide bus assistance, they base the need on the percentage of kids in a given school that qualify for free and reduced-price meals (FRPM).

Cost, administration, and the availability of vehicles and drivers are listed as the greatest challenges in a transportation report prepared by the Great Valley Center and the Stewardship Council. The report says charter buses are the most commonly used mode of transportation, and the most expensive. District yellow buses are more affordable, but they are restricted by midday use and geographic range. Remember carpools? They aren't much of an option anymore given liability, insurance, coordination, and unknown driving records. Furthermore, both parents often work. Public transportation is viable in some areas, but it has limited destinations and can be a challenge to use as a group. SFSU's Roberts says an under-utilized option is existing fleets of buses such as the PresidiGo Shuttle and



Students from San Pedro Elementary School in San Rafael enjoy a field trip to Miwok Meadows in China Camp State Park.

photo courtesy WildCare

those owned by cities and municipalities. She thinks most would be willing to work with schools.

There are several more important reasons to get youth outside. Environmental educators and conservation advocates know that outdoor experiences can lead to future stewardship of the environment. About two-thirds of the teenagers surveyed by The Nature Conservancy said they have had a personal and positive experience with nature. That 66 percent was more likely to say they were concerned about the health of the environment, more likely to think that protecting the environment was "cool," and more likely to think that climate change can be addressed by acting now.

Creating stewards of the future is one reason that organizations provide bus support. Another is to provide equal

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## Transporting Kids to Nature (from page 3)

access to open space and parks. The East Bay Regional Park District (EBRPD) serves about 60,000 school children a year at their 73 parks and 10 visitor centers, said Anne Kassebaum, the district's chief of interpretive and recreation services. About 20 percent of those kids receive low-cost transportation with the Parks Express bus program. In 2017, EBRPD subsidized 477 buses for underserved youth in Alameda and Contra Costa counties at a cost of \$390,000, she said.

EBRPD also provides support in the summer, when outings are sorely needed. A 2007 survey conducted by the Public Policy Institute of California found that 30 percent of teenagers polled did not participate in any outdoor activity that summer. In addition to EBRPD's regular Park'n It Day Camp that charges \$200 per person, the agency and partner Regional Parks Foundation spring for about 240 kids to participate in summer camps for free, including transportation. For one week, 80 kids from a school or community group chosen by the agency are bussed to various EBRPD parks where they fish at Point Pinole, pet animals at the Little Farm in Tilden, swim at Lake Anza, or canoe at the Tidewater Boating Center in Oakland.

Another organization that provides transportation support is Environmental Volunteers in Palo Alto. The nonprofit launched its Transportation Fund in 2011 with a seed grant from the Bay Area Environmental Education Funders Consortium. The Transportation Fund helps pay for buses for schools in the nine-county Bay Area that qualify based on their FRPM percentage. Any teacher from a qualifying school can apply for bus support for an outing of their choice. In the 2016-17 school year, the fund helped 17,149 students get out to parks or open spaces.

Oakland's Youth Outside has a more targeted approach. Youth Outside works to get underrepresented youth in more outdoor programs and into the environmental movement. One of their programs is the Outdoor Trips Fund, which since 2012 has helped nearly 21,000 kids go on field trips that focused on science or environmental education. The organization also addresses other barriers that contribute to deterring some youth from using the trails, including a culture of who is represented in the outdoors. The Outdoor Foundation reports that 74 percent of people who recreate outdoors are Caucasian.

All these programs are competitive. Environmental Volunteers' Transportation Fund starts receiving applications in August, and once the available money has been promised, applicants are placed on a waiting list. As money comes in, out it goes to teachers on the list. Executive Director Elliot

Wright would love to see the program funded adequately to accommodate everyone. "The last thing I want is for teachers to feel like they are competing to get their kids out to open space," he said.

"We're seeing change," said SFSU's Roberts. "Some nonprofits are [funding transportation], but others need to step up. They are the ones who have the skills to help schools out and should do more of the heavy lifting. They know the funding sources more than the teachers do."

Grants are a good place to start. Solano Land Trust recently received a grant from the California Coastal Conservancy to help get kids to a science-based program at Rush Ranch Open Space to learn about the marsh. The organization had noticed a decline in requests from schools for field trips.

"We've got the Suisun Marsh, we've got the kids, and we've got the curriculum. Without the funds for buses the equation wouldn't be complete," said Solano Land Trust's Michelle Dickey.

Help with transportation costs makes a big difference for schools and teachers. The EBRPD asked Parks Express participants if they would have visited the park without bus support, and 94 percent said no.

While programs that bring nature to the schools in a van are also helpful, they can't replace a field trip to a local treasure where kids can look up at the redwoods at Muir Woods National Monument or explore the tidepools at Fitzgerald Marine Reserve. "It is in our DNA to be outside and play in nature," said WildCare's Jones. 

*Aleta George covers open space for the Monitor.*



# Buffering the Bay Shoreline While Improving Water Quality

By Robin Meadows



Oro Loma Sanitary District's unique horizontal levee offers innovative solutions to two critical environmental problems.

photo by Kristopher Decker

This small rectangle of wetland near the San Francisco Bay in San Lorenzo doesn't look particularly visionary. Above ground, it's an appealing — if unusually orderly — array of meadows, cattails, and willows. But there's far more here than meets the eye. This modest strip of land, just 38 by 150 feet, in the Oro Loma Sanitary District promises to help solve two of the Bay Area's most pressing concerns: sea level rise and nutrient pollution.

"In many ways, the project has been a wild success," said Jason Warner, the sanitary district's general manager.

Below ground, effluent from Oro Loma's wastewater treatment plant percolates through layers of sand and gravel. The goal is to test whether microbes living down there can remove nitrogen and other contaminants that currently pass right through the treatment plant and into the Bay. Nitrates can harm aquatic environments by fueling algae blooms, which in turn can deprive other aquatic life of oxygen.

Another key feature of the project that's not immediately obvious is its shape. The land is higher at one end than the other, forming a subtle wedge. The hope is to protect tidal marshes, which help buffer the Bay shoreline against crashing waves, from rising seas. When bounded by conventional steep levees, marshes have nowhere to go and are projected to drown. In contrast, the gentle slope of the Oro Loma project — called a horizontal levee — mimics the natural transition between upland and marshes, giving these vital wetlands room to move inland as the sea rises.

The horizontal levee was inspired by seeps that historically flowed from uplands to marshes around the Bay, before conventional levees broke that connection. "There was a native flora that depended on freshwater seeps into salt marshes," said coastal ecologist Peter Baye, who helped design the Oro Loma project. "The horizontal levee is like a freshwater seep, except the water source is treatment plant effluent."

A few remnants of the natural upland-to-marsh transition are left today, including one near the horizontal levee site in Coyote Hills Regional Park. Baye chose more than 20 plant species growing there for the Oro Loma project, including sedges, rushes, and goldenrod. The next step, spearheaded by the Oakland-based nonprofit Save the Bay, was establishing the native plants in the horizontal levee.

This was a huge undertaking that took about 70,000 plants. Collection permits in hand, Save the Bay staff gathered plant materials from parks and reserves in the fall of 2014. At Baye's suggestion, they focused on rhizomes — underground stems that readily grow roots and shoots — and planted them in raised beds at Oro Loma.

The beds were alive with new shoots by spring and in the fall of 2015, Save the Bay began the task of transplanting them in the horizontal levee. All told, the effort took about two months and 5,000 volunteers. And once the transplants took off in their new home, the project was ready for testing.

"The water quality improvements have been stellar," Oro

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## Buffering the Bay Shoreline (from page 5)

Loma's Warner said.

Preliminary results show that the horizontal levee removes essentially all of the nitrate from the wastewater treatment plant effluent. "Nitrogen disappears almost as soon as it comes into the system," said David Sedlak, an environmental engineer at UC Berkeley and co-director of the Berkeley Water Center, who led the water quality testing.

The horizontal levee also removes pharmaceuticals such as carbamazepine, an anticonvulsant used to

prevent seizures. "It was quite a pleasant surprise," Sedlak said. "It's disappearing in this wetland — the microbes growing there break it down much more effectively than microbes in the sewage treatment plant." Bacteria in the horizontal levee come from the landscape, while those in treatment plants come from sewer pipes and people.

Currently, the microbes growing in the horizontal levee's underground sand and gravel get their carbon from wood chips that were added when the project was built. When those wood chips are gone, roots from the native plants growing on top will provide a new carbon source.

Another benefit of the project is that it gives wildlife a place to live. "Critters are moving in," Warner said, adding that he sees more birds and foxes than before the horizontal levee was built.

But for all the promise of the horizontal levee, getting it approved was quite a challenge. "We did this to advance the science of response to sea level rise, but existing regulations hinder our ability to respond in an environmentally-friendly manner," Warner said. Notably, the horizontal levee was classified as artificial treatment rather than wetland restoration. "The laws are set up to protect endangered species, and don't differentiate between a horizontal levee and a big box store," he explained.

This meant that the approval process took a lot of money — about a quarter of the project's total \$2 million cost — and time. "It took four years to get the permits and only six months to build," Warner said.

Now, the horizontal levee concept is being explored for sites all around the Bay, including Novato in the North Bay,

the salt pond restoration in the South Bay, and the Palo Alto Baylands Nature Preserve on the peninsula. The latter has a spot that seems ideal for a horizontal levee. "It's near a

wastewater treatment plant and there's a pre-existing slope," Baye said.

While expansion is important for optimizing horizontal levees, so is making sure that they don't get built where they don't belong. "They need wide marshes and mudflats, not cliffs or bluffs," Baye said. "The biggest danger is misapplication, which

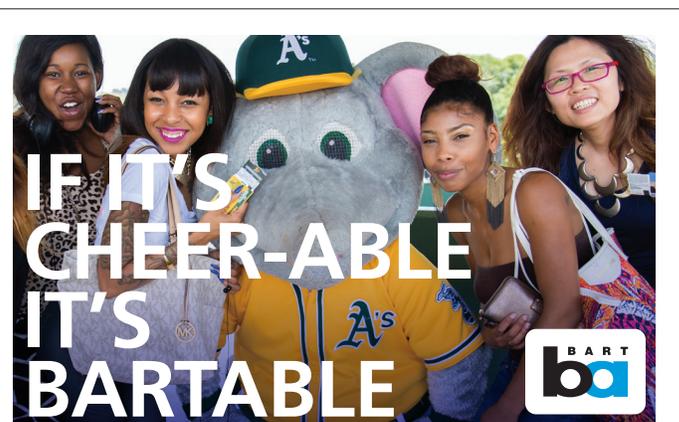
breeds poor results." Just as in other parts of life, ecological fixes can become too trendy for their own good. For example, Facebook and Google were intrigued by horizontal levees, but the sites they had in mind weren't a good fit.

Collaborating with Baye, Sedlak, and the rest of the team is one of Warner's favorite parts of the project. "We don't always solve problems this way — sometimes people stay in their boxes," he said, adding, "When you do something special for the environment, it brings out the best in everyone." 

*Robin Meadows covers water for the Monitor.*



Save the Bay coordinated the transplanting process on the levee in 2015. photo by Jessie Olson



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## Air District Launches Community Health Protection Program

By Leslie Stewart

Gardeners know that the Bay Area has microclimates, places which are colder or wetter or windier than the vicinity. Microclimates apply to air pollution as well, where pollution sources, wind patterns, and other factors combine to intensify the impacts in some communities. These pockets have remained a problem even as the region's air quality on the whole has been steadily improving over decades.

Jack Broadbent, CEO of the Bay Area Air Quality Management District, recently acknowledged this reality, stating that despite the overall progress, "We know that we have communities that experience high levels of air pollutants." He was speaking at the January 2018 kickoff meeting for the Air District's Community Health Protection Program, which will address the problem by looking at air pollution on the neighborhood level, and with the participation of the local residents. Created to implement last year's Assembly Bill 617 (C. Garcia), the program has an initial goal of identifying and prioritizing communities throughout the region with a "high cumulative exposure burden" by July 31. Highest-ranked communities will be eligible for selection by the California Air Resources Board (CARB) for the first round of planning and monitoring assistance under the new state law.

The Air District's existing Community Air Risk Evaluation (CARE) program had already listed communities particularly affected by cumulative air pollution, but now the agency is moving to add more areas to their list, considering factors such as lower life expectancy, health problems like lung and heart disease, and proximity to heavily trafficked corridors and major industrial pollution sources.

Elizabeth Yura, the Air District's community health protection officer, explained that in addition to adding communities, "this program moves us to the next step, to actually change things for the communities. It's a great new toolbox — AB 617 gives us the resources for ground-up exercises, and additional funding for community partnerships."

Using newer tools — such as the state's EnviroScreen program, a recently introduced website called the Healthy Places Index, and direct community input from an online "Open Air Forum," social media, and workshops — the Air District created an initial list of candidate areas which was submitted to CARB at the end of April.

Nominations are not closed, however, and outreach continues through June to make sure that all qualifying communities are included. At workshops around the region and online, residents are being asked to map their homes and nearby pollution sources, suggest measures to improve their air quality, and rank



The Air District's Elizabeth Yura speaks at a workshop for the agency's new Community Health Protection Program.

photo by Alec MacDonald

their top choices for AB 617 programs. Hundreds of comments from over 80 cities in the region had already been received by the end of April, with at least seven workshops still to go.

In an example of the kind of comments received by the Air District, Marin resident Bettina Hughes wrote on the Open Air Forum, "In communities like Forest Knolls and Woodacre it is the wood smoke that affects the inhabitants." The agency is very interested in local impacts like these, which have often been too location-specific for previous planning efforts, but are a perfect fit for the more granular level of AB 617 programs.

The Air District is also reaching out to regional and local organizations interested in partnering with the agency to design plans to clean up air pollution in their neighborhoods. So far, one suggestion for plan design has been to change air pollution permitting, including consideration of cumulative impacts, permit moratoriums in heavily impacted communities, and use of health risk assessments that are being developed under separate Air District regulation.

Many communities on the list for AB 617 participation at the end of July will be eligible to receive funding for technical assistance to aid in completing action and monitoring plans to improve their air quality. Because these are local plans for individual neighborhoods, they may be as specific as improving an Air District regulation or working with local officials on land use ordinances to address a particular facility, or redesigning a traffic pattern to reduce emission build-ups from congested roadways. A community may decide that it will benefit most by gathering data from a new generation of air monitoring equipment able to provide more finely-tuned answers to what is

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## Community Health Protection Program (from page 7)

in the air, either at certain times or round-the-clock.

When it submits its community participant choices for the first year, the Air District will also provide the state with a list of communities to be added over a five-year period, according to Yura. She characterized this second list as a “wish list,” because how many communities participate each year is dependent on future funding. “We are figuring out metrics to help with ranking these,” she explained.

Communities across the state may also self-nominate directly to CARB, but Stephanie Tsai of the California Environmental Justice Alliance commented, “The criteria for the air districts are different from those used for self-nomination — they don’t use the same metrics.”

The first cycle of AB 617 local programs will begin with state approval of participating communities in October 2018. In the Bay Area, first-round participants will probably be those most prepared to start the planning process; they may already be CARE communities or have active partner organizations in place, like West Oakland and Richmond. Others communities will be able to apply for Air District grants to do pre-planning and capacity building as they take their place in line for future cycles. These grants are funded

from a share of \$5 million provided statewide by CARB, plus additional funds from the Air District.

Guidance for action plans and community monitoring programs will be released as the first cycle begins, and by July 2019, one Bay Area community will begin an air monitoring plan and a second will begin to develop an action plan. In October 2019, the Air District will schedule adoption of community action plans developed in the AB 617 process, and then will move to the implementation phase. At the same time, the second round of communities will begin their participation. For each community, the full process is expected to last five years. Yura is pleased that CARB has requested local air districts to provide a discussion of what the program will look like after those first five years.

Yura reported that the Air District is requesting additional funding from the state for staffing and for air quality monitors to support the local communities. She emphasized, “The district is very committed to this program, and I certainly hope we get all the resources we need, but we’ll implement it in some fashion, regardless of resources.” 

*Leslie Stewart covers air quality and energy for the Monitor.*

### Expanding Public Ferry Service

- WETA began passenger ferry operations in 2011
- WETA has invested \$465 million to support ferry service expansion
- Since 2012 ridership has increased 74%; up 29% since 2015
- 2.7 million ferry riders annually from nine terminals

WETA's Long Range Strategic Plan: 44 Vessels and 16 Terminals by 2035



#### Fleet Expansion

- Seven new vessels by 2019 bringing the WETA fleet to 16

#### Route and Terminal Expansion

- Richmond ferry service in September 2018
- SF Ferry Terminal expansion in 2019
- Treasure Island Ferry, Mission Bay, Redwood City, Berkeley and more

#### Operations and Maintenance Expansion

- North Bay Operations and Maintenance Facility – Opened 2016
- Central Bay Operations and Maintenance Facility – Opens 2018

#### Emergency Response Preparedness

- Coordinate water transportation response
- Support evacuation and first responder transportation
- Provide emergency water transit service and expertise

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# What's on the Horizon?

By Cecily O'Connor



Bay Area officials are attempting to better account for unpredictability in their latest efforts to plan for the region's future.

photo by Alec MacDonald

While the Bay Area economy continues to hum, policymakers are exploring various “what ifs” to decide how the region should react when economic output, population, and employment abruptly busts.

This type of planning isn't necessarily new. State, regional, and local officials routinely set aside rainy day reserves to combat the unforeseen. But at a time when affordable housing and reliable transportation are visible problems, regional planners are picturing new scenarios associated with economic contraction and expansion that could affect the Bay Area's potential to prosper over the next three decades. They're also addressing questions about transportation technology, frequent disasters, and political and environmental factors — all of which are unique but also intertwined with the regional economy.

The planning exercise, known as “Horizon,” is spearheaded by the recently merged Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). By exploring external forces, the agencies are attempting to incorporate flexibility and responsiveness into what has traditionally been a statutorily-bound regional planning process.

Horizon's objective is to “tackle uncertainties that exist in our region, nation, and our world that could affect the Bay Area,” said Dave Vautin, Horizon's project manager.

For example, how can the Bay Area improve resilience to national and international geopolitical and economic shifts? Or, what might different levels of autonomous vehicle adoption mean for the transportation investment pipeline?

Horizon is expected to be complete in June 2019, feeding policy ideas to the next iteration of Plan Bay Area, the region's transportation and land-use planning roadmap.

Similar work is occurring in San Francisco, where Mayor Mark Farrell asked city officials to produce a list of recession mitigation strategies by September 1 as part of an economic resiliency plan conceived in 2016. They want to buffer against projections that a severe downturn in the city's technology sector could result in more than 54,000 jobs lost and a 9.4 percent unemployment rate, according to a May 8 press release. San Francisco's economic reserves, including rainy day funds, total \$449 million, close to the city's goal.

At the state level, California is saving for uncertain times, too. Officials expect to have amassed \$9.4 billion in rainy-day reserves by the end of the current fiscal year, according to a May 11 press release. Still, it is uncertain when the next economic slowdown could occur. Trade tensions and the potential for higher U.S. inflation and interest rates are among broad factors that could hurt regional confidence and expansion going forward, economists said.

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# What's on the Horizon? (from page 9)

“We certainly have challenges in terms of housing affordability and transportation, but we had those in a period when GDP and job growth outpaced the nation,” said Stephen Levy, director of the Center for Continuing Study of the California Economy (CCSCE). “So they could crimp growth in the Bay Area, although they have not yet.”

In fact, signs point to companies and communities responding by planning for the future, Levy said. The Bay Area posted a 1.8 percent job growth rate for a 12 month-period ending in March, slightly below the state average but still above the 1.5 percent U.S. gain, according to CCSCE data. Housing permit levels are rising, too, especially in Alameda and Contra Costa counties.

But positive growth effects are not evenly distributed, especially when it comes to finding an affordable place to live. For example, a family of two workers with an annual household income of \$62,400 can afford the median market rent in only five percent of the Bay Area’s 1,500-plus neighborhoods. That’s according to a new report from Bay Area Equity Atlas, a partnership between PolicyLink, The San Francisco Foundation, and the Program for Environmental and Regional Equity at the University of Southern California.

“We have a volatile economy, and even when it does well, it’s not helping everybody,” said Cynthia Kroll, chief economist and assistant director for integrated planning at MTC and ABAG.

## History as a Guide

So, how do you account for and design policy solutions to not only prepare for the worst, but also cultivate an environment that is fair, sustainable, and creates opportunities for residents and communities?

To kick-start the thinking process, Horizon pinpoints

five guiding principles: affordability, connectivity, diversity, health, and vibrancy. The last of these emphasizes the economy and a vision of the Bay Area as an “innovation leader, creating job opportunities for all and ample fiscal resources for communities.”

Beyond these principles, local history offers a guide about the region’s boom-and-bust nature, dating back to the California Gold Rush. It’s also demonstrated resilience to unanticipated events like the 1906 earthquake and World War II, the latter of which ushered in major shifts to population and the economy.

More recent inspiration can be gleaned from public management officials who offered advice after facing challenges around development and social change in the ’70s and ’80s, sustained growth in the ’90s, and the dot-com bust in the early 2000s.

Henry Gardner served as Oakland’s city manager between 1981 and 1993, a period he described as affected by two recessions and then later by corporate departures, job losses, and housing deterioration in the form of vacancies and abandonment.

He recalled several headwinds with which he and other public management officials dealt. One was the crack-cocaine epidemic “terrorizing the community,” he said. The other was the 6.9 Loma Prieta earthquake in 1989, which destroyed a segment of the San Francisco-Oakland Bay Bridge. Two years later, the Oakland Hills Firestorm destroyed several thousand single-family homes.

“Oakland is a fascinating and dynamic place to be involved at any level in civic engagement,” Gardner said. “One has to be well rested to perform on that stage.”

He attributed the city’s ability to emerge from rocky times, in part, to former Oakland Mayor Lionel Wilson (1977 to 1991) and Wilson’s downtown economic development vision

**Solving the Housing Crisis Is Key to Inclusive Prosperity in the Bay Area**

By Sarah Treuhaft with Jessica Pizarek, Angel Ross, and Justin Scoggins

**Cost of Opportunity**

Crossing the \$101,200 annual household income threshold (a family including a teacher and a retail salesperson earning \$31,200 annually, for example) gets you access to about half the region's neighborhoods, located in every county save for San Francisco, where the least expensive neighborhood has a median market rent of \$2,530.

To truly have their pick of Bay Area neighborhoods, households need to make more than \$125,000 per year—a little above the average software engineer's salary at tech companies like LinkedIn or Salesforce, or in occupations like software development, law, pharmacy, and general management. Only 17 percent of renter households bring in that much income.

**Two minimum-wage workers can find affordable rent in just 5 percent of Bay Area neighborhoods**  
Median Market Rent by Census Tract, 2015

**Of low rent neighborhoods**

- 52% rank "very low" in neighborhood opportunity
- Black and Latino residents make up 53% of the population

**Of high rent neighborhoods**

- 53% rank "very high" in neighborhood opportunity
- Black and Latino residents make up 12% of the population

**Median Market Rent (MMR), 2011-2015**

- Low (less than \$1500)
- High (more than \$325)
- Missing data

**Corresponding Household Income before MMR is 30% of income**

- Less than \$62,400
- More than \$125,000

Source: PolicyLink/PERE analysis of data from the Zillow Rent Index (ZRI) Time Series, the 2015 5-year American Community Survey, and the Cost Opportunity Index from directhabits.org

**The Bay Area Equity Atlas partnership recently published *Solving the Housing Crisis Is Key to Inclusive Prosperity in the Bay Area*, the first in a series of reports featuring regional data intended as a resource for policymakers.**

sff.org/report-housing-as-key-to-regions-economic-future

to stimulate long-term growth.

“I think the leaders of the community, both elected and non-elected and professional staff, never lost faith in what the future held for Oakland,” Gardner said.

Rod Diridon Sr., a vocal proponent of modern transit service in Silicon Valley for decades, was instrumental in campaigning for a half-cent sales tax in 1976 that still helps fund the Santa Clara Valley Transportation Authority today.

The cash infusion helped bring light rail to Santa Clara County, in anticipation of population growth and transit demand, said Diridon, who has served as chair of three regional agencies: MTC, ABAG, and the Bay Area Air Quality Management District. Light rail, which serves 30,000 weekday riders, will eventually connect to California High-Speed Rail at San Jose’s Diridon Station, a central hub.

Both Diridon and Gardner consistently advised that planners not overlook the need to offer high-density or high-rise housing near public transit stations to encourage ridership, as well as contribute to traffic and greenhouse-gas reduction goals.

Housing needs associated with Silicon Valley’s light rail system were not looked at “as seriously as we should of,” Diridon said. The shortcoming became clear in the early 2000s when it was difficult to recruit for “service-level” jobs such as police officers and fire fighters. Those challenges persist today because of the imbalance between affordable housing and well-paying jobs.

The lesson now is “we’re reaching the point of crisis in terms of access to employment in Silicon Valley,” added Diridon. “That crisis can be met by hauling people longer distances on mass transit, but it’s not going to be met on highways.”

To increase housing supply, Diridon has long advocated putting high-rise apartment or condominium units atop a multi-acre podium platform to construct a village of sorts above transit stations and station parking.

Whatever form new housing development takes, it remains a core priority that planners need to be thinking about creatively with solutions that are long-term to make sure the Bay Area remains economically important. Both housing and transportation systems need a greater amount of flexibility in them to be successful and thrive during periods of economic growth.

“Planning is not about predictions,” said Egon Terplan, regional planning director at the San Francisco-based nonprofit SPUR. “It’s about ensuring institutions allow for future outcomes.”

Residents can read more about the broader impacts of Horizon’s guiding principles in “perspective papers” as

they’re released online and at expert panel discussions over the next 12 months. In June, Horizon dives into autonomous vehicles and future mobility. Panel discussions will feature the paper’s lead author, in addition to experts from nonprofit organizations, government, and the private sector. The papers “will propose a set of strategies that could be considered by the public to move forward,” Vautin said.

Strategies will be explored through a lens of potential “futures,” or ideas about what the Bay Area would look like if, for example, it experienced three feet of sea level rise or the completion of high-speed rail between San Francisco and Los Angeles. Project evaluation will then follow in the fall, based on a detailed understanding of how the Bay Area would fare under various futures, assuming current policies and investments are not changed to improve the outcomes, Vautin said.

“We will be able to describe opportunities and challenges related to transportation, housing, the economy, the environment, and social equity in each future using model-based analyses,” he said.

During Horizon’s evaluation period, residents, advocates, and other stakeholders can give input at outreach events. MTC and ABAG also will engage with residents via social media throughout the planning effort. Public participation will likely be robust, if the early going is any indication. The first round of outreach for Horizon this past winter — including “pop-ups” across the Bay Area and an online survey about the region’s aspirations — generated more than 10,000 comments. 

*Cecily O’Connor covers transportation for the Monitor.*

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