BAY AREA MONITOR

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

April/May 2019 • Volume 44, Number 5

Sorting out Our Landfill Legacy and the Trash of Tomorrow

Restoring Mountain Meadows

Considering Congestion Pricing

Tend Your Bulbs and Watch Them Bloom

The peculiar land mass jutting out into the water west of Buchanan Street in Albany looks unnatural because it is. The Albany Bulb used to be a construction debris landfill site until ceasing operations in the 1980s. Today, it and the surrounding area serve as a popular recreational destination, especially for dog walkers and beach enthusiasts.

Our front and back *Monitor* cover images (as well as the photo of guerilla artwork above) were shot there, highlighting this edition's coverage of landfills and the Bay Area's ongoing challenges with how to responsibly dispose of waste.

Aleta George starts us off on the next page with an overview of landfills — their history in the Bay Area, the way they're put together, and the risks they pose. Leslie Stewart digs deeper on page 5, explaining why landfills and organic material make for a climate-changing combination. Following her reporting on what's being done to confront that problem, we look at a related one on page 7, showing how Bay Area jurisdictions are responding to a shift in the global market for recyclables. Then on page 8, Robin Meadows reveals how the environmental restoration of mountain meadows supports our water supply, and Cecily O'Connor wraps things up on page 10 with a look at congestion pricing, which like seemingly everything else these days has repercussions for climate change.

All of this comes as a reminder that Earth Day is right around the corner on April 22. One way to get an early start in demonstrating your support for the environment happens around the Albany Bulb on April 20, when The Watershed Project (thewatershedproject.org) holds a shoreline cleanup. If that's not enough Bulb activity for you, Wholly H2O (whollyh2o.org) hosts a bioblitz there the following weekend, with Love the Bulb's Bulbfest (bulbfest.org) going down the weekend after that. But no matter where you do it, we suggest you get outside this spring and show the environment a little love.

Madeline Kronenberg, LWVBA President
Alec MacDonald, Editor
(510) 839-1608 • editor@bayareamonitor.org

Published in August, October, December, February, April, and June, the Bay Area Monitor appears both in print and online at www.bayareamonitor.org. Distributed in the nine-county San Francisco Bay Area and other parts of California, the Monitor's readership consists mainly of elected and appointed officials, government staff, business and community leaders, nonprofit affiliates, library patrons, engaged residents, and League members. Subscriptions to the publication are free.

The Monitor's primary financial support comes from the Metropolitan Transportation Commission and the Bay Area Air Quality Management District. The publication also receives funding from advertising sponsors and through reader donations. The Monitor is nonpartisan, and operates with editorial autonomy.

Wishful Thinking About Landfills

By Aleta George

Ours is a consumer economy. That's a misleading term, isn't it, since much of what we "consume" ends up in landfills. And although state and federal regulations have improved landfills over the last 50 years, they still pose problems. They take up space, can change the behavior of flora and fauna, and are environmentally destructive in the long run.

Some of you are already committed to the goal of Zero Waste, which means that you work hard to keep trash from going to landfills. You recycle paper, glass, and cans; you separate organic waste for composting; and you carry a reusable water bottle, coffee cup, and canvas tote bag. If that's you, then keep up the good work! But most of us need to think more about landfills and why we need to divert as much trash as possible away from them. It may surprise you to learn that even with increased awareness of and municipal participation in recycling and composting programs, waste generation and landfill disposal are on the rise in California, according to state agency CalRecycle.

Operated by Waste Management, the Altamont Landfill in Livermore is one of the largest in Northern California. These photos of its active face were taken in January 2019 as part of a periodic inspection conducted by Alameda County.

photos courtesy CalRecycle

It is worth noting that our trashy ways have gotten better in the last fifty years. At least we're not dumping our garbage in the wetlands of the San Francisco Bay anymore. From the Gold Rush until the 1970s, communities used the bay as their dumping ground until Sylvia McLaughlin, Kay Kerr, and Esther Gulick took to living rooms and boardrooms to protect it from more landfill and to inspire the birth of Save the Bay. That non-profit organization helped enable the 1965 formation of the San Francisco Bay Conservation and Development Commission, which began to regulate the use of the bay. As a result, many shoreline garbage dumps were eventually transformed into parks.

Today, there are more than a dozen landfills-turned-parks on the bay's edges. Nick Lapis, director of advocacy for Californians Against Waste, says that most mounds and high points you see on the edge of the bay are active or inactive landfills. The Albany Bulb was a local dump until it closed in 1987 and was transformed into a popular dog-walking spot and guerilla sculpture garden. Oyster Point Park was an intertidal shore where oysters were once cultivated, and where South San Francisco later dumped and incinerated its garbage; now it's a shoreline park. Further down in Mountain View, Google's corporate headquarters and the Shoreline Amphitheatre are built on former dump sites.

As landfills were forced to move from the bay's edges, the general trend was also for them to become less local and more regional. The bigger ones headed for the hills. Three large regional dumps that operate further inland are Potrero Hills Landfill in Solano County, Ox Mountain Sanitary Landfill in San Mateo County, and Altamont Landfill in Alameda County. Bayside facilities haven't vanished completely, however, with Redwood Landfill in Novato and Newby Island Landfill in Milpitas both still in operation.

On the whole, most of the garbage generated in the Bay Area travels 25 to 40 miles, said Arthur Boone, a Zero Waste Committee member of the Sierra Club's San Francisco Bay Chapter. Boone is eighty years old, and remembers firsthand the progression of landfills and recycling. As a Boy Scout, he and his troop made enough money recycling newspapers to buy camping gear.

The 1976 federal Resource Conservation and Recovery Act established a protocol for the nation's disposal of waste. First there was dump-off recycling and then curbside collection. San Francisco was the first city to have a three-cart system with large bins for green waste and recycling, and a small can for garbage. "At some point there's a click that goes off in your head. Garbage is what we don't compost or recycle," said Boone.

To accommodate this garbage, landfills are built to have complex stratification. Before any trash can be dumped, first a layer of clay and then a sheet of high-density polyethylene are laid down. Above that, a perforated pipe system runs through a layer of gravel to collect and divert leachate (garbage-infused tea) into sumps. Our garbage is thrown on top of these layers and covered daily by topsoil, green waste, or

continued on page 4

Wishful Thinking About Landfills (from page 3)

fabric. Once a section of landfill reaches its permitted height, layers of clay, another plastic liner, drainage material, topsoil, and vegetation are laid down. At that point, depending on your point of view, you would say "Rest in peace" or "Mea culpa" to the capped dump site.

"Rest in peace" means you're looking on the bright side. In addition to those layers of protection, some landfills even work to improve the land to support flora and fauna. The serpentine soils at the Kirby Canyon Recycling and Disposal Facility in Morgan Hill host the world's largest population of the bay checkerspot butterfly. When the butterflies were discovered, the facility owner, Waste Management, worked with Stanford University to develop a conservation agreement that called for setting aside 267 acres and developing a plan to ensure landfill operations wouldn't harm the federally-endangered species. Waste Management owns 252 landfills and services 20 million people in North America, including the Altamont Landfill in Livermore. At this landfill, they put a habitat conservation easement on 1,000 acres of its 2,170-acre site.

Other than special programs, the Altamont Landfill wildlife preserve is not open to the public, but plenty of parks are built on top of old, capped garbage landfills. "They are perfectly fine as open space in the short run," said Lapis. "But inevitably, they are environmental disasters."

Historic landfills have issues, and modern landfills have similar issues, said Alfred Twu, Sierra Club's Zero Waste Committee chair. One thing that's in abundance in a landfill is plastic. "Metals and glass are easy to recycle, but it's hard to find markets for plastic recycling because the value of plastic is low," he said. Plastic represents what he calls "wishful recycling." For years it went to China, but that's an environmental timebomb since they have few environmental protections. Recently, China cut down on the amount of plastic they take. "Recyclers in the US are trying to find other countries to take the plastic, but some cities simply send it to landfills," said Twu.

The biggest immediate problem at landfills, however, is the organic materials such as wood, paper, and food scraps that are mixed in with the trash. The wet trash biodegrades, and creates methane and other nasty gases (*for more on this issue, see "Taking a Bite out of Climate Change" on the next page*).

Landfills can, and do, change the behavior of wildlife. California gulls offer the most dramatic example. Their breeding population increased from 24 birds in 1980 to 53,000 in 2017, according to annual counts made by the San Francisco Bay Bird Observatory. US Geological Survey scientists believe that a combination of improved nesting habitat in local salt ponds and food availability in garbage landfills resulted in what can only be seen as a population explosion. They estimate that landfill fare makes up 50 to 75 percent of breeding gulls' diets.

Capped landfills are not stable in the long run. They are operated as "dry tombs," said Lapis. All the moisture is taken out to stabilize the rotting garbage. But there isn't a liner made that will last forever, he said, and once liquid gets into the mass, leachate can get into groundwater, slopes can fail, and the mass can catch on fire and burn for years. Mea culpa.

"Confidence in liners varies with how much you want to believe they will work," said Sierra Club's Boone. Seems as though wishful thinking about the longevity of landfill liners is similar to the "wishful recycling" of plastic.

The best way to mitigate the problems with landfills is to divert trash from going to them in the first place. That brings us to the Zero Waste programs implemented as goals in several cities in the Bay Area, of which San Francisco is leading the way in practice and performance. But we're not there yet. "One pound in four is still going to landfills," said Twu. "The remaining quarter is the hardest to deal with. We've hit a plateau of what we can divert from landfills and have to go up the food chain to change product and packaging."

Lapis doesn't see Zero Waste as a zero-sum game. He sees it as an "inspirational target," similar to the goals of a manufacturing company that aspires to have no work-related injuries. They don't expect to reach their goal one-hundred percent of the time, but they do implement protocols to increase their chances of success.

Aleta George covers open space for the Monitor.

Taking a Bite out of Climate Change

By Leslie Stewart

For many Bay Area residents, an opportunity to fight climate change comes at least three times a day, as they choose what to eat and how to dispose of the leftovers. Even the most devoted member of the Clean Plate Club will leave a tangerine peel, a dirty paper napkin, or a chicken bone, and many people discard much more. If that organic waste gets shipped off to a landfill, it will decompose and create methane, a greenhouse gas which inevitably leaks into the atmosphere.

Methane traps heat far more potently than carbon dioxide, but it disappears more quickly from the atmosphere, which is why it is classified as a "short-lived climate pollutant." Reducing the formation of methane in landfills can make an immediate, significant difference in combating climate change. The Bay Area Air Quality Management District has estimated that 51 percent of methane emissions in the region are generated by fugitive emissions from landfills; new survey methods give reason to investigate whether these emissions may be even higher than previously estimated.

Residents around the region have already been diverting some of their tangerine peels and paper napkins from landfills by using green waste bins, provided in many communities for collection of organic materials. Although some communities still collect only yard waste, many jurisdictions have implemented food waste collection programs, beginning with San Francisco in 1996.

However, a new state mandate will require everyone to make a more intense effort. Under 2016's Senate Bill 1383 (Lara), agencies and jurisdictions involved in solid waste management must meet a goal of diverting 50 percent of organic waste from landfills by 2020, and 75 percent by 2025. Citing a recent study on California's composting infrastructure, Robert Cave, an air quality specialist at the Air District, suggested that the Bay Area might need to double its composting capacity to meet SB 1383 goals.

Building new composting facilities or expanding existing ones may prove difficult in a region with expensive land and residents who worry about odor problems. Odor minimization is one of the targets of a new Air District methane emissions regulation, Rule 13-2, that will require best management practices for facilities. Along with methane reduction, operating procedures should also control both odor and volatile organic compounds, another source of air pollution. Cave explained, "If you compost 100 percent efficiently, you don't have any methane — oxygen plus organics generate heat, and you get CO_2 and water and humus. But if parts of the pile don't get oxygen, that's when you have problems, both methane and odor."

Disposing food waste separately from other garbage is an important step in fighting climate change. photo by Alec MacDonald

In order to address air quality, Napa Recycling & Waste Services is moving from open-air composting to covered composting. The facility is expanding, but recycling manager Tim Dewey-Mattia said, "We have a small site, so we can't get too large, and that's true of other Bay Area sites as well." His company plans to add an anaerobic digester with funding from a recent state grant. While more expensive, digesters take up less space than large compost piles, and can accommodate a waste stream with higher nitrogen levels from fats or meat. Dewey-Mattia reported that methane created during the process is fully captured and of higher quality than that recovered from a landfill, so it can be used as a carbon-neutral fuel for the vehicles operating at the recycling facility. However, digesters produce their own waste, he noted, citing as an example that "South San Francisco sends its [digester residue] to us because it still needs composting."

Even expanding facilities will not enable the region to achieve SB 1383 goals without changes in waste disposal and collection practices, starting with the households and businesses that discard organic waste. Dewey-Mattia pointed out that rules for what to place in composting bins are probably easier to learn than for recycling bins, but they are also newer and vary from

continued on page 6

Taking a Bite out of Climate Change (from page 5)

community to community because waste collection systems are very localized. "I'm confident that people will figure it out over time," he said, explaining that when SB 1383 is fully implemented, waste collectors will collect a wider variety of organics, not just yard waste, and there will be a statewide uniform color code for waste containers.

In Alameda County, Rachel Balsley, a senior program manager at StopWaste, has been working on enforcing the county ordinance redirecting organic waste to green collection bins. For businesses and multi-family residential units, "twenty gallons of organics in the general garbage is the maximum we'll allow, and they need to show that they have organics collection service," she explained, adding, "For restaurants, compliance is also tied to their food permits." Nudged by inspections, proper disposal of organic waste is improving. "We've demonstrated that all this is possible," she reported.

For Balsley's colleague at StopWaste, program manager Cassie Bartholomew, the goal is to prevent disposal in the first place. Bartholomew quoted some dismaying statistics: 40 percent of food produced in the US never reaches a plate, and in the Bay Area, 83 percent of organic waste comes from home or restaurant kitchens. She said that at her agency, "We look at the whole food cycle: how we purchase and consume food, food storage, using leftovers, and then composting what's left." The Stop Food Waste campaign includes helpful flyers, shopping list templates, and a website full of tips and tricks to reduce what goes into the compost bin. School programs help children learn techniques to practice at home.

StopWaste's "Smart Kitchen Initiative" uses tracking technology to measure "pre-consumer food waste." The agency offers restaurant owners assistance, from classes in knife skills that reduce waste in trimming meat, to education on how to determine whether food is still edible after storage, helping them minimize their waste and reduce spending on food that isn't paid for by customers. Customers may see lower prices, or perhaps free soup with lunch when the restaurant wants to avoid dumping a surplus.

Finally, there is another option for many restaurants and cafeterias: donating food that is still edible but not usable in their kitchens. SB 1383 includes an edible food diversion goal of 20 percent by 2025, emphasizing the environmental benefit of donation programs that comes along with their social benefit. Two 2017 state bills have also made donations easier. Senate Bill 557 (Hernandez) expands on programs to share unwanted but edible food in school cafeterias by allowing schools to donate the surplus, while Assembly Bill 1219 (Eggman) protects those donating or rescuing edible food from certain liabilities.

At the regional level, the Air District's senior environmental planner Chad White is working on an organics recovery initiative that will incorporate and build on the response to SB 1383. Green waste diversion can provide more value than just reduction of methane emissions from landfills, and any benefits, from marketable compost to biogas production, become incentives to keep the diversion programs healthy while keeping costs down.

White described the initiative as requiring a deeper collaboration between the solid waste sector and the Air District. It may also involve food and agriculture departments, because composting contributes to healthy soil and sequesters carbon, which helps offset climate change. To begin the process, the Air District convened a regional stakeholder meeting in June 2018 with participants ranging from solid waste professionals to environmental groups. Their challenge, according to White, is "how do we build new ways of handling organics without adversely affecting some air quality attainment levels, and also make the new approaches financially feasible and attractive?"

Meanwhile, methane reduction continues to hinge on critical choices made every day by individuals, whether they are a supermarket produce clerk, a restaurant chef, or a harried parent planning dinner for a young family. Success depends heavily on their ability to buy food wisely, use it well, and dispose of what is left responsibly.

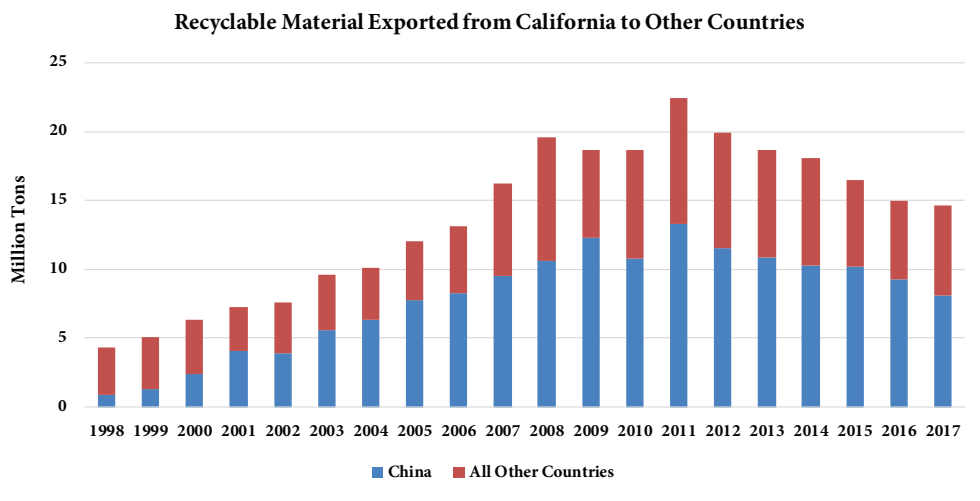
Leslie Stewart covers air quality and energy for the Monitor.

Re-evaluating Recycling

In a March 17 cover story detailing how recycling programs across the nation have been collapsing, California State Treasurer Fiona Ma told *The New York Times* that "we are in a crisis moment in the recycling movement right now."

Why? Because we can no longer afford to be nonchalant about shipping our junk overseas.

As part of an attempt to improve its own environmental situation and focus on domestic recycling, China has begun to limit what it is willing to receive from other countries, and in July of last year announced an intention to ban the import of all recycled materials by 2020. Countries such as Vietnam, Thailand, and Indonesia have followed suit by tightening their acceptance standards as well.



California's export of recyclable material has already been slowing in recent years, and is expected to drop off sharply as foreign countries impose new restrictions on what they are willing to import.

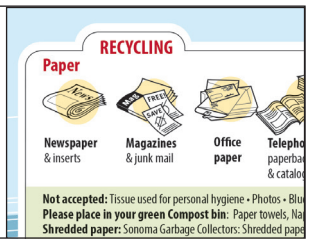
source: CalRecycle

This poses a big problem for California, which has been sending roughly one-third of its collected recyclable material to other countries. Solid waste and recycling facilities have been forced to stockpile materials, creating significant challenges for local governments and the residents they serve.

Although the situation feels daunting, solutions do exist. CalRecycle has compiled a list of responses that are bubbling up from the local level, and so in keeping with the *Monitor*'s ongoing effort to share replicable policy and programmatic strategies, here below are a few from the Bay Area.

INCENTIVES: The City of Vallejo runs a program that awards residential and commercial recycling customers a year of free garbage service or a discount for properly sorted recycling and trash bins.

INFORMATION: San Mateo County's RethinkWaste, Sonoma County Waste Management, and the City of Sunnyvale are among those who have published guides for proper waste disposal.



COLLABORATION: StopWaste has been convening a regional task force to share information, plan public outreach responses, and produce recommendations for changes to local recycling programs.

PILOT PROGRAMS: Mill Valley Refuse Service recently conducted a dual-stream recycling pilot, while the City of San Jose is partnering with private industry to conduct a pilot focusing on polyethylene.

PRICING: Fremont increased residential garbage bills by $1.50 per month in order to pay for the processing necessary to remove all trash and other contaminants from recyclable material.

ORDINANCES: The City of Berkeley passed an ordinance aimed at eliminating single-use foodware by 2020, and is one of at least nine California cities (and four in the Bay Area) to ban plastic straws.

Visit www.calrecycle.ca.gov/markets/nationalsword/localresponse for a statewide list of actions from jurisdictions and their partners.

Restoring Mountain Meadows to Benefit Water Supply

By Robin Meadows

This winter's storms piled so much snow on the Sierra Nevada that people standing on Mount Diablo could see the range as a serrated band of bright white on the horizon. That's good news for the millions of Bay Area people who get their drinking water from snowmelt.

Meadows (such as this one in the Sierra Nevada, seen largely in its natural state) provide critical ecosystem and water supply functions. image courtesy UC Davis Sierra Meadows Data Clearinghouse

The recent drought is a reminder, however, that we can't always count on this wealth of water from the mountains. Furthermore, climate change is projected to diminish the snowpack, giving us less water even during wet years; and warmer temperatures will likely make the snow melt earlier, giving us a flood of water in the spring instead of a relatively steady supply that lasts through the summer and fall.

To prepare for the dry years that will come again as well as an uncertain future, healthy mountain watersheds will be key to our water supply. While the importance of forests to these watersheds is well known, new research suggests that meadows are valuable too.

Meadows are like sponges, soaking up snowmelt in the spring and releasing it through the dry season. "There's no new water but it changes the timing," said Luke Hunt, an ecologist who is director of headwaters conservation for American Rivers, a national non-profit dedicated to protecting and restoring rivers. And although forest covers more of the watershed, meadows are where the connection between the mountains and the water supply is most obvious. "You can see water bubbling up between your toes," Hunt said.

The Sierra Nevada has about 280,000 acres of meadows, and roughly half are degraded. Notably, after the Gold Rush, ranchers dug ditches in mountain meadows to drain them for cattle grazing. The ditches eroded over time, often becoming as much as eight feet deep and 50 feet across, and snowmelt now rushes through these degraded meadows instead of being soaked up and stored for later.

Two Bay Area water agencies — the San Francisco Public Utilities Commission (SFPUC) and the East Bay Municipal Utility District (EBMUD) — get most of their water from the Sierra Nevada. However, EBMUD gets water from the Mokelumne watershed while SFPUC gets water from the Tuolumne watershed, and the latter is less at risk of losing snowpack due to climate change.

"We're lucky that we have extremely high peaks," explained Tim Ramirez, SFPUC's natural resources and lands management division manager. The Tuolumne River's headwaters begin at the base of a glacier on Yosemite National Park's Mount Lyell, which has an elevation of 13,000 feet. In addition, most of the land that drains into Hetch Hetchy — SFPUC's reservoir in the park — is above 6,000 feet, and the reservoir itself is at 4,000 feet. All this means that as climate change pushes the snowline up the mountains, the Tuolumne watershed will still be relatively rich in snow.

In contrast, the Mokelumne watershed and the reservoir it fills are at much lower elevations. Most of the land is below 6,000 feet and Pardee Reservoir is down in the foothills of the Sierra Nevada, at just 600 feet.

To help protect its water supply, EBMUD has joined forces with other water agencies to form the Upper Mokelumne River Watershed Authority (UMRWA). Current restoration efforts spearheaded by UMRWA include two projects in the Stanislaus National Forest, which borders Yosemite National Park. Each project is about a thousand acres, and goals include thinning undergrowth to make the land more meadow-like, said David Briggs, EBMUD's manager of water operations and UMRWA representative. Besides reducing the risk of intense fire and subsequent erosion that can clog reservoirs and make water too full of sediment to treat, restoring the landscape to be more

Thank You for Your Support

The *Monitor* would like to acknowledge recent donations from Jane Bergen, Nancy Burnett, and Diana Stephens. 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 non-profit organization, are tax deductible.

meadow-like could benefit the water supply in several ways.

Snow that falls on the ground lasts longer and yields more liquid water than snow that falls on a forest. "When snow is stuck on trees, it can be blown into water vapor and gone," Briggs said. In addition, thinning decreases the water that is taken up by plants. And, of course, meadows increase the capacity to absorb and store water for the dry season. "It's very useful," Briggs said. "Everybody has a need for water in the summer."

UMRWA has also proposed restoring several meadows in the Mokelumne watershed. "Increasing water in the meadows would enhance the yield of cold, clean water through the summer," wrote UMRWA Secretary Lisa Stuart in the minutes from the authority's January 26, 2018 board meeting. "The improved flow of cold water in the late fall is also a value to salmon and steelhead downstream as well as water agencies. This is becoming increasingly important through the years with the gradually shrinking snowpack."

The minutes also cited a 2012 restoration project in a meadow called Indian Valley, which sits on the crest of the Sierra Nevada in the Mokelumne watershed, near Lake Tahoe. The project was a great success. Restoration doubled the flow of water from the meadow, according to a 2018 study led by American Rivers' Hunt and reported in the *Journal of the American Water Resources Association*.

Moreover, the study confirmed that meadows can soak up water in the spring and store it until summer. During the spring, more water flowed into Indian Valley than flowed out. The opposite was true during the summer: more water flowed out than flowed in. Notably, the study was done during the last drought, when the stream through Indian Valley ran dry for part of the summer. Even so, water flowed out of the meadow all summer long.

That said, the amount of water that meadows can store is modest. Even if all the degraded meadows in the Sierra Nevada were restored, their total storage capacity would be perhaps 70,000 acre-feet of water per year, according to the Sierra Meadows Partnership, an alliance of researchers, non-profits, and state and federal agencies. For comparison, EBMUD customers collectively use about 20,000 acre-feet of water per month. "Meadow restoration is not going to solve California's water problem — but it is one of the tools," Hunt said. "Meadows are part of California's water infrastructure."

The importance of natural water storage is highlighted in the 2016 California Water Plan, which guides efforts by the state's Department of Water Resources (DWR) to manage water sustainably. "Meadows act as natural reservoirs, storing and releasing snowmelt and rainfall runoff," states the plan.

Meadow restoration also helps at-risk wildlife. Besides providing water for salmon, mountain meadows provide habitat for other threatened and endangered species, including amphibians such as Yosemite toads and yellow-legged frogs as well as birds such as Bell's vireo and willow flycatchers. "Meadow restoration is a multibenefit strategy," said Lewis Moeller, a DWR project manager for the California Water Plan. "It not only has the potential to retain water from a time of plenty to a time of shortage, but also has ecological benefits."

The biggest obstacle to meadow restoration is funding, but the state has begun to move forward on that. Proposition 1, the $7.12 billion water bond that California voters passed in 2014, provided nearly $1.5 billion for "multibenefit ecosystem and watershed protection and restoration projects." In addition, Proposition 68 — the $4 billion bond supporting parks, water, and the environment that passed in 2018 — provided $85 million for restoring mountain watersheds. Of that, $25 million was dedicated to forest and meadow systems, and $60 million was for projects with a range of benefits, including restoring meadows and protecting the water supply.

The contribution of meadows to the water supply may be small but, especially in a dry year, every drop is welcome. "Some of EBMUD's water now comes from Indian Valley," said Hunt. "When you take a sip, you can know that some of it is there because of restoration."

Robin Meadows covers water for the Monitor.

Congestion Drives Policymakers to Consider Road Pricing

By Cecily O'Connor

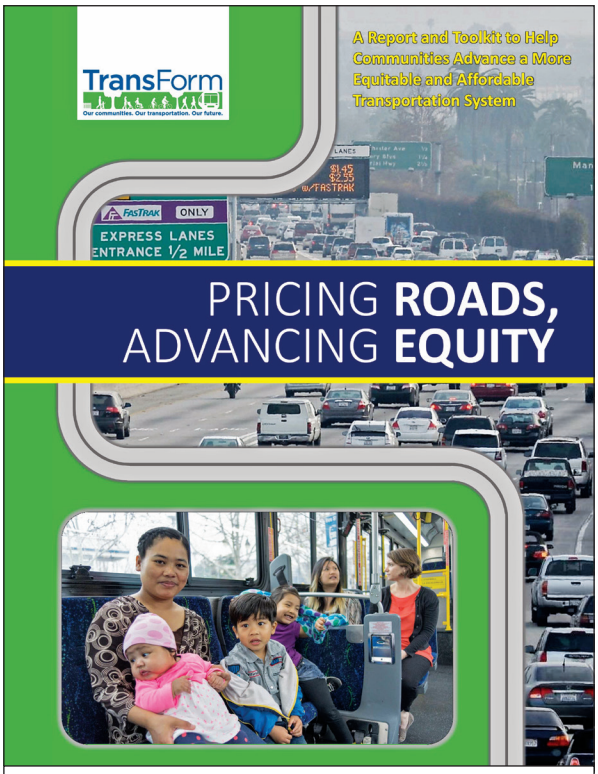
In many parts of the Bay Area driving is more like plodding, with heavy feet on the brakes because of record-level gridlock on roads and streets.

Given no sign these conditions will let up, San Francisco is joining the ranks of other large U.S. cities and considering congestion pricing — a possible toll to drive in the downtown area during peak periods. The aim is that, when faced with a fee, drivers will re-think their travel plans, hop on a bike, or ride a bus or train.

As the fifth-most congested city in the world, San Francisco drivers lose nearly 80 hours a year to congestion, the heavy flow of which contributes to air pollution, hurts residents' quality of life, and results in lost productivity from an economic perspective.

The board of supervisors at the San Francisco County Transportation Authority (SFCTA), which oversees delivery of the Proposition K half-cent local transportation sales tax program and New Expenditure Plan, agreed during a February 12 meeting to invest $500,000 to study tolling in the northeastern part of the city. Social and racial equity will be emphasized in the work, vetting various charges, discounts, subsidies, and incentives.

"We have a system that is stratified by income, as well as race and ethnicity," said Jeff Hobson, outgoing deputy director for planning at SFCTA. "Our goal would be to pursue an equitable plan by having a congestion pricing fee that uses funds paid by drivers … to invest into expanding transit and improving it to be safer for walking and biking."



TransForm published the report *Pricing Roads, Advancing Equity* **earlier this year.** image courtesy TransForm

SFCTA first studied congestion charges for downtown in 2010. It determined then that a "cordon," or a fee charged when a car enters or exits a defined area, would be the best bet for the city's northeast quadrant, Hobson said. That territory includes the downtown area going as far west as Laguna Street and as far south as 18th Street, and bound by water on the other edges.

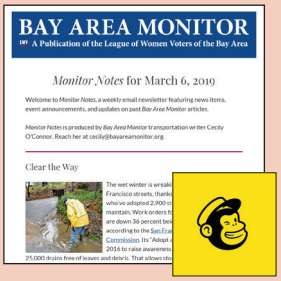
But sluggish recovery from the Great Recession curbed the appetite for "taking such a bold step" nearly a decade ago, Hobson said. Business community input also compelled officials to explore whether similar effects could be achieved by changing prices on parking, among other alternatives later studied.

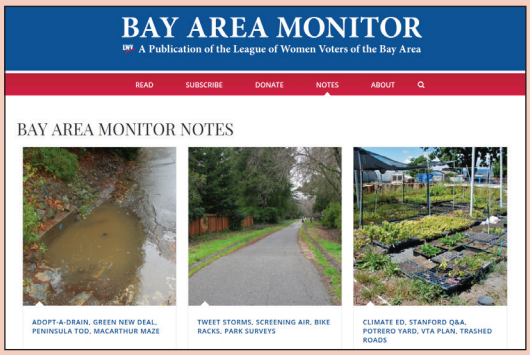
Today, congestion pricing is not as widespread as other approaches like express lanes, but they are gaining some traction on big city policy agendas due to heavy traffic congestion and related climate concerns, said Stuart Cohen, outgoing executive director at TransForm and co-author of the report *Pricing Roads, Advancing Equity*.

Three West Coast cities — Los Angeles, Portland, and Seattle — are actively exploring whether congestion pricing

Take Note of Our E-mail Newsletter

Can't get enough *Monitor*? Sign up for *Monitor Notes*, our weekly e-mail newsletter. To learn more, contact us at editor@bayareamonitor.org, visit bayareamonitor.org/notes, or join us on social media at facebook.com/bayareamonitor.





should hit their roads. Overseas, Stockholm, Singapore, and Milan employ cordon pricing to enter their downtowns.

SFCTA's latest congestion pricing study will build off a toolkit that's part of the *Pricing Roads, Advancing Equity* report from TransForm and the Natural Resources Defense Council, Hobson said. The toolkit offers cities a road pricing framework that ensures fair transportation polices and investments.

"With rents through the roof, we need to minimize the cost of transportation and that will help more people stay in place and stay in the region," Cohen said.

By definition, equitable transportation options should increase access to high-quality mobility options that are affordable, accessible, safe, reliable, and efficient, advocates said. Options also should emphasize air pollution reductions because, in general, low-income residents and communities of color tend to suffer disproportionately.

"Congestion pricing is an opportunity to come to terms with the reality that our reliance on cars is bad for the economy and society," said Hana Creger, environmental equity program manager at The Greenlining Institute, an Oakland-based policy and research group.

Despite the opportunity, comments from San Francisco Supervisor Rafael Mandelman made during the February 12 meeting point to mixed feelings at the planning level.

Putting a congestion pricing strategy in place is "a heavy lift," said Mandelman, citing a Dignity Health CityBeat poll from the San Francisco Chamber of Commerce showing 30 percent of residents support the approach. But when car-sharing services are increasing the use of already busy streets, congestion pricing is "one of the few potential tools we may have left," Mandelman countered.

Tolling also has been proposed to enter and exit San Francisco's Treasure Island, in addition to looking at a reservation and pricing system to manage the flow of traffic on tourist-laden Lombard Street.

There's also the possibility of adding State Route 37 to the Bay Area Toll Authority's (BATA) bridge toll program, signaling toll talk going forward, based on a recent memorandum of understanding signed by the transportation authorities of Marin, Napa, Sonoma, and Solano counties. The move to BATA would require legislation.

Still, these examples aren't necessarily an indication other congested corridors will start moving in the same direction, especially given high development and operational costs, Cohen said. In fact, the road pricing approach with broader regional reach is express lanes in which solo drivers who choose to pay a toll may use them. Express lanes are free for carpools, buses, and motorcycles.

Bay Area transportation agencies are creating a 600-mile network of express lanes that will be completed in 2035. The Metropolitan Transportation Commission (MTC) will eventually operate 270 miles of the network.

"What we see consistently is a speed and time advantage in the express lane," said John Goodwin, MTC spokesperson. For example, on Interstate 680 in Contra Costa County there is an 8-mile speed advantage in the express lane during the peak hour northbound in the afternoon, compared to the general purpose lane.

Back in San Francisco, SFCTA envisions the congestion pricing study as an 18-month effort, based on a schedule included in December 4 meeting materials. But those published dates could slip since officials are still seeking funding for the effort beyond the $500,000 SFCTA board commitment, $400,000 from MTC, and revenue from city development impact fees, Hobson said.

The study will include rounds of community engagement to gather equity and economic input. While a $3 toll was floated in SFCTA's 2010 study, officials have not settled on an amount to consider going forward, Hobson said.

The crux of the work is about "how do we design a system that makes the transportation network work better and fair," he added.

Cecily O'Connor covers transportation for the Monitor.

Bay Area Monitor
League of Women Voters of the Bay Area
436 14th Street #1213
Oakland, CA 94612
(510) 839-1608
bayareamonitor.org
facebook.com/bayareamonitor

NONPROFIT
ORGANIZATION
U.S. POSTAGE
PAID
OAKLAND, CA
PERMIT NO. 2508