Reconservation League

lanuary - February 2021

Planning for recreation on MMWD's watershed

by Nona Dennis

No one saw it coming! Within days of the first call in March to stay-in-place as a measure to control the outbreak of the Covid pandemic, people thronged to the beach, parks, and open spaces. At first, land managers responded by limiting entry to bikes and close-to-home walkers. As confinement wore on, they realized that being outdoors was the universal "cure" for a restless public, and they doubled their efforts to manage the crowds. Marin Municipal Water District (MMWD, or District) was no exception. By mid-December 2020, watershed lands were still experiencing record numbers of visitors who, for nine months, had been escaping from the confinement of home to the relative safety of the outdoors. Recreation as a whole, always welcomed on the watershed, was straining District resources, creating competition among watershed land uses, ecological and cultural resources, and the District's primary mission of supplying high quality water and protecting the watershed's rich natural resources. Furthermore, it was compounding existing visitor safety concerns.

MMWD's legacy of public access

The history of MMWD's founding helps to explain the current recreational

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Richardson's Bay: Regulating and Protecting an Irreplaceable Natural Resource



Eelgrass beds are a vital component of Richardson's Bay ecosystems.

by Terri Thomas

"Richardson Bay is a priceless natural resource which affects those who live and work around it, and on it, and also those who pass through it...Good water quality is absolutely essential for maintaining Richardson's Bay as important wildlife habitat, and for maximum public enjoyment," stated former Marin County Supervisor and State Senator Peter Behr as President of MCL in 1984.

Irreplaceable resource

Richardson's Bay is a 3,000-acre ecologically-rich, shallow inlet of San Francisco Bay. It hosts a mosaic of habitats including open water, marshes, sandy pebble beaches, rocky shorelines, eelgrass and shellfish beds, seal haul-outs, herring spawning grounds, and resting and feeding habitats for tens of thousands of migrating and overwintering waterbirds, including many species of diving ducks. Designated as an Important Bird Area by Audubon California, it includes a 900-acre protected area, the Richardson Bay Audubon Sanctuary, in its northeastern reach. The Sanctuary is seasonally closed to boats to protect wintering waterfowl.

Richardson's Bay was once the top herring fishery on the west coast of North America, Pacific herring spawn in its sheltered waters

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A Message from the President - MCL updates its Mission, Vision, and Guiding Principles

Dear Members and Friends,

Last month Marin Conservation League's Board of Directors unanimously approved MCL's 2021-23 Strategic Plan, a roadmap that will help us to remain a relevant and effective advocate for Marin's environment. Personally, I'm

relieved (it was a lot of work!) and excited by the many planned changes and the unplanned changes that will arise from "learning by doing" as we implement the Plan.

Here are some highlights from our new Mission, Vision and Guiding Principles statements, listed on page 12. They precede everything else in the Plan.

To our Mission statement "Preserve, protect and enhance the natural assets of Marin", we added "in a changing environment", reflecting the growing impact of climate change on our environment and of other negative environmental changes, such as spreading new pathogens and non-native invasive species. Our (first!) Vision statement clearly states what we want: "...an ecologically diverse and resilient natural environment that a

thriving, engaged community

values and cares for". As for MCL's Guiding Principles, we revised four Principles-support nature first, act based on

science, use diverse approaches for mobilizing action, and tirelessly advocate for the environment--that capture our past and current approach to thoughtfully developing, vetting and advocating for policies that benefit Marin's environment.

The two new Principles are really important to me:

"Integrate climate change understanding into our work". Yes, MCL's Climate Action Working Group addresses climate change mitigation and impacts--but so do our other main Issue Committees: Fire and Environment; Parks and Open Space; Land Use, Transportation and Water; and Agricultural Land Use. Integrating policy expertise on climate change with policy expertise deeply rooted in MCL's long history of environmental work in many areas creates exciting possibilities to help stakeholders adopt best-practices and develop innovative policies--that can help Marin and potentially can be spread elsewhere and so have impacts regionally and beyond.

"Work for environmental justice, equity, diversity and inclusion" in all of our environmental advocacy work means that we will listen, learn, and figure out how we can best add value by working with partners in underserved communities, whose residents are disproportionately people of color.

Over time, we aim to improve our work and how we communicate with you, the public, and decision-makers about that work--in order to be better and more effective advocates for the environment on your behalf. And we'll need your help: we hope you will check out our Issue Committee meetings and participate in new volunteer opportunities going forward!

Robert Miller, President

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"dilemma." By the early years of the 20th century, much of Mt. Tamalpais was in the hands of some 20 private water companies. To the dismay of hikers who flocked to the mountain, these privatelyowned lands were off-limits, particularly in the Lagunitas Creek watershed. That all changed when, in 1912 and 1915, Marin citizens created and then funded the first municipal utility chartered in California. More than 10,300 acres came into the public domain. That would grow over ensuing years to the 18,500 acres now managed by the District on Mt. Tam. (Nicasio and Soula Jule Reservoirs , constructed in 1961 and 1976, respectively, brought the total a acreage to 21,250.) It was not a coincidence that the Tamalpais Conservation Club, representing a large group of hikers, was organized within months of the charter. Their paramount interest was captured in a headline in a 1915 issue of California-Out-of-Doors: "A Great Opportunity and a Duty: A Water Supply and a Public Park in Marin." Thus, TCC members were enthusiastic supporters of the bond measure and all subsequent expansions of the new water district. They wanted to ensure that the watershed would remain open to the public. And it did.

For many years, hiking, running, and horseback riding predominated. The mix of users was not without controversy. MCL voiced its concerns decades ago over dangerous and unregulated horseback riding. Hikers and runners cut corners and created social trails. A few "clunker" bicycles began appearing in the 1970s. Cycling escalated sharply in the 1980s as mountain bike technology evolved, and conflicts began to appear. Slow-moving visitors were suddenly faced with riders on two wheels reaching speeds three-to five times their own pace.

When then-Chief Ranger Bill Hogan retired in 2016 after 38 years as a ranger with the District, he estimated, based on visitor surveys in 1974 and 2013, bike use had grown from about two percent of all visitors to 30 percent. Equestrian use had decreased, and hiking and running continued to be the dominant mode of recreation. In total numbers, annual visitors had roughly doubled from 750,000 annual visitors to over 1,600,000, now estimated to be over 2,000,000. "Outdoor recreation is

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no longer a 'nice to have'; it is now a 'must have," he said. Leaders across the country recognized the undeniable economic, social and health benefits of outdoor recreation. With it came evident impacts to vegetation, roads, and trails.

This already-considerable growth has been amplified by Covid-19. A November report from MMWD staff cited high levels of use at major entry points and along popular trails (300 visitors per hour were reported recently on the Cataract Trail). The report cited parking limitations, trash and sanitation issues, and increasing requests for medical aid. A seasonal entrance attendant at Sky Oaks reported the last weekend of November as the busiest in her term; 800 cars entered. Enforcement of personal safety measures against Covid-19 has added to ranger responsibilities.

Staff began to take short-term actions, such as augmenting and servicing sanitation facilities, adding hand sanitizer at parking lots and sanitation stations, upgrading trash cans with wildlife proof receptacles and monitoring trash in high use areas, and selling annual passes online. In addition to recent pandemic precautionary signs, "slow zone" signs and new signs to promote safe behaviors and trail etiquette were being designed and installed. "Ambassadors" were assigned to busy locations to assist visitors. Plans to increase ranger presence by adding two rangers were being budgeted.

E-bikes or not?

More than a year before the onset of the pandemic, the Board had begun to focus on a single issue: should electric bikes (E-bikes) be permitted on the 92 miles of fire and emergency roads that traverse watershed lands? Under existing District Code, E-bikes are considered "motorized vehicles" and therefore prohibited on these roads. Over the past few years, a relatively small cohort of cyclists, many of them veterans of early years of mountain biking on Mt. Tamalpais and now experiencing the afflictions and reduced stamina that come with age, had been lobbvina the District Board to legalize the E-bikes that they already ride on the watershed. They were not alone in the growing appearance of E-bikes on District lands. however. The Board agreed that the matter warranted study.

After a year of robust public review, including study by a Community

Advisory Committee and further outreach, staff eventually recommended to the Board in December 2020 that they approve a threeyear Special Use Permit for E-bikes as an opportunity to gather data on their impact on the environment, watershed facilities, and other recreational visitors. By that time, the pandemic had reached alarming levels and showed no signs of abating. The continuing growth in recreation on Mt. Tam, prompted by the pandemic, pointed to the urgent need for a comprehensive Watershed Recreation Plan that would go well beyond the narrow focus on E-bikes. The Directors demurred on approving the E-bike proposal, and directed further study to the Watershed Committee.

Longer-term action: a recreation plan

At a board retreat in late September, District staff outlined a longer-term strategy to deal with recreational demand: a plan for recreation that would protect the watershed's biodiversity, water quality and environment, and at the same time sustain



Lake Lagunitas (foreground) and Bon Tempe Lake areas have experienced especially high recreation levels since the onset of the Covid pandemic.

safe access to recreational opportunities for diverse visitors, address unauthorized uses, ensure adequate capacity to maintain infrastructure and historical landmarks, and reach out into the cultures of visitors and surrounding communities to integrate natural resource values with safe recreational behaviors. The directors agreed to move forward with such a plan.

MMWD has had numerous plans in place for managing vegetation and other resources on the watershed since the first "Environmental Planning Study" for the watershed was developed in 1973. Urged by MCL, that study paved the way for a comprehensive understanding of Mt. Tamalpais' conditions and myriad resources. Twenty years later, a "Vegetation and Fire Management Plan" was prepared and guided the District for more than twenty years until it was replaced by the "Biodivesity, Fire and Fuels Integrated Plan" (BFFIP) in 2019, after years of preparation. The "Mt. Tamalpais Road and Trail Management Plan" (2005) inventoried all roads and trails on District lands, identified numerous best practices

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on extensive eelgrass beds [see Nature Note: The extraordinary ecology of eelgrass, pg 10]. It is home to 55 species of fish. The eelgrass beds provide important habitat for invertebrates, birds, marine mammals and other fish-eating species. Unfortunately, these beds have been negatively impacted by boats and associated anchoring equipment for many years.

Richardson Bay Special Area Plan and the Public Trust Doctrine

Every year, Richardson's Bay ecosystems are damaged by residential vessels and other floating structures. Associated anchors and the dragging scope of the anchor chains can be highly damaging to eelgrass beds and bottom lands. Other threats include leakage or dumping of petroleum, sewage, trash and debris. Sunken boats present hazards; and shade is now considered by the National Marine Fisheries Service and California Fish and Wildlife as a negative factor to marine vegetation and wildlife habitat.

jurisdictions: Sausalito, Mill Valley, Marin

County, Belvedere and Tiburon. In 1984, in response to surmounting negative impacts, representatives of the five jurisdictions and the San Francisco Bay Conservation and Development Commission (BCDC) created the Richardson Bay Special Area Plan (RBSAP) to provide uniform policies and standards to be used to manage the future use and protection of the Bay. Recommendations in the plan are included for enforcement of the provisions of the plan, designation of Richardson Bay as a No Discharge Area, designations for local anchorages and moorages, and marsh restoration and enhancement programs. When MCL commented on the RBSAP in 1984, it concluded, "This is a very reasonable plan. We urge that its findings, policies and maps be adopted."

In 1985, the Richardson Bay Regional Agency (RBRA) was established to implement the RBSAP. The RBRA consisted of the five jurisdictions, each of which were required to contribute a percentage of the funds needed to implement their share of the plan. Ordinances were adopted by each jurisdiction to codify the provisions and ensure implementation. One policy in the RBSAP is that no permanent residential vessels are allowed in Richardson's Bay. The RBSAP limits vessel stays to only 72 hours. The removal of residential anchored vessels has been a challenge. Between 1985 and 2019 the number kept growing.

In response to documented damage by anchors, the RBRA proposed that a mooring field be established in the anchorage outside of the eelgrass habitat. The mooring would fix a boat or other floating vessel to the bottom of the Bay in one location, by use of cable or chains. Unlike anchors, this type of mooring remains attached to the bottom in one place and would not drag on the bottom of the bay.

In addition to protections in the RBSAP, Richardson's Bay is protected by the Public Trust Doctrine, a principle of common law that is deeply rooted in US history and culture and has been legally validated through the Supreme Court. Its basic premise is that public trust lands and waters are to be managed for the public good and not for individual purposes. In 2009, the California State Lands Commission issued a statement for Richardson Bay. "It is important to stress, as discussions regarding the development of mooring fields proceed, that it is the position of the Commission staff, based on advice from the Attorney General's office that residential use of the State's tidelands and submerged lands, whether granted or ungranted, including residential live-aboard use, is not a use consistent with the Public Trust Doctrine, as it is for a purely private purpose that is unrelated to, not dependent upon, and does nothing to stimulate or promote the purposes for which tidelands are uniquely suited."

Recent changes in management

In June 2017, frustrated that enforcement of the provisions of RBSAP were not being

Richardson's Bay is surrounded by five



Patrick and Julie Belanger, The 111th Group

Anchor damage viewed like "crop circles" around boats where eelgrass is plowed up.

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enforced by the agency, Sausalito left the RBRA. Sausalito had been required to pay 35% of the RBRA operating costs and was experiencing most of the impacts from the anchor-out vessels. Many residents of these vessels go ashore in Sausalito to resupply or use city services. The Sausalito Police Chief was needed to actively manage the Sausalito portion of the anchorage. This duplication of enforcement costs was not sustainable. Leaving the RBRA gave rise to Sausalito more successfully implementing their jurisdictional responsibilities under the RBSAP.

In November 2019, the RBRA published the Ecologically Based Mooring and Planning Feasibility Study completed by Merkel and Associates (Merkel Study). The study identified areas of Richardson's Bay that did not have eelgrass beds and therefore could be identified as potential mooring fields. In response to the Merkel Study, Point Blue, funded by Marin Audubon Society, conducted a bird survey of the areas that the Merkel Study recommended. Completed in July 2020, Point Blue recommended a mooring field not be allowed in the areas recommended in the Merkel Study due to their findings of total number of birds, total number of species and bird species richness per plot in those areas.

After a 2019 audit criticized BCDC for not fulfilling its agency's responsibilities and cited Richardson Bay as an example, there was a new emphasis to enforce existing plans within San Francisco Bay including the RBSAP. BCDC began conducting enforcement meetings and identified ways to move the resident vessels out of the bay while working with the inhabitants to find other housing or moorings.

Since February 2019 when there were 239 boats anchored, there has been improvement. By August 2020, 202 boats were remaining -- the reduction due almost entirely to the removal of derelict vessels that had no inhabitants. By October

2020 there were 144 boats.

In October 2020, the BCDC Enforcement Committee decided to enter into transition agreements with both Sausalito and RBRA identifying the need for a five-year sunset clause for eliminating permanent residential anchorage. The Enforcement Committee moved immediately into agreement with Sausalito. BCDC is engaging with RBRA and each of their local member cities in their transition plan. Annual goals will be identified to ensure regular reduction of vessels in RBRA jurisdictional waters to meet the goal of the 5-year timeframe. Additional activities will be included in all agreements that reduce habitat damage, limit new vessels to 72-hour mooring, encourage short and long-term housing solutions, and require subtidal habitat restoration. Senator Mike McGuire is assisting by discussing ways to support permanent housing.

RBRA and Sausalito transition plans and programs

Seventeen of the 144 boats in RBRA's boundaries have completed registration in RBRA's Safe and Seaworthy Program. These boats may qualify to stay longer than others on the anchorage if they bring their boats up to a safe condition. They are eligible for small funding grants. Marin County social workers provide services once a month to assist the anchor-out community. However, over the last few months of the pandemic, enforcement has had to wane. During this time 24 new boats came into anchorage.

RBRA is beginning a process of creating an Eelgrass Protection and Management Plan which will identify desired uses and known threats such as impacts by anchors, water quality issues and climate change to the eelgrass areas within RBRA jurisdictional waters. The plan will discuss how to accommodate uses and at the same time protect eelgrass and the animals dependent on it. It will identify particular zones where activities can occur. RBRA has convened stakeholder listening sessions.

Sausalito also has special programs. The Legacy Vessels program allows long-term mariners on the bay to stay in their vessels, anchored in Sausalito waters for the rest of their lives. There are six boats in this program and their owners range in age from 68 to 80 years old. Sausalito also has a Safe Harbor program, which finds alternative housing for the residents of the boats anchored. Social services include portable showers, grab-and-go food, and Covid-19 testing. Sausalito has been working with Marin County Health and Human Services, the Ritter Center, Sausalito Marina Operators and the Sausalito Chamber of Commerce to transition the anchor-out community out of homelessness, provide job opportunities and identify alternative slips and/or land housing. Sausalito has eight slips available for transition and has received \$171,000 from California Emergency Solutions and Housing to help the effort.

Sausalito is also taking steps to protect the Dunphy Park eelgrass colony by designating it as Open Water and thereby having no boats in the area. They are developing a plan for restoring eelgrass damage, and addressing issues that create ongoing eelgrass impacts and will include the monitoring of projects for success.

MCL's support

Last October MCL's Board of Directors adopted a position that reinforced its 1984 support of the RBSAP and recommended that RBRA and Sausalito be given five years to implement the provisions of the RBSAP, in support of BCDC's Enforcement Committee's timeframe. MCL continues to track the transition plans, the enforcement actions of BCDC, and the protection of Richardson Bay.

Project Status Updates

Golden Gate Transportation District tidal marsh restoration nears completion

In December, the Golden Gate Bridge, Transportation Highway and District (GGBHTD) breached the berm at the northern edge of its 72-acre property in Corte Madera to restore tides to a new four-acre site. The property was once part of the large complex of tidal marshes and mudflats that fringed San Francisco Bay. It is separated by berms on its north, south, and bay sides from the Corte Madera Ecological Reserve (Reserve) and bordered by the SMART right-of-way to the west. The restoration site is located northeast of the Village Shopping Center in Corte Madera. It is one more piece in the restoration of about 200 acres of Corte Madera's former tidelands that were diked off from the Bay 70 years ago. In 1976, 125 acres were restored as mitigation for construction of the Larkspur Ferry Terminal, leaving the 72-acre property for future restoration.

Construction on the site began in October 2020 and is projected to be completed in January to avoid disturbing adjacent tidal marshlands during wildlife breeding season. The project will provide additional tidal marsh habitat to support both the federally listed Ridgway's rail and the salt marsh harvest mouse, whose habitats include mudflats, low marsh to high marsh, a transition zone with vegetative refugia and adjacent protected vegetated uplands. A "wildlife-friendly" fence is planned for both sides of the trail around the restored tidal marsh to minimize disturbance by pedestrians and dogs.



Becky Matsubara, flickr creative commons

The tidal marsh restoration will provide additional tidal marsh habitat for Ridgway's rail, pictured above, and the salt marsh harvest mouse.



Golden Gate Bridge Highway & Transportation District

The four acre restoration site is one more piece in the restoration of about 200 acres of Corte Madera's former tidelands that were diked off from the Bay 70 years ago.

The restoration fulfills two GGBHTD commitments: one, to meet a 1988 Army Corps of Engineer's condition of permit that authorized the dredging and disposal of 90,000 cubic yards of dredge sediment collected during maintenance of the Larkspur Ferry Terminal; and two, to satisfy a 1996 agreement with local environmental groups to mitigate for increased marsh erosion when ferry operations were modified to add a high-speed ferry to its service.

Breaching the northern berm connects a newly excavated slough on the site to an adjacent tidally influenced drainage channel. The restoration site is being graded to elevations suitable for tidal inundation. This has involved spreading excavated fill, relocating some portions of GGBHTD's perimeter berm, and moving some seasonal wetland habitat. In time, native marsh vegetation will naturally re-establish. Nonnative vegetation on the site, including some nonnative trees, were removed. In all, approximately 14 acres of the GGBHTD property will support the restoration.

The project plan does not change or remove Corte Madera's formal easement for the shoreline public trail along the eastern and southern perimeter berms on the GGBHTD property. Nor does it alter GGBHTD's access easement on the SMART right-of-way, which is used informally as a trail by the public. However, an informal trail along the northwestern and northern outer perimeters and within the project site will be replaced by a new berm trail along the eastern and southern edges of the restored marsh, connecting with the rest of the trail loop. Of note, berms around the GGBHTD property were built in the 1970s during construction of the Larkspur Ferry Terminal to contain dredged sediments, and were not designed to provide flood protection.

After construction, the restored tidal marsh and seasonal wetland areas will be monitored for up to five years to evaluate progress in achieving performance standards for vegetative cover and other indicators of success. At that time, the District intends to deed the restoration site to the California Department of Fish and Wildlife to be managed as part of the Reserve, or to another suitable land trust for long-term management.

San Rafael Transit Center Replacement Project planning continues

Golden Gate Bridge Highway and District (GGBHTD) is Transportation progressing its plans for the San Rafael Transit Center Replacement Project (SRTCRP). The project includes three phases: identification and analysis of Transit Center alternatives. environmental relocation analysis and clearance (both relocation and environmental analysis are currently underway), and preliminary design and engineering. Following completion of these phases, there will be final design and, one to two years later, construction. A completion date is uncertain but currently the new Transit Center opening is anticipated four to seven years from now.

Four current Transit Center site and configuration alternatives have been identified. Here is a descriptive summary of those footprints:

4th Street Gateway Alternative – The facility would be located on two blocks between 3rd Street and 5th Avenue and between Tamalpais Avenue and Hetherton. The Whistlestop building would not be included. The bus bays between 3rd and 5th would be adjacent to the SMART Station, however passengers transferring buses would need to use 4th Street crosswalks to

reach other bus bays. Three bus bays would be located on Hetherton and so right turns from Hetherton onto 4th Street would be prohibited to protect safety. Two Victorian houses on 5th that are potentially historic resources would need to be relocated.

Under the Freeway Alternative - This facility would be located partially under the freeway between Hetherton and Irwin Streets and would require a lease for that portion on Caltrans property. There would be little opportunity for amenities or permanent structures like bus shelters under the freeway and Caltrans could evict bus use should it need to conduct repairs there. Bus bays would be located between 5th Avenue and extending onto the block south of 4th Street. Transfers to the SMART station and access to downtown would have to cross Hetherton, and transfer to other bus bays would require crossing 4th, raising safety concerns. This alternative would require bridging over the Erwin Creek channel in three locations and would displace four operational businesses and 72 Park & Ride parking spaces which would need to be replaced elsewhere.

Two Whistlestop Block Alternatives – These are similar alternatives -- one that



Golden Gate Bridge Highway & Transportation District

Footprints for alternative locations for the San Rafael Transit Center.

integrates transit uses with the Whistlestop building and another in which the Whistlestop building would either be relocated or reconstructed and in which Tamalpais Avenue would then be relocated to the Whistlestop site aligning it more closely with Tamalpais Avenue to the north. Both alternatives are located between 3rd and 4th Streets utilizing both sides of 4th and between Tamalpais and Hetherton extending onto property west of Tamalpais. Tamalpais would be redesigned for bus, shuttle and bike use-only with a dedicated bike facility and wider sidewalks. In both alternatives, seven bus bays would be located on both sides of Tamalpais Avenue. An advantage of these alternatives is that all transit activity would be located on one contiguous block and so would decrease circulation time.

All alternatives will require acquisitions. The project cost estimates for the 4th Street Gateway and one of the Whistlestop Block alternatives range between \$40 and \$55 million. The cost estimate for the Whistlestop Block alternative in which the Whistlestop building would either be relocated or reconstructed is \$40 to \$60 million. The Under the Freeway alternative is estimated between \$60 and \$85 million. GGBHTD will be putting together a funding package that includes \$30 million of allocated Regional Measure 3 funding that has not yet been released; there will be proceeds from the sale of the current transit center site; GGBHTD is working with the Federal Transit Administration and anticipates federal funds; and they will be working with their partner agencies to figure out how to fill a remaining gap in funding the entire project.

Though it remains uncertain as to just how well transit ridership will rebound post-pandemic in the months and years to come, it is certain that what is planned and built today will set the stage for the future. The success of public transit is key to two societal objectives – increasing equity and decreasing greenhouse gas emissions (GHGs). Effective transit and its infrastructure must meet the needs of those who don't have access to private mobility and who depend on quality transit (to employment, school, shopping, healthcare appointments) in

Project Status Updates

A Vision Framework for the Trust for Public Land's property in San Geronimo Valley

The Trust for Public Land (TPL) is progressing on both its short-term planning and long-range vision for their 157-acre property in San Geronimo Valley. The property is surrounded by Marin County open space preserves and lies within the Lagunitas Creek Watershed with Larsen Creek running through the northern part of the property and San Geronimo Creek running through it to the south. A year and a half of community engagement meetings and workshops for developing shared goals, together with technical analysis of the site, has culminated in a Vision Framework for the property's future. The comprehensive Framework document is due to be posted on the Reimagine San Geronimo website later this month.

According to TPL's December presentation of key elements of the Framework, conservation priorities include creek and floodplain restoration, daylighting and restoring Larsen Creek, improved habitat for salmonids and other aquatic species, restoring wetland habitats for birds and other sensitive wildlife and conserving and restoring vegetated riparian, grassland and upland corridors for wildlife linkages and movement. There are nine ponds on the site – some may be restored, others preserved.

Over the summer Trout Unlimited assembled a technical advisory group to help refine the preliminary plan for creek and floodplain restoration. Stream restoration is currently underway on San Geronimo Creek, and Trout Unlimited and Environmental Science Associates are leading additional restoration planning. According to TPL's project manager, Erica Williams. "The restoration footprints developed by Trout Unlimited and their consultants and advisors will underpin the Vision Framework. ...[T]he Framework will integrate compatible public access, passive recreation, and community ideas where possible and appropriate. Under the Framework, the San Geronimo and Larsen Meadows will be protected and



Trust for Public Land

TPL's conservation priorities for the San Geronimo Meadow include creek and floodplain restoration; improved, more complex habitat for salmonids and other aquatic species; riparian corridor conservation for habitat movement; restoration and enhancement of wetland habitats.

reserved primarily for restoration, public open space, and conservation-compatible passive recreation, educational, and interpretive opportunities. The Clubhouse parcel is where TPL envisions a broader range of community and recreational uses. It is also the most suitable location for a new Marin County fire station, [located close to the main road]. The circulation (trails) may change from the current alignment with proposed multi-use, secondary and tertiary trails built into the Framework."

In August and September, the site hosted the National Park Service's Incident Command Post, set up to respond to the Woodward fire in Point Reyes National Seashore. The site became the control center with a field of tents and basic services for between 400 and 500 fire fighters and support staff, many of whom traveled long distances to help fight the fire. Currently, the Marin County Fire Department is using the clubhouse during the pandemic to allow administrative staff to spread out and socially distance while at work. After receiving a temporary use permit in March, the department more recently entered into a formal agreement to use the site for a fee. TPL has hired a fire expert to put together a comprehensive fire fuel management plan and, as part

Project Status Updates

San Geronimo Valley, from page 8

of their use of the clubhouse, the Fire Department is helping to implement key recommendations of that plan. The property is being managed according to fire-wise fuel management standards, with areas adjacent to structures receiving an increased level of weed and fuel management.

According to Williams, the clubhouse parcel has also allowed community members and organizations, with a temporary use permit, to use the clubhouse and nearby property for nonprofit meetings, art installation projects, outdoor education programs, and the like. The Nicasio Volunteer Fire Department co-hosted a community blood drive at the clubhouse in November with the American Red Cross and the San Geronimo Lions Club and there are plans to hold another blood drive in March. The Lions Club has also volunteered to help with workdays on the property. A trio of San Anselmo high school students is helping to map native and invasive species and develop a management plan that will include stewardship opportunities this spring.

According to the TPL presentation, the property is returning to a natural state with managed natural land zones that blend open space, public access and fire resilience. The property is currently open to the public for passive recreation and enjoyment of nature. Next steps will include completing fundraising to cover acquisition and associated costs, and transferring the property to a new owner, ideally a public agency, in 2021 – 2022.

Note: MCL worked with other environmental and community groups to defeat Ballot Measure D in March of last year. Measure D's defeat cleared the path for continued planning for conservation priorities and public access.

San Rafael Transit Center, from page 7

order to thrive. Knowing that, GGBHTD has sought local input from students at San Rafael High and English learners, at a Facebook Spanish-only meeting hosted by Canal Alliance, and through tabling and interaction at the current Transit Center to capture input from current transit users in an effort to optimally meet their needs.

Furthermore, as there is no time left for incremental steps toward sustainability. Reducing GHGs and mitigating climate change has become paramount. In the House Select Committee's recent report "Solving the Climate Crisis", California's landmark goal to reduce GHGs to 40 percent below 1990 levels by 2030, Plan Bay Area 2050's Transportation Strategies, Marin's Drawdown, and in local jurisdiction climate action plans, success of public transit has become a key strategy. The new transit center must try to draw an increase of users to public transportation and support complete trips. The new Transit Center alternatives are incorporating networks with other modes of public transit like sidewalks, bike lanes, and other forms of shared mobility, some more successful than others.

The SRTCRP CEQA environmental review document will likely be released in mid to late spring this year. It will analyze each of the four alternatives described above plus a "no build" alternative and will select a preferred alternative as part of the process. MCL provided comments on the scope of the environmental issues that should be addressed in the EIR. Many of those comments were included in the SRTCRP's February 2019 Environmental Scoping Report's summary of key issues.

We encourage you to read our scoping comments. MCL plans to comment on the draft EIR when it's released. We encourage you to comment, too.

Watershed recreation, *from page 3*

to reduce erosion and sedimentation, and made recommendations about which roads and trails to designate as official, and which ones to either reclassify or decommission and restore. It continues to serve this purpose. The BFFIP is the most current guide to managing vegetation. In 2016, the One Tam partners initiated what will be a series of reports measuring the health of Mt. Tam. It identifies stressors like climate change, invasive species, and forest disease, and their impacts on key species indicators of the "health" of the mountain, but does not include impacts of recreational growth on Mt. Tam as a cause of concern.

None of these plans addresses the impacts of recreational use of Mt. Tam, per se. Missing from MMWD's information resources is a plan that defines what sustainable recreation for the watershed would look like – how to protect watershed biodiversity, water quality and environment while sustaining safe and inclusive access to recreation – how to integrate recreation values with protecting natural resources; how to educate or otherwise encourage safe and resource-conscious behavior; or, when education alone is ineffective, how to effectively enforce regulations.

A longer term plan will define sustainable recreation on the watershed, develop a framework for monitoring and managing diverse recreational opportunities, assess the capacity of infrastructure to support recreation, recognizing that visitors have different goals, protect the welldocumented biodiversity and other resources on Mt. Tam, and engage the larger community in appreciating and stewarding the irreplaceable assets that mountain's watersheds afford.

MCL commends the directors' decision to defer action on E-bikes, but also urges them to move forward with developing a recreation plan BEFORE reconsidering adding E-bikes to an already complex set of management issues. MCL looks forward to participating in that plan.

Nature Note

The extraordinary ecology of Eelgrass

by Terri Thomas

Eelgrass (Zostera marina L.) is a type of "Submerged Aquatic Vegetation" and established colonies are known to be some of the most productive ecosystems worldwide. Eelgrass are true plants, not seaweeds or algae. They grow as seagrass meadows that have horizontal root systems and leafy shoots that extend upward into the water column. Colonies of eelgrass grow in the protected soft bottom bays and estuaries of the Northern Hemisphere, typically in shallow waters (0-6 feet), like those in Richardson's Bay. Because they transform flat unconsolidated silt and sand into a highly structured forest-like density of leaves, eelgrass meadows create complex habitats for the bay that have both unique biological and physical traits.

Eelgrass as habitat and food source for marine species

Eelgrass meadows provide important ecological functions and ecosystem services, such as primary food production and habitat for commercially, recreationally, and ecologically important species. Because these meadows provide direct and indirect food for marine food chains, eelgrass is considered to be a "foundation" or habitat forming species as it creates a highly structured, diverse environment for marine life.



Olivia Graham, SFSU

Eelgrass in Richardson's Bay provide a protective nursery for fish and their roe.



EUO Enrique Talledo, flickr creative commons

The restoration of eelgrass has become a high priority worldwide.

The eelgrass colonies in Richardson's Bay provide a protective nursery for fish and shellfish. Pacific herring lay their eggs in eelgrass beds. Herring and their roe are two of the most important food sources for birds and marine mammals in the bay. The connection between eelgrass and herring is so entwined that it is often called the eelgrass-herring ecosystem herring depend on eelgrass and marine wildlife depends on the herring. Many invertebrates thrive on eelgrass and eelgrass provides habitat for birds such as American Coot, Western and Clark's Grebe, Scoter, Greater and Lesser Scaup, Ruddy Duck, and Bufflehead. Eelgrass is especially important to the Black Brant, a bird species that requires it to survive.

During the annual herring spawning runs, between December and early March, Richardson's Bay comes alive with dramatic activity. Marine mammals, harbor seals, and Californa sea lions roll and dive for the fish and hundreds, sometimes thousands, of birds circle, swoop and plunge into the water following the herring through the eelgrass. Ducks and other water birds feast on fish and roe at the surface. It is a truly wild scene, as exciting as any famous ecotourist event. It is the eelgrass beds that are the primary support system for most of this ecologically-valuable wildlife fiesta.

Eelgrass improves water quality and prevents erosion of shorelines

Because eelgrass is a rooted plant, it also provides the vital ecological service of trapping sediment that protects shorelines from erosion and improves water quality. Trapping suspended materials, taking up nutrients and other dissolved substances, and rooting into the unconsolidated soil help prevent erosion. This ability to accrete sediments is coupled with an ability to attenuate waves. Therefore, eelgrass is being looked at as a major player in shoreline protection from sea level rise.

Eelgrass decline, protection and restoration

Eelgrass has declined worldwide, most likely due to increased anthropogenic effects as well as climate-induced changes. Therefore, it has been given many specific

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protections. It has special status under the Clean Water Act and is considered an important element of Essential Fish Habitat regulated under the Magnuson-Stevens Fishery Conservation and Management Act. Eelgrass has been designated as a Habitat Area of Particular Concern (HAPC) under that Act. Finally, the National Oceanic and Atmospheric Administration's (NOAA) fisheries policy recommends no net loss of eelgrass habitat function in California. The policy establishes protocols for mitigating adverse impacts on eelgrass and provides quidelines for mapping, mitigation

planting, monitoring, and evaluation.

The restoration of eelgrass has become a high priority worldwide as its decline has become apparent. There are more efforts to improve upon conservation, restoration, and enhancement of the species. The California Coastal Conservancy has targeted eelgrass for major restoration with a goal of 8,000 restored acres over the next 50 years. Currently eelgrass covers 3,000 acres or 1% of submerged lands. A predictive model for eelgrass suggests that an even greater capacity for San Francisco Bay to support eelgrass may exist under certain climatic conditions. As a result, additional monitoring and recurrent surveys have become a priority.

Recently, the Estuary and Ocean Science Center in Tiburon received \$1.2 million to conduct eelgrass restoration and research as part of a consent decree from San Francisco Herring Association's successful litigation against PG&E. The project specifically includes restoration of eelgrass beds that have been destroyed as a result of the illegal vessels anchored in Richardson's Bay.

MCL Director Profiles



Pamela Reaves is a past member of the San Rafael 2040 General Plan Steering Committee and the San Rafael Climate Change Action Plan Update Working Group. Pamela remains active in San Rafael as the environmental team leader for the nonprofit Responsible Growth Marin.

She graduated from the Environmental Forum of Marin, class of 30 and co-coordinated Toxins Day and Advocacy Day for many years. She was a Marin County Integrated Pest Management Commissioner for six years and helped revamp the County IPM Ordinance to improve oversight, transparency, and collaboration.

Because 53% of Marin County's green house gas emissions are from transportation, Pamela is particularly interested in helping our County move towards electrification of all vehicles and to increase access to electric

vehicles and EV infrastructure to all income levels. She also supports creek restoration and ranch management practices that can sequester carbon to help combat climate disruption as well as improve the economic vitality of the rancher.

She and her wife have lived in North San Rafael for 22 years and have created a waterwise luscious garden with vegetables, many citrus, stone fruit, and apple trees, as well as bird, bee, and butterfly habitat. Pam loves to hike for rejuvenation and exercise. She is newly retired from her clinical psychology practice.



Roger Roberts is a resident of Marin County since 1970. Roger retired after a 35-year career in International Trade and Project Finance. He has been a member of the Marin Conservation League for approximately 20 years, previously served on the Board for 12 years, 3 of those years as President.

Roger has a M.Sc. in World Business Administration and Finance from San Francisco State University and B.A. in Government and International Relations from the College of William and Mary. He served on the board of directors of Marin Citizens for Energy Planning, served as City Councilman for the City of Larkspur, served on various citizens advisory and action committees, and is a member of a number of other national and local environmental organizations.

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Issue Committee Meeting Schedule (subject to change-check website)

Land Use and Transportation: 1st Wed. of the month, 10:00 AM-12:00 PM

Parks and Open Space: 2^{nd} Thurs. of the month, 3:00 PM-5:00 PM Fire and Environment Working Group: 2^{nd} Mon. of the month, 3:00 PM-5:00 PM

Climate Action Working Group: 3rd Fri. of the month, 9:00 AM-11:00 AM

Agricultural Land Use: meets quarterly; North Marin Unit: Check website for times

Marin Conservation League was founded in 1934 to preserve, protect and enhance Marin County's natural assets. MCL is a non-profit 501(c)3 organization. All contributions and memberships are tax-deductible to the extent allowed by law.

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The mission of Marin Conservation League is to preserve, protect and enhance the natural assets of Marin in a changing environment

MCL Vision

Marin Conservation League's vision for Marin is an ecologically diverse and resilient natural environment that is valued and cared for by a thriving, engaged community

MCL Guiding Principles

1. SUPPORT NATURE FIRST ACROSS ALL LANDS and WATERS. Give highest priority to sustaining and restoring natural systems, including undeveloped open space, agricultural lands, and urban landscapes.

2. ACT BASED ON BEST AVAILABLE SCIENCE. Be scientifically credible, employing the most comprehensive information in advocating policies, positions and best practices.

3. INTEGRATE CLIMATE CHANGE UNDERSTANDING INTO OUR WORK. Act knowing that global climate change has profound local and regional environmental effects. Recognize that actions and policies for local mitigation and adaptationespecially innovative ones--can have regional or national impacts.

4. WORK FOR ENVIRONMENTAL JUSTICE, EQUITY, DIVERSITY, AND INCLUSION. These values are vital in all of our environmental advocacy work.

5. USE DIVERSE APPROACHES FOR MOBILIZING ACTION. When common goals allow, pursue opportunities to convene groups and forge partnerships in order to increase collective impact.

6. BE TIRELESS ADVOCATES FOR THE ENVIRONMENT. Advocate assertively and tenaciously for the environment and be passionate in carrying forward the MCL legacy.

Read more in the President's Message, page 2