NEWS FROM MARIN CONSERVATION LEAGUE

January—February 2016

Artificial turf: more environmental cons than pros?

by Pat Nelson

Surf the internet and you will find endless ads touting the virtues of artificial turf: Save 70 percent on your water bill; free yourself from air- and noise-polluting mowers and blowers; give up fertilizers and chemicals; and enjoy a care-free lawn with a life expectancy of up to 25 years.

Such claims prompt the question: Does artificial turf offer a solution in drought-prone climates? Or is it too good to be true?

This conundrum has been debated by environmentalists since AstroTurf first began appearing on sports fields in the late 1960s. Certainly modern artificial turf has changed since the early days of AstroTurf, which resembled thick carpet on top of concrete. Today's product consists of synthetic fibers, generally with an infill of sand and rubber. It has become popular in many sports at all levels to reduce water use and maintenance while achieving the consistency of natural grass fields.

It turns out that artificial turf is not a problem-free way to reduce water use in times of drought. Dan Carney, Water Conservation Manager at Marin Municipal Water District made this clear in a presentation at the October 2015 meeting of MCL's

Continued on page 10

Old business in the New Year

Corte Madera's much-maligned 180-unit Tam Ridge Residences is an opportunity to test the model of transit-oriented development in Marin County.

Dru Parker

by *Nona Dennis*

Most of us welcome the New Year as a time to reflect on the past year and turn over a new leaf in the new one. Land use issues don't work that way. Old business simply carries forward into the new calendar year without fanfare. After all, some issues have been around for decades. For 2016, three long-pending land use issues are on MCL's radar and will require continued tracking. Also, there is a fourth issue that was approved in 2009 without comment from MCL or others for which 2016 provides an opportunity to test whether the premises that support transit-oriented development work in Marin.

Easton Point (Martha Property)

Definitely the longest running land use case in Marin County, "Easton Point" has been a focus of MCL attention since 1976. At that time a stipulated court judgment promised the landowners a minimum development of 43 residences for this 110-acre ridge land site at the southeast end of Tiburon Peninsula, with unparalleled views of Raccoon Strait, Angel Island, San Francisco Bay and the Golden Gate. Forty years and several draft EIRs later, the disposition of the land remains unresolved. According to informal reports, the owners,

Continued on page 8

In This Issue—

President's message—page 2
Ron Miska retires—page 2
In memoriam—page 3
Events—page 4
Agricultural land use—page 5
New Director profile—page 5
Parks and open space—page 6
MMWD forest health—page 11

A Message from the President—Conservation in a Changing World

Conservation in a changing world—that is the important theme that will permeate all of the issues MCL will focus on in 2016.

While biodiversity isn't static in space or time, and natural systems evolve and change, the pressures on ecosystems around the world are increasing. Accelerating rates of change in climate and land use (due to growing population and development) are altering our world in many ways, pushing species past their thresholds of environmental tolerance and jeopardizing their abilities to adapt. Changes due to invasion by non-native plants and altered watercourses are adding to these challenges.

Marin County has a unique landscape. A large percentage of what were once private lands are now protected public lands that separate and define our towns and neighborhoods. Preserving our large parks and open spaces and managing their ability to support intact, healthy ecosystems is evermore essential. Likewise, protecting important ecosystem functions on private lands, like restoring creeks and preserving healthy soil, are also important. How we act now will impact many generations to come.

In order to meet our conservation goals, we must continue to learn the science of our natural systems and local ecology; we must understand the challenges and changes we face in both the short term and the long term; and armed with this knowledge, we must continue to participate actively in local decision-making.

The late Marin County environmentalist and MCL past president, Jean Starkweather, who worked for many years to protect open space, wetlands, and other habitats, said, "It's been a pleasure living in this community . . . It's been a wonderful place to live. And, to have some effect on how it should grow is very satisfying. You don't win everything you want to win, but if you're not in there, you're not going to win at all, and maybe things will turn out not so well. So you've got to keep at it and encourage other people to take an interest in their local area, because it really matters when people take an interest."

Successfully navigating and adapting to the changes ahead will require the continuing efforts of all of us. We hope you will join us at our January Business-Environment Breakfast to learn more about water supply issues in California, at our committee meetings, and at other MCL events throughout the year. Keep us in the loop in your efforts and environmental interests. From all of us at MCL, we wish you a productive, healthy, and satisfying 2016.

Kate Powers

Ron Miska retires from Marin County Parks

by Linda Novy

Ron Miska, Assistant Director of Marin County Parks Department, retired at the end of December, 2015. After 27 years, his mark on the department and on the landscape of Marin County is indelible and will endure long after his departure, in part because he leaves behind an effective Parks Department to carry his work forward. The story of his journey from a park planner to Assistant Director, through reorganizations and transitions, warrants telling.

Ron's career has included work in private, non-profit, and public sectors. He first worked with Bay Area landscape architecture firms after graduating from the University of Michigan in 1982 with a Masters degree in Landscape Architecture. In 1986 he tested the waters of public service, joining the Midpeninsula Regional Open Space District as a contract consultant. The following summer, Ron moved East with his wife Deborah to take a position with the Housatonic Valley Association, a regional land trust that works to conserve the natural character and environment of western Connecticut and Massachusetts. There, Ron honed his entrepreneurial skills, convincing local land owners that placing conservation easements on their property made financial and environmental sense.

In December 1988, Ron returned with his family to the Bay Area after securing the job of Assistant Open Space and Park Planner with Marin County. Ron's real estate background in Connecticut proved to be invaluable in this new position. Working under Fran Brigmann, then Planning and Acquisition Manager, Ron learned the ropes of public open space acquisition. He was to go on adding thousands of acres to Marin County's open space system, including new preserves (Gary Giacomini, Old St. Hilary's, White Hill, Bald Hill) and additions to many others.

When Fran was promoted to Director, Ron took over the Planning and Acquisition Manager role, and eventually served as Deputy Director and Assistant Director under multiple Directors and Interim Directors. It is noteworthy that during reorganizations and leadership transitions, Ron continued to improve the department's organization, budget process, performance planning, communications, and other business functions. Ron also shepherded the development of the 2008 Marin County Parks and Open Space Strategic Plan,

Ron regards his recent collaboration with Linda Dahl, Director from 2010 to 2015, as an exceptional time in the department's history with far reaching achievements, among them the passage of Measure A—

Continued on page 7

In Memoriam

Jean Starkweather— Champion of Marin's Environment

Marin County lost a gentle and diminutive giant when Jean Starkweather died in late November at the age of almost 86. Alert and interested in current environmental happenings in the county almost until the end, she had steadfastly pursued every path she took during her almost 60 years in Marin without fanfare, whether it was to instill love of plants and wildlife in schoolchildren in the open spaces of Terra Linda, her own three boys among them, and busloads of kids who visited Audubon Canyon Ranch over the years Jean was a docent – or to inspire by example the loyal birders who joined her monthly bird census along the East San Rafael Shoreline. These came naturally from her love of nature that drove all of her pursuits—that, and her firm belief that natural resources are valuable community resources, and people must work to protect them.

When Jean and her husband John settled in San Rafael in 1956, she probably didn't expect to find herself knee-deep in environmental politics for the remainder of her life, although she and John shared a strong sense of civic responsibility. Environmental politics began almost by accident, however, according to long-time neighbor and friend Sue Beittel. In about 1968 the late George Ellman of Tiburon, Chair of the newly formed Marin Audubon Society Conservation Committee, gathered a small team, including Jean and Sue, and set out to identify Marin wetlands (evidenced by the presence of pickleweed). They divided the East Marin bayfront into sections and systematically inventoried the location of salt marshes, something that had never been done in Marin.

By Jean's account, politics for her began when, in the early 1970s, she saw a sign on the hills of Terra Linda above the Starkweather home that advertised a new subdivision to come. She soon discovered what a "planning commission" was and how to thread her way through the development process. That land was saved from development and led, ultimately, to the acquisition of lands that make up the Terra Linda-Sleepy Hollow Divide Open Space Preserve. That was only the beginning. Her fascination with wetlands and knowledge of birds continued and eventually prompted her to focus on East San Rafael, as one former wetland parcel after another was slated for development. After years, she was able to see a few substantial pieces of wetland saved and the rough levee path along the bay become the improved Jean and John Starkweather Shoreline Park. And her regular census of birds using the shoreline continued.

Jean's immersion in Marin County's environment would include extended terms on the Marin Audubon Society Board (President from 1975 – '77), the Marin Conservation League Board (President from 1993 – '95), 40 years as a docent and generous supporter of Audubon Canyon Ranch, 20-year member of the Marin County Parks and Open Space Commission (Chair for two years), the San Rafael 2020 General Plan update Citizens' Advisory Committee, and more, prompting awards for her achievements along the way.

Jean Starkweather tallying species at the 2011 bird census in East San Rafael.

It is not surprising that the gathering of many friends and family in her memory on December 19th was indeed a celebration of her life! There were many stories to tell, but the common theme would be that Jean simply got things done in a patient and persuasive way—an example for all of us who share her vision of Marin.

Events

Business-Environment Breakfast, Friday, January 29, 7:30—9:00 a.m., McInnis Park Clubhouse

Armando Quintero on water research and challenges

Please join MCL and Armando Quintero, Executive Director of the Sierra Nevada Research Institute at UC Merced, at our January 29 Business-Environment Breakfast meeting. Armando serves on the Board of the Marin Municipal Water District and is Governor Brown's appointee to the California Water Commission.

Hear about cutting edge research into water and climate and the challenges of planning for the controversial $2.7 billion piece of the Water Bond that is designated for the public benefit portion of water storage projects in California. Hear also about water management at MMWD, including the new water rate structure.

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The talk will take place at McInnis Park Golf Clubhouse, 350 Smith Ranch Road, San Rafael at 7:30 AM. The fee is $15 for MCL members and $20 for the general public. A full breakfast buffet is included. Pre-registration is required by Jan. 25. Call MCL at 415-485-6257 to pay by phone, or register online at mclwaterbreakfast.eventbrite.com.

Ticket price includes full breakfast buffet.

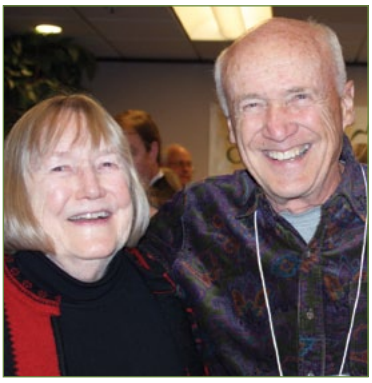
Pre-registration required by Jan. 25.

Make checks payable to **MCL** *and mail to:*
MCL, 175 N. Redwood Dr., Ste. 135, San Rafael, CA 94903.
To pay with credit card, call **415-485-6257 or register online at**
mclwaterbreakfast.eventbrite.com.
Refunds given only if the event is canceled.

Armando Quintero

MCL Holiday Party spirit

103 MCL members and their guests attended the annual holiday party on December 4 and contributed a full barrel of food and cash to the Marin Food Bank. Many thanks to all the MCL directors and staff for the food, decorations, and good time had by all! See you next year on Dec. 2.



Clockwise from top right: Bob Spofford, Bill Carney, Tamra Peters; Novato Mayor Pat Eklund, Supervisor Damon Connolly, Assemblymember Marc Levine; Kathy Gaines, Lindsay Boughey; food collected for the Food Bank; Kathy Cuneo, Roger Roberts.

photos by Shannon Doherty,John Nygren and Susannah Clark

Marin leads in Governor's "Healthy Soils Initiative"

by Judy Teichman

For several years Marin agriculture and agroecology leaders have researched and innovated land management strategies designed to sequester carbon in rangeland soil through enhanced photosynthesis as an environmentally beneficial means of lowering the amount of carbon dioxide in the air.

In 2012, MCL first brought the Marin Carbon Project (MCP) to the attention of its members at a Business-Environment Breakfast featuring University of California, Berkeley, Professor Whendee Silver, principal scientific investigator for the Project. Over the next two years, MCL hosted two informative programs at the Nicasio Native Grass Ranch, owned by Project co-founder John Wick and his wife Peggy Rathman. By late 2013, the Carbon Project, largely a volunteer effort, had birthed several peer reviewed papers and the full-time non-profit Carbon Cycle Institute (CCI). Since that time, the MCL Agricultural Land Use Committee has tracked progress with John Wick and co-Founder Dr. Jeffrey Creque (MCL *Newsletter* January-February 2015). Thus it was with considerable interest that the Committee received an update on the Project at its quarterly meeting in late August, 2015.

University of California Cooperative Extension (UCCE) farm advisor David Lewis, and Torri Estrada and Dr. Creque from the CCI, reviewed the evolution of efforts to implement carbon farm plans in Marin through collaboration with local ranchers and the MCP Implementation Task Force, including the Marin Resource Conservation District and the UCCE Service. Three carbon farm projects are underway in Marin, and carbon plans are in progress for 20 more ranches over the next three years. These Marin-based efforts have not gone unnoticed. In his January 2015 inaugural address, Governor Jerry Brown declared, "We must manage farm and rangelands, forests and wetlands so they can store carbon." California's 2015-2016 budget, signed by the governor last June, included $20 million for a "Healthy Soils Initiative." This will fund demonstration projects and provide incentives for California's agriculturalists to use practices that increase both sequestration of carbon dioxide from the atmosphere and water efficiency in soil.

Dr. Whendee Silver

For her ground-breaking contributions to the Marin Carbon Project, Dr. Silver was recently appointed UC Berkeley's first Faculty Climate Action Champion and awarded $25,000 to expand her work "in an interdisciplinary manner over the course of a year." In September 2015, ClimateWire, a new *Scientific American* website, featured an article by Camille von Kaenel, "Farms Harvest Cuts in Carbon Dioxide via Soil: Farming to improve crops and store more CO2 gains traction." The article quotes fourth-generation Marin rancher Loren Poncia, "[i]f the soil is healthier, everything is better: the grass, the cows and the pocket book." And "...using agricultural practices to sequester carbon is described as 'low-hanging fruit' in the fight against climate change" was the observation of another commentator.

Marin and California are not alone in this endeavor. Efforts to implement agricultural practices that increase carbon sequestration in plant material and soils appear to be popping up in other states, and around the world as well, driven to no small degree by an emerging United States Department of Agriculture soil health campaign. Numerous articles in international publications that appeared in advance of the recent Paris Climate Conference revealed that France and other European countries are beginning to recognize the need to go beyond emissions reductions to engage the world's soils in helping to solve our global climate crisis.

New Director Profile

Patricia Nelson, San Rafael

Patricia is an attorney who practices in the areas of government contract and environmental law. She has a particular interest in water issues and the ways in which water affects land use and energy decision-making. She has completed the Master Class at the Environmental Forum of Marin and has served on the Forum board since 2013. She also writes environmental poetry and works with the "Activist" group of poets led by John Hart.

Parks and Open Space Newsbriefs

Muir Woods MOU

On January 6, 6:30 – 8:30 at Tam Valley Community Center, the public will have an opportunity to learn about progress on implementing the MOU between the County and the National Park Service (NPS) concerning **parking management on Muir Woods Road**. The MOU was signed by the County last year, and NPS' signature is awaiting the completion of an Environmental Assessment on the planned Muir Woods reservation system, a key element in the agreement. The public submitted comments on the EA late last year. It remains for NPS to review comments and complete the process later this spring. In the meantime, the County and NPS, along with California Department of Parks and Recreation ("State Parks"), were to begin collaborative actions pursuant to the MOU, including installing barriers, signs, and fencing to restrict parking; hiring additional ranger staff to enforce parking restrictions; and instituting best management practices to prevent polluted runoff from entering Redwood Creek.

East Peak, Mt. Tamalpais State Park

State Parks will soon begin a planning process to develop a Facilities Management Plan (FMP) for the **East Peak area of Mt. Tamalpais State Park**. The FMP will identify a cohesive vision for recreation and other uses of East Peak, building on ideas that emerged from a design charette that was conducted in 2010 and 2011. The State Park property follows Ridgecrest Blvd. from approximately Mountain Theater, encircles the East Peak, but is otherwise surrounded by lands of MMWD, including the fire look-out at the top of the peak. It is a popular destination, especially because of its spectacular 360-degree views from the accessible Verna Dunstan Trail. Other amenities on East Peak include visitor information, a reconstructed Gravity Car barn, picnic facilities—and an extensive asphalt parking lot. MCL will keep members and others informed when online and meeting activities commence.

West Peak, Mt. Tamalpais

MMWD, in partnership with Tamalpais Lands Collaborative (OneTam), will begin a long-anticipated feasibility study in 2016 to consider the scale and scope of restoring the 106-acre site of a former Air Force station to some level of ecological, cultural, and historic integrity. It is difficult now to imagine that the U.S. maintained a vigilant presence on this site from 1950 throughout much of the Cold War, and was prepared to launch jet interceptors and short range Nike nuclear missiles against a Soviet attack that never materialized. Dozens of buildings, barracks, roads, and other infrastructure served an entire community of military men who manned the radar station, some with families. Little has been done to clean up the site since the base was abandoned in 1980, leaving behind dilapidated structures, including a bowling alley and sewage facility, acres of foundation slabs, and miles of fencing. How, and to what condition, the site should be restored will be considered by the study. The 22-minute documentary Invisible Peak by the West Peak's unofficial "historian" Gary Yost of Mill Valley, offers outstanding images of the site and its history. It is available for free download at invisiblepeak.com.

Draft Inclusive Access Plan

Over the past year, Marin County Parks has been developing a plan to increase recreational opportunities and access to enable people of all abilities to explore the many landscapes of the County's 34 open space preserves. Aided by input from

Continued on page 7

The former Air Force station on the West Peak of Mt. Tamalpais was abandoned in 1980. A study will determine the feasibility of restoring the site.

Gary Yost, garyyost.com

Parks briefs *from page 6*

public workshops and several focus group sessions, the Draft Inclusive Access Plan incorporates accessible design standards, guidelines for signage and trailhead amenities for people of all abilities, and a system for selecting appropriate destination-oriented trails that offer a range of open space experiences. The Plan also summarizes current state, federal and county requirements, standards, and best-practice guidelines relating to accessibility in open space areas, and establishes policies to respond to rapid technological change, for example in the use of Other Power-Driven Mobility Devices (OPDMD) on open space trails. The Plan identifies candidates for "Destination Oriented" trails on the county open space preserves that could, with relatively minor improvements, meet accessibility standards.

Public review of the Draft Plan closed last December 3, and the Final Draft Plan and environmental documents will be released later this spring. MCL submitted comments on the Plan, supporting in general the goal of increasing access for all abilities, at the same time cautioning against proposing any physical improvements (widening, resurfacing, etc.) to trails that will impact sensitive habitat areas. MCL also cautioned against the possible abuse of disability status to justify illegal use of OPDMDs like electric bikes on other preserve roads and trails. MCL will continue to track progress of the Plan. Preparation of the Inclusive Access Plan has been made possible by funding from Measure A.

Marin County Convention and Visitor Bureau

A signpost at Old Mine Trail in Mt. Tam State Park indicates wheelchair accessibility.

GGNRA

The **GGNRA Dog Management Plan and EIS**, which has been in development for 10 years, will surface again for public comment early 2016 as a Notice of Proposed Rule Making. The Notice will be open to comment for 60 days. Final action on the Plan is expected late this fall. The Plan will be on the MCL Park and Open Space Committee's agenda as soon as NPS publishes the Notice, and we expect to note any specific changes from earlier versions. MCL will review its previous position, which, in general, recognizes the need for appropriate management of dogs on GGNRA lands that allows recreational pleasure for dogs and dog-owners while also assuring the full protection of vegetation and wildlife and the safety and well-being of other visitors.

Dru Parker, 2013

Callie enjoys the view of Rodeo Beach.

Miska *from page 2*

the parks, open space and farmland sales tax measure—in November 2012; and development and adoption of the Road and Trail Management Plan.

Over his 27 years, Ron helped the department "grow from being just planners and rangers," to the mature organization it is today. Examples include the Natural Resources and Science Program and the Communications Program, both of which Ron helped establish. These and other programs now provide a strong framework that enables the department to meet its goals and be responsive to the citizens it serves. This would not have been possible without Ron's internal drive to "leave something better than he found it."

Marin is clearly better in several ways, thanks to Ron Miska. He is responsible, either directly, or through staff and partnering with citizens' groups, for acquiring more than half of the Marin County Open Space District's acreage. Ron has modeled integrity that inspires others. He has focused on cultivating team work and setting high standards, inspired by a steadfast commitment to serve the parks and open space and the public good of Marin County. His absence will be significant, yet, he leaves behind an organization that is highly capable due to his example and influence.

The next chapter of "Renaissance Ron's" life will reveal itself in new and interesting ways, as he has a passion for wood and metalworking, instrument making (ukuleles!), restoration and recycling of vintage furniture and English bicycles, baking, fermenting foods, and in other ways he does not yet know. Whatever he does, Ron Miska will continue to serve the public good. Marin is grateful for his service!

Old business *from page 1*

who intend to develop and sell 43 building sites for very large residences, are seeking ways to provide adequate water pressure, resolve traffic safety issues on Paradise Drive, and mitigate the projected loss of rare plant populations. Myriad other health, safety, and biological constraints must be resolved before a Final EIR can be certified and the project can proceed to merit hearings.

In the meantime, the Tiburon Open Space Committee continues to seek strategies to acquire all or part of the site as open space, adjoining Old St. Hilary's and Tiburon Uplands Nature Preserves, owned by the County Open Space District. Twice in the past 14 months, MCL has sent letters to the Reed family (descendants of John L. Reed, who purchased the land in 1923) urging them to meet with the Trust for Public Lands to explore alternatives to the costly delays and anticipated future legal battles with neighbors that their further pursuit of development will surely bring. To date the owners have not responded. Meanwhile, MCL is waiting in the wings while the Tiburon Open Space Committee pursues funding sources that could be viewed by the Reed family as earnest money for an acquisition.

Hamilton Fields Sports Park

First proposed in 2012 as a 78-acre multi-sports complex located off Hamilton Way, the Hamilton Fields Sports Park is back before the city of Novato, and is now reduced to 55 acres. The complex would include a 12-acre community park, four baseball fields and a 1,000-seat ballpark for high school and collegiate sports. Regardless of the reduction in size (the hotel in the 2012 proposal has since been removed), the project has met with strong opposition from Hamilton neighbors. The developers call it a "public-private partnership" in which they provide parks to the public at no cost to the community. Opponents call it a "commercial for-profit enterprise" that will attract many out-of-town visitors and produce traffic, noise and disruptive night lighting. The proposal has a long way to go before any decisions are reached. In addition to public meetings and reviews by various city commissions, the Environmental Impact Report process will extend at least through 2017. The MCL North Marin Unit is tracking the proposal as the City continues to review the complete plan and will submit issues to be addressed in an EIR at the appropriate time.

Strawberry—Seminary site

As 2016 begins, the application by North Coast Land Holdings to develop a new Branson School campus on this prime site in the Strawberry community near Mill Valley is barely off the ground, and already the opposition—much of the resident community—is well organized. Neighboring communities along this congested stretch of the 101 corridor are also very interested. The site may prove to be one of the most debated land use issues in Marin in recent history.

Hamilton Fields Sports Park is proposed for Landfill 26 and its buffer area.

Dru Parker

Until its recent sale, Golden Gate Baptist Theological Seminary occupied the 126-acre site since the mid 1950s. Then it was a bare, almost treeless campus. After a number of expansions and transformations, the Seminary obtained an approved Master Plan in 1984. (See MCL *Newsletter* March-April 2011) Some, but not all, of the elements in the Master Plan were implemented. In 2011, the Seminary sought to amend the Plan and subdivide the campus to reflect a changing student body and reduced needs for campus housing (the so-called "Hart Plan"). Among other elements, the amendment would have authorized building a new chapel on a top knoll of the campus and selling off the scenic Seminary Point for development of 38 market rate residences.

The plan would represent a radical change in the character of the campus.

Neighbors began organizing at that time, and the Seminary withdrew its plans. In the ensuing four years, the beautiful but embattled site has figured prominently, first in the community's opposition to establishing a Planned Development Area, pursuant to Plan Bay Area, covering the lands fronting Highway 101, including the Seminary site; and more recently, in community meetings convened by Supervisor Kate Sears to allow ample time for residents to discuss the future and develop a Vision Plan including the Seminary site. In the meantime, the Seminary found its best interests were served by selling the site, consolidating its facilities elsewhere, and building its endowment. North Coast Land Holdings, representing a private fund, purchased the site for $85 million with the intent of redeveloping the campus to allow for future growth of Branson School from a Town of Ross-imposed cap of 320 students to an eventual 1,000. The plan also calls for developing 304 units of housing, 20 percent of which would be affordable.

The applicants say that they are working within the development parameters of the 1984 Master Plan, which allowed up to 1,000 students. Opposing neighbors and many others claim otherwise: transforming the Seminary's lightly-used graduate campus with modest on-site housing for students and faculty into a 1,000-student per day high school with 200 employees, a regional 1,000 seat sports complex, and

Continued on page 9

Old business *from page 8*

©Mark Cavagnero Associates Architects, bransonschool.org

Architect's rendering of the proposed development at the Seminary site in Strawberry. Full plans are available for public review at marincounty.org/depts/cd/divisions/planning/projects.

new venue for events and weddings, plus 304 rental units that are considerably larger than the units they would replace, would represent a radical change in the character of the campus and be inconsistent with both the Strawberry Community Plan and the 1984 Master Plan itself. Traffic, parking, and school events and activities promise to be central topics of debate.

In a recent action before a crowd of 300, the Strawberry Design Review Board agreed that the application to the County was not complete. This is an early step in a process that will likely entail some modifications to the plan, and, if it indeed survives, require an Environmental Impact Report before merit hearings can begin. This process could stretch over the next two to three years. Clearly what happens on the Seminary site will have regional implications. MCL has not taken an official position but can agree with the Design Review Board's conclusions at this stage of the process.

Tam Ridge Residences (WinCup)

What will 2016 hold for the much-maligned 180-unit Tam Ridge Residences (WinCup) complex, located adjacent to Highway 101 on Tamal Vista in Corte Madera, when it finally opens and becomes populated? Over the three years during which the four-story buildings have taken shape within full view of thousands of passing motorists on 101, the public has had ample time to dub it the poster child of everything they claim they don't want: density, bulk and mass, more traffic, and insufficient parking.

Will WinCup residents walk, bike, or take transit? Will it work?

But wait! Isn't this also an opportunity for Tam Ridge Residences to prove itself a model for compact transit-oriented, walk-able, bike-able development? Golden Gate Transit buses on 101 within a stone's throw; five to ten-minute walk for groceries at Trader Joe's, or exotic teas and spices at Cost Plus World Market; 15-minute walk to Town Center for restaurants, numerous stores selling a variety of goods, a gym, spa, and more; "Safe Routes" to both a high school and an elementary school; five minutes to daily book talks and classes at a local book store; easy access to walkways and open space; a 20-minute invigorating walk to a public library, with coffee en route; and professional service providers across the street. The question is: Will it work?

Who will live in the apartments—seniors, families with children, single professionals? And will residents really park their cars and walk, bike, or take public transit to their destinations? Or will traffic increase along an already congested corridor or at local intersections? Will a concept that other parts of the Bay Area are embracing work in Marin?

MCL did not comment on the planned project in its early stages; it was buried within the updated Corte Madera General Plan, approved in 2009, and within the EIR on that Plan.

Although the Grand Jury reviewed the ten-year decision process that led to approval of the project and found no evidence of misconduct, it noted that the proposal should have had full public review in a separate EIR. Regardless of recent history, we can begin 2016 by evaluating the relative success of a transit-oriented development in meeting its goals.

Units at Tam Ridge Residences, located at the site of the former WinCup factory in Corte Madera, will soon be ready for occupancy.

Dru Parker

Turf *from page 1*

Land Use and Transportation Committee. Carney, after extensive research, believes that the advertised benefits of artificial turf are significantly outweighed by its environmental impacts and potential risks to health. He described drawbacks perhaps not widely known to the well-meaning home gardener, manager of public spaces, or sports field proprietor. An informed decision, he said, would weigh the following factors against manufacturer claims that artificial turf reduces water use, maintenance cost, and pesticide and fertilizer runoff:

- Artificial turf reduces biodiversity in the landscape, diminishing its value as habitat and impeding its ability to resist disease and insect pests.
- Covering soil with "plastic carpet" effectively kills the soil by reducing microbial activity. We lose several environmental benefits when we lose healthy soil, including the ability to cycle nutrients and filter pollutants. Healthy soil is a critical part of the water cycle. In addition to purifying water, it has a greater capacity than sterile soil to hold water during heavy rainfall.
- Artificial turf exacerbates climate change in several ways. Production of plastic carpet entails significant greenhouse gas emissions, particularly when transportation and life-cycle costs are considered. And unlike real vegetation, artificial turf has no ability to sequester carbon.
- Covering soil with plastic carpet creates a heat island and produces ground-level ozone. The temperature of artificial turf can reach up to 177 degrees on an 85 degree day. It can be hotter than asphalt by 30 degrees. For this reason, professional sports field managers are now required to install irrigation systems and may have to use them hourly to reduce the heat load.
- Artificial turf, which contains polypropylene, polyethylene, and polyurethane, is not easily recycled. Forty million tons of discarded artificial turf end up in landfills every year. There is little infrastructure for recycling artificial turf, and only one in every eleven thousand plastic fields is recycled.
- Artificial turf contributes to water pollution. Chemicals in the artificial turf can be mobilized and run off directly into storm drains and waterways without the beneficial filtration effect that a living landscape provides. Zinc, selenium, lead, cadmium, and other pollutants may leach into the groundwater from the crumb rubber underlayment of the carpet, but more research needs to be done (http://www.ehhi.org/reports/turf/).
- Plastic fritters (breaks up into tiny pellets) when it is exposed to sunlight, releasing highly persistent pollutants.
- Artificial turf can cause or contribute to injuries when it is used as a playing field by children as well as older athletes. In addition to burns resulting from the heat effect, artificial turf has a higher grip than live turf and places stress on joints and bones.

For all of these reasons, artificial turf is not eligible for state or local "cash for grass" rebate programs. (Check whether North Marin Water District offers cash for grass.)

Carney also questioned advertised claims that artificial turf is maintenance free. Although consumers may eliminate an irrigation system, artificial turf that doesn't get washed off requires regular use of sweepers and rakes to smooth out the turf and to avoid degradation of the plastic materials. Users must spray it with anti-statics and anti-microbials to disinfect plastic that is exposed to animal waste or to the sweat and blood of people playing sports. Over time, artificial turf gets compacted and requires aeration. And users must install a costly drainage system under the "carpet."

Dru Parker

A newly installed artificial turf soccer field at Redwood High School in Larkspur.

Dru Parker

The crumb rubber filling can be scuffed up by players' cleats.

Many of the problems with artificial turf can be traced to the use of crumb rubber in the manufacturing process. Crumb rubber has been used historically to fill in

Continued on page 11

Turf *from page 10*

the spaces between the plastic blades of artificial turf. Particularly in the early days, the crumb rubber was composed of discarded tires, ground up for reuse. Used tires contain known carcinogens that are impossible to detoxify because the vulcanization process locks them in, and they are subject to off-gassing, a major concern in enclosed spaces.

Currently, the crumb rubber filling is more likely to be made of recycled tennis shoes or virgin rubber. And some artificial turf manufacturers make a product woven like carpet, without crumb rubber.

In summing up, Carney noted that artificial turf may be a good fit for some uses, such as sports fields that are heavily used year round or are in locations where grass cannot be grown or properly maintained. (Note that several Marin schools, such as Redwood High School, pictured,) have replaced sports fields with artificial turf.) Consumers should do their homework, however, and weigh the environmental and other risks before making a costly investment. Carney offered several weblinks for further research:

- Evaluation of Health Effects of Recycled Waste Tires.
- Synthetic Turf Council (Industry Advocate) White Papers.
- FieldTurf Maintenance Guideline
- US National Library of Medicine National Institutes of Health Studies

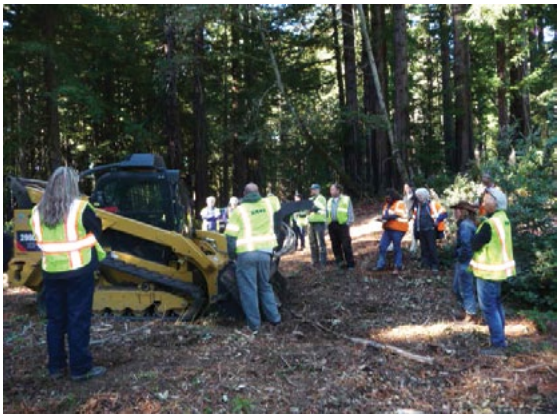
MMWD researches forest health—a follow-up tour

by Nona Dennis

On a recent November field trip, a small group joined MMWD Director Larry Bragman and District watershed managers on a tour to observe first-hand just what Janet Klein, MMWD's Natural Resource Program Manager, meant when she told the MCL Parks and Open Space Committee recently that, "We can no longer take our forests (on the watershed) for granted." (See MCL *Newsletter* September-October 2015) The inspection traversed redwood and Douglas fir forest along Bolinas Ridge between the top of Shafter Grade and the Bolinas-Fairfax Road. More than half of MMWD's 21,000-acre watershed is forested. As the forest canopy has opened due to the 80 percent mortality of tanoak trees from Sudden Oak Death, and in the absence of naturally occurring fire, much of the forest floor is now overwhelmed by an impenetrable brush understory—a catastrophic wildfire waiting to happen. The group learned about the forest history and saw examples of existing conditions contrasted with forest stands where the brush understory had been cleared. MMWD watershed staff demonstrated the clearing process, deploying a machine that literally chews up all brush and small trees in its path and, with the help of manual labor, spreads the resulting material as thick mulch on the forest floor. Research now under way will help determine how treated and untreated control plots compare in their capacity to store carbon, optimize water yield, respond to wildfire, provide habitat, adapt to climate change, and serve other ecosystem functions of a healthy forest.

From top: Dense understory before clearing; MMWD Watershed staff explains the use of the equipment to the group; An area of cleared forest.

MMWD



Nona Dennis

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

Land Use and Transportation:
1st Wed. of the month, 9:00 AM—Noon

Parks and Open Space:
2nd Thurs. of the month, 3:00—5:00 PM

Invasive Plant Subcommittee of POS:
3rd Wed. of the month, 3:00—5:00 PM

Climate Action Working Group: 3rd Fri. of the month, 9:00 AM—12:00 PM

Agricultural Land Use: meets quarterly; Water and Watersheds, North Marin Unit: Check website for times and locations

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.

Editor: Nona Dennis
Design and Production: Dru Parker.
Printed in Marin on recycled paper. Please share and recycle.

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