



TOWN OF TIBURON  
Tiburon Town Hall  
1505 Tiburon Boulevard  
Tiburon, CA 94920

## **TIBURON TOWN COUNCIL**

May 4, 2016 Regular Meeting  
7:30 p.m

### **AGENDA**

#### **CALL TO ORDER AND ROLL CALL**

Councilmember Doyle, Councilmember Fredericks, Councilmember O'Donnell, Vice Mayor Fraser, Mayor Tollini

#### **ORAL COMMUNICATIONS**

Persons wishing to address the Town Council on subjects not on the agenda may do so at this time. Please note however, that the Town Council is not able to undertake extended discussion or action on items not on the agenda. Matters requiring action will be referred to the appropriate Commission, Board, Committee or staff for consideration or placed on a future Town Council meeting agenda. Please limit your comments to three (3) minutes.

#### **INTRODUCTION OF NEW TOWN EMPLOYEE**

Associate Engineer - Dmitriy Lashkevich

#### **CONSENT CALENDAR**

All items on the Consent Calendar may be approved by one motion of the Town Council unless a request is made by a member of the Town Council, public or staff to remove an item for separate discussion and consideration. If you wish to speak on a Consent Calendar item, please seek recognition by the Mayor and do so at this time.

#### **CC-1. Town Council Minutes**

Adopt minutes of April 1, 2016 Town Council/Staff Retreat (Town Clerk Crane Iacopi)

Documents: [APRIL 1, 2016 RETREAT MINUTES.PDF](#)

#### **CC-2. Town Council Minutes**

Adopt minutes of April 20, 2016 regular meeting (Town Clerk Crane Iacopi)

Documents: [APRIL 20, 2016 DRAFT MINUTES.PDF](#)

### **CC-3. Town Post-Employment Benefits**

Recommendation to authorize participation in the Public Agency Retirement Services (PARS) Trust Program for Other Post-Employment Benefits and Pension Liabilities (Director of Administrative Services Bigall)

Documents: [CC-3 OPEB TRUST.PDF](#)

## **ACTION ITEMS**

### **AI-1. McKegney Green Soccer Field Upgrade**

Consider consultant's report and provide direction to staff (Director of Public Works/Town Engineer Barnes)

Documents: [AI-1 MCKEGNEY GREEN SOCCER FIELD UPGRADE REPORT.PDF](#), [EXHIBIT 1-MCKEGNEY GREEN FIELD STUDY,SIGNED PROJECT SYNOPSIS 04-25-16.PDF](#), [EXHIBIT 2-SITE VICINITY PLAN 03-30-16.JPG](#), [EXHIBIT 3 - MCKEGNEY FIELD, PLAN 1, 04-21-16.PDF](#), [EXHIBIT 3 - MCKEGNEY FIELD, PLAN 1A, 04-21-16.PDF](#), [EXHIBIT 3 - MCKEGNEY FIELD, PLAN 2, 04-21-16.PDF](#), [EXHIBIT 3 - MCKEGNEY FIELD, PLAN 3, 04-21-16.PDF](#), [EXHIBIT 3 - MCKEGNEY FIELD, PLAN 4, 04-21-16.PDF](#), [EXHIBIT 4-MCKEGNEY OPC 04-25-16.PDF](#), [EXHIBIT 5- MCKEGNEY FIELD IRRIGATION WATER SOURCE MEMO.PDF](#), [EXHIBIT 6-TIBURON FIELD\\_KELLY BIO LETTER 3-30-2016.PDF](#), [EXHIBIT 7-MCKEGNEY FIELD 16-076-0106 20160323 REPORT\\_PDF\\_2953057-002.PDF](#)

## **PUBLIC HEARINGS**

### **PH-1. Marin Municipal Water District (MMWD) Water Efficient Landscaping**

Amend Title IV, Chapter 13E (Water Efficient Landscape) of the Tiburon Municipal Code to adopt by reference the most current MMWD ordinance regarding water-efficient landscapes and water conservation (Community Development Department) - *Introduction and first reading of ordinance*

Documents: [PH-1 AMEND TITLE IV, CHAPTER 13E.PDF](#)

## **TOWN COUNCIL REPORTS**

## **TOWN MANAGER REPORT**

## **WEEKLY DIGESTS**

## **ADJOURNMENT**

## **GENERAL PUBLIC INFORMATION**

### **ASSISTANCE FOR PEOPLE WITH DISABILITIES**

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Town Clerk at (415) 435-7377. Notification 48 hours prior to the meeting will enable the Town to make reasonable arrangements to ensure accessibility to this meeting.

### **AVAILABILITY OF INFORMATION**

Copies of all agenda reports and supporting data are available for viewing and

inspection at Town Hall and at the Belvedere-Tiburon Library located adjacent to Town Hall. Agendas and minutes are posted on the Town's website, [www.ci.tiburon.ca.us](http://www.ci.tiburon.ca.us).

Upon request, the Town will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Please send a written request, including your name, mailing address, phone number and brief description of the requested materials and preferred alternative format or auxiliary aid or service at least 5 days before the meeting. Requests should be sent to the Office of the Town Clerk at the above address.

## **PUBLIC HEARINGS**

Public Hearings provide the general public and interested parties an opportunity to provide testimony on these items. If you challenge any proposed action(s) in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing(s) described later in this agenda, or in written correspondence delivered to the Town Council at, or prior to, the Public Hearing(s).

## **TIMING OF ITEMS ON AGENDA**

While the Town Council attempts to hear all items in order as stated on the agenda, it reserves the right to take items out of order. No set times are assigned to items appearing on the Town Council agenda.



TOWN OF TIBURON  
1505 Tiburon Boulevard  
Tiburon, CA 94920

CC-1

## MEMORANDUM

**Date:** April 4, 2016  
**To:** Mayor and Town Council  
**From:** Diane Crane Iacopi, Town Clerk  
**Subject:** Summary of April 1, 2016 Council-Staff Retreat - DRAFT

On April 1, 2016, the Town Council held a special meeting at Servino's Restaurant for the purpose of its annual retreat with Town staff.

At 8:30 a.m., Mayor Tollini called the meeting to order. All Councilmembers were present: Doyle, Fredericks, O'Donnell, Vice Mayor Fraser, and Mayor Tollini. Staff members present were Town Manager Chanis, Director of Community Development Anderson, Director of Public Works/Town Engineer Barnes, Director of Administrative Services Bigall, Police Chief Cronin, Planning Manager Watrous, Management Analyst Creekmore, and Town Clerk Crane Iacopi. One member of the public (Deirdre McCrohan, The Ark Newspaper) attended, and was joined later by several proponents of the Hawthorne Terrace undergrounding effort.

After asking for oral communications (there were none), Mayor Tollini and Town Manager Chanis reviewed the agenda. Town Manager Chanis noted there were no formal action items on the retreat agenda; rather, there were projects and discussion items on which the Council could provide direction to staff and indicate its consensus, or not, of moving forward with particular items.

The Town Manager also briefly reviewed the list of prior year (2015) special projects and activities, noting which ones had been completed and those that are still in process, and a few that had not yet commenced (but are on the project list for today's meeting). He highlighted the completion of the Town's website and acknowledged Management Analyst Creekmore for her efforts in bringing this project to fruition.

This was followed by a power point presentation by Director of Administrative Services Bigall on the Town's General Fund (GF) reserves. Bigall said having strong GF reserves is a cornerstone of the Town's financial flexibility, providing it with options to respond to unexpected issues, offset unfunded liabilities, and pay for capital equipment and capital improvements without incurring interest expense related to debt financing. She said the 15 funds that comprise the GF and its reserves are broken down into three categories – Designated Reserves (which she said are policy driven), Discretionary Reserves (for capital projects), and the unallocated GF balance (which this year is \$2 million).

Bigall said staff met with the Council Budget Committee in March to discuss the Town's GF reserve balances and possible transfer of unallocated reserves. Also discussed was the possible investment of the GASB 68 OPEB reserve into a third-party trust (PARS), and to remit the PERS Reserve to CalPERS to pay down a portion of the Town's \$4.7 million unfunded liability. She said investing OPEB funds with a third party trust would allow the Town to have the funds professionally managed to achieve a higher rate of return which will help lower the Town's future liability. And paying down the Town's CalPERS unfunded liability will save the Town interest expense of 7.5% on the funds prepaid. Bigall said this recommendation will be brought to the entire Council for action.

Bigall said the Budget Committee would also recommend the transfer of \$2.75 million from the GF unallocated reserve -- \$750,000 to Facilities Repair, \$1.25 M to Drainage and \$750,000 to Parks and the Old Rail Trail to replenish these accounts that had been drawn down over the past year.

Bigall then discussed the remaining unallocated reserves of \$2 M which, when allocated to projects or policies under consideration today and during the upcoming budget cycle, would still allow the Town to meet its standard and policy of 25% of operating budget "rainy day" fund.

However, Bigall noted there was "lots of competition" for projects [in this \$2M fund]. This led to a question from Councilmember Fredericks as to how cost overruns on capital projects were funded. Town Manager Chanis said this fund was one way to fund them. Fredericks asked if this was a good practice. Chanis said that for an agency this size, it may be an appropriate use of the funds, if Council agrees. Vice Mayor Fraser disagreed with this approach; he said it was not good practice to have a back-up; that our goal should always be to focus on fine-tuning the budget and not have a "slush fund".

Director Barnes agreed that there is a need for more pre-design engineering on projects and appropriate contingencies. But he said that one never knows the cost of a project until it goes out to bid. (The Town Manager added, or until a Notice of Completion is signed.) That being said, Barnes said the upfront design tends to mitigate this problem.

Town Manager Chanis opened a discussion about project priority-setting and what it might look like if the Council decided to adopt this approach and integrate it into the budget process. He reviewed a criteria guide for capital improvement projects utilized by the County of Marin, which showed how projects were ranked, starting with the most important legal criterion ("Removes and Reduces Threats to Health & Safety") to lesser weighted criteria, such as aesthetic benefits to users. He noted he had also provided the Council with a white paper on this topic.

Council indicated its interest in pursuing a priority-setting process for its obvious benefits as a tool for budgeting, as well as to make the process more open and accountable. The suggestion to form a Council subcommittee for capital improvement projects was received favorably and will be brought back for formal adoption.

The Town Manager led the discussion of projects he said were generated by Council or public input. He introduced a new template sheet with information about each project that also contained estimated project costs, source of funds, net impact on operating budget, and the like. He said staff was open to suggestions on ways to improve the template.

Chanis said Council was also free to ask questions or provide feedback on projects not highlighted for today's discussion.

Councilmember O'Donnell raised the topic of Electric Vehicle (EV) charging stations. He said the market has changed a lot since the last discussion; that more and more people own electric vehicles, and he raised the question of whether government should be subsidizing car owners (rather than incentivizing them as was envisioned in the past).

Councilmember Fredericks said there is a bill before the State Legislature that would limit local government's ability to provide design review and decision over placement of these stations by private entities. It was agreed that there will be more discussion of this topic in future.

The list of projects discussed, a brief summary and direction given, is below:

1. Town Council Chambers A/V Upgrade – consensus to pursue; better microphone system and large screen or screens, visible around the room. Also, there was a strong desire to support the DRB through better A/V infrastructure to project 3-D and design elements during public presentations.
2. Kayak Put In – carried forward from 2015; location still needs to be determined, but a new idea arose to possibly locate it in a “safe harbor” area in vicinity of Angel Island dock; consensus for subcommittee (Doyle and O'Donnell) to continue gathering information about viability and public/private partnership since Town does not own ferry docks.
3. McKegney Green – preliminary rough estimates received from consultant need to be further refined; initial reporting shows renovation of a 150,000 square foot section plus potable water irrigation hook-up will cost \$1.1 million; turf of same size will cost \$2.9 million; Council expressed caution about artificial turf being not well received in community; also wanted to see smaller (existing field) size estimates. Councilmember O'Donnell commented that some golf courses use special grasses that are salt tolerant that may allow continued use of reclaimed water. Discussion continued to a future Council meeting.
4. Trestle Berm Trail – project proposed by Tiburon Peninsula Foundation (Jim Wood) has been reviewed by POST with recommendation to send to Council for consideration – will be on April 20, 2016 regular meeting agenda.
5. Open Space Management Program – discussion by Vice Mayor Fraser and others of public interest in eradicating invasive species esp. in Middle Ridge area that are threatening endangered plants; discussion of possibly using annual budget allocation and Measure A funds for 1 year to concentrate on this effort in difficult to reach areas; talk with fire district about suspending usual work near homes in favor of this short-term concerted effort.
6. Sidewalk Construction 1 (Mar West to Lyford) – proposed by Mayor and supported by Council to provide safe passage (not having to cross the street) for children walking to

Reed School from the east side of Tiburon Boulevard; cost estimated at \$730,000. Fredericks said she liked the design aesthetic of a proposed wooden bridge over the existing drainage ditch.

7. Sidewalk Construction 2 (Gilmartin to San Rafael) – brought forward by Mayor and at the behest of Gilmartin residents who want to cross Tiburon Boulevard but who do not want to walk (on existing shoulder) back to the light at San Rafael Avenue; Town Engineer noted that a sidewalk would displace resident parking on that section of Tiburon Boulevard; this was not received favorably unless there were alternatives; suggestion tabled for now.
8. Hawthorne Undergrounding District / General Benefit – Director Barnes reported on “very preliminary” cost estimates of \$1,140,000. He said the proponents have \$150,000 on deposit with the Town to start design work. Fredericks said that litigation costs should be factored in, as well. Town Manager reported on current case law which says that the “general benefit” portion of the work cannot be assessed to the property owners within district and noted that Town policy seems to say otherwise. Councilmembers Fredericks and O’Donnell said they did not object to Town paying general benefit; O’Donnell said that removal of 4-5 poles on Old Rail Trail would be a general benefit.
9. Rules 20A/B Undergrounding (Lyford to Ned’s Way) – Director Barnes reported that PG&E has placed the Town in the queue and will allow use of Rule 20B funds, as well, creating an opportunity to do the work for less; argument against was that these funds may be needed to put toward general benefit in Hawthorne District. Direction to staff is to proceed by asking PG&E if they can wait a while longer to start engineering study while fate of Hawthorne District is determined.

At this juncture, one of the Hawthorne proponents asked the Council to stay tuned for updates on district within the next six weeks. The proponent, Jack Ryan, expressed optimism and said that the legal challenges dealt with by the Town in the past had been mostly removed due to recent court rulings and updates to procedures; said there was plenty of support in neighborhood to move forward with project.

10. Granicus Agenda/Meeting Management – consensus to pursue, along with community outreach on whether the Town should live-stream or videotape its meetings.
11. Social Media Presence – Mayor has received feedback from merchants who would like a community calendar and perhaps a Town presence on Next Door. While the latter was not endorsed, the staff recommendation to create a Social Media use policy (based on “best practices” and existing policies) was given the green light.
12. Relinquishment Tiburon Boulevard – previous Council support not as strong after hearing community arguments against assuming new and ongoing costs; however, arguments in favor of control of boulevard still resonate with some and deserve possible further study; the direction was to get better numbers on what it would cost to maintain the boulevard, and to identify these costs using a town consultant versus a Caltrans study.

13. Resident parking pass program – Vice Mayor Fraser raised issue and although funding sources were not identified, said it would help to encourage residents to dine and shop downtown. He also noted there is a parking shortage in the Boardwalk lot and said that employees were being asked to park elsewhere. The consensus was for a subcommittee (to be appointed at a future meeting) to study solutions; possibly through another public/private partnership.
14. Parking facility acquisition – Consensus to revive discussion with Argo/AC Ventures on possibility of leasing lot adjacent to Town Hall; Director Anderson also noted that the Library expansion project needs to meet its parking mandates and this would be the location to do it.
15. Refinancing Existing Assessment Districts (5) – consensus to pursue refi that would benefit homeowners and still cover administrative costs of Town.

A question arose as to whether the Town could float its own bond for general benefit assessment in districts. While doubtful, staff said it would get an answer from counsel.

Councilmember Doyle thanked staff (Pat Barnes and DPW) for its timely completion of Blackie's Picnic Meadow. He noted that while there was no formal "grand opening," the area is being used now by groups for picnics on weekends.

The meeting adjourned at 12:20 p.m.

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ERIN TOLLINI, MAYOR

ATTEST:

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DIANE CRANE IACOPI, TOWN CLERK

**TOWN COUNCIL  
MINUTES**

**CALL TO ORDER**

Mayor Tollini called the regular meeting of the Tiburon Town Council to order at 7:30 p.m. on Wednesday, April 20, 2016, in Town Council Chambers, 1505 Tiburon Boulevard, Tiburon, California.

**ROLL CALL**

PRESENT: COUNCILMEMBERS: Doyle, Fraser, Fredericks, O'Donnell, Tollini

PRESENT: EX OFFICIO: Town Manager Chanis, Town Attorney Stock, Director of Community Development Anderson, Director of Public Works/Town Engineer Barnes, Director of Administrative Services Bigall, Chief of Police Cronin, Town Clerk Crane Iacopi

**ORAL COMMUNICATIONS**

Pamela McConnell-Douglas, who described herself as a 50-year resident, senior citizen and disabled, complained of how the town had changed. She said she was charged a dollar for a glass of ice at a local restaurant. She also spoke about being bullied and said she did not want to see this happen to anyone. Her husband, Steve, said he supported his wife and what she way saying.

**CONSENT CALENDAR**

1. **Town Council Minutes** – Adopt minutes of April 6, 2016 special and regular meetings (Town Clerk Crane Iacopi)
2. **Legislative Action** – Recommendation to oppose proposed State Legislation (Assembly Bill 2586, Assembly Bill 2501, Assembly Bill 2322) that would limit local control over parking and housing development (Town Council Ad hoc Legislative Committee)
3. **Appointments to Boards, Commissions and Committees** – Affirm appointment of Councilmember Fredericks to Bay WAVE Policy Group – County of Marin Sea Level Rise policy committee (Town Manager Chanis)
4. **General Fund Reserves** – Authorize reallocation of General Fund reserves as recommended by Town Council 2015-16 ad hoc Budget Committee (Director of Administrative Services Bigall)

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MOTION: To approve Consent Calendar Items 1 through 4, as written.

Moved: O'Donnell, seconded by Fredericks

Vote: AYES: Unanimous

### **ACTION ITEMS**

1. **Railroad Trestle Trail** – Consider citizen-initiated (Tiburon Peninsula Foundation) project for a proposed pathway and related improvements to the former Railroad Trestle berm portion of Blackie's Pasture; provide direction to staff (Community Development Department)

Mayor Tollini said the Action Items would be taken out of order; Item No. 2 (special event permit) to be heard first.

2. **Special Event Permits** – Consider applications by The Ranch for special event permits: Tiburon Taps Beer Festival (Shoreline Park) and Trick or Treat Trail (Main Street/Ark Row) (Office of the Town Manager)

Town Manager Chanis said The Ranch had submitted special event permit applications for two events in the Fall; one at Shoreline Park and the other on Main Street and Ark Row. He said the first event, Tiburon Taps beer festival, had previously been staged at Point Tiburon Plaza for the past two years and noted The Ranch sought a change of venue for this year's event. He said both events contemplated street closure. He then turned the floor over to Cathleen Andreucci and Jessica Hotchkiss of The Ranch, to provide more details and a description of the events.

Ms. Hotchkiss described the layout of the beer festival which contemplated street closure between Paradise Drive and the Landmarks' (Donahue) building. She said fencing would be installed around the area to ensure the entrants were of drinking age. She said there would be tents and umbrellas for the beer vendors, and a stage for a live band, along Paradise Drive. Umbrellas for shade and wine barrel tables would be placed in the park area for participants.

Director Andreucci acknowledged that the event was relocating from Pt. Tiburon Plaza due to some issues, like beer being poured into planters. She said she would make sure the Point Tiburon Bayside lawn was fenced off to avoid any problems.

Ms. Andreucci noted the Shoreline Park location featured water views and would be an excellent draw for the event. She said that other locations had been contemplated but were not as convenient, especially for participants who arrive by ferry. She said that the beer festival fit within the criteria of five events allowed per year under the Shoreline Park policy, and was the third of the current year. She said the festival had been very successful; she said \$13,000 in revenue [last year's revenue] was used to support The Ranch programs, and its scholarship fund.

She asked the Council if there were any questions.

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Vice Mayor Fraser asked if the hours of the beer festival mirrored the hours of the Tiburon Wine Festival. Staff noted that the Wine Festival hours are 1 to 4 p.m., while the Tiburon Taps permit requested hours of operation from 1 until 5 p.m.

Ms. Hotchkiss described the Trick or Treat event that would start in Tiburon and end in Belvedere. She said the idea was to have a safe place for children to go to trick or treat. She said she was working with downtown merchants to gain support for the event. Ms. Hotchkiss said that Main Street would be decorated with carved pumpkins and lead a “trail” to the Belvedere Community Center. She said it would be festive and bring people downtown.

Councilmember O’Donnell asked whether October 29 might be a better date, closer to Halloween. Ms. Hotchkiss said that the Chamber of Commerce preferred the October 22 because of other events on its calendar.

Councilmember Fredericks asked about merchant support. Ms. Hotchkiss said that she planned to approach them with the idea of staying open later and giving out candy, etc.

Mayor Tollini asked whether any money could be made on the event. Ms. Andreucci said it was not a money-maker; rather, it cost money. Jessica said that The Ranch would sell drinks and glow sticks at the park. Councilmember Fredericks noted that while it was not a revenue-generator, it was a “community-building” event.

Mayor Tollini opened the item to public comment.

Pamela McConnell Douglass asked how the [Trick or Treat] event would be funded and also said she was interested in having her community involved.

Hank McWhinney, Paradise Drive, President of the Point Tiburon Bayside Homeowner’s Association, said he had received short notice of the hearing and regretted not being able to sit down and talk with staff about the event prior to the meeting, as had been done in the past.

While stating that he admired The Ranch programs, he said there were four objections to the Tiburon Taps event: 1) Legal, 2) Neighborliness, 3) Safety, and 4) Town image. He went on to describe these objections:

1) Inconsistency with Shoreline Park’s dedicating documents which stated that its use was only for public purpose, of a recreational, open space, or historical nature. He said the beer event would discriminate by age and would keep people out of the park.

2) Neighbors have a right to peace and quiet, and that 1000-1250 people drinking beer (not “tasting”) would be a lot of beer being consumed; that it would be very risky, noisy, and crowded, and not an event that any neighborhood would want to listen to all afternoon; that it was not “compatible with the adjacent neighborhood” under town policy, literally 15 yards away from some residences, and that any event requiring police on duty should not be allowed; that the

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attendance was being expanded over the previous years, due to the change of venue, and that its staging at Point Tiburon Plaza was not as intrusive to the neighbors, nor did it require street closure. McWhinney said that it was not an appropriate event in a quiet, residential neighborhood, and that fencing off the park effectively closed it for use by Tiburon residents.

3) Driving Under the Influence (DUIs) were a threat to residents and required money to have more police on duty; also, closing both lanes of Paradise Drive was unusual for events in that location, as was fencing off the park at both ends.

4) Shoreline Park is not an appropriate location for the event, and the event is not in keeping with the quiet, charming, upscale image of Tiburon like the art shows, Classic Car Show, and RCP Mile, which speak well of the community.

Mr. McWhinney said that the Town would be better off donating funds to The Ranch instead of allowing an event that had the potential to adversely affect and cause damage to the area. He said that merchants would not benefit from the influx of people, either. He asked that the Council reject the application as it was not contractually allowed, not neighborly, not safe, nor appropriate to Tiburon.

Rod Thompson, Paradise Drive, also a member of the Bayside HOA board, thanked the Council for listening to the homeowners and resolving the issue with the placement of the Gallows Wheels. He reiterated many of Mr. McWhinney's remarks; he concurred that the car show, art display, and swim event were all in keeping with the public use envisioned for Shoreline Park. He said the beer festival, which required purchase of a ticket and fenced off the area, was not. He said the greatest fear of the homeowners was that it would become a permanent event in that location. He lamented the thought of beer tents lined up "in front of our windows". He decried the "bottomless" beer ticket, as advertised.

Jay Key, 29-year resident of Point Tiburon, said he had participated in the Wine Festival but worried a precedent was being set for these types of events at Shoreline Park. He said that previous management had signed an agreement 29 years ago claiming the area "would always be a park".

He suggested that Blackie's Pasture would be a better location, like the Reed Regatta did. He said the organizers could run a bus there from the ferry. Alternatively, he suggested the parking lot adjacent to Town Hall where chili festivals had been staged in the past. Mr. Key said "were in favor of charities and causes" and if the event were a concert, for instance, staged by local firefighters, they would support it. Mr. Key also asked about insurance for the beer festival. He said the homeowners should be added to the rider. He said this event did not benefit the Town and the neighbors did not support it.

Another speaker, Jim Smith, noted there would be two large events in town on the same day-- Tiburon Taps and Blackie's Hay Day. He said the beer festival was not even being run by The Ranch, according to the website, Festivalnet.com, a for-profit corporation.

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[Ms. Andreucci spoke up and said the festival website was selling tickets for the event but that the event was run and managed by The Ranch.]

Mr. Smith said the Town-approved events [on public property] were to be open to the public and said the event should be free, not requiring admission (\$45 per ticket). He said that people drinking beer all day would result in public intoxication and other problems. He said that re-routing traffic to Mar West, which is essentially a one-way street for 800-feet in one location, would be problematic. He asked whether a liquor license could be obtained for selling in a public park.

Another member of the board, Robert Roberti, resident of the area off-and-on for 50 years, said that all the points made by previous speakers were well intended and well thought out. He said the event did not pass the “what the heck is going on here test”. He agreed that the other events previously described had merit but that the beer festival was “way outside the envelope, and not a good fit”. He asked the Council to carefully consider these objections.

Mayor Tollini asked Ms. Andreucci if she would like to reply to any of the comments.

Ms. Andreucci said the beer festival was not a drunken brawl, and said some of the participants were neighbors at Pt. Tiburon. She said the car show closed the street and that the swim event was not free. She said The Ranch hires security for the event and that people in the community do come out and enjoy themselves; she added the participants are not “low class” citizens.

Director Andreucci went on to say The Ranch insurance could cover the HOA, if necessary, and that the set-up time could be changed from 7 a.m. to 8 a.m. She said permits were obtained to sell alcohol.

Ms. Hotchkiss concurred that The Ranch would obtain “extra layers of insurance” and that they worked with vendors who understand when to “cut people off” who have had too much to drink.

In response to the question about the Trick or Treat event, Director Andreucci said funding would be sought from merchants and realtors, but that The Ranch might return to Council to ask for additional funding.

Vice Mayor Fraser asked whether The Ranch had considered staging the event [beer festival] on Main Street. Ms. Andreucci said that because they would need to limit who could come into the area [by age], it represented a liability to the organizers. Also, she said it could cut off access to businesses which would likely not be supported by the business owners.

Mayor Tollini closed the matter to public and asked for Council discussion.

Councilmember Doyle asked about whether Ark Row had been considered, noting that the Art Festival had been staged in that location. But Doyle said he loved events at Shoreline Park; he

asked whether four hours out of 8700 in a year could have such a negative impact. Doyle said he had attended the beer festival and had not witnessed “sloppy, nasty, or drunken” behavior. Going back to the idea of Ark Row, Doyle said that it was also an easy location to access from the ferry and that it could be fenced off to allow access to shops and businesses, as well.

Councilmember Fredericks agreed with Doyle’s suggestion of staging on Ark Row. She said she, too, disagreed with the negative characterization of the beer festival. She noted that younger people, including her own children, enjoy tasting and identifying the different types of beers and ales and what goes into them. She said there was enjoyment in these festivals. But she said she was uncomfortable with the [Shoreline Park] location, as it did not seem consistent with the kinds of events previously approved in that particular location. Fredericks said that staging on Ark Row would also provide good exposure to that area of downtown.

Vice Mayor Fraser concurred with Councilmember Doyle’s idea, as well. He said he, too, had been to the beer festival and noted that consumption was regulated through the use of a very small cup. He said that Friday Nights on Main was a good example of a successful event staged in the downtown area, as was the wine festival. He said it was worth exploring the idea of staging the event at Ark Row.

Councilmember O’Donnell said he leaned toward approving the permit for the festival at Shoreline Park. He noted that while the residents and board members of Point Tiburon Bayside had valid concerns, he said some might be overblown.

O’Donnell noted the Shoreline Park Policy explicitly allows events that “temporarily deviate” from the customary use of the park. He said that he did not think a beer festival constituted a deviation, although he said it does deserve vigilance, and perhaps should not take place every year. O’Donnell said that he did not see the event as an onerous burden on the neighborhood. But he also said he would support the Council majority in this matter.

Mayor Tollini said she, too, understood not wanting a party in front of one’s home. But she commented that when her neighbors had parties, she sang along with their music.

The Mayor also said the Town’s Shoreline Park Policy limits the events in that location to five per year; that the beer festival was of short duration (1 to 5 p.m.), and it did not seem onerous. But she said she would be open to the idea of exploring the Ark Row location.

Vice Mayor Fraser suggested The Ranch come back to the next meeting, and report on the feasibility of staging on Ark Row. He also asked that the hours of operation of the festival be reduced to three hours, like the wine festival.

Councilmember Doyle noted there were only 20 beer vendors in the event. He suggested that if the lay-out of the Shoreline Park event was changed to move the band closer to the Donahue Building, for instance, it might be more feasible.

MOTION: To ask The Ranch staff to explore the possibility of staging Tiburon Taps on Ark Row; to shorten duration (hours) of the event duration, and re-work the layout of the event, if Shoreline Park is approved as the location.

Moved: Fraser, seconded by O'Donnell

Vote: AYES: Unanimous

MOTION: To approve the Trick or Treat event application, as submitted.

Moved: O'Donnell, seconded by Doyle

Vote: AYES: Unanimous

Action Item No. 1 – heard second, at 8:20 p.m.

**1. Railroad Trestle Trail** – Consider citizen-initiated (Tiburon Peninsula Foundation) project for a proposed pathway and related improvements to the former Railroad Trestle berm portion of Blackie's Pasture; provide direction to staff (Community Development Department)

Director Anderson gave the report. He said the project was a follow-up of work that was started by the Tiburon Peninsula Foundation (TPF) a few years ago at Blackie's Pasture. He said it would consist of a 600-foot accessible color pathway up to and atop the Trestle Berm, with the final 20 feet being railroad track with a realistic appearance. He said there would be some benches, and "then and now" historical markers, similar to the ones installed by the Foundation along Old Rail Trail.

Anderson said the project must comply with Title 24 (Americans with Disabilities Act), as well as Town safety standards. He said the TPF had provided a preliminary cost estimate of \$125,000 for the project. He noted that fundraising was an important component, and that the Foundation contemplated a contribution from the Town, as well. If public [Town] funds are used, Anderson said the public bidding process would be required for the contract which would, no doubt, drive up the cost of the project.

As more fully detailed in the written staff report, Director Anderson said the project was consistent with uses specified for the area in the Tiburon General Plan and Tiburon Zoning Ordinance. He said it would primarily consist of flat work and there were no adverse impacts from view blockage. He said the result was that many more people would be able to enjoy the area.

Anderson said the POST Commission had voted unanimously to endorse the project and refer it to the Council for final approval. He said that over 250 notices had been sent out to surrounding neighborhoods and no written comments had been received as of tonight's meeting. Anderson said the project preliminarily appears to be exempt from CEQA, a determination that would be finalized if the Council chooses to approve the project. He went on to say that if the Council approves the project in concept, the next steps would be to direct staff to work with the TPF and prepare bid documents, go through the bidding process, award the contract, and obtain the necessary zoning and building permits.

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Councilmember Fredericks asked if the project could come back to the Council before the “build” phase for review of costs and the like. Director Anderson concurred that it would be advisable to keep the Council informed on the progress of the project. Fredericks said this was particularly important before the project goes out to bid, as the Town Council had experienced being surprised by escalating costs on projects in the recent past.

Vice Mayor Fraser agreed, adding that an amount for contingency should be added to the project cost and taken into consideration for raising enough funds.

Councilmember O’Donnell said he would like to know more about how the safety issues of the area would be addressed, noting that “kids on bikes” would be attracted to the area.

Mayor Tollini asked for a presentation from the applicants.

Jim Wood, resident of Vistazo West Street, spoke representing the TPF board, sponsors of the “Trestle Trail” project. He acknowledged other members of the team, including Petey Stein, David Holscher, Tom O’Neill, and Phil Cassou. He said their mission was to bring the history of the railroad to the Town. He said the group had already raised \$30,000-- \$15,000 from TPF and \$15,000 from the Belvedere Community Foundation – and they would ask the Town for a \$40,000 to the project. He said the goal was a 2:1 private/public funding partnership.

Mr. Wood described the fundraising efforts of selling 60 authentic redwood railroad ties, on which a bronze plaque could be affixed with the donor’s name. He said the group hoped to sell them at Friday Nights on Main for \$2,000-\$2,500 apiece. He said at the end of the trail, there would be actual rail and ballast. He said the ties would be sunken into and flush with the ground (grade). Wood also said they would sell railroad spikes at \$250 each, with these donors recognized in a nearby plaque.

He said the donor recognition also helped to address the many requests for memorials, and would “fit in” to the area, as well. He said if all the ties and spikes were sold, the money could go into contingency (cost overruns) and ongoing maintenance of the project, which he said could run \$3,000-\$6,000 per year.

Wood said the project design would complement the newly installed picnic area (Blackie’s Picnic Meadow) and would overall give residents and visitors alike a historical perspective of the area. He said it promoted a sense of community, to “belonging to something”.

Dave Holscher, resident of Paradise Drive, architect on the project and member of TPF, reviewed the project drawings with the Council. He said it was a simple design, essentially a walking path to the end of the track. He said there was a beautiful vista atop the berm, and at the end of the trail there would be a picture of the trestle that used to be there. He said it was not “fancy” nor would it create blight to the area. He said it would fit it well, and be part of, the adjacent Blackie’s Pasture area. He also said the brown tone would blend in with the natural

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surroundings, and be a nice, quiet addition to the area. He said the berm was as essentially a “forgotten area”.

In response to question about safety from Councilmember O’Donnell, Mr. Holscher said there would be a barrier at the end of the trail that would be self-defeating so that bicycles could not jump over it.

Councilmember Fredericks wondered whether bicyclists could have a place to park their bikes and walk up the berm. Holscher said the path was essentially a walking path, paved with inlaid trusses.

Mayor Tollini asked if there was any railing contemplated. Holscher said no. She also asked whether the benches would be visible from the road. The benches were described as backless, wooden benches. And Councilmember Fredericks added that top of the berm is not visible as you are driving by the area; the only visible portion is the end of the berm.

Mayor Tollini opened the matter to public comment.

Parker Pringle, Tiburon native, said he wholeheartedly supported the project. He said the trestle was an icon of the Town’s railroad past, along with the Donahue Building and [Railroad] palm tree at Point Tiburon, and that it really needed to be preserved.

Jeff Slavitz, current President of the TPF, said it was a wonderful project and would make a forgotten area a destination. He agreed that it would become an attraction; he noted that while he served on the Town Council, similar [attractive nuisance] concerns were expressed about the installation of Blackie’s sculpture which had turned out to not be as onerous as imagined. He said the Town would make any necessary adjustments to this project, if needed, as well.

The Council asked a few more questions about the barrier. Mr. Holscher admitted that he was not really a fan of installing a barrier, because it would make the project more visible, and he would prefer instead to pull the pathway back about 20 feet to ensure safety [without the addition of a barrier]. He said the barrier might be visible from the road, and he would prefer to grade up a bit instead.

Jim Wood said he hoped they would have the funds to restore the timbers on the trestle, as well. He compared the project to the High Line in New York City, a restoration of an elevated railway that was now widely used as a walking path and scenic area.

Mayor Tollini closed the matter to public comment.

Councilmember O’Donnell said he was happy to support the project and would vote to authorize the \$40,000 donation by the Town. He said he would like Town staff to work with Mr. Holscher to limit the size and scale of the barrier, as he felt it would detract away from the overall project.

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Councilmember Doyle said he loved everything about the project—the photos and historical aspect—and said he wished the original trestle had been preserved. He suggested that the ballast at the end might be embedded rather than raised gravel. He jokingly said it might be fun to have a rail car or cart on the tracks.

Councilmember Fredericks also voiced her support. She said the project represented a good balance of trails in the area—some dirt and some paved—and that she liked the proposed materials. Fredericks said she was happy that the trail would not be visible and said she, too, would support the requested contribution by the Town, but stated that \$40,000 should be the limit. She added that the TPF should create a trust for ongoing maintenance. Fredericks also agreed that design features should be utilized to discourage bicycle use on the trail.

Vice Mayor Fraser applauded the TPF for a project that would bring the community together. He agreed with Councilmember Fredericks that \$40,000 should be the maximum contribution by the Town.

Mayor Tollini concurred with the previous remarks in all aspects – historical preservation, education, connecting the community, and limiting what might be visible from the road.

MOTION: To approve the project in concept and authorize filing of the CEQA exemption; to direct staff to work with the applicants to limit the size of any barrier or visible features; also, to authorize the \$40,000 budget appropriation in the 2016-17 fiscal year budget.

Moved: O'Donnell, seconded by Fredericks

Vote: AYES: Unanimous

## **TOWN COUNCIL REPORTS**

Mayor Tollini, Town representative to the Richardson Bay Regional Agency (RBRA) reported on the proposed mooring field and enforcement issues regarding anchor outs. She said the City of Sausalito had voted against funding a mooring field in favor of other means of enforcement. She said another request for funding, to remove sinking boats, had also been declined by the City. She noted the City also recommended that the other RBRA agencies split its JPA costs evenly, rather than on current formula based on percentage of coastal lineal footage. Mayor Tollini commented that the future of the RBRA appears somewhat uncertain.

## **TOWN MANAGER REPORT**

Town Manager said the Yellow Bus Challenge web platform was ready and bus passes would go on sale on May 2. He also reported that the Reed Union School District had appointed two directors, and the JPA was now in a position to move forward.

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**WEEKLY DIGESTS**

- Town Council Weekly Digests – April 7 & April 15, 2016

**ADJOURNMENT**

There being no further business before the Town Council of the Town of Tiburon, Mayor Tollini adjourned the meeting at 8:58 p.m.

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ERIN TOLLINI, MAYOR

ATTEST:

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DIANE CRANE IACOPI, TOWN CLERK



Up to this point, the Town has paid the amount required for retiree medical benefits in a given year on the pay-as-you-go basis. In addition, the Town has set aside funds in the OPEB GASB 45 General Fund Reserve. The funds held in this reserve do not earn interest, and are not eligible to be considered in reducing the Town's OPEB unfunded liability because they are not held in an irrevocable trust. There is currently \$1,246,159 in the OPEB GASB 45 reserve, and based on the most recent analysis, the Town's unfunded liability for OPEB benefits will be approximately \$3.63 million based on a 4% discount rate. The 4% discount rate is the scenario used for agencies that only contribute OPEB costs in the amount of the actual payments on behalf of retirees (pay-as-you-go), which the Town currently employs.

It is a financial management best practice, and consistent with the Town's financial goals to reduce long term liabilities and GFOA considers it "best practice" to prefund OPEB benefits (2012). Staff believes that entering into a trust agreement to prefund OPEB liabilities will lower long term liabilities and produce savings in the long run. Prefunding OPEB costs in an irrevocable trust will also allow the Town to use a higher discount rate when performing its next actuarial valuation in 2017. It is estimated that a 1% increase in the discount rate could lower the Town's OPEB unfunded liability by 10-12%, or \$360,000 to \$435,000, based on a \$3.63 million liability. A 6.0% discount rate would still be considered moderately conservative when performing the next actuarial, and could reduce the Town's current unfunded liability from \$3.63 million to approximately \$2.75 - \$2.9 million.

While not a requirement of GASB 45, prefunding the Town's OPEB obligation and placing it in an irrevocable trust provides certain benefits:

- Once placed into a trust, the funds cannot be diverted to other purposes, nor is it subject to claims by creditors or State takeaways.
- Trust assets can be managed for investment purposes to achieve a higher rate of return, thus lowering the Town's future liability. There is investment flexibility with Section 115 Trust compared to restrictions on general fund investments.
- It is fiscally prudent to prefund retiree obligations while accrued during active service, preventing the increase of the Town's unfunded obligation and pay-as-you-go costs.
- Prefunding is less expensive for the Town over the long run since more of the unfunded liability will be paid for by investment dollars.

There are surprisingly few choices when it comes to companies that provide trust services for OPEB pre-funding. Staff reached out to the California Employers' Retirement Benefit Trust (CERBT) and Public Agency Retirement Services (PARS) for proposals to provide trust services. After reviewing the information provided, the main difference between the two companies comes down to fees charged, number of investment strategies provided, requirement on timing of OPEB Actuarial, and additional services provided.

CERBT is overseen and administered by the CalPERS Board of Administration and currently charges an annual fee of 10 basis points on the assets under its management. This fee can be increased at any time. CERBT has three asset allocation strategies with the most conservative allocation averaging 24% in equities and the most aggressive with 57% in equities. CERBT requires an actuarial valuation be performed every two years, at an approximate cost of \$5,000 per valuation.

PARS is a private for-profit company that contracts with US Bank for trustee services and HighMark Capital Management for Investment Management services. PARS charges 25 basis points for their trust administration/consulting fees with additional fees ranging between 24 – 32 basis points for contracted trust/investment management fees, for a total maximum fee of 57 basis points. The fee that would be charged is fixed for the next two years. PARS has actually reduced fees over the past six years due to economies of scale of their multi-employer trust. PARS provides more flexibility with 5 asset allocation strategies (active or passive) and the ability to customize the portfolio. The most conservative portfolio has a minimum of 5% invested in equities, with the most aggressive at 75% equities. PARS allows for tri-annual actuarial valuation reports. PARS also provides an option, at no additional cost, to make OPEB payments directly to retirees, therefore relieving the administrative duty from Town staff. This option is not available with CERBT. PARS also provides an option for establishing an account within the same trust for prefunding unfunded pension liabilities. There are currently no other options for prefunding our CalPERS pension unfunded liability except lump-sum payments to CalPERS. This pension prefunding option with PARS gives us the ability to set aside reserves in the same trust (sub accounted for separately from OPEB) and lower Net Pension Liabilities (NPL) for GASB 68 reporting.

There are no costs to establish a trust fund with either administrator. Fees are only charged once funds are placed with the administrator to manage.

The pros of contracting with CERBT are lower management fees (ten basis points versus 49-57 basis points). However, CERBT has under-performed PARS in their three investment options over the past three years, net of all fees. Of course, this past performance does not guarantee future results. Two of CERBT's investment options do not have a five year history at this point to compare results.

The pros in contracting with PARS would be diversification of investments as CalPERS would not also be managing these funds (PERS currently manages approximately \$27 million in Town pension assets). Only this PARS Trust has a Private Letter Ruling (PLR) from the IRS which allows for prefunding of OPEB or Pension or Both liabilities. PARS will directly make payment to retirees who are eligible for monthly medical allowance payments (currently 14 employees). For an agency our size, PARS only requires an actuarial valuation be performed every three years as opposed to CERBT every two years. PARS does provide more investment options than CERBT and does allow for customization of investment options. PARS has a full service approach including a local dedicated Portfolio Manager who will make a recommendation on our investment strategy, take on the fiduciary responsibility to manage our assets, assist with our investment policy, conduct annual reviews and has cell phone access for questions.

This agenda item is recommending, through the Council Budget Committee, that the Town Council authorize participation in the Public Agency Retirement Services (PARS) Post-Employment Benefits Trust. Though staff was looking only at establishing an OPEB Irrevocable Trust only, there is no cost to open either Trust Fund and the Town could consider pre-funding pension liabilities through this trust as opposed to directing additional payments to CalPERS in the future. Once this combination trust is established, PARS will work with the Town, through the Budget Committee, to determine the best strategic asset allocation policy for the investment of the OPEB GASB 45 Reserve funds.

## **FINANCIAL IMPACT**

Establishing the Pension Trust Fund has no direct cash impact. Funding the Trust Fund will have a cash impact as funds will be withdrawn from the OPEB GASB 45 General Fund Reserve and transferred to the irrevocable trust.

## **ENVIRONMENTAL DETERMINATION**

This item does not meet the definition of a project under the California Environmental Quality Act (CEQA).

## **RECOMMENDATION**

Staff recommends that the Town Council:

Move to adopt the following resolution:

1. Resolution authorizing participation the in PARS Post-Employment Benefits Trust Program, to be administered by Public Agency Retirement Services (PARS) and U.S. Bank, as Trustee, appointment the Town Manager as the Town's Plan Administrator, and authorizing the Town Manager to execute the documents to implement the Program

Staff will meet with the Budget Committee and PARS representatives to determine the best strategy for our OPEB GASB 45 Reserves based on needs and objectives, and bring the recommendation back to the full Council for approval. If we invest these funds prior to June 30, 2016, we can receive credit for the investment against our Net OPEB Obligation in the FY 2015-16 annual audit.

## **Exhibits:**

1. Resolution authorizing participation the in PARS Post-Employment Benefits Trust Program, to be administered by Public Agency Retirement Services (PARS) and U.S. Bank, as Trustee, appointment the Town Manager as the Town's Plan Administrator, and authorizing the Town Manager to execute the documents to implement the Program
2. Administrative Services Agreement

Prepared By: Heidi Bigall, Director of Administrative Services

RESOLUTION NO: \_\_\_\_\_

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF TIBURON  
APPROVING THE ADOPTION OF THE PUBLIC AGENCIES POST  
EMPLOYMENT BENEFIT TRUST ADMINISTERED BY  
PUBLIC AGENCY RETIREMENT SERVICES (PARS)

WHEREAS, it is determined to be in the best interest of the Town of Tiburon (the "Town") to participate in the PARS Public Agencies Post-Employment Benefit Trust (the "Program") for the purpose of pre-funding pension obligations and/or OPEB obligations; and

WHEREAS, the Town is eligible to participate in the Program, a tax-exempt trust and plan performing an essential governmental function within the meaning of Section 115 of the Internal Revenue Code, as amended, and the Regulations issued thereunder, and is a tax-exempt trust under the relevant statutory provisions of the State of California; and

WHEREAS, the Town adoption and operation of the Program has no effect on any current or former employee's entitlement to post-employment benefits; and

WHEREAS, the terms and conditions of post-employment benefit entitlement, if any, are governed by contracts separate from and independent of the Program; and

WHEREAS, the Town's funding of the Program does not, and is not intended to, create any new vested right to any benefit nor strengthen any existing vested right; and

WHEREAS, the Town reserves the right to make contributions, if any, to the Program.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Council hereby adopts the PARS Public Agencies Post-Employment Benefits Trust; and
2. The Council hereby appoints the Town Manager, or his/her successor or designee as the Town's Plan Administrator for the Program; and
3. The Town's Plan Administrator is hereby authorized to execute the PARS legal and administrative documents on behalf of the Town and to take whatever additional actions are necessary to maintain the Town's participation in the Program and to maintain compliance of any relevant regulation issued or as may be issued; therefore, authorizing him/her to take whatever additional actions are required to administer the Town's Program.

Exhibit 1

PASSED AND ADOPTED at a regular meeting of the Town Council of the Town of Tiburon on \_\_\_\_\_, 2016 by the following vote:

AYES: COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

\_\_\_\_\_  
ERIN TOLLINI, MAYOR  
Town of Tiburon

ATTEST:

\_\_\_\_\_  
DIANE CRANE-IACOPI, TOWN CLERK

## AGREEMENT FOR ADMINISTRATIVE SERVICES

This agreement ("Agreement") is made this day of \_\_\_\_\_, 2016, between Phase II Systems, a corporation organized and existing under the laws of the State of California, doing business as Public Agency Retirement Services and PARS (hereinafter "PARS") and the Town of Tiburon ("Agency").

WHEREAS, the Agency has adopted the PARS Public Agencies Post-Employment Benefits Trust for the purpose of pre-funding pension obligations and/or OPEB obligations ("Plan"), and is desirous of retaining PARS as Trust Administrator to the Trust, to provide administrative services.

NOW THEREFORE, the parties agree:

1. **Services.** PARS will provide the services pertaining to the Plan as described in the exhibit attached hereto as "Exhibit 1A" ("Services") in a timely manner, subject to the further provisions of this Agreement.
2. **Fees for Services.** PARS will be compensated for performance of the Services as described in the exhibit attached hereto as "Exhibit 1B".
3. **Payment Terms.** Payment for the Services will be remitted directly from Plan assets unless the Agency chooses to make payment directly to PARS. In the event that the Agency chooses to make payment directly to PARS, it shall be the responsibility of the Agency to remit payment directly to PARS based upon an invoice prepared by PARS and delivered to the Agency. If payment is not received by PARS within thirty (30) days of the invoice delivery date, the balance due shall bear interest at the rate of 1.5% per month. If payment is not received from the Agency within sixty (60) days of the invoice delivery date, payment plus accrued interest will be remitted directly from Plan assets, unless PARS has previously received written communication disputing the subject invoice that is signed by a duly authorized representative of the Agency.
4. **Fees for Services Beyond Scope.** Fees for services beyond those specified in this Agreement will be billed to the Agency at the rates indicated in the PARS' standard fee schedule in effect at the time the services are provided and shall be payable as described in Section 3 of this Agreement. Before any such services are performed, PARS will provide the Agency with a detailed description of the services, terms, and applicable rates for such services. Such services, terms, and applicable rates shall be agreed upon in writing and executed by both parties.
5. **Information Furnished to PARS.** PARS will provide the Services contingent upon the Agency's providing PARS the information specified in the exhibit attached hereto as "Exhibit 1C" ("Data"). It shall be the responsibility of the Agency to certify the accuracy, content and completeness of the Data so that PARS may rely on such information without further audit. It shall further be the responsibility of the Agency to deliver the Data to PARS in such a manner that allows for a reasonable amount of time for the Services to be performed. Unless specified in Exhibit 1A, PARS shall be under no duty to question Data received from the Agency, to compute contributions made to the

Plan, to determine or inquire whether contributions are adequate to meet and discharge liabilities under the Plan, or to determine or inquire whether contributions made to the Plan are in compliance with the Plan or applicable law. In addition, PARS shall not be liable for non performance of Services to the extent such non performance is caused by or results from erroneous and/or late delivery of Data from the Agency. In the event that the Agency fails to provide Data in a complete, accurate and timely manner and pursuant to the specifications in Exhibit 1C, PARS reserves the right, notwithstanding the further provisions of this Agreement, to terminate this Agreement upon no less than ninety (90) days written notice to the Agency.

6. **Records.** Throughout the duration of this Agreement, and for a period of five (5) years after termination of this Agreement, PARS shall provide duly authorized representatives of Agency access to all records and material relating to calculation of PARS' fees under this Agreement. Such access shall include the right to inspect, audit and reproduce such records and material and to verify reports furnished in compliance with the provisions of this Agreement. All information so obtained shall be accorded confidential treatment as provided under applicable law.
7. **Confidentiality.** Without the Agency's consent, PARS shall not disclose any information relating to the Plan except to duly authorized officials of the Agency, subject to applicable law, and to parties retained by PARS to perform specific services within this Agreement. The Agency shall not disclose any information relating to the Plan to individuals not employed by the Agency without the prior written consent of PARS, except as such disclosures may be required applicable law.
8. **Independent Contractor.** PARS is and at all times hereunder shall be an independent contractor. As such, neither the Agency nor any of its officers, employees or agents shall have the power to control the conduct of PARS, its officers, employees or agents, except as specifically set forth and provided for herein. PARS shall pay all wages, salaries and other amounts due its employees in connection with this Agreement and shall be responsible for all reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation and similar matters.
9. **Indemnification.** PARS and Agency hereby indemnify each other and hold the other harmless, including their respective officers, directors, employees, agents and attorneys, from any claim, loss, demand, liability, or expense, including reasonable attorneys' fees and costs, incurred by the other as a consequence of, to the extent, PARS' or Agency's, as the case may be, negligent acts, errors or omissions with respect to the performance of their respective duties hereunder.
10. **Compliance with Applicable Law.** The Agency shall observe and comply with federal, state and local laws in effect when this Agreement is executed, or which may come into effect during the term of this Agreement, regarding the administration of the Plan. PARS shall observe and comply with federal, state and local laws in effect when this Agreement is executed, or which may come into effect during the term of this Agreement, regarding Plan administrative services provided under this Agreement.

11. **Applicable Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of California. In the event any party institutes legal proceedings to enforce or interpret this Agreement, venue and jurisdiction shall be in any state court of competent jurisdiction.
12. **Force Majeure.** When a party's nonperformance hereunder was beyond the control and not due to the fault of the party not performing, a party shall be excused from performing its obligations under this Agreement during the time and to the extent that it is prevented from performing by such cause, including but not limited to: any incidence of fire, flood, acts of God, acts of terrorism or war, commandeering of material, products, plants or facilities by the federal, state or local government, or a material act or omission by the other party.
13. **Ownership of Reports and Documents.** The originals of all letters, documents, reports, and data produced for the purposes of this Agreement shall be delivered to, and become the property of the Agency. Copies may be made for PARS but shall not be furnished to others without written authorization from Agency.
14. **Designees.** The Plan Administrator of the Agency, or their designee, shall have the authority to act for and exercise any of the rights of the Agency as set forth in this Agreement, subsequent to and in accordance with the written authority granted by the Governing Body of the Agency, a copy of which writing shall be delivered to PARS. Any officer of PARS, or his or her designees, shall have the authority to act for and exercise any of the rights of PARS as set forth in this Agreement.
15. **Notices.** All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of the notices in person or by depositing the notices in the U.S. mail, registered or certified mail, return receipt requested, postage prepaid and addressed as follows:
  - (A) To PARS: PARS, 4350 Von Karman Avenue, Suite 100, Newport Beach, CA 92660; Attention: President
  - (B) To Agency: [Agency]; [Address]; [City, State, Zip]; Attention: [Plan Administrator]Notices shall be deemed given on the date received by the addressee.
16. **Term of Agreement.** This Agreement shall remain in effect for the period beginning \_\_\_\_\_, 2016 and ending \_\_\_\_\_, 2019 ("Term"). This Agreement may be terminated at any time by giving thirty (30) days written notice to the other party of the intent to terminate. Absent a thirty (30) day written notice to the other party of the intent to terminate, this Agreement will continue unchanged for successive twelve month periods following the Term.
17. **Amendment.** This Agreement may not be amended orally, but only by a written instrument executed by the parties hereto.
18. **Entire Agreement.** This Agreement, including exhibits, contains the entire understanding of the parties with respect to the subject matter set forth in this Agreement. In the event a conflict arises between the parties with respect to any term, condition or

provision of this Agreement, the remaining terms, conditions and provisions shall remain in full force and legal effect. No waiver of any term or condition of this Agreement by any party shall be construed by the other as a continuing waiver of such term or condition.

19. **Attorneys Fees.** In the event any action is taken by a party hereto to enforce the terms of this Agreement the prevailing party herein shall be entitled to receive its reasonable attorney's fees.
20. **Counterparts.** This Agreement may be executed in any number of counterparts, and in that event, each counterpart shall be deemed a complete original and be enforceable without reference to any other counterpart.
21. **Headings.** Headings in this Agreement are for convenience only and shall not be used to interpret or construe its provisions.
22. **Effective Date.** This Agreement shall be effective on the date first above written, and also shall be the date the Agreement is executed.

**AGENCY:**

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**PARS:**

BY: \_\_\_\_\_

Tod Hammeras

TITLE: Chief Financial Officer

DATE: \_\_\_\_\_

EXHIBIT 1A  
SERVICES

PARS will provide the following services for the [Agency Name] Public Agencies Post-Employment Benefits Trust:

1. Plan Installation Services:

- (A) Meeting with appropriate Agency personnel to discuss plan provisions, implementation timelines, actuarial valuation process, funding strategies, benefit communication strategies, data reporting, and submission requirements for contributions/reimbursements/distributions;
- (B) Providing the necessary analysis and advisory services to finalize these elements of the Plan;
- (C) Providing the documentation needed to establish the Plan to be reviewed and approved by Agency legal counsel. Resulting final Plan documentation must be approved by the Agency prior to the commencement of PARS Plan Administration Services outlined in Exhibit 1A, paragraph 2 below.

2. Plan Administration Services:

- (A) Monitoring the receipt of Plan contributions made by the Agency to the trustee of the PARS Public Agencies Post-Employment Benefits Trust ("Trustee"), based upon information received from the Agency and the Trustee;
- (B) Performing periodic accounting of Plan assets, reimbursements/distributions, and investment activity, based upon information received from the Agency and/or Trustee;
- (C) Coordinating the processing of distribution payments pursuant to authorized direction by Agency, and the provisions of the Plan, and, to the extent possible, based upon Agency-provided Data;
- (D) Coordinating actions with the Trustee as directed by the Plan Administrator within the scope this Agreement;
- (E) Preparing and submitting a monthly report of Plan activity to the Agency, unless directed by the Agency otherwise;
- (F) Preparing and submitting an annual report of Plan activity to the Agency;
- (G) Facilitating actuarial valuation updates and funding modifications for compliance with GASB 45, if prefunding OPEB obligations;
- (H) Coordinating periodic audits of the Trust;
- (I) Monitoring Plan and Trust compliance with federal and state laws.

3. PARS is not licensed to provide and does not offer tax, accounting, legal, investment or actuarial advice.

EXHIBIT 1B  
FEES FOR SERVICES

PARS will be compensated for performance of Services, as described in Exhibit 1A based upon the following schedule:

- (A) An annual asset fee paid by the Agency or paid from Plan Assets based on the following schedule:

<u>For Plan Assets from:</u>			<u>Annual Rate:</u>
\$0	to	\$10,000,000	0.25%
\$10,000,001	to	\$15,000,000	0.20%
\$15,000,001	to	\$50,000,000	0.15%
\$50,000,001	and	above	0.10%

Annual rates are prorated and paid monthly. The annual asset fee shall be calculated by the following formula [Annual Rate divided by 12 (months of the year) multiplied by the Plan asset balance at the end of the month]. Trustee and Investment Management Fees are not included.

- (B) The annual asset fee referenced above shall be paid as follows:

**Annual Asset Fee Payment Option (Please select one option below):**

- Annual Asset Fee shall be paid from Plan Assets.  
 Annual Asset Fee shall be invoiced to and paid by the Agency.

EXHIBIT 1C  
DATA REQUIREMENTS

PARS will provide the Services under this Agreement contingent upon receiving the following information:

1. Executed Legal Documents:
  - (A) Certified Resolution
  - (B) Adoption Agreement to the Public Agencies Post-Employment Benefits Trust
  - (C) Trustee Investment Forms
  
2. Contribution – completed Contribution Transmittal Form signed by the Plan Administrator (or authorized Designee) which contains the following information:
  - (A) Agency name
  - (B) Contribution amount
  - (C) Contribution date
  - (D) Contribution method (Check, ACH, Wire)
  
3. Distribution – completed Payment Reimbursement/Distribution Form signed by the Plan Administrator (or authorized Designee) which contains the following information:
  - (A) Agency name
  - (B) Payment reimbursement/distribution amount
  - (C) Applicable statement date
  - (D) Copy of applicable premium, claim, statement, warrant, and/or administrative expense evidencing payment
  - (E) Signed certification of reimbursement/distribution from the Plan Administrator (or authorized Designee)
  
4. Other information pertinent to the Services as reasonably requested by PARS and Actuarial Provider.



TOWN OF TIBURON  
1505 Tiburon Boulevard  
Tiburon, CA 94920

Town Council Meeting

May 4, 2016

Agenda Item: *AI-1*

## STAFF REPORT

**To:** Mayor and Members of the Town Council  
**From:** Department of Public Works  
**Subject:** Proposed McKegney Green Soccer Field Upgrade  
**Reviewed By:** *L.C.*

### BACKGROUND

From Spring 2015 until early this year, staff has met with representatives of the Tiburon Peninsula Soccer Club (TPSC), outside consultants, Councilmember O'Donnell and Mayor Tollini regarding the condition of McKegney Green and a potential project to upgrade the field.

The playing field at McKegney Green was constructed in 1975. The existing field is about 200,000 SF (4.6 acres) of natural turf. This 200,000 SF includes a sand field that is 330 feet by 225 feet or about 75,000 SF (1.8 acres). This sand field includes a 10" layer of sand beneath it for improved drainage. The entire field is crowned to drain to both sides at 2 - 3%.

Since its construction, the McKegney playing field has received minimal maintenance including reseeding, limited resodding, and repairs to drainage and irrigation as needed. For instance, in 2014, Public Works spent about \$10,000 in maintenance on the field. The playing field is currently in poor condition, with the field surface exhibiting significant inconsistency in the areas of turf growth, wear resistance and drainage. In addition, the irrigation and drainage systems are aged and operating beyond their expected useful life, resulting in some areas that are too dry for proper growth and other areas that are muddy and tear up easily under the stress of play. Comparatively, Mill Valley schedules their sand fields for resodding and irrigation repairs every 5 to 8 years.

Council discussed McKegney Green on March 2, 2016, and voted unanimously to authorize a pre-design scoping study to better determine the project requirements for a possible renovation of McKegney Field. Staff engaged Abbey Arnold Associates for that study on March 4, 2016. The issue was also discussed at the Council Retreat on April 1, 2016. These discussions centered on how the elevated levels of salt found in the soil, and recycled water used for irrigation, might affect the project. Council requested that we investigate turf grasses used near salt water on golf courses in the Bay Area to see if these might be suitable for use on the McKegney project. The pre-design study is now complete and includes information related to: existing soil conditions, irrigation water sources, and biological considerations at the site. Based on this information, the consultant has provided 5 possible options for improving the existing field with their associated estimates of probable cost.

## **ANALYSIS**

Before discussing the individual options, it is important to understand the possible implications of three items:

1. Alternative natural turf
2. Recycled water versus potable water
3. Natural turf versus artificial turf

### **Alternative Turf**

Staff was asked to investigate the availability of alternative turf grass species that may tolerate the existing conditions at McKegney Green. The consultant has identified only one species, Paspalum, which we could consider.

Paspalum, which has demonstrated an ability to better tolerate high level of salts in irrigation water, is a warm weather, drought tolerant turf grass. It has been used for golf courses and athletic fields in Florida, Georgia, Texas and Southern California, but has been used successfully only on Bay Area golf courses. Athletic fields receive far greater stress than golf courses and, to our knowledge, Paspalum has not yet been used for an athletic field in the Bay Area. Paspalum was considered by the consultant for an earlier project in Brentwood but rejected as the soil temperatures were too low for it to recover from the wear and tear of play. Soil temperatures in Tiburon are only slightly higher, and therefore, the use of Paspalum on McKegney Green would be experimental. Nonetheless, it is the only turf species identified that may tolerate the salt levels in the existing irrigation system without providing a new potable water source for the field. In this scenario, Paspalum would be used with recycled water, and no irrigation available in the winter. While Paspalum is drought tolerant, a dry winter could result in additional stress and limited ability to recover from seasonal use.

### **Potable and Recycled Water**

The field is currently watered with recycled secondary water under a permit granted in 1988. A new or revised permit would require this recycled water have tertiary treatment. Moreover, the water is very high in salts due to seawater intrusion in the sewer system. This seawater intrusion has increased over the last 5 to 10 years. This level of salinity makes the water unsuitable for most typical turf grasses. Mill Valley also uses this recycled water, but only after blending it with up to 75% potable water. The existing permit limits the amount of recycled water we can use, and does not allow any irrigation from November 15 through April 15, further stressing the turf during dry winters. The Town currently pays about \$17,000 per year for recycled water, which includes the water used at South of Knoll Park as well as McKegney Green.

Adding potable water irrigation would provide many benefits, but would increase applicable estimated project costs by approximately \$310,000. This would eliminate salt problems and allow winter irrigation when needed. Potable water would also allow for the use of Bermuda hybrid grasses normally used on athletic fields in the Bay Area.

### **Natural and Artificial Turf**

Natural turf limits the use of the field. The consultant states a ratio of 1 hour of play to 10 hours of rest should be observed. This results in a maximum play time of about 800 hours per year

assuming year around play. Play could be further reduced when winter irrigation and rain are limited, drainage is poor, the field is wet, or the ability to move the goal posts is limited by the size of the field. All, or some of these conditions are likely to occur in options 1, 1.a. and 2 discussed below. In option 3, the size of the field would allow the periodic relocation of goal posts, mitigating that factor. With all natural turf options, the annual maintenance costs are higher than artificial turf, and it is recommended the turf sod be completely replaced every 10 years.

An artificial turf field has lower estimated annual maintenance costs, and allows a greater amount of play, normally around 1500 hours per year, up to a maximum of 3,000 hours per year. However, the fabric would need to be replaced every 10 -12 years. Assuming 1,500 hour per year use for artificial turf and 800 hour per year use for a sand based field (the upper recommended maximum), the cost per hour of play for artificial turf is lower than the cost per hour of play for a sand field. The consultant notes that artificial turf has been a “game changer” where it has been installed. That is to say, “if you build it, they will come.” This presents a potential issue with artificial turf, and to a somewhat lesser extent, Option 3 discussed below. If they do come, where will they park? Further, artificial turf will need to be protected and fenced, changing the nature of the existing McKegney Green field. For this reason, the CEQA consultant noted, “The artificial turf might increase the duration and frequency of field use, in turn, affecting parking or traffic, therefore a Mitigated Negative Declaration could be necessary.”

### **Project Options**

The consultant provided five options for improving the existing field. The minimum project simply repairs the existing sand field. The largest project converts all of the existing usable area to an artificial turf playing area. The report and background documents are attached. Diagrams of each option as well as their associated probable estimate of costs are included in the report. The proposed options are as follows:

1. **Re-sod only the existing sand-based portion of the field.** This will result in a 75,000 SF sand-based field. This would include upgrades to the existing irrigation. Drainage problems will not be addressed, potentially resulting in wet areas that will tear more easily. The size of this field does not allow moving of goal posts to avoid concentrated wear. **Estimated cost: \$685K.**
- 1a. **Re-sod only the existing sand-based field and add improved drainage.** This is similar to option 1 except that drainage would be improved to reduce potential wet areas and increase the ability of the field to leach salt in the winter. **Estimated cost: \$864K.**
2. **Re-sod 150,000 SF of the existing field.** This rehabilitates the entire existing playing area without any re-grading to maximize the useable area. The result is a 150,000 SF playing area that includes a 75,000 SF sand-based field and 75,000 SF of non-sand based field. This would allow play on a sand-based field and practice or junior games on dirt based fields, increasing the functionality of the fields. This would include upgrades to the drainage and existing irrigation. This option restores McKegney playfield to its original 1975 functionality. **Estimated cost: \$1.1M.** (Note that a Verde Design estimate for a similar field was supplied by the project proponents at \$1.1 M).

**Note:** Options 1, 1a and 2 would utilize Paspalum turf. These options could be improved with installation of a potable water irrigation system at an additional cost of about \$310K. If a potable water irrigation system is added, it is recommended that the drainage be improved (as indicated in options 1a and 2), and a more typical Bermuda type turf be utilized as opposed to the Paspalum turf described above. This would result in more consistent year-round watering, more play time, better recovery and reduced experimental risk associated with using Paspalum.

3. **Construct a 200,000 SF sand based field.** Remove about 200,000 SF of sod, re-grade to maximize the usable area, and replace with a 200,000 SF sand based sod field with 185,000 SF of playable area. This option allows multiple sand fields and moving of goal posts to reduce high intensity wear, and includes installation of a potable water irrigation system and improved drainage. Adding potable water will be needed due to the increase in water use. This option would allow for a full 800 hours of play per year. **Estimated cost: \$2.6M.** (Note that a Verde Design estimate for a similar field but 150,000 SF field and without a new potable water source was supplied by the resident proponents. Adjusting for size and adding a potable water source, the Verde estimate would be \$2.5 M).
4. **Create a 185,000 SF artificial turf field.** This includes fencing which would be required to keep dogs off the field. This field allows a greater amount of play, up to 3,000 hours per year. Maintenance and water costs are lower. However, the fabric would need to be replaced every 10 -12 years. **Estimated cost \$3.1M.**

### **FINANCIAL IMPACT**

Options range in estimated probable cost from \$685K to \$3.1M. Comparisons with estimates for similar fields by Verde Design as supplied by the project proponents are consistent with these estimates.

TPSC has discussed a partnership for the funding. The amount they might be able to contribute is not yet clear. There have been discussions of additional funding if an artificial turf field was constructed. All these discussions are preliminary and no commitment has been made.

Annual irrigation/maintenance/capital reserve costs for natural turf are expected to range from \$71K to \$103K per year depending on the option selected. An artificial field would require less in annual maintenance, at approximately \$8K per year, but would require setting aside \$100K per year for future turf fabric replacement, for a total annualized maintenance cost of approximately \$108K.

Revenue from field rentals would partially offset these annual costs. Currently we charge \$35/hour for use of the existing field. For the natural turf field options, we estimate the annual revenue could range from \$17.5K to \$27.5K per year. For the artificial turf option, we estimate revenue could range from \$40K to \$50K per year. It is important to note the higher revenue numbers for both the natural and artificial turf options assume a level of use significantly higher than the current utilization. This increased use is likely to create issues related to parking and traffic impacts. These issues have not been analyzed as part of this report.

## RECOMMENDATION

Staff recommends the Town Council:

1. Receive the Staff Report, and provide direction to staff regarding the proposed McKegney Green Project.

Prepared by: Patrick Barnes, Director of Public Works

### Exhibits:

1. McKegney Green Athletic Field Study (Abbey Arnold Associates)
2. Existing Conditions/Site Analysis, (1sheet)
3. Field Plans (5 sheets)
4. Preliminary Construction Estimates (5 sheets)
5. McKegney Field Irrigation Upgrades and Expansion letter (Brelje and Race)
6. Biological Issues letter (Kelly Biological)
7. Soil Analysis Reports (Waypoint Analytical)



April 25, 2016

Patrick Barnes  
Public Works Director  
Town of Tiburon  
1505 Tiburon Blvd.  
Tiburon, CA 94920

Subject: McKegney Green Athletic Field Study

Attachments: Existing Conditions/Site Analysis, (1- 11 X 17 Site Plan)  
Field Plans (5- 11x17, Colored Site Plans)  
Preliminary Construction Estimate for each Plan (5- 8.5 x 11)

**Project Synopsis:**

The Town of Tiburon Staff asked that we evaluate options available to the Town regarding upgrading the McKegney Green athletic field. Currently the field is used by youth athletics from mid Spring through Fall by the local youth soccer clubs and is closed for repairs during the rainy season, (November thru April).

**FIELD DESCRIPTION**

The existing field was installed in the late 1970's and includes about 200,000 sf (4.6 acres) of natural turf. Of that 200,000 sf, about 80,000 sf (1.8 acres) has a 10" layer of sand beneath it for improved drainage. This sand area is 220' by 350 feet, the size of a regulation soccer field.

**DRAINAGE**

The entire field is crowned to drain to both sides at 2 to 3%. The storm water runoff from the crown on the east side of the field feeds into a swale that ultimately enters a storm drain system which daylight into the bay. On the west side, the runoff sheet flows across the gravel maintenance roadway, eventually all the way to the rip rap boulders at the shoreline. At no time does the Town irrigation water enter the storm drains, only rain water during heavy rain events makes its way into the system.

**CURRENT PERMIT**

The field is operating under a permit granted in 1976 and updated in 1987 to use reclaimed water from the local water treatment facility. The current 'secondary' level water treatment is within the limits of the original permit requirement. This type of treatment would no longer be allowed if a similar project were to be presented to the Regional Water Quality Board. Current regulations would require tertiary level of treatment, (refer to attached BRCE report regarding treatment levels and associated costs for upgrading to tertiary from the current secondary).

## WATER QUALITY

As mentioned in the BRCE report, the levels of salt in the water currently being delivered by SASM to the Richardson Bay facility are very high due to the leaky infrastructure of the sewer system. The high levels of salty bay water entering the water treatment plant can only be mitigated by a very expensive main line replacement program. Salt is not something that can be treated/removed from the water, except by a reverse osmosis system, which is energy intensive and expensive to build. Mill Valley currently uses a tertiary level treatment system for their fields, but have been 'blending' in MMWD water, (up to 75% of fresh to 25% of reclaimed), to relieve the issues caused by the excess salt.

### **Proposed Approaches to Field Upgrades:**

- Plan 1-** Remove existing turf and organic matter at the sand based area only. Replace irrigation equipment 'in-place'. Import 6" of new drainage sand. Install Paspalum salt resistant sod turf. This approach would be considered a maintenance project. (75,000 sf of field available for athletics).
- Paspalum is a warm weather grass that is salt tolerant. It has been used for golf courses in the Bay Area and sports fields in warmer climates such as Southern California, Texas, Florida and Georgia. Sports fields get significantly more wear than golf courses. Paspalum has not been used for a sports field in the Bay area. But nonetheless, this is the only grass which will tolerate the level of salts in the recycled water.
  - Without adding drainage, this solution would result in ponding and wet areas that would wear easily.
  - Paspalum is very drought tolerant, but the inability to water during a dry winter will further stress the grass during its recovery season.
- Plan 1a-** Retain existing field's turf layout and grades. Replace irrigation equipment 'in-place', replace far north and south portions of the turf with planted stormwater treatment areas, remove existing turf at existing sand based portion of the field, add subsurface drainage at sand area, (route runoff to treatment areas), add 9" of new sand, Install Paspalum salt resistant sod turf. This approach would be considered a maintenance project. (75,000 sf of field available for athletics).
- The advantage to this approach over Plan 1 is that it will better drain the salts from the soil and eliminate areas where water currently ponds.
- Plan 2-** Retain existing field's turf layout and grades. Replace irrigation equipment 'in-place', remove existing turf, amend soil and sand, replace turf. This approach would be considered a maintenance project, (150,000 sf of field available for athletics).
- Plan 3-** Retain the existing turf's total surface area and re-grade. This entails the removal of existing turf, regrading to create more useable turf area, (removal of deep swale on the east side of the field), import a 12" depth 'drained' sand section, replace entire

irrigation system, install sand based sod turf. Upgrade irrigation water to either blended reclaimed water or use all domestic water. This approach also requires treatment of storm water, (bioswales), (185,000 sf of field available for athletics).

**Plan 4-** Remove all turf, regrade, replace the playing field area with a non-crumb rubber artificial turf field. Sloped surrounding areas would be landscaped with low water use plants and, for health and safety reasons, a fence would be installed to prevent dog access.

### **Field Uses and Associated Size Requirements**

The field presented represents a full sized adult level AYSO sanctioned size for soccer, (75 x 110 yds). The expanded field will allow the flexibility to line the field to allow the addition of two U10 sized fields.

Lacrosse has a definitive requirement of 60x110 yards which would fit within the proposed fields.

### **Soil or Sand Based Natural vs. Artificial Turf**

The use of artificial turf for communities with limited open space for athletic fields has proven to be a very worthy investment. Previous projects designed by my firm, have been 'game changers' for the local athletic programs, The Branson School and Bentley School. My recommendation, due to the drought and intensity of use, that an artificial turf field be installed.

There are benefits to natural turf, but the downsides are significant for Tiburon due to lack of park space and intensity of use.

An artificial turf field can be used during daylight hours and is not affected by weather. Normal use is around **1,500 hours per year**, but could be used more if necessary. Annual maintenance of artificial turf is dependent on field location (leaf drop and removal). If the field is used intensely, a professional maintenance program is about \$5,000 per year, plus leaf removal, (more intense in fall, and minimal the remainder of the year).

A natural turf field, to remain in a safe and playable condition, can be used much less (800 hours/year). The number of use hours would decrease during particularly rainy years due to field closures. These closures are necessary to reduce damage to the field. (Natural turf= Sand Based Bermuda/Rye).

The following are the Pros and Cons:

#### **Pros- Natural:**

1. Lower installation costs.
2. Natural turf is a living thing and helps the environment with carbon uptake and oxygen production.
3. It has lower surface temperatures.

**Cons- Sand Based Natural:**

1. Additional **maintenance costs** per year for natural turf, (water, labor, equipment, materials) \$45,000.
2. The field would use approximately 5,000,000 gallons of water per year.
3. Fertilizer and some pesticide use is necessary.
4. Requires mowing, edging, aerating, verti-cutting, vacuuming, sod patching/replacement. Turf should be completely replaced every 10 years.
5. Can only be used about 800 hours per year, less during rainy years. Natural turf has a very limited amount of time the field can be used continuously. There is a recommended ratio of **10 hours of rest for every 1 hour of use**. So, if the field is used intensively for 6 hours a day during a weekend tournament, theoretically the field needs to rest for the next 3 days...no use at all for those 3 days to allow the turf to recover. These 'use' numbers are based on averages, so they will be affected by maintenance, weather, types of use and user types (adult vs. children). The turf manager would have to adjust rest periods based on post tournament field inspections.

**Pros- Artificial:**

1. Reduced maintenance.
2. Can be used up to 3,000 hours per year.
3. Does not require irrigation.
4. Can be used rain or shine.
5. Safer (impact attenuation and level/even playing surface).
6. Almost no field closures.
7. No limits on continuous use, no rest period required.

**Cons- Artificial:**

1. Field needs to be replaced in 10 -12 years, requiring annual funding of \$100K per year for future 'turf only' replacement.
2. More expensive to install.
3. Surface temperature is higher than natural turf on hot days (+20 degrees).

**Field Use Benefits**

If the Town utilizes the fields as many hours as other similar municipalities do (+/-1,500 hours per year), the cost per hour of use are less (approx. \$200/hr, vs. \$380/hr.), and the benefits to programming flexibility are significant. These costs are for the entire 2-3 field facility, (depending on final field layout).

Cost / Hour formula for 10 year use cycle:

Field Cost (*field only*) + 10 times Annual Maintenance and Field replacement Costs = total costs over 10 years. Total divided by 10 years, then divide by total yearly hours.

**Artificial Turf**

Field Cost- \$3,000,000

Annual Maintenance- \$7,000

Field Replacement- \$100,000 (annual funding toward new field)

Annual Hours of Use- 1,500  
 $3,000,000 + 1,070,000 = 4,070,000 / 10 = 407,000$  per year  
 $407,000 / 1,500 \text{ hrs.} = \$271/\text{hr.}$

### **Natural Turf**

Field Cost- \$2,400,000  
Annual Maintenance- \$75,000  
Sod Replacement- \$20,000  
Annual Hours of Use- 800  
 $2,400,000 + 950,000 = 3,350,000 / 10 = 335,000$  per year  
 $335,000 / 800 \text{ hrs.} = \$418/\text{hr.}$

### **Environmental and Permitting Issues.**

As a part of our scope we are working with both BRCE (water quality engineering) and Kelly Biological (environmental permitting), to understand the effects of each approach on water issues, their costs both long term and installation, and possible permitting issues.

#### **WATER USE (EFFECT ON EXISTING PERMIT)**

(Reference- BRCE Memorandum dated 03-31-16)

The current permit allows the Town to use 50,000 gallons per day of the treated secondary reclaimed water. Since the turf area does not change in any of the 'Plans', BRCE feels that as long as the total daily water use is not increased, the current permit would remain as is.

The main issue with the current reclaimed water has become the levels of salt in the water. Salt cannot be removed with either secondary or tertiary treatment, so a suggestion was offered up to 'blend' MMWD water with the reclaimed water to reduce and dilute the salt. This approach would possibly reduce the amount of MMWD water required for the project, but the total savings would be more than offset by the Town's possible increased 'per unit' charges expected for the reclaimed water, if their total use is decreased. The Town is paying Richardson Bay Sanitary District \$3.38 per CCF, (which is less than their cost for producing the water). MMWD Tier 1 Rates would be \$3.80 per CCF. If the Town switched to all MMWD water, the total additional cost for the domestic water would be approximately \$2,000 annually (\$15,850 vs \$17,850). The possibility of the rates for the reclaimed water going up negates the effectiveness of blending.

#### **PERMITTING**

(Reference- Kelly Biological Memorandum dated 03-30-16)

The bottom line of this analysis is that since the Town, in Plans 1, 1a, 2 and 3, is not proposing to change the shape, quantity or type of use, that no BCDC, CEQA or Fish and Game Permitting would be required. Also noted, the proposed changes do not affect migratory birds, endangered species, or waterways. There is the possibility that NPDES regulations for construction activities would create the need for a full Storm Water Pollution Prevention Plan and associated monitoring during the installation of Plans 3 and 4 (shown in Opinions of Probable Costs).

For Plan 4, the installation of an artificial turf surface, due to the nature of the surface, would probably create an increase in use, thus the possible need for a Mitigated Negative Declaration. The increase in use, year around, would impact parking at Blackies Pasture and surrounding neighborhoods. The exact amount would to be a separate study. The fact that the turf would be playable year around and during any weather thus adds 5 -6 months of extra athletic practices and games annually, indicates a change in use, intensity and duration. Truly the only limiting factor for the use of this type of field is daylight.

## CONCLUSION

After this analysis the team understands that the entire project revolves around the current condition of the reclaimed water. The discovery that salt levels in the water supplied by SASM have risen dramatically over the last 5-10 years changes the original question as well as the subsequent solutions.

For athletic field turf normally used in the Bay Area, we can only recommend the use of natural turf if SASM can deliver secondary water that is not detrimental to the turf (not likely), and allow the Town to continue its 50,000 gallon per day use under the current permit. It appears that the alternate solution of using domestic water and the high initial cost for MMWD allotments and meter charges, would make the cost of a natural turf field very expensive when considering the high costs per hour for the field's use.

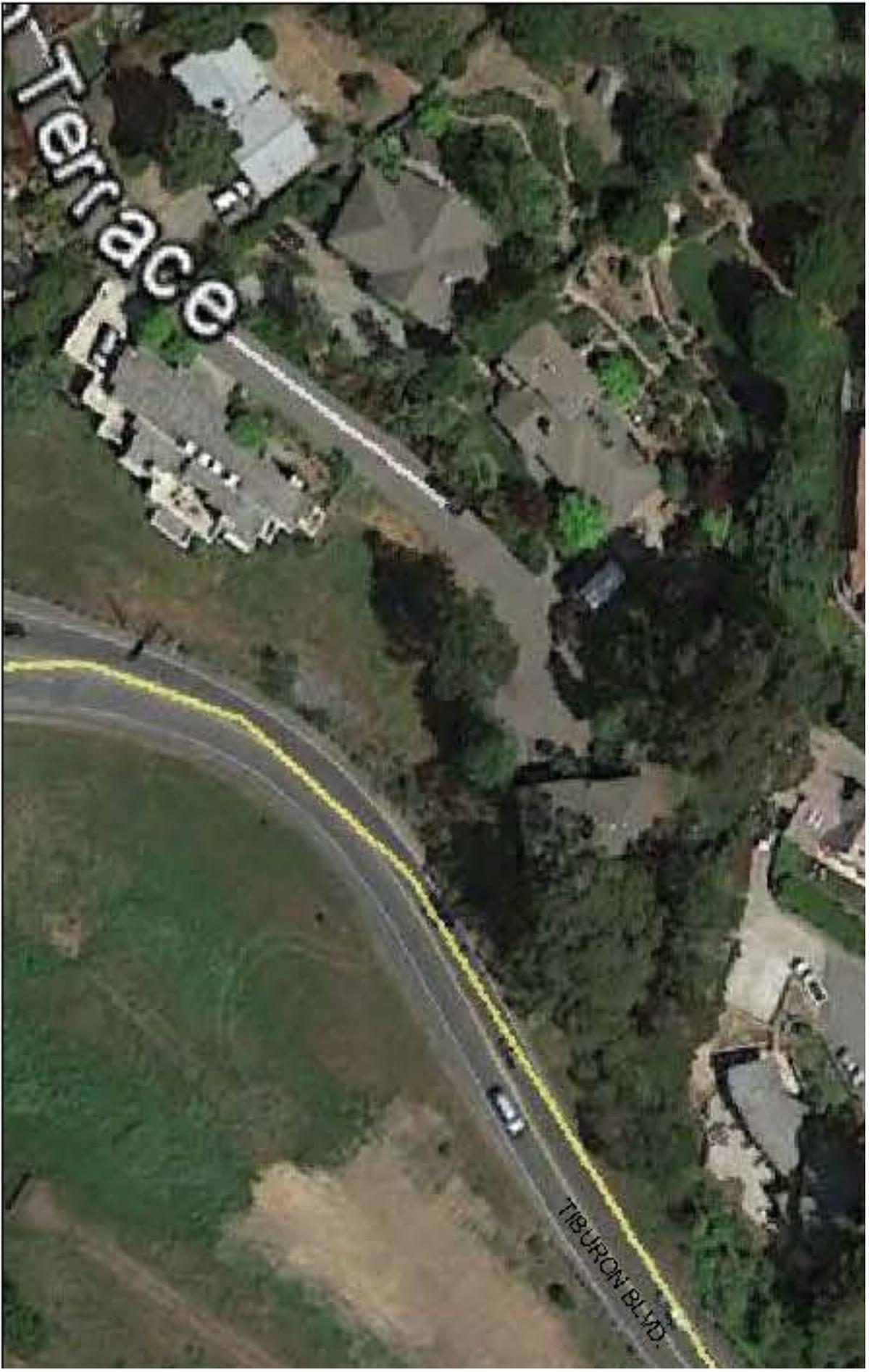
Paspalum can withstand salty water and has been used in Southern California and along the Gulf Coast for many years. It has also been used locally for golf courses along the shore of the San Francisco Bay with much success. In Southern California it has been used for soccer and baseball is documented. Paspalum looks very much like Bermuda grass, but its color is a bit brighter of a green. It requires a minimum soil temperature of 60 degrees, which is right about the coastal Bay Area's minimum temperature, which means it will be somewhat of a gamble to say it will be 100% successful and thrive as a soccer field. That said, our irrigation water's condition leaves us no other long term alternative. In the overall budget, the actual turf related costs are moderate in its effect on the budget.

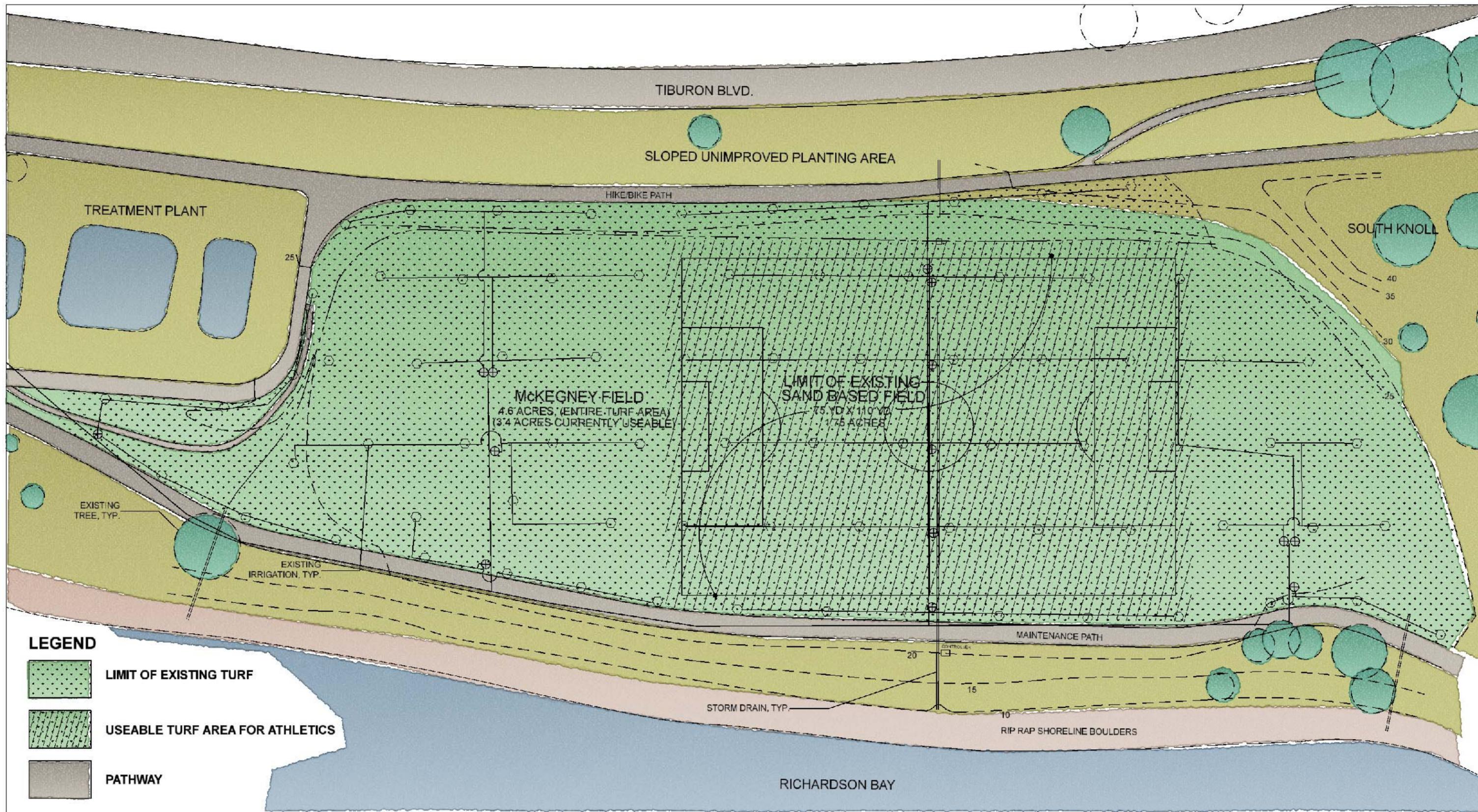
We still feel from an athletic venue perspective, even with the initial higher costs and probable increase in the field's use, as well as the associated impact on parking, the installation of artificial turf becomes an approach that still needs to be considered as a long term solution.

Paspalum is the stop gap 'experimental' approach that can be implemented until the funding, permitting, and political hurdles can be overcome for an artificial turf installation.



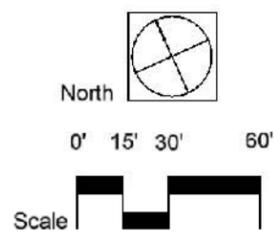
Peter Arnold, PLA



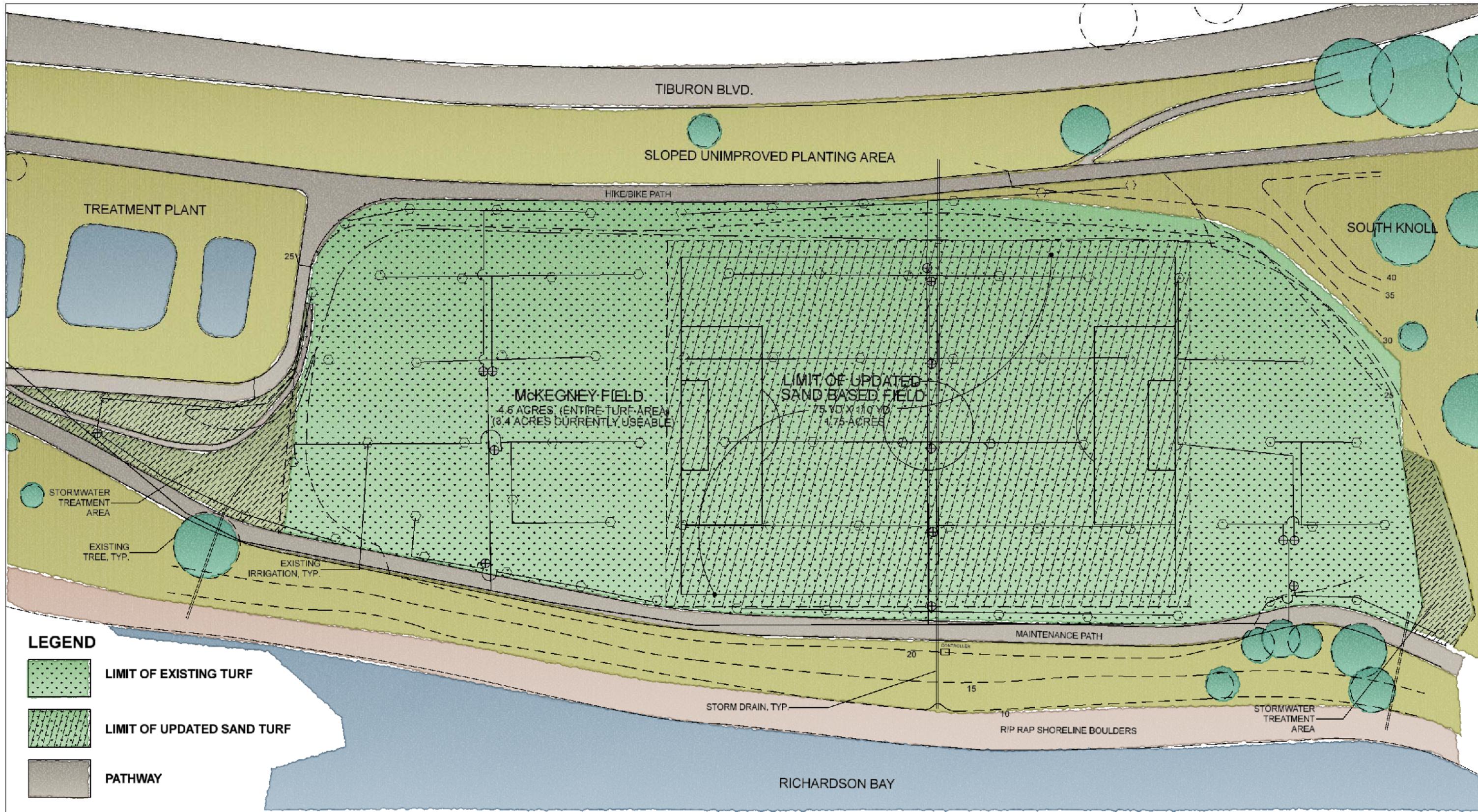


**PLAN 1**  
**RENOVATION OF EXISTING FIELD**  
 McKEGNEY FIELD STUDY  
 Town of Tiburon  
 Tiburon, California

April 21, 2016

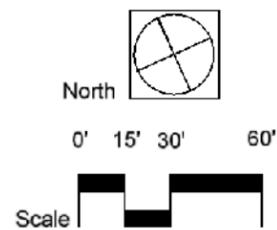


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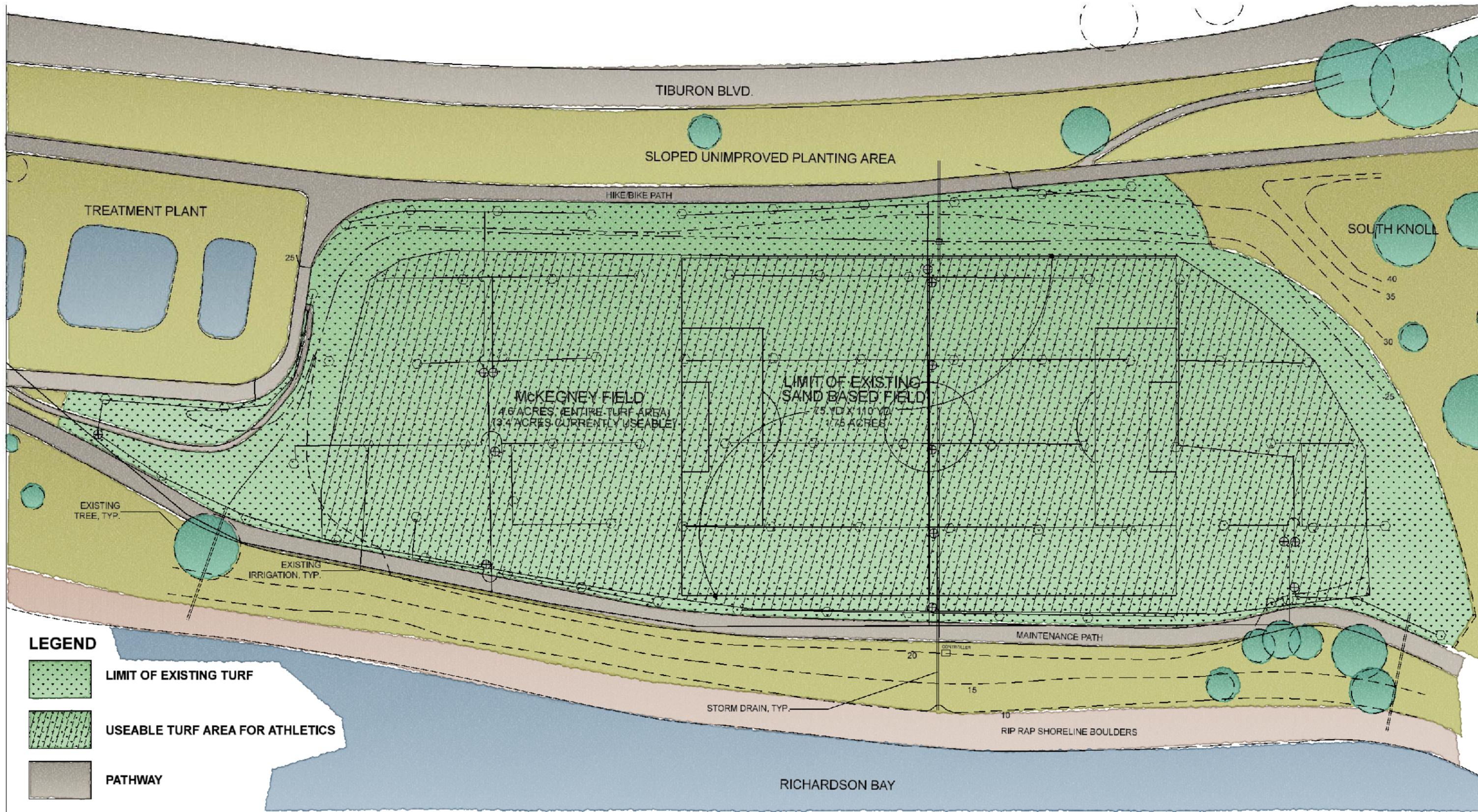


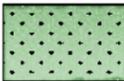
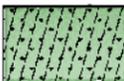
**PLAN 1a**  
**RENOVATION OF EXISTING SAND FIELD ONLY**  
 McKEGNEY FIELD STUDY  
 Town of Tiburon  
 Tiburon, California

April 21, 2016



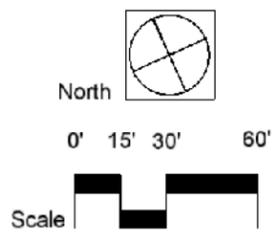
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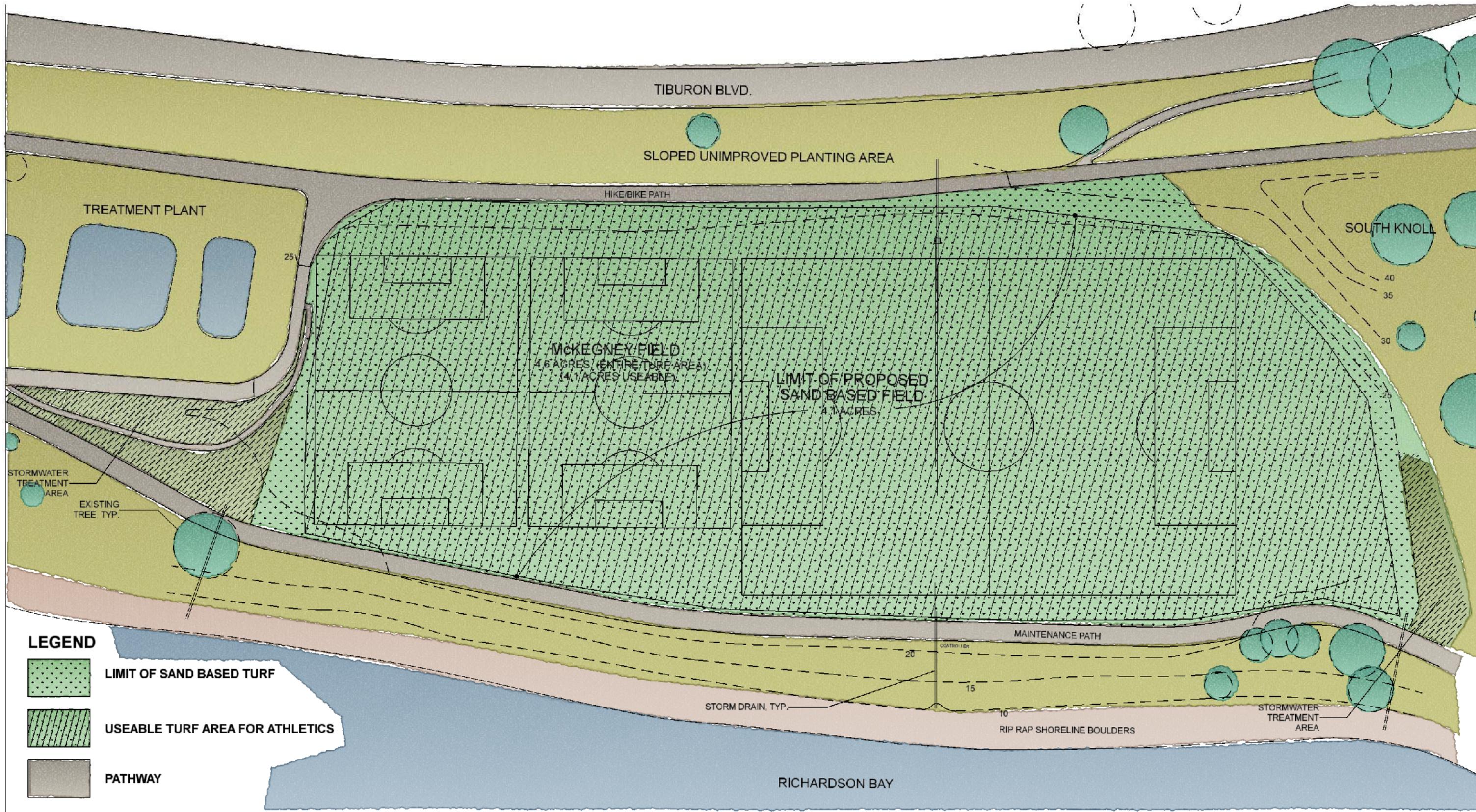
- LEGEND**
-  LIMIT OF EXISTING TURF
  -  USEABLE TURF AREA FOR ATHLETICS
  -  PATHWAY

**PLAN 2**  
**RENOVATION OF EXISTING FIELD**  
**McKEGNEY FIELD STUDY**  
 Town of Tiburon  
 Tiburon, California

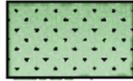
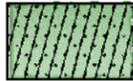
April 21, 2016

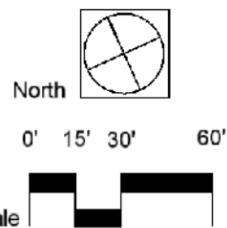



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**LEGEND**

-  **LIMIT OF SAND BASED TURF**
-  **USEABLE TURF AREA FOR ATHLETICS**
-  **PATHWAY**

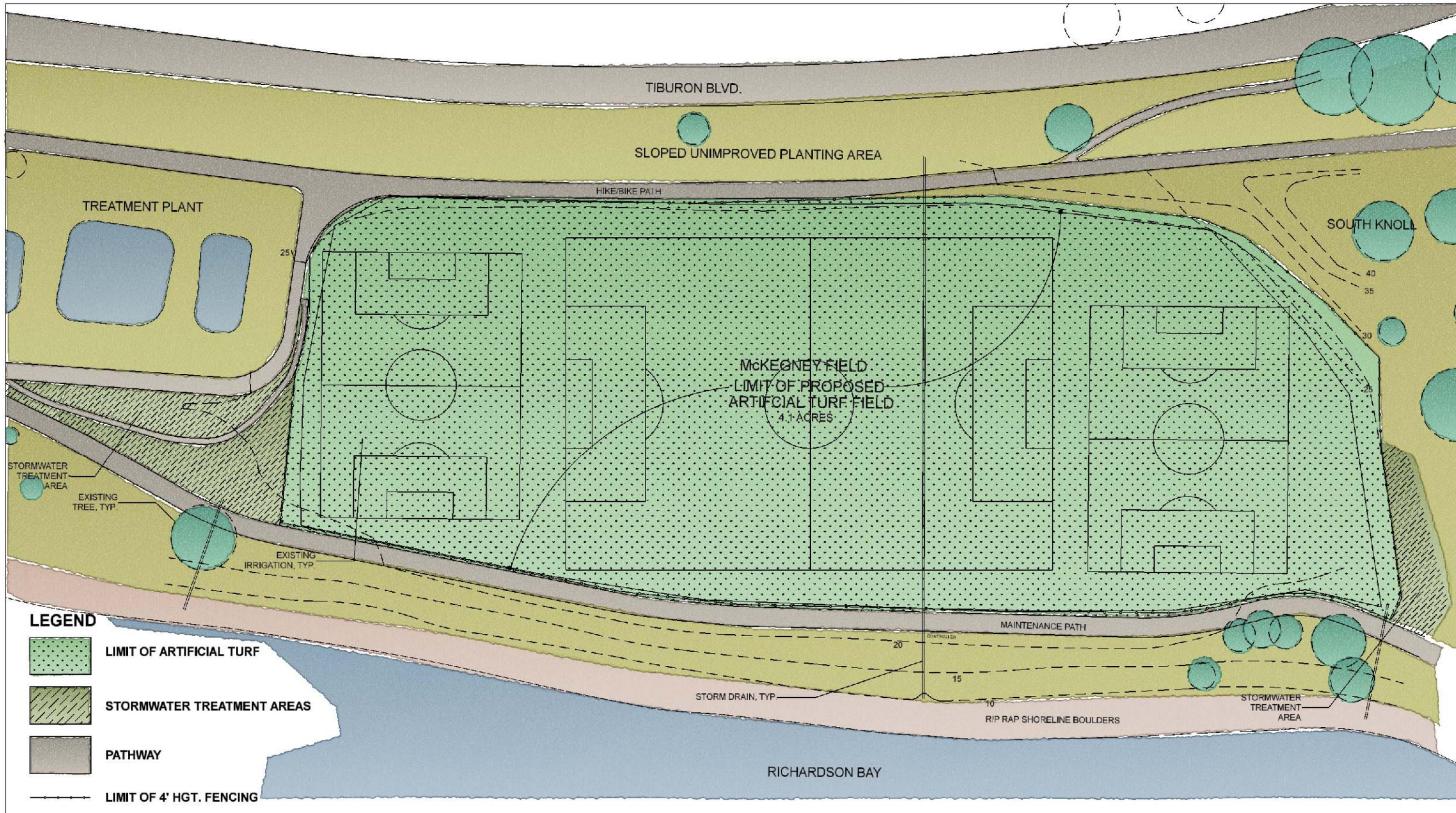


**PLAN 3**  
**UPGRADE of NATURAL TURF FIELD**  
**McKEGNEY FIELD STUDY**  
**Town of Tiburon**  
**Tiburon, California**

April 21, 2016

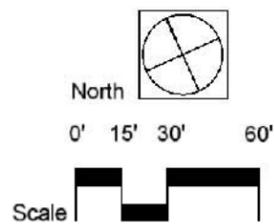


1005 A Street, Suite 305  
 San Rafael, California 94901  
 P 415-258-9580  
 F 415-258-9780  
 CA License #2616



**PLAN 4**  
**PROPOSED ARTIFICIAL TURF FIELD**  
 McKEGNEY FIELD STUDY  
 Town of Tiburon  
 Tiburon, California

April 21, 2016



1005 A Street, Suite 305  
 San Rafael, California 94901  
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 F 415-258-9780  
 CA License #2616

PRELIMINARY OPINION OF PROBABLE COSTS  
 Date: 04/25/2016  
 Project: McKegney Green Athletic Field Study, Tiburon CA

**Plan 1- Renovate Existing Sand Field , As Is with current water source, (salt issues will remain)**

<b>Item #</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Price</b>	<b>Total</b>
1	Mobilization/SWPPP/Staking	1	LS	\$35,000.00	\$35,000.00
2	Demolition, Turf Removal to 6" depth	75,000	SF	\$1.00	\$75,000.00
3	Rough Grading	2,000	CY	\$10.00	\$20,000.00
4	Fine Grading	75,000	SF	\$0.15	\$11,250.00
5	Irrigation	75,000	SF	\$1.50	\$112,500.00
6	Sand Section	2,000	CY	\$65.00	\$130,000.00
7	Sod Turf	100,000	SF	\$1.00	\$100,000.00
8	SWPPP-Monitoring	1	lump	\$12,000.00	\$12,000.00
9	Maint Equip, (Aerator, Verticutter, Reel Mower)	1	lump	\$75,000.00	\$75,000.00
<b>Sub Total</b>					<b>\$570,750.00</b>
<b>10% Contingency</b>					<b>\$57,075.00</b>
<b>10% Softcosts</b>					<b>\$57,075.00</b>
<b>Grand Total</b>					<b>\$684,900.00</b>

PRELIMINARY OPINION OF PROBABLE COSTS  
 Date: 04/25/2016  
 Project: McKegney Green Athletic Field Study, Tiburon CA

**Plan 1a- Renovate Exist. Sand Field , With Drainage with current water source, (salt issues will remain)**

<b>Item #</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Price</b>	<b>Total</b>
1	Mobilization/SWPPP/Staking	1	LS	\$35,000.00	\$35,000.00
2	Demolition, Turf Removal to 6" depth	75,000	SF	\$1.00	\$75,000.00
3	Rough Grading	2,000	CY	\$10.00	\$20,000.00
4	Fine Grading	75,000	SF	\$0.15	\$11,250.00
5	Irrigation	75,000	SF	\$1.50	\$112,500.00
6	Sand Section	2,000	CY	\$65.00	\$130,000.00
7	New Drainage Lines w/ deep trenches	2,500	LF	\$35.00	\$87,500.00
8	Sod Turf	100,000	SF	\$1.00	\$100,000.00
9	Storm Drainage Treatment Areas	0.25	acre	\$250,000.00	\$62,500.00
10	SWPPP-Monitoring	1	lump	\$12,000.00	\$12,000.00
11	Maint Equip, (Aerator, Verticutter, Reel Mower)	1	lump	\$75,000.00	\$75,000.00
<b>Sub Total</b>					<b>\$720,750.00</b>
<b>10% Contingency</b>					<b>\$72,075.00</b>
<b>10% Softcosts</b>					<b>\$72,075.00</b>
<b>Grand Total</b>					<b>\$864,900.00</b>

PRELIMINARY OPINION OF PROBABLE COSTS

Date: 04/25/2016

Project: McKegney Green Athletic Field Study, Tiburon CA

**Plan 2- Renovate Entire Existing Field , As Is with current water source, (salt issues will remain)**

<b>Item #</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Price</b>	<b>Total</b>
1	Mobilization/SWPPP/Staking	1	LS	\$50,000.00	\$50,000.00
2	Demolition, Turf Removal	150,000	SF	\$1.15	\$172,500.00
3	Rough Grading	5,000	CY	\$10.00	\$50,000.00
4	Fine Grading	150,000	SF	\$0.15	\$22,500.00
5	Irrigation, Replace Mailine, Valves and Heads	200,000	SF	\$1.00	\$200,000.00
6	Soil Preparation- Native Soil	75,000	SF	\$1.00	\$75,000.00
7	Soil Preparation- Sand Section	75,000	SF	\$1.25	\$93,750.00
8	New Sod	150,000	SF	\$1.00	\$150,000.00
9	French Drain	500	LF	\$30.00	\$15,000.00
10	SWPPP- Monitoring	1	lump	\$15,000.00	\$15,000.00
11	Maint Equip, (Aerator, Verticutter, Reel Mower)	1	lump	\$75,000.00	\$75,000.00
				<b>Sub Total</b>	<b>\$918,750.00</b>
				<b>10% Contingency</b>	<b>\$91,875.00</b>
				<b>10% Softcosts</b>	<b>\$91,875.00</b>
				<b>Grand Total</b>	<b>\$1,102,500.00</b>

PRELIMINARY OPINION OF PROBABLE COSTS  
 Date: 04/25/2016  
 Project: McKegney Green Athletic Field Study, Tiburon CA

**Plan 3- Regrade and Expand Sand Based Turf Area's Useable Surface, (using all MMWD water)**

<b>Item #</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Price</b>	<b>Total</b>
1	Mobilization/SWPPP/Staking	1	LS	\$50,000.00	\$50,000.00
2	Demolition, Turf Removal to 6" depth	200,000	SF	\$1.00	\$200,000.00
3	Rough Grading	6,000	CY	\$10.00	\$60,000.00
4	Fine Grading	200,000	SF	\$0.15	\$30,000.00
5	Irrigation	200,000	SF	\$1.75	\$350,000.00
6	MMWD Allotment, Meter, Fees	1	lump	\$310,000.00	\$310,000.00
7	Sand Section	7,500	CY	\$65.00	\$487,500.00
8	New Drainage Lines w/ deep trenches	6,000	LF	\$35.00	\$210,000.00
9	Sod Turf	200,000	SF	\$1.00	\$200,000.00
10	Storm Drainage Treatment Areas	0.25	acre	\$250,000.00	\$62,500.00
11	SWPPP-Monitoring	1	lump	\$15,000.00	\$15,000.00
12	Maint Equip, (Aerator, Verticutter, Reel Mower)	1	lump	\$75,000.00	\$75,000.00
				<b>Sub Total</b>	<b>\$2,050,000.00</b>
				<b>10% Contingency</b>	<b>\$205,000.00</b>
				<b>15% Softcosts</b>	<b>\$307,500.00</b>
				<b>Grand Total</b>	<b>\$2,562,500.00</b>

**Plan 4- Replace Natural Turf with Artificial Turf**

Item #	Description	Quantity	Unit	Price	Total
1	Mobilization/SWPPP/Staking	1	LS	\$50,000.00	\$50,000.00
2	Demolition, Turf Removal	200,000	SF	\$0.75	\$150,000.00
3	Rough Grading	6,000	CY	\$10.00	\$60,000.00
4	Lime Treat Subgrade at Artif. Turf	180,000	SF	\$0.75	\$135,000.00
5	Fine Grading	200,000	SF	\$0.15	\$30,000.00
6	Irrigation, for Turf, QCV's at 100' o.c. at perimeter	1,200	LF	\$30.00	\$36,000.00
7	MMWD Allotment, Meter, Fees	1	lump	\$35,000.00	\$35,000.00
8	Containment Curbing	1,900	LF	\$40.00	\$76,000.00
9	Fencing, 4' height	1,900	LF	\$60.00	\$114,000.00
10	Artificial Turf (with Brock pad)	180,000	SF	\$8.00	\$1,440,000.00
11	New Drainage Lines w/ deep trenches	2,300	LF	\$30.00	\$69,000.00
12	Base Rock leveling course for Synthetic Turf	1,600	CY	\$60.00	\$96,000.00
13	Storm Drainage, Area Drains, Adjust existing	1	LS	\$10,000.00	\$10,000.00
14	Storm Water Treatment	0.25	acre	\$250,000.00	\$62,500.00
15	Irrigation system- Stormwater areas.	25,000	SF	\$1.75	\$43,750.00
16	SWPPP-Monitoring	1	lump	\$15,000.00	\$15,000.00
				<b>Sub Total</b>	<b>\$2,422,250.00</b>
				<b>10% Contingency</b>	<b>\$242,225.00</b>
				<b>20% Softcosts</b>	<b>\$484,450.00</b>
				<b>Grand Total</b>	<b>\$3,148,925.00</b>

**MEMORANDUM**

TO: Pat Barnes, Town Engineer, Town of Tiburon

FROM: Sean Jeane and Sophia Grubb

SUBJECT: McKegney Field Irrigation Upgrades and Expansion  
B&R File No. 4279.00

DATE: March 31, 2016

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**BACKGROUND**

In 1979 the Sewerage Agency of South Marin (SASM) was formed as a Joint Powers Agency to provide the residents of Southern Marin County with wastewater collection, treatment, water reclamation and disposal. Six agencies make up SASM including the Richardson Bay Sanitary District (RBSD). Wastewater collected by the separate agencies is treated at the SASM wastewater treatment plant located in the City of Mill Valley. The SASM plant produces secondary effluent that is then delivered to recycled water customers or deep water discharged into San Francisco Bay.

RBSD holds a 1988 water reclamation permit (permit) which allows them to divert up to 50,000 gallons per day (gpd) of secondary effluent from SASM for spray irrigation on two playing fields, McKegney Green and South Knoll, both owned by the Town of Tiburon (Tiburon) and located immediately southeast of the RBSD facility. Currently Tiburon is purchasing the recycled water under an informal agreement from RBSD at a relatively low rate. The total area of irrigated turf is approximately 204,000 square feet. While allowing up to 50,000 gpd, the permit also states that an average of 39,000 gpd is irrigated from April to October.

The RBSD treatment facility in Tiburon diverts secondary<sup>1</sup> recycled water from a 6 inch tap off the 36 inch SASM effluent discharge line that runs along the perimeter of Richardson Bay. RBSD initially directs the water into a series of three polishing ponds. The polished water is then chlorinated and passed through a metal screen and sand filter. Although RBSD performs this additional treatment, the recycled water does not meet tertiary standards and is therefore still considered secondary effluent. The filtered effluent is stored in a 60,000 gallon tank and pumped to the adjacent fields for irrigation.

Currently the fields are irrigated from June through October four days each week. Irrigation water use based on irrigated area should currently be approximately 40,425 gpd for each watering day or roughly 10.8 acre feet per year.

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<sup>1</sup> The use of secondary treated wastewater would not be permitted today for spray irrigation on playing fields under current Title 22 requirements.

**PROPOSED IMPROVEMENTS**

Abey Arnold Associates have prepared several improvement options, some of which will modify the McKegney and the South Knoll fields by regrading portions to expand the playing surfaces that are currently being irrigated and by altering the underlying soil to reduce recycled water runoff and improve irrigation efficiency. Based on these proposed changes, the revised annual irrigation volume required has been estimated by Abey Arnold Associates to be 13.6 acre feet per year, assuming turf irrigation from April through October.

**CONSIDERATIONS FOR INCREASING RECYCLED WATER USE**

1) Potential New Permit Language

Any increase above the currently permitted irrigation volume would trigger a review and likely update of the RBSD permit. An update could potentially require treatment to tertiary standards for continued spray irrigation. The current capacity of the RBSD treatment plant and the permitted reclaimed water limits are expected to be adequate to supply the irrigation demand for the planned project. During the summer peak, June and July, the average water use is projected at 42,000 gpd applied four days each week. This demand is within the permitted maximum allowed diversion of 50,000 gpd. The projected average irrigated volume from April through October is estimated to be approximately 36,300 gpd, which remains within the permitted average of 39,000 gpd. The limiting element of the RBSD facility is the 60,000 gallon storage tank. This volume is adequate for both the maximum daily limit and the projected maximum daily water use.

2) Salt Concentrations in Effluent

Elevated salt concentration in the SASM plant effluent is a known issue, particularly during summer for peak irrigation. As the ground becomes less saturated into the summer months, inflow and infiltration is almost exclusively saltwater from the bay. Abey Arnold Associates provided information indicating that sodium concentrations above 70 mg/L and chloride concentrations above 350 mg/L are detrimental to turf health and growth. Chloride concentrations less than 100 mg/L are acceptable for turf irrigation; however, concentrations between 100 and 350 mg/L will cause the turf to be unhealthy.

The sodium and chloride concentrations of the secondary effluent are not currently know; however, SASM provided 2015 conductivity data for the April through October irrigation season. Conductivity is directly related to total dissolved solids (TDS) which consists mainly of various salts. To correlate conductivity to sodium and chloride concentrations, knowing the TDS makeup is necessary; however, the typical makeup of the effluent’s TDS is also unknown. By assuming a range of sodium chloride (NaCl) concentration to TDS concentration ratios in the SASM effluent, it is possible to make a reasonable estimation of the range of sodium and chloride concentrations to roughly predict the irrigation water quality. The results of these estimations are presented in Table 1.

**Table 1:** Estimated Sodium and Chloride Concentrations in SASM Reclaimed Water

% NaCl	Sodium Concentration (mg/L)		Chloride Concentration (mg/L)	
	Average	Maximum	Average	Maximum
20%	168.7	503.2	260.2	776.0
50%	421.9	1,258.0	650.6	1,939.9
70%	590.6	1,761.1	910.8	2,715.9

Table 1 shows that even if sodium chloride constituted only 20 percent of the TDS, the calculated average sodium concentration is more than double the allowable limit and the average chloride concentration would likewise cause unhealthy turf. The maximum calculated chloride concentration would be damaging to the turf. It is likely that the sodium chloride percentage of the TDS is much greater than 20 percent, and potentially as high as 70 percent. In order to provide irrigation water that would not damage the turf, salt concentrations will need to be significantly reduced in the effluent. This can be accomplished by blending with water with lower concentrations or by treatment methods.

### 3) Potential Recycled Water Rate Increase

The rate Tiburon pays for reclaimed water could be raised by RBSD should the required irrigation volume change. RBSD staff have stated that the long-standing informal agreement between RBSD and Tiburon does not cover the true expenses to deliver water. According to RBSD staff, they collect less than the actual cost of chemicals alone, and staff time and electricity costs are not included in the rate. Should the volume of water Tiburon purchases from RBSD change, there would be justification for the informal agreement to be revisited and the cost of the recycled water renegotiated. Currently, Tiburon pays \$3.38 per unit (1 unit equals 748 gallons or 1 CCF).

### **ALTERNATIVE IRRIGATION OPTIONS**

There are three potential solutions to the issues outlined above: irrigation with a blend of secondary effluent and potable water; irrigation with potable water only, and; further treatment of the secondary effluent. For either of the potable options, a connection to the Marin Municipal Water District (MMWD) would need to be established. MMWD would establish an “allotment volume”, for base charges under a tiered rate structure. The allotment volume may be less than the needed irrigation volume, meaning the overage charges could be at a considerably higher rate (tier one charges are \$3.80 per CCF and the allotment would be roughly 10.2 AF). Potable water from MMWD has an average sodium concentration of 20 mg/L, to reduce the concentration of sodium in the irrigation water to 70 mg/L, as much as 90 percent of the total irrigated volume would need to be potable water. The blending method may not be able to keep potable water demands within the tier one allotment volume causing the cost differential between the blending and potable only options to be minimal.

Additionally, the mixed secondary effluent and potable water could be considered all secondary effluent, triggering a permit update to current Title 22 standards. An update could potentially require tertiary treatment of the reclaimed water.<sup>2</sup> Upgrading the RBSD facility to treat the effluent to tertiary standards would be Tiburon’s sole financial responsibility as RBSD’s only recycled water customer and would significantly increase the cost of the recycled water.

Further treatment of the effluent to remove salts would include extremely expensive treatment options such as electrodialysis or reverse osmosis and are not considered feasible solutions.

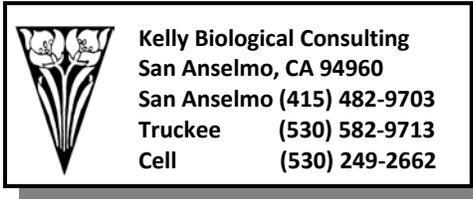
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<sup>2</sup> Tertiary standards include a chlorine disinfection process following filtration that provides a CT value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes or a disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2 or polio virus in the wastewater. To provide this kind of treatment, various and complicated infrastructure would have to be constructed. The capital costs of implementing tertiary treatment would be approximately \$250,000. Ongoing treatment, maintenance and sampling costs would increase overall costs significantly and the cost of tertiary water would be higher than potable water. Additionally, unless reverse osmosis is used, treating the effluent to tertiary standards would not remove salts.

## **RECOMMENDATION**

It is recommended that irrigation be switched completely from salty secondary effluent to a potable water source. Irrigating with potable water only would remove the regulatory risks associated with the blending option; any cost savings associated with blending would be minimal, and; keeping the irrigation water as completely secondary effluent runs the risk of having unhealthy turf due to existing high salt concentrations. Additionally, the Regional Water Quality Control Board has the right to revisit the permit at any time, meaning that the regulatory risk of having to upgrade to tertiary treatment is still present should irrigation with secondary effluent continue.

The actual costs associated with blending would be dependent on several factors, the determination of which are beyond the scope of this memorandum.



**TO:** Peter Arnold, PLA, Abey Arnold Associates

**FROM:** Micki Kelly, PWS, Principal, Kelly Biological Consulting

**DATE:** March 30, 2016

**RE:** Biological Issues for the McKegney Green Project, Tiburon, CA

### **1.0 Summary**

Tiburon Peninsula Soccer Club is proposing to improve the McKegney Green play field in Tiburon, California. The purpose of this memo is to provide a preliminary evaluation of biological and related regulatory constraints. It should be noted that Kelly Biological Consulting can provide their best professional expertise; however, only the agencies can make the final determine on issues within their jurisdiction. Given the assumptions discussed below, the project would not impact sensitive biological resources. An NPDES permit may be required. A BCDC permit would not be needed. It could be considered CEQA exempt per Section 15301(h); however, for Alternative 3 artificial turf might increase the duration and frequency of field use, in turn, affecting parking or traffic, therefore a Mitigated Neg Dec could be necessary for that alternative. The final decision on the CEQA approach would be made by the Town.

### **2.0 Site Overview**

The site is an active turf playfield in the Town of Tiburon, within Marin County (Latitude 37.892958/ Longitude -122.485517) (Figure 1. Site Vicinity). There is a paved bike path to the northeast of the field and a gravel maintenance road to the southwest. Southwest of the maintenance road is a strip of mowed lawn and a dirt single track path. The path is adjacent to the rocky shoreline of the Bay. There is no salt marsh in this area. To the south of the field is a small knoll; to the north are treatment ponds and a dogleg in the bike path.

### **3.0 Regulatory**

This section provides a summary of the regulations addressed in this document. After each regulation are bullets discussing the project's biological or regulatory issues.

#### **3.1 San Francisco Bay Conservation and Development (BCDC)**

BCDC has regulatory responsibility over development in San Francisco Bay and along the Bay's shoreline. BCDC is guided in its decisions by the McAteer-Petris Act, the San Francisco Bay Plan, and other plans for specific areas around the Bay.

- As stated in BCDC's Bay Plan Map 4 "Along the shoreline in San Francisco and Marin Counties, the Commission's jurisdiction extends 100 feet inland" (<http://www.bcdc.ca.gov/>). At this site BCDC's jurisdiction extends 100 feet from the shoreline and includes a portion of the field. Initial communication with BCDC indicates that a BCDC permit would not be required for turf replacement (Ethan Lavine, BCDC, pers. comm. March 30, 2016).

### 3.2 Clean Water Act (CWA)

The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 404 identifies the United States Army Corps of Engineers (USACE) Jurisdiction over fill materials in essentially all water bodies, including wetlands. All federal agencies are required to avoid impacts to wetlands whenever there is a practicable alternative. Section 404 established a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the US (including wetlands).

Section 401 of the CWA requires that an applicant for a federal permit that allows activities resulting in a discharge to waters of the U.S., obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Boards (RWQCB) administers the certification program in California. The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Section 402 of the CWA (National Pollutant Discharge Elimination System, NPDES) requires dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

- The Bay would be considered CWA Section 404 "other waters". There will be no direct impacts to the Bay. Indirect impacts would be avoided through the use of appropriate temporary and permanent BMPs (such as temporary silt fencing and permanent bioswales). In addition, no irrigation runoff or stormwater containing pollutants (including fertilizer, pesticides, etc.) should enter the Bay. No CWA 404 or 401 fill permit would be required.
- Disturbance of more than 1 acre may require a NPDES or Stormwater permit. However, the project could be considered an exempt maintenance project. The project engineers or the RWQCB should be able to provide additional insight.

### 3.3 Section 10 of Rivers and Harbors Act of 1899

The Rivers and Harbors Act requires permits for all structures in navigable waters of the U.S such as riprap and activities such as dredging. The term navigable waters of the United States and all other terms relating to the geographic scope of jurisdiction are defined at 33 CFR part 329. Generally, navigable waters are that are subject to the ebb and flow of the tide shoreward to the mean high

water mark, and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. The Bay is considered a navigable water subject to the Rivers and Harbors Act.

- The project would not require a Section 10 permit. In addition, the bullets listed under the CWA section would protect the Bay from indirect impacts.

### 3.4 California Porter-Cologne Water Quality Control Act

California's counterpart to the Clean Water Act is the Porter-Cologne Water Quality Control Act. Pursuant to Porter-Cologne, any person discharging waste, or proposing to discharge waste that could affect the quality of the waters of the state are usually required to file a report of the discharge with the appropriate RWCQB. The RWQCB is increasingly requiring Waste Discharge Requirement (WDR) permits for impacts to Waters of the State.

- The only Water of the State is the Bay, which is also a CWA 404 "other waters" and addressed above. The project is not expected to require a permit. The project hydrologist or engineer should be consulted to determine if a permit would be needed for using treated waste water.

### 3.5 California Fish and Game Code Series 1600 series (Streams and Lakes in California)

Streams and lakes, as habitat for fish and wildlife species, are subject to the jurisdiction of California Department of Fish and Wildlife (CDFW) under Sections 1600-1616 of California Fish and Game Code.

- This project would not require a 1600 series stream and lake permit.

### 3.6 Special-Status Species (Multiple Regulations)

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act or California Endangered Species Act. These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory with California Rare Plant Rank of 1 or 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are afforded little or no protection under CEQA. The following paragraphs discuss some of the key regulations.

**Federal Endangered Species Act.** The Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq.), was enacted to provide a means to identify and protect endangered and threatened species. Under the Section 9 of the ESA, it is unlawful to take any listed species. "Take" is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or

collecting a listed species. “Harass” is defined as an intentional or negligent act or omission, which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding, or sheltering. “Harm” is defined as an act which actually kills or injures fish or wildlife and may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. Actions that may result in “take” of a federal-listed species are subject to USFWS or National Marine Fisheries Service (NMFS) permit issuance and monitoring. Section 7 of ESA requires federal agencies to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat for such species.

**Essential Fish Habitat.** The Magnuson-Stevens Fishery Conservation and Management Act of 1976 was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

**California Endangered Species Act.** CDFW is responsible for administering California Endangered Species Act (CESA, CDFG Code §§2050, et seq.), which prohibits take of species that have been listed, or are considered for listing (candidate species) as threatened or endangered species within the State of California. CESA allows for incidental take of state listed species through issuance of an Incidental Take Permit, or through a Consistency Determination in coordination with a Biological Opinion issued by the USFWS (CDFW Code Section 2081). In contrast with federal law, the definition of “take” under CESA involves actual harm to one or more members of a listed species and does not extend to modification of habitat not involving direct take.

- Special status species that are known known to occur in the vicinity of the project are a shown on Figure 2. Maintenance trucks use the gravel road adjacent to the turf at least several times a day while maintaining the restroom and play area south of knoll and mowing and irrigating the turf on both sides of the knoll. Also, the public and dogs walkers use the dirt single track path dozens of time a day. Given the active management of the lawn (mowing etc.) and the level of activity of the adjacent paths, special status species would not be expected in the work area.
- In addition, water quality protection measures discussed above would protect aquatic species that are known to occur in the Bay

### 3.7 Migratory Bird Treaty Act (MBTA)

This treaty with Canada, Mexico and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game Code (Sec 3500) also prohibits the destruction of any nest, egg, or nestling.

- There are no plans to remove trees, shrubs, or structures that could provide nesting habitat. Given the active use of the lawn and adjacent path it is unlikely that protected ground nesting birds would nest there. The project is not likely to affect species protected pursuant to the MBTA.

### 3.8 CEQA

California Environmental Quality Act (CEQA) is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The CEQA guidelines include a list of classes of projects which were determined not to have a significant effect on the environment and are exempt from the provisions of CEQA (CCR, Chapter 3, Article 19.).

Categorical Exemptions Section 15301 includes “Existing Facilities. Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.” Sub section (h) identifies maintenance of existing landscaping as exempt (<http://resources.ca.gov/ceqa/guidelines/>).

- Provided that there are no substantial impacts the natural turf alternatives would likely be CEQA exempt [per Section 15301 (h)]. The artificial turf might increase the duration and frequency of field use, in turn, affecting parking or traffic, therefore a Mitigated Neg Dec could be necessary. The final decision on the CEQA approach would be made by the Town.

### **4.0 Proposed Alternatives**

Three alternatives are proposed for McKegney Green. A description of each alternative is followed with a discussion of the biological and regulatory issues.

**Alternative 1** is to leave the turf and its associated systems in place and to do maintenance upgrades, (replace irrigation rotor heads, remote control valves, and controller, amend the existing soil, and resod). The current turf has a large swale along one side and a ‘sand based’ soccer field set into the fill soil. Approximately 80,000 sf of the total 204,000 sf is sand, the rest is the clay fill soil.

**Discussion of Alternative 1.** From a regulatory perspective this could be considered a basic maintenance project. Assuming that the amendments would not enter the Bay via stormwater runoff or irrigation runoff and that the work (including staging) is restricted to existing disturbed areas, there would be no impacts to biological resources. It could be considered CEQA exempt per Section 15301(h).

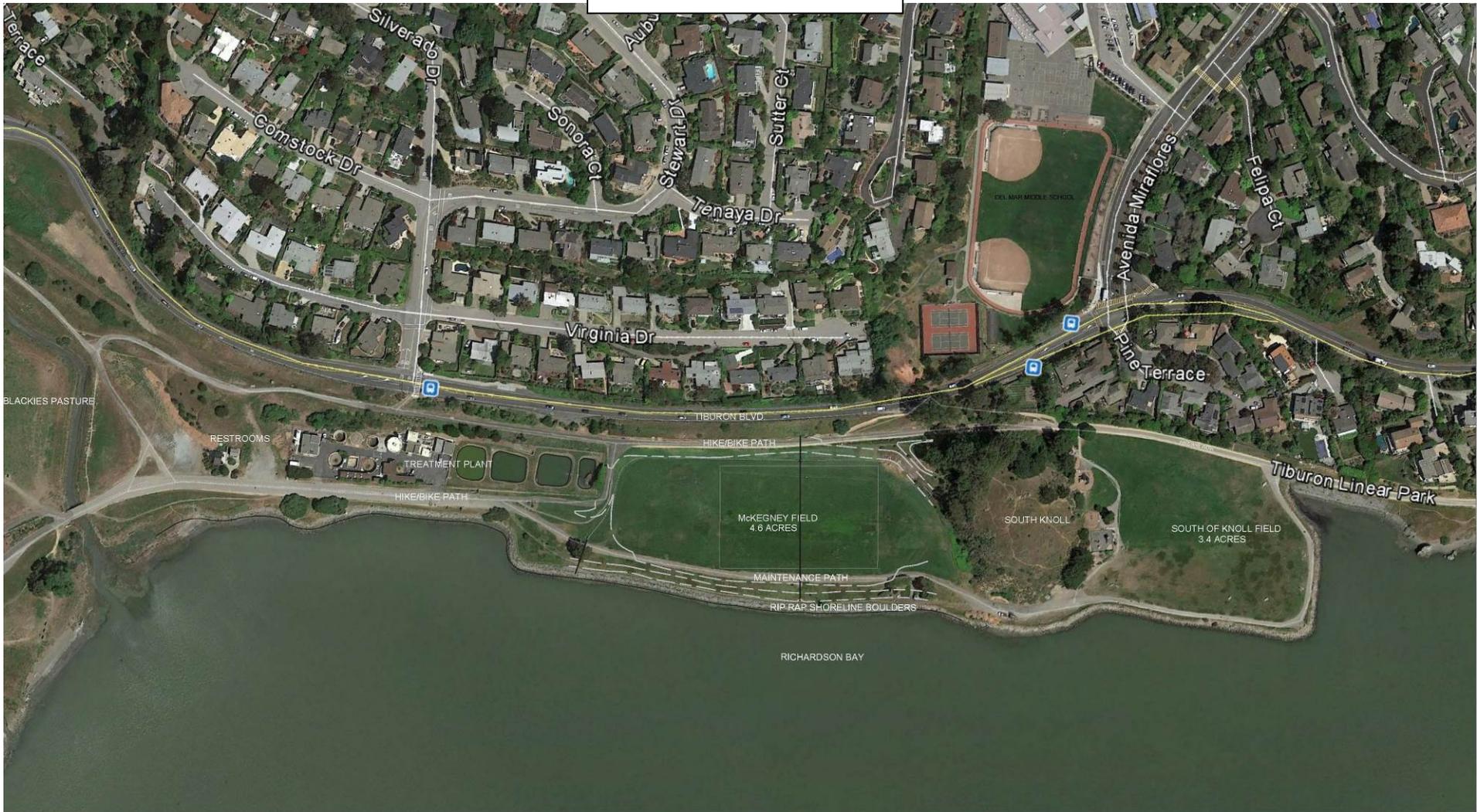
**Alternative 2** upgrades the entire natural turf field. This involves removing all existing turf, then re-grading the entire turf area (204,000 sf), installing a new sand based subsurface drainage system that daylight into a bioswale which treats the runoff before it goes into the Bay. This alternative would also, install new irrigation and new sand based turf. This approach will increase the ‘useable’ area of turf by more than two fold.

**Discussion of Alternative 2.** Similar to Alternative 1, from a regulatory perspective this could be considered a basic maintenance project. The plans include a bioswale/treatment area to improve stormwater runoff water quality therefore the amendments would be less likely to enter the Bay via stormwater runoff or irrigation runoff. Assuming that the work (including staging) is restricted to existing disturbed areas, there would be no impacts to biological resources. It could be considered CEQA exempt per Section 15301(h); though the final determination would be made by the Town. An NPDES Permit may be required.

**Alternative 3** installs an artificial turf field. This approach would create the need for fencing to keep dogs off of the turf. The turf drainage system would be tied into the existing storm drains.

**Discussion of Alternative 3.** Similar to Alternative 2, from a regulatory perspective this could be considered a basic maintenance project. Assuming that the work (including staging) is restricted to existing disturbed areas and there is no discharge to the Bay, there would be no impacts to biological resources. It could be considered CEQA exempt per Section 15301(h); however, the artificial turf might increase the duration and frequency of field use, in turn, affecting parking or traffic, therefore a Mitigated Neg Dec could be necessary. The final decision on the CEQA approach would be made by the Town. An NPDES Permit may be required.

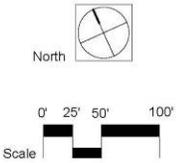
Figure 1. Vicinity Map



EXISTING FIELD and SURROUNDING AREAS

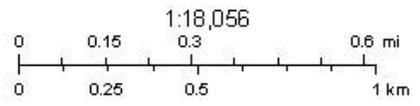
McKEGNEY FIELD STUDY  
Town of Tiburon  
Tiburon, California

March 30, 2016



**Figure 2. CNDDDB Map**

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)



March 29, 2016

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey,

Author: caddb.com  
 Printed from <http://caddb.com>

## References

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**SOIL ANALYSIS**

Send To : Abey Arnold Associates 1005 'A' Street # 305 San Rafael CA 94901	Project : McKegney Field Tiburon Job # 1602	Report No : <b>16-076-0106</b> Cust No : 03256 Date Printed : 03/22/2016 Date Received 03/16/2016 Page : 1 of 2 Lab Number : 32547
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Sample Id : **Sand Base**

**SATURATION EXTRACT - PLANT SUITABILITY**

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	2.6 dS/m					
Sodium Adsorption Ratio (SAR) *	16.22					
Boron (B)	0.70 ppm					
Sodium (Na)	22.8 meq/L					
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

\* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime
pH	7.6 s.u.								Low

**EXTRACTABLE NUTRIENTS**

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	13 ppm	0.3						2 ppm
Phosphorus (P) - Olsen	29 ppm	1.2						NH4-N
Potassium (K)	225 ppm	1.7						11 ppm
Potassium - sat. ext.	0.7 meq/L							Total Exchangeable Cations(TEC)
Calcium (Ca)	709 ppm	0.5						78 meq/kg
Calcium - sat. ext.	1.9 meq/L							
Magnesium (Mg)	273 ppm	1.5						
Magnesium - sat. ext.	2.1 meq/L							
Copper (Cu)	0.9 ppm	0.9						
Zinc (Zn)	3 ppm	0.6						
Manganese (Mn)	7 ppm	0.8						
Iron (Fe)	79 ppm	2.1						
Boron (B) - sat. ext.	0.70 ppm	2.3						
Sulfate - sat. ext.	4.8 meq/L	1.6						
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

**PARTICLE SIZE ANALYSIS**

Half Sat	Organic Matter	Weight Percent of Sample Passing 2mm Screen							USDA Soil Classification
		Gravel		Sand			Silt	Clay	
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Coarse 0.5-1	Med. to Very Fine 0.05-0.5	.002-.05	0-.002	
20 %									

### SOIL ANALYSIS

Send To : Abey Arnold Associates 1005 'A' Street # 305 San Rafael CA 94901	Project : McKegney Field Tiburon Job # 1602	Report No : <b>16-076-0106</b> Cust No : 03256 Date Printed : 03/22/2016 Date Received 03/16/2016 Page : 2 of 2 Lab Number : 32548
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Sample Id : **Soil Base**

#### SATURATION EXTRACT - PLANT SUITABILITY

Test	Result	Effect on Plant Growth				
		Negligible	Sensitive Crops Restricted	Many Crops Restricted	Only Tolerant Crops Satisfactory	Few Crops Survive
Salinity (ECe)	6.3 dS/m	[Bar chart showing Salinity in the 'Many Crops Restricted' range]				
Sodium Adsorption Ratio (SAR) *	22.16	[Bar chart showing SAR in the 'Many Crops Restricted' range]				
Boron (B)	0.84 ppm	[Bar chart showing Boron in the 'Negligible' range]				
Sodium (Na)	50.4 meq/L	[Bar chart showing Sodium in the 'Many Crops Restricted' range]				
Chloride (Cl)						
Carbonate (CO3)						
Bicarbonate (HCO3)						
Fluoride (F)						

\* Structure and water infiltration of mineral soils potentially adversely affected at SAR values higher than 6.

Test	Result	Strongly Acidic	Moderately Acidic	Slightly Acidic	Neutral	Slightly Alkaline	Moderately Alkaline	Strongly Alkaline	Qualitative Lime	
pH	7.4 s.u.	[Bar chart showing pH in the 'Neutral' range]								Low

#### EXTRACTABLE NUTRIENTS

Test	Result	Sufficiency Factor	SOIL TEST RATINGS					NO3-N
			Very Low	Low	Medium	Optimum	Very High	
Available-N	30 ppm	0.4	[Bar chart showing Available-N in the 'Low' range]					8 ppm
Phosphorus (P) - Olsen	46 ppm	1.1	[Bar chart showing Phosphorus in the 'Optimum' range]					NH4-N
Potassium (K)	318 ppm	1.1	[Bar chart showing Potassium in the 'Optimum' range]					22 ppm
Potassium - sat. ext.	0.6 meq/L							Total Exchangeable Cations(TEC)
Calcium (Ca)	1788 ppm	0.5	[Bar chart showing Calcium in the 'Low' range]					232 meq/kg
Calcium - sat. ext.	3.8 meq/L							
Magnesium (Mg)	965 ppm	1.9	[Bar chart showing Magnesium in the 'Optimum' range]					
Magnesium - sat. ext.	6.6 meq/L							
Copper (Cu)	3.7 ppm	1.2	[Bar chart showing Copper in the 'Optimum' range]					
Zinc (Zn)	7 ppm	0.6	[Bar chart showing Zinc in the 'Low' range]					
Manganese (Mn)	20 ppm	0.8	[Bar chart showing Manganese in the 'Optimum' range]					
Iron (Fe)	184 ppm	1.6	[Bar chart showing Iron in the 'Optimum' range]					
Boron (B) - sat. ext.	0.84 ppm	2.8	[Bar chart showing Boron in the 'Very High' range]					
Sulfate - sat. ext.	10.3 meq/L	3.4	[Bar chart showing Sulfate in the 'Very High' range]					
Exch Aluminum								

Cu, Zn, Mn and Fe were analyzed by DTPA extract.

#### PARTICLE SIZE ANALYSIS

Half Sat	Organic Matter	Weight Percent of Sample Passing 2mm Screen							USDA Soil Classification
		Gravel		Sand			Silt	Clay	
		Coarse 5-12	Fine 2-5	Very Coarse 1-2	Coarse 0.5-1	Med. to Very Fine 0.05-0.5	.002-.05	0-.002	
34 %									

Graphical interpretation is a general guide. Optimum levels will vary by crop and objectives.



## STAFF REPORT

**To:** Mayor and Members of the Town Council  
**From:** Community Development Department  
**Subject:** Amend Title IV, Chapter 13E (Water Efficient Landscape) of the Tiburon Municipal Code; (Ordinance, First Reading)  
**Reviewed By:** *[Signature]*

### BACKGROUND

The Town initially adopted a Water Conservation chapter of its Municipal Code in 1990, focusing primarily on landscape requirements. Subsequent changes in State law mandating enhanced water conservation rendered those initial Town regulations inadequate. In 2010, the Town repealed Chapter 13E (Water Conservation) of the Tiburon Municipal Code and adopted a new Chapter 13E (Water Efficient Landscape) in order to meet the new and stronger provisions. The method used by the Town to achieve compliance was to “adopt by reference” the latest Marin Municipal Water District (MMWD) water-efficiency regulations. In 2011, state regulations went into effect that imposed additional water-efficiency restrictions on permits issued by local agencies. The current Town ordinance follows those regulations as set forth in MMWD Ordinance No. 421.

In late 2015, MMWD adopted new water conservation requirements to meet new and more stringent state standards. The proposal before the Council would amend the current Town regulations with respect to Water Efficient Landscaping and adopt by reference the revised MMWD regulations (Ordinance No. 430), and successors and amendments thereto.

### ANALYSIS

The primary changes to the latest MMWD regulations (as they affect the Town) are 1) increased water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems; 2) graywater usage; and 3) limitation on turf and high-water-use plants. For more detailed information, please see **Exhibit 3**. The new area thresholds for project types for compliance with the MMWD ordinance provisions are as follows:

- (1) New construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review;
- (2) Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,000 square feet requiring a building or landscape permit, plan check, or design review;

- (3) Any project with an aggregate landscape area of less than 1,000 square feet requiring a building or landscape permit, plan check, or design review shall comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in the Ordinance No. 430.

The requirements would apply only if a design review approval or a building permit is required from the Town in association with the work. The Town's procedures will remain the same.

The Town's ordinance would continue to designate MMWD to implement, enforce, and monitor the requirements of the ordinance, as is permitted under state law. The adoption by reference of MMWD regulations is the same approach used by the other municipalities in the MMWD service area (all Marin cities except Novato), and has the benefits of providing uniformity of application and consistent standards, while at the same time meeting stringent state requirements for water conservation.

The draft ordinance is attached as **Exhibit 1**, and the Town's current Water Efficient Landscape regulations are attached as **Exhibit 2**. MMWD Ordinance No. 430 is attached as **Exhibit 3**.

## **ENVIRONMENTAL REVIEW**

Staff has preliminarily determined that the subject application is categorically exempt from the requirements of CEQA per Section 15308 of the CEQA Guidelines and is also exempt under the general rule set forth in Section 15061(b)(3) of the CEQA Guidelines.

## **STAFF RECOMMENDATION**

Staff recommends that the Town Council hold first reading of the Ordinance. Because the Town is adopting another agency's regulations by reference, the procedure set forth in state law is slightly different than is typical for adoption of local ordinances. The required procedure for eventual adoption would be as follows:

1. The Town Council should hold a public hearing and consider any testimony at this meeting.
2. The Town Council should introduce and hold first reading of the Ordinance. The procedure is to move to read by title only and carry the motion; then read the title and hold a roll call vote to pass first reading.
3. If first reading is completed, the Town Council should continue the item for a second public hearing and consideration of second reading and adoption at the June 1, 2016 Town Council meeting.

## **EXHIBITS**

1. Draft Ordinance
2. Current Chapter 13E (Water Efficient Landscape) of the Tiburon Municipal Code
3. Marin Municipal Water District Ordinance No. 430

Prepared By: Kyra O'Malley, Associate Planner

**ORDINANCE NO. XXXX**

**AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF TIBURON  
AMENDING TITLE IV, CHAPTER 13E (WATER EFFICIENT LANDSCAPE)  
OF THE MUNICIPAL CODE AND ADOPTING BY REFERENCE MARIN  
MUNICIPAL WATER DISTRICT (MMWD) ORDINANCE NO. 430  
REGARDING WATER CONSERVATION**

The Town Council of the Town of Tiburon does hereby ordain as follows:

**Section 1. Findings.**

- A. The Town Council has held public hearings on May 4, 2016 and June 1, 2016 and has heard and considered any public testimony on this matter.
- B. The Town Council finds that all notices and procedures required by law attendant to the adoption of this Ordinance have been followed.
- C. The Town Council finds that the amendment actions made by this Ordinance are necessary for the protection of the public health, safety, and welfare, and are necessary to comply with state law.
- D. The Town Council has found that the amendment actions made by this Ordinance are consistent with the goals and policies of the Tiburon General Plan and other adopted ordinances and regulations of the Town of Tiburon.
- E. The Town Council finds that this project is categorically exempt from the requirements of the California Environmental Quality Act per Section 15308 of the CEQA Guidelines because these regulations constitute an action by a regulatory agency to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. The Town Council further finds that this project qualifies for an exemption under the General Rule section 15061(b)(3) because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

**Section 2. Amendment.**

Title IV, Chapter 13E of the Tiburon Municipal Code is amended as follows:

- A. Section 13E-1 is amended to read as follows:

*Town of Tiburon*

*Ordinance No. XXX N. S.*

*Effective --/--/2016*

1

EXHIBIT NO. 1

10F5

**Section 13E-1. Purpose and Authority.**

As mandated under State Government Code Section 65595(c), certain new construction, remodels, and rehabilitation projects that include landscape and irrigation improvements are required to comply with water-efficient landscape requirements and monitoring of water usage for irrigation. The purpose of this chapter is to comply with this state mandate regarding water-efficient landscaping. For the purpose of administering this State mandate, the Town of Tiburon will herein adopt by reference the most current Marin Municipal Water District (MMWD) Ordinance No. 430 (Water Conservation), and any amendments or successors thereto, and designate MMWD, the local water provider, to implement, enforce, and monitor its requirements. The MMWD ordinance contains provisions that include but are not limited to, the following:

- (1) The application and monitoring of a “maximum applied water allowance” that is established for applicable projects.
- (2) The review of required landscape and irrigation plans, specifications and supportive documents prepared for applicable projects for compliance with water-efficient landscape restrictions, including limitations on the type and amount of landscape materials and plant species.
- (3) The review, inspection and approval of landscape and irrigation that is installed for applicable projects to ensure compliance with the approved landscape and irrigation plans and specifications.
- (4) The post-installation monitoring of water usage for irrigation by applicable projects.

B. Section 13E-2 is amended to read as follows:

**Section 13E-2. Adoption by Reference of Marin Municipal Water District Water Efficient Landscape Regulations.**

(a) Pursuant to Government Code Section 50022.2, Marin Municipal Water District Ordinance No. 430, including amendments and successors thereto, is hereby adopted by reference and shall be in full force and effect within the Town of Tiburon. Said Ordinance, and amendments and successors thereto shall be applicable to projects that are subject to the water efficient landscape requirements set forth therein, which projects include, without limitation:

(1) New construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review; and

(2) Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,000 square feet requiring a building or landscape permit, plan check or design review; and

(3) Any project with an aggregate landscape area of less than 1,000 square feet requiring a building or landscape permit, plan check, or design review shall comply with the performance requirements of this ordinance.

(b) For the purpose of administering these regulations, the Town of Tiburon hereby designates MMWD, the local water provider, to implement, enforce, and monitor the requirements therein.

(c) Town review of applicable projects shall be processed as follows:

(1) Projects requiring approval of a Site Plan and Architectural Review (a.k.a. Design Review) permit. When an applicable project is subject to Site Plan & Architectural Review approval pursuant to Title IV, Chapter 16 of the Tiburon Municipal Code, the landscape and irrigation plans required by and submitted with this permit application shall be designed and prepared to comply with the provisions and requirements of the applicable MMWD regulations adopted by reference herein. The process for application review of applicable projects and compliance with applicable MMWD regulations shall be as follows:

a. The application and plans submitted to the Town shall be designed in accordance with the most current MMWD Ordinance provisions regarding water efficient landscape;

b. The permit approval shall include a condition or conditions that include the following:

1. The final landscape and irrigation plans must comply with the current water efficient landscape requirements of MMWD.

2. The construction plans submitted to the Town for the issuance of a building permit/grading permit must be pre-approved by MMWD with the submitted plans stamped as approved by MMWD.

3. The building permit application must be accompanied by a letter from MMWD approving the landscape and irrigation plans.

4. If the MMWD-approved plans substantially differ from the Town-approved plans, these differences may require additional review through the Town's design review permit process and/or a revision to the Town's permit.

5. The applicant is responsible for contacting MMWD for all inspections, approval and sign-off on landscape and irrigation installation. Upon approval, MMWD shall issue a Certificate of Completion, which must be submitted to the Planning Division before building permit final sign-off or a Certificate of Occupancy is issued by the Tiburon Community Development Department.

2) Projects requiring a Building Permit and/or Grading Permit only. When an applicable project is not subject to a Site Plan and Architectural Review permit but is required to secure a Building Permit and/or Grading Permit pursuant to Title IV, Chapter 13 of the Tiburon Municipal Code, such permit(s) shall not be issued until the applicant has secured, in writing, MMWD approval of the landscape and irrigation plans confirming compliance with the most current MMWD Ordinance provisions regarding water efficient landscape.

(d) Inspections and Post-Installation Monitoring and Enforcement. MMWD shall be responsible for:

(1) Inspecting and approving all landscape and irrigation installed for applicable projects prior to project permit final and/or occupancy; and

(2) Monitoring water usage for installed landscapes to ensure compliance with the most current MMWD Ordinance provisions regarding water efficient landscape. All enforcement actions for ordinance non-compliance or violations shall be administered by MMWD.

C. Section 13E-3 is amended to read as follows:

**13E-3. Designation of Marin Municipal Water District for Enforcement.**

The Marin Municipal Water District, as the Town's local water provider, is hereby designated as the implementing and enforcement agency for provisions of Ordinance No. 430 and any amendments or successors thereto.

D. Section 13E-4 is amended to read as follows:

**13E-4. Availability of Copies.**

Three (3) copies of Marin Municipal Water District Ordinance No. 430, and any amendments or successors thereto, shall be kept on file for public review in the office of the Tiburon Town Clerk.

**Section 3. Severability.**

Should any part or provision of this Ordinance be declared by a court of competent jurisdiction to be invalid or unconstitutional, such decision shall not affect the validity of this Ordinance as a whole, or any part thereof except that part or provision so declared invalid or unconstitutional.

**Section 4. Effective Date.**

This Ordinance is to take effect and be in force at the expiration of thirty (30) days from and after its passage, and before the expiration of fifteen (15) days after its passage, the same, or its legally required equivalent, shall be published with the names of the members voting for and against the same at least once in a newspaper of general circulation published in the Town of Tiburon.

This Ordinance was first read and introduced at a regular meeting of the Town Council of the Town of Tiburon on \_\_\_\_\_, 2016, and was adopted at a regular meeting of the Town Council of the Town of Tiburon on \_\_\_\_\_, 2016, which was noticed pursuant to Government Code Sections 6066 and 50022.3, by the following vote:

AYES:           COUNCILMEMBERS:  
NAYS:           COUNCILMEMBERS:  
ABSENT:        COUNCILMEMBERS:

\_\_\_\_\_  
ERIN TOLLINI, MAYOR  
TOWN OF TIBURON

ATTEST:

\_\_\_\_\_  
DIANE CRANE IACOPI, TOWN CLERK



**Chapter 13E**

**WATER EFFICIENT LANDSCAPE\***

- 13E-1. Purpose and authority.**
- 13E-2. Adoption by reference of Marin Municipal Water District Ordinance No. 421.**
- 13E-3. Designation of Marin Municipal Water District for enforcement.**
- 13E-4. Availability of copies.**
- 13E-5. Penalties and enforcement.**

**13E-1. Purpose and authority.**

As mandated under State Government Code Section 65595(c), certain new construction and rehabilitation projects that include landscape and irrigation improvements are required to comply with water-efficient landscape requirements and monitoring of water usage for irrigation. The purpose of this chapter is to comply with this state mandate regarding water-efficient landscaping. For the purpose of administering this state mandate, the Town of Tiburon will herein adopt by reference Marin Municipal Water District (MMWD) Ordinance No. 421 (Water Conservation), and any amendments or successors thereto, and designate MMWD, the local water provider, to implement, enforce, and monitor its requirements. The MMWD ordinance contains provisions that include, but are not limited to, the following:

- (1) The application and monitoring of a "maximum applied water allowance" that is established for applicable projects.
- (2) The review of required landscape and irrigation plans, specifications and supportive documents prepared for applicable projects for compliance with water-efficient landscape restrictions, including limitations on the type and amount of landscape materials and plant species.

\*Editor's note—Ord. No. 521 N.S., §§ 2A-2D, adopted March 17, 2010, repealed ch. 13E in its entirety and enacted a new ch. 13E as set out herein. The former ch. 13E pertained to water conservation and derived from Ord. No. 359 N.S., §§ 1—4.

(3) The review, inspection and approval of landscape and irrigation that is installed for applicable projects to ensure compliance with the approved landscape and irrigation plans and specifications.

(4) The post-installation monitoring of water usage for irrigation by applicable projects. (Ord. No. 521 N.S., § 3, 3-17-2010; Ord. No. 532 N.S., § 2A, 9-7-2011)

**13E-2. Adoption by reference of Marin Municipal Water District Ordinance No. 421.**

(a) Pursuant to Government Code Section 50022.2, Marin Municipal Water District Ordinance No. 421, including amendments and successors thereto, is hereby adopted by reference and shall be in full force and effect within the Town of Tiburon. Said Ordinance No. 421 shall be applicable to projects that are subject to the water efficient landscape requirements set forth therein, which projects include, without limitation:

- (1) New construction and rehabilitated landscapes for public agency projects and private development projects with a landscape area equal to or greater than one thousand square feet requiring a building or landscaping permit, plan check or design review; and
  - (2) New construction and rehabilitated landscapes that are developer or contractor-installed in single-family, two-family and multi-family residential projects with a landscape area equal to or greater than one thousand square feet requiring a building or landscape permit, plan check or design review; and
  - (3) New construction and rehabilitated landscapes that are homeowner-provided in single-family, two-family, and multi-family residential projects with a total project landscape area equal to or greater than two thousand five hundred square feet requiring a building or landscaping permit, plan check or design review.
- (b) For the purpose of administering these regulations, the Town of Tiburon hereby desig-

nates MMWD, the local water provider, to implement, enforce, and monitor the requirements therein.

(c) Town review of applicable projects shall be processed as follows:

(1) Projects requiring approval of a Site plan and architectural review (a.k.a. design review) permit. When an applicable project is subject to site plan and architectural review approval pursuant to title iv, chapter 16 of the Tiburon Municipal Code, the landscape and irrigation plans required by and submitted with this permit application shall be designed and prepared to comply with the provisions and requirements of the applicable MMWD regulations adopted by reference herein. The process for application review of applicable projects and compliance with applicable MMWD regulations shall be as follows:

(A) The application and plans submitted to the town shall be designed in accordance with MMWD Ordinance 421 and any amendments or successor ordinances thereto;

(B) The permit approval shall include a condition or conditions that include the following:

i. The final landscape and irrigation plans must comply with the current water efficient landscape requirements of MMWD.

ii. The construction plans submitted to the town for the issuance of a building permit/grading permit must be pre-approved by MMWD with the submitted plans stamped as approved by MMWD.

iii. The building permit application must be accompanied by a letter from MMWD approving the landscape and irrigation plans.

iv. If the MMWD-approved plans substantially differ from the town-approved plans, these differences may require additional review through the town's design review permit process and/or a revision to the town's permit.

v. The applicant is responsible for contacting MMWD for all inspections, approval and sign-off on landscape and irrigation installation. Upon approval, MMWD shall issue a certificate of completion, which must be submitted to the planning

division before building permit final sign-off or a certificate of occupancy is issued by the Tiburon Community Development Department.

(2) Projects requiring a building permit and/or grading permit only. When an applicable project is not subject to a site plan and architectural review permit but is required to secure a building permit and/or grading permit pursuant to title iv, chapter 13 of the Tiburon Municipal Code, such permit(s) shall not be issued until the applicant has secured, in writing, MMWD approval of the landscape and irrigation plans confirming compliance with MMWD Ordinance No. 421 and any amendments or successors thereto.

(d) Inspections and post-installation monitoring and enforcement. MMWD shall be responsible for:

(1) Inspecting and approving all landscape and irrigation installed for applicable projects prior to project permit final and/or occupancy; and

(2) Monitoring water usage for installed landscapes to ensure compliance with MMWD Ordinance No. 421 and any amendments or successors thereto. All enforcement actions for ordinance non-compliance or violations shall be administered by MMWD.

(Ord. No. 521 N.S., § 3, 3-17-2010; Ord. No. 532 N.S. , § 2B, 9-7-2011)

**13E-3. Designation of Marin Municipal Water District for enforcement.**

The Marin Municipal Water District, as the town's local water provider, is hereby designated as the implementing and enforcement agency for provisions of Ordinance No. 421 and any amendments or successors thereto.

(Ord. No. 521 N.S., § 3, 3-17-2010; Ord. No. 532 N.S. , § 2C, 9-7-2011)

**13E-4. Availability of copies.**

Three copies of Marin Municipal Water District Ordinance No. 421, and any amendments or successors thereto, shall be kept on file for public review in the office of the Tiburon Town Clerk.

(Ord. No. 521 N.S., § 3, 3-17-2010; Ord. No. 532 N.S. , § 2D, 9-7-2011)

**13E-5. Penalties and enforcement.**

(a) Any violation of the provisions of this chapter is hereby declared a public nuisance and shall be subject to summary abatement as provided by law.

(b) Any person violating provisions of this chapter shall be deemed guilty of an infraction and shall be subject to penalties pursuant to Section 36900 of the California Government Code, as amended, and title VI, chapter 31 of the Tiburon Municipal Code.

(c) Each and every day that any violation of this chapter continues, is committed or is permitted to continue shall be regarded as a new and separate offense.

(d) The remedies provided in this section shall be cumulative and not exclusive.  
(Ord. No. 521 N.S., § 3, 3-17-2010)



MARIN MUNICIPAL WATER DISTRICT

ORDINANCE NO. 430

AN ORDINANCE AMENDING TITLE 13 OF THE MARIN MUNICIPAL WATER DISTRICT CODE ADDING ANOTHER ELEMENT OF THE DISTRICT'S WATER CONSERVATION PROGRAM PURSUANT TO WATER CODE SECTION 375 BY REPEALING IN ITS ENTIRETY EXISTING CODE SECTION 13.02.021 AND REPLACING IT WITH A NEW SECTION 13.02.021 OF THE DISTRICT CODE

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE MARIN MUNICIPAL WATER DISTRICT AS FOLLOWS:

**SECTION 1. Purpose:** The purpose of this ordinance is to adopt another element of the District's water conservation program pursuant to Water Code Section 375. The purpose of this ordinance is to update elements of the District's water conservation code Title 13, Chapter 13, Section 13.02.021 to comply with the Governor's Executive Order No. b-29-15 which revised provisions of the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance, and the July 1, 2015 supplement to the 2013 California Green Building Code, Title 24, Part 11. The current element includes revisions that will improve the effectiveness of the District's water waste prevention program and increase efficiency standards. The Board of Directors views this conservation program as a fundamental and necessary step in its on-going efforts to reduce overall water use District-wide.

**SECTION 2. Ordinance Amendments:**

- A. **Section 13.02.021 entitled "Water Conservation: Normal Year Water Conservation" of Chapter 13.02 of Title 13 of the District Code is repealed in its entirety and replaced with a new Section 13.02.021 entitled "Water Conservation: Normal Year Water Conservation" which shall read as follows:**

13.02.021 Water Conservation: Normal Year Water Conservation.

- (1) **Declaration of Purpose.** The purpose of this chapter is to provide a water conservation plan to maximize the water supply during periods of relatively normal rainfall and to minimize the effect of a shortage of water on the district's consumers during an extended dry weather period (drought). The normal year conservation programs in this chapter are based on industry standards promulgated by the American Rainwater Catchment Systems Association (ARCSA), Bay-Friendly Landscape and Gardening Practices (Bay-Friendly), Best Management Practices developed by the California Urban Water Conservation Council (CUWCC), California Department of Water Resources (DWR), California Invasive Plant Council (Cal-IPC), California Irrigation Management Information System (CIMIS), Consortium for Energy Efficiency (CEE), University of California Cooperative Extension (U.C. Extension), USEPA WaterSense Program (WaterSense), Water Use Classification of Landscape Species (WUCOLS), and other recognized conservation industry standards. In every case, the intent of this chapter is to remain a living document,

incorporating the most restrictive industry standards in practice at the time in question. In the event that there is a conflict in regulations, the default shall be determined by the District, or as required by law.

Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable method of use. This policy protects local water supplies through the implementation of a whole systems approach to design, construction, installation and maintenance of the landscape resulting in water conserving climate-appropriate landscapes, improved water quality and the minimization of natural resource inputs.

(2) Definitions. Definitions used in this chapter are as follows:

- A. **Aggregate Landscape Area:** The total square foot area of new or rehabilitated landscape subject to plan review.
- B. **Applied Water:** The portion of water supplied by the irrigation system to the landscape.
- C. **Application for Service from an Existing Connection:** The application for service from an existing connection, whether it is a new, increased, or modified water service, in a customer's name for a property.
- D. **Automatic Irrigation Controller:** means a device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.
- E. **Backflow Prevention Device:** means an approved device installed to District standards which will prevent backflow or back-siphonage into the potable water system.
- F. **Booster Pumps:** A water pump used where the normal water system pressure is low and needs to be increased.
- G. **Bubblers:** Irrigation heads that produce a large volume of output, measured in gallons per minute (gpm) that flood the soil area surrounding the bubbler head.
- H. **Check Valve or Anti-Drain Valve:** means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.
- I. **Common Interest Development:** community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.
- J. **Compost:** the decayed remains of organic matter that has rotted into a natural fertilizer suitable as a soil amendment to enhance plant growth.

- K.** Conversion Factor (0.62): means the number that converts acre-inches per acre per year to gallons per square foot per year.
- L.** Developed landscape area: all outdoor areas under irrigation, swimming pools, and water features, but excluding hardscape areas.
- M.** Distribution Uniformity: means the measure of the uniformity of irrigation water over a defined area.
- N.** Drip Irrigation: means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.
- O.** Ecological Restoration Project: a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
- P.** Effective Precipitation (Eppt): the portion of total rainfall which becomes available for plant growth and that is used by the plants, defined as an average of 25% of total rainfall.
- Q.** Emitter: a drip irrigation device that delivers water slowly from the system to the soil.
- R.** Established Landscape: means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.
- S.** Estimated Total Water Use (ETWU): a calculated amount of water needed to irrigate a given landscape, and used as the basis for assigning water budgets at a site.
- T.** ET Adjustment Factor (ETAF): a factor of 0.55 for residential areas and 0.45 for non-residential areas, that, when applied to reference evapotranspiration as measured by a CIMIS weather station, or equivalent, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. The ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0. The ETAF for existing non-rehabilitated landscapes is 0.8.
- U.** Evapotranspiration rate: the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specific specified time.
- V.** Flow Rate: the rate at which water flows through pipes, and valves and emission devices, measured in (gallons per minute, gallons per hour, or cubic feet per second).
- W.** Flow Sensor: means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow

monitor capable of receiving flow signals and operating master valves. This combination flow sensor/controller may also function as a landscape water meter or submeter.

- X.** Friable: means a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.
- Y.** Graywater: means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.
- Z.** Hardscape: impermeable areas including patios, decks and paths, driveways and sidewalks.
- AA.** Head-to-Head Coverage: a high-flow irrigation system designed to provide an irrigation spray pattern that delivers water from one sprinkler head to the next.
- BB.** High-efficiency Fixture(s): High efficiency fixtures shall, at a minimum, meet the current requirements of the Water Sense labeling program and those of the California Department of Water Resources and the District.
- CC.** High-efficiency Irrigation Controller: An electronic device that controls the amount of time and frequency of operation for an irrigation system and adjusts automatically to compensate for the seasonal plant water requirements at the site (commonly referred to as weather-based irrigation controllers).
- DD.** High-efficiency Irrigation System: An irrigation system connected to a water service where the overall distribution uniformity (how evenly water is distributed across the irrigated landscape area) is a minimum of 75% for overhead spray devices and 85% for drip and bubbler systems, and the volume of water used is consistent with seasonal plant requirements as defined by the District.
- EE.** High volume irrigation: An irrigation device or system that delivers water to the landscape in a spray, stream-like, or flooding manner from above-ground irrigation nozzles with output expressed in gallons per minute (include many bubblers and micro-spray devices).
- FF.** High-Flow Sensor: a device for sensing the rate of flow in the irrigation system.
- GG.** High-water-use plants: Annuals, plants in containers, and plants identified as high-water-use in the current edition of the WUCOLS list published by the U.C. Extension. High-water-using plants are characterized by high transpiration

rates, shallow rooting, the need for frequent watering during summer months or with exposure to hot and drying climatic conditions.

- HH.** Hydrozones: A distinct grouping of plants with similar water needs and climatic requirements. Hydrozone types include, but are not limited to turf, high-water-use plants, low-water-use plants, microclimates (i.e., sun or shade, southern or northern exposures, surrounded by highly reflective surfaces), and partially hardscaped areas with plants, pool areas and water-use features.
- II.** Infiltration Rate: the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).
- JJ.** Invasive Plant Species: species of plants not historically found in California and/or that spread outside cultivated areas and can damage environmental or economic resources as determined by Cal-IPC ([www.cal-ipc.org](http://www.cal-ipc.org)) and the District.
- KK.** Irrigation Design Capacity: the maximum amount of water calculated to flow through an irrigation system, or section of a system, based on pipe size, pipe material, and operating pressure.
- LL.** Irrigation Efficiency (IE): a calculated measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The irrigation efficiency for purposes of this ordinance is 0.75 for overhead spray devices and 0.85 for drip and bubbler systems.
- MM.** Isolation Valves: used to isolate and shut-off water to a portion of the piping system.
- NN.** Landscape Agent: The consumer's designated representative for interacting with the District on landscape plan reviews.
- OO.** Landscape Area: means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).
- PP.** Landscape Plans: This includes a planting plan, an irrigation plan, and a grading plan drawn at the same scale and that clearly and accurately identify specified plants, irrigation layout, equipment, finish grades and drainage, specifications and construction details, plan sheet numbers, and drawing date of plans.
- QQ.** Landscape Project: means total area of landscape in a project as defined in "landscape area".

- RR.** Landscape Water Budget: The amount of water allowed for landscape water use at a site, adjusted on a seasonal basis, as determined by the District.
- SS.** Landscape Water Meter: means an inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.
- TT.** Lateral Line: non-pressurized pipe that is located downstream of an irrigation valve.
- UU.** Low-Head Drainage: water that flows out of the system after the valve turns off due to elevation changes within the system.
- VV.** Low Volume Irrigation: Irrigation devices, commonly called drip or point-source irrigation, with output measured and typically expressed in gallons per hour (gph), that apply water directly to soil in the plants root zone.
- WW.** Low-water-use plants: Plants identified as low-water-use in the current edition of the Water Use Classification of Species list published by the U.C. Extension. (Typically, plants that once established can survive on two irrigations per month during the summer months).
- XX.** Main Line: the pressurized pipeline that delivers water from the water source to the valve or outlet.
- YY.** Master Valve: is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a break, leak, or other malfunction in the irrigation system.
- ZZ.** Maximum Applied Water Allowance (MAWA): for design purposes, the upper limit of annual applied water for the established landscape as determined by the District.
- AAA.** Median: is an area between opposing lanes of traffic that may be unplanted or planted.
- BBB.** Microclimate: The climate of a specific area in the landscape that has substantially differing sun exposure, temperature, or wind, or proximity to reflective surfaces than adjacent areas or the area as a whole.
- CCC.** Moderate Water Use Plants: ornamental trees, shrubs ground covers, and perennials and other plants recognized as moderate-water-use by WUCOLS.
- DDD.** Mulch: any organic material such as leaves, bark, straw, compost or other inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature and preventing soil erosion.

- EEE.** New construction: means any new landscape area such as a planter, lawn, swimming pool, park, playground, or greenbelt with or without a new building associated with the project.
- FFF.** Non-Residential Landscape: means landscapes in commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments, such as home owners associations, with designated recreational areas.
- GGG.** Operating Pressure: the pressure when water is flowing through the irrigation system.
- HHH.** Overhead Sprinkler Irrigation Systems or “overhead spray irrigation systems” means systems that deliver water through the air (e.g., spray heads, microspray, multi-stream rotating nozzles and rotors).
- III.** Overspray: Water delivered by an irrigation system outside the targeted landscape area during average operating conditions onto any adjacent hardscapes or other non-landscaped areas during an irrigation cycle.
- JJJ.** Pervious: any surface or material that allows the passage of water through the material and into the underlying soil.
- KKK.** Plant Factor: a factor specified in WUCOLS that, when multiplied by reference evapotranspiration (ET<sub>o</sub>), estimates the amount of water used by specified plants.
- LLL.** Point of Connection (POC): The location where an irrigation system is connected to water supply.
- MMM.** Precipitation Rate: the rate of application of water measured in inches per hour.
- NNN.** Pressure Regulating Valve: a valve that automatically reduces the pressure in a pipe.
- OOO.** Project Applicant: the individual or entity submitting a Landscape Documentation Package, to request a permit, plan check or design review from the local agency. A project applicant may be the property owner or his or her designee.
- PPP.** Property: Any structure, including but not limited to single family residential, multi-family residential and floating homes, built and/or intended primarily for sheltering or housing of any person and ancillary structures thereto.
- QQQ.** Property Owner: A person or entity that owns or has the financial authority or control over the property to comply with the requirements set forth in this chapter.

- RRR.** Rain Sensor: a system component which automatically shuts off and suspends the irrigation system when it rains.
- SSS.** Recreational Area: areas dedicated to active play or recreation such as sports fields, school yards, picnic grounds, or other areas with intense foot traffic parks, sports fields and golf courses where turf provides a playing surface.
- TTT.** Recycled Water: means tertiary treated water which results from the treatment of wastewater, is suitable for direct beneficial use, and conforms to the definition of disinfected tertiary recycled water in accordance with state law.
- UUU.** Reference Evapotranspiration or ETo: a standard measurement of environmental parameters which affect the water use of plants and are an estimate of the evapotranspiration of a large field of four to seven-inch tall, cool-season grass that is well watered.
- VVV.** Rehabilitated Landscape: any re-landscaping project that requires a building or grading permit, plan check or design review.
- WWW.** Residential Customer: The person(s) or entity with an existing water service connection for a residential property.
- XXX.** Residential Landscape: means landscapes surrounding single family or duplex homes.
- YYY.** Runoff: Irrigation water that is not absorbed by the soil or landscape area to which it is applied and which flows onto other non-targeted areas, including runoff into storm drain systems.
- ZZZ.** Soil Moisture Sensing Device or “soil moisture sensor”: means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.
- AAAA.** Soil Texture: means the classification of soil based on its percentage of sand, silt, and clay.
- BBBB.** Soils Laboratory Report: the analysis of a soil sample to determine nutrient content, composition and other characteristics, including contaminants, for horticultural purposes.
- CCCC.** Special Landscape Area (SLA): an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.
- DDDD.** Sprinkler Head: a high volume irrigation device that delivers water to the landscape through a spray nozzle.
- EEEE.** Static Water Pressure: the pipeline or municipal water supply pressure when water is not flowing.

- FFFF.** Station: an area served by one valve or by a set of valves that operate simultaneously.
- GGGG.** Submeter: a separate meter that is located on the private side of the water system and is plumbed to measure all water that flows only through the irrigation system. This meter is to be used by the owner to monitor irrigation water use and will not be read or maintained by the District.
- HHHH.** Swing Joint: an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.
- IIII.** Turf: A mat layer of monocotyledonous plants with shallow rooting structures requiring frequent watering during the growing season; i.e., cool or warm season grass consisting, but not limited to Blue, Rye, Fescue, Bent, Bermuda, Kikuyu, St. Augustine, Zoysia, and Buffalo.
- JJJJ.** Valve: a device used to control the flow of water in the irrigation system.
- KKKK.** Valve Manifold: a one-piece manifold for use in a sprinkler valve assembly that includes an intake pipe having a water inlet and a plurality of ports adapted for fluid connection to inlets.
- LLLL.** Water Budget: an allocation of water based on plant water needs, used to determine the billing tiers for customers with dedicated landscape irrigation meters, for example.
- MMMM.** Water Feature: a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area.
- NNNN.** Watering Window: means the time of day irrigation is allowed.
- OOOO.** Weather Based or Sensor Based Irrigation Control Technology: uses local weather and landscape conditions to tailor irrigation schedules to actual conditions on the site or uses historical weather data.
- PPPP.** WUCOLS: the most current Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation.

(3) Requirements for All Services.

- A.** Pressure Regulation. A pressure-regulating valve shall be installed and maintained by the consumer if static service pressure exceeds 80 pounds per square inch (psi), and be set at a maximum operating pressure of 60 psi at the regulator outlet. The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and pressure-relief valves and other

plumbing safety devices shall be installed as required by local codes. The operating pressure requirement may be waived if the consumer presents evidence satisfactory to the District that high pressure is necessary in the design and that no water will be wasted as a result of higher pressure operation.

**B. Interior Plumbing Fixtures.** All plumbing installed, replaced or moved in any new or existing service shall be high-efficiency fixtures and shall meet the following minimum requirements:

1. **High-efficiency Clothes Washers:** Residential or commercial clothes washers that meet the current highest water efficiency standards as defined by the District. The General Manager shall have authority to grant a variance from the requirements of this section based upon financial hardship.
2. **High-efficiency Lavatory Faucet:** The maximum flow rate shall not exceed 1.0 gallons per minute (gpm) at a pressure of 60 pounds per square inch (psi) at the inlet, when water is flowing.
3. **High-efficiency Shower Head:** The manufacturer shall specify a maximum flow rate equal to or less than 2.0 gallons per minute (gpm), at a pressure of 60 pounds per square inch (psi) at the inlet, when water is flowing.
4. **High-efficiency Toilet:** Any WaterSense listed toilet rated at an effective flush volume of no greater than 1.28 gallons.
5. **High-efficiency Urinal:** The average water consumption shall not exceed 0.25 gallons per flush (gpf).

**C. Pool Covers.** Pool covers are required for all new outdoor swimming pools. (Ord. 421 §3(part), 2011; Ord. 385 §1(part), 1999); Ord. 326 §1(part), 1991).

**(4) Non-Residential Interior Plumbing Fixtures.** All plumbing installed, moved or replaced in any new or existing service shall be high-efficiency fixtures and shall meet the following minimum requirements: (Ord. 421 §3(part), 2011).

**A. Faucets.** Lavatory faucets, other than public lavatory or metering faucets, shall deliver 1.0 gallons, or less of water per minute.

1. **Metered Faucets** Self-closing or self-closing metering faucets shall be installed on lavatories intended to serve the transient public, such as those in, but not limited to, service stations, train stations, airports, restaurants, and convention halls. Metered faucets shall deliver no more than .25 gallons of water per use. Self-closing faucets shall deliver no more than .5 gallon per minute.
2. **Public Lavatory** (other than metering) faucets shall deliver 0.5 gallons, or less, of water per minute.

3. **Kitchen, Bar and Utility/Service** (other than hand-washing sinks) faucets shall by default deliver 1.8 gallons per minute or less, and may be constructed to allow a temporary flow of 2.2 gallons, or less, of water per minute.

**B. Private Use, Public Use.** Pursuant to the *International Plumbing Code (IPC)*:

“In the classification of plumbing fixtures, “private” applies to fixtures in residences and apartments, and to fixtures in nonpublic toilet rooms of hotels and motels and similar installations in buildings where the plumbing fixtures are intended for utilization by a family or an individual...”public” applies to fixtures in general toilet rooms of schools, gymnasiums, hotels, airports, bus and railroad stations, public buildings, bars public comfort stations, office buildings, stadiums, stores, restaurants and other installations where a number of fixtures are installed so that their utilization is similarly unrestricted”.

**C. Commercial Equipment Specifications.**

1. **Dishwashers.** Dishwashers are machines designed to clean and sanitize plates, glasses, cups, bowls, utensils, and trays by applying sprays of detergent solution (with or without blasting media granules) and a sanitizing final rinse. Dishwashers shall meet the current specifications set by the Consortium for Energy Efficiency’s (CEE) “High Efficiency Specifications for Commercial Dishwashers and any and all amendments thereto”.
2. **Steamers.** A “steamer” or “steam cooker” is a device with one or more food steaming compartments in which the energy in the steam is transferred to the food by direct contact. Steamers shall meet the current specifications set by the CEE’s “High Efficiency Specifications for Commercial Steamers and any and all amendments thereto”.
3. **Pre-Rinse Spray Valves.** Pre-rinse valves use a spray of water to remove food waste from dishes prior to cleaning in a dishwasher. Pre-rinse spray valves shall (1) deliver 1.3 gallons, or less, of water per minute based on tested performance by the FSTC and (2) meet the cleaning performance standard of 26 seconds per plate or less, based on the *ASTM Standard Test Method for Performance of Pre-Rinse Spray Valves and any and all amendment thereto*.
4. **Dipper Wells.** A “dipper well” is a basin into which clean tap water flows constantly to provide a fresh supply of water for soaking utensils. The run-off goes down the drain. Dipper well flow rate shall be .3 gallon, or less, per minute.
5. **Ice Machines.** Ice machines are a factory-made assembly (not necessarily shipped in one package) consisting of a condensing unit and ice-making section operating as an integrated unit, with means for making and harvesting ice. It is an assembly that makes up to 4,000 lbs. of ice per day at Standard Ratings Conditions, as defined in Section 5.2.1 of ARI Standard 810-2006, and may also include means for storing or dispensing ice, or both. Ice machines shall (1) be Energy Star qualified and (2) meet the current highest Tier specification set by the CEE’s “High Efficiency Specifications for Air-Cooled Ice Machines and any and all amendments thereto”.

6. **Heating, Ventilation and Air Conditioning (HVAC) Equipment.** HVAC Equipment shall eliminate all once-through cooling, replacing with an air-cooled system or a cooling tower. For cooling towers, the following are recommended:
  - (a) flow submeters on make-up and bleed-off lines; submeters should, at a minimum, be capable of totaling the flow.
  - (b) conductivity controllers that activate the blowdown valve for dissolved solids control.
  - (c) overflow sensors on the overflow pipes.
  - (d) baffles or drift eliminators.

All cooling towers shall be monitored and maintained in a manner consistent with applicable regulatory guidelines and manufacturers recommendations.

(5) Water Efficient Landscaping.

- A. After December 1, 2015, this chapter shall apply to all of the following:
  1. New construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review;
  2. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,000 square feet requiring a building or landscape permit, plan check, or design review;
  3. Any project with an aggregate landscape area of less than 1,000 square feet requiring a building or landscape permit, plan check, or design review shall comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in Appendix D.
- B. This chapter shall not apply to:
  1. Registered local, state or federal historical sites;
  2. Ecological restoration projects that do not require a permanent irrigation system;
  3. Mined-land reclamation projects that do not require a permanent irrigation system; or
  4. Existing plant collections, as part of botanical gardens and arboretums open to the public.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

C. Water Efficient Landscape Worksheet.

1. Complete the Maximum Applied Water Allowance and Estimated Total Water Use worksheet in Appendix A.
2. Water budget calculations shall adhere to the following requirements:
  - (a) The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR).
  - (b) All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.
  - (c) All Special Landscape Areas shall be identified and their water use calculated as shown in Appendix A.
  - (d) ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas, and for areas exclusively irrigated with recycled water, rainwater, or graywater, shall not exceed 1.0.

D. Soil Management Report.

1. In order to reduce runoff and improve plant growth, the project applicant may be required by the District to complete a soil management report as follows:
  - (a) Submit soil samples to a laboratory for analysis and recommendations.
  - (b) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
  - (c) The soil analysis may include:
    - (1) soil texture;
    - (2) infiltration rate determined by laboratory test or soil texture infiltration rate table;
    - (3) pH;
    - (4) total soluble salts;
    - (5) sodium;
    - (6) percent organic matter; and
    - (7) recommendations.

E. Landscape Design Plan. For each landscape project subject to this chapter applicants shall submit a landscape design plan in accordance with the following:

1. The landscape design plan, at a minimum, shall:
  - (a) delineate and label each hydrozone by number, letter, or other method;
  - (b) identify each hydrozone as low, moderate, high water. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;
  - (c) identify recreational areas;
  - (d) identify areas permanently and solely dedicated to edible plants;
  - (e) identify areas irrigated with recycled water;
  - (f) identify type of mulch and application depth;
  - (g) identify soil amendments, type, and quantity;
  - (h) identify type and surface area of water features;

- (i) identify hardscapes (pervious and non-pervious);
- (j) identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Appropriate stormwater best management practices are encouraged in the landscape design.
- (k) identify any applicable rain harvesting or catchment technologies
- (l) identify any applicable graywater discharge piping, system components and area(s) of distribution;
- (m) contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and
- (n) bear the signature of a licensed landscape architect, licensed landscape contractor, or other person authorized by the property owner to design the project's landscape.

**F. Soil Preparation, Mulch and Amendments.**

1. Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.
2. Soil amendments shall be incorporated according to what is appropriate for the plants selected.
3. For landscape installations, compost at a rate of a minimum of six-cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of eight inches into the soil. Soils with greater than 6% organic matter in the top 8 inches of soil, as determined by a soil management report, are exempt from adding compost and tilling.
4. A minimum three inch (3") layer of organic mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to 5 % of the landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.
5. Stabilizing mulching products shall be used on slopes that meet current engineering standards.
6. The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.
7. Organic mulch materials made from recycled or post-consumer are preferred over virgin forest products unless the recycled post-consumer organic products are not locally available.

**G. Plants.**

1. Any plant may be selected for the landscape, providing the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water

Allowance and the selected plants meet all other permit, fire safe, and non-invasive requirements for the project. Methods to achieve water efficiency shall include the following:

- (a) protection and preservation of native species and natural vegetation;
- (b) selection of water-conserving plant, tree and turf species, especially local native plants;
- (c) selection of plants based on local climate suitability, disease and pest resistance;
- (d) selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and
- (e) selection of plants from local and regional landscape program plant lists.
- (f) Plants with similar water use needs shall be grouped together in distinct hydrozones, and where irrigation is required the distinct hydrozones shall be irrigated with separate valves.
- (g) Low and moderate water use plants can be mixed, but the entire hydrozone will be classified as moderate water use for MAWA calculations.
- (h) High water use plants shall not be mixed with low or moderate water use plants.
- (i) Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. Methods to achieve water efficiency shall include one or more of the following:
  - (1) use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
  - (2) recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure [e.g., buildings, sidewalks, power lines]; allow for adequate soil volume for healthy root growth; and
  - (3) consider the solar orientation for plant placement to maximize summer shade and winter solar gain.
- (j) Turf shall not be allowed in the following conditions: Slopes exceeding 10%, planting areas 10 feet wide or less, street medians, traffic islands, planter strips adjacent to hardscape, bulbouts or parkways, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.
- (k) High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians, traffic islands, planter strips adjacent to hardscape, or bulbouts of any size.
- (l) Invasive plants as listed by the Cal-IPC are prohibited. Weedy species, listed as invasive in California at ([www.cal-ipc.org/ip/inventory/index.php](http://www.cal-ipc.org/ip/inventory/index.php)) shall not be planted. Please check the species you might be thinking of planting against these lists, broken out by plant type. Exemptions may be granted on a case by case basis if District staff determine that the proposed location, species, size,

number of plants, and other cultural methods are not likely to cause harm to the watershed ecosystem.13.02.021

- (m) Fire Safe Landscape Practices. The requirements in this chapter are intended to support, and be in compliance with, all local and State requirements related to Fire Safe Landscaping practices, including, but not limited to, requirements for Wildlife Urban Interface zones as specified by the local authority.
- (n) The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

#### H. Water Features.

1. Recirculating water systems shall be used for water features.
2. Where available, recycled water shall be used as a source for decorative water features.
3. Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.
4. Pool covers are required for all new outdoor swimming pools.

I. Irrigation Design Plan. This section applies to landscaped areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package:

1. The irrigation design plan, at a minimum, shall contain:
  - (a) location and size of separate water meters for landscape;
  - (b) location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention assemblies;
  - (c) static water pressure at the point of connection to the public water supply;
  - (d) flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;
  - (e) recycled water irrigation systems;
  - (f) the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and

- (g) the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or other person authorized by the property owner to design the project's irrigation system.
2. System
- (a) Separate District landscape water service meters shall be required for all new landscapes, other than single-family and two-unit residential landscapes, for which the irrigated area is equal to or greater than 1,000 square feet.
  - (b) A private submeter shall be required for all rehabilitated landscapes for which the irrigated landscape area is equal to or greater than 2,500 square feet.
  - (c) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems.
  - (d) If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device(s) is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
  - (e) Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.
  - (f) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply and before each valve or valve manifold, to minimize water loss in case of an emergency (such as a main line break) or routine repair.
  - (g) Backflow prevention assemblies shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.
  - (h) Flow sensors that detect high flow conditions created by system damage or malfunction, are required for all non-residential landscapes and residential landscapes of 5000 sq. ft. or larger and shall be integrated with the irrigation system in such a manner as to be capable of automatically stopping water flow in the irrigation system in the event of a high flow condition. Flow sensors that meet this requirement are typically integrated with the irrigation controller(s) and master valve(s), and have the ability to alert the system operator of malfunctions using remote communication devices.
  - (i) The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.
  - (j) If applicable, relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

- (k) The design of the irrigation system shall conform to the hydrozones of the landscape design plan.
- (l) The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency regarding the Maximum Applied Water Allowance.
- (m) It is highly recommended that the project applicant inquire with the District about water restrictions that may impact the effectiveness of the irrigation system.
- (n) In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.
- (o) Sprinkler heads and other emission devices shall have matched precipitation rates.
- (p) Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
- (q) Swing joints or other pipe protection components are required on above-ground irrigation piping.
- (r) Check valves shall be installed to prevent low-head drainage.
- (s) Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produce no runoff or overspray.
- (t) Minimum 24" setback of overhead spray irrigation is required when adjacent to a continuous hardscape area where runoff water flows into the curb and gutter.
- (u) Slopes greater than 15% shall not be irrigated with an irrigation system with an application rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.
- (v) Identify any applicable rain harvesting, graywater, or catchment technologies (e.g. rain gardens, cisterns, etc.). Applicants are encouraged to employ alternative irrigation techniques as appropriate, and where permitted by law.
- (w) Identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Appropriate stormwater best management practices are encouraged in the landscape design.

3. Hydrozone

- (a) Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
- (b) Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.
- (c) Trees shall be placed on separate irrigation valves except when planted in turf areas.
- (d) Low and moderate water use plants can be mixed, but the entire hydrozone will be classified as moderate water use for MAWA calculations.
- (e) High water use plants shall not be mixed with low or moderate water use plants.

- (f) On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table. This table can also assist with the irrigation audit and programming the controller.

**J. Certificate of Completion (Appendix C).**

1. The Certificate of Completion shall include the following six (6) elements:
  - (a) project information sheet that contains:
    - (1) date;
    - (2) project name;
    - (3) project applicant name, telephone, and mailing address;
    - (4) project address and location; and
    - (5) property owner name, telephone, and mailing address;
  - (b) certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package;
    - (1) where there have been significant changes made in the field during construction, "as-built" or record drawings shall be included with the certification;
    - (2) A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.
  - (c) irrigation scheduling parameters used to set the controller
  - (d) landscape and irrigation maintenance schedule
  - (e) irrigation audit report and
  - (f) soil analysis report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations as required.
2. The project applicant shall:
  - (a) submit the signed Certificate of Completion to the District for review;
  - (b) ensure that copies of the approved Certificate of Completion are submitted to the property owner or his or her designee.

**K. Landscape and Irrigation Maintenance Schedule.**

1. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.
2. A regular maintenance schedule shall include, but not be limited to, routine inspection; auditing, adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; top dressing with compost, replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing obstructions to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

3. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.
4. A project applicant is encouraged to implement established landscape industry sustainable Best Practices for all landscape maintenance activities.

**L. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.**

1. All landscape irrigation audits shall be conducted by a local agency landscape irrigation auditor or a third party certified landscape irrigation auditor.
2. In large projects or projects with multiple landscape installations (i.e. production home developments) an auditing rate of 1 in 7 lots or approximately 15% will satisfy this requirement.
3. For new construction and rehabilitated landscape projects installed after December 1, 2015, the project applicant shall submit an irrigation audit report with the Certificate of Completion to the District that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure and any other factors necessary for accurate programming;

**M. Irrigation Efficiency.** For the purpose of determining Estimated Total Water Use, average irrigation efficiency is assumed to be a minimum of 0.75 for overhead spray devices and 0.85 for drip system devices.

**N. Recycled Water.**

1. The installation of recycled water irrigation systems shall allow for the current and future use of recycled water.
2. All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.
3. Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

**O. Graywater Systems.** Graywater systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation. All graywater systems shall conform to the California Plumbing Code (Title 24, Part 5, Chapter 16) and any applicable local ordinance standards.

**P. Stormwater Management and Rainwater Retention.**

1. Identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Appropriate stormwater best management practices are encouraged in the landscape design.

2. Rain gardens, cisterns, and other landscapes features and practices that increase rainwater capture and create opportunities for infiltration and/or onsite storage are recommended.

**Q. Forms.**

The following forms shall be submitted: Appendix A, Maximum Applied Water Allowance; Appendix B, Hydrozone Table; Appendix C, Certificate of Completion; Appendix D, Prescriptive Compliance (Optional).

**Appendix A – Maximum Applied Water Allowance**

**Appendix B – Hydrozone Table**

**Appendix C – Certificate of Completion**

**Appendix D – Prescriptive Compliance Option**

- (6) Drinking Water Served Upon Request Only.  
By January 1, 2011, eating or drinking establishments, including but not limited to a restaurant, hotel, café, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.
- (7) Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services.  
By January 1, 2011, hotels, motels and other commercial lodging establishments shall provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments shall prominently display notice of this option in each bathroom using clear and easily understood language.
- (8) Gray Water Systems. This section is reserved for future provisions regarding grey water systems. 13.02.021
- (9) Rain Water Harvesting Systems. This section is reserved for future provisions regarding rain water harvesting systems.
- (10) Other Provisions. The General Manager will consider and may allow the substitution of design alternatives and innovation which may equally reduce water consumption for any of these requirements. The General Manager may accept documentation methods, water allowance determination, and landscape and irrigation design requirements of the State of California Model Water Efficient Landscape Ordinance instead of Chapters 14-30.040 and 14-30.050 of these requirements where it can be demonstrated that the State procedure will more effectively address the design requirements of the project.
- (11) Provisions For Appeal. The applicant or any affected person may appeal the final decision of staff regarding plan check or final inspection to the General Manager, The decision of the General Manager shall be final. An appeal regarding plan check shall be submitted prior to the installation of the landscape or it will be deemed to have been waived.
- (12) Forms. The following forms shall be submitted as described in this chapter: Appendix A, Maximum Applied Water Allowance; Appendix B, Hydrozone Table; Appendix C, Certificate of Completion; Appendix D, Prescriptive Compliance Option (as required). (Ord. 421 §3(part), 2011; Ord. 414 §2, 2010)

# Appendix A – Maximum Applied Water Allowance (Residential & Commercial)

## Maximum Applied Water Allowance - Residential -- Zone 4 --

Zip Codes: 94904, 94920, 94925, 94930, 94939, 94946, 94957, 94960, 94963, 94964, 94973

The following calculations will help you determine your site specific water budget and establish a planting mix that will allow you to meet your water budget. Your Estimated Total Water Use must be less than your Maximum Applied Water Allowance.

### 1.) Maximum Applied Water Allowance (MAWA)

$$MAWA = (ET_o) (0.62) [(0.55 \times LA) + (0.45 \times SLA)]$$

Where:

ET<sub>o</sub> = Annual Net Reference Evapotranspiration (inches)

0.55 = ET Adjustment Factor

LA = Landscaped Area (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

0.45 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.55 = 0.45)

#### A.) Net Evapotranspiration Calculation

46.60  
(Annual ET<sub>o</sub>)

26.30  
(Annual Rainfall)

x .25

= 6.58  
(Effective Rainfall)

Net Evapotranspiration Calculation = Annual ET<sub>o</sub> - Effective Rainfall = 40.03

#### B.) Adjusted Landscape Area Calculation

0 x 0.55  
(Landscaped Area) Adjustment Factor = 0

0 x 0.45  
(Special Landscaped Area) Adjustment Factor = 0

Sum of Adjusted Landscape Area = 0

MAWA = 40.03 x 0.62 x 0 = 0 gallons = 0 CCFs

### 2.) Estimated Total Water Use (ETWU)

#### A.) Net Evapotranspiration Calculation

Net Evapotranspiration Calculation = Annual ET<sub>o</sub> - Effective Rainfall = 40.03

#### B.) Adjusted Landscape Area Calculation

0 x 0.3  
(Low water use plant sqft) = 0

0 x 0.6  
(Moderate water use plant sqft) = 0

0 x 1.0  
(High water use plant sqft) = 0

Sum of Adjusted Landscape Area = 0

ETWU = 40.03 x 0.62 x 0 = 0

% of Total Landscape Irrigated with Drip	Irrigation Efficiency Factor
0-33%	enter 0.75 above
34-66%	enter 0.80 above
67-100%	enter 0.85 above

Maximum Applied Water Allowance - Commercial

-- Zone 4 --

Zip Codes: 94904, 94920, 94925, 94930, 94939, 94946, 94957, 94960, 94963, 94964, 94973

The following calculations will help you determine your site specific water budget and establish a planting mix that will allow you to meet your water budget. Your Estimated Total Water Use must be less than your Maximum Applied Water Allowance.

1.) Maximum Applied Water Allowance (MAWA)

$$MAWA = (ET_o) (0.62) [(0.45 \times LA) + (0.55 \times SLA)]$$

Where:

ET<sub>o</sub> = Annual Net Reference Evapotranspiration (inches)

0.45 = ET Adjustment Factor

LA = Landscaped Area (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

0.55 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.45 - 0.55)

A.) Net Evapotranspiration Calculation

46.60  
(Annual ET<sub>o</sub>)

26.30  
(Annual Rainfall)

x 0.25

6.58  
(Effective Rainfall)

Net Evapotranspiration Calculation = Annual ET<sub>o</sub> - Effective Rainfall = 40.03

B.) Adjusted Landscape Area Calculation

0 x 0.45  
(Landscaped Area) Adjustment Factor

= 0

0 x 0.55  
(Special Landscaped Area) Adjustment Factor

= 0

Sum of Adjusted Landscape Area = 0

MAWA = 40.03 x 0.62 x 0 = 0 gallons

0 CCFs

2.) Estimated Total Water Use (ETWU)

A.) Net Evapotranspiration Calculation

Net Evapotranspiration Calculation = Annual ET<sub>o</sub> - Effective Rainfall = 40.03

B.) Adjusted Landscape Area Calculation

0 x 0.3  
(Low water use plant sqft)

= 0

0 x 0.6  
(Moderate water use plant sqft)

= 0

0 x 1.0  
(High water use plant sqft)

= 0

Sum of Adjusted Landscape Area = 0

ETWU = 40.03 x 0.62 x 0 = 0

0

% of Total Landscape Irrigated with Drip	Irrigation Efficiency Factor
0-33%	enter 0.75 above
34-66%	enter 0.80 above
67-100%	enter 0.85 above



## Appendix C – Certificate of Completion

### Certificate of Completion

This certificate is filled out by the project applicant, landscape architect and landscape contractor upon completion of the landscape project.

#### Part 1. Project Information Sheet

Date:	MMWD Project Number:	
Project Name:	Project Address:	
Name of Project Applicant:	Telephone No.:	
	Fax No.:	
Title:	Email Address:	
Company:	Street Address:	
City:	State:	ZIP Code:

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

\_\_\_\_\_  
Property Owner Signature

\_\_\_\_\_  
Date

#### Part 2. Landscape Architect and Landscape Contractor/Installer

Landscape Architect Name:	Telephone No.:	
	Fax No.:	
Title:	Email Address:	
License No. or Certification No.:	Street Address:	
Company:	City:	
	State:	ZIP Code:

Landscape Contractor Name:	Telephone No.:	
	Fax No.:	
Title:	Email Address:	
License No. or Certification No.:	Street Address:	
Company:	City:	
	State:	ZIP Code:

"I/we certify that the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conform to the criteria and specifications of the approved Landscape Documentation Package. Additionally, a landscape audit and irrigation maintenance schedule have been completed and are attached to this certificate showing that the system meets the efficiency requirements used in the Maximum Applied Water Allowance calculation".

\_\_\_\_\_  
Landscape Architect Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Landscape Contractor Signature

\_\_\_\_\_  
Date

## Appendix D – Prescriptive Compliance Option

1. This appendix contains prescriptive requirements which may be used as a compliance option to the Model Water Efficient Landscape Ordinance.
2. Compliance with the following items is mandatory and must be documented on a landscape plan in order to use the prescriptive compliance option:
  - (a) Submit a Landscape Documentation Package which includes the following elements:
    - (1) date
    - (2) project applicant
    - (3) project address (if available, parcel and/or lot number(s))
    - (4) total landscape area (square feet), including a breakdown of turf and plant material
    - (5) project type (e.g., new, rehabilitated, public, private, homeowner-installed)
    - (6) water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well
    - (7) contact information for the project applicant and property owner
    - (8) applicant signature and date with statement, “I agree to comply with the requirements of the prescriptive compliance option to the MWEL0”.
    - (9) narrative description of project
  - (b) Incorporate compost at a rate of at least six cubic yards per 1,000 square feet to a depth of eight inches into landscape area (unless contra-indicated by a soil test);
  - (c) Plant material shall comply with all of the following:
    - (1) For residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water, graywater, and/or rainwater as the exclusive source of water for irrigation. For non-residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 100% of the plant area, excluding edibles and areas using recycled water, rainwater, or graywater as the exclusive source of water for irrigation.
    - (2) A minimum three inch (3”) layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.
    - (3) Do not plant invasive or non-fire safe species of plants not historically found in California and/or that spread outside cultivated areas and can damage environmental or economic resources as determined by Cal-IPC ([www.cal-ipc.org](http://www.cal-ipc.org)), the local fire agency, and the District.
  - (d) Turf shall comply with all of the following:
    - (1) Turf and other high water use plants shall not exceed 25% of the landscape area in residential areas, and there shall be no turf permitted in non-residential areas;
    - (2) Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 10 feet of horizontal length;
    - (3) Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.

- (e) Irrigation systems shall comply with the following:
  - (1) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.
  - (2) Irrigation controllers shall be of a type which does not lose programming data (non-volatile memory) in the event the primary power source is interrupted.
  - (3) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the components are within the manufacturers recommended pressure range.
  - (4) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply and before each valve or valve manifold.
  - (5) Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.
- (f) For non-residential projects with landscape areas of 1,000 sq. ft. or less, a private submeter(s) to measure landscape water use shall be installed.
- (g) At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

**SECTION 3. Findings of Necessity:** The Board of Directors finds as follows:

- A. Water is a finite and precious resource.
- B. Currently, California is in its fourth year of drought.
- C. On January 17, 2014, Governor Jerry Brown issued a drought state of emergency declaration in response to record-low water levels in California's rivers and reservoirs as well as an abnormally low snowpack. On April 1, 2015, Governor Brown issued an Executive Order calling for statewide mandatory water reductions of up to 25%.
- D. On May 5, 2015, the State Water Resources Control Board approved regulations, based on Governor Brown's Executive Order, mandating the District to reduce its water consumption by 20% percent for June 2015 through February 2016 as compared to the same months in 2013.
- E. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed the Department of Water Resources to update the State's Model Water Efficient Landscape Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015.
- F. The Executive Order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, gray water usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf. It also requires reporting on the implementation and enforcement of local ordinances, with required reports due to the Department of Water Resources by

December 31, 2015, and subsequent annual reports due by January 31<sup>st</sup> each year thereafter.

- G. This ordinance is designed to comply with the State's requirement, conserve water and preserve the District's water supply.
- H. Article X Section 2 of the California Constitution declares that the general welfare requires that water resources be put to beneficial use to the fullest extent of which they are capable and that the waste, unreasonable use or unreasonable method of use of water be prevented, and that conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and the public welfare.
- I. California Water Codes Section 375 authorized water suppliers to adopt and enforce a comprehensive water conservation program to reduce water consumption and conserve water supplies.
- J. The adoption and enforcement of the water conservation program contained in this ordinance is necessary to manage and conserve the District's water supply and ensure its sustainability and reliability while preventing water waste.
- K. The Board finds this ordinance is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15061(b) (3) of the CEQA Guidelines.
- L. After more than twenty years of innovative and aggressive conservation efforts, more needs to be accomplished. The water conservation program required by this ordinance is necessary to conserve additional water for beneficial use and to preserve the District's water supply.

**SECTION 4. Environmental Determination:** This project has been reviewed for compliance with the California Environmental Quality Act and qualifies for an exemption under the General Rule section 15061(b) (3) because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

**SECTION 5. Severability:** If any section, subsection, sentence, clause, phrase, portion or part of this ordinance is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such section shall not affect the validity of the remaining portions of this code. The Board of Directors hereby declares that it would have adopted this ordinance and each section, subsection, sentence, clause, phrase, part or portion thereof, irrespective of the fact that any one or more sections subsections, clauses, phrases, parts or portions be declared invalid or unconstitutional.

