Date Posted: 8/29/2014

NORTH MARIN WATER DISTRICT
AGENDA - REGULAR MEETING
September 2, 2014 – 7:30 p.m.
District Headquarters
999 Rush Creek Place
Novato, California

Information about and copies of supporting materials on agenda items are available for public review at 999 Rush Creek Place, Novato, at the Reception Desk, or by calling the District Secretary at (415) 897-4133. A fee may be charged for copies. District facilities and meetings comply with the Americans with Disabilities Act. If special accommodations are needed, please contact the District Secretary as soon as possible, but at least two days prior to the meeting.

Est. Time	Item	Subject
7:30 p.m.		***CALL TO ORDER***
	1.	***APPROVE MINUTES FROM REGULAR MEETING***, August 19, 2014
	2.	***GENERAL MANAGER'S REPORT***
	3.	***OPEN TIME: (Please observe a three-minute time limit)***
		This section of the agenda is provided so that the public may express comments on any issues not listed on the agenda that are of interest to the public and within the jurisdiction of the North Marin Water District. When comments are made about matters not on the agenda, Board members can ask questions for clarification, respond to statements or questions from members of the public, refer a matter to staff, or direct staff to place a matter of business on a future agenda. The public may also express comments on agenda items at the time of Board consideration.
	4.	***STAFF/DIRECTORS REPORTS***
		CONSENT CALENDAR
		The General Manager has reviewed the following items. To his knowledge, there is no opposition to the action. The items can be acted on in one consolidated motion as recommended or may be removed from the Consent Calendar and separately considered at the request of any person.
	5.	***Consent Approve:*** Inn Marin Quitclaim **Resolution**
		ACTION CALENDAR
	6.	***Consider:*** Request for Additional Bill Adjustment – 45 Bogey Lane
	7.	***Approve:*** STP Transmission Line Evaluation Contract – Pure Technologies
8:00 p.m.		***INFORMATION ITEMS***
	8.	Fourth Quarter FY 13/14 - Water Quality Quarterly Report w/Quarterly Bacteriological Monitoring Report
	9.	FY 14 - Operations/Maintenance Year End Report
	10.	Water Conservation Year End Report (July 2013 through June 2014)
	11.	Year End Progress Report - Engineering Department
	12.	Temporary Urgency Change Order
	13.	Marin County Club Golf Course 2014 Recycled Water Feasibility Study Update – Draft Report
	14.	NBWA Meeting - September 5, 2014

All times are approximate and for reference only.
The Board of Directors may consider an item at a different time than set forth herein.

(Continued)

Est. Time	Item	Subject
	15.	***MISCELLANEOUS*** Disbursements Marin County Fish and Wildlife Commission News Articles: Suggestions for drought tolerant plants Drought prompts Marin water districts to clamp down on irrigation systems State extends review of $25B delta plan
9:00 p.m.	16.	***ADJOURNMENT***

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DRAFT
NORTH MARIN WATER DISTRICT
MINUTES OF REGULAR MEETING
OF THE BOARD OF DIRECTORS
August 19, 2014

CALL TO ORDER

President Rodoni called the regular meeting of the Board of Directors of North Marin Water District to order at 7:30 p.m. at the District Headquarters and the agenda was accepted as presented. Present were Directors Jack Baker, Rick Fraites, Stephen Petterle, and John Schoonover. Also present were General Manager Chris DeGabriele, District Secretary Katie Young, Auditor-Controller David Bentley and Chief Engineer Drew McIntyre.

District employee Tony Arendell (Construction/Maintenance Superintendent) was in the audience.

MINUTES

President Rodoni provided the District Secretary with some minor corrections to the draft minutes from the August 5, 2014 meeting.

On motion of Director Schoonover, seconded by Director Fraites and unanimously carried the Board approved the minutes from the previous meeting as amended.

GENERAL MANAGER'S REPORT

Parking Lot Paving

Mr. DeGabriele informed the Board that the parking lot was refurbished and complimented Tony Arendell on his efficient methods of repairing, repaving and restriping the lot.

Drought Drive-Up

Mr. DeGabriele advised the Board that he attended the Drought Drive-Up in West Marin on August 9th, along with President Rodoni. He noted that the drive-up was well attended with over 50 customers taking advantage of the drought tools.

Water Line Newsletter

Mr. DeGabriele informed the Board that the Novato *Water Line* Newsletter was mailed out this week and that all of the current prohibitions were listed on the front page. He stated that additionally an article in the Marin Independent Journal was in the paper on Sunday and is hopeful that the public outreach is making an impact.

Out of the Office

Mr. DeGabriele informed the Board that he will be out of the office for the rest of the week and that David Bentley will be Acting General Manager.

Urban Water Management Plan

Mr. DeGabriele advised the Board that the Governor signed legislation to extend the 2015 Urban Water Management Plan due date from December 31, 2015 to June 30, 2016, which will now include the information for 20% reduction in per capita water use by 2020. He noted that all of the water contractors are hoping to hire the same consultant for water demand and conservation analysis.

EPA Water Sense Award

Mr. DeGabriele advised the Board that Sonoma Marin Saving Water Partnership will be receiving the EPA Water Sense Partner of the Year Award in October. He informed the Board that he has been asked to accept the award for the partnership and will be attending the WaterSmart Innovations Conference in Las Vegas in October to do so.

OPEN TIME

President Rodoni asked if anyone in the audience wished to bring up an item not on the agenda and there was no response.

STAFF/DIRECTORS REPORTS

President Rodoni asked if staff or Directors wished to bring up an item not on the agenda and the following item was discussed:

David Bentley informed the Board that the District received the remaining balance from the Hardiman Construction who the District had prevailed against in a small claims action.

MONTHLY PROGRESS REPORT

Mr. DeGabriele provided the Board with the Monthly Progress Report for the month of July. He stated that water production in Novato was down 18% from one year ago and down 21% from February through July. He stated that in West Marin water production is down 7% although Mr. Bentley advised Mr. DeGabriele that Palace Market had a 1.1MG leak and if the leak amount had been removed, West Marin water production would be down 19% compared to one year ago.

Mr. Bentley provided an analysis to the Board regarding the drought surcharge in West Marin. He noted that 48% of the bills had drought surcharge. He stated that the median surcharge for residential customer was $10.93 and the median surcharge for non-residential customers was

$29.39. Mr. Bentley stated that staff project that adoption of the drought surcharge would generate $43,000 over the four month period.

Mr. DeGabriele stated that Lake Mendocino is at 31% capacity with 35,000AF and Lake Sonoma is at 65% capacity with 158,000AF. He noted that Stafford Lake is at 36% capacity and is planning to operate until September 19th. He advised the Board that in West Marin, Lagunitas Creek flows continue to be above the minimum flows and the District is still able to divert water without purchasing more water from Marin Municipal. He noted that sodium levels are surprisingly low.

Mr. DeGabriele informed the Board that Oceana Marin is in good shape and has not had to discharge in July. He advised the Board that the field service representative who was injured in May is still out of work and staff has hired temporary help to backstop meter reading. Mr. DeGabriele stated that the energy cost is down considerably from a year ago and the Stafford rate dropped due to the credit from power sold back to PG&E.

Mr. DeGabriele provided the Board with the Summary of Complaints and Service Orders advising the Board that the amount of water quality complaints was mostly due to the Sonoma County Agency supply of water. He stated that SCWA turned on the Santa Rosa plain wells to supplement the Russian River diversions and the wells had a different water quality which was noticed by Novato customers. He noted that additionally SCWA was unable to adjust the pH balance since the end of July but has now resolved the issue and will be able to deliver good water.

Mr. Bentley provided the Board with the Monthly Report of Investments for July, stating that the District has $15M in the bank and at the end of the month the weighted average portfolio rate was 0.39%.

PRELIMINARY FY 2013/14 FINANCIAL STATEMENT

Mr. Bentley provided the Board with the Preliminary FY 2013/14 Financial Statement. He advised the Board that the District generated a net income of just under $500K and saw a net cash increase of $4.7M. He noted that the cash increase is largely attributable to the receipt of Recycled Water grant and loan funds. Mr. Bentley advised the Board that both Operating Revenue and Operating Expense came in over budget and that 52% of the Capital Improvement Projects Budget was expended during the fiscal year. He informed the Board that the District's cash balance decreased by $2M during June, primarily due to the pay off of the CalPERS Side Fund. Mr. Bentley advised the Board that the cash balance was at $14.8M at the end of the fiscal year.

Mr. Bentley informed the Board that water consumption in Novato was down 2% from the prior year, that $99K in connection fees was collected during the year and that from Marin Municipal Water District made a $480K capital contribution for the Aqueduct Energy Efficiency Project as

required under the Interconnection Agreement. Mr. Bentley stated that the Stafford Treatment Plant produced 479MG last fiscal year and was budgeted at 750MG. He stated that Recycled Water production almost doubled from a year ago, producing almost 160MG, and had 27 new connections. He advised the Board that the Total Recycled Water Operating Expense was $352K more than last year primarily to the addition of purchased water cost from Novato Sanitary District and Las Gallinas Valley Sanitary District. Mr. Bentley stated that Novato Recycled Water ended the year with a cash balance of $1M.

Mr. Bentley stated that West Marin Water consumption was 78MG, 3% less than the previous year and the Operating revenue was 7% more than last year, primarily due to the 8% rate increase. He noted that the District received one connection fee and that 52% of the Capital Improvement Project Budget was spent during the fiscal year. He advised the Board that West Marin Water ended the year with a cash balance of $913K.

Mr. Bentley informed the Board that Oceana Marin Sewer Operating revenue was 13% higher than the previous year and received one new connection. He stated that 39% of the Capital Improvement Project budget was expended and that Oceana Marin ended the year with a cash balance of $283K.

CONSENT CALENDAR

On motion of Director Fraites, seconded by Director Petterle and unanimously carried, the following items were approved on the Consent Calendar:

REQUEST OUT-OF-STATE TRAVEL FOR STACIE GOODPASTER FOR AWWA FALL 2014 CONFERENCE

Stacie Goodpaster has been a member of the AWWA California Nevada Section Water Quality Laboratory Analyst Certification Committee for over six years and currently serves as Chair. The annual fall conference this year is taking place in Reno, Nevada from October 19th-23rd. In addition to the committee meeting, Stacie will attend technical sessions for continuing education credits necessary for maintenance of the Distribution System Operator certificate and the Laboratory Analyst certificate. The Board authorized expenses for Stacie Goodpaster to attend the AWWA Fall 2014 Conference.

REQUEST OUT-OF-STATE TRAVEL FOR ROBERT CLARK FOR AWWA FALL 2014 CONFERENCE

Robert Clark has been active in the CA-NV AWWA for the past few years and has become more involved with the Asset Management, Safety & Security Planning and Backflow Committees. The annual fall conference this year is taking place in Reno, Nevada from October 19th-23rd. He will

be attending sessions regarding emergency planning, pipeline rehabilitation, water tank rehabilitation, material performance and asset management programs. The Board authorized expenses for Robert Clark to attend the AWWA Fall 2014 Conference.

ACTION CALENDAR

ATHERTON TANK REHABILITATION CONTRACT AWARD – BLASTCO INC.

Mr. McIntyre reminded the Board that the Atherton Tank Rehabilitation Project has been on the budget for awhile and now with the additional temporary storage tanks available the project can commence. He stated that the job went out for bid and 9 prime contractors received plans and specs. He noted out of the 9 contractors, 6 bids were received. He advised the Board that the engineers estimate was $2.2M and the bid span between the number 1 and number 2 low bidders was $65K. Mr. McIntyre advised the Board that the second low bidder protested claiming that Blastco's bid was non-responsive due to not correctly answering the question whether any claims were filed against them. He advised the Board that staff deferred to District's legal counsel regarding this issue and they determined that Blastco's bid was a responsive.

Mr. McIntyre stated that Blastco's bid was $1,348,850 and a bid evaluation was performed by District staff. He noted that Blastco has previouslycompleted tank re-coating projects for the District at Plum Street Tank and Crest Tank No. 1.

Director Baker asked if staff thought the District would hear more back from the second low bidder Advanced Industrial Services about the bid protest. Mr. McIntyre responded that staff has not received anything to date and that the District is going to bring in a third party company to help prepare the labor compliance plan and shadow field verifications.

On motion of Director Schoonover, seconded by Director Baker and unanimously carried, the Board rejected Advance Industrial Services' protest of Blastco's bid and approved award of the contract to Blastco, Inc. and authorized the General Manager to execute an agreement with Blastco, Inc. for $1,348,850 and set aside a contingency reserve of $70,000 (~5%).

ATHERTON TANK REHABILITATION COATING INSPECTION AWARD

Mr. McIntyre advised the Board that consistent with the Atherton Tank re-coating project staff is requesting the Board approve a third party coating inspector. He stated that staff sent out the proposal to six local firms and five responded. Mr. McIntyre informed the Board that the scope of work includes but is not limited to inspecting coating removal, conducting surface assessment, overseeing the surface preparation and inspecting the application. He stated that DB Gaya Consulting, who has previously completed work for the District, submitted the lowest bid at $37,800.

On motion of Director Petterle, seconded by Director Schoonover and unanimously carried, the Board authorized the General Manager to execute an agreement with DB Gaya Consulting LLC for coating inspection services on a time and expense basis with a not to exceed limit of $37,800 plus an approved contingency reserve of $5,000.

2014 WEST MARIN WATER SYSTEM MASTER PLAN – ACCEPTANCE OF FINAL REPORT

Mr. McIntyre advised the Board that the review and comment period has closed for the 2014 West Marin Water System Master Plan and that the Board saw the draft plan at the West Marin Meeting on June 24th. He stated that the Master Plan serves as a guideline and will be updated every 10 years.

President Rodoni asked if the Master Plans were available on the District's website. Mr. McIntyre stated that they were not but staff could add them.

On motion of Director Petterle, seconded by Director Fraites and unanimously carried, the Board accepted the 2014 West Marin Water System Master Plan.

AUTHORIZATION TO SOLICIT BID PROPOSAL FOR FIRE SERVICE TESTING

Mr. DeGabriele reminded the Board that last year staff contracted with a firm to help with fire service and backflow testing. He stated that staff is requesting to solicit bid proposals for the fire service testing and that staff does not have adequate time to get all of the backflow inspections and repair work done.

President Rodoni asked if staff is going to contract with a firm, would it free up more time. Mr. DeGabriele stated that without outside assistance some of the services would just go untested. He advised the Board that staff would provide a report on the backflow testing.

On motion of Director Schoonover, seconded by Director Petterle and unanimously carried, the Board authorized staff to advertise for proposals to test 220 fire service backflow devices.

RESOLUTIONS SUPPORTING FRESH WATER FLOWS IN THE SAN FRANCISCO BAY DELTA ESTUARY

Mr. DeGabriele reminded the Board that Director Fraites requested the other Board members receive the resolutions adopted supporting fresh water flows as well as the differences between the resolutions currently adopted by various entities. He informed the Board that there is a half day conference in September sponsored on by the Friends of the Estuary that may be attended to obtain more information. Mr. DeGabriele stated that Marin Municipal Water District supported the County of Marin's resolution. Mr. DeGabriele stated that the Sonoma resolution was adopted by the Sonoma Board of Supervisors not the SCWA and he believes that the resolutions may be dangerous to Stafford Lake water supply reliability.

Director Schoonover asked if Mr. DeGabriele wanted a Board member or staff to attend the Friends of the Estuary Conference. Mr. DeGabriele responded that either or both can attend.

Director Fraites stated that he realizes that the District does not receive its water from the Bay and is not dependent on the water from the Delta but that the District should be concerned with the water quality in the San Francisco Bay. He stated that several entities supported the resolutions with the same situation as the District and that he is very concerned about the future of the Bay and the Delta. He suggested that he prepare a resolution for the Board to consider that supports this issue and bring it back to the Board for further comment and action.

Director Baker stated that he respected Director Fraites' concern for the Delta and the Bay but believes the District should not get involved directly or indirectly.

Director Petterle stated that it was a regional water issue and that he supported the concept and volunteered to help draft a resolution.

Director Fraites stated that with less water flowing out of the Delta more salt intrusion will occur and that could have negative impact in the Delta. He advised the Board that if the Bond measure passes there will be more dams and reservoirs built and more demand for water will occur.

President Rodoni supported Director Fraites and Petterle to draft a resolution on behalf of the District to be brought back to the Board for further discussion and action.

President Rodoni suggested that Director Petterle and Director Fraites ask for Mr. DeGabriele's input when drafting the resolution.

The Board tabled this item until a future meeting.

INFORMATION ITEMS

SCWA TEMPORARY URGENCY CHANGE PETITION

Mr. DeGabriele advised the Board that Sonoma County Water Agency filed a Temporary Urgency Change Petition will the State Board requesting lower flows in the Russian River. He stated that the petition is requesting lowering upper Russian River minimum flows to 50 cubic feet per second and lowering flows in the lower Russian River from the Dry Creek confluence to the Pacific Ocean to 60cfs. He noted that the reduced flows are projected to preserve approximately 4,000AF of water in Lake Mendocino by November 1st.

Mr. DeGabriele informed the Board that the TUCP is different from those filed previously, in that Mendocino County Russian River Flood Control and Water Conservation Improvement District also filed a petition which enables SCWA to request that the State Board take actions to reduce diversions by 20% for holders of water right permits and licenses issued under the 10,000AF per

year Sonoma County Reservation in the upper Russian River. Mr. DeGabriele stated the reduced diversions by the Mendocino District are projected to preserve an additional 5,000AF in Lake Mendocino by November 1st.

Mr. DeGabriele advised the Board that SCWA specifically requested the State Board order no further terms regarding water conservation activities of the Water Agency and its contractors including the District. He noted that he has not heard about the outcome of the TUCP and will keep the Board apprised.

NBWRA UPDATE

Mr. McIntyre advised the Board that Director Schoonover, Director Baker and Water Conservation Coordinator, Ryan Grisso, attended the North Bay Water Reuse Authority meeting on July 28th. He stated that there was no budget augmentations required at the end of the fiscal year from any of the consultants and that there are plans for a fall trip to Washington DC to continue to support WaterSMART funding and Reclamation Infrastructure Innovation Act legislation. Mr. McIntyre informed the Board that if the $7.5B water bond passes on the November ballot, there will be $725M designated for recycled water.

COLLABORATION: SEA-LEVEL MARIN ADAPTION RESPONSE TEAM (C-SMART) PARTICIPATION

Mr. DeGabriele provided the Board with a memorandum about the Marin County Sea-Level Adaption Response Team (C-SMART). He stated that the County is requesting representation from the District but not at an elected official level. He advised the Board that he would be the initial contact for the County and will attend the first TAC meeting and determine to fully participate or assign to another staff member at that time. Mr. DeGabriele provided background information on the effort to assess sea-level rise effects on coastal infrastructure and resources.

President Rodoni asked if there has been any discussion with the County regarding it's groundwater management plan for Marin. Mr. DeGabriele stated that he has had brief conversations with Rebecca Ng and has offered a letter of support to help assist in West Marin, but nothing has occurred.

MISCELLANEOUS

The Board received the following miscellaneous information: Disbursements, FY14 4th Quarter Labor Cost Report, Self-Insured Workers' Comp – 4th Quarter Status Report, Summary NMWD Water Use Prohibitions for 2014 – Novato, Summary NMWD Water Use Prohibitions for 2014 – West Marin, and Letter from customer at 331 Grandview Ave.

The Board received the following news articles: Editorial: Marin Municipal Water District's 'smiley face' conservation program worth a look, Marin water officials unfazed by downgraded El Nino predictions, North Bay Water Suppliers Deploy New Water Management Tools in Response to Ongoing Drought, and Water Bond Could Provide Significant Resources to Sonoma County.

The Board also received the following news articles at the meeting: State mandates Inverness water emergency, Marin Voice: North Marin water users need to continue conservation efforts, PG&E to release dam water for steelhead in upper Eel River, and County approves Hog Island water well.

CLOSED SESSION

President Rodoni adjourned the Board into closed session at 8:46 p.m. in accordance with Government Code Section 54957 for Public Employee Performance Evaluation (One), Title: General Manager.

OPEN SESSION

Upon returning to regular session at 9:20 p.m., President Rodoni stated that during the closed session the Board had discussed the issue and no reportable action had been taken.

ADJOURNMENT

President Rodoni adjourned the meeting at 9:21 p.m.

Submitted by

Katie Young
District Secretary

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ITEM #5

MEMORANDUM

To: Board of Directors August 29, 2014

From: Drew McIntyre, Chief Engineer

Subject: Quitclaim Existing Easement in Trade for New Easement at the Inn Marin APN 160-161-21

R:\Folders by Job No\EASEMENT\QUITCLAIMS\Misc\7007.08_1422 Quitclaim BOD memo.doc

RECOMMENDED ACTION: That the Board approve the quitclaim for APN 160-161-12 and authorize the General Manager to execute said quitclaim.

FINANCIAL IMPACT: None

The District performed cross-connection and meter improvements on existing facilities at the Inn Marin (U.S. Hwy 101 and Entrada Drive) and relocated one (1) fire hydrant (in cooperation with the Fire District). The project necessitated new easements overlapping some existing easements. In lieu of trying to merge existing and new easements it was more cost effective to survey all water facilities and post same on a single document. The District has secured said new waterline easement for all facilities (Attachment 1). In order to properly remove a portion of the old easement encumbering said parcel, the District must record the attached quitclaim (Attachment 2).

RECOMMENDATION

That the Board approve quitclaim for APN 160-161-12 and authorize the General Manager to execute said quitclaim.

Approved by GM CD

Date 8/29/2014

RESOLUTION NO. 14-

AUTHORIZATION OF EXECUTION OF QUITCLAIM DEED TO

INN MARIN ASSOCIATES, LLC, a California Limited Liability Company

BE IT RESOLVED by the Board of Directors of NORTH MARIN WATER DISTRICT that the President and Secretary of this District be and they hereby are authorized and directed for and on behalf of this District to execute that certain Quitclaim Deed to providing for the release of a pipeline easement in trade for another.

* * *

I hereby certify that the foregoing is a true and complete copy of a resolution duly and regularly adopted by the Board of Directors of NORTH MARIN WATER DISTRICT at a regular meeting of said Board held on the this _____ day of _____, 2014, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAINED:

_____

Katie Young, Secretary
North Marin Water District

(SEAL)

Recording requested by:

NORTH MARIN WATER DISTRICT

When Recorded Mail To:

North Marin Water District
P. O. Box 146
Novato, CA 94948-0146

RECEIVED
AUG 15 2014
NORTH MARIN WATER DISTRICT

2014-0031785

Recorded Official Records County of Marin RICHARD N. BENSON Assessor-Recorder County Clerk	REC FEE 0.00 CONFORMED COPY 0.00
10:22AM 31-Jul-2014	a Page 1 of 9

Record Without Fee Per G.C. 27383

A.P.N. 160-161-12 J-1 7007.08 & 1422 Space above this line for Recorder's use

250 Entrada Dr.
Novato, CA 94949-5574

GRANT OF EASEMENT

FOR A VALUABLE CONSIDERATION,

INN MARIN ASSOCIATES, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

herein called "Grantor", hereby grants to NORTH MARIN WATER DISTRICT, a public corporation organized and existing under the County Water District Law of the State of California, herein called the "District", a perpetual easement and right of way for the purpose of laying down, constructing, reconstructing, removing, replacing, repairing, maintaining, operating and using, as the Grantee may see fit, for the transmission and distribution of water (potable and/or recycled), a pipe or pipes and all necessary braces, connections, fastenings, manholes and other appliances and fixtures for use in connection therewith or appurtenant thereto, in, under, on and along that real property in the City of Novato, County of Marin, State of California, described on Exhibit "A" and illustrated on Exhibit "B", attached hereto and made a part thereof.

TOGETHER WITH the right of ingress to and egress from said right of way and the right at all times to enter in, over and upon said right of way and every part thereof and also to use said right of way for all purposes connected with the laying down, constructing, reconstructing, replacing, removing, repairing, maintaining, operating and using said pipe or pipes.

The Grantors and the Grantors' heirs, successors or assigns, shall not do, nor allow to be done, anything which may interfere with the full enjoyment by the District of the rights herein granted, including without limitation the following:

placing or permitting to be placed on said right of way any building or structure (including without limitation fences not approved by District, garden structures, swimming pools, or deck(s), tree(s), large shrub(s), or rock(s) weighing more than 50 pounds);

excavating or permitting an excavation to be made closer than three (3) feet to any structure or pipe placed by the District on said right or way.

Subject to the foregoing provisions, Grantors may change the grade of the surface of said right of way, provided that before making any such change, Grantors (or Grantor's heirs, successors or assigns if Grantors are no longer in possession) shall notify District of the proposed change and pay to District the full expense of raising or lowering of such facilities as solely determined by District if District determines in its sole discretion that the change of the grade necessitates that any District facilities be raised or lowered. The Grantors and the Grantor's heirs, successors or assigns, shall not otherwise place or cause to be placed any earth, fill or rubble over any structure or pipe placed by the District on said right of way.

ATTACHMENT 1

Grantors may cultivate and landscape the surface of said right of way and may construct a driveway thereon provided that such actions do not in any way conflict with or violate any of the preceding limitations.

Grantors reserve the right to change the location of said right of way to a new location agreeable to District, in it's sole and absolute discretion, provided that Grantors shall first provide a right-of-way in the new location at Grantor's sole cost by executing a new easement in the standard form then utilized by the District and pay to District the full expense of relocating such facilities as solely determined by District.

Grantor and the Grantor's heirs, successors or assigns shall indemnify and hold the District free from loss, damage, defense costs or expenses in any way arising or occurring on account of injuries to persons, property or property damage sustained or alleged to have been sustained arising out of District's use of this easement except for damage actually caused by the sole negligence of the District. It is the express intent that the Grantor will indemnify and hold harmless District, its directors, employees and agents from any and all claims suits or actions from any cause whatsoever arising out of any use of the easement. These claims or actions may cover but are not limited to vehicular accidents, damage caused by water, land movement, or land subsidence, including negligence by the District, other than those arising from the sole negligence, willful misconduct of criminal acts of the District, its directors, employees and agents. This indemnity shall survive termination of this easement. This paragraph shall bind Grantor and its heirs, successors and assigns, and shall run with the land.

It is expressly agreed that the District shall be under no obligation to install or maintain a roadway or pavement or other surfacing upon the right-of-way except such as may be convenient for its own purposes, and specifically the District shall not be liable for any contribution for same.

Everywhere herein, where reference is made to the Grantor, it shall also include the Grantor's heirs, assigns, and/or successors and/or agents.

Should there be any variations, errors or omissions in the description herein, Grantor and the Grantor's heirs, successors or assigns, shall convey to District a right-of-way over the pipeline and other installations as laid and located by executing a new easement in the standard form then utilized by the District.

INN MARIN ASSOCIATES, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

Dated 7/23/14

Robert Marshall

CERTIFICATE OF ACCEPTANCE

This is to certify that the interest in real property conveyed by the foregoing instrument to North Marin Water District, a local governmental agency, is hereby accepted by the undersigned officer on behalf of the Board of Directors of the District pursuant to authority conferred by the Board's Resolution No. 10-14, adopted on August 3, 2010, and the Grantee consents to recordation thereof by its duly authorized officer.

Dated 7/23/2014

NORTH MARIN WATER DISTRICT

By: Chris DeGabriele

Chris DeGabriele, General Manager

(Attach notary slip on back of this page.)

Inn Marin
Waterline Easement
APN 160-161-21

Exhibit A

A Water Line Easement in, over and upon that certain parcel of land in the City of Novato, County of Marin, State of California more particularly described as follows:

Beginning at the most southerly corner of that certain parcel of land conveyed to Inn Marin Associates, LLC by Grant Deed recorded September 30, 1997 as Recorder's Document No. 97-054567, Marin County Records.

Thence, along the southwesterly line of said parcel:

N 21° 59' 30" E 92.07 feet.

Thence N 15° 00' 00" W 48.95 feet.

Thence on a curve to the left, tangent to the preceding course with a radius of 20.00 feet through a central angle of 82° 10' 00" an arc length of 28.68 feet.

Thence, tangent to the preceding curve, S 82° 50' 00" W 32.40 feet.

Thence, leaving said southwesterly line, N 08° 43' 45" W 10.02 feet.

Thence S 83° 17' 42" W 31.90 feet.

Thence S 36° 47' 00" W 7.31 feet.

Thence S 85° 31' 54" W 174.16 feet.

Thence N 51° 44' 42" W 37.48 feet.

Thence N 38° 15' 18" E 20.00 feet.

Thence S 51° 44' 42" E 29.66 feet.

Thence N 85° 31' 54" E 157.27 feet.

Thence N 36° 47' 00" E 6.85 feet.

Dale White

PROFESSIONAL LAND SURVEYOR
DALE WHITE
No. 4397
STATE OF CALIFORNIA

6-9-14

Exhibit A

Thence N 83° 17' 42" E 38.77 feet.

Thence N 08° 43' 45" W 28.89 feet.

Thence N 81° 16' 15" E 23.42 feet.

Thence S 08° 43' 45" E 25.82 feet.

Thence N 79° 34' 06" E 18.41 feet.

Thence N 09° 14' 33" W 52.13 feet.

Thence S 80° 45' 27" W 7.97 feet.

Thence N 09° 14' 33" W 20.87 feet.

Thence N 80° 45' 27" E 27.97 feet.

Thence S 09° 14' 33" E 73.00 feet.

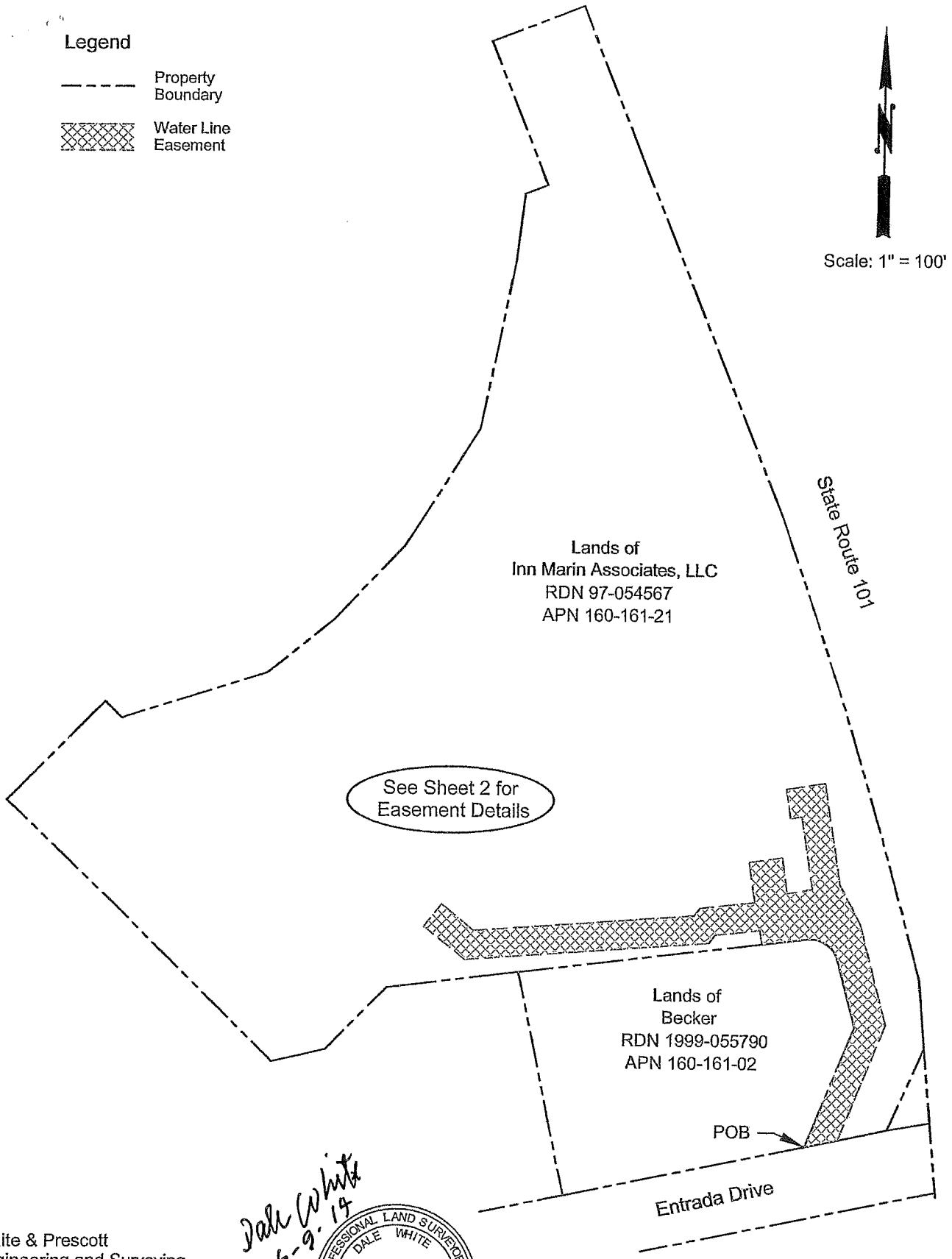
Thence S 28° 24' 40" E 31.06 feet.

Thence S 15° 00' 00" E 74.04 feet.

Thence S 21° 59' 30" W 88.56 feet to the southerly line of said parcel, being the northerly line of Entrada Drive.

Thence, along said southerly line and street line, S 77° 57' 49" W 24.12 feet to the point of beginning.

This easement contains approximately 12,721 square feet.



Dale White 6-9-14

PROFESSIONAL LAND SURVEYOR
DALE WHITE
PLS 4397
STATE OF CALIFORNIA

White & Prescott
Engineering and Surveying
1620 Grant Avenue
Novato, CA

D:\LD2014\NMWD- Inn Marin WLE\dwg\Sheet 1.dwg

North Marin Water District
Inn Marin Waterline Easement

Exhibit B - Sheet 1 - Site Overview

Line Table

No.	Bearing	Distance
1	S 82°50'00" W	32.40
2	N 08°43'45" W	10.02
3	S 83°17'42" W	31.90
4	S 36°47'00" W	7.31
5	N 51°44'42" W	37.48
6	N 38°15'18" E	20.00
7	S 51°44'42" E	29.66
8	N 36°47'00" E	6.85
9	N 83°17'42" E	38.77
10	N 08°43'45" W	28.89
11	N 81°16'15" E	23.42
12	S 08°43'45" E	25.82
13	N 79°34'06" E	18.41
14	N 09°14'33" W	52.13
15	S 80°45'27" W	7.97
16	N 09°14'33" W	20.87
17	N 80°45'27" E	27.97

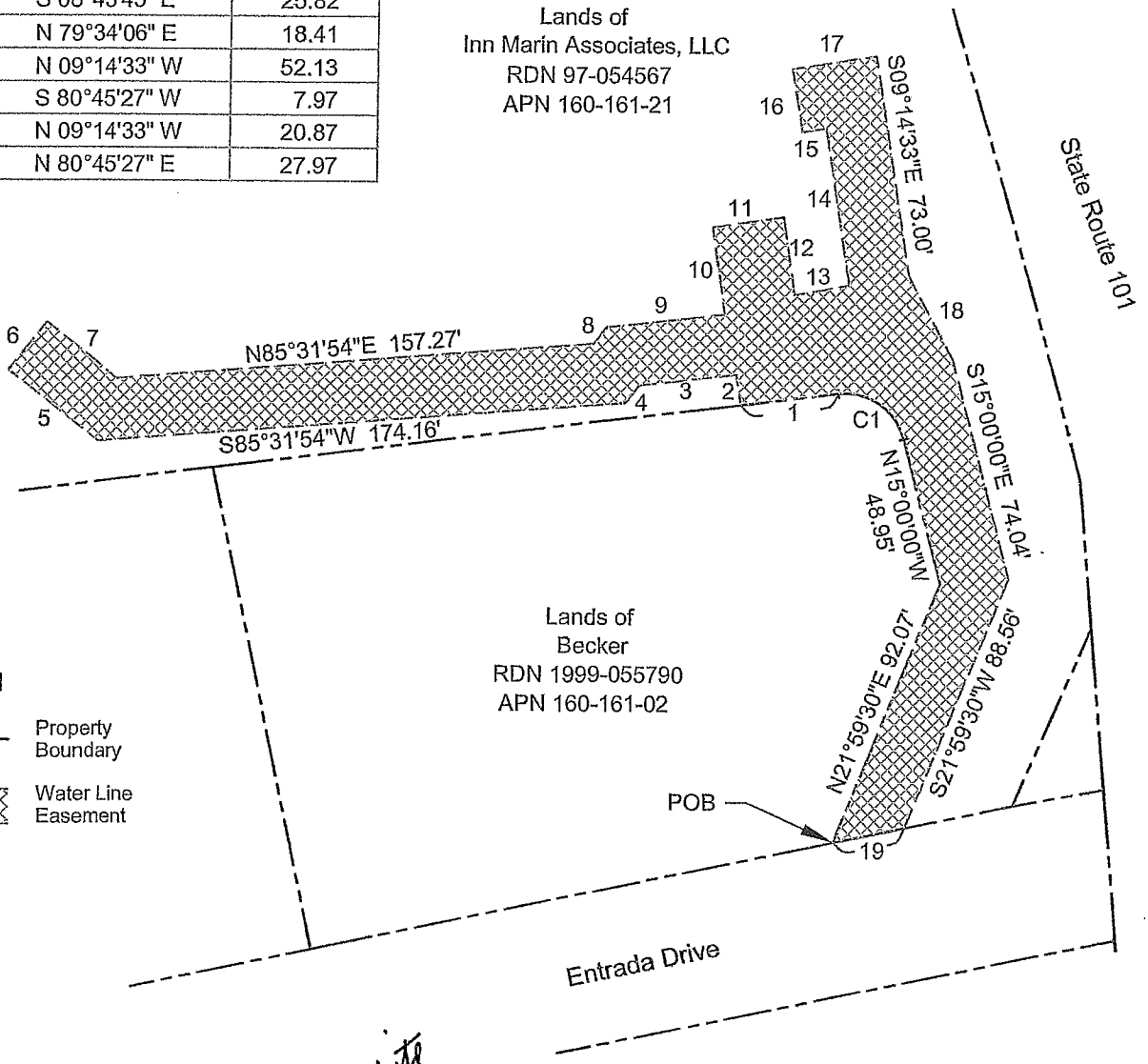
Line Table

No.	Bearing	Distance
18	S 28°24'40" E	31.06
19	S 77°57'49" W	24.12

Curve Table

No.	Delta Angle	Radius	Arc Length
C1	82°10'00"	20.00'	28.68'

Scale: 1" = 60'



Dale White 6-9-14

PROFESSIONAL LAND SURVEYOR DALE WHITE PLS 4397 STATE OF CALIFORNIA

White & Prescott
Engineering and Surveying
1620 Grant Avenue
Novato, CA

D:\LD2014\NMWD- Inn Marin WLE\dwg\Sheet 1.dwg

North Marin Water District
Inn Marin Waterline Easement

Exhibit B - Sheet 2 - Easement Details

Recording requested by:

NORTH MARIN WATER DISTRICT

When Recorded Mail To:

North Marin Water District
P. O. Box 146
Novato, CA 94948-0146

A.P.N. 160-161-21 J-1 7007.08 & 1422 Space above this line
250 Entrada Dr. for Recorder's use
Novato, CA 94947-5574

FOR BENEFIT OF THE DISTRICT

QUITCLAIM DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

NORTH MARIN WATER DISTRICT, A Public Corporation

does hereby remise, release, abandon, and forever quitclaim to the Inn Marin Associates, LLC, a California Limited Liability Company, all of said District's right, title, and interest in and to the following described water line easement:

That particular Grant of Easement from F. Julius Dreyfous, F. John Dreyfous, Helen Dreyfous to North Marin County Water District conveyed in Book 2727 at page 108, Marin County Records.

Which above quitclaim is in trade for a new Grant of Easement from Inn Marin Associates, LLC, a California Limited Liability Company, to North Marin Water District recorded _____ in Serial No. _____, Marin County California, Official Records and in benefit of said District.

NORTH MARIN WATER DISTRICT

Date: _____ _____

Chris DeGabriele, General Manager

6

ITEM #6

MEMORANDUM

To: Board of Directors August 29, 2014

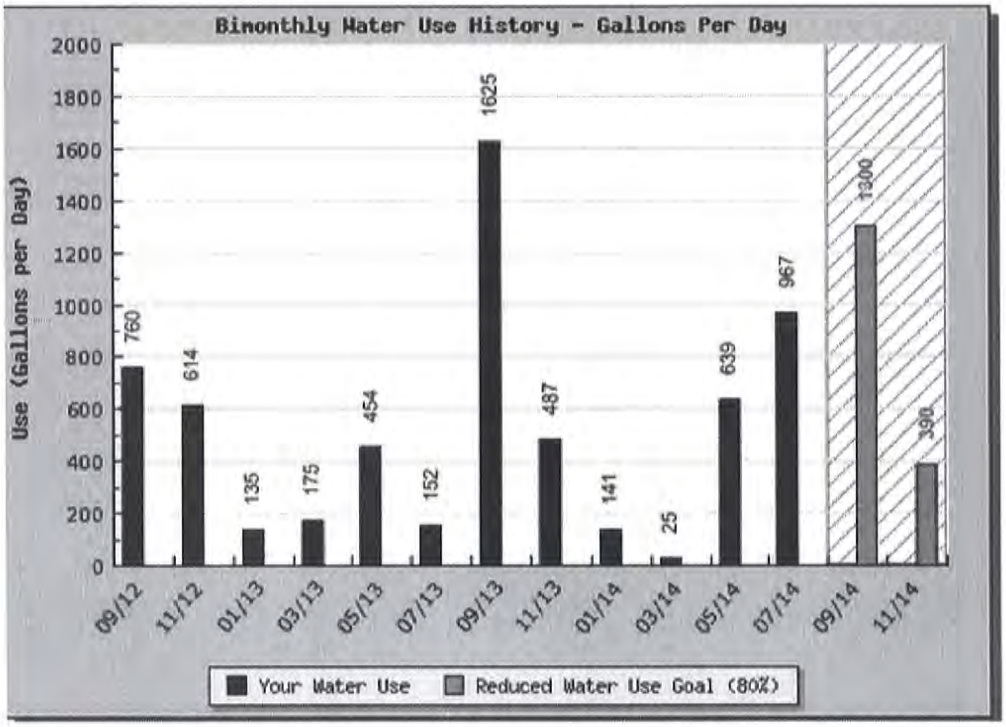
From: David L. Bentley, Auditor-Controller

Subj: Request for Additional Bill Adjustment – 45 Bogey Lane
t:\ac\word\memo\13\bangart bill adjustment.docx

Recommended Action: Consider Additional Adjustment

Financial Impact: $0-$181

The pool at Ms. Kientz' Bogey Lane property (off Country Club Drive) incurred a plumbing leak which she promptly repaired in early June at a cost of $4,230. Approximately 53,000 gallons of water was lost, resulting in a $411 water bill. When Ms. Kientz called for a bill adjustment, she was reminded that she had requested and received a $257 bill adjustment in September 2013 for a 65,000 gallon leak, which our records indicate she was unable to definitively locate.



Under the District Bill Adjustment Policy (attached):

> Consideration of an adjustment pursuant to this policy shall be allowed only once in any consecutive 24-month period.

Staff explained to Ms. Kientz that it has no authority to grant any further adjustment, but that she was welcome to appeal to the Board. The attached letter from Ms. Kientz explains that the water loss was not intentional, but rather an act of God, and requests some reduction.

Options for the Board to consider:

1) Let the bill stand at $411;
2) Grant a Bill Adjustment of $181 as though there had not been a $257 September 2013 adjustment;
3) Authorize an adjustment between options 1 and 2 (a credit between $0 and $181).

The Kientz family are good customers, owning the home since construction in 1962. Ms. Kientz has provided documentation and pictures to support her case. Staff is sympathetic to her situation, but endeavors to be true to Board policy. Accordingly, staff frequently rejects bill adjustment requests from customers who incur multiple high bills within a 24-month period. Staff is concerned about the precedent set by granting Ms. Kientz an additional adjustment.

Ms. Kientz has been invited to attend the meeting and address the Board

RECOMMENDATION:

Option 1 - Let the bill stand at $411.

NORTH MARIN WATER DISTRICT

POLICY: BILL ADJUSTMENT POLICY
POLICY NUMBER: 2

Original Date: February 7, 1967
Last Reviewed and Amended: 04/02/13

In the event water use (measured in 1,000 (thousand) gallon units) for the disputed bill is in excess of one and one-half times the normal seasonal bimonthly use as solely determined by the District, and there is no evidence that the excess water use was due to the willful act or negligence of the consumer or the consumer's agent(s), the District will credit the consumer's account for one half of the difference between the dollar amount of the normal bill (calculated as normal seasonal bimonthly use at current commodity rates) and the dollar amount of the disputed bill, plus, to the extent the excess use was subject to a tier rate, half the use in excess of normal will be credited to the customer's account at the tier rate. In the event the excess use encompasses two consecutive bimonthly billing periods, such bi-period rate adjustment will be separately applied to each such billing period provided the water use in each bimonthly period exceeds one and one-half times the normal seasonal bimonthly use for said period as determined by the District. Consideration of an adjustment pursuant to this policy shall be allowed only once in any consecutive 24-month period. Consumers requesting a bill adjustment must allow District staff to complete a residential water use survey before any bill adjustment is given. The District General Manager, or designee, may grant exemptions to this requirement should staff be unavailable to perform the survey in a timely manner.

Renée Kientz
113 Ahlstrom Circle
Cotati,CA 94931
415-259-9999
rakshasta@hotmail.com

August 8, 2014

North Marin Water District
Attn: Board of Directors
999 Rush Creek Place
PO Box 146
Novato, CA 94948-0146

Dear Board of Directors,

Your billing department referred me to the Board of Directors as they were unable to assist me with this situation.

I am writing to you today to ask for some reduction on our water bill for service period 5-6 -2014 – 7-10-14, in the amount of $ 411.47.

During this billing period we had an unfortunate problem arise. We discovered we had a leak. We immediately hired a professional pool repair company and they found it was a broken pipe underground for the filtration system and a leaking skimmer system for the pool. We immediately hired Bob's pool & Spa and began work the very next day. As seen in the photos, they dug the yard up, and an area of cement decking around the pool was removed to get to and repair/replace the broken pipe and also replace the skimmer system. All totaling $.4,229.95 to repair.

We are asking for aid with this situation as it was not intentional overuse it was simply an unfortunate act of god.
As stated we corrected this very expensive situation immediately when noticed.
We are asking the water district for some reduction on this bill.

Thank you for your time and attention of this review.

Best Regards,
Renee Kientz
Acct 447001
45 Bogey Ln., Novato

NORTH MARIN WATER DISTRICT
999 Rush Creek Place / Post Office Box 146
Novato, CA 94948-0146

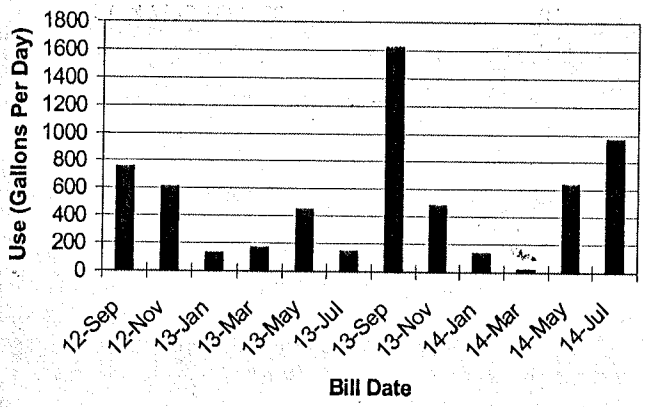
Telephone: (415) 897-4133
Fax: (415) 892-8043
Website: www.nmwd.com

SEE BACK FOR NOTES

MAILING DATE	ACCOUNT NUMBER	DUE DATE (Note F)	TOTAL DUE	SERVICE ADDRESS
07/17/2014	447001	08/11/2014	$ 411.47	45 Bogey Ln

DATE	DESCRIPTION		AMOUNT
05/15/2014	Previous Balance		$221.73
06/09/2014	PAYMENT ** THANK YOU **		($221.73)
07/17/2014	SERVICE CHARGE (Note A)		$60.00
5/6/2014 - 5/31/2014 (25 days)			
	BASE RATE 15,375 Gal @$4.51/1,000 Gal	$69.34	
	TIER 2- 8,791 Gal @$6.90/1,000 Gal	$60.66	
			$130.00
6/1/2014 - 7/10/2014 (40 days)			
	BASE RATE 24,600 Gal @$4.80/1,000 Gal	$118.08	
	TIER 2- 14,066 Gal @$7.35/1,000 Gal	$103.39	
			$221.47
	Total Billed Amount:		**$411.47**

Water Use History



8/8/14
Kathy -
Board of Directors - Letter to Boards -

METER NUMBER	DATE OF SERVICE	METER READING	USE (CCF)**
15408086	FROM 05/06/2014 TO 07/10/2014	FROM 7379 TO 7463	84

	**CCF	TOTAL GALLONS USED	DAYS	AVG. GALLONS PER DAY
CURRENT PERIOD:	84	62,832	65	967
SAME PERIOD LAST YEAR:	13	9,724	64	152

** 1 CCF = 100 CUBIC FEET OR 748 GALLONS

IMPORTANT MESSAGE FROM NMWD

We now offer Automatic Payment Service (APS), a convenient way to pay your NMWD bills directly via your bank. Mark the pay stub and we will send you info and an application.

Thank You for your consistently prompt payments.

Detach and return stub with your payment. Retain upper portion for your records.

Repair Invoice

BOB'S POOL & SPA

P.O. Box 7965
Santa Rosa, CA 95407
707-545-4530

Invoice Number	11659
Invoice Date	6/5/2014
Due Date	6/5/2014
Payment Terms	DUE ON COMPLETI...
Job Description	leaks

PAID 06/07/2014

Bill To:

Leo Delsanto
113 Ahlstrom Circle
Cotati, CA 94931

Ship To:

Leo Delsanto
113 Ahlstrom Circle
Cotati, CA 94931

Item	Description	Qty	Price	Amount
Travel C...	Initial travel time within repair area and first 1/2 hr labor included to perform the following:	1	120.00	120.00
Pool Lab...	Labor to install pool filter, replace plumbing, run and test system	1	120.00	120.00
Product...	System 3 S7S50 Sand Filter 3.4 Sq Ft.	1	690.00	690.00T
Product...	System 3 Sand Multiport Backwash Valve 2" Slip	1	195.00	195.00T
Product...	Sand 300lb Glass Bead	6	19.00	114.00T
	Subtotal			1,239.00
Product...	3 port solar valve w/drain down	1	97.00	97.00T
Product...	System check valve for front of pump and solar return	2	64.00	128.00T
Pool Lab...	Labor to replace pool skimmer. Includes skimmer plumbing concrete and materials	1	1,800.00	1,800.00
Pool Lab...	Labor to complete the following: Install overflow and fill line to skimmer, install backwash line, install provided irrigation valve for fill line, include plaster patching of top step and wiring irrigation fill valve...	1	250.00	250.00

Remittance Form: Please use the envelope provided and return the lower portion with your payment, at your earliest convenience.

Thank you for choosing Bob's for all of your Pool & Spa needs!

All repairs include a 90 day labor warranty, and a min. 1 year part warranty.

Leo Delsanto
113 Ahlstrom Circle
Cotati, CA 94931

Subtotal	$3,514.00
Tax (8.75%)	$107.10
Total	$3,621.10
Payments	-$3,621.10
Balance Due	$0.00

Please make any name or address corrections above.

Invoice #	Amount Enclosed:
11659	$_____

Make checks payable to: **Bob's Pool & Spa**

Bob's Pool & Spa
P.O. Box 7965
Santa Rosa, CA 95407

Payments recieved after 15 days are subject to a $20.00 service charge, with a 1.75% monthly service charge there after... (annual rate=21%).
PAYPAL PAYMENTS MAY BE MADE TO: BOBMOOK@NBAQUATICS.COM

Bob's Pool & Spa is a division of Efficient Aquatics, Inc.

BOB'S POOL & SPA

#61
Bogey Acct
6-1744

P.O. Box 7965
Santa Rosa, CA 95407
Office 707-545-4530
Cell 707-280-3009

Service Invoice

Invoice Date	Invoice Number
6/9/2014	11689

Bill To:

Leo Delsanto
113 Ahlstrom Circle
Cotati, CA 94931

Ship To:

Leo Delsanto
113 Ahlstrom Circle
Cotati, CA 94931

Due Date	6/9/2014	Payment Terms	DUE ON COMPLETIO...

Item	Item Description	Qty	Rate	Amount
Pool Labor	Labor to perform the following: Replumb pool cleaner line from existing copper return pipe, install new time clocks for pool filter pump and cleaner pump, install gfci on light circuit	2.5	120.00	300.00
Products sold	Plumbing for pool cleaner	1	20.00	20.00T
Products sold	Time clock mechanisms	2	85.00	170.00T
Products sold	gfci and electrical	1	35.00	35.00T
Products sold	Pool leaf rake	1	0.00	0.00T
Products sold	Solar Sensor	1	59.00	59.00T
	Inc. Replaster top step, finish skimmer install, wire irrigation valve, replace solar sensor and repair wires connections			
	Subtotal			$584.00
	Sales Tax (8.75%)			$24.85
	Total			$608.85
	Payments			$0.00
	Total Due			**$608.85**


CRAFTSMAN

7

ITEM #7

MEMORANDUM

To: Board of Directors August 29, 2014

From: Drew McIntyre, Chief Engineer
David Jackson, Associate Engineer

Subject: Stafford Treatment Plant Transmission Line Evaluation – Award Condition Assessment of 18" and 24" Concrete Cylinder Pipeline to Pure Technologies
R:\Folders by Job No\7000 jobs\7130 STP Trans Main\7130 BOD Memo Approve Contract Award to Pure Tech 9-2-14.doc

RECOMMENDED ACTION: Approve award of the contract and authorize the General Manager to execute an agreement with Pure Technologies, Inc.

FINANCIAL IMPACT: $120,000 (included in FY15 CIP Budget)

Background

The Stafford Treatment Plant (STP) Transmission Line Condition Assessment Project includes inspection and condition assessment of approximately 13,800 feet of 24-inch and 18-inch ID concrete cylinder pipe; bar-wrapped steel cylinder pipe with rubber gaskets and bell and spigot joints, similar to AWWA Standard C-303.

The STP transmission main was installed in 1951 for the purpose of delivering water from STP to NMWD's Zone 1 water service area. This transmission main is the only connection between the STP and NMWD's distribution system (see Attachment A). The purpose of this inspection is to determine the current pipe condition and assess the remaining life. A complete inspection has not been performed previously and there have been no major repairs on this pipeline since it was constructed.

The end of the transmission line is interconnected (i.e., looped) with other Zone 1 pipelines between Raposa Vista and Wilson Ave. District crews are to perform minor modifications to the transmission line and will operate the Zone 1 system to minimize disruptions to water deliveries. All work will be performed after the STP shuts down this fall and all materials or equipment introduced into the pipeline will be disinfected to the satisfaction of the District.

A Request for Proposal for this project was mailed in October, 2013 to five companies and two companies returned a proposal. The proposals received ranged from a low of $56,000 to a high of $270,000.

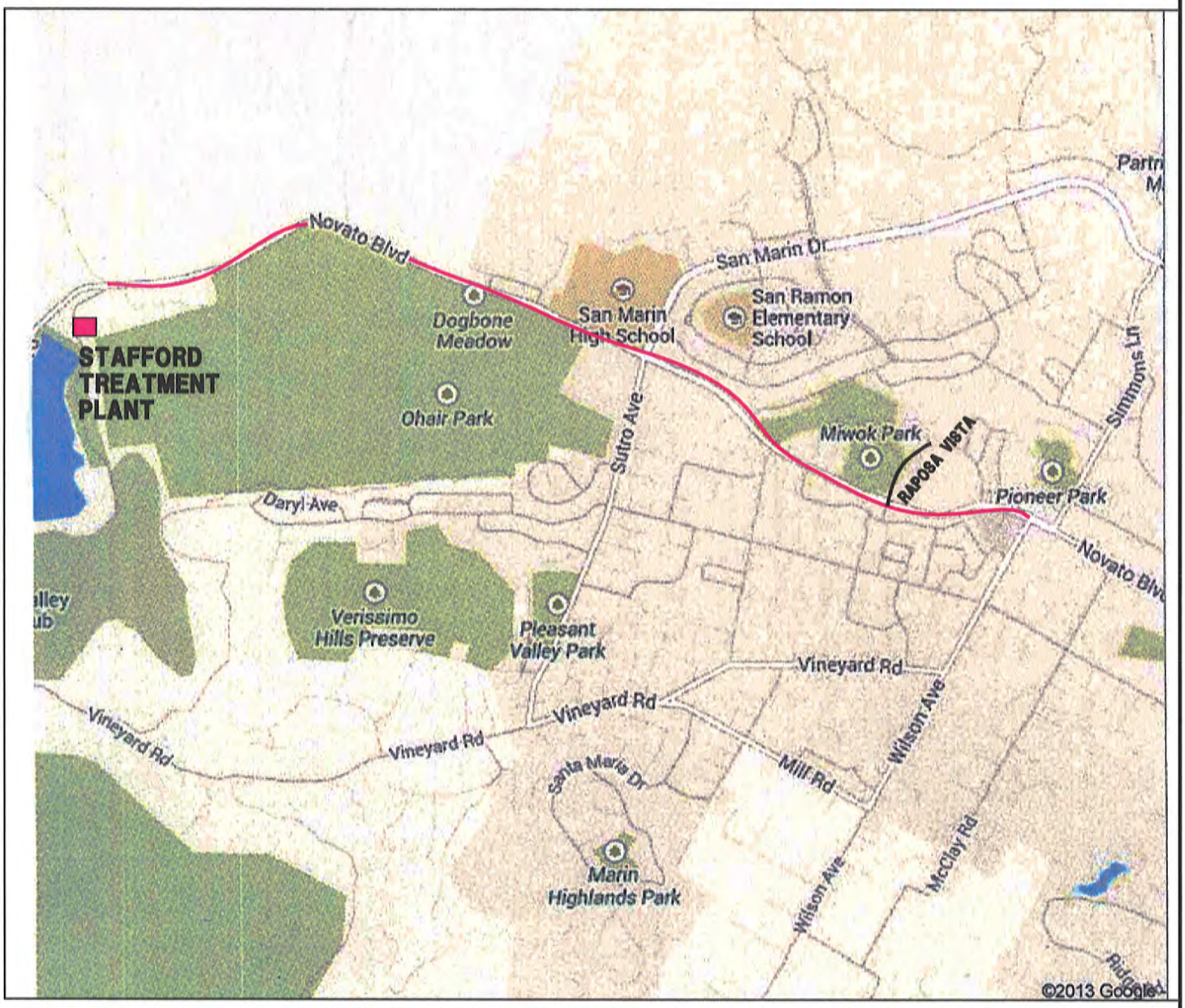
	CONTRACTOR	*TOTAL PROPOSAL*
1.	Pure Technologies, Columbia MD	$56,000 to $270,000
2.	Echologics, Ontario Canada	$168,204

Proposal Evaluation

Pure Technologies is proposing their proprietary "Sahara" system, which is a cable tethered camera with audio inspection for leak detection (see Attachment B). Pure Technologies was the only company to provide a proposal that included interior video inspection along with leak finding capabilities. Pure Technologies submitted several alternatives for the evaluation at various pricing levels shown. Following discussions with Pure Technologies a scope of work was developed that should encompass the majority, if not the entire pipeline at a cost within the project budget. Pure Technologies, Inc., of Columbia Maryland, submitted the lowest responsive proposal of $120,000. Pure Technologies' bid is $48,204 (29%) below the proposal by Echologics.

RECOMMENDATION

That the Board approve award of the contract to Pure Technologies, Inc. and authorize the General Manager to execute an agreement with Pure Technologies, Inc. for $120,000 and set aside a contingency reserve of $30,000.



TRANSMISSION LINE

STAFFORD TRANSMISSION MAIN CONDITION ASSESSMENT			
DATE	SCALE	JOB NO.	DWG. NO.
8/28/14	N.T.S.	7130	MAP

Aug 28, 2014 - 10:53am C:\MAP_TEMPLATE-2.dwg User: ACANTILLER

ATTACHMENT A

Sahara® Leak and Air Pocket detection and Video Survey

The Sahara system consists of an acoustic sensor to detect leaks and air pockets, as well as with a camera to collect video of the internal condition of a pipeline. Like SmartBall, surveys are conducted under live operating conditions. Once a leak or gas pocket has been detected, the technology is used to pinpoint its location (and size for leaks), all in real time during the inspection, ultimately facilitating strategic rehabilitation.

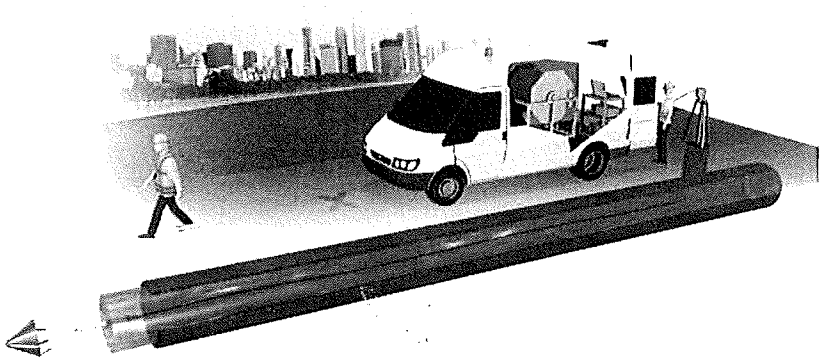
Sahara Leak Detection Methodology

Sahara pipeline inspections are conducted while the main remains in service by inserting an acoustic sensor and video camera into any 2-inch opening. A small parachute uses the flow of water to draw the sensor and camera through the pipeline while the operator monitors its progress. The sensor or camera is tethered and sends a signal to the surface, allowing for real-time results, and maximum control and sensitivity.

The Sahara equipment, which includes a cable drum, computers, a generator and a power pack is contained in a truck which is parked near the access point during the inspection. The average Sahara inspection distance is 2,500 to 5,000feet per day depending on factors such as bends, flow rate and pressure. Sahara requires pressures of at least 5 psi to be able to detect leaks effectively. Pockets of trapped gas can be detected and video can be collected at any pressure. A minimum flow rate of 1 foot per second is required.

The sensor and camera is tracked from above ground throughout the inspection. If any leaks or gas pockets exist, the sound of the leak or gas pocket will be transmitted from the sensor to the operator, who will then use a combination of visual and audio signals to position the tool at the leak location. The above-ground tracking tool can determine the location of the now-stationary sensor head, and therefore the leak or gas pocket. The leak position is then marked on the surface, facilitating subsequent repairs.

The tether of the Sahara system allows it to pinpoint leaks, however it also prevents it from passing butterfly valves and imposes limitations on bends, making it a suitable choice for shorter distances, and pipelines where precision locating is critical, and video is desired. The surface tracking device allows the position of leaks and other pipeline features to be located to within 18 inches.



Sahara System

8

ITEM #8

MEMORANDUM

To: Board of Directors August 29, 2014

From: Pablo Ramudo, Water Quality Supervisor

Subject: Fourth Quarter FY 13/14 – Water Quality Report
P:\LAB\WQ Supv\WQ Reports\2014\4th Qtr FY14WQ Rpt.doc

RECOMMENDED ACTION: Information

FINANCIAL IMPACT: $0

The water served to the communities of Novato and Point Reyes met federal and state primary and secondary water quality standards during the fourth quarter of fiscal year 2013-2014.

Following is a review of the activities and water quality issues in regards to:

- Source Water
- Treatment Performance
- Distribution System Water Quality
- Recycled Water
- Algae Toxins

NOVATO SYSTEM

Source Water: Stafford Lake

Stafford Lake water was used as a source of drinking water during the 4th quarter of FY 2014. Water quality was monitored on a weekly basis throughout the quarter for chemical and mineral components as well as microbiological activity.

Algae from the raw water intake were identified and enumerated. Algae numbers were low for the period. There were a few small blooms of cyanobacteria along with the presence of some diatoms and green algae. Water clarity was very good during the period, probably owing to the lack of runoff and banking of water from our other source. This can sometimes be a concern because the light penetration can fuel taste-and-odor producing algae and benthic plants at lower levels; however this did not seem to be the case as no problems with taste or odor were noted.

Treatment Performance: Stafford Treatment Plant

Total organic carbon (TOC) removal remained above the 35% requirement of the Enhanced Surface Water Treatment Rule. Operators were able to achieve from 60-62% removal throughout the quarter. Finished water TOC concentration was above the district's goal of 2.0 mg/L, ranging between 2.1-2.7 mg/L. The majority of TOC removal was accomplished through optimized coagulation and filtration.

Distribution System: Novato

Of the 254 routine samples collected for compliance with the Total Coliform Rule, there were no coliform positive samples this quarter. Chlorine residual concentrations throughout our distribution system were adequate. Disinfection byproducts were moderate for the quarter and within standards of the Stage 2 Disinfection By-Product Rule.

POINT REYES SYSTEM

Source Water: Coast Guard Wells

Raw water quality was good throughout the quarter. Water quality parameters affected by salt water intrusion were fairly low and near their historical baseline levels. The sodium concentration ranged from 27-48 mg/L, chloride ranged from 19-32 mg/L, bromide ranged from 64-94 ug/L and hardness ranged from 64-78 mg/L.

Treatment Performance: Point Reyes Treatment Plant

Treatment was optimal throughout the quarter and finished water quality was good. Iron and Manganese removal was excellent and neither of the metals was detected in the treated water.

Distribution System: Point Reyes and West Marin

Of 23 routine samples collected for compliance with the Total Coliform Rule, there were no coliform positive samples from the distribution system during this quarter. Chlorine residuals were adequate.

Concentrations of disinfection by-products were moderate during the quarter. Our tank aeration system can be credited with reducing trihalomethanes by half during the quarter.

NOVATO RECYCLED WATER

The Deer Island Recycled Water Facility was operated for several days in April to provide recycled water to the North area of Novato while Novato Sanitary District was temporarily unable to produce water from their Davidson Street facility. Recycled water quality was good during this time with no samples having any coliform bacteria.

ALGAE TOXINS

In early August, Toledo, Ohio declared its water unsafe to drink for four days after concentrations of a toxin produced by algae were found to be above health guidelines. Although algal toxins are not regulated in drinking water, the World Health Organization has set a health advisory limit for microcystin of 1ug/L. Concentrations in Lake Erie have been recorded at **thousands of times** over this value so utilities in areas where the toxin commonly accumulates have instituted regular monitoring when algae are present. During the August event in Toledo the toxin was detected in finished water and in their distribution system at levels very close to 1ug/L.

The algae that produces this particular toxin is present in Stafford Lake (it is also one of the species responsible for taste and odor problems), but it does not reach the population sizes observed in Lake Erie. The toxin is easily removed by chlorination and GAC adsorption when the concentration is moderate. We have tested for the toxin once in 2003 in both raw water and finished water during a particularly large bloom. The toxin was detected at 0.55 ug/L in the raw water but was not detectable in finished water. The risk of a bloom large enough to raise the concentration of microcystin to an untreatable level is extremely low and in any case a large bloom would likely require shutting our treatment plant down for taste and odor.

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ITEM #9

MEMORANDUM

To: Board of Directors August 29, 2014

From: Robert Clark, Operations / Maintenance Superintendent RMC

Subject: FY14 Operations / Maintenance Year-End Report
x:\maint sup\2014\bod\q4 13-14 o&m update.doc

RECOMMENDED ACTION: Information

FINANCIAL IMPACT: None

Operations Summary

With assistance from the Operations/Maintenance and Construction/Maintenance Departments, the Operations Group fulfilled flushing and tank cleaning needs in FY14. Operations activities and accomplishments during FY14 included 9 improvement projects, 6 major maintenance tasks during the winter shutdown, and over 500 routine maintenance tasks throughout the year. The project to remove the sand fluidization system and adjustments to the polymer mixture has resulted in a 50% reduction of sand use at STP.

Stafford Production

- Startup of the spring production season was delayed to May 1, 2014. Due to the lack of rainfall, there was only 1650 AF of storage available in the lake for production.
- Lake water quality continued to improve due to restrictions on the Grossi Dairy manure spreading, operation of the Solar Bees, the new aeration system and reduced rain event run off.
- As a result of the lake water quality, there were no algae blooms causing taste and odor issues during the period. The granular activated carbon did not require replacement; however, replacement will be necessary prior to start-up next spring.

Novato Water System Flows

- Novato production was slightly up again this year, along with the five-year average (3.0 BGal). Average daily production during the period was 8.4 MGD, with a peak day of 12.7 MGD.
- Recycled water total production for the period was 56.4 MG, up 23% from the April-June period last year due to the new recycled water customers in Hamilton and the dry weather.

West Marin System Flows, Demands and Storage

- West Marin average daily production was 230,143 gpd with a peak day of 365,050 gallons – about 11% lower than the same period last year.
- Lower demands have allowed for single-well operation, which helped with reduced salinity intrusion and energy efficiency.
- The new Point Reyes Well production and water quality have remained reliable and at a higher quality compared to the older well.

Oceana Marin

- During the period, force main pump flow has averaged 16,031 gpd with a peak of 37,991 gallons. The total discharge to the irrigation field was consistent with the previous years, leaving a freeboard of 7.6 feet at the end of June.
- District staff resumed daily operations and maintenance tasks and began work on varied maintenance items such as building and grounds clean-up, replacing corroding metal on exterior facilities, and painting.

Water Quality

During the period, the Water Quality group staffing level was augmented with a temporary lab assistant while one of the chemists was out on leave. Staff continued to support the activities for contract lab services to Las Gallinas Valley Sanitary District. However, the Marin Municipal Water District no longer has a need for our services for recycled water testing. Other activities this year included coordinating with Department of Public Health staff for plans to test all backflow devices annually and proof of capital improvement budget to retrofit un-testable fire service backflow devices throughout Novato.

Maintenance Summary

Maintenance staffing levels have been consistent over the past year with continued help from the Operations staff on the spring clean-up and backflow program activities. Department accomplishments during FY14 include 9 facility improvement projects and over 450 routine maintenance tasks. Staff continued to execute the day-to-day activities while performing projects on the remote telemetry unit upgrades and radio communication links in the North aqueduct valve pit, Winged Foot, Half Moon and Nunes tanks. Improvement projects also included Oceana Marin propane tank replacement, rental housing maintenance and telemetry system work for the Aqueduct Energy Efficiency Project.

Electrical / Mechanical

- Designed, built, installed and started up a replacement remote telemetry unit for the Oceana Marin facilities, and the replacement of the last Tesco remote telemetry units have been completed.
- Installed tank access security controls at 12 new locations – now 16 tanks are being remotely monitored for intrusion.

Cross-Connection Control

- Testing of fire services, as well as both small and large devices, has been done in a more balanced approach this year. However, new construction activities have continued to take time away from these tasks. Staff is again looking to augment testing with outside assistance and internal training of additional staff this fall.
- Staff continues to work with customers on changes to the requirements in our cross-connection control regulation for backflow devices and how these rules are applied to those customers.

Building and Grounds

- Completed annual inspection of the landscape plantings and irrigation for the recycled water south, Leveroni Creek restoration, and the Palmer Tank, Center Road Tank and Amaroli Tank projects. A few plant replacements and minor irrigation upgrades were identified; otherwise, all sites are recovering nicely.

Fleet Operations

- The District's fleet mechanic has been able to assist E/M staff with remote telemetry unit replacements and pump station operation.
- Received and outfitted two new ¾-ton service trucks and a 5-yd. dump truck for the Construction / Maintenance Department.

Asset Management

- Staff completed the Asset Management section of the West Marin 5-Year Plan, as well as updating the Oceana Marin sewer remote television inspection maps, and continues to assist the Engineering Dept. with the GIS valve-naming process and updates to the Valve Database.

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ITEM #10

MEMORANDUM

To: Board of Directors August 29, 2014

From: Ryan Grisso, Water Conservation Coordinator RG

Subject: Water Conservation Year End Report (July 2013 through June 2014)
W:\Memos to Board\Quarterly Reports\Year End Report 13_14\Water Conservation FY 2013_2014 Year End Report.docx

RECOMMENDED ACTION: Information

FINANCIAL IMPACT: None

Water Conservation and Public Outreach Summary

This memo provides an update on all water conservation and public outreach activities implemented during Fiscal Year 2013/2014 (FY 14).

The District Water Conservation and Public Outreach Programs are operating according to the Water Conservation Master Plan, approved in June 2008. Water Conservation participation numbers through the end of the current and previous two fiscal years are summarized in Table 1 below.

Table 1: Year End Water Conservation Program Participation (July through June: 2012 - 2014)

Program	FY 14	FY 13	FY 12
Water Smart Home Surveys	366	177	283
Water Smart Commercial Surveys	5	4	5
High Efficiency Toilet Rebates (Residential)	348	238	230
High Efficiency Toilet Rebates (Commercial)	1	9	5
Ultra High Efficiency Toilets Distributed	466	0(2)	0(2)
Retrofit on Resale (Dwellings Certified)	293	315	274
High Efficiency Washing Machine Rebates	308	252	312
Cash for Grass Rebates	52(1)	33	39
Water Smart Landscape Rebates	9	3	8
Water Smart Irrigation Controller Rebates (Residential)	4	0	2
Water Smart Irrigation Controller Replacement (Commercial)	14	22	1
New Development Approvals (Residential)	18	17	16
New Development Approvals (Commercial)	14	20	16
Large Landscape Audits (measured by number of accounts)	5	16	0
Large Landscape Budgets (measured by number of accounts)	437	435	435

(1) Cash for Grass participants removed 46,485 square feet of turf versus 27,207 last FY.
(2) Program not available in the past two fiscal years.

Water Conservation Programs

Water Smart Home Survey (WSHS) Program: This program is the cornerstone of the Residential Water Conservation Program and provides the customer with an in-depth analysis of both their indoor and outdoor water use. The WSHS provides the customer with water use analysis and water efficient recommendations to implement, but also provides staff with an opportunity to present available and applicable incentive programs to which the participating customer may be eligible (i.e. Cash for Grass and Smart Controller Rebate Program). WSHS participation has more than doubled with 366 WSHS' completed during FY 14 compared to 177 in the previous year. Currently the program is implemented by Sonoma County Water Agency through the Sonoma Marin Saving Water Partnership, with the District having administrative oversight. Targeted and overall program marketing resumed this fiscal year and participation numbers increased as anticipated.

Water Conservation Fixture Distribution: The District continues to distribute water conserving fixtures at the front counter of the District Administration Building, on service calls and WSHS, and at various public outreach events. Fixtures include 1.5 to 2.0 gallon per minute (GPM) showerheads, 1.0 and 0.5 GPM sink aerators, hose nozzles (when available) and other related items. We also offer commercial establishments installation of 0.5 GPM sink aerators on all hand-washing sinks when conducting a Water Smart Commercial Survey.

High Efficiency Toilet (HET) Replacement Program: The District provides $100 rebates for residential and commercial customers, for purchase and installation of qualified HETs. During FY 14, the District rebated 348 residential HETs, a 46% increase compared to participation from the previous fiscal year. The Prop 84 Grant Funding and subsequent increase in rebate level to $100 for residential customers initiated at the start of the fiscal year resulted in increased participation numbers for FY 14. Additionally, the District purchased and distributed 466 Ultra High Efficiency Toilets (UHET) to customers. These 0.8 gallons per flush UHETs were advertised through the Winter issue of *"Water Line"* and funded by a budget expenditure in FY 14 and Prop 84 Grant reimbursements. See also the attached memo on NMWD toilet replacement history (Attachment 1).

Retrofit on Resale: The District currently requires ultra low flush toilets (1.6 gallons per flush), showerheads (2.0 gallons per minute) and bathroom sink aerators (1.5 gallons per minute) to be certified by the seller before the close of escrow of any property sold in the District service area. HET rebates are available to customers to help ease any potential financial hardships from the requirement. In FY 14, the District received certificates for 293 dwellings

sold in Novato.

High Efficiency Clothes Washer Rebate Program: The District currently offers rebates for qualified high efficiency clothes washing machines through the Sonoma-Marin High Efficiency Clothes Washer Program, with rebates paid directly by the District ($50 rebate). In FY 14, the District rebated 308 clothes washing machines.

Cash for Grass Rebate Program: The District rebated 52 Cash for Grass projects, removing a total of 46,485 square feet of automatically irrigated turf in FY 14. Cash for Grass program participation levels have increased significantly this year due to the drought and increased program marketing. Participation numbers should continue to increase in the next fiscal year.

Water Smart Landscape Rebate Program: The District rebates customers for improving landscape water use efficiency. Rebates are provided for drip irrigation installations, multi-stream/low volume sprinkler retrofits, mulch, rain sensors and other efficient retrofits. In FY 14, the District rebated 9 projects.

Water Smart Irrigation Controller Rebate Program: Rebates are available for purchase, installation and activation of District approved Smart Irrigation Controllers (Smart Controllers) at a minimum level of $200, or $30 per active station, up to $1,200. This rebate also extends to large landscape customers on a per meter basis. In FY 14 the District rebated 14 qualified controllers to non-residential (large landscape) customers and 4 to residential customers. This program has traditionally been a very tough sell to customers, however, the new Prop 84 Grant Funding rebate levels, effective July 1, 2012, helped increase participation numbers for the last two fiscal years.

Large Landscape Water Conservation Program: The Large Landscape Water Conservation Program consists of the Large Landscape Audit Program, the Large Landscape Budget Program, Water Smart Controller Rebate Program (previously covered in the Water Smart Irrigation Controller Rebate Program section) and the Large Landscape Water Smart Landscape Efficiency Rebate Program. All programs are aimed at assisting large landscape accounts (dedicated irrigation and large mixed use metered) to become more water use efficient in their landscape water management practices. In FY 14, the District audited 5 large landscape accounts in conjunction with the recycled water program. Large landscape audits were performed during the coverage testing for recycled water retrofit sites. The District maintained and distributed water budgets for 437 dedicated irrigation meter accounts during FY 14.

In addition to the District Large Landscape conservation efforts, the Sonoma Marin Saving Water Partnership implements the Qualified Water Efficient Landscaper (QWEL) trainings throughout the year.

Commercial Water Conservation Program: The Commercial Water Conservation Program currently offers the HET Rebate Program (previously covered in the High Efficiency Toilet Replacement Program), Water Smart Commercial Survey (WSCS), and a High Efficiency Clothes Washing Machine Rebate. In FY 14, staff completed 5 WSCS and rebated 1 HET. Even though customer numbers for commercial toilets are down, commercial toilet retrofits are occurring through the new development/construction requirements.

New Development Requirements: The District New Development Requirements specify innovative and "state of the art" water efficiency measures consistent with the Water Conservation Master Plan 2008 and AB 1881, for all new construction in both service areas. These requirements are enforced through water service agreements and the District's signature requirement for all final permits with the City of Novato Building Department and Marin County Planning. In FY 14, staff inspected and approved 18 residential projects and 14 commercial projects.

Public Outreach and Conservation Marketing

The Fall 2013 *"Water Line"* issue was sent in mid November. This issue focused on water supply and the various District water use efficiency program offerings. The Winter 2014 *"Water Line"* issue focused on the drought and advertised the Ultra High Efficiency Toilet Giveaway. The Spring 2014 "*Water Line"* issue was mailed out in May and focused on informing customers of the connection between current and future water supply with District projects and funding commitments to ensure adequate supply and the rates associated with those commitments. The Water Smart Home Survey Program was advertised along with the Water Smart Savings Program offerings (Cash for Grass, Water Smart Landscape Rebate, High Efficiency Toilet Rebate, and High Efficiency Clothes Washer Rebate).

The District sent out High Impact Direct Mailers to higher water use customers in an effort to generate participation in the WSHS program, placed newspaper advertisements, and staffed outreach events, such as the Eco Friendly Garden Tour, Tour of Novato, California Native Plant Society Plant Sale and Fair, and drip irrigation and sheet mulching workshops. The District is also actively maintaining a Facebook page.

In addition to the public information and outreach efforts directly implemented the District, the Sonoma Marin Saving Water Partnership conducted many outreach efforts including

the 2014 Drought campaign which resulted in extensive and aggressive advertising and press coverage starting in January 2014 and a very successful "Drought Drive Up Day" in April 2014.

Water Conservation Budget and Staffing

Table 2 summarizes and compares the year end budget expenditures between the last three fiscal years (FY 12, FY 13 and FY 14). FY 14 expenditures were 7% above budget, however, Prop 84 Grant reimbursements of $47,221 more than off-set the overage.

Table 2: Water Conservation and Public Outreach Expenditures (July 2012-June 2013)

	FY14	FY 13	FY 12
Total Budget	$400,000	$400,000	$400,000
Actual Expenditures	$429,444	$263,000	$270,277

Staffing: Water Conservation is currently staffed by one full time Water Conservation Coordinator and one half-time Water Conservation Technician. The District has also partnered with Sonoma County Water Agency through the Sonoma-Marin Saving Water Partnership to implement some of the District Water Conservation Programs including the WSHS program.

Prop 84 Grant Funding: The District was awarded a Prop 84 Grant ($183,750 allocated to the District), in cooperation with the Sonoma County Water Agency (SCWA) and other Bay Area Agencies, which will help fund future HET rebates, Cash for Grass rebates, Smart Controllers, Clothes Washer rebates, and a Commercial Direct Install HET Program. The District has entered into a funding agreement with SCWA to receive these funds and has received a total of $47,221 in reimbursements in FY 14.

MEMORANDUM

To: Board of Directors August 29, 2014

From: Ryan Grisso, Water Conservation Coordinator RG

Subject: NMWD Toilet Replacement History
W:\Memos to Board\Toilet Replacement Program History 2014.doc

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None

At a recent Board meeting, it was requested that staff provide the Board with a summary of all historical water conservation toilet policies and replacement programs. The District's toilet programs date back to the late 1970's with new development requirements and continue today with District incentive programs (rebates and giveaways), District requirements (Retrofit on Resale and New Development Requirements), and through natural replacement (toilets replaced outside of the District programs). The following summarizes all activities going back to 1977 (District incentive programs also tabulated in Table 1).

1977: The District required all new development to install 3.5 gallon per flush toilets. This was implemented 5 years prior to the federal mandate in 1982

1989: The District required all new development to install Ultra Low Flush Toilets (ULFT) that flushed 1.6 gallons per flush. This was implemented 3 years prior to the federal mandate in 1992.

2000: The District implemented a rebate program for ULFT. Even though ULFT's were the only toilets available in the retail market, the rebate was intended to increase the voluntary customer replacement of toilets incentivized through rebate. The rebate ranged from $50 to $100, during the years of the program's existence. This program ended in 2006 and resulted in a total of 5,841 residential ULFT rebates and 126 commercial ULFT rebates (5,967 in total). The District also implemented a "Retrofit on Resale" requirement in 2000 for all home sold in the Novato service area (implemented in 1992 for West Marin). This required retrofit of non-compliant toilets, showerheads, and bathroom sink aerators and certification by the seller before the close of escrow of any property sold in the District service areas. The District has received 5,062 certificates for home sold in both District service areas and is still actively implementing this program.

2006: The District implemented a rebate program for High Efficiency Toilets (HET) that flush 1.28

gallons per flush on average, and required HETs to be installed in all new construction. This program is still in effect and has resulted in 3,033 residential HET rebates and 281 commercial HET rebates (3,314 in total).

2007/2008: The District distributed 730 dual flush HETs to customers (free) through distribution events starting with a pilot giveaway in spring 2007 and ending with a summer giveaway in 2008, with the highlight being a 378 toilet giveaway event in September 2007.

2014: The District distributed 466 Ultra High Efficiency Toilets (UHET) to customers (free) through a series of giveaways in Spring 2014. In July 2014, the District implemented a $150 rebate for UHETs, which are defined as toilets using less than 1.1 gallons per flush.

Table 1: Toilet Replacement Incentive History Table

Years	Toilet Type	Flush Volume	Replacement Type	No. of Installations
2000-2006	ULFT	1.6 GPF	Rebate	5,967
2006 - Present	HET	1.28 GPF	Rebate	3,314
2007-2008	HET	Dual Flush	Giveaway	730
2014	UHET	0.8 GPF	Giveaway	466
			Total	**10,477**

The District toilet replacement programs have been very successful with both voluntary and non-voluntary toilet retrofits and in achieving market transformation over the years. Staff estimates that more than half of the toilets have been retrofitted in both service areas, through District incentive programs (rebates and giveaways), District requirements (Retrofit on Resale), and through natural replacement (toilets replaced outside of the District programs). Current State law (as of January 1, 2014) requires that all toilets sold in California meet at least the EPA WaterSense standard of 1.28 gallons per flush, so market transformation towards HETs is complete. The next step is to continue with a higher incentive level for UHETs with a goal of increasing UHET availability in the market.

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MEMORANDUM **ITEM #11**

To: Board of Directors Date: August 29, 2014

From: Drew McIntyre, Chief Engineer

Subject: Year End Progress Report – Engineering Department
R:\CHIEF ENG\MCINTYRE\BUDGETS\FY13-14 Budget\eng dept perf recap-4th Qtr 13-14.doc

The purpose of this memo is to provide a year-end status report to the Board on the District's performance in completing budgeted FY13-14 Capital Improvements Projects (CIP). The following information is being provided to supplement the progress report summary provided to the Board each month.

SUMMARY

Service Areas	Project Costs ($)		% Complete @ 6/30/14		Earned Value ($) @ 6/30/14	
	Budget ($)	Actual ($)	Planned	Actual	Planned	Actual
Novato Water	7,693,000	3,677,783	100	57	6,878,000	3,626,863
Novato Recycled	200,000	481,850	100	100	200,000	481,826
West Marin	585,000	297,149	100	80	560,000	297,430
TOTAL	8,478,000	4,456,779	100	79	7,638,000	4,406,119

The above project costs shows that actual respective CIP expenditures for Novato Water and Recycled Water Service Areas were 48% and 240% of the approved FY13-14 budgets (versus respective mid-year forecasts of 57% and 300%). With respect to West Marin (including Oceana Marin), CIP expenditures were 51% of the approved FY13-14 budget value (versus a mid-year forecast of 70%).

Performance Status for Capital Improvement Projects

The attached tables and figures summarize the District's year-end performance in completing FY13-14 Capital Improvements Projects. This review encompasses all District CIP's in both Novato and West Marin.

A total of 37 projects were originally budgeted in FY13-14 for the Novato, West Marin and Oceana Marin service areas (see Attachments A and B). Nine projects were added, five were carried over and seven projects were deferred or dropped resulting in an adjusted budget total of 44 projects (versus 43 projects in the prior fiscal year). Of these 44 Capital Improvement Projects, 34 are under the lead responsibility of the Engineering Department for completion (26 in Novato and 8 in West Marin). The remaining ten projects are under the responsibility of the other departments: 7 - Maintenance, 2 – Operations and 1-GM). A detailed project milestone schedule is provided in Attachment C.

At year end, 27 out of the 44 projects (i.e., 61%) have been completed by all departments and 13 out of the 27 projects (i.e., 48%) have been completed by Engineering. Note that the above summary table shows higher completion percentages because it also includes progress on partially completed projects. When broken down by service areas, 18 of the Novato CIPs have been completed and 9 West Marin CIPs have also been finished. As shown in Attachment A, overall

progress in fully completing Novato CIPs was 67%. From a strictly CIP budget expenditure standpoint, approximately 48% of the authorized Novato CIP budget was expended (compared to 44% in FY12-13) and 240% of the authorized Novato Recycled Water CIP budget was expended (compared to 124% in FY12-13).

Novato Service Area Project Costs Variances

Of the 32 FY13-14 Novato Water CIPs, all (i.e., 100 %) were at or below original budget compared to 79% in FY12-13. From a strictly CIP expenditure standpoint, the slow start of the Aqueduct Energy Efficiency Project (AEEP) construction represents ~$2.18M of the shortfall in expenditures. Without considering this project, overall actual Novato Water CIP would have been 76% of approved budget (versus the year end percentage of 48%). When reviewing total project expenditures for all Novato Water Capital Improvements, it is apparent that no budget augmentation was needed during this fiscal year.

Novato Recycled Water Service Area Project Costs Variances

As shown in Attachment B, expenses for one of the three FY13-14 Novato Recycled Water CIPs were above original budget. Actual expenses for the Recycled Water South Service Area project has been reviewed previously with the Board via separate agenda items (August 20, 2013 and January 7, 2014).

West Marin Service Area (including Oceana Marin) Project Costs Variances

All but one of the FY13-14 West Marin projects (~90%) were at or below the original budget (compared to 90% in FY12-13). The sole project exceedence was the Gallagher Auxiliary Stream Gauge. Based on a review of total project expenditures for all West Marin System Capital Improvements Projects, it is apparent that no budget augmentation was required during this fiscal year.

Engineering Department Labor Hours

The Engineering Department provides a multitude of functions supporting overall operation, maintenance and expansion of water facilities. The major work classifications are: (1) General Engineering, (2) Developer Projects and (3) District (i.e., CIP) Projects. Out of the approximately 14,900 engineering labor hours available annually (less Conservation), the FY13-14 labor budget for Developer Projects and District Projects is 1,480 (10% of total) and 3,698 (25% of total), respectively. A chart of actual hours expended versus budgeted hours for both Developer and District projects during FY13-14 is provided in Attachment D. At the end of the fourth quarter, actual engineering labor hours expended for Developer work was 859 hours (versus 631 hours in FY12-13) compared against a forecast of 1,480 hours (58% of budget). With respect to District Projects, 5,127 engineering labor hours have been expended (versus 5,402 in FY12-13) on Capital Improvement Projects when compared against the estimate of 3,698 hours (139% of budget). The higher rate is primarily attributed to in-house work on Recycled Water South Expansion, Gallagher Well Pipeline and Aqueduct Energy Efficiency projects.

FY 13-14

CAPITAL IMPROVEMENTS PROJECTS

PROJECTS BUDGETED	NOVATO SERVICE AREA	WEST MARIN/ OCEANA MARIN	TOTAL
Original Budget	28	9	37
Added	6	3	9
FY 12-13 Carryover	4	1	5
Deferred/Dropped	6	1	7
Adjusted Budget	32	12	44

CURRENT COMPLETION STATUS	NOVATO SERVICE AREA	WEST MARIN/ OCEANA MARIN	TOTAL
No. of Projects Completed as of 6/30/14	18	9	27
Projected Completion Performance	**56%**	**75%**	**61%**

FY12-13 CARRYOVER	**Date Brought to Board**
Novato	
STP 18" Transmission Line Repair	First Quarter Report
Digital to Leveroni Looping	First Quarter Report
DeLong to Cain Looping	First Quarter Report
PB Replacement: City Measure A, Group 5 (83 services)	First Quarter Report
West Marin	
PB Repl: County Paving Balboa, Portola, Mesa, 2nd	Third Quarter Report
DEFERRED/DROPPED	
Novato	
PB Repl - Pacheco Valle (42)	Third Quarter Report
Electronic Document Management System	Third Quarter Report
Admin Office/Lab/Yard Remodel Plan	Third Quarter Report
SMART Crossing Rework – Golden Gate Place	Third Quarter Report
Start Up Flushing Connection	Third Quarter Report
Lake Aeration Upgrade – Dropped	Third Quarter Report
West Marin	
PRTP Control Valve Replacement – Dropped	Third Quarter Report
PROJECTS ADDED	
Novato	
County PB Repl: (19 servs, 2 streets)	Third Quarter Report
City PB Repl: (47 servs, 9 streets)	Third Quarter Report
Sampling Stations	Third Quarter Report
SMART Crossing Upgrade - Roblar Rd	Third Quarter Report
SMART Crossing Upgrade – Hanna Ranch	Third Quarter Report
Recycled Water Central Service Area	Third Quarter Report
West Marin	
County PB Repl (7 servs, 1 street)	Third Quarter Report
Gallagher Well Pipeline CEQA	Third Quarter Report
Gallagher Well Pipeline Construction	Third Quarter Report

ATTACHMENT A

NOVATO SYSTEM CAPITAL IMPROVEMENT PROJECTS SUMMARY FY13-14

AS OF JUNE 30, 2014

STATUS[1]	DEPT	ITEM #	PROJECT NO.	DESCRIPTION	PROJECT COSTS		% COMPLETE		EARNED VALUE	
					Budget	Actual	Forecast	Actual	Planned	Actual
			1. PIPELINE REPLACEMENTS/ADDITIONS							
PC	Eng	1	1.a.1	So. Novato Blvd - Rowland to Sunset (12"CI@1,000')	$100,000	$25,136	100	10	$100,000	$25,000
PC	Eng	2	1.a.2	*<STP 18" Transmission Line Assess/Repair >*	*$0*	*$24,069*	100	10	$0	$24,000
C	Eng	3	1.a.3	*<Digital to Leveroni Looping *8"@600')>*	*$0*	*$93,342*	100	100	$0	$93,342
C	Eng	4	1.a.4	*<DeLong to Cain Looping (8"@400')>*	*$0*	*$138,324*	100	100	$0	$138,324
C	Eng	5	1.a.5	*<PB Repl - City Measure A, Group 5>*	*$0*	*$109,305*	100	100	$0	$109,305
C	Eng	6	1.a.6	Shields Ln 6" Cast Iron (6"@1,120') - 1st year	$225,000	$144,724	100	100	$225,000	$144,724
PC	Eng	7	1.a.7	Ashley Ct 2" Thinwall Plastic (6"@200')	$40,000	$2,395	100	10	$40,000	$2,300
PC	Eng	8	1.a.8	Grant/5th 1" Galvanized Steel (6"@400')	$100,000	$11,030	100	15	$100,000	$11,000
			1.a.9	Other Pipeline Replacements	$35,000	$0	100	0	$35,000	$0
PC	Eng	9	1.b.1	Zone A Pressure Improvements	$250,000	$35,915	100	10	$250,000	$35,000
			1.c.1	~~PB Repl - Pacheco Valle (42)~~ - DEFER	$125,000	$617	0	0	$0	$0
			1.c.2	Repl PB in Sync w/City Paving	$135,000	$0	0	0	$0	$0
C	Eng	10	1.c.3	PB Repl - Clay Ct (9)	$33,000	$28,673	100	100	$33,000	$28,673
PC	Eng	11	1.c.4	PB Repl - Atherton Oaks/Summit Ln (20)	$60,000	$2,068	100	10	$60,000	$2,000
			1.c.5	Other PB Replacements	$47,000	$0	0	0	$0	$0
C	Eng	12	1.c.6	**County PB Repl: (19 servs, 2 streets)**	**$0**	**$62,785**	100	100	$0	$62,785
PC	Eng	13	1.c.7	**City PB Repl: (47 servs, 9 streets)**	**$0**	**$10,073**	100	5	$0	$10,000
			1.d.1	Other Relocations	$80,000	$0	100	0	$80,000	$0
PC	Eng	14	1.e.1-11	AEEP - Hwy 101 Widening	$4,600,000	$2,424,654	100	50	$4,600,000	$2,382,431
				SubTotal	$5,830,000	$3,113,111				
			2. SYSTEM IMPROVEMENTS							
C	Maint	15	2.a	RTU Upgrades	$10,000	$9,783	100	100	$10,000	$9,783
C	Eng	16	2.b	Flushing Taps at Dead Ends	$50,000	$24,121	100	100	$50,000	$24,121
PC	Eng	17	2.c	DCDA Repair/Replace	$150,000	$115,391	100	70	$150,000	$115,000
PC	Eng	18	2.d	Anode Installations	$30,000	$7,384	100	15	$30,000	$7,000
C	Maint	19	2.e	Radio Telemetry	$25,000	$14,675	100	100	$25,000	$14,675
C	Eng	20	2.f	Inaccurate Meter Replacement	$10,000	$8,015	100	100	$10,000	$8,000
C	Maint	21	2.g	Backflow Device Upgrade - BMK (15)	$30,000	$0	100	0	$30,000	$0
C	Maint	22	2.h	Tank Access Hatch/Level Alarms (10)	$35,000	$32,137	100	100	$35,000	$32,000
C	Eng	23	2.i	**Sampling Stations - 1st year**	**$0**	**$736**	100	100	$0	$1,000
				SubTotal	$340,000	$212,243				
			3. BUILDINGS, YARD, & S.T.P. IMPROVEMENTS							
	Admin		3.a.1	~~Electronic Document Management System~~ - DEFER	$150,000	$0	100	0	$0	$0
			3.a.2	~~Admin Office/Lab/Yard Remodel Plan~~ - DEFER	$50,000	$0	0	0	$0	$0
	GM		3.b.1	~~SMART Crossing Upgrade - Golden Gate Pl~~ - DEFER	$58,000	$379	100	0	$0	$400
PC	Eng	24	3.b.2	**SMART Crossing Upgrade - Roblar Rd**	**$0**	**$4,657**	100	50	$0	$5,000
C	Eng	25	3.b.3	**SMART Crossing Upgrade - Hanna Ranch**	**$0**	**$182,599**	100	50	$0	$183,000
C	Ops	26	3.c.1	Watershed Erosion Control	$25,000	$12,000	100	100	$25,000	$12,000
			3.c.2	~~Start Up Flushing Connection~~ - DEFER	$225,000	$5,888	0	0	$0	$0
				~~Lake Aeration Upgrade~~ - DROP	$25,000	$0	0	0	$0	$0
				SubTotal	$533,000	$205,524				
			4. STORAGE TANKS & PUMP STATIONS							
PC	Eng	27	4.a	Atherton Recoat & Mixing System (1st year)	$700,000	$112,635	100	20	$700,000	$112,000
PC	Maint	28	4.b	Lynwood PS Motor Control Center	$190,000	$22,039	100	25	$190,000	$22,000
PC	Eng	29	4.c	Relocate Crest Rd/School Rd Pump Station	$100,000	$12,230	100	5	$100,000	$12,000
				SubTotal	$990,000	$146,905				
				Novato Water Total	$7,693,000	$3,677,783	100	57	$6,878,000	$3,626,863
			5. RECYCLED WATER FACILITY							
C	Eng	30	5.a	NBWRA Grant Program Administration	$100,000	$63,035	100	100	$100,000	$63,035
C	Eng	31	5.b-o	Expansion to South Service Area	$100,000	$414,791	100	100	$100,000	$414,791
C	Eng	32	5.p	**Recycled Water Central Area (1st year)**	**$0**	**$4,024**	100	100	$0	$4,000
				Novato Recycled Total	$200,000	$481,850	100	100	$200,000	$481,826
				Tctal Novato	$7,893,000	$4,159,633	100	79	$7,078,000	$4,108,689

[1]C - Completed

PC - Partially Completed

PROJECT FORECAST REVISED

Baseline projects with revised forecast budget increases (indicated by shaded box)

Baselined projects to be deferred or dropped (indicated in strikeout)

New projects added **(indicated in bold)**

Prior year projects carried over indicated in italics and brackets < >

ATTACHMENT B

WEST MARIN CAPITAL IMPROVEMENT PROJECT SUMMARY FY13-14

AS OF JUNE 30, 2014

STATUS	DEPT	ITEM #	PROJECT NO.	DESCRIPTION	PROJECT COSTS		% COMPLETE		EARNED VALUE	
					Budget	Actual	Forecast	Actual	Planned	Actual
			6. West Marin Water System							
			System Improvements							
PC	Eng	33	6.a	TP Solids Handling	$200,000	$6,765	100	10	$200,000	$6,000
			6.b	~~TP Control Valve Replacement~~ - DROP	$25,000	$0	0	0	$0	$0
C	GM	34	6.c	Gallagher Auxilliary Stream Gauge	$30,000	$71,271	100	100	$30,000	$71,271
PC	Eng	35	6.d	Olema PS Flood Protection & RTU Upgrade	$100,000	$19,057	100	20	$100,000	$20,000
C	Maint	36	6.e	Emergency Generator Connections	$15,000	$14,405	100	100	$15,000	$14,405
PC	Eng	37	6.f	Tank Seismic Upgrades	$65,000	$1,895	100	25	$65,000	$2,000
C	Eng	38	6.g	Gallagher Well Pipeline (design)	$100,000	$93,057	100	100	$100,000	$93,057
C	Eng	39	6.h	**County PB Repl (7 servs, 1 street)**	**$0**	**$12,332**	100	100	$0	$12,332
C	Eng	40	6.i	**Gallagher Well Pipeline CEQA**	**$0**	**$57**	100	100	$0	$57
C	Eng	41	6.j	**Gallagher Well Pipeline (start of construction)**	**$0**	**$56,959**	100	100	$0	$56,959
C	Eng	42	6.k	*PB Repl: County Paving Balboa, Portola, Mesa, 2nd*	*$0*	*$1,695*	100	100	$0	$1,695
					$535,000	$277,492				
			7. Oceana Marin Sewer System							
C	Ops	43	7.a	Infiltration Study & Repair	$15,000	$10,298	100	100	$15,000	$10,298
C	Maint	44	7.b	SCADA RTU Upgrade & Install	$35,000	$9,356	100	100	$35,000	$9,356
				SubTotal	$50,000	$19,655				
				Total West Marin	$585,000	$297,147	100	80	$560,000	$297,430
				FY13-14 TOTAL	$8,478,000	$4,456,779	100	79	$7,638,000	$4,406,119

[1]C - Completed

PC - Partially Completed

PROJECT FORECAST REVISED

Baseline projects with revised forecast budget increases (indicated by shaded box)

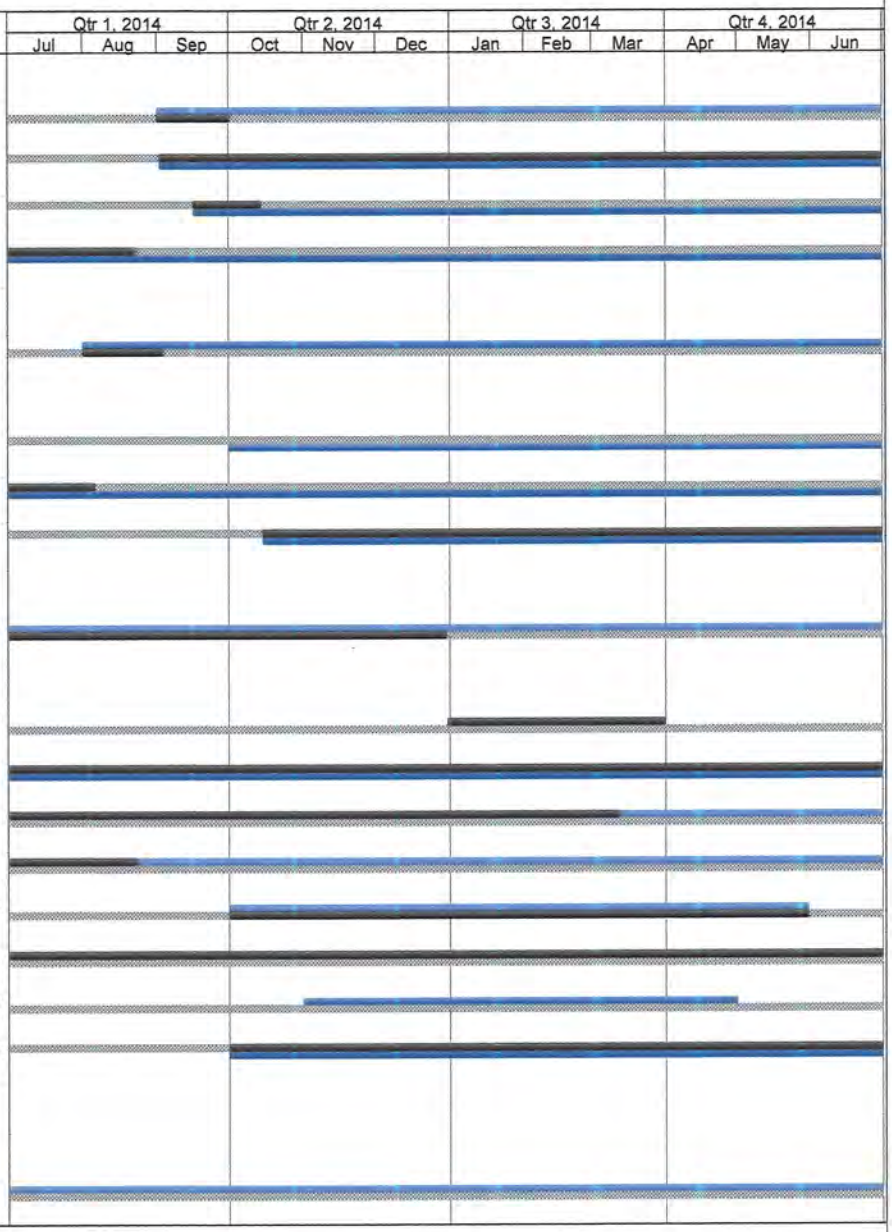
Baselined projects to be deferred or dropped (indicated in strikeout)

New projects added **(indicated in bold)**

Prior year projects carried over indicated in italics and brackets < >

FY13_14 CAPITAL IMPROVEMENT PROJECTS

ID	Task Name	Start	Finish	% Complete	Resp
1	**1 A PIPELINE REPLACEMENTS/ADDITIONS**	7/1/13	6/30/14	**0%**	
2	1A1 So. Novato Blvd - Rowland to Sunset (12"CI@1,000')	9/1/13	6/30/14	10%	ENG / CC
3	1A2 Shields Ln 6" Cast Iron (6"@1,120')	9/2/13	6/30/14	100%	ENG / DJ
4	1A3 Ashley Ct 2" Thinwall Plastic (6"@200')	9/16/13	6/30/14	10%	ENG / JK
5	1A4 Grant/5th 1" Galvanized Steel (6"@400')	7/1/13	6/30/14	15%	ENG / CC
6	**1B MAIN/PIPELINE ADDITIONS**	7/1/13	6/30/14	**0%**	
7	1B1 Zone A Pressure Improvements	8/1/13	6/30/14	10%	ENG / DJ
8	**1C PB SERVICE LINE REPLACEMENTS**	7/1/13	6/30/14	**0%**	
9	1C1 Pacheco Valle (42) DEFER	10/1/13	6/30/14	0%	ENG / JK
10	1C4 Atherton Oaks/Summit Lane (20)	7/1/13	6/30/14	10%	ENG / JM
11	1C3 Clay Ct (9)	10/15/13	6/30/14	100%	ENG / JM
12	**1E AQUEDUCT REPLACEMENTS/ENHANCEMENTS**	7/1/13	6/30/14	**0%**	
13	1E1 Aqueduct Energy Efficiency Project	7/1/13	6/30/14	50%	ENG / DM
14	**2 SYSTEM IMPROVEMENTS**	7/1/13	6/30/14	**0%**	
15	2A RTU Upgrades	12/31/13	3/31/14	100%	MAINT/RC
16	2B Flushing Taps at Dead Ends	7/1/13	6/30/14	100%	ENG / JM
17	2C DCA Repair/Replace (14/yr)	7/1/13	6/30/14	70%	ENG / CC
18	2D Anode Installations (150/yr)	7/1/13	6/30/14	15%	ENG / DJ
19	2E Radio Telemetry	10/1/13	5/30/14	100%	MAINT/RC
20	2G Inaccurate Meter Replacement	7/1/13	6/30/14	100%	ENG / CC
21	2I Backflow Device Upgrade - BMK (14)	11/1/13	4/30/14	0%	MAINT/RC
22	2J Tank Access Hatch/Level Alarms	10/1/13	6/30/14	100%	MAINT/RC
23	**3 BUILDING, YARD, STP IMPROVEMENTS**	7/1/13	6/30/14	**0%**	
24	**3A ADMIN BUILDING**	7/1/13	6/30/14	**0%**	
25	3A1 Electronic Document Management System	7/1/13	6/30/14	0%	GM/DB

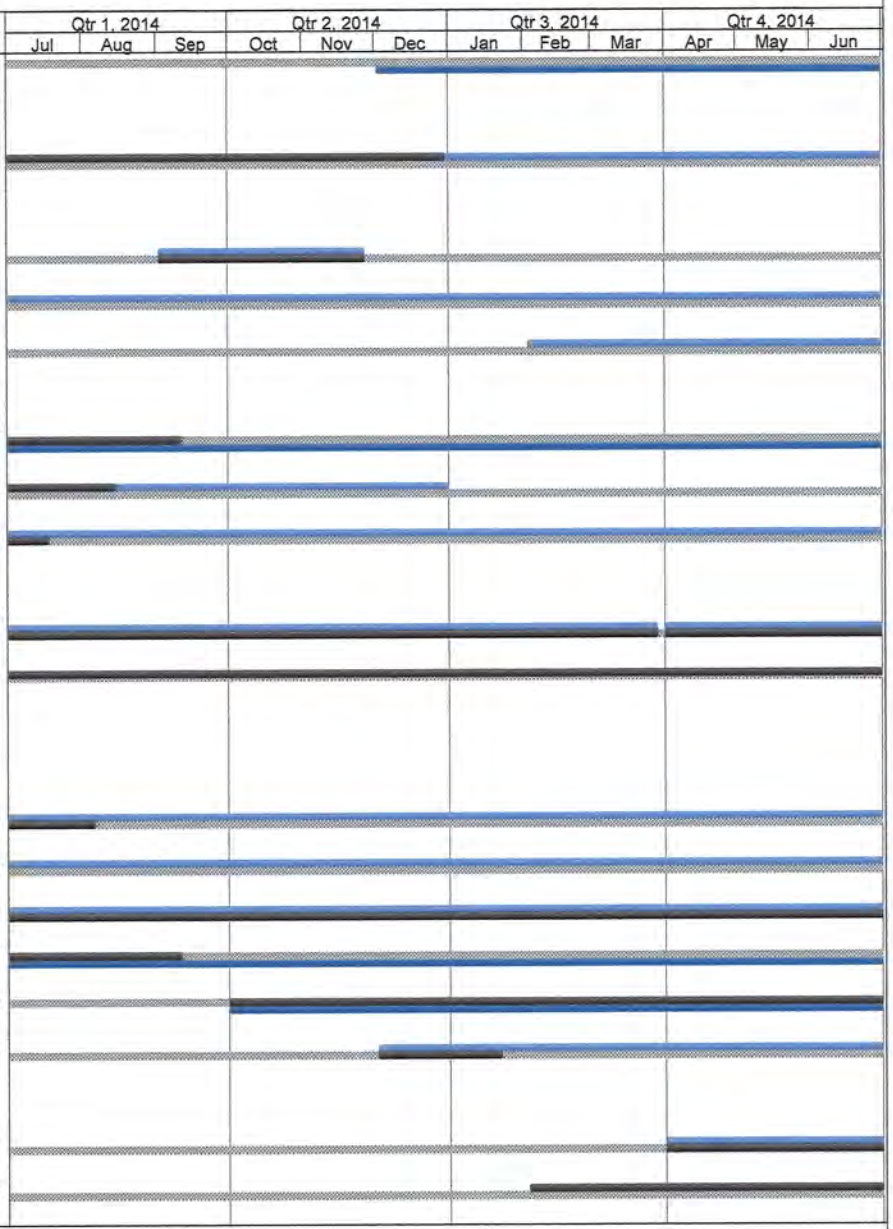


Current
Baseline
Inactive Task
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
Progress

ATTACHMENT C

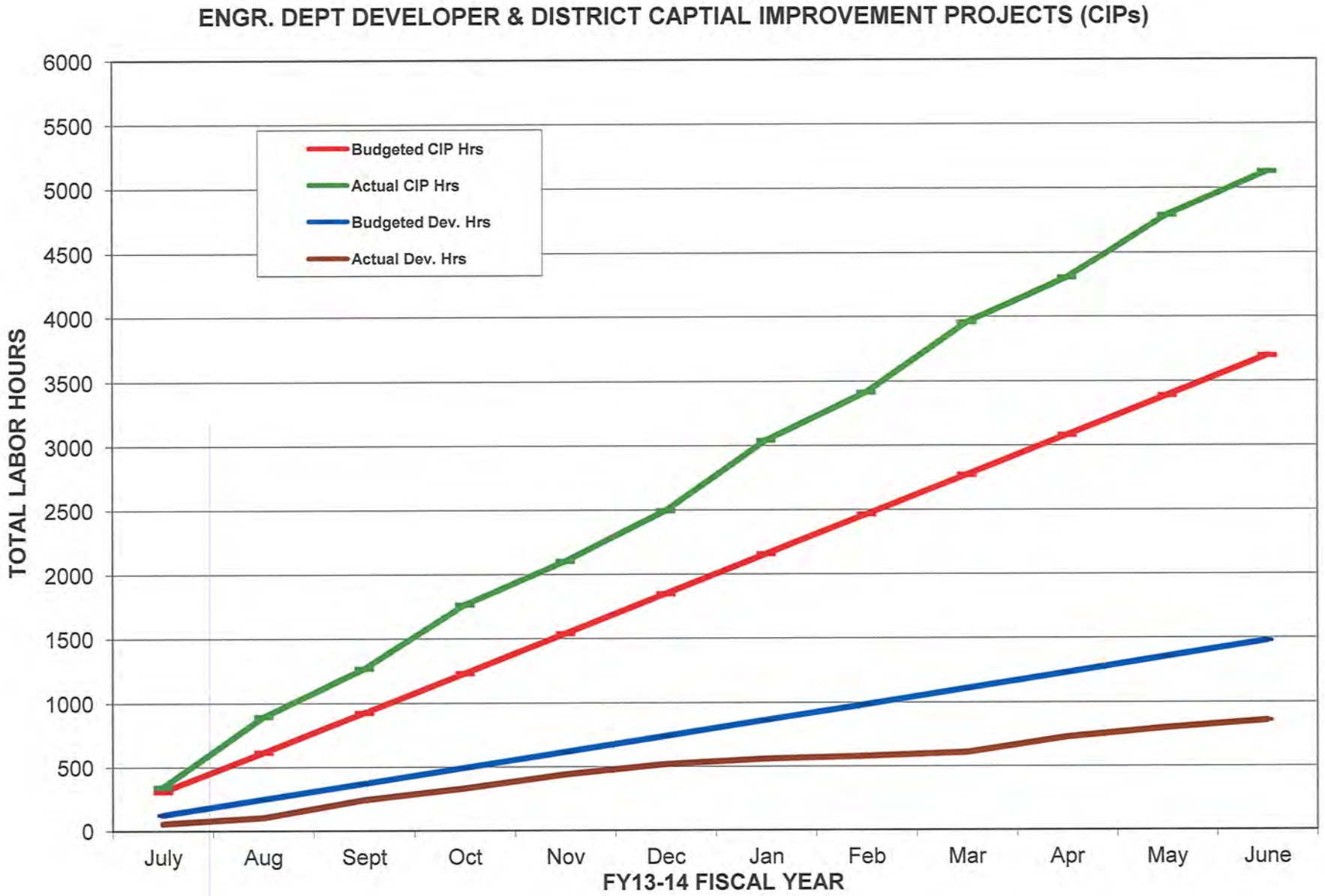
FY13_14 CAPITAL IMPROVEMENT PROJECTS

ID	Task Name	Start	Finish	% Complete	Resp
26	3A2 Admin Office/Lab/Yard Remodel Plan DEFER	12/2/13	6/30/14	0%	OPS / RC
27	**3B CORP YARD/WAREHOUSE/CONSTRUCTION OFFICE**	7/1/13	6/30/14	**0%**	
28	3B1 SMART Crossing Upgrade	7/1/13	6/30/14	50%	GM
29	**3C STAFFORD TREAMENT PLANT**	7/1/13	6/30/14	0%	
30	3C1 Watershed Erosion Control	9/2/13	5/31/14	100%	OPS / RC
31	3C3 Start Up Flushing Connection DEFER	7/1/13	6/30/14	0%	ENG / CC
32	3C4 Lake Aeration Upgrade - DROP	2/3/14	6/30/14	0%	OPS / RC
33	**4 STORAGE TANKS/PUMP STATIONS**	7/1/13	6/30/14	0%	
34	4B1 Atherton Recoat & Mixing System	7/1/13	6/30/14	20%	ENG / CC
35	4C Lynwood Pump Station Motor Control Center	7/1/13	12/31/13	25%	MAINT/RC
36	4D Relocate School Dr/Crest PS	7/1/13	6/30/14	5%	ENG / DJ
37	**5 RECYCLED WATER**	7/1/13	6/30/14	0%	
38	5A NBWRA Grant Program Administration	7/1/13	6/30/14	100%	ENG / DM
39	5B Recycled Water South	7/1/13	6/30/14	100%	ENG / DJ
40	**6 WEST MARIN WATER SYSTEM IMPROVEMENTS**	7/1/13	6/30/14	0%	
41	**SYSTEM IMPROVEMENTS**	7/1/13	6/30/14	0%	
42	6A PRTP Solids Handling	7/1/13	6/30/14	10%	ENG / DJ
43	6B PRTP Control Valve Replacement - DROP	7/1/13	6/30/14	0%	MAINT/RC
44	6F Gallagher Auxiliary Stream Gauge	7/1/13	6/30/14	100%	GM
45	6E Olema PS Flood Protection & RTU Upgrade	7/1/13	6/30/14	20%	ENG / DM
46	6F Emergency Generator Connections	10/1/13	6/30/14	100%	MAINT/RC
47	6G Tank Seismic Upgrades	12/2/13	6/30/14	25%	ENG / JK
48	**7 OCEANA MARIN SEWER SYSTEM**	7/1/13	6/30/14	0%	
49	7A Infiltration Study & Repair	4/1/14	6/30/14	100%	OPS / RC
50	7B SCADA RTU Upgrade and Install	2/3/14	6/30/14	100%	MAINT/RC



Current
Baseline
Inactive Task
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
Progress

ATTACHMENT D



\Engineering Server\CHIEF ENG\McIntyre\Budgets\FY09-10 Budget\IP Project Summary Report FY13-14 4th quarter

12

ITEM #12

MEMORANDUM

To: Board of Directors August 29, 2014

From: Chris DeGabriele, General Manager CD

Subj: Temporary Urgency Change Order
t:\gm\water shortage 2014\tucop 0814.docx

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None

Attached please find two orders approving Temporary Urgency Changes issued by the State Water Resources Control Board. The first (Attachment 1) issued to Sonoma County Water Agency regarding the Russian River and Dry Creek. This order enables minimum in-stream flows in the upper Russian River to remain at or above 50 cubic feet per second (cfs) and minimum in-stream flows in the lower Russian River to remain at or above 60cfs. Minimum in-stream flow requirements are measured on a 5-day running average basis. However, flows in the upper Russian River shall never be less than 40cfs and on the lower Russian River never be less than 50cfs.

Term 17 of the Order (on page 11), outlines additional water conservation requirements, requiring SCWA to develop a water demand reduction plan achieving 20% reduction in the baseline water demand. The Water Contractors will convene after the TAC meeting on September 8th to discuss development of the plan and determination of the baseline water demand.

Attachment 2 is the approved Temporary Urgency Change on the east fork of the Russian River, issued to Mendocino County Russian River Flood Control and Water Conservation Improvement District (Mendocino District). This order enables SCWA to comply with the minimum in-stream flows by requiring the Mendocino District to provide real time forecast of diversions to SCWA. It also requires a 25% reduction in Mendocino District contract deliveries, requires development of long-term drought contingency plan and expands the place of use for diversions to be that currently receiving Russian River water from the Mendocino District. This order also adds the SWRCB standard permit Term U requiring a minimum 20% reduction in baseline water demand. If a baseline water demand is not established by the Mendocino District it is assumed to be the average water demand in 2013. Mendocino District must also develop a water demand reduction plan, which includes on-farm conservation, and the water waste prohibitions and urban water use limitations recently adopted by SWRCB.

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

AUG 2 5 2014

In Reply Refer to:
EKH: A012919A et al.

Mr. Grant Davis
General Manager
Sonoma County Water Agency
404 Aviation Boulevard
Santa Rosa, CA 95403-9019

Dear Mr. Davis:

ORDER APPROVING SONOMA COUNTY WATER AGENCY'S PETITION FOR TEMPORARY URGENCY CHANGE OF PERMITS 12947A, 12949, 12950, AND 16596 (APPLICATIONS 12919A, 15736, 15737, 19351)

The enclosed Order approves the petition for temporary urgency change in the subject permits. Please review the conditions of the Order and retain the Order with your permit.

If you have any questions, please contact Emily Hyland at (916) 341-5803 or by email at Emily.Hyland@waterboards.ca.gov. Written correspondence should be addressed as follows: State Water Resources Control Board, Division of Water Rights, Attn: Emily Hyland, P.O. Box 2000, Sacramento, CA 95812-2000.

Sincerely,

Amanda Montgomery

Amanda Montgomery, Manager
Permitting and Licensing Section
Division of Water Rights

Enclosure

cc: See next page.

ATTACHMENT 1

cc w/ enclosure:

North Coast Regional Water Quality Control Board
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

National Marine Fisheries Service
Southwest Region
777 Sonoma Avenue, Room 325
Santa Rosa, CA 95404

California Department of Fish and Wildlife
Region 3: Bay Delta Region
7329 Silverado Trail
Napa, CA 94558

United States Geological Survey
California Water Science Center
6000 J Street, Placer Hall
Sacramento, CA 95819

ec w/ enclosure:

Mr. Don Seymour
Donald.Seymour@scwa.ca.gov

Ms. Pam Jeane
Pam.Jeane@scwa.ca.gov

Mr. Todd Schram
Todd.Schram@scwa.ca.gov

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

In the Matter of Permits 12947A, 12949, 12950, and 16596 (Applications 12919A, 15736, 15737, 19351)

Sonoma County Water Agency

ORDER APPROVING TEMPORARY URGENCY CHANGE

SOURCE: Dry Creek and Russian River

COUNTIES: Sonoma and Mendocino Counties

BY THE DEPUTY DIRECTOR FOR WATER RIGHTS:

1.0 SUBSTANCE OF TEMPORARY URGENCY CHANGE PETITION

On August 14, 2014, Sonoma County Water Agency (SCWA) filed a Temporary Urgency Change Petition (TUCP) with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) requesting approval of a change to the subject permits pursuant to California Water Code section 1435. The TUCP requests the following temporary reductions to the Russian River instream flow requirements to address low storage conditions in Lake Mendocino:

(1) From August 15, 2014 through February 10, 2015, reduce instream flow requirements for the upper Russian River (from its confluence with the East Fork of the Russian River to its confluence with Dry Creek) from 75 cubic feet per second (cfs) to 50 cfs.

(2) From August 15, 2014 through February 10, 2015, reduce instream flow requirements for the lower Russian River (downstream of its confluence with Dry Creek) from 85 cfs to 60 cfs.

The TUCP requests that compliance with these minimum instream flow requirements be measured based on a 5-day running average of average daily stream flow measurements, provided that instantaneous flows on the upper Russian River shall be no less than 40 cfs and on the lower Russian River shall be no less than 50 cfs. These 5-day running average provisions will allow SCWA to reduce the operational buffers needed to manage these stream flows, thereby allowing the SCWA to conserve more water in Lake Mendocino.

No changes to the instream flow requirements for Dry Creek are requested.

The request for the upper Russian River is intended to prevent significant depletion of storage in Lake Mendocino and potential elimination of water supplies for 2015. Such depletion in storage and reduction to or elimination of water supplies would cause serious impacts to human health and welfare and reduce water supplies needed for fishery protection and stable flows in the upper Russian River. The request for the lower Russian River is intended to protect fishery resources in Dry Creek.

2.0 BACKGROUND

2.1 Water Right Permits

SCWA's TUCP involves the following permits:

- Permit 12947A for direct diversion of 92 cubic feet per second (cfs) from the East Fork Russian River and storage of 122,500 acre-feet per annum (afa) in Lake Mendocino from January 1 through December 31 of each year.
- Permit 12949 for year-round direct diversion of 20 cfs from the Russian River at the Wohler and Mirabel Park Intakes near Forestville.
- Permit 12950 for direct diversion of 60 cfs from the Russian River at the Wohler and Mirabel Park Intakes from April 1 through September 30 of each year.
- Permit 16596 for year-round direct diversion of 180 cfs from the Russian River and storage of 245,000 afa in Lake Sonoma from October 1 of each year to May 1 of the succeeding year.

Term 20 of SCWA's Permit 12947A requires SCWA to pass through or release from storage at Lake Mendocino sufficient water to maintain specified instream flows for the protection of fish and wildlife, and for the maintenance of recreation in the Russian River. The flows vary depending on river reach and water supply conditions. The current minimum instream flow requirements are for dry water supply conditions. The requirements are 75 cfs for the upper Russian River (between the confluence of the East and West Forks of the Russian River and the confluence of the Russian River and Dry Creek) and 85 cfs for the lower Russian River (between its confluence with Dry Creek and the Pacific Ocean).

Term 17 of both Permit 12949 and Permit 12950 requires SCWA to allow sufficient water to bypass the points of diversion at the Wohler and Mirabel Park Intakes on the Russian River to maintain 85 cfs to the Pacific Ocean during dry water supply conditions.

Similarly, Term 13 of Permit 16596 requires SCWA to maintain 85 cfs in the lower Russian River during dry water supply conditions, unless the water level in Lake Sonoma is below elevation 292.0 feet with reference to the National Geodetic Vertical Datum of 1929, or unless prohibited by the United States Government. Permits 12947A, 12949, 12950, and 16596 use the same water-year classification definitions. The water year classifications (Normal, Dry or Critically Dry) were established in Decision 1610 and are based on cumulative inflow into Lake Pillsbury beginning October 1. Although Lake Mendocino storage is critically low, cumulative inflow into Lake Pillsbury during this water year has been of a sufficient volume such that under Decision 1610, 2014 is currently classified as a Dry year.

2.2 Information Concerning the Temporary Urgency Change Petition

A Supplement to the TUCP indicates that on August 12, 2014, the water supply storage level in Lake Mendocino was 36,052 acre-feet. This storage level was 32 percent of the available summer water supply pool. Since its completion in 1958, this is the lowest level in Lake Mendocino on this date, except for August 12, 1977, when reservoir storage was 21,982 acre-feet. The low storage level is the result of a severe drought that began in the region in January 2013.

According to the Supplement, using 2013 hydrology, Lake Mendocino storage is expected to decline to approximately 20,000 acre-feet by November 1, 2014, due to releases required to meet downstream water demands and minimum instream flow requirements on the Russian River. If dry conditions continue, storage levels could be as low as 14,000 acre-feet on January 1, 2015. The projected storage analysis was completed using SCWA's Russian River Water System Model with the following assumptions: (1) the current upper Russian River minimum instream flow requirement of 75 cfs; (2) 2013 hydrology; (3) 2013 upper

Russian River observed reach losses; and (4) Potter Valley Project operations based on the 2004 amended license issued by the Federal Energy Regulatory Commission. These extremely low projected storage levels and possible elimination of water supply in Lake Mendocino could cause serious impacts to human health and welfare, threatened Russian River fish species, and water-supply in Mendocino County and the Alexander Valley in Sonoma County, as well as harm Lake Mendocino and Russian River recreation. Therefore, SCWA proposes to reduce the instream flow requirements on the upper Russian River, which are maintained by reservoir releases, to preserve water in Lake Mendocino.

As of August 12, 2014, the water supply storage level in Lake Sonoma was 159,781 acre-feet. This storage level is 65 percent of the available water conservation pool. This storage level is the lowest seen since March 1991. However, the much larger water supply pool of Lake Sonoma provides multiple years of carry over storage. Consequently, SCWA has not requested any changes to the current minimum instream flow requirements for Dry Creek at this time.

SCWA is requesting changes to the minimum instream flow requirements on the lower Russian River, downstream of its confluence with Dry Creek to the Pacific Ocean. These changes are requested because the reduced minimum instream flows being requested on the upper Russian River will provide significantly less contribution to meet minimum instream flow requirements in the lower Russian River. Consequently, increased releases from Lake Sonoma into Dry Creek could be necessary to maintain Decision 1610 minimum instream flow requirements on the lower Russian River. However, increased releases into Dry Creek are limited by the Incidental Take Statement contained in the September 24, 2008, National Marine Fisheries Service (NMFS) Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, SCWA, and the Mendocino County Russian River Flood Control and Water Conservation Improvement District in the Russian River watershed (Biological Opinion). The Incidental Take Statement restricts releases from Lake Sonoma into Dry Creek because they can result in flows that are too high for optimal habitat for juvenile salmonids. Therefore, SCWA proposes to reduce the minimum instream flow requirements for the lower Russian River to protect fishery resources in Dry Creek.

3.0 COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT

Ordinarily, the State Water Board must comply with any applicable requirements of the California Environmental Quality Act (CEQA) prior to issuance of any order approving a TUCP pursuant to Water Code section 1435. (See Cal. Code Regs., tit. 23, § 805.) However, on January 17, 2014 Governor Edmund G. Brown, Jr. declared a State of Emergency, due to drought conditions, which concluded that strict compliance with CEQA would "prevent, hinder, or delay the mitigation of the effects of the emergency." Accordingly, as authorized by Government Code section 8571, item 9 of the Governor's Proclamation suspends CEQA, and the regulations adopted pursuant to it, to the extent that CEQA would otherwise apply to specified actions necessary to mitigate the effects of the drought, including the actions described in item 8 of the Governor's Proclamation. Item 8 requires the State Water Board to consider modifying requirements for reservoir releases or diversion limitations that were established to implement a water quality control plan. The subject instream flow requirements implement the Water Quality Control Plan for the North Coast Region because they protect instream beneficial uses that are designated in the plan, including recreation, cold and warm freshwater habitat, and wildlife habitat. Accordingly, CEQA is suspended to the extent that it would otherwise apply to the TUCP and subsequent modifications thereto.

In addition, the changes requested in the TUCP are consistent with the following Statutory and Categorical CEQA exemptions for the following reasons:

1) As of August 12, 2014, the water supply storage level in Lake Mendocino was 32 percent of the available summer water supply pool. Information provided by SCWA demonstrates that continued releases of water pursuant to permit term requirements could cause storage levels in Lake Mendocino to decline to unsafe levels. If storage in Lake Mendocino is depleted there will be serious impacts to human health and welfare and water will not be available to protect aquatic life, including

threatened and endangered species in the Russian River. Approval of the TUCP is therefore necessary to prevent and mitigate loss of, or damage to, the environment, fishery resources, property, public health, and essential public services. Accordingly, the project is statutorily exempt from CEQA because it is necessary to prevent or mitigate an emergency. (Pub. Resources Code, § 21080, subd. (b)(4); Cal. Code Regs., tit. 14, § 15269, subd. (c).)

2) The proposed action consists of the operation of existing facilities involving negligible or no expansion of use beyond that existing, and accordingly is categorically exempt from CEQA under a Class 1 exemption. (Cal. Code Regs., tit. 14, § 15301.) The proposed action will be within the range of minimum instream flows established by Decision 1610. The proposed action does not request and will not expand the water supply available to SCWA for consumptive purposes.

3) A Class 7 exemption "consists of actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment." (Cal. Code Regs, tit. 14, § 15307.) The proposed action on the upper Russian River will assure the maintenance of a natural resource, i.e., the instream resources of the Russian River, by reserving water in Lake Mendocino to prevent harm to, and protect habitat for listed Russian River salmonid fisheries. The proposed action on the lower Russian River will also assure the maintenance of a natural resource, i.e, the instream resources of Dry Creek, by avoiding impacts to salmonids consistent with the Incidental Take Statement. Accordingly, these changes are categorically exempt from CEQA pursuant to a Class 7 exemption.

4) A Class 8 exemption "consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment." (Cal. Code Regs., tit. 14, § 15308.) The proposed action will assure the maintenance of the environment, i.e., the instream environment of the Russian River, in the same way as stated for the Class 7 exemption.

4.0 PROCEDURAL REQUIREMENTS CONCERNING THE TEMPORARY URGENCY CHANGE PETITION

Pursuant to Water Code section 1438, the State Water Board may issue a temporary urgency change order in advance of the required notice. The State Water Board will issue and deliver to SCWA as soon as practicable, a notice of the temporary urgency change order pursuant to Water Code section 1438, subdivision (a). Pursuant to Water Code section 1438, subdivision (b)(1), SCWA is required to publish the notice in a newspaper having a general circulation, and that is published within the counties where the points of diversion lie. In addition, the State Water Board will post the notice of the temporary urgency change order on its website, along with the TUCP (and accompanying materials). The State Water Board also will distribute the notice through an electronic notification system.

Any interested person may file an objection to a temporary urgency change. (*Id.*, subd. (d).) The State Water Board must promptly consider and may hold a hearing on any objection. (*Id.*, subd. (e).) State Water Board Resolution 2012-0029 delegates to the Deputy Director for Water Rights the authority to act on a temporary urgency change petition if there are no objections to the petition. (Resolution 2012-0029, ¶ 4.4.1.)

The State Water Board exercises continuing supervision over temporary urgency change orders and may modify or revoke temporary urgency change orders at any time. (Wat. Code, §§ 1439, 1440.) Temporary urgency change orders expire automatically 180 days after issuance, unless they are revoked or an earlier expiration date is specified. (*Id.*, § 1440.)

5.0 CRITERIA FOR APPROVING THE PROPOSED TEMPORARY URGENCY CHANGE

Water Code section 1435 provides that a permittee or licensee who has an urgent need to change the point of diversion, place of use, or purpose of use from that specified in the permit or license may petition for a conditional temporary change order. The State Water Board's regulations set forth the filing and other procedural requirements applicable to TUCP's. (Cal. Code Regs., tit. 23, §§ 805, 806.) The State Water Board's regulations also clarify that requests for changes to permits or licenses other than changes in point of diversion, place of use, or purpose of use may be filed, subject to the same filing and procedural requirements that apply to changes in point of diversion, place of use, or purpose of use. (*Id.*, § 791, subd. (e).)

Before approving a temporary urgency change, the State Water Board must make the following findings:

1. the permittee or licensee has an urgent need to make the proposed change;
2. the proposed change may be made without injury to any other lawful user of water;
3. the proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses; and
4. the proposed change is in the public interest.

(Wat. Code, § 1435, subd. (b)(1-4).)

5.1 Urgency of the Proposed Change

Under Water Code section 1435, subdivision (c), an "urgent need" means "the existence of circumstances from which the board may in its judgment conclude that the proposed temporary change is necessary to further the constitutional policy that the water resources of the state be put to beneficial use to the fullest extent of which they are capable and that waste of water be prevented . . . ."

In this case, an urgent need exists for the proposed change in minimum instream flow requirements on the upper Russian River because, as described in the Supplement to the TUCP, Lake Mendocino reservoir levels are projected to reach extremely low conditions that may prevent SCWA from continuing to make the reservoir releases that are necessary to support the various beneficial uses that rely on these releases in the Russian River. If upcoming dry conditions persist and significant storm events are delayed or do not occur in Water Year 2015, then carryover storage in Lake Mendocino will be crucial for the continued protection of the Russian River salmonid fishery and water supply reliability. Specifically, at a storage level below 20,000 acre-feet, there would be greater risks that there would be insufficient water supplies to support: (a) survival of ESA-listed Russian River salmonid species, (b) agricultural and municipal uses that depend on the Russian River, and (c) river-based recreation. Without the proposed changes, the current minimum instream flow requirements would require releases of water from Lake Mendocino at levels that would risk significant depletion of storage and potential elimination of water supplies for water uses in Mendocino County and northern Sonoma County (above the confluence with Dry Creek). Such depletion in storage and reduction in or elimination of water supplies would cause serious impacts to human health and welfare, and reduce water supplies needed for fishery protection and stable flows in the upper Russian River.

An urgent need also exists for the proposed change in minimum instream flow requirements on the lower Russian River because reductions in the upper Russian River flows could require an increase in Lake Sonoma releases into Dry Creek to meet lower Russian River flow requirements. The 2008 NMFS Biological Opinion found that high Dry Creek flows from June through October result in sub-optimal habitat conditions for juvenile salmonids and issued an Incidental Take Statement restricting releases from Lake Sonoma to Dry Creek from June through October each year. Therefore, higher Dry Creek flows could be detrimental to the fisheries in Dry Creek and result in violations of the Incidental Take Statement. In addition, reductions in the lower Russian River minimum instream flow requirements will conserve storage in Lake Sonoma during drought conditions. Considering the severe drought conditions and the Governor's Emergency Drought Proclamation, conservation of water in Lake Sonoma is prudent.

5.2 No Injury to Any Other Lawful User of Water

Under this Order, SCWA will be required to maintain specific flows in the Russian River from its most upstream point of diversion to the river's confluence with the ocean. Therefore, because these minimum flows will be present, it is anticipated that all other lawful users of water will still be able to divert and use any water to which they may be legally entitled during the period specified in this Order. Accordingly, granting this TUCP will not result in any injury to any other lawful user of water. Pursuant to Water Code section 1439, the State Water Board will supervise diversion and use of water under this temporary change order for the protection of all other lawful users of water and instream beneficial uses.

5.3 No Unreasonable Effect upon Fish, Wildlife, or Other Instream Beneficial Uses

Although flows in the mainstem Russian River will be reduced upon approval of this TUCP, prevention of the depletion of storage in Lake Mendocino is crucial for instream beneficial uses, including threatened and endangered fish species. Reductions in the minimum instream flow requirements will improve carryover storage in Lake Mendocino, which will provide significant benefit to all instream beneficial uses if dry conditions persist into Water Year 2015. Specifically, conserved storage will allow enhanced management of Russian River flows in the fall, winter and next spring for the benefit of salmon migration, spawning, and rearing. It is possible that the reduced flows may impair some instream beneficial uses, principally recreation, in the Russian River. However, any effects associated with such flow reductions would not be unreasonable, considering the potential catastrophic impacts to fish, wildlife and other instream beneficial uses that could occur with the current release levels, if the current release levels result in the draining of Lake Mendocino and the dewatering of the upper Russian River

SCWA has consulted with the California Department of Fish and Wildlife (CDFW), NMFS, and the Regional Water Quality Control Board (Regional Board) regarding filing the TUCP and the effects of the proposed changes. All three agencies support the changes requested in the TUCP. The Regional Board has requested continuous water quality monitoring on the mainstem Russian River and at the Russian River Estuary and associated reporting, which will be required. CDFW and NMFS concurred that the proposed flow reductions are prudent measures to protect aquatic resources, such as Chinook, steelhead, and coho migration and spawning, as well as salmon egg incubation. CDFW and NMFS recognize that flow reductions will support conservation of Lake Mendocino's water supply and avoid dewatering of the upper Russian River. In light of the potential for the effective period of this Order to continue into migration seasons for threatened and endangered anadromous fish species, CDFW and NMFS have requested continuation of ongoing consultation and reporting efforts with SCWA to determine monitoring efforts and appropriate flows for fish passage. CDFW and NMFS also requested an additional pulse flow release requirement. However, current data regarding timing and need for a pulse flow is limited at this time. Furthermore, it is unclear whether a pulse flow is necessary to mitigate for the impacts of the changes sought by SCWA's TUCP. This Order may not be an appropriate vehicle to require SCWA to implement a pulse flow, but these issues should be discussed in the consultations with CDFW and NMFS. This order includes requirements for consultation on: 1) flow increases after November 1 to support successful migration and spawning of Chinook, steelhead, and coho salmon and 2) the need for and appropriate methodology for monitoring salmonid species and other native fish species in the Russian River. This Order also includes a term limiting ramping rates below Lake Mendocino to avoid fish stranding.

To inform the review and approval of the TUCP and the State Water Board's continuing supervision of the diversion and use of water under this temporary change order pursuant to Water Code section 1439, this Order requires SCWA to report on consultations with CDFW, NMFS, and the Regional Board. In addition, to ensure beneficial use of water resources to the fullest extent possible and to prevent waste of water, SCWA is required to provide a weekly update to the Deputy Director, CDFW, NMFS, and the Regional Board regarding the current hydrologic and environmental conditions of the Russian River (Term 11). This information will assist the State Water Board in determining whether additional actions are necessary.

5.4 The Proposed Change is in the Public Interest

The proposed changes in the upper Russian River minimum instream flow requirements will help conserve stored water in Lake Mendocino so that, in the event drought conditions persist, water can be released to maintain instream flows for the benefit and protection of all uses of Russian River water, including the salmonid fisheries in the Russian River. It is in the public interest to preserve these water supplies for these beneficial uses under present severe drought hydrologic conditions.

The proposed changes in the lower Russian River minimum instream flow requirements will support ecological values in Dry Creek by preventing higher Dry Creek flows that could be necessary if the State Water Board were to approve only the requested changes in the upper Russian River requirements. As discussed above, such higher Dry Creek flows would impair habitat conditions for juvenile salmonids and deplete storage in Lake Sonoma. It is in the public interest to minimize impacts to salmonids and conserve water supplies in Lake Sonoma during drought conditions. Reductions in diversions at SCWA's facilities can also serve to increase flows in the lower Russian River and prevent the need for higher Dry Creek flows. Accordingly, inclusion of a term requiring SCWA and its contractors to conserve water is in the public interest. Pursuant to Term 17, SCWA will be required to implement a Water Demand Reduction Plan to reduce water demand by a minimum of 20 percent relative to baseline (pre-drought) water demand. In addition, SCWA will continue to implement water use efficiency programs that align with the California Urban Water Conservation Council's Best Management Practices (BMPs) and comply with SBx7-7.

To further ensure preservation of Lake Mendocino water supplies in the public interest, SCWA has coordinated the filing of this TUCP with the filing of a separate TUCP by the Mendocino Russian River Flood Control and Water Conservation Improvement District (District). The District's TUCP requested the temporary incorporation of demand management terms into the District's permit (Permit 12947B), which authorizes storage in Lake Mendocino for use within Mendocino County. According to the Supplement to SCWA's TUCP, the District's TUCP should result in reduced diversions in the upper Russian River, which will further improve storage in Lake Mendocino and allow SCWA to manage Russian River flows more efficiently.

6.0 CONCLUSIONS

The State Water Board has adequate information in its files to make the evaluation required by Water Code section 1435.

I conclude that, based on the available evidence:

1. The permittee has an urgent need to make the proposed change;
2. The petitioned change will not operate to the injury of any other lawful user of water;
3. The petitioned change will not have an unreasonable effect upon fish, wildlife, or other instream beneficial uses; and,
4. The petitioned change, with the modifications described above, is in the public interest.

ORDER

NOW, THEREFORE, IT IS ORDERED THAT: the Petition filed by Sonoma County Water Agency (SCWA) for a temporary urgency change in Permits 12947A, 12949, 12950 and 16596 is approved and effective until 180 days from the date of this Order or Lake Mendocino storage reaches the top of the water supply pool (68,400 acre-feet), whichever is earlier.

All existing terms and conditions of the subject permit remain in effect, except as temporarily amended by the following provision:

1. The minimum instream flow requirements in the Russian River, as specified in Term 20 of Permit 12947A, Term 17 of Permits 12949 and 12950, and Term 13 of Permit 16596, shall be modified as follows:

    a. Minimum instream flow in the upper Russian River (from its confluence with the East Fork of the Russian River to its confluence with Dry Creek) shall remain at or above 50 cubic feet per second (cfs).
    b. Minimum instream flow in the lower Russian River (from its confluence with Dry Creek to the Pacific Ocean) shall remain at or above 60 cubic feet per second (cfs).
    c. For purposes of compliance with this term, the minimum instream flow requirements shall be measured based on a 5-day running average of average daily stream flow measurements, provided that instantaneous flows on the upper Russian River shall be no less than 40 cfs and on the lower Russian River shall be no less than 50 cfs.

2. Beginning November 1 SCWA shall consult with the National Marine Fisheries Service (NMFS) and the California Department of Fish and Wildlife (CDFW) regarding increasing controlled instream flow, to allow successful migration and spawning of Chinook, steelhead, and coho, at the USGS gages at both Hopland (No.11462500) and Healdsburg (No. 11464000) to a level not to exceed 100 cfs and at the USGS Hacienda gage to a level not to exceed 135 cfs. Consultations shall occur every two weeks and SCWA shall submit a summary report of consultation details and any increases to the minimum flows to the Deputy Director within one week of each consultation meeting.

3. To protect against stranding of fish when releases from Lake Mendocino are reduced under this Order, flow in the East Fork Russian River immediately below Coyote Dam shall not be reduced by more than 25 cfs per hour. Ramping rates specified in this term may be revised upon consultation with NMFS and the CDFW. SCWA shall submit a summary report of consultation details to the Deputy Director within one week of each consultation meeting.

4. Within two weeks of the issuance of this Order, SCWA shall consult with NMFS and CDFW regarding the need for and appropriate methodology for monitoring salmonid species and other native fishes in the Russian River during the term of this Order. SCWA shall submit a summary report of consultation details and a description of any plans and methodologies for monitoring required by NMFS and CDFW to the Deputy Director within one week of the consultation.

5. SCWA shall monitor and record daily numbers of adult salmonids moving upstream past the life cycle monitoring station in Dry Creek (when operable) beginning no later than September 1, 2014, and continuing through the duration of the Order. SCWA shall include these numbers in the weekly reports required in Term 11.

6. SCWA shall report to NMFS and CDFW every two weeks or more frequently upon their request regarding the applicable fisheries monitoring activities specified in Terms 4 and 5 of this Order. Consistent with the Biological Opinion, SCWA shall consult with NMFS and CDFW regarding any necessary adaptations to the monitoring program including revisions to Terms 4 and 5. SCWA shall submit a summary report of consultation details to the Deputy Director within one week of each consultation meeting. Upon consultation with NMFS and CDFW, any necessary revisions to the terms and conditions of this order shall be made upon approval by the Deputy Director. Reporting of fisheries monitoring tasks described in Terms 4 and 5 shall be submitted to the Deputy Director by April 1, 2015 in accordance with NMFS and CDFW annual reporting requirements as more fully described in the Biological Opinion.

7. Monitoring shall be conducted to determine the water quality effects and the effects to availability of aquatic habitat for salmonids resulting from the approved temporary urgency change. Mainstem Russian River and estuary monitoring shall include continuous monitoring of temperature, dissolved oxygen (DO), pH, and specific conductance at multiple stations from Ukiah to Jenner.

   a. For the duration of this Order, monitoring on the mainstem Russian River shall occur at three, multi-parameter "permanent" water quality sondes on the Russian River at USGS stream gages located at Hopland, Diggers Bend near Healdsburg, and Hacienda Bridge. These three sondes are referred to as "permanent" as they are maintained as part of SCWA's early warning detection system in coordination with the United States Geological Survey (USGS) on its "Real-time Data for California" website. As of March 2014, the sonde at SCWA's river diversion facility (RDS) at Mirabel was removed due to several construction projects; therefore it will not be included in the 2014 monitoring effort. SCWA, in cooperation with the USGS, shall also operate three seasonal sondes with real-time telemetry at USGS gages at Cloverdale station (north of Cloverdale at Commisky Station Road), Jimtown (at the Alexander Valley Road bridge), and at Johnson's Beach (Guerneville). The sonde at the Cloverdale gage collects DO and temperature, the sonde at the Jimtown gage collects pH, temperature, DO, specific conductivity and turbidity, and the sonde at Johnson's Beach collects pH, temperature, DO, specific conductivity and turbidity. Data from these locations is available on the USGS "Real-time Data for California" website.

   b. Monitoring in the mainstem Russian River Estuary shall include nine stations in the lower, middle, and upper reaches of the Estuary, including tributaries and areas upstream from the Estuary that become inundated during lagoon conditions (maximum backwater area). Seven stations shall be located in the mainstem Estuary between the mouth of the river at Jenner and Monte Rio and two stations shall be located in the Willow and Austin creek tributaries, in areas that are subject to tidal and/or lagoon inundation. These sondes shall be removed when/if flows reach 1000 cfs and high flows are sustained.

      Sondes shall record hourly measurements of water temperature (Celsius), dissolved oxygen (milligrams per liter, mg/L), dissolved oxygen (percent saturation, % Sat), specific conductance (microsiemens), salinity (parts per thousand, ppt), and hydrogen ion (pH). All sondes shall be recalibrated following the manufacturer's manual and data downloaded every two weeks.

      Monitoring sites include:
      i. Russian River Mouth at Goat Rock State Beach (2 YSI 6600 Datasondes)
      ii. Russian River at Patty's Rock upstream from Penny Island (2 YSI 6600 Datasondes)
      iii. Willow Creek at the first bridge (1 YSI 6600 Datasonde)
      iv. Russian River at Sheephouse Creek downstream of Sheephouse Creek (1 or 2 YSI 6600 Datasondes)
      v. Russian River at Freezeout Creek downstream of Freezeout Creek (2 YSI 6600 Datasondes)
      vi. Russian River at Brown's Pool downstream of Austin Creek (1 YSI 6600 Datasonde)
      vii. Austin Creek downstream of the first steel bridge (1 YSI 6600 Datasonde)
      viii. Russian River at Patterson Point in Villa Grande (1 YSI 6600 Datasonde)
      ix. Russian River at Monte Rio downstream of Dutch Bill Creek (1 YSI 6600 Datasonde)

   c. Monitoring on the East Fork Russian River, shall occur at a seasonal sonde approximately 1/3 mile (0.33 mi) downstream from Lake Mendocino, and shall record hourly measurements

of water temperature, dissolved oxygen, specific conductance, pH, and turbidity. The monitoring site will be accessed by foot.

8. SCWA shall monitor bacteria, nutrients, and algae at five surface-water sites in the Russian River Estuary. All samples shall be analyzed for nutrients (e.g. nitrogen, ammonia, and phosphorus), chlorophyll a, standard bacterial indicators (Total coliforms, E. coli, and Enterococcus), total and dissolved organic carbon, total dissolved solids, and turbidity. Nutrient/Bacterial/Chlorophyll a monitoring sites include: Russian River at the Jenner Boat Ramp; Russian River at Casini Ranch below Austin Creek; Russian River at Patterson Point in Villa Grande; Russian River at Monte Rio below Dutch Bill Creek; and Russian River at Vacation Beach below summer dam.

Additional focused sampling would occur under certain conditions and following specific river management and operational events, noted below, at the sites listed above:

a. Removal of Johnson's Beach and/or Vacation Beach Dam – 3 samples within 10 days after dam removal
b. Sandbar Closure at the river mouth – 3 samples within first 10 days (weekly thereafter)
c. Sandbar Breach at the river mouth – 3 samples within 10 days after breach
d. Lagoon Outlet Channel implementation – 3 samples within 10 days after implementation (weekly thereafter).

Bacteroides bacteria sampling shall be conducted at the three surface-water sites in the maximum backwater area: Patterson Point, Monte Rio, and Vacation Beach. Sampling for human-host Bacteroides bacteria shall be conducted at public freshwater beaches during periods of potentially heavy contact recreational use (i.e. following Labor Day and Veteran's Day holiday) and during river mouth closure and lagoon outlet channel implementation when freshwater beaches may become inundated.

Samples shall be collected weekly through the duration of the lagoon management period (May 1 - October 15). Measurements of water temperature, dissolved oxygen, specific conductance, pH, and turbidity shall be collected using a YSI 6600 datasonde and YSI 650MDS datalogger during water sample collection. The sonde will be calibrated before and after the collection of water samples.

Sampling frequency shall increase to daily at freshwater beach sites, including Patterson Point, Monte Rio and Vacation Beach, if bacteria indicators exceed North Coast Regional Water Quality Control Board (Regional Board) operative standards during the weekly sampling effort and shall continue daily until measurements are below operational standards. Measurements for E. coli (235 MPN/100mL) shall be used for a comparison to operational standards. Bacteria indicators and sampling effort shall be included in the weekly reports required in Term 11.

SCWA shall continue to collect Enterococcus samples and record and report the data, however, Enterococcus results will not be relied upon when coordinating with the Regional Board and Sonoma County DHS about potentially posting warning signs at freshwater beach sites or to discuss potential adaptive Estuary management actions including mechanical breaching of the sandbar to address potential threats to public health.

At the conclusion of any focused grab sampling event, regular weekly sampling shall resume, as described above.

9. SCWA shall provide the summary data from the permanent water quality sondes required in Term 7a and nutrient/bacterial/algal sampling in Term 8 (as data becomes available) to the Deputy Director for the State Water Board and the Executive Director for the Regional Board in the weekly hydrologic status report required in Term 11. If any water quality issues of concern are observed from the continuous monitoring network, SCWA or the Regional Board can initiate consultation. SCWA shall submit a summary report of consultation details to the Deputy Director within one week of each consultation meeting. If no consultation is necessary; SCWA shall submit an explanation to the

Deputy Director within one week after the conclusion of the effective period of this Order. Upon consultation with the Regional Board, any necessary revisions to Terms 7 and 8 shall be made upon approval by the Deputy Director.

10. SCWA shall summarize all water quality data collected pursuant to Terms 7 and 8 during the term of this Order. The summary report shall include an evaluation of whether, and to what extent, the reduced flows authorized by the Order caused any impacts to water quality, including any water quality impacts affecting recreation or the availability of aquatic habitat for salmonids. The report shall be submitted to the Deputy Director by April 1, 2015.

11. SCWA shall report to the Deputy Director of Water Rights and the Executive Director of the North Coast Regional Board on a weekly basis regarding the current hydrologic condition of the Russian River system, including current Lake Mendocino reservoir level, the rate of decline for Lake Mendocino, a 16-day cumulative rainfall forecast, current inflow from Potter Valley, fish counts, and a summary of the available water quality data.

12. This Order does not authorize any act that results in the taking of a candidate, threatened or endangered species, or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this Order, the permittee shall obtain authorization for an incidental take permit prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the temporary urgency change authorized under this Order.

13. The State Water Board reserves jurisdiction to supervise the temporary urgency change under this Order, and to coordinate or modify terms and conditions, for the protection of vested rights, fish, wildlife, instream beneficial uses and the public interest as future conditions may warrant.

14. SCWA shall immediately notify the State Water Board if Lake Mendocino storage reaches the top of the winter water supply pool (68,400 acre-feet).

15. SCWA shall immediately notify the State Water Board if any significant change in storage conditions in Lake Mendocino occurs that warrants reconsideration of this Order.

16. SCWA shall provide a written update to the Deputy Director by April 1, 2015, regarding activities and programs being implemented by SCWA and its water contractors to assess and reduce water loss, promote increased water use efficiency and conservation, and improve regional water supply reliability.

17. The temporary changes authorized by this Order are not effective unless SCWA is operating in accordance with a Water Demand Reduction Plan (Plan) satisfactory to the Deputy Director for Water Rights. The Plan shall be designed to ensure that all parties that beneficially use water diverted and/or stored under this right implement actions to meet a water demand reduction of a minimum of 20 percent of the baseline water demand. The Plan shall define baseline water demand as appropriate for SCWA's situation based on considerations such as weather, economy, wholesale supplier allocations or other relevant information. For the purpose of compliance with this term, if the Plan does not define baseline water demand, it is assumed to be the average water demand for the previous year (excluding drought years).

The Plan shall include, at a minimum, the following components:

1) All parties that beneficially use water diverted and/or stored under these rights and/or parties otherwise subject to the temporary change(s) authorized by this Order (excluding SCWA's surplus customers, whom are curtailed, and parties found on the De Minimus list provided by

SCWA on August 22, 2014, whose diversions amount to less than one percent of SCWA's total water distributed);

2) Baseline water demand for all parties included in (1) above;

3) Existing actions and additional actions planned by each party included in (1) above to reduce water use in order to meet the water demand reduction required by this term, including a description of how such actions can be expected to meet the demand reduction. The Plan shall also identify additional actions to be implemented, in the event that SCWA does not attain the amount of water use demand reduction relative to baseline water demand.

   Additional actions to be considered include, at a minimum, those recommended in any applicable Governor's Drought Proclamation as applicable to SCWA's operations, and determine if implementation of such action(s) may increase conservation of their water supply. If so, SCWA will either implement the recommendation(s) or provide documentation as to why such action is not reasonable for SCWA's situation. Actions to evaluate include, but are not limited to, 1) Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes; 2) Turn off fountains and other decorative water features unless recycled or grey water is used for those water features, 3) Limit vehicle washing at home by patronizing local carwashes that use recycled water; 4) Limit outdoor watering of lawns and landscaping to no more than two times a week; 5) Recreational facilities, such as city parks and golf courses, and large institutional complexes, such as schools, business parks and campuses, should immediately implement water reduction plans to reduce the use of potable water for outdoor irrigation; 6) Commercial establishments such as hotel and restaurants should take steps to reduce water usage and increase public awareness of the drought through measures such as offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets; 7) Professional sports facilities, such as basketball arenas, football, soccer, and baseball stadiums, and hockey rinks should reduce water usage and increase public awareness of the drought by reducing the use of potable water for outdoor irrigation and encouraging conservation by spectators.;

   Additional actions to be considered include, but are not limited to, those associated with on farm conservation, such as irrigation scheduling, tailwater recovery systems, and irrigation system improvements, and irrigation district system improvements, such as canal lining, canal structure improvements, and remote measurement, monitoring and control. SCWA shall determine if implementation of such action(s) may increase conservation of water supply. SCWA will either implement action(s) or provide documentation as to why such action is not reasonable for SCWA's situation;

4) For parties included in (1) above over which SCWA has the authority or other ability to impose the listed water demand reduction actions, a list of such parties and a description of such authority or other ability over each party;

5) For parties included in (1) above over which SCWA does not have the authority or other ability to impose the listed water demand reduction actions, a list of such parties, a description of the efforts of SCWA to coordinate with each of the listed parties to ensure that each party take appropriate action to reduce water demand, and a description of such actions for each party;

6) A detailed schedule with planned completion dates for key events.

SCWA shall submit to the Deputy Director for Water Rights a written report within 15 days of the end of each month (monthly status update) that provides a summary of compliance with this term. The monthly status update shall, at a minimum, include a description of SCWA's actions to date to comply with the requirements of this term and the results of such actions, including but not limited to the amount of water demand

reduction relative to baseline water demand. The data submitted for the amount of water demand reduction shall include both monthly and aggregate annual to date information and shall be compared to baseline water demand. When the monthly status update reflects that SCWA is not achieving the minimum water demand reduction of this term, SCWA shall also include additional actions SCWA has adopted and/or implemented to meet the demand reduction and identify the date when such additional actions will be fully implemented as part of the monthly status update.

Failure to achieve demand reduction may result in modification of this Order to limit the extent of the approved action, at the discretion of the Deputy Director for Water Rights.

(000000U2)

STATE WATER RESOURCES CONTROL BOARD

Barbara Evoy, Deputy Director
Division of Water Rights

Dated: AUG 25 2014

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

In the Matter of Permit 12947B
(Application 12919B)

Mendocino County Russian River Flood Control and Water Conservation Improvement District

ORDER APPROVING TEMPORARY URGENCY CHANGE

SOURCE: East Fork Russian River

COUNTIES: Mendocino

BY THE DEPUTY DIRECTOR FOR WATER RIGHTS:

1.0 SUBSTANCE OF TEMPORARY URGENCY CHANGE PETITION

On August 8, 2014, Mendocino County Russian River Flood Control and Water Conservation Improvement District (District) filed a Temporary Urgency Change Petition (TUCP) with the State Water Resources Control Board (State Water Board) requesting approval of changes to Permit 12947B pursuant to Water Code section 1435. The TUCP was subsequently revised and re-submitted on August 18, 2014. The revised August 18, 2014 TUCP is considered herein. The August 18, 2014 TUCP requests the following temporary changes: (1) addition of four drought emergency terms to compliment and support a TUCP filed by Sonoma County Water Agency (SCWA) on August 14, 2014, (2) changes to the place of use for irrigation to reflect the actual area served by the District, and (3) a 100-acre increase in the net acreage limitation within the gross place of use for irrigation purposes.

2.0 BACKGROUND

2.1 Water Right Permit 12947B

The District is authorized to divert up to 122,500 acre-feet per year to shared storage in Lake Mendocino and 53 cubic feet per second by direct diversion under Permit 12947B (Application 12919B). The District is limited to a combined diversion and rediversion of stored water under permit 12947B not to exceed 8,000 acre-feet per year. The season of diversion is January 1 to December 31 of each year, and the purposes of use are Recreation, Municipal, Industrial, Domestic, and Irrigation. Irrigation under Permit 12947B is limited to the place of use as shown on a map on file with the State Water Board and is subject to an annual net limitation of 4,096 acres within a larger gross area.

2.2 Background Information for the Petition for Temporary Urgency Change

The District submitted an attachment with the TUCP (attachment 3) describing current conditions at Lake Mendocino and in the District's service area. With respect to current conditions at Lake Mendocino, the attachment indicates that as of July 15, 2014, the volume of water stored in Lake Mendocino was approximately 42,326 acre feet, which is less than 39 percent of capacity. At current rates, releases from

Lake Mendocino to maintain minimum flows, will reduce lake storage to less than 20,000 acre feet by November 1, 2014. Accordingly the District requests the addition of the four drought emergency terms to Permit 12947B. These terms are included in attachment 1 to the TUCP and are intended to conserve storage in Lake Mendocino through water retention and demand reduction. The District describes these terms as complimenting and supporting the TUCP filed by SCWA on August 14, 2014, for temporary reductions in the instream flow requirements. SCWA holds water right Permit 12947A (Application 12919A), which also authorizes diversion to storage in Lake Mendocino. As a condition of Permit 12947A, SCWA must bypass or release water from Lake Mendocino in order to maintain minimum instream flows in the Russian River. One of the changes sought by SCWA's TUCP, which was filed and processed in coordination with the District's TUCP, is a reduction in the minimum instream flows required as a condition of Permit 12947A in order to conserve water stored in Lake Mendocino.

The District submitted a long term change petition on May 14, 2014, to request changes and corrections to the place of use for irrigation to reflect the actual areas served by the District. With respect to current conditions in the District's service area, attachment 3 indicates that the District has reached the maximum net acreage for irrigation purposes (4,096 acres). The District has identified lands within the service area boundaries that have no alternate source of water and vineyards which will die without an emergency supply of water in 2014. These lands are located outside of the permitted place of use for irrigation. Accordingly, the District requests temporary approval of the changes to the gross place of use for irrigation requested in the long-term change petition and a 100-acre increase to the net acreage limitation for irrigation in order to supply water stored under Permit 12947B to lands within the District on an emergency basis. According to the District, no more than 20 acre feet of water would be needed in 2014 to provide emergency water supplies to this land. Per the information in attachment 3, the District has water available for this emergency purpose because it imposed mandatory conservation upon all of its customers beginning in March of 2014. Through this mandatory conservation, the District's public agency customers water use under Permit 12947B has been reduced on average by over 27 percent compared to 2013. The demand requirement for the additional place of use (20 acre feet) represents less than 1 percent of the amount of water conserved thus far in 2014.

3.0 COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT

Ordinarily, the State Water Board must comply with any applicable requirement of California Environmental Quality Act (CEQA) prior to issuance of any order approving a TUCP pursuant to Water Code section 1435 (See Cal. Code Regs., tit. 23, § 805.) However, on April 25, 2014, Governor Edmund G. Brown, Jr. issued a Proclamation of a Continued State of Emergency, which included a directive to suspend the requirements of CEQA as applied to certain actions called for in the proclamation to allow those actions to take place as quickly as possible. This suspension applies to actions to immediately and expeditiously process requests to move water to areas of need as described in Directive 2 of the Governor's April 25, 2014 proclamation, and to actions to conserve water as described in Directive 3 of the proclamation.

The purpose of the changes sought by the TUCP are to move water to areas of need and to conserve water consistent with Directives 2 and 3 of the Governor's proclamation. Accordingly, approval of those changes is not subject to CEQA.

4.0 PROCEDURAL REQUIREMENTS CONCERNING THE TEMPORARY URGENCY CHANGE PETITION

Pursuant to Water Code section 1438, the State Water Board may issue a temporary urgency change order in advance of the required notice. The State Water Board will issue and deliver to the District as soon as practicable a notice of the temporary urgency change order pursuant to Water Code section 1438, subdivision (a). Pursuant to Water Code section 1438, subdivision (b)(1), the District is required to publish the notice in a newspaper having a general circulation, and that is published within the counties where the points of diversion lie. In addition, the State Water Board will post the notice of the temporary urgency

change order on its website, along with the TUCP (and accompanying materials). The State Water Board also will distribute the notice through an electronic notification system.

Any interested person may file an objection to a temporary urgency change. (*Id.*, subd. (d).) The State Water Board must promptly consider and may hold a hearing on any objection. (*Id.*, subd. (e).) State Water Board Resolution 2012-0029 delegates to the Deputy Director for Water Rights the authority to act on a temporary urgency change petition if there are no objections to the petition. (Resolution 2012-0029, ¶ 4.4.1.)

The State Water Board exercises continuing supervision over temporary urgency change orders and may modify or revoke temporary urgency change orders at any time. (Wat. Code, §§ 1439, 1440.) Temporary urgency change orders expire automatically 180 days after issuance, unless they are revoked or an earlier expiration date is specified. (*Id.*, § 1440.)

5.0 CRITERIA FOR APPROVING THE PROPOSED TEMPORARY URGENCY CHANGE

Water Code section 1435 provides that a permittee or licensee who has an urgent need to change the point of diversion, place of use, or purpose of use from that specified in the permit or license may petition for a conditional temporary change order. The State Water Board's regulations set forth the filing and other procedural requirements applicable to TUCP's. (Cal. Code Regs., tit. 23, §§ 805, 806.) The State Water Board's regulations also clarify that requests for changes to permit or license conditions other than changes in point of diversion, place of use, or purpose of use may be filed, subject to the same filing and procedural requirements that apply to changes in point of diversion, place of use, or purpose of use. (*Id.*, § 791, subd. (e).)

Before approving a temporary urgency change, the State Water Board must make the following findings:

1. the permittee or licensee has an urgent need to make the proposed change;
2. the proposed change may be made without injury to any other lawful user of water;
3. the proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses; and
4. the proposed change is in the public interest.

(Wat. Code, § 1435, subd. (b)(1-4).)

5.1 Urgency of the Proposed Change

Under Water Code section 1435, subdivision (c), an "urgent need" means "the existence of circumstances from which the board may in its judgment conclude that the proposed temporary change is necessary to further the constitutional policy that the water resources of the state be put to beneficial use to the fullest extent of which they are capable and that waste of water be prevented . . . ."

An urgent need exists for the addition of the drought emergency terms in light of the predicted severe depletion of water supply storage in Lake Mendocino by November 1, 2014. Approval of the SCWA TUCP and the addition of the drought emergency terms pursuant to the District's TUCP will allow SCWA and the District to retain valuable surface water in storage.

An urgent need exists for the changes to the place of use and the 100-acre increase in the net acreage limitation within the gross place of use for irrigation purposes because the affected acreage has no other source of water in 2014 and, absent deliveries from the District, would experience damage or loss of permanent crops.

5.2 No Injury to Any Other Lawful User of Water

The addition of the drought emergency terms to Permit 12947B will have the effect of conserving storage in Lake Mendocino and therefore does not have the potential to injure any other lawful user of water.

The changes to the place of use and the 100-acre increase in the net acreage limitation within the gross place of use for irrigation purposes will be served under this order using water that was previously diverted to storage in Lake Mendocino pursuant to the terms and conditions of Permit 12947B. No other lawful users of water are entitled to this water. Accordingly, the place of use adjustments will not result in injury.

5.3 No Unreasonable Effect upon Fish, Wildlife, or Other Instream Beneficial Uses

The addition of water conservation terms will not have any unreasonable effect upon fish, wildlife, or other instream beneficial uses. The terms will result in a greater amount of storage in Lake Mendocino and more efficient and consistent releases from storage by SCWA due to demand forecasting.

The changes to the place of use and the 100-acre increase in the net irrigable acreage within the gross place of use will be served under this order using water that was previously diverted to storage in Lake Mendocino pursuant to the terms and conditions of Permit 12947B. Accordingly, these changes will not result in a decrease in natural and abandoned flows in the Russian River. It is possible that these changes will reduce storage in Lake Mendocino, thereby affecting slightly the availability of stored water to support flows later in the summer and fall. The District has consulted with National Marine Fisheries Service and California Department of Fish and Wildlife and reported that both agencies are supportive of the District's TUCP. In addition, given the amount of water involved (20 acre-feet) is small as compared to the amount of water previously conserved by the District, and the amount of water that will be conserved due to the addition of the drought emergency terms. Under these circumstances, and taking into consideration the potential for loss of permanent crops, any effects to fish, wildlife, or other instream beneficial uses due to a slight decrease in storage is reasonable.

According to the District, the place of use changes will not result in conversion of any land, but will be limited to continued historical uses on lands that are currently used for agriculture and irrigated within the boundaries of the District service area. Therefore, no effects to fish, wildlife, or other instream beneficial uses are anticipated as a result of the temporary changes in the place of use. To further ensure the place of use changes will not cause unreasonable effects, approval of the TUCP will be subject to terms limiting new service contracts during the term of this order to areas of permanent crops that have been historically irrigated for agriculture, prohibiting take of threatened and endangered species, and reserving State Water Board authority pursuant to Water Code Section 1439 to supervise diversion and use of water under this temporary change order.

5.4 The Proposed Change is in the Public Interest

The addition of drought emergency terms will help conserve stored water in Lake Mendocino. Conservation of stored water in Lake Mendocino is in the public interest and will insure that critical water supplies continue to be available through 2014. The changes to the place of use and the 100 acre increase in the net acreage limitation within the gross place of use for irrigation purposes will prevent the damage or loss of permanent crops. These changes will not result in injury to other legal of users of water or unreasonable effects to fish, wildlife, or other instream beneficial uses for the reasons stated above. Accordingly, these changes are also in the public interest.

6.0 CONCLUSIONS

The State Water Board has adequate information in its files to make the evaluation required by Water Code section 1435. The findings of this Order are based on unique circumstances created by the drought, and are intended to support only approval of the District's TUCP. Separate findings will need to be made to support approval of the long term change petition filed by the District on May 14, 2014 pursuant to Chapter 10 of Division 2 of Part 2 of the Water Code.

I conclude that, based on the available evidence:

1. The permittee has an urgent need to make the proposed changes;

2. The petitioned changes will not operate to the injury of any other lawful user of water;

3. The petitioned changes will not have an unreasonable effect upon fish, wildlife, or other instream beneficial uses; and,

4. The petitioned changes are in the public interest.

ORDER

NOW, THEREFORE, IT IS ORDERED THAT: the Petition filed by Mendocino County Russian River Flood Control and Water Conservation Improvement District for a temporary urgency change in Permit 12947B is approved and effective until 180 days from the date of this Order.

All existing terms and conditions of the subject permit remain in effect, except as temporarily amended by the terms set forth below. Provided that SCWA's TUCP filed on August 14, 2014 is approved and remains in effect, the District shall comply with the following three terms:

1. Provisions for Real Time Forecasts of Diversions
   District is currently implementing real time metering of customer diversions. Although the District currently does not have the ability to forecast all diversions by its customers in real time, the District shall work with its customers to develop a real-time forecasting plan that will assist SCWA in managing releases of water from Lake Mendocino to meet minimum instream flow requirements with as small of an operational buffer as possible while this Order and the State Water Board Order approving the TUCP filed by SCWA on August 14, 2014 are in effect.

   To develop this plan, the District shall hold a meeting of all of its customers within seven days after the date of this Order, and using the input from its customers that the District receives during this meeting, the District shall prepare a plan for providing real time one-day and three-day forward forecasts of its customers' diversions to SCWA. The goal of this plan shall be to provide these forecasts of diversions by the District's customers from the Russian River or its underflow with at least three-fourths of the total amount of water that is subject to the District's contracts.

   The District shall file this plan with the State Water Board, and submit a copy of this plan to SCWA, within 14 days of the date of the State Water Board's approval of this Order. The District shall begin to implement this plan immediately after the District files it with the State Water Board. The District shall continue to implement this plan while this Order is in effect.

2. Plan for Reductions in Diversions
As additional information is received, the District shall provide copies of updated demand reduction tables to the State Water Board depicting demand reductions achieved pursuant to the mandatory 25 percent reduction in contract deliveries that the District has imposed.

The District shall hold a meeting of its customers within seven days after the date this Order, and, during the meeting and through written correspondence, provide its customers with information about the drought emergency and the District's TUCP, and request sufficient reductions in its customers' diversions to achieve at least 20 percent reductions in their diversions (using the baseline defined in Standard Permit Term U) while this Order is in effect.

The District shall implement the requirements imposed by State Water Board Standard Permit Term U in accordance with a Water Demand Reduction Plan that the District will prepare and file with the Deputy Director for Water Rights within 14 days of the date of this Order, for review and approval by the Deputy Director for Water Rights. The plan shall be designed to ensure that all parties that beneficially use water diverted or stored under the District's water right Permit 12947B will implement actions to meet reductions in all of their diversions of at least 20 percent of their baseline water demands (as defined in Term U).

3. Long-Term Drought Contingency Plan
The District shall develop a long-term drought contingency plan in cooperation with SCWA. This plan will contain the following provisions (a) protocols for real-time one-day and three-day advance forecasts of total diversions by all of the District's customers under all bases of right, to facilitate SCWA's operations with releases of Lake Mendocino stored water with minimal operational buffers; (b) protocols for achieving reductions in the total diversions by each District contractor during future droughts; and (c) annual reporting to the State Water Board of the total monthly amounts of water diverted by each District contractor under its contract with the District (with the report for each year to be filed by June 30 of the following year). The District shall file this plan with the State Water Board within six months after the date of this Order.

4. The description of the place of use for irrigation in Term 3 of Permit 12947B is modified as follows:

The place of use for irrigation purposes shall be represented by the map filed with the State Water Board entitled Proposed Change in Place of Use for Irrigation dated December, 2013. The net limitation within the gross place of use for irrigation shall be increased to 4,196 acres.

5. Standard Permit Term U:
The temporary changes authorized by term 4 of this Order are not effective unless District is operating in accordance with a Water Demand Reduction Plan (Plan) satisfactory to the Deputy Director for Water Rights. The Plan shall be designed to ensure that all parties that beneficially use water diverted and/or stored under this right implement actions to meet a water demand reduction of a minimum of 20 percent of the baseline water demand. The Plan shall define baseline water demand as appropriate for the District's situation based on considerations such as weather, economy, wholesale supplier allocations or other relevant information. For the purpose of compliance with this term, if the Plan does not define baseline water demand, it is assumed to be the average water demand: 2013.

The Plan shall include, at a minimum, the following components:

a. All parties that beneficially use water diverted and/or stored under this right and/or parties otherwise subject to the temporary change(s) authorized by this Order;

b. Baseline water demand for all parties included in (a) above;

c. Existing actions and additional actions planned by each party included in (a) above to reduce water use in order to meet the water demand reduction required by this term, including a description of how such actions can be expected to meet the demand reduction. The Plan shall also identify additional actions to be implemented, in the event that the District does not attain the amount of water use demand reduction relative to baseline water demand;

Additional actions to be considered include, at a minimum, those recommended in any applicable Governor's Drought Proclamation as applicable to the Districts operations, and determine if implementation of such action(s) may increase conservation of their water supply. If so, the District will either implement the recommendation(s) or provide documentation as to why such action is not reasonable for the District's situation. Actions to evaluate include, but are not limited to, 1) Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes; 2) Turn off fountains and other decorative water features unless recycled or grey water is used for those water features, 3) Limit vehicle washing at home by patronizing local carwashes that use recycled water; 4) Limit outdoor watering of lawns and landscaping to no more than two times a week; 5) Recreational facilities, such as city parks and golf courses, and large institutional complexes, such as schools, business parks and campuses, should immediately implement water reduction plans to reduce the use of potable water for outdoor irrigation; 6) Commercial establishments such as hotel and restaurants should take steps to reduce water usage and increase public awareness of the drought through measures such as offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets; 7) Professional sports facilities, such as basketball arenas, football, soccer, and baseball stadiums, and hockey rinks should reduce water usage and increase public awareness of the drought by reducing the use of potable water for outdoor irrigation and encouraging conservation by spectators.;

Additional actions to be considered include, but are not limited to, those associated with on farm conservation, such as irrigation scheduling, tailwater recovery systems, and irrigation system improvements, and irrigation district system improvements, such as canal lining, canal structure improvements, and remote measurement, monitoring and control. District shall determine if implementation of such action(s) may increase conservation of water supply. The District will either implement action(s) or provide documentation as to why such action is not reasonable for the District's situation.;

d. For parties included in (a) above over which the District has the authority or other ability to impose the listed water demand reduction actions, a list of such parties and a description of such authority or other ability over each party;

e. For parties included in (a) above over which the District does not have the authority or other ability to impose the listed water demand reduction actions, a list of such parties, a description of the efforts of the District to coordinate with each of the listed parties to ensure that each party take appropriate action to reduce water demand, and a description of such actions for each party;

f. A detailed schedule with planned completion dates for key events.

District shall submit to the Deputy Director for Water Rights a written report within 15 days of the end of each month (monthly status update) that provides a summary of compliance with this term. The monthly status update shall, at a minimum, include a description of the District's actions to date to comply with the requirements of this term and the results of such actions, including but not limited to the amount of water demand reduction relative to baseline water demand. The data submitted for the amount of water demand reduction shall include both monthly and aggregate annual to date

information and shall be compared to baseline water demand. When the monthly status update reflects that the District is not achieving the minimum water demand reduction of this term, the District shall also include additional actions the District has adopted and/or implemented to meet the demand reduction and identify the date when such additional actions will be fully implemented as part of the monthly status update.

Failure to achieve demand reduction may result in modification of this Order to limit the extent of the approved action, at the discretion of the Deputy Director for Water Rights.

6. No water shall be served to new customers in the place of use areas added under the temporary changes authorized by this order unless the District has submitted documentation verifying the use will be consistent with the conditions described in the TUCP. These conditions limit new service to existing permanent crops. At a minimum, verification documentation shall include, but is not limited to, photographic evidence of permanent crops, descriptions of previous water supply, and signed statements by the customer(s) committing to limit irrigation under Permit 12947B to existing permanent crops.

7. This Order does not authorize any act that results in the taking of a candidate, threatened or endangered species, or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A sections 1531 to 1544). If a "take" will result from any act authorized under this Order, the permittee shall obtain authorization for an incidental take permit prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the temporary urgency change authorized under this Order.

8. The State Water Board reserves jurisdiction to supervise the temporary urgency change under this Order, and to coordinate or modify terms and conditions, for the protection of vested rights, fish, wildlife, instream beneficial uses and the public interest as future conditions may warrant.

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:

Barbara Evoy, Deputy Director
Division of Water Rights

Dated: AUG 25 2014

13

ITEM #13

MEMORANDUM

To: Board of Directors August 29, 2014

From: Drew McIntyre, Chief Engineer

Re: Marin County Club Golf Course 2014 Recycled Water Feasibility Study Update – Draft Report

R:\Folders by Job No\2700 jobs\2775\MCC RW Draft Feas Study BOD Memo 9-14.doc

RECOMMENDATION: None – Information Only

FINANCIAL IMPACT: None – applicant funded

Background

Marin County Club is located at 500 Country Club Drive, south of Ignacio Blvd. in the southern Novato Zone 2 hydraulic zone. The 72 acre golf course and club house facilities were originally constructed in 1958 and a Water Service Agreement to provide a 1.5" domestic meter for the club house and pool was approved by the Board the same year. In 1999, an additional 1.5" domestic water service and 4" fire service was approved by the Board for the MCC clubhouse/pool and renovation project. On April 5, 2005, the Board approved a Water Service Agreement that entitled MCC to 58 equivalent dwelling units (EDUs) of water from an existing 1" service located on Verde Drive. This service was originally installed on August 10, 1977 to provide 3 EDUs to supplement MCC's locally supplied on-site irrigation water.

MCC has six man-made lakes throughout the golf course along the Arroyo San Jose water course. The combined seasonal storage within the six lakes is relatively small (24 acre feet or approximately eight million gallons). This volume represents approximately 12% of a normal year irrigation water requirement. In addition to these six on-site lakes, MCC also has an on-site well which consistently produces about 65 gallons per minute (gpm) throughout the summer. Existing local supply is adequate to supply approximately 90% of the golf course irrigation demand during normal rainfall years and significantly less during major drought years.

2014 Feasibility Study Update

The initial MCC Recycled Water Feasibility Study was approved by the Board at the September 7, 2004 meeting. Almost ten years has elapsed since the original Feasibility Study and in 2013 MCC requested an update to incorporate recent recycled water expansion in the Novato North and South Service Areas (as well as the planned Central Service Area expansion) and develop new updated costs associated with potential expansion of recycled water to MCC Golf Course.

At the January 7, 2014 meeting, the Board authorized an agreement with Nute Engineering's to update the 2004 Marin County Club (MCC) Golf Course Recycled Water Feasibility Study in the amount of $10,000 (paid in full by MCC). The draft Feasibility Study (Attachment 1) was completed in May 2014 and has subsequently been undergoing review by both MCC and NMWD Staff. An oral presentation by Mr. Ed Nute, Nute Engineering, will take place at the meeting to summarize the draft report. The 2014 Study identifies four alternatives for extending recycled water along Ignacio Blvd to the MCC Golf Course site. Three alternatives (Alternatives A, B and C) are an extension of NMWD's planned Central Service Area Expansion (with NSD as a partner). The fourth alternative (Alternative D) is an extension of NMWD's South Service Area (with LGVSD as a partner). At this time, the lowest cost and preferred option is Alternative C, which extends a pipeline from the south end of the Central Service Area along the west side of Highway 101 (substantially within the City Bike Path alignment within Caltrans Right-of-Way) and connects to the out of service 0.5 million gallon Norman Tank (near Entrada Drive) before running west on Ignacio Blvd to MCC (see Figure 3 of Nute report).

Path Forward

MCC and NMWD staff have been discussing joint participation in the Recycled Water Central Service Area Expansion project with the intent to construct an Ignacio Area Extension similar to that depicted in Alternative C in the 2014 Feasibility Study Update. Staff sent MCC a draft memorandum of understanding (MOU) on August 29 2014 outlining key terms and conditions for discussion purposes only with the understanding that any final terms and conditions would necessitate input from both MCC and NMWD Boards. If there is progress on the draft MOU it is possible that it could come back to the NMWD Board for review at the October 7 2014 meeting.

NORTH MARIN WATER DISTRICT

FEASIBILITY STUDY TO PROVIDE RECYCLED WATER TO THE

MARIN COUNTRY CLUB GOLF COURSE UPDATE

NMWD Job No. 1.2775.00

May 2014

INTRODUCTION

The Marin Country Club (MCC) maintains an eighteen hole golf course in the Ignacio area of Novato. Most of the time irrigation water is supplied from MCC's own sources, which include a well and a significant amount of runoff and spring water which is captured in their six storage ponds. These ponds are maintained for aesthetics as well as for water capture and storage prior to irrigation.

In years with low rainfall the MCC water supply becomes short at the end of the summer and early fall until the weather cools and rains resume. During some dry periods MCC purchases water from the North Marin Water District (NMWD) to augment water in their ponds. MCC also takes measures to minimize their water usage to get through these dry periods.

Recently, NMWD developed two recycled water distribution systems, one serving the north Novato area and the other serving the Hamilton areas in the south Novato. A Phase 2 extension of the distribution system to serve the central Novato area is now being planned.

However, even with the planned pipeline extension both distribution systems will still not be close to the MCC golf course. If recycled water could be brought to the MCC golf course the water could be used for golf course irrigation.

Recycled water service to the Ignacio area including MCC and the Indian Valley College has been projected in the NMWD recycled water master planning. A pipeline extension to MCC would need to be routed in the most cost effective manner including maximizing the recycled water customer base.

In order to determine the feasibility of providing recycled water to the MCC golf course it will be necessary to extend a recycled water line in a route that will provide recycled water to the maximum number of customers in the most cost effective manner.

This study was requested and funded by MCC.

STUDY OBJECTIVE

The objective of this study has been to update the 2004 Feasibility Study for supplying recycled water to the MCC golf course which includes determination of the potential recycled water demand, projection of the most feasible pipeline route and estimating the capital costs for extending a recycled water pipeline to serve MCC.

BACKGROUND

The Recycled Water Master Plan prepared for the NMWD in 2004 analyzed the feasibility of constructing a recycled water system to serve landscape irrigation customers in the Novato Area. The Master Plan identified pipeline routes which would deliver recycled water to a maximum number of potential landscape irrigation customers.

The Phase 1 project involved providing recycled water to the Stonetree Golf Course. The recycled water treatment facility was constructed in the Novato Sanitary District (NSD) reclamation area and a pipeline was constructed to the Stonetree Golf Course which stored the recycled water in an on-site pond.

In 2006 an Implementation Plan was prepared which revised the Master Plan to take into account some changes including relocation of the recycled water treatment facility from the NSD reclamation area to the Novato treatment plant. The existing Phase 2 and proposed Phase 3 recycled water distribution systems are shown in Figure 1.

Based on the Implementation Plan two separate recycled water projects have now been constructed. In the north area recycled water is produced at the NSD treatment plant located at the end of Davidson St in Novato and a Phase 2 of the distribution pipelines has been constructed to serve customers along Olive Ave to Fireman's Fund. In the south area recycled water is produced at the Las Gallinas Valley Sanitary District treatment plant and distribution pipelines have been constructed to serve customers in the Hamilton area. A storage tank has been incorporated into each system.

A Phase 3 recycled water distribution pipeline project is now planned which will serve customers in central Novato including the Vintage Oaks shopping center together with schools and home owners associations on the west side of Highway 101 to South Novato Blvd. Funding of this project appears to be possible in the near term.

For the Ignacio area of Novato including MCC, the Master plan envisioned extending the south area pipelines from the Hamilton area to serve irrigation customers along Ignacio Blvd and extending up to the San Jose Middle School and the Indian Valley campus of the College of Marin. However, if the Phase 2 project from the Novato Sanitary District treatment plant is constructed it may be more cost effective to extend a pipeline from the NSD Davidson St. treatment plant to serve MCC and other customers in that area.

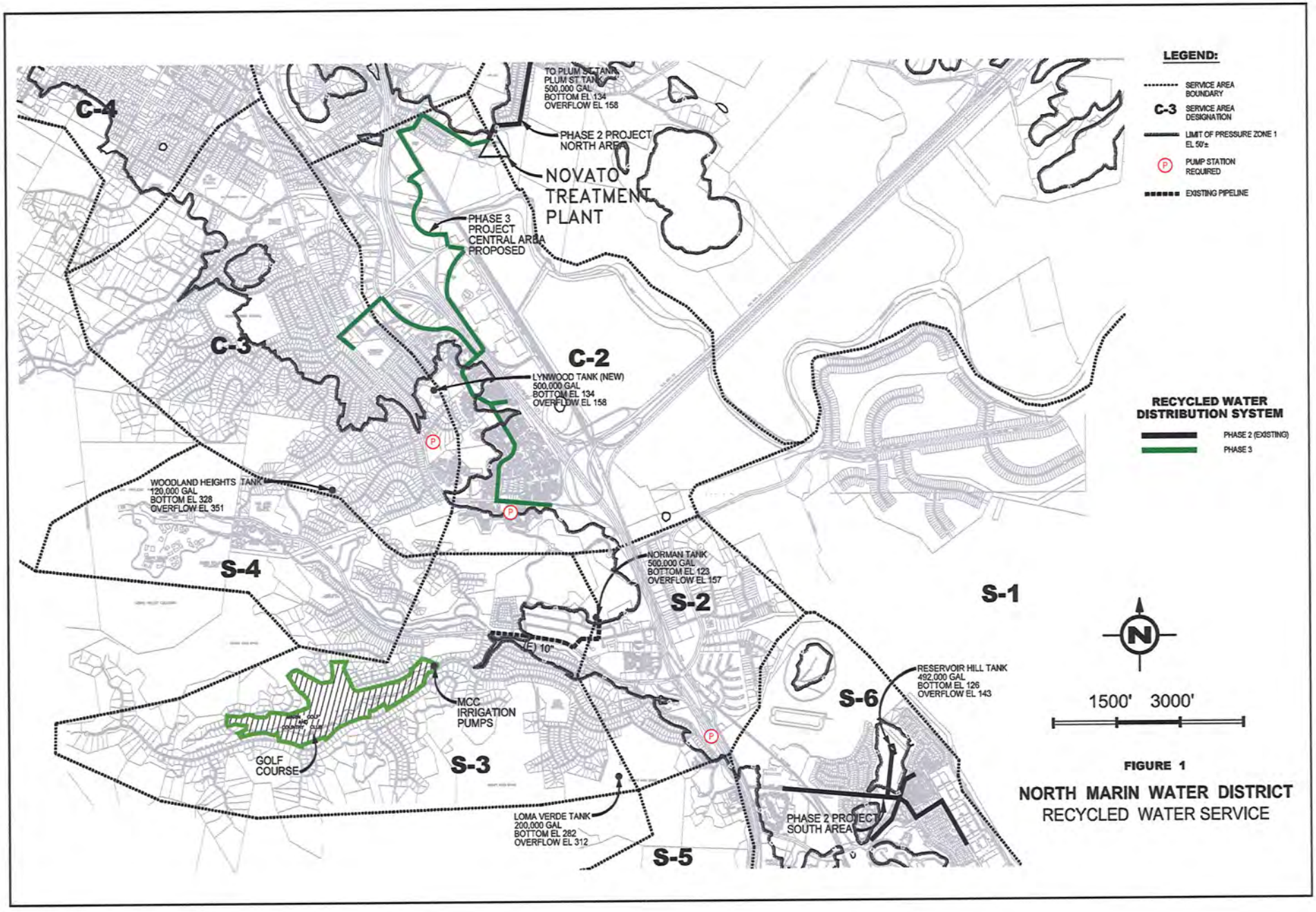


FIGURE 1

NORTH MARIN WATER DISTRICT
RECYCLED WATER SERVICE

In the MCC area there are several facilities in the NMWD system which are no longer used and could be incorporated into a recycled water system. These facilities include three storage tanks, a 10" pipeline crossing Highway 101 and 2,100 feet of a 10" pipeline on Ignacio Blvd.

MCC GOLF COURSE

The MCC golf course stretches for about a mile along the Arroyo San Jose in Ignacio. For most of its length private residences back up to the golf course. At the present time approximately 58 acres of the golf course are irrigated. The MCC golf course and storage lakes are shown in Figure 2.

As it traverses through the golf course the creek has been dammed off to form a series of six lakes. These lakes have a total surface area of around 6 acres and an average depth of 8.7 feet. The maximum storage volume of the lakes is 52 acre feet (AF). During an average year the lakes evaporate around 16 AF of water.

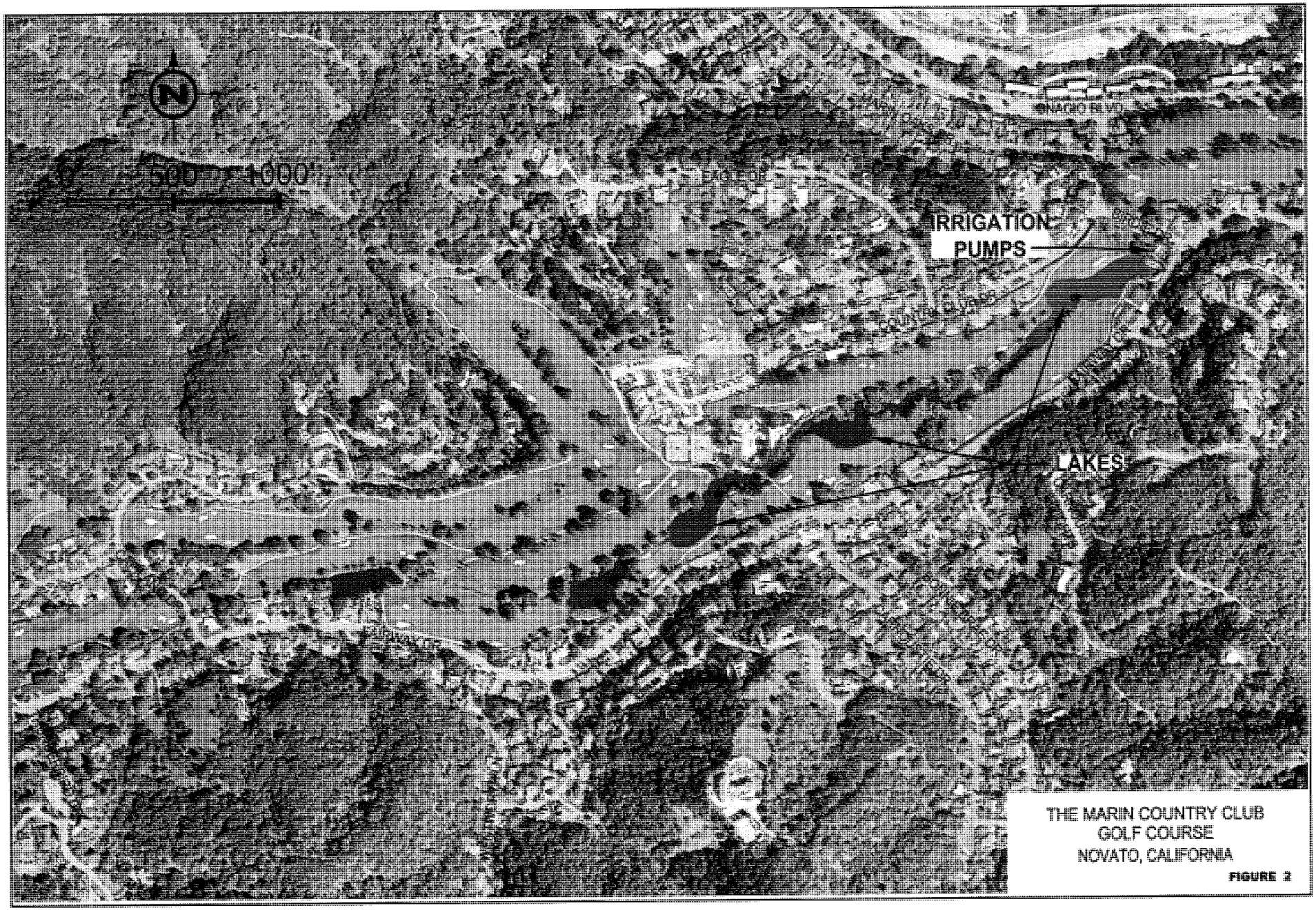
The golf course is irrigated by a fixed irrigation system with automatic control of the sprinkler heads. Water is drawn out of the lowest lake by two irrigation pumps, which pressurize the irrigation system. The lakes are not lined and some water is lost because it enters the groundwater. A well, located downstream of the lowest lake, is used to return groundwater to the lakes so it can be used for irrigation.

During drought years MCC has purchased supplemental water from NMWD and added it to the lakes so it could be used for irrigation. Supplemental water is sometimes needed late in the irrigation season during the months of August, September and October. During the hot summer months the greens must be irrigated daily, however, by October the weather usually cools so the frequency of green irrigation can be reduced to as little as once every three days.

GOLF COURSE IRRIGATION WITH RECYCLED WATER

As described in the 2004 Feasibility Study, irrigation of golf courses with recycled water is a well-established practice in California. The California Department of Public Health (CDPH) has established treatment standards for recycled water, to protect the public health. This means that with appropriate restrictions and management practices recycled water may be used for irrigating golf courses and other landscaped areas including parks and school yards.

The mineral quality of the effluent from the Novato Sanitary District (NSD) treatment plant can generally be characterized as having either no restriction on landscape irrigation use or slight to moderate restriction (Reference 1, Section II). Residual chlorine in recycled water is also not a concern since it readily volatilizes and dissipates as the water is sprayed.



THE MARIN COUNTRY CLUB
GOLF COURSE
NOVATO, CALIFORNIA

FIGURE 2

Golf course operators have successfully developed management practices which allow them to use recycled water as a complete replacement for irrigation with potable water. Good plant/water/soil management and good maintenance play key roles in the success of golf course irrigation, with or without the use of recycled water. With proper management, recycled water runoff to waterways from the Novato area should pose few difficulties although the greens supervisor should be trained and experienced with management of golf course irrigation with recycled water.

The Stonetree golf course in Black Point has been using recycled water for irrigation since 2007. Stonetree is underlain by residual bay muds, which have a high clay content and are poorly drained. The soils at the MCC golf course are alluvium soils, which should drain better than bay mud. At Stonetree the recycled water is stored in on-site ponds and then irrigated at night using on-site pumps. Unlike the ponds at Stonetree, which are isolated from any water course, the MCC golf course ponds were constructed by damning off the Arroyo San Jose Creek and will not be available for storage of recycled water as discussed below.

ADDITION OF RECYCLED WATER TO THE MCC PONDS

MCC is generally able to supply its own irrigation water from six storage ponds along Arroyo San Jose augmented by a downstream well. MCC purchases some supplemental potable water from NMWD approximately in one half of the summer irrigation periods. This potable water is added to the lowest pond where it is picked up by the irrigation pumps.

Recycled water is derived from treated wastewater and its use and discharge to water courses is regulated. The CDPH regulates the bacteriological quality to protect public health and the California Regional Water Quality Control Board (RWQCB) regulates discharges to the environment. The RWQCB is concerned about heavy metals and nutrients, which may harm the environment and marine species but which do not have any adverse effect on irrigation use. NSD is not allowed to discharge its treated effluent during the summer months. When discharge is allowed the effluent is pumped through their outfall to San Pablo Bay. Recycled water is NSD's treated effluent which is further treated to comply with the Title 22 bacteriological standards as established by CDPH. However, this further treatment does not finally eliminate the RWQCB's continued regulation of this water if it is proposed to be discharged to water courses.

When recycled water is used for landscape irrigation the RWQCB regulations require good management and which prohibit any runoff of the irrigation water to any impoundments or water courses. Care will need to be taken to make sure that there is a separation between the sprinkler heads and the ponds or the creek.

MCC's existing storage ponds are constructed in the Arroyo San Jose, which is a water course. During the summer this water course is dry but when it rains the water stored in the ponds will flow downstream and eventually get to the bay. If recycled water were added to the "in stream" ponds there would most likely still be some residual recycled water at the end of the irrigation season which would flow into the creek when it starts raining.

According to Blair Allen at the RWQCB the discharge of recycled water to "in stream" storage ponds is an unresolved issue. As soon as the recycled water flows down the watercourse it comes under the jurisdiction of Federal NPDES permit requirements which prohibits such a discharge even though water quality impacts may be low or non-existent.

Steve Moore of the State Water Board was a little more optimistic and responded that "the golf course will need to develop an O&M plan which could be a basis for allowing storage in the stream system itself. However, recycled water directly in the water body is problematic from a permitting standpoint unless an NPDES permit establishes protective levels; the low level effects of effluent in an undiluted setting, such as salt and nutrient levels, as well as chloramine in the short term, could exceed triggers that are designed to protect from excessive algal growth, toxicity or TDS."

Under the current drought conditions there may be pressure on the State to address this policy in order to facilitate the use of recycled water.

In the case of the Stonetree golf course at Black Point the storage ponds are used to store recycled water. One benefit of using an on-site pond to store recycled water is the reduced demand on the recycled water pipeline and delivery system. The recycled water can be added to the ponds over a 24 hour period through a smaller diameter pipe and the irrigation pumps can pressurize the system and irrigate over a 6 to 8 hour period.

MCC GOLF COURSE RECYCLED WATER DEMAND

MCC is able to purchase limited potable water from NMWD through a 1" meter. The potable water is discharged to the lowest pond in the golf course where the irrigation pump can pick it up for irrigating the golf course. At the present time the NMWD's water allocation to MCC is based on an equivalent 58 EDU's which amounts to a water use to around 17 AF, which is around 11% of MCC's estimated annual irrigation water demand.

Table 1 summarizes the MCC supplemental water usage based on the meter readings for the nine years from 2005 to 2013. MCC used supplemental water during only five of the nine years with a peak usage in 2013 of 23.49 AF. It is difficult to predict the amount of supplemental water that will be needed by MCC for any given year because it depends on the amount of creek water that can be stored and the amount of groundwater that can be pumped.

Table 1 – MCC Supplemental water usage from NMWD

Calendar Year	Total Usage	
	Gallons	ac-ft
2013	7,932,472	24.28
2012	1,794,452	5.49
2011	0	0
2010	0	0
2009	4.995,892	15.29
2008	6,260,280	19.16
2007	5,630,196	17.22
2006	0	0
2005	0	0

In the September 2004 MCC Feasibility Study (Reference 2) the highest supplemental water usage over the prior 16 years was 30.8 AF in 1987. At that time MCC added water to their ponds from a fire hydrant discharging through a meter and a 2" diameter fire hose.

A major difference between using potable water and recycled water for irrigating the MCC golf course is that the RWQCB does not currently allow recycled water to be stored in the on-site ponds within Arroyo San Jose. This means that when recycled water is being used for irrigation it must come directly from the NMWD recycled water system.

According to Kevin Pryseski, Golf Course Superintendent, the summer peak irrigation pumping rate is 1,400 gpm at 150 psi for four hours at night. This amounts to a total of 336,000 gallons each day. Irrigation hours are between 10 PM and 5 AM, which is actually a seven hour window of time. Thus it may be feasible to adjust the MCC irrigation pumps so they could irrigate over a 7 hour period at 800 gpm. This would reduce the size of the recycled water pipeline needed to provide this peak water flow.

If MCC were to irrigate only with recycled water then the monthly usage will follow the hot weather season, starting in May and ending in October. On the basis of 336,000 gallons of irrigation demand for the average day in the peak month the annual usage would be 155 AF. This calculation is based on the assumption that 20% of the annual irrigation water is required during the peak month. If recycled water were to be used only as supplemental water it will be difficult to predict the quantity and timing of the recycled water use during the irrigation season.

For comparison purposes the Stonetree golf course in Black Point used about 193 AF of recycled water in 2013.

SOUTH SERVICE AREA PROJECTED RECYCLED WATER USAGE

MCC is located in the NMWD Recycled Water Master Plan Service Area S-3. A recycled water pipeline to serve MCC could also serve customers in Ignacio Service Areas S-2 and S-4. Irrigation customers in portions of Service Areas C-3 and S-6 might be served depending on the pipeline route. The service areas and the locations of potential customers are shown in Figure 1.

Projections of the irrigation water usage of potential customers in the MCC area has been updated by NMWD and are listed in Appendix A and summarized Table 2 below.

Table 2 – Summary of Potential Irrigation Water Use by Service Area

Service Area	Annual AF/yr	Avg day gpd	Peak day gpd	Peak hour gpm
S-2	29.47	64,009	108,814	223
S-3	51.39	272,386	463,055	1,061
S-4	51.48	111,814	190,084	389
Totals	132.34	448,209	761,953	1,673

BASIS FOR ESTIMATING COSTS

The project costs for the four alternatives are based on projected 2015 costs using the following assumptions:

- Pipeline costs based on the construction costs of recycled water pipelines installed in NMWD's South Service Area Recycled Water Expansion project and escalated cost to the 2014 construction season are as follows: 8" diameter = $190/LF and 12" diameter = $200/LF. (See Appendix B)
- Construction of a double containment for a water line in Caltrans bike path is estimated to cost an additional $50/LF.
- Tank upgrade costs are assumed to be as stated.
- Pumping station costs are assumed to be as stated.
- Construction contingency = 20% of construction cost
- Planning, design and construction management = 25% of total construction cost including contingencies.

The estimated project costs should be escalated 3% per year to the construction year.

RECYCLED WATER SYSTEM EXTENSION

The extension of the NMWD recycled water system to serve MCC will need to be designed to provide sufficient recycled water for the other potential irrigation customers in the area. Extension of the NMWD recycled water system to the Ignacio area could come from the future Phase 3 system expansion from the north, which will serve central Novato or it could be brought in from the south through system now serving the Hamilton area. The best route for a

pipeline extension will depend on the economics consisting of the cost of the pipeline, the cost of pumping and the cost of storage.

In order to keep the pipeline into the MCC area a reasonable size it would be best to provide local storage. This would allow a storage tank to be filled throughout the non-irrigation period so it could augment the recycled water needed for the night's irrigation.

As shown in Table 2 the projected peak day demand for all three service areas, S-1, S-2 and S-3 in the MCC area is 761,953 gallons for all the identified potential recycled water customers. A storage tank of 508,000 gallons could be filled over a 16 hour period to augment the irrigation demand which will occur over a 6 to 8 hour period at night.
Service Areas S-3 and S-4 rise substantially in elevation toward the west. At the easterly boundary of S-3 the elevation of Ignacio Blvd is about 40 feet and the MCC irrigation pumps are at an elevation of about 90 feet. On Ignacio Blvd the easterly boundary of S-4 is about 82 feet and then rises to 127 feet to the intersection with Sunset parkway. The easterly boundary of the College of Marin campus is elevation 148 and rises to elevation 221 at the playing field on the westerly boundary of the campus. Recycled water service to these areas will require establishment of a second pressure zone requiring additional pumping and possibly a high level storage tank.

STORAGE TANKS

There are three surplus tanks in the NMWD system which could potentially be used for storage of recycled water in the Ignacio area. The tanks have various storage capacities and elevations and will be various distances from the proposed recycled water pipelines as described below.

- **Norman Tank**: Capacity 500,000 gallons, bottom elevation 123, overflow elevation 157 (District standard NAVD 1927). Location: north of Norman Drive, east of Palmer Drive on the border of service areas S-2 and S-3. The Norman tank will require interior coating and possible pitting repairs, exterior coating and the addition of flexible connection at pipe connections together with miscellaneous repairs. The estimated cost of these repairs is $600,000. The Norman tank would only be useful in serving the lowest pressure zone, i.e. Zone 1. The Norman tank is basically the same elevation as the 500,000 gallon Plum St. tank in the north so that if it were connected to the recycled water system serving central Novato it would basically double the Zone 1 storage capacity.

- **Loma Verde Tank**: Capacity 200,000 gallons, bottom elevation 282, overflow elevation 312. Location: End of Via Escondida above Calle Arboleda in the south east corner of service area S-3 on the border with service area S-2. The elevation of this tank would provide around 80 psi pressure at the MCC irrigation pumps. The Loma Verde tank could be connected to a recycled water pipeline in Alameda Del Prado. The tank needs painting and other repairs estimated to cost $400,000.

- **Woodland Heights Tank**: Capacity 120,000 gallons, bottom elevation 328, overflow elevation 351. Location: Oak view court east of Sunset Parkway. Although the tank is relatively small it has good elevation and could provide good pressure to service area S-4, which is at the upper end of the valley. The elevation of this tank would provide around 100 psi pressure at the MCC irrigation pumps. The Woodland Heights tank is relatively close to the Sunset Parkway could be connected by a water line constructed up the hill in easements. The tank needs painting and other repairs estimated to cost $300,000 and an 8" pipeline connection to Sunset Parkway would be about 1,300 feet long and cost approximately $250,000.

The Norman tank has the greatest storage capacity but is relatively low and would only serve pressure Zone 1. Ideally in order to avoid additional pumping a pipeline route should be selected what would allow a gravity feed into the Norman tank from the Plum St. tank on the north recycled water system. The Plum St. tank is at essentially the same elevation as the Norman tank.

The Loma Verde and Woodland Heights tanks have good elevation but much less storage capacity than the Norman tank. Both tanks could be used to establish a pressure Zone 2. However because of the small capacity of these two tanks the distribution pipelines into the Ignacio area will need to be at least 12" diameter to accommodate pumped irrigation flows during the nighttime irrigation period from the central or south recycled water systems.

CENTRAL AREA STORAGE

The Phase 1 recycled water system serving the North Novato area incorporated the Plum St. storage tank. This tank has a capacity of 500,000 gallons and with a bottom elevation of 134 and overflow elevation of 158 it establishes pressure Zone 1. As the recycled water system is extended into Central Novato and the MCC area it will be necessary to provide additional storage in order to reduce peak nighttime demands on the treatment and pumping systems.

A storage tank in the Central Novato or MCC area of approximately the same capacity as the Plum St. tank and connected within pressure Zone 1 (without pumping) will be necessary for proper design of the recycled water distribution system serving the Novato area. Two tanks providing a combined million gallons of storage would anchor future expansion of the recycled water distribution system serving the rest of the Central and West Novato areas.

If the MCC area could be connected to the Central Novato distribution system with a pipeline within pressure Zone 1, i.e. which does not require pumping, the Norman tank (capacity 500,000 gallons) can provide the necessary storage for the Central Novato area. If the Norman tank cannot be connected without pumping it will be necessary to provide an additional storage tank in the Central Novato area, ether as the initial project or as a future project.

Although there are no surplus storage tanks in the Central area a new recycled water tank could be constructed adjacent to the two Lynwood tanks on the hill east of Lynwood Drive. This tank could be connected to the Phase 3 distribution system from end of the pipeline which

will serve the Lynwood school. The tank itself will be new and will be constructed adjacent to the existing Lynwood potable water tanks. The site would need to be graded but an access road already exists from Kavon Ct.

- **Lynwood Tank (new)** – The Lynwood tank would be a new tank constructed next to the existing Lynwood potable water tanks on the hill east of Lynwood Dr. This tank would have a capacity of 500,000 gallons and would be at the same elevation as the Plum St. tank on the north system. Together this tank and the Plum St. tank would provide the necessary storage for the Central and North Novato areas and Ignacio.

- **Connection to the Phase 3 Recycled Water System** – The pipeline connecting the Central system from the end of the Phase 3 pipeline at Lynwood school to the new Lynwood tank would be 12" diameter and would run south on South Novato Blvd, turn east for one block on Sunset Blvd, then continue south on Lynwood Dr to Kavon Ct. then run uphill to the new tank.

The estimated cost of the new Lynwood tank and the connection to the end of the Phase 3 recycled water system is given below.

2,280 LF 12" Lynwood School to Kavon Ct.	@$200/LF	$456,000
600 LF 12" Kavon Ct to new Lynwood tank	@$200/LF	$120,000
Estimated 500,000 gallon Lynwood tank		$1,100,000
Estimated construction cost		$1,676,000
Construction Cost with 20% Contingencies		$2,010,000
Planning, design and Const. Management 25%		$500,000
TOTAL ESTIMATED PROJECT COST		$2,510,000

This estimated cost has been incorporated into the cost of the Alternate A project since the pipeline connects at Lynwood School and runs past the Lynwood tank site. However this cost will need to be considered as a necessary additional cost for the Central area project and added to other alternatives which do not incorporate a gravity connection to the Norman tank in the MCC area.

ALTERNATIVE RECYCLED WATER PIPELINE ROUTES INTO THE SOUTH AREA

Recycled water can be brought into the MCC area from either the planned Phase 3 north recycled water system which will serve central Novato or from the existing Phase 2 south recycled water system serving the Hamilton area. A pipeline from central Novato must either go over or around the ridge separating the Novato and MCC areas. A pipeline from the south area would not have to go over a ridge but it would need to cross Highway 101. Alternative recycled water pipeline routes into the MCC area are shown in Figure 3 and described below. The estimated cost of each alternative and the potential recycled water customers along the pipeline route is given in Appendix C and summarized in Table 3. Also shown in Table 3 is estimated project capital cost per AF of recycled water delivered along the pipeline route.

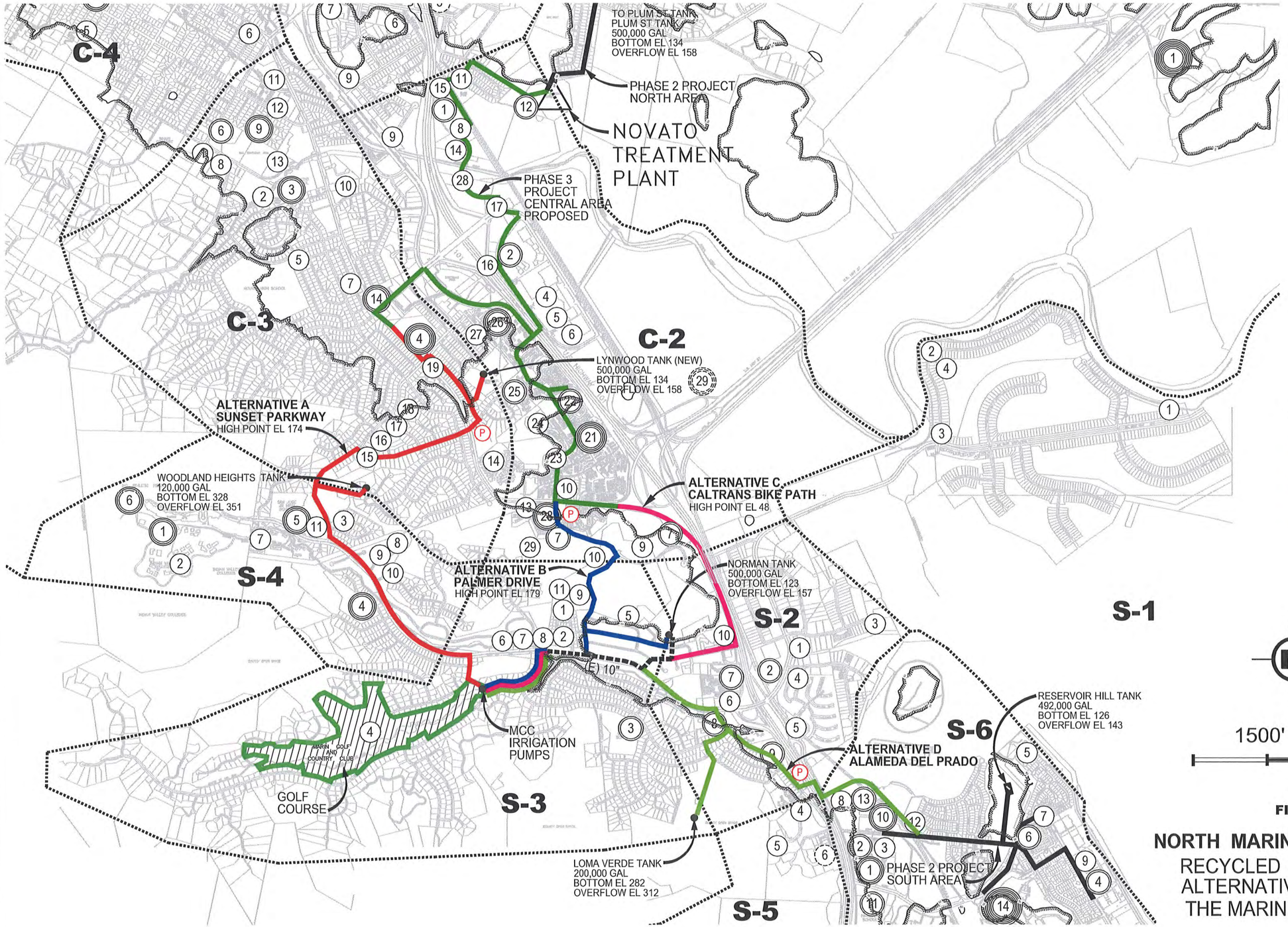


FIGURE 3

NORTH MARIN WATER DISTRICT

RECYCLED WATER SERVICE ALTERNATIVES TO SERVICE THE MARIN COUNTRY CLUB

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TABLE 3
NORTH MARIN WATER DISTRICT
ALTERNATIVE PROJECTS TO SERVE
MARIN COUNTRY CLUB WITH RECYCLED WATER
SUMMARY OF ESTIMATED PROJECT COSTS

ALTERNATIVE	Est Capital Cost	Est Capital Cost/AF
ALTERNATIVE A - Sunset Parkway to MCC	$7,070,000	$62,677/AF
ALTERNATIVE B - Palmer Drive Route to Norman Tank and MCC	$3,780,000	$34,146/AF
ALTERNATIVE C - South Novato Blvd to MCC from Caltrans South	$3,545,000	$28,714/AF
ALTERNATIVE D - Hamilton Spruce Area Pipeline Extension	$4,121,000	$29,499/AF

- **ALTERNATIVE A** – The Alternative A pipeline would begin at South Novato Blvd at the Lynwood school, which will be constructed in the Phase 3 Recycled Water project. The pipeline would then run South Novato Blvd and Lynwood Drive to Kavon Ct where it would connect to a new tank to be constructed on NMWD's existing parcel containing the existing Lynwood potable water tanks. The pipeline would then continue on Lynwood Dr. to Midway Blvd. where it would turn to the west and continue to Sunset Parkway and over the ridge to Ignacio Blvd. A pump station will be constructed near South Novato Blvd to pump over the high point on Sunset Parkway, which has an elevation of 174', and into the Woodland Heights tank to establish a second pressure zone. The Woodland Heights tank has a capacity of 120,000 and a bottom elevation of 351. A spur line off of Sunset Parkway would be needed to connect this tank to the system. This tank would be of insufficient capacity to serve the MCC area. Under this alternative recycled water could be provided to the San Jose Middle School and the MCC.

- **ALTERNATIVE B** – The Alternative B pipeline would begin at the intersection of South Novato Blvd and Redwood Blvd which will be constructed in the Phase 3 Central Novato Recycled Water project. The pipeline would then run south on Redwood Blvd and Palmer Drive to Ignacio Blvd. where it would connect to an existing 10" water pipeline which is no longer needed for potable water service. The existing line runs to the west to Laurelwood Drive. Beyond Laurelwood Drive a new recycled water pipeline would run a short distance to Fairway Drive, then on Fairway Drive to the MCC irrigation pumps at Birdie Drive. The high point on this route is around 180 feet at the intersection of Redwood Blvd. and Palmer Drive. At Tan Oak Way a spur line would be extended to the Norman Tank. The Norman tank has a capacity of 500,000 gallons, which would be sufficient storage to irrigate the MCC golf course. A pump station will need to be constructed in the vicinity of south Novato Blvd. which would pump over the high point. The tank elevation is insufficient to provide adequate

pressure at the MCC so it is assumed that MCC would continue to provide its own pumps to provide the necessary pressure for irrigation. The main disadvantage of Alternative B is that since it will be necessary to pump into the Norman tank it will not be able to be hydraulically connected to the Plum St. tank in the north to establish pressure Zone 1 for north and central Novato.

- **ALTERNATIVE C** – The Alternative C pipeline would begin at the easterly terminus of the Phase 3 Central Novato pipeline on South Novato Blvd then be constructed in the Caltrans bike path which follows the slope above the Ignacio Interchange and around the end of the ridge to Entrada Drive. The pipeline would then run westerly on Entrada Drive to Ignacio Blvd. On Ignacio Blvd the existing 10" pipeline to Laurelwood Dr would be used. Beyond Laurelwood Drive a new recycled water pipeline would run a short distance to Fairway Drive and on Fairway Drive to the MCC irrigation pumps at Birdie Drive. The high point on this pipeline route is around 50', which means that the Norman tank could be used in combination with the Plum St. tank in the north as a part of pressure Zone 1. However, since the Norman tank is only at elevation of 134' and pumping will continue to be required to irrigate the MCC golf course.
  The installation of a recycled water pipeline in the Caltrans bike path would constitute a longitudinal encroachment in their right of way. Longitudinal permits are not readily granted by Caltrans. They will very likely require double containment of a pressurized water main so that if it ruptures the bike path will not be washed out. The bike path is narrow and if another utility is able to secure a longitudinal permit first it will very likely preclude NMWD of using this route.

- **ALTERNATIVE D** – The Alternative D pipeline would originate from the Phase 2 Novato South recycled water system serving the Hamilton area. The pipeline would connect to the existing recycled water pipeline on Hamilton Parkway and follow it to the north and west to Nave Drive. On Nave Drive opposite Safeway the pipeline would need to cross Highway 101 in a new bored and jacked steel casing to Alameda del Prado. A pump station would be constructed on the west side of the highway and connection would be made to the Loma Verde tank by a line via Alameda de la Loma and Calle de la Silva. The Loma Verde tank has a bottom elevation of 282' and would establish pressure Zone 2 to serve customers on the west side of Highway 101. However, the tank capacity is only 200,000 gallons so additional pumping capacity or storage will be necessary to serve the nighttime irrigation demand.

EVALUATION OF ALTERNATIVE PROJECTS

The evaluation of the alternative projects to serve the MCC area and golf course are summarized in Table 4. Included in the evaluation are the estimated project costs, the project cost per AF of water served along the pipeline route and the pros and cons. Also included is the estimated cost of constructing the Lynwood tank for the three alternatives which do not have a gravity connection to the Novato Central Recycled Water system.

A new storage tank will ultimately be needed to provide recycled water storage in the Central area to compliment storage provided in the north area by the Plum St. tank. This tank can be

either a new Lynwood tank or the Norman tank providing the Norman tank can be connected to the Central system without pumping. Only Alternative C, which involves construction of a low level pipeline in the Caltrans bike path provides a gravity connection from the Norman tank to the Central area. Alternative A and B require pumping over the ridge from the Central area so it will be necessary to construct a new storage tank to serve the Central area, such as the Lynwood tank. Alternative D, which comes from the Novato South Recycled Water service area and has no connection to the Central area would still require construction of the Lynwood recycled water storage tank to serve the Central Novato area.

The following are additional observations of the four alternatives:

- Both the Woodland Heights tank and Loma Verde tank could establish pressure Zone 2 in the Ignacio area, however both these tanks are small in relation to the projected water needs.
- A pressure Zone 2 which would be established by either the Woodland Heights or Loma Verde tanks would not provide the 150 psi pressure needed for the MCC golf course irrigation so MCC would still need to provide its own pumps.
- All alternatives would continue to require private pumping at MCC to provide the necessary irrigation system pressure.
- Only Alternative C, in which the pipeline would follow the Caltrans bike path and provide a gravity connection to the Norman tank which would provide the necessary storage for the Central Novato area recycled water distribution system.
- Securing a permit from Caltrans for a longitudinal encroachment in their bike path could be difficult and Caltrans will probably require double containment of the recycled water line. If another utility secures a permit for a longitudinal encroachment permit in the bike path first it will probably preclude NMWD of using this route unless a cooperative arrangement could be worked out.

Based on the evaluation summarized above the most cost effective alternative to serve the MCC area and golf course is Alternative C. This alternative involves constructing a recycled water pipeline in the Caltrans bike path adjacent to Highway 101 from south Novato Blvd. to Entrada Drive. The highest point of this bike path is elevation 50 which means that a gravity connection can be made from the central Novato area to the Norman tank. The Norman tank would provide the necessary storage to compliment the Plum St. tank in the north part of Novato.

The other alternatives will not provide a gravity connection to the Central area, which means that either initially or in the future an additional storage will be required. For the Central area storage it is projected that a new recycled water tank could be constructed adjacent to the existing Lynwood potable water tanks.

RECOMMENDATIONS

It is recommended that NMWD select Alternative C as the best project to serve the MCC area and golf course. This route will allow incorporation of the Norman tank in the Central/North recycled water system. However installing a pipeline in the Caltrans bike path will require a longitudinal permit and possible double containment of the water line. If another utility is able to use the bike path first it will probably preclude NMWD's use unless a cooperative arrangement could be worked out.

APPENDICES

APPENDIX A: Inventory of Existing and Proposed Recycled Water _____
APPENDIX B: Recycled Water Pipeline Projects – Construction Cost Summary
APPENDIX C: Alternative Projects to Serve Marin Country Club with Recycled Water – Estimated Costs

References:

1. Nute Engineering, North Marin Water District and Novato Sanitary District, *Recycled Water Master Plan*, February 2004.

2. Nute Engineering, North Marin Water District, *Feasibility of Providing Recycled Water to the Marin Country Club Golf Course*, September 2004.

3. Nute Engineering and Winzler & Kelly, *Recycled Water Implementation Plan*, May 2006.

APPENDIX A
NORTH MARIN WATER DISTRICT
SOUTH SERVICE AREAS
INVENTORY OF EXISTING AND POTENTIAL RECYCLED WATER USERS
(2007-2012 Average Provided by R. Grisso, NMWD)

		EXISTING WATER USE			
Potential User Name	Type	Ac-ft/yr	Avg day peak month gpd	Peak day gpd	Peak hr gpm
Service Area S-2					
1 Creekwood Prtnrship - 250 Bel Marin	CMI	1.13	2,454	4,172	9
2 Marin Co. Human Soc - 171 Bel Marin	GVT				
3 Bayview Bus. Park - 90 Digital	CMI				
4 City of Novato - 190 Bel Marin	GVT				
5 Caltrans D04 NMWD - 5810 Redwd	GVT	0.69	1,499	2,548	5
6 Galli Square Partnership - 330 Ignacio	CMI				
7 Ignacio Gardens HOA - 15 Salvatore	THC	4.48	9,731	16,542	34
8 Ignacio Hills Irrg - 445 Ignacio Blvd	APTS	12.84	27,888	47,410	97
9 Villa Ignacio HOA - 8 Hector	THC	3.94	8,558	14,548	30
10 Villa Entrada - 520 Entrada Drive	THC	6.39	13,879	23,594	48
Subtotal for Service Area S-2		**29.47**	**64,009**	**108,814**	**223**
Service Area S-3					
1 Marin Glen HOA - 192 Ignacio	SFI	3.93	8,536	14,511	30
2 Marin Glen HOA - 325 Ignacio	SFI	2.94	6,386	10,856	22
3 Novato Uni School Dist 399 Alameda del	GVT	11.46	24,891	42,315	86
4 Marin Country Club (See Note 1)	CMI	90.75	197,647	336,000	800
5 Point Marin HOA 1 Elm View Way	THC	3.00	6,516	11,077	23
6 Fairway Apts. 1000 Fairway Drive	APT	1.00	2,172	3,692	8
7 City Median 119 Ignacio Blvd	GVT	6.37	13,836	23,521	48
8 City Mdeian 123 Ignacio Blvd	GVT	3.25	7,059	12,000	25
9 Belleterra HOA 100 Palmer Drive	THC	0.92	1,998	3,397	7
10 Belleterra HOA 550 Redwood	THC	0.41	891	1,514	3
11 Belleterra HOA 27 Rowe Ranch	THC	1.13	2,454	4,172	9
Subtotal for Service Area S-3		**125.16**	**272,386**	**463,055**	**1,061**
Service Area S-4					
1 Marin Comm. College Dist 1800 Ignacio	GVT	3.51	7,623	12,960	26
2 Marin Comm. College Dist 1800 Ignacio	GVT	1.84	3,996	6,794	14
3 Novato Uni School Dist 1000 Sunset	GVT	3.05	6,625	11,261	23
4 City of Novato - 571 Marin Oaks (Hoog Park)	GVT	9.40	20,417	34,709	71
5 Novato Uni School Dist 1000 Sunset	GVT	12.92	28,062	47,706	97
6 City of Novato - 1800 Ignacio Blvd	GVT	12.30	26,716	45,417	93
7 Ignacio Creek HOA - 300 Indian Way	THCI	4.71	10,230	17,391	36
8 Point Marin	THC				
9 City Median 1501 Ignacio Blvd	GVT	1.57	3,410	5,797	12
10 City Median 1503 Ignacio Blvd	GVT	1.16	2,520	4,283	9
11 City Median 1718 Ignacio Blvd.	GVT	1.02	2,215	3,766	8
Subtotal for Service Area S-4		**51.48**	**111,814**	**190,084**	**389**
Service Area G-3 - Sunset Parkway Route (Alternative A)					
15, 16, 17, 18 City Median 271, 275, 285, 440 Sunset Parkway	GVT	1.33	2,889	4,911	10
19 City Medians South Novato Blvd.	GVT	1	2,172	3,692	8
Subtotal for Service Area S-4 - Sunset Parkway Route		**2.33**	**5,061**	**8,603**	**18**

Note 1 - MCC currently irrigates at 1,400 gpm for 4 hours during peak days.
If recycled water is provided it is assumed that the irrigation pumps will be reprogrammed to irrigate over a 7 hour period at an equivalent 800 gpm.
The total MCC use is based on the assumed full 100% use of recycled water which is equivalent to a annual water of approximately 91 AF, which is low for a golf course.

APPENDIX B
NORTH MARIN WATER DISTRICT
RECYCLED WATER PIPELINE PROJECTS - CONSTRUCTION COST SUMMARY
2011-2012

North Service Zone

	Contract	Pipe Length
Segment 1	$570,552	5,100
Segment 2	$1,707,286	9,550
Segment 3	$1,609,068	8,450
	$3,886,906	23,100

North Service Area: Cost/LF = $3,886,906 / 23,100 = $168.30

South Service Zone

Phase 1a*		9,874
Phase 1b	$2,032,500	10,065
Phase 2	$1,441,750	8,976
	$3,474,250	19,041

South Service Area Phase 1b and 2 Only: Cost/LF = $3,474,250 / 19,041 = $182.46

*Pipeline was installed mostly in unimproved areas and is not included for this analysis

North and South Zones

North Service Zone	$3,886,906	23,100
South Service Zone	$3,474,250	19,041
	$7,361,156	42,141

Total North and South: Cost/LF = $7,361,156 / 42,141 = $174.68

Escalation to 2014

ENR Index for San Francisco	Aug 2011	10,192
ENR Index for San Francisco	June 2014	11,000

Percent Increase = 7.9%

Cost/LF escalated to mid 2014 = $174.68 x 1.079 = 188.47/LF

Use $200/LF for 2015

APPENDIX C
NORTH MARIN WATER DISTRICT
ALTERNATIVE PROJECTS TO SERVE THE MARIN COUNTRY CLUB WITH RECYCLED WATER
ESTIMATED COSTS

PROJECT ALTERNATIVE					Potential recycled water customers along pipeline route	AF
ALTERNATIVE A - Sunset Parkway Route to MCC						
2,280 LF	12"	Lynwood School to Kavon Ct	$200	$456,000	C-3 - 15, 16, 17, 18, 19	2.33
450 LF	12"	Kavon Ct to Midway Blvd.	$200	$90,000	S-4 - 3, 5, 9, 10, 11	19.72
2,680 LF	12"	Midway Blvd to Sunset Parkway	$200	$536,000	S-3- 4 MCC	90.75
2,590 LF	12"	Sunset Parkway to Ignacio Blvd	$200	$518,000		112.8
3,950 LF	12"	Ignacio Blvd to Country Club Dr	$200	$790,000		
780 LF	12"	Country Club Dr to MCC pumps	$200	$156,000	**PROJECT CAPITAL COST /AF**	**$62,677**
600 LF	12"	Kavon Ct to New Lynwood Tank	$200	$120,000		
Est.		New 500,000 gallon Lynwood Recycled Water Tank		$1,100,000		
Est.		Pumping station in Central Novato (1,340 gpm ultimate)		$400,000		
1,300 LF	8"	Connection to Woodland Heights tank	$190	$247,000		
Est.		Woodland Heights tank restoration (120,000 gal capacity)		$300,000		
		Estimated Construcion Cost		$4,713,000		
		Construcion Cost with 20% Contingency		$5,655,600		
		Planning, Design and Const. Management 25%		$1,414,400		
		TOTAL ESTIMATED PROJECT COST		**$7,070,000**		
ALTERNATIVE B - Palmer Drive Route to Norman Tank and MCC						
4,300 LF	12"	South Novato Blvd to Ignacio Blvd.	$200	$860,000	S-3 - 1, 2, 4 (MCC), 6, 7, 8, 9, 10, 11	110.7
870 LF	10"	Palmer Dr to Laurelwood Dr. (Existing)	$0	$0		
1,800 LF	12"	Laurelwood Dr to MCC pumps	$200	$360,000	**PROJECT CAPITAL COST /AF**	**$34,146**
2,000 LF	12"	Palmer Dr to Norman tank	$200	$400,000		
Est.		Pumping in Central Novato (545 gpm ultimate)		$250,000		
Est.		Norman Tank restoration (500,000 gal capacity)		$650,000		
		Estimated Construcion Cost		$2,520,000		
		Construcion Cost with 20% Contingency		$3,024,000		
		Planning, Design and Const. Management 25%		$756,000		
		TOTAL ESTIMATED PROJECT COST		**$3,780,000**		
ALTERNATIVE C - South Novato Blvd to MCC via Caltrans Bike Path						
3,750 LF	12"	South Novato Blvd to Entrada Drive	$200	$750,000	C-2 -7	12.76
3,350 LF	18"	Double containment pipe - Caltrans bike path	$50	$167,500	S-2 - 10	6.39
1,930 LF	12"	Entrada Dr. to Ignacio Blvd.	$200	$386,000	5-3 - 2, 4 (MCC), 6, 7, 8	104.31
2,100 LF	10"	Entrada Dr to Laurelwood Dr. (Existing)	$0	$0		123.46
1,800 LF	12"	Laurelwood Dr to MCC pumps	$200	$360,000		
250 LF	12"	Entrada Dr to Norman tank	$200	$50,000	**PROJECT CAPITAL COST /AF**	**$28,714**
Est.		Norman Tank restoration (500,000 gal capacity)		$650,000		
		Estimated Construcion Cost		$2,363,500		
		Construcion Cost with 20% Contingency		$2,836,200		
		Planning, Design and Const. Management 25%		$708,800		
		TOTAL ESTIMATED PROJECT COST		**$3,545,000**		
ALTERNATIVE D - Hamilton Service Area Pipeline Extension						
2,450 LF	12"	Hamilton Parkway to Nave Drive	$200	$490,000	S-2 - 8, 9	16.78
500 LF	12"	Nave Dr. to Highway Crossing	$200	$100,000	S-3 - 2, 4(MCC), 6, 7, 8	104.31
350 LF	12"	Highway 101 crossing (Existing)	$500	$175,000	S-6 - 8, 10, 12, 13	18.61
2,650 LF	12"	Alameda del Prado to Ignacio Blvd	$200	$530,000		139.7
2,100 LF	10"	Entrada Dr to Laurelwood Dr. (Existing)	$0	$0		
1,800 LF	12"	Laurelwood Dr to MCC pumps	$200	$360,000	**PROJECT CAPITAL COST /AF**	**$29,499**
1,800 LF	8"	Connection to Loma Verde tank	$190	$342,000		
Est.		Loma Verde tank restoration (200,000 gal capacity)		$400,000		
Est.		Pumping station at Alameda del Prado (1,170 gpm ultimate)		$350,000		
		Estimated Construcion Cost		$2,747,000		
		Construcion Cost with 20% Contingency		$3,296,400		
		Planning, Design and Const. Management 25%		$824,600		
		TOTAL ESTIMATED PROJECT COST		**$4,121,000**		

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ITEM #14

NOTICE OF MEETING OF
NORTH BAY WATERSHED ASSOCIATION

Notice is hereby given that a meeting of the North Bay Watershed Association will be held as follows:

Date:	Friday, September 5, 2014
Time:	9:30 a.m. – 11:30 a.m.
Location:	Novato Sanitary District 500 Davidson Street Novato, CA 94945

AGENDA

Item		Recommendation
1.	Call to Order (Jack Gibson, Chair)	
2.	Public Comment	
3.	Approval of the Agenda (1 min.)	Approve
4.	Approval of Minutes	Approve
5.	Treasurer's Report (1 min.)	Accept
6	Desalination in California (45 min.) Guest Speaker: Ron Davis, Executive Director, CalDesal	Information
7.	Collaborative Watershed Stewardship (45 min.) Guest Speaker: Dennis Bowker, Dennis Bowker Consulting	Information
8.	Project Approval (10 min.) Napa/Sonoma/Marin LandSmart Workshops ($25k) Harry Seraydarian	Action
9.	BAIRWMP – 2013 Plan – Resolution Adoption (5 min.) Harry Seraydarian	Action
10.	Items of Interest	
11.	Items for Next Agenda	

Next Meeting Information:

Next Meeting: October 3, 2014
Petaluma (Lucchesi) Community Center
320 N. McDowell Boulevard
Conference Room 2
Petaluma, CA 94954

NORTH BAY WATERSHED ASSOCIATION

Minutes for the meeting of the North Bay Watershed Association (NBWA) Board of Directors.

Date: July 11, 2014
Time: 9:30 a.m.
Location: Marin Community Foundation
5 Hamilton Landing, Suite 200
Redwood Room
Novato, CA 94949

Directors Present: Directors present included:

Board Member	Agency/Organization	Board Member	Agency/Organization
Adrian Cormier	Bel Marin Keys Community Services District	Pamela Meigs	Ross Valley Sanitary District
Rick Fraites	North Marin Water District	Brant Miller	Novato Sanitary District
Kathy Hartzell	Central Marin Sanitation Agency	Chris Pegg	City of Sonoma and Sonoma Valley County Sanitation District
David Iribarne	City of Petaluma	Larry Russell	Marin Municipal Water District
		Judy Schriebman	Las Gallinas Valley Sanitary District

Directors present represented 10 out of the 16 agencies signatory to the Association MOU.

Board Actions:

1. **Call to Order.** Rick Fraites, Chair Pro Tem, called the meeting to order at 9:37 a.m.

2. **Public Comment.** None.

3. **Approval of the Agenda.** (See Handout) The Board unanimously approved the agenda.

4. **Approval of the Minutes of the Board Meeting held June 6, 2014.** (See Handout) The Minutes of the Board Meeting held on June 6, 2014 were unanimously approved.

5. **Treasurer's Report.** (See Handout) The Treasurer's Report was accepted as presented by Harry Seraydarian.

6. **Stormwater Technical Guide Project.** Terri Fashing, Marin County Stormwater Pollution Prevention Program Manager, provided a PowerPoint presentation entitled, "Post Construction Manual Project Update". Terri began by listing the Project partners in this collaborative effort and noted that Marin, Napa, Sonoma, and Solano stormwater entities were now included as part of the Bay Area Stormwater Management Agencies Association (BASMAA) Phase II Committee. She gave special thanks to NBWA in describing the history of this project and highlighted the role of Dan Cloak (consultant) as a "partner". Terri described the planning and development tasks in the Scope of Work leading to the new Guidance Manual and noted a final draft Manual will be presented in public workshops this October. Terri then explained the benefits of working through the larger, well-respected, regional organization, BASMAA, and presented the proposed title – "BASMAA Post Construction Manual – Prepared for the Bay Area Stormwater Management Agencies Association (BASMAA) Phase II Committee with funding from the North Bay Watershed Association". Terri asked whether there were any objections from the NBWA Board on this title – none were expressed. She then presented a summary of the Section E.12 requirements: site design; runoff treatment; peak runoff controls; and facility maintenance. Terri then provided more details on the types of projects (Single Family Homes/Small Projects 2,500-4,999 sq. ft. and Regulated Projects 5,000 or more sq. ft.) and photos and drawings as examples of design measures. She emphasized the importance of Low Impact Development (LID) approaches and identified the benefits, including those for bioretention. Terri then described the "path to compliance" starting with a pre-application meeting. She quickly walked through the Development Review Process and discussed how the Guidance Manual would be used to write a Stormwater Control Plan. Terri also highlighted the use of pervious surfaces and the concept and sizing formulas to create "Drainage Management Areas". The NBWA Board Members had several questions. What was the cost of this project? (NBWA provided $30k with considerable in-kind match. Appendices will be included in the Manual to meet specific needs, for example, Marin County paid a consultant directly for a "Plant List" and $8k for modeling to meet hydromodification requirements. Napa is paying for an "example plan".) Will permit fees increase given extraordinary compliance costs? (Not raised yet – may happen.) Do smaller cities have qualified staff or do they use consultants? (Depends on size, some use both.) How is runoff quality measured? What are pollutants? Is that in the Manual? (The Manual emphasizes "Best Management Practices (BMPs)"; overall monitoring requirements are included in the Phase II permit.) Are "remodels" included? (Depends on the surface area

affected – yes, if greater than 5,000 square feet.) Does the Manual address streets and medians? (Not directly; the Manual can be used for this category.)

7. **Freshwater Flows and the Health of the San Francisco Estuary.** Darcie Luce, Friends of the San Francisco Estuary, provided a PowerPoint presentation entitled, "Freshwater Flows and the Future of the San Francisco Estuary: Standing Up for the Bay". Darcie began by providing background on "Friends" which was established in 1993 and is affiliated with, but separate from, the San Francisco Estuary Partnership. The Comprehensive Conservation Management Plan is a blueprint for "Friends". The emphasis on flows came out of the 2011 State of the Estuary Report. Darcie provided a map emphasizing the drainage through the Estuary from the Sacramento River (80-85%) and the San Joaquin River (15-20%) through the Delta and out to San Francisco Bay where the mix of fresh and salt water is vital to sustain unique habitats and then highlighted the many alterations to the Estuary (canals, mining, drained wetlands, introduced species, etc.). Darcie focused on the diversion of freshwater and provided a chart illustrating the chronic and "artificial" drought impacts on outflow. She also presented a chart showing the increased diversions over time by the state and federal projects. Darcie then displayed a number of slides documenting what is at stake with reduced outflow: negative impact on fish and wildlife communities; water quality decline and increase in certain pollutants; lost jobs and income (salmon fishing and tourism); and diminished quality of life. Darcie moved on to describe the major planning processes under way regarding the Estuary and the Delta. She discussed in some detail the Bay Delta Water Quality Control Plan and the Bay Delta Conservation Plan (BDCP). Darcie then described the components of a drought proof water supply: Conservation/Increased Efficiency, Recycling; Groundwater Storage and Banking; and other regionally appropriate solutions. Darcie summarized what "Friends" is doing in their outreach program to address flows, such as increasing awareness and action through meetings and resolutions and hosting a Conference on freshwater flows (see details below). She praised Marin, Sonoma and Napa Counties for having already passed the resolution. Darcie ended by identifying what could be done at the state, regional and local level to address this issue. The NBWA Board Members had several questions. Is Friends looking at sea level rise and the impacts of proposed gates near the Golden Gate Bridge? (Looking at salinity changes due to sea level rise, not specific actions.) In looking at improvements to Ag and Urban water use, where is the biggest change needed? (No silver bullet. Ag uses 80% state-wide but jury is out on conservation results; Ag forced to consider fallowing land and links to groundwater management.) This led to a dialogue on waste water recycling and direct potable reuse. A suggestion was made to recruit George Tchobanoglous, UC Davis, as a future speaker on wastewater recycling.

8. **Items of Interest.** Bay+Delta+Water: Better Together (A Conference on Fresh Water in Our Bay-Delta Estuary) Wednesday, Sept. 24, 2014 – 9:00 a.m. to 12:30 p.m. – Antioch Community Center, 4703 Lone Tree Way, Antioch, CA Invited Speakers: Congressman George Miller, Congressman Jared Huffman, SWRC Board Member Steve Moore

9. **Items for Next Agenda.**
   * Desalination from a State-Wide Perspective, Ron Davis, Executive Director of Cal Desal
   * Collaborative Watershed Stewardship, Dennis Bowker, California Bay Delta Authority

Rick Fraites, Chair Pro Tem, adjourned the meeting at 11:23 a.m.

SUBJECT TO BOARD APPROVAL
Submitted By: Elizabeth O. Preim-Rohtla
Assistant to the Executive Director

NEXT MEETING INFORMATION:
NO AUGUST MEETING
September 5, 2014, Novato Sanitary District, 500 Davidson Street, Novato, CA 94945

LandSmart™ On-the-Ground Workshop Series

Fiscal Lead: Napa County Resource Conservation District
Project Partner: Sonoma Resource Conservation District
Project Duration: 12-18 months
Funding Request: $24,825

Background:

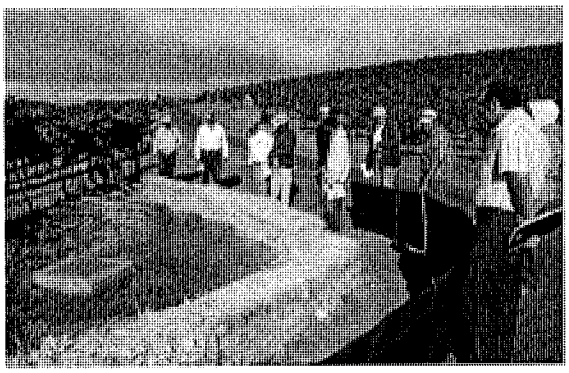
The Napa County Resource Conservation District (RCD) and Sonoma Resource Conservation District are seeking matching funds to implement a series of *LandSmart™ On-the-Ground* workshops for rural and urban land managers in Napa and Sonoma Counties. *LandSmart™ On-the-Ground* is part of *LandSmart™*, a regional collaborative program supporting productive lands and thriving streams. The program is being implemented by four RCDs in Sonoma, Mendocino, and Napa counties. *LandSmart™* provides conservation planning, hands-on assistance with completing conservation projects, and field-based conservation education for youth - the next generation of watershed land managers (www.landsmart.org).

Build Your Own Rain Barrel Workshop

LandSmart™ On-the-Ground is the hands-on component of *LandSmart™*, helping rural and urban land managers do the projects that will improve water quality, efficiency of resource use, and wildlife habitat on their property and in their watersheds. The program has two main components: 1) hands-on educational workshops related to implementing best management practices and 2) one-on-one assistance with land managers related to project prioritization, project funding (especially via NRCS-EQIP), designs, CEQA, permitting, project oversight, and contractor oversight. *LandSmart On-the-Ground* is a new program name that integrates several farmer and community education and technical assistance efforts that the RCDs have offered for decades. The proposed scope of work below focuses on implementing a series of hands-on educational workshops related to stormwater runoff, rainwater harvesting, and water quality.

Scope of Work:

The LandSmart On-the-Ground Workshop Series will consist of a minimum of 10 workshops (approximately 6 in Napa County, 2 in Sonoma County and 2 in Marin County). The series will be planned with the goal of providing trainings for a variety of audiences (rural home owner, urban home owner vineyard manager, rancher, heavy equipment operator, erosion control practitioner) in improving water quality, resource conservation, and wildlife habitat in the North Bay. The series will be promoted together and participants can select workshops of interest. The series will provide a unique educational opportunity for learning practical tips regarding the variety of ways that landowners and those who implement land management projects can have productive lands and thriving streams in the watersheds. All workshops will emphasize techniques that will build the community's resilience in the face of climate change and anticipated impacts on local natural resources.



Erosion Control and Water Quality Protection Workshop

Workshop topics may include, but are not limited to:

- drip irrigation efficiency,
- rural road maintenance for heavy-equipment operators,
- preparing rural roads and lands for winter,
- insectary plantings on farms and homesteads,
- working with wildlife in the vineyard,
- home greywater systems,
- build-your-own rain barrels,
- rain garden design, lawn removal and alternatives,
- Slow it, Spread it, Sink it landscape approaches,
- attracting pollinators and birds to the home garden, and
- building climate resilience into your land.

Lose Your Lawn Workshop

To determine the specific topics selected for the workshop series, the RCDs will consult with local partners (City of Napa Water Division, Napa Countywide Stormwater Pollution Prevention Program, Napa County Flood Control District, Napa County Planning, Building, and Environmental Services, Napa Valley Grape Growers, Napa County Farm Bureau, Marin County Stormwater Pollution Prevention Program, Marin Municipal Water District, Marin County Flood Control District, USDA NRCS, Sonoma County Water Agency, Sonoma County Winegrowers, Sonoma County Farm Bureau, Daily Acts, Friends of the Petaluma River) to ascertain local needs and priorities and to ensure that *On-the-Ground* workshops do not duplicate other outreach efforts in the community.

Workshops will be presented at minimal or no cost to attendees and will last for 1- 3 hours, depending on the complexity of the subject matter. Attendance will be kept to 20-40 participants to ensure that attendees have the opportunity to participate and engage with instructors. All workshops

will have a hands-on component during which attendees will build a tool or tour the conservation technique that is the workshop's focus. All workshop materials and resources will be posted on the *LandSmart*^{TM} website and announced via the RCDs' e-newsletters and Watershed Information Center and Conservancy's website (www.napawatersheds.org). When applicable, workshop attendees will be advised to consult their local agencies for rebates or permits.

Riparian Habitat and Native Planing Workshop

RCD staff will coordinate the workshop series. Workshop presenters will be chosen based on their real-world knowledge of the subject and ability to convey subject matter in workshop settings. Workshop sites will be selected for their proximity to the target populations, and ability to demonstrate the subject.

RCD staff will also promote the workshop series. The workshops will be announced via email distribution lists and web calendars that the RCDs host, as well as through partner email distribution lists, local newspapers, and at least three paid advertisements in some of the following venues: Napa Valley marketplace, Napa Recycling and Waste Service Bill Insert, Napa Valley Register, Petaluma Argus-Courier, Sonoma Index-Tribune.

LandSmart On-the-Ground Workshop Series Deliverables

- Press release about *LandSmart*^{TM} *On-the-Ground* Workshop Series
- Paid advertisement for *LandSmart On-the-Ground* Workshop Series
- Agendas, sign-in sheets, and evaluations for all workshops in the Series
- Links to locations where workshop materials will be posted
- Brief summaries of each workshop, including number of attendees, at least one demographic measure of type of attendees (e.g. rural vs. urban resident, age category, etc.), summary of presentation content, and at least one photo

Project Budget

TOTAL REQUEST FROM NBWA: $24,825

Line Item Budget:

Item	Napa County RCD @$80/hour	Sonoma RCD @$93/hour	Total
Labor – Workshops series promotion	$5,760	$1,440	$7,200
Labor – Workshop coordination and facilitation	$16,000	$4,000	$20,000
Mileage	$500	$125	$625
Speaker fees	$1,600	$400	$2,000
Workshop Supplies	$1,600	$400	$2,000

Advertisements (4)	$1,600	$400	$2,000
TOTAL	**$27,060**	**$6,765**	**$33,825**

Other Funding Sources:

Source	**Amount**	**Type**
California Department of Water Resources (Grant to Napa Co RCD)	$1000	Cash, coordination of vineyard irrigation efficiency workshops in Napa and Sonoma Counties
City of Napa Water Division	$2,000	In-kind, speakers at water conservation workshops and promotion of series
Napa County Flood Control and Water Conservation District	$1,500	In-kind, speakers at rain water harvesting workshops and promotion of series
UC Master Gardeners	$2000	In-kind, speakers at workshops related to landscapes and promotion of series
Napa County Planning, Building, and Environmental Services	$1000	In-kind, speakers at workshops related to erosion control, grading, and permitting of greywater devices, promotion of series
California Department of Water Resources (Grant to Sonoma RCD through Bay Area IRWMP)	$1500	Cash, coordination of vineyard irrigation efficiency workshops in Napa and Sonoma Counties
TOTAL	**$9000**	

NORTH BAY
WATERSHED ASSOCIATION

Bel Marin Keys Community Services District

Central Marin Sanitation Agency

City of Petaluma

City of San Rafael

City of Sonoma

County of Marin

County of Sonoma

Las Gallinas Valley Sanitary District

Marin County Stormwater Pollution Prevention Program

Marin Municipal Water District

Napa County Flood Control and Water Conservation District

Napa Sanitation District

North Marin Water District

Novato Sanitary District

Ross Valley Sanitary District

Sonoma County Water Agency

Sonoma Valley County Sanitation Agency

Associate Members:

City of Novato

The Bay Institute

Tomales Bay Watershed Council

Group Members:

City of Mill Valley

Sewerage Agency of Southern Marin

Resolution - September 5, 2014
RESOLUTION OF THE NORTH BAY WATERSHED ASSOCIATION ADOPTING THE SAN FRANCISCO BAY AREA INTEGRATED REGIONAL WATER MANAGEMENT PLAN UPDATE

WHEREAS, the State electorate approved multiple statewide bond measures since 2000, including Propositions 50 and 84, to fund water and natural resource projects and programs, including Integrated Regional Water Management (IRWM); and

WHEREAS, the benefits of integrated planning for water resources management activities include increased efficiency or effectiveness, enhanced collaboration across agencies and stakeholders, and improved responsiveness to regional needs and priorities; and

WHEREAS, state statute and guidelines required that an IRWM Plan be adopted by the governing boards of participating agencies before IRWM grant funds would be provided for water resources management projects that are part of the IRWM Plan; and

WHEREAS, several of the participating agencies in the Bay Area jointly submitted an IRWM grant application for state consideration where a condition for funding required the Bay Area IRWM Plan to be adopted by January 1, 2007; and

WHEREAS, the Bay Area agencies that received funding in previous grant rounds did adopt the Bay Area IRWM Plan before such funds were received; and

WHEREAS, more recent state statutes and guidelines require that the Bay Area IRWM Plan be updated before agencies may receive future IRWM grant funding; and

WHEREAS, a grant was received to update the Bay Area IRWM Plan, that Plan having been completed in the fall of 2013; and

WHEREAS, a series of workshops were held on the initial Bay Area IRWM Plan and recently the Plan Update to provide stakeholders, including Bay Area local governments, an opportunity to ask questions, provide comments and make recommendations; and

WHEREAS, the Draft Bay Area IRWM Plan Update was posted on the internet and made available for public comment; and

Resolution - September 5, 2014
RESOLUTION OF THE NORTH BAY WATERSHED ASSOCIATION ADOPTING THE SAN FRANCISCO BAY AREA INTEGRATED REGIONAL WATER MANAGEMENT PLAN UPDATE

WHEREAS, the Bay Area IRWM Plan Update before the Board for consideration incorporates changes based on comments received during the public review period in the areas of environmental justice, technical project data, and other elements of the Plan; and

WHEREAS, the Bay Area IRWM Plan Update provides an implementation framework that calls for tracking accomplishments, developing lists of prioritized projects and periodically updating the Bay Area IRWM Plan as conditions warrant, providing funding and resources are available to carry out these activities; and

WHEREAS, adoption of the Bay Area IRWM Plan Update does not entail a direct commitment of resources and implementation of each project, as such will be the responsibility of the project proponent and any applicable project partners, and there is no joint commitment or responsibility by the Bay Area IRWM Plan Update participants to implement any or all of the projects; and

WHEREAS, the Bay Area IRWM Plan is exempt from the California Environmental Quality Act pursuant to CEQA Guidelines §15262 and §15306 because the IRWM Plan consists of basic data collection that would not result in the disturbance of any environmental resource and involves planning studies for possible actions that the participating agencies have not yet approved; and

WHEREAS, the IRWM Plan Update is meant to be complementary to participating agencies' individual plans and programs and does not supersede such plans and programs, and adoption of the IRWM does not prohibit or effect in any way a participating agencies' planning efforts separate from the IRWM Plan; and

NOW THEREFORE, BE IT RESOLVED that the North Bay Watershed Association Board of Directors does hereby adopt the Bay Area IRWM Plan Update,

PASSED AND ADOPTED this fifth day of September, 2014 by the North Bay Watershed Association Board.

_____
Jack Gibson
Chairman, Board of Directors
North Bay Watershed Association

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DISBURSEMENTS - DATED AUGUST 21, 2014

ITEM #15

Date Prepared: 8/20/14

The following demands made against the District are listed for approval and authorization for payment in accordance with Section 31302 of the California Water Code, being a part of the California Water District Law:

Seq	Payable To	For	Amount
1	ADTS	Supervisor Training DVD Rental - Alcohol & Drug Testing	$50.00
2	All Star Rents	Tamper Rental (1 week) ($500) & Propane (19.4 gals) (STP)	569.51
3	Alpha Analytical Labs	Lab Testing	144.00
4	AT&T	Telephone Charges: Leased Lines	63.30
5	Automation Direct	RTU Analog Cards	498.00
6	Bank of Marin	Bank of Marin Loan Principal & Interest (Pymt 34 of 240)	46,066.67
7	Bannister, Carol	Refund Overpayment on Closed Account	47.05
8	Benedict, Remsen	Novato "Cash for Grass" Program	400.00
9	Borges & Mahoney	4" Teflon Diaphragm (STP)	356.75
10	Briscoe, James	Novato "Toilet Rebate" Program	100.00
11	California State Disbursement	Wage Assignment Order	1,018.50
12	C.J. Welding	Welding for Shields Lane Cast Iron Replacement	1,080.00
13	Cummings Trucking	Rock (97 yds)	3,580.59
14	Diggs, James	Retiree Exp Reimb (Aug Health Ins)	1,017.68
15	Environmental Science Assoc	Professional Services: Recycled Water Expansion Project, South Service Area (Balance Remaining on Contract $20,306)	138.75
16	Gallo, Philip	Novato "Toilet Rebate" Program	100.00
17	Government Financial Officer Assoc.	Membership Renewal (Landeros) (9/14-8/15) (Budget $160)	160.00
18	Gilead House	Novato "Washer Rebate" Program	50.00
19	Golden Gate Petroleum	Gasoline ($3.69/gal) & Diesel ($3.82/gal)	4,638.97
20	Grainger	Tool Tote, High Pressure Hose Nozzle ($98), Air Hose Couplings (6) ($114) & Disposable Wipes (1,260) ($81)	349.74

Seq	Payable To	For	Amount
21	Groeniger	6" & 8" Steel Pipe (80') ($2,129) & Bell Restraint (2) ($273)	2,402.36
22	Hertz Equipment Rental	Storage Tank Rental (7/5-7/14)	381.50
23	Irish & Son Welding	Weld 8" Saddle on 18" Water Main (OMA Village)	720.00
24	Jim-n-i Rentals	Plate Rental (6/24-7/14) ($458), Pin, Sling, Spreader & Plate Rental (7/1-7/14/14) ($915)	1,373.84
25	Kemira Water Solutions	Ferric Chloride (47,600 lbs) (STP)	5,232.60
26	Kingdom Pipeline	Refund Security Deposit on Hydrant Meter Less Final Bill	435.93
27	King, Ruth	Novato "Washer Rebate" Program	50.00
28	Lab Support	Temporary Staffing During Pregnancy Leave of Chemist II (40 hrs) (Total Project Cost $8,652)	1,659.00
29	Lemos, James	Exp Reimb: Water Dist Operation & Maint Training Course Package	113.68
30	Lincoln Life	Deferred Compensation PPE 8/15/14	12,920.87
31	Maltby Electric	Electro Mechanical Switches for Tank Access	73.86
32	Marin County Tax Collector	FY15 Possessory Interest Tax ($1,049) & Supplemental Tax Bill ($615) (15 Gustafson Ct) (11/15/13-7/1/14)	1,665.02
33	Marin County Recorder	May & June Copies of Official Records (3)	20.00
34	Mason, Catherine	Novato "Toilet Rebate" Program	100.00
35	Matchette, Tim	Retiree Exp Reimb (Aug Health Ins)	349.23
36	McLellan, WK	Misc Paving ($9,003) (696 S.F.), Grind & Pave Shields Lane ($29,700) (4,400 S.F.) & Crossing @ Wilson ($7,080) (200 S.F.)	45,783.53
37	McMaster-Carr Supply	Vacuum Suction Hose (45') ($446), Electrical Terminals & Shrink Tubing	545.52
38	Moore, Doug	Retiree Exp Reimb (Aug Health Ins)	943.40
39	Munoz, Alice	Novato "Washer Rebate" Program	50.00
40	Nationwide Retirement Solution	Deferred Compensation PPE 8/15/14	1,025.00
41	Nguyen, Alice	Novato "Washer Rebate" Program	50.00
42	Niagara Conservation	Ultra High Efficiency Toilets for Customer Give-a-way (25)	3,569.76
43	NMWD Employee Association	NMWD Association Dues 6/15 - 7/31/14	900.00

Seq	Payable To	For	Amount
44	Pace Supply	1" Copper Tube Nut (4), Unions (39) ($398), Bushings (18), Nipples (50) ($648), Couplings (97) ($845), Meter Spuds (50) ($401), Reducer ($75), Corp Stops (40) ($1,709), Flange, Caps (20), Adaptors (26) ($370), Elbows (16) ($346), PVC Pipe (40) ($302) & Hose Bibbs (8) (Less Credit of $291)	4,998.48
45	Pacific Utility Products	Transfer Switch for Lynwood P.S.	8,920.56
46	Radio Shack	Batteries for Data Logger (2)	21.79
47	Red Wing Shoe Store	Safety Boots (Ochoa & LeBrun)	395.47
48		Cafeteria Plan: Childcare Reimbursement	208.33
49	Ricoh USA	Scan & OCR Journal Entry Documents (1995-2014)	6,632.46
50	Roberts, Renee	Retiree Exp Reimb (Aug Health Ins)	349.23
51	Roto Rooter	Clear Clogged Drain in Office Kitchen	471.25
52	SHRM	Society for Human Resource Management Membership Dues (9/14-8/15) (Landeros) (Budget $190)	185.00
53	Solar, Devin	Exp Reimb: Safety Boots	200.00
54	Sonoma County Water Agency	Water Smart Home Surveys & Assistance with Administering Water Conservation Program (4/1-6/30/14)	13,782.02

Seq	Payable To	For	Amount
55	Staples Advantage	Quarterly Office Supply Order: Copy Paper (Letter $224 & Tabloid $98), Sharpie Markers (12), Packaging Tape (6) ($30), Pens (48), Shipping Labels (600), Self Adhesive Folder Fasteners (500) ($59), Manila Folders (50) & Post-it Notes (24)	514.36
56	Stompe, Brad	Exp Reimb: Safety Snacks	33.96
57		Cafeteria Plan: Uninsured Medical Reimbursement	300.00
58	Stone, Curtis	Novato "Washer Rebate" Program	50.00
59	Strahm Communications	West Marin Summer Waterline Printing ($1,282) & Mailing Services ($181)	1,462.03
60	United Parcel Service	Delivery Service: Sent Prop 50 Claim #2 for Gallagher Well Pipeline Project	14.06
61	Univar	Sodium Hypochlorite (1,200 gals)	735.85
62	US Bank	July Safekeeping Fee - Treasury Securities	114.00
63	Von Stauffen, Eraina	Novato "Toilet Rebate" Program	300.00
64	Water Opcert School	2-Day Exam Review for D-3 Test (Arendell)	200.00
65	Water Components & Bldg Supply	6" Sewer Clamps (2) (OMA Village Sewer Repair)	166.27
		TOTAL DISBURSEMENTS	**$180,849.73**

The foregoing payroll and accounts payable vouchers totaling $180,849.73 are hereby approved and authorized for payment.

D. Scott 8/19/14

Auditor-Controller Date

Chris DeGabriele 8/19/2014

General Manager Date

DISBURSEMENTS - DATED AUGUST 28, 2014

Date Prepared: 8/26/14

The following demands made against the District are listed for approval and authorization for payment in accordance with Section 31302 of the California Water Code, being a part of the California Water District Law:

Seq	Payable To	For	Amount
P/R*	Employees	Net Payroll PPE 8/15/14	$120,375.31
EFT*	US Bank	Federal & FICA Taxes 8/15/14	51,803.69
EFT*	State of California	State Taxes & SDI PPE 8/15/14	9,094.18
EFT*	State of California	Unemployment Insurance Claim (4/1/14-6/30/14) (Crump & Krupin)	266.00
1	AICPA Subscriptions	Subscription Renewal (9/14-8/15) (Budget $70)	69.00
2	Alpha Analytical Labs	Lab Testing	240.00
3	American Family Life Insurance	September Employee Contribution for Accident, Disability & Cancer	4,366.65
4		Vision Reimbursement	127.00
5	AT&T	Telephone Charges: Data Lines	155.39
6	AWWA CA-NV SEC	Fall Conference Registration in Reno, NV (10/20-23) (McIntyre)	465.00
7	Backflow Distributors	4" DCDA Repair Parts	106.18
8	Cadu, Denis & Engelbert, Lisa	Novato "Washer Rebate" Program	50.00
9	CalPERS Retirement System	Pension Contribution PPE 8/15/14	41,231.27
10	Cinquini & Passarino	Surveying Services on South Novato Blvd Waterline Replacement (Balance Remaining on Contract $27,833)	2,167.00
11	Clark, Robert E.	Exp Reimb: AWWA Fall Conference Registration ($595) & Hotel ($268)	862.81

Seq	Payable To	For	Amount
12	Core Utilities	Consulting Services: July IT Support ($5,000), Program Replacement RTU for Tahiti Way Lift Station ($4,075), Tank Access Hatch/Level Alarms ($400), RWF/SQL Server Problem ($50), Maintenance of Telemetering Equipment ($1,075), Revise Website Water Consumption Graph ($450), West Marin Drought Surcharge ($450) & Lockbox Modification ($325)	11,825.00
13	Dex Media	Quarterly Telephone Directory Charge	50.09
14	Duplantis, Shaun	Novato "Cash for Grass" Program	380.00
15	Employer Resource Institute	Cal/OSHA Compliance Advisor (Clark) (9/14-8/15) (Budget $350)	299.00
;	Environmental Express	Conical Tubes for Ion Chromatograph (1,000)	147.67
17	Charles Z. Fedak	Progress Billing on Audit of FY14 Financial Statement (Balance Remaining on contract $17,380)	2,000.00
18	Fertitta, S. & A. Friedman	Novato "Washer Rebate" Program	50.00
19		Cafeteria Plan: Uninsured Medical Reimbursement	260.00
20	Frazier DeWitt, Sarah	Novato "Washer Rebate" Program	50.00
21	Ghilotti Construction	Construct AEEP Reaches A-D/MSN B3 Pipeline Project (Balance Remaining on Contract $9,759,695)	1,728,944.95
22	Godinez, Martin	Refund Overpayment on Closed Account	117.71
23	Grainger	Batteries (D,C,AA, 9V,AAA) (271)	127.07
24	Groeniger	Couplings (3)	7.36
25	Hach	Calibration Standard (STP)	134.08
26	Hall Dump Truck Service	Remove Dirt Spoils (Yard, Hanna Ranch & Misc) (352 yds)	5,828.00
27	InfoSend	July Processing Fee for Water Bills ($1,470) & Postage ($4,190), Bill Inserts (Informing Customers of Electronic Water Quality Report), Printing ($466) & Insertion Fee ($249) (21,189)	6,376.04

Seq	Payable To	For	Amount
28	Jim-n-i Rentals	Steel Plate Rental (7/3-7/25/14)	639.29
29	Lee, Raymond	Novato "Washer Rebate" Program	50.00
30	Marin County Tax Collector	FY15 Possessory Interest Tax (25 Giacomini Rd)	564.79
31	Marion Park Associates	Novato "Toilet Rebate" Program (7)	700.00
32	McAndrew, Carola	Novato "Toilet Rebate" Program	300.00
33	MCC Control Systems	Programming Modifications for Treatment Plant & RWF PLC's and SCADA Computers (Balance Remaining on Contract $4,625)	375.00
34	McLellan, WK	Paving @ OMA Village Crossing ($3,698) (200 S.F.) & Misc Paving ($1,852)	5,550.00
35	McGuire, Michael J.	Progress Pymt #1 - Provide Study of Stafford Lake Water (Balance Remaining on Contract $31,692)	3,907.67
36	MegaPath	DSL Internet Service (8/12-9/11/14)	142.88
37	Nevin, Brigit	Novato "Washer Rebate" Program	50.00
38	Nixon, Andrea	Novato "Toilet Rebate" Program	300.00
39	Novato, City of	Street Excavating Moratorium Fees for 1222 Cambridge, 1304 Cambridge, 1159 Santolina & 2433 Center Rd	2,000.00
40	Novato Disposal Service	July Trash Removal	419.94
41	NTU Technologies	Polymer Emulsion (2,250 lbs) (STP)	3,622.50
42	Pace Supply	Elbows (4) ($525), Cutter Head Assembly (4) ($808), Gate Valves (4) ($1,833) & Flanged Adaptors (4) ($1,345)	4,512.07
43	PES Environmental	Prepare CA Dept of Fish & Wildlife Notification Potential Streambed Alteration for Gallagher Well Operation (Balance Remaining on Contract $976)	4,015.50
44	Preferred Alliance	Pre-Employment Physical Exam (Leonard, Moretti & Ochoa)	126.00

Seq	Payable To	For	Amount
47	Rotary Club of Novato-Sunrise	Annual Dues (McIntyre) (7/14-6/15) (Budget $180)	178.00
48	Sargent, Ross	Refund Overpayment on Closed Account	196.72
49	Sequoia Safety Supply	Safety Vests (4) ($93), Heavy Bandages (200), 2" Gauze (4) & Earplugs (600) ($93)	207.83
50	Serafini, Bill	Novato "Cash for Grass" Program	240.00
51	Sonoma County Water Agency	July Contract Water	614,269.79
52	SPG Solar	July Energy Delivered Under Solar Services Agreement	13,346.30
53	Tamagno Green Products	Sludge Removal (106 yds)	2,120.00
54	TelePacific	Telephone Charges - Voice Lines	451.20
55	Township Building Services	July Janitorial Service	1,588.84
56	Turrini, Elizabeth	Novato "Toilet Rebate" Program	300.00
57	Verizon California	Telephone Charges: Leased Lines	604.98
58	White & Prescott	Engineering Services: Bear Valley Pump Station Survey ($1,840), Olema Pump Station ($560), Korean Church & Majauskas Water Line Easement ($560)	2,960.00
59	Wiley Price & Radulovich	Drug & Alcohol Testing Question	346.50
		TOTAL DISBURSEMENTS	**$2,653,525.61**

The foregoing payroll and accounts payable vouchers totaling $2,653,525.61 are hereby approved and authorized for payment.

8/26/14
Auditor-Controller Date

8/26/2014
General Manager Date

BOD MISC

MARIN COUNTY FISH AND WILDLIFE COMMISSION

From The Commission.....

This newsletter is an annual publication of the Marin County Fish and Wildlife Commission.

Volunteer members are appointed by the Board of Supervisors for three year terms.

The Commission serves to advise the Board and administer the annual grant program.

Meetings are held on the second Tuesday of the month.

Members:
Gary Frugoli
Brooke Halsey
Al Nichelini
Susan Ristow
Laurette Rogers
Ed Schulze
Brad Stompe

This year the Commission was pleased to receive proposals for many wonderful and educational projects. The following grant proposals for the 2014 - 2015 year, from non-profit organizations to provide equipment and supplies to directly benefit habitat, wildlife, and fishing populations in Marin, have been reviewed and approved for funding by the Marin County Board of Supervisors.

Tyee Foundation

The Tyee Foundation annually raises over 50,000 salmon fingerlings in net pens in Tiburon in the San Francisco Bay. Volunteers feed and release the fish as smolts to leave for ocean migration and then return to support sportfishing in Marin and Sonoma. The grant funding is for fish feeders, food, and tagging. Information: (415) 665-7839 or (650) 766-5129.

Point Reyes Seashore Association

This association is a partner with the National Park Service at Point Reyes National Seashore. Membership dues support a variety of park programs. The association provides a variety of educational field seminars, summer camp programs, and operates sales outlets in park visitor centers that help fund various park programs. The grant request is for printing costs of 10,000 educational booklets about offshore ecosystems, to educate preschoolers to third graders. These booklets will compliment the existing Junior Ranger activities. Information: (415) 663-1200 or www.ptreyes.org.

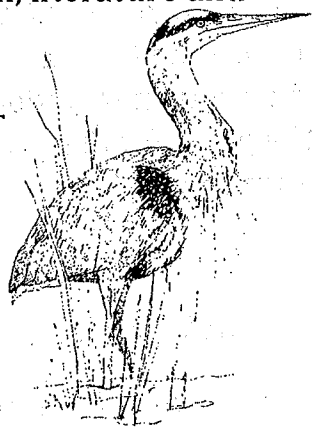
...Continued next page

The Dance Palace Community Center

The Community Center serves West Marin by providing classes, meeting space, concerts, cultural events, afterschool programs as well as a summer camp. The grant funding is for materials for nature study classes during the annual summer camp and elementary school afterschool science education. Information: www.dancepalace.org

Wildcare

Wildcare/Terwilliger Nature Education and Wildlife Rehabilitation operate a wildlife rehabilitation center for injured animals. In addition, Terwilliger nature vans travel off-site to dozens of schools throughout the area each year to provide hands on nature education. The grant funding is for material, literature and support items for Nature Discovery Programs, Terwilliger Nature Camps, and Wildlife Ambassador Programs. Information: (415) 453-1000 or www.wildcare.org



Audubon Canyon Ranch (ACR)

ACR was founded in 1962 to protect one of the largest heronries on the west coast. ACR's mission is to protect nature through land preservation, nature-based education and conservation science. The grant funding is for educational supplies for teachers and docents at the Martin Griffin Preserve. Info: (415) 868-9244

Marin Audubon Society

Marin Audubon Society (MAS) was established more than 50 years ago to protect the environment and is also a chapter of the National Audubon Society. Marin Audubon's educational activities focus on birds and other wildlife as well as wildlife habitats. The Society offers regularly scheduled field trips to natural areas focused on bird identification, and monthly programs on natural history topics. The grant funding is for the Corte Madera Ecological Reserve Expansion project, to acquire, restore, and permanently protect a 5.2 acre site adjacent to the Reserve. Information: www.marinaudubon.org

California Department of Fish & Wildlife

The CDFW has primary responsibility to enforce fish and game regulations in Marin County. The grant funding is for supplementary adapters and cameras to be used with existing spotting scopes. Information: P.O. Box 47, Yountville CA 94599

Tiburon Salmon Institute

TSI currently raises approximately 10,000 salmon per year to be released into the San Francisco Bay. They directly connect the youth of Marin to this effort to save the fish that swim in their backyards through public raise & release efforts. The grant funding is for construction of a mobile aquarium display that will be exhibited for schools and informal education. Information: www.tiburonsalmoninstitute.org, (415) 435-2397.

Mill Valley Streamkeepers

The Streamkeepers are an all volunteer organization that began in 1998 working to restore and protect Mill Valley's watershed through educating the community. The grant funding is for newsletter production. Information: www.millvalleystreamkeepers.org

S.T.R.A.W.

Students and Teachers Restoring a Watershed (STRAW) grew out of the work of the Shrimp Project that began in 1992, to respond to the problem of an endangered species. Today STRAW is a wing of Point Blue (formerly PRBO Conservation Science) that sustains a network of teachers, students and restoration specialists who plan and implement watershed and riparian corridor restoration projects. The grant funding is for tools and materials to support new installation and maintenance of recent project sites. Information: www.pointblue.org

All One Ocean

This group, founded in 2010, is working to protect ocean and marine life from the dangers posed by marine debris, especially plastic trash. They have established "Beach Clean-Up Stations" (B'CUS) at various West Marin beaches. They also have an educational program for local Bay Area schools about the dangers of marine debris to ocean ecosystem and human health. The grant funding is for material for two on site beach clean up stations. Information: (510) 859-9198 or Lauren@alloneocean.org

Richardson Bay Audubon Center and Sanctuary

The Bay Audubon Center and Sanctuary protects open space in Tiburon along the San Francisco Bay as well as provides nature education programs about local flora and fauna. The grant funding is for educational materials and binoculars. Information: (415) 388-2524 or www.tiburonaudubon.org

Friends of Novato Creek

Friends is a non-profit, volunteer based, watershed preservation group formed to protect and restore the Novato Creek Watershed. The grant funding is for educational interpretive signage and grabber tools. Information: Sue Lattanzio (415) 883-8339

Mark Your Calendars! Annual Barbecue

Thursday, September 18, 2014
4:30 pm -7:30 pm

Lagoon Park
(next to jury parking)

Marin County's Fish and Wildlife Commission Annual Barbecue. Meet Commission members, grantees, wardens and others associated with Commission activities. Learn more about the Commission grant projects to enhance the fish and wildlife habitat and populations of Marin County.

Marin County Fish and Wildlife Commission
c/o U.C. Cooperative Extension
1682 Novato Blvd., Ste. 150B
Novato, California 94947-7021

MARIN COUNTY
FISH AND WILDLIFE COMMISSION

Marin County Fish and Wildlife Commission

The Fish and Wildlife Commission advises the Board of Supervisors on expenditures of funds obtained through fines levied for fish and wildlife violations in Marin County. The funds are designated to enhance fish and wildlife resources in the county and for public education. Grant proposals submitted to the Commission Chair are reviewed during the first quarter of any calendar year and recommended on a competitive basis and availability of funds. If approved by the Board of Supervisors, funding becomes available by fall of the same year. The commission can also provide letters of endorsement for projects seeking alternative sources of funding. The commission sponsors an annual barbecue (September 18, 2014) for grantees and community groups.

For applications and deadline information, contact: Marin County Fish and Wildlife Commission, U.C. Cooperative Extension, 1682 Novato Boulevard, Suite 150 B, Novato, CA 94947-7021, (415) 473-4204, http://cemarin.ucdavis.edu

West Marin Citizen
August 21, 2014

Suggestions for drought tolerant plants

By Cathy Teague

As promised in my last column about gardening in West Marin, the following is a list of plants which are drought-tolerant-once they are established. The "once-established" part is important because all newly planted plants need regular water until they are established in their new garden spot. So, for those communities with mandatory 25 percent cutbacks, it may make sense to wait until the rainy season starts in November to make major alterations in planted areas.

For those of you who still have lawns, my advice would be to stop watering now to kill the grass or cover turf areas with mulch to get rid of the lawn for fall planting. As I mentioned before, lawns make no sense in our Mediterranean climate with no summer rain.

The North Marin Water District, which includes Point Reyes Station, Olema, Inverness Park, Bear Valley and Paradise Ranch, is offering "Cash for Grass" when customers replace lawns with low-water-use plants or synthetic turf. Their website also includes an extensive list of acceptable replacement plants, some of which I disagree with because they are invasive.

For more information, the NMWD website has lots of good information - the website is www.nmwd.com. Those of you who live in other towns in West Marin may want to contact your water districts to see if they offer similar programs, and even if they don't, you may want to go to less thirsty plants because it is just a good idea.

There are lots of lists of drought-tolerant plants online, so the following is just a list of my favorites, listed by botanical name, followed by the common name. If you have a question about a particular plant and its drought tolerance, please don't hesitate to contact me at teagueca@gmail.com. If I don't know the answer, I will find out.

So, on to the lists, and remember, these are for established plants. Succulents, of course, should be near the top of the list, along with many California natives. I just designed a garden in Hamilton in Novato using almost all succulents in the front yard to replace the existing lawn. My personal garden favorites are starred.

TREES:

Aesculus California - California Buckeye

Arbutus - No common name- NCN*

Cedrus - Cedar

Celtis - Hackberry*

Chiltapa tashkentensis*

Cupressus - Cypress

Eucalyptus (most)

Geijera robusta - Australian Willow

Lagerstroemia indica - Crepe Myrtle*

Laurus nobilus- Sweet Bay

Olea europaea - Olive*

Pinus - Pine

Pistacia - Pistache*

Quercus - Oak

Robinia - Locust*

Schinus molle - California Pepper Tree

Sophora japonica - Japanese Pagoda Tree*

SHRUBS:

Alyogne huegelii - Blue Hibiscus

Anisodontea - Cape Mallow

Arctostaphylos - Manzanita*

Artemesia

Baccharis

Carpenteria Californica- Bush Anemone

Ceanothus - California Lilac - some*

Cercis occidentalis - Western Redbud

Cistus - Rockrose*

Coprosma - NCN

Correa - Australian Fuchsia*

Cotinus coggygria - Smoke Tree*

Cotoneaster

Eleagnus - some

Feijoa - Pineapple Guava

Lantana*

Lavandula**

Lavatera assurgentiflora - Tree Mallow

Leonitis leonurus - Lion's Tail

Leptospermum - Tea Tree

Mahonia - Oregon Grape Holly*

Myrtus communis - Myrtle*

Nandina domestica - Heavenly Bamboo*

Phlomis*

Plumbago auriculata - Cape Plumbago*

Punica granatum - Pomegranite

Rhamnus (most)*

Ribes (most) Currant, Gooseberry*

Rosmarinus officinalis - Rosemary*

Salvia (many)*

Teucrium - Germander*

Westringia fruticosa*

This is a long list, so I think I will write about perennials, annuals and ground covers next time.

Published in the West Marin Citizen August 21, 2014

Drought prompts Marin water districts to clamp down on irrigation systems

Water districts ban use of systems between 9 a.m.-7 p.m.

By Mark Prado

(mailto:mprado@marinij.com?subject=Marin Independent Journal:)
(mailto:mprado@marinij.com?subject=Marin Independent Journal:
)mprado@marinij.com (mailto:mprado@marinij.com) *@MarkPradoIJ on Twitter*

POSTED: 08/20/2014 05:52:09 PM PDT

2 COMMENTS

The use of landscape watering systems between 9 a.m. and 7 p.m. has been banned by the Marin Municipal Water District in response to a state call for water savings in the face of the drought.

And the North Marin Water District has taken similar action.

Hand watering those roses and tomatoes with a hose is allowable as long as there is an attached shut-off valve. The Marin Municipal board also voted Tuesday night to require all hoses have a shut-off nozzle. Customers can get a free nozzle at the district's Corte Madera office. The district already has on its books rules against overwatering and washing down hard surfaces, such as driveways.

Last month the state Water Resources Control Board called for water districts to impose "mandatory restrictions on outdoor irrigation of ornamental landscapes or turf."

While scofflaws face up to a $250 fine, water officials said they will not actively seek to write tickets, but rather educate the public about the new rules, which are now in effect.

"We want to get the word out," said Libby Pischel, Marin water district spokeswoman. "People are very good about compliance. Our goal is to save water."

The hours of 9 a.m. to 7 p.m. were chosen because data shows that's when the most water evaporation occurs, water officials said.

Washing cars is also permitted with a shut-off valve, although the district recommends using commercial car wash facilities that recycle water. If drought conditions ease, the water district will likely keep the new rules in place.

"We should not continue to do the things that waste water," said Krishna Kumar, water district general manager.

The Marin Municipal Water District serves about 190,000 people between Sausalito and San Rafael.

RELATED STORIES

Aug 18:

- Stinson Beach adopts water rationing policy amid influx of outsiders, wealth (http://www.marinij.com/marinnews/ci_beach-adopts-water-rationing-policy-amid-influx?source=pkg)

Aug 16:

- Marin Voice: North Marin water users need to continue conservation efforts (http://www.marinij.com/marinnews/ci_voice-north-marin-water-users-need-continue?source=pkg)

Aug 7:

- Marin water officials unfazed by downgraded El Niño predictions (http://www.marinij.com/marinnews/ci_water-officials-unfazed-by-downgraded-el-nino?source=pkg)

Aug 3:

- Marin water-wasters will soon get a nudge from WaterSmart (http://www.marinij.com/marinnews/ci_water-wasters-will-soon-get-nudge-from?source=pkg)

Jul 25:

- Q&A: WaterSmart CEO Peter Yolles, on tracking your water conservation (http://www.marinij.com/business/ci_peter-yolles-founder-and-ceo-watersmart-software?source=pkg)
- Water restrictions backed by 75 percent of Californians, poll says; Marin residents agree

The North Marin Water District — which serves about 50,000 customers in Novato — implemented similar rules Aug. 6, also in response to the state's actions.

Watering of any lawn, garden, or landscape area is only permitted with drip irrigation or by hand with a container or hose with an automatic shut-off nozzle, under North Marin rules.

Sprinkler irrigation systems can be used if the customer maintains an overall 20 percent reduction in water use when compared to the same billing period in 2013. Customers using 300 gallons per day or less are permitted to use overhead sprinkler irrigation without the 20 percent reduction. Use of sprinkler irrigation systems are also banned from 9 a.m. to 7 p.m.

Violations may result in a disconnection of water, with a $75 re-connection fee. But conservation manager Ryan Grisso said the district just wants to save water.

"We want to work with the customers," he said. "People don't want to waste water."

(http://www.marinij.com/marinnews/ci_26218056/water-restrictions-backed-by-75-percent-californians-poll?source=pkg)

Jul 18:

- George Russell: New scrutiny for Jack, Jill and that pail of water (http://www.marinij.com/marinnews/ci_26173393/george-russell-new-scrutiny-jack-jill-and-that?source=pkg)

Jul 15:

- State water board approves proposal to slap hefty fines on water wasters (http://www.marinij.com/sanrafael/ci_26155443/state-water-board-approves-proposal-slap-hefty-fines?source=pkg)

Jul 13:

- Marin water officials contemplate state proposal to slap fines on water wasters (http://www.marinij.com/marinnews/ci_26142760/marin-water-officials-contemplate-state-proposal-slap-fines?source=pkg)

Jun 22:

- Marin water managers: Residents saving more than what state says (http://www.marinij.com/marinnews/ci_26013125/marin-water-managers-residents-saving-more-than-what?source=pkg)

Jun 9:

- Drought limits summer water releases from Mt. Tam reservoir (http://www.marinij.com/marinnews/ci_25930360/drought-limits-summer-water-releases-from-mt-tam?source=pkg)

Jun 6:

- El Niño coming, but drought impact might be minimal (http://www.marinij.com/marinnews/ci_25914953/chances-el-ni-o-increase?source=pkg)

May 25:

- Pipeline over the Richmond-San Rafael Bridge eyed for Marin water supply (http://www.marinij.com/marinnews/ci_25825383/pipeline-over-richmond-san-rafael-bridge-eyed-marin?source=pkg)

May 21:

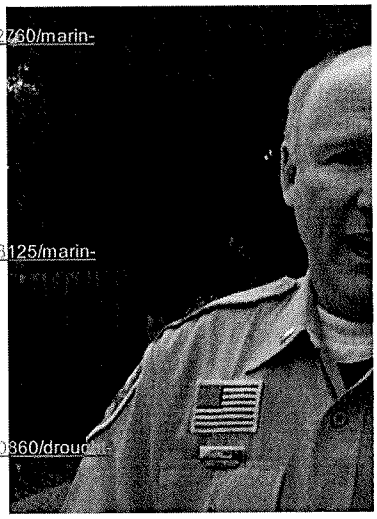
- Marin Municipal Water District holds off on easing conservation percentage (http://www.marinij.com/marinnews/ci_25810678/marin-municipal-water-district-holds-off-easing-conservation?source=pkg)

May 2:

- Panel explores drought's impacts on small business (http://www.marinij.com/marinnews/ci_25687185/panel-explores-droughts-impacts-small-business?source=pkg)

Apr 28:

- Forum to air impact of drought on Marin's small businesses (http://www.marinij.com/marinnews/ci_25654877/forum-air-impact-drought-marins-small-businesses?source=pkg)



WATER

State extends review of $25B delta plan

The Associated Press

SACRAMENTO » More planning is needed on a $25 billion proposal to build two massive water tunnels in Northern California, state officials said this week.

Some 30,000 pages of environmental reviews and draft plans have already been generated on what would be the biggest water supply project in California in decades, the Los Angeles Times reported.

On Wednesday, the Department of Water Resources said it will do further work with state and federal agencies on revising parts of the drafts. They will be reissued next year for additional public comment.

That will push a final decision on the tunnels — originally scheduled for late this year — well into 2015.

Backed by major urban and agricultural water districts, the project would change the way some Northern California supplies are sent south to the San Joaquin Valley and Southern California, the Times said.

Sacramento River water would be diverted into two 30-mile-long tunnels and conveyed under the Sacramento-San Joaquin delta to existing pumping facilities.

The $25 billion project also includes extensive restoration of fish and wildlife habitat in the delta. Supporters say the changes will improve environmental conditions and ease pumping restrictions that have cut water exports.

But delta interests and some environmental groups are opposed, arguing that the tunnels will rob the delta of more water, adding to its many ecological problems.

NORTHERN CALIFORNIA

2 counties ask to form state of Jefferson

The Associated Press

SACRAMENTO » Represent
tives of two counties in f
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formally asking state le
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Modoc and Siski
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Marin IJ
8/29/14