Agenda

Sacramento Suburban Water District

Water Quality Committee

3701 Marconi Avenue, Suite 100
Sacramento, CA 95821

Monday, October 16, 2017
3:00 p.m.

Public documents relating to any open session item listed on this agenda that are distributed to the Committee members less than 72 hours before the meeting are available for public inspection in the customer service area of the District's Administrative Office at the address listed above.

The public may address the Committee concerning any item of interest. Persons who wish to comment on either agenda or non-agenda items should fill out a Comment Card and give it to the General Manager. The Committee Chair will call for comments at the appropriate time. Comments will be subject to reasonable time limits (3 minutes).

In compliance with the Americans with Disabilities Act, if you have a disability, and you need a disability-related modification or accommodation to participate in this meeting, then please contact Sacramento Suburban Water District Human Resources at (916)679-3972. Requests must be made as early as possible and at least one-full business day before the start of the meeting.

Call to Order

Pledge of Allegiance

Roll Call

Public Comment
This is an opportunity for the public to comment on non-agenda items within the subject matter jurisdiction of the Committee. Comments are limited to 3 minutes.

Consent Items
The committee will be asked to approve all Consent Items at one time without discussion. Consent Items are expected to be routine and non-controversial. If any member of the Committee, staff or interested person requests that an item be removed from the Consent Items, it will be considered with the action items.

1. **Meeting Notes of the July 17, 2017 Water Quality Committee Meeting**
   Recommendation: Approve subject meeting notes.

Items for Discussion and Action

2. **Regulation and Monitoring of 1,2,3 - Trichloropropane**
   Receive written staff report.

3. **Update on Water Quality - TCE at Well #N15**
   Receive written staff report.

4. **Water Quality Test Reports**
   Receive written staff report.

5. **New Replacement Well #N6A – Manganese Treatment**
   Receive written staff report.

6. **SB 427 – Lead User Service Lines**
   Receive written staff report.

Adjournment

* *

Upcoming Meetings:

Monday, October 16, 2017 at 6:30 p.m., Regular Board Meeting

* *

I certify that the foregoing agenda for the October 16, 2017, meeting of the Sacramento Suburban Water District Water Quality Committee was posted by October 12, 2017, in a publicly-accessible location at the Sacramento Suburban Water District office, 3701 Marconi Avenue, Suite 100, Sacramento, California, and was made available to the public during normal business hours.

_____

Robert S. Roscoe
General Manager/Secretary
Sacramento Suburban Water District

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Meeting Notes

Sacramento Suburban Water District
Water Quality Committee
Monday, July 17, 2017

Call to Order
Director Wichert called the meeting to order at 3:00 p.m.

Roll Call

Directors Present:	Bob Wichert and Dave Jones.
Directors Absent:	None.
Staff Present:	General Manager Rob Roscoe, Assistant General Manager Dan York, Amy Bullock, John Valdes, David Armand, Hannah Dunrud, Mitchell McCarthy, Dan Bills, David Espinoza and James Arenz.
Public Present:	William Eubanks, Alex MacDonald and Mitch Dion.

Public Comment
None.

Announcements
None.

Consent Items

1. **Meeting Notes of the March 27, 2017 Water Quality Committee Meeting**

   Chair Wichert moved to approve Items 1; Director Jones seconded. The motion passed by a unanimous vote.

AYES:	Jones and Wichert.	ABSTAINED:	
NOES:		RECUSED:	
ABSENT:			

Items for Discussion and Action

2. **Aerojet Plume Update**
   David Armand (Mr. Armand) introduced Alex MacDonald (Mr. MacDonald) with the Regional Water Quality Control Board who went through a PowerPoint presentation.

   Chair Wichert inquired who paid for the well head treatment on the contaminated wells.

   Mr. MacDonald stated that Aerojet paid for well head treatment on the contaminated wells and Aerojet paid for the temporary water supply.

Director Jones inquired on the wells that are running now if there is a contingency water supply plan in place.

Mr. MacDonald stated that there is a contingency water supply plan in place, both a short and long term plan that can be activated at any time.

Chair Wichert inquired if Sacramento Suburban Water District (SSWD) has any plans in place if the contaminant constituents make it to their service area.

Mr. MacDonald stated that SSWD has not been required to come up with that plan because the plume is still outside of the boundaries.

General Manager Rob Roscoe (GM Roscoe) inquired on how fast they estimate the leading edge of the plume is moving northwest.

Mr. MacDonald stated that the plume is estimated to be moving 200 to 400 feet per year, or approximately one mile in last 12 years.

Chair Wichert inquired what would happen if Aerojet Rocket Dynamics shuts down and or goes away.

Mr. MacDonald stated that Areojet Rocket Dynamics is going away; however, they have parent companies still in place and an 80 million dollar bond that is required to be in place.

GM Roscoe inquired how many decades it will take to clean this up.

Mr. MacDonald stated that it will be many decades. Estimated 245 years and they are only 12 years into it.

The committee thanked Mr. MacDonald for his report.

3. **Update on Water Quality - TCE at Well #N15**
John Valdes (Mr. Valdes) presented the staff report.

Director Jones inquired if we get this information back from Sierra West Consultants, what we do with it.

GM Roscoe stated that what SSWD does with the information will depend on what Sierra West Consultants does or does not find.

Mr. Valdes followed up on Director Jones question and stated that Jeff Bench with Sierra West Consultants stated that if the District receives documented proof that TCE could have come from a potential contaminated activity the District would then turn the documented findings over to the Regional Water Reliability Control Board (RWRCB) and they could potentially take further action.

Director Wichert inquired if legal needs to be involved or already has been informed on this issue.

GM Roscoe stated that yes, legal is aware and we are waiting for the next report from Sierra West Consultants.

4. **Water Quality Test Reports**
Mr. Armand and Hannah Dunrud (Ms. Dunrud) presented the staff report and went through the staff report exhibits in Excel spreadsheets.

Chair Wichert inquired what happens if you have a standby well and you have to bring it into service, but your next monitoring is not until 2022.

Mr. Armand stated before you bring a well back into service you have to get it re-permitted and you have to bring all the water quality monitoring up to date.

Chair Wichert inquired if staff is satisfied with the lab the District is using.

Ms. Dunrud stated that they considering looking into a new lab.

GM Roscoe stated that our Environmental Compliance department is doing an excellent job. The additional detailed follow through staff performs is impressive.

Director Wichert stated that he would like to see this information regularly, but proposes staff find a way to condense the information for these types of presentations.

5. **Lead Monitoring in Schools Update**
Mr. Armand presented the staff report.

Chair Wichert stated that initially he had mixed feelings on this and has heard complaints regarding doing this school sampling testing, but he feels like this is the right thing to do.

Mr. Armand stated that because this is an unfunded mandate no one budgeted for this.

Chair Wichert stated the results of lead poisoning are horrible. He commented that he is in favor of the District's Environmental Compliance departments working with school districts on this.

6. **New Replacement Well #N6A – Water Quality**
Mr. Valdes presented the staff report and introduced Justin Shobe (Mr. Shobe) with Luhdoroff & Scalmanini.

Director Jones inquired if there is a maintenance factor in this or a long term maintenance cost.

Mr. Shobe stated that there is nothing on maintenance that jumps out that is costly.

Chair Wichert inquired to GM Roscoe if this is cheaper than drilling a new well.

GM Roscoe stated that yes; this process is cheaper and does not change the certification requirements for our operators. A new well runs similar risks of requiring well head treatment.

Director Jones inquired if additional staff will be needed.

GM Roscoe stated that additional staff will be required. This treatment and technology is something that our operators are familiar with however, additional staff will be needed to operate this treatment system.

Chair Wichert inquired to Mr. Roscoe if he is comfortable knowing what he knows from operating a similar system that this is the right decision.

GM Roscoe stated that yes he is comfortable moving forward; however, he's also waiting to see the final report from Luhdoroff & Scalmanini.

Adjournment
Chair Wichert adjourned the meeting at 5:19 p.m.

Robert S. Roscoe
General Manager/Secretary
Sacramento Suburban Water District

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SACRAMENTO SUBURBAN WATER DISTRICT

Water Quality Committee

Agenda Item: 2

Date: October 5, 2017

Subject: Regulation and Monitoring of 1,2,3 - Trichloropropane

Staff Contact: David Armand, Environmental Compliance Supervisor

Recommended Committee Action:
Receive written staff report.

Background:
On July 18, 2017, the State Water Resources Control Board, Division of Drinking Water (DDW) set the maximum contaminant level (MCL) for 1,2,3-Trichloropropane (1,2,3-TCP) at 5 parts per trillion (ppt). Upon completion of the final regulatory documentation, it will be sent to the State Office of Administrative Law (OAL) where it will become law. DDW expects OAL to concur with its recommendation that compliance monitoring begin January 1, 2018.

1,2,3-TCP is a anthropogenic chemical that has been used historically in cleaning solvents and soil fumigant pesticides. Based on 2015 data, DDW estimated that 103 water systems have detected 1,2,3-TCP above 5 ppt in at least one source. Many of those detections have been in the Central Valley. DDW encourages systems with previous detections of 1,2,3-TCP greater than 5 ppt to begin taking corrective action before January 2018.

Discussion:
Public water systems will be required to conduct four consecutive quarters of monitoring at each source of supply. If the average result for 1,2,3-TCP from the four quarters of monitoring is greater than 5 ppt, the system will be out of compliance. At that time, the source of supply will have to be permanently removed from service, or have treatment installed. Granular activated carbon is the preferred method of treatment for removing 1,2,3-TCP. Note that it is possible for a source to exceed the MCL before four quarters of monitoring have been completed.

For those sources where 1,2,3-TCP is not detected after the initial four quarters of monitoring is completed, the monitoring frequency will be reduced to either annual for surface water systems, or triennial for groundwater systems. The District's per sample cost is $70. Initial compliance monitoring (analytical) costs for 1,2,3-TCP will be approximately $21,000.

1,2,3-TCP is one of the few synthetic organic chemicals where the Detection Limit for the Purposes of Reporting is equal to the MCL. The exceptionally low MCL is primarily based on 1,2,3-TCP's 0.7 ppt Public Health Goal (PHG). The PHG is established as the 1:1,000,000 cancer risk for a person drinking 2 liters of water per day with a 70-year lifetime exposure. The 5 ppt MCL was established by considering the PHG, compliance costs and, analytical and treatment capabilities.

Historic 1,2,3-TCP monitoring at selected wells includes data from California's Unregulated Contaminant Monitoring Rule (UCMR) from 2001 to 2003 and USEPA's UCMR 3 from 2013 to 2015. The CA UCMR analysis reported results down to 5 ppt and USEPA's UCMR 3 analysis reported results down to 30 ppt. The District has CA UCMR data for 57 of the 75 wells that are currently permitted as Active and USEPA UCMR 3 data for 45 of the currently Active wells. No detections of 1,2,3-TCP were reported from either sampling event. There are nine Active wells that have never been monitored for 1,2,3-TCP below 0.5 ppb.

The District recently initiated 1,2,3-TCP monitoring in the South Service Area during the third quarter of 2017. Monitoring for 1,2,3-TCP will begin in the North Service Area during the first quarter of 2017.

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SACRAMENTO SUBURBAN WATER DISTRICT

Water Quality Committee

Agenda Item: 3

Date: October 4, 2017

Subject: Update on Water Quality – TCE at Well #N15

Staff Contact: John E. Valdes, Engineering Manager
Jim Arenz, Senior Project Manager

Recommended Committee Action:
Receive report on the investigation for the source of Trichloroethylene (TCE) contamination at the District's Cabana Well (#N15).

Background:
In 2016, well #N15 was taken off-line due to concentrations of TCE above the maximum contaminant level (MCL) being detected. TCE is a volatile solvent commonly used as an industrial degreaser or is a by-product of Tetrachloroethylene (PCE) degradation. The well also has elevated concentrations of iron and manganese (but these are below MCL for drinking water standards), as well as other challenges.

The District had the well assessed and a reconnaissance level report completed, which evaluated suitable alternatives to address the water quality and complexities for water production at this site. The report was prepared by Wood Rodgers, Inc. and expressed an opinion that the source of contamination was in a higher aquifer and the well might be restored for service (likely at a lower rate of water production) with treatment following a regime of additional study and with retrofitting for isolation of production zones. However, the site has physical limitations regarding access and overall size to accommodate the work and possible treatment requiring additional evaluation.

In November 2016, the District retained Sierra West Consulting (SWC) to perform a study in an attempt to determine the source of the TCE contamination. SWC's scope of work included searching various databases for nearby properties where environmental cleanup occurred; confirming the general groundwater flow direction; identifying nearby properties with Potentially Contaminating Activities (PCAs); developing a Drinking Water Source Assessment and Protection (DWSAP) style evaluation to understand the aquifer capture zone of Well #N15

and the corresponding recharge areas; analyzing historical aerial photos of the recharge area; and preparing a report summarizing their findings.

SWC completed these tasks and their findings and recommendations were presented to the Water Quality Committee Meeting at a meeting on March 27, 2017. They concluded that "the most likely sources of TCE in Well #N15 are the former Camp Kohler, nearby industrial activities and gas stations." They also concluded that "more in-depth analyses of the identified locations would include further review of historical activities and land uses, preliminary site investigations and limited Phase II investigations to test soil and groundwater."

Discussion:

The District contracted with SWC for a second phase of the TCE contamination investigation in order to try and identify the possible responsible party(ies). Their scope of work included hiring a nationally recognized firm, History Associates, to assist in the investigation. Specifically, History Associates was to conduct targeted historical research into whether the WWII era Army Signal Corps facility at Camp Kohler could have discharged TCE containing compounds to the subsurface. SWC's scope of work for this second phase also includes evaluating the potential costs of well rehabilitation and wellhead treatment.

History Associates has now completed their research into the Camp Kohler and other activities. Their findings are included in the attached Exhibit 1 (a letter report from History Associates dated September 12, 2017). Unfortunately, the results did not reveal any TCE-related activities at Camp Kohler and certainly nothing that would explain the TCE found in Well #N15.

District staff met with SWC on October 3, 2017, to obtain an update on the phase two investigation work. SWC is making progress on evaluating and providing cost estimates for possible well rehabilitation options that might allow the well to be returned to service. In addition, they are also costing out possible treatment options. It is anticipated that they will be completed with the phase two work by mid-November. It is also anticipated that SWC will attend the next Water Quality Committee Meeting to provide an update on their conclusions and findings from the second phase of the investigation.

Fiscal Impact:

Unknown at the present time. Future costs could include further environmental investigation(s), water treatment, etc., and may could prove infeasible to pursue. The contract amount with SWC for the current phase of the investigation is $26,200. The cost to add the services of History Associates, as described above, was $8,500 resulting in a revised cost of $34,700. The cost for the initial phase of the investigation was $14,800.

Strategic Plan Alignment:

Water Supply – 1.D. Manage the District's water supplies to ensure their quality and quantity.

This item is in alignment with this goal because adequate supplies of uncontaminated groundwater are crucial to the health of consumers. District customers benefit by exercising

diligence and taking action to identify sources of contamination and recovering damages when possible.

Exhibit 1

History Associates INC.
THE BEST COMPANY IN HISTORY®

300 N. Stonestreet Ave, Rockville, Maryland 20850
301 279 9697 301 279 9224
www.HistoryAssociates.com

Privileged and Confidential / Work Product Protection

September 12, 2017

Jeffrey C. Bensch, P.E.
Sierra West Consultants, Inc.
4227 Sunrise Blvd., Suite 220
Fair Oaks, California 95628

Dear Jeffrey:

Per your email request of September 11, 2017, History Associates, Inc., is pleased to submit the following research methodology report concerning our targeted Phase I historical research into whether the World War II-era U.S. Army Signal Corps or U.S. Army Air Forces facility at Camp Kohler, located twelve miles northeast of Sacramento, California, potentially discharged trichloroethylene (TCE) containing compounds to the subsurface.

On August 7, 2017, you, on behalf of Sierra West Consultants, LLC, authorized History Associates to undertake research as outlined in our proposal dated June 14, 2017. On the same day, you authorized History Associates to conduct additional research using our consultant at the Air Force Historical Research Agency (AFHRA) at Maxwell Air Force Base in Montgomery, Alabama, as proposed via email on June 21, 2017.

We are once again providing the link to the main project folder with all collected documents on *Dropbox*, in which you can still access the files:

https://www.dropbox.com/sh/038dk1d6jkmze4u/AADuHLdhnfCzWNcCFNw_YcL0a?dl=0

PROJECT METHODOLOGY

During August 2017, History Associates undertook targeted historical research at the National Archives at College Park, Maryland (NARA-CP), by reviewing materials in the following collections: Records of the Army Air Forces (RG 18), Records of the Office of the Chief of Engineers (RG 77), Records of the Office of the Quartermaster General (RG 92), Records of the Office of the Chief Signal Officer (RG 111), Records of the Office of the Inspector General (RG 159), Records of the General Services Administration (RG 269), and Records of the War Asset Administration (RG 270). We have attached our research notes that provide further information

on the specific entries within each of these record groups that we reviewed while completing this targeted Phase I research.[1]

History Associates also communicated with the command historian at the U.S. Army Communications-Electronics Command (CECOM) History Office in Fort Monmouth, New Jersey, and obtained additional documentation about Camp Kohler through remote requests, while our consultant at AFHRA reviewed holdings pertaining to the U.S. Army Air Forces. We also reached out to archivists at the National Archives at San Bruno, CA (NARA-San Bruno) regarding any potential records of interest in the facility's collection of U.S. Army Corps of Engineers records.

KEY FINDINGS

As previously discussed, we did not locate any documents that describe the usage or disposal of TCE at the facility during its operation as an U.S. Army Signal Corps or U.S. Army Air Forces training facility. We also found no documents indicating that vapor degreasers (or other TCE-containing equipment) were utilized on the site during World War II. We have, however, located contextual information describing the operation of the base laundry and motor pool and located a few tangential references to an "oxidation pond" or "laundry reservoir" at the site during World War II. Below we have summarized the key documents we collected:

1943 06 19 Camp Kohler—Annual Report, Sept. 1, 1942-June 15, 1943

This document provides an overview of activities at the facility from 1942–43. The file consists of two separate annual reports; one for 1942 and one for 1943. Pages 58-92 and 116-128 of the PDF provide an overview of training procedures for resident personnel. The report also includes schematics of the site (pages 21-23). There is reference to a "reservoir" near the laundry as well as a sewage treatment plant. It is unclear what type of reservoir this was or what it was potentially used for over time.

1944 12 16 History of Overseas Replacement Depot—Camp Kohler (Vol. II)

Pages 5-19 include a schematic circa 1944. Pages 50-52 include a December 7, 1944 memo regarding the "Report of Fuel, Fuel Burning Equipment, operation and Maintenance at Camp Kohler," which describes the boiler equipment present at the facility. Page 269 includes Daily Bulletin #5, dated January 5, 1945, which includes information about the subcontractor, Lillywhite Dry Cleaners of Roseville. This document seems to imply that dry cleaning operations (which sometimes utilized TCE) were not undertaken at the facility during the period of interest.

1945 11 08 Memo re Advance Planning Industrial Waste Report

[1] File Names: "2017 08 03 NARA-San Bruno_MC Research Notes," "2017 08 18 CECOM_AS Research Notes," "2017 08 AFHRA_GC Consultant Notes," "2017 08 NARA-College Park_AS Research Notes," and "2017 08 NARA-College Park_MC Research Notes."

This report details industrial waste releases from McClellan Air Force Base into Magpie Creek, a drainage channel that serviced both the airfield and Camp Kohler. The report indicates that an Engine Repair Area at McClellan was the primary culprit of the releases and that "lube oils and cleaning solvents" had seeped into the creek. The main solvent released was "Turco Fuze" which was described as: "19% Cryalic Acid, 58% Ethleyene dichloride, 8% soap, 15% water." The Army Air Forces subsequently took efforts to control the waste and sludge originating from the airfield.

DERP-FUDS Site No.J09CA706300—Camp Kohler

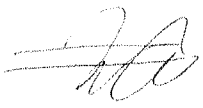
This is a circa 1994 environmental study prepared by the U.S. Army Corps of Engineers. The report notes that the site is eligible for the Defense Environmental Restoration Program, should pollution be discovered at the former facility. Page 6 denotes an "oxidation pond" near the laundry. It is unclear, however, if the oxidation pond is an industrial lagoon designed for the disposal of waste.

POTENTIAL AVENUES OF FURTHER RESEARCH

We have now completed all Phase I research tasks outlined in our proposal. There are, however, several potential additional research avenues which could be completed once you have had an opportunity to review the documents we collected. We feel that a more in-depth review of the following collections may be worthwhile, particularly due to their connection to McClellan Air Force Base: Records of the Headquarters U.S. Air Force; and, the Records of the U.S. Air Force Commands, Activities, and Organizations. We could also potentially review histories for U.S. Air Force units stationed in the McClellan Air Force Base, as well as the larger histories related to such entities as the Sacramento Air Material Area. It may even be prudent to check for environmental reports regarding McClellan Air Force Base, developed when the U.S. Department of Defense closed the installation over the course of the 1990s.

Please let us know if you have questions or comments regarding this report or if there is additional work that we can complete for you.

Sincerely,



Matthew R. Coletti
Historian

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SACRAMENTO SUBURBAN WATER DISTRICT

Water Quality Committee

Agenda Item: 4

Date: October 5, 2017

Subject: Water Quality Test Reports

Staff Contact: David Armand, Environmental Compliance Supervisor

Recommended Committee Action:
Receive written staff report.

Background:
The 2017 Monitoring Plan (Exhibit 1) is a master schedule that lists the monitoring requirements for each of the District's groundwater wells. The monitoring plan also shows the following general information for each well:

- Service area
- Name and number
- Permitted status
- The next time main groups of contaminants require monitoring

The monitoring plan also indicates which of the South Service Area (SSA) wells have fluoridation facilities. The monitoring plan shows that most of the annual and triennial sampling for 2017 has been scheduled in the third quarter. The scheduled third quarter monitoring was completed by September 30, 2017, except for offline wells. However, the data presented in this agenda item is limited to that received from the lab to date.

Discussion:
Third quarter 2017 monitoring is primarily composed of quarterly, annual, and triennial sampling that is required by regulation, or a water supply permit condition. Nitrate monitoring is required on an annual frequency (at minimum) for active sources, according to the Title-22 Code of Regulations. SSA wells were monitored for triennial Title-22 constituents, including inorganic chemicals, synthetic organic compounds and volatile organic compounds (VOCs). The State Water Resources Control Board, Division of Drinking Water (DDW) has required select wells to

be monitored at an increased frequency (annual instead of triennial) for VOCs due to their proximity to other sources which have had detections or known areas of groundwater contamination. Most of the increased-frequency (quarterly) monitoring required by regulation, for non-bacteriological related constituents, was triggered by events such as:

- VOC detection
- Nitrate detection over one-half of the maximum contaminant level (MCL)
- Secondary MCL exceedance

The water quality data also includes monthly monitoring at some sources that was triggered by unique events. Other sampling required during the third quarter 2017 that is not on the monitoring plan includes sampling that was scheduled to be conducted previously but could not be performed because the wells were not in service.

Third quarter monitoring was conducted in accordance with the 2017 Monitoring Plan (Exhibit 1). Individual analytical results (for the available data) from the third quarter 2017 monitoring are attached as Exhibits 2 – 7. Exhibits 2 – 7 also include explanations as to why each source was monitored during the third quarter. Nine wells missed scheduled monitoring because they are offline pending repairs or upgrades.

SACRAMENTO SUBURBAN WATER DISTRICT
2017 MONITORING PLAN

Exhibit 1

NSA Monitoring Plan 2017

This plan is subject to changes that result from: well status or condition, monitoring results, waivers, new regulations and/or other requirements.

Area	Facility Name (F)[2]	No.	Status	2017															
				Raw Bac-T	Inorganics	Secondary	Perchlorate	Chrome 6 (Cr+6)[3]	Nitrate (as N)	Annual Fluoride	Special Fe/Mn	VOC	SOC	Radionuclides	Asbestos	Pb & Cu	Stage 2 DBPs	Other - Special	Nitrosamines (Process Sampling)
N	Melrose / Channing	27	Active	Q1-4					Q3										
N	Watt / Elkhorn	31A	Active	M					Q3		M	Q3							
N	La Cienega / Melrose	34	Stand-by	Next monitoring= 2022															
N	Thomas / Elkhorn	39	Stand-by	Next monitoring= 2022															
N	Weddigen / Gothberg	52	Active	Q1-4					Q3										
N	Fairbairn / Karl	56A	Active	Q1-4					Q3			Q3							
N	Thirty Second / Elkhorn	58	Active	Q1-4					Q3			Q3							
N	Bainbridge / Holmes School	59A	Active	Q1-4					Q3									M-Hg	
N	Galbrath / Antelope Woods	64	Active	M-10T					Q3										
N	Capehart 1-C	MC-C1	Stand-by	Next monitoring= 2022															
N	Capehart3-C	MC-C3	Stand-by	Next monitoring= 2022															
N	McClellan Well 10	MC10	Active	Q1-4	INORGANICS PART OF TITLE 22 NEXT DUE 2019	SECONDARIES PART OF TITLE 22 NEXT DUE 2019	PERCHLORATE PART OF TITLE 22 NEXT DUE 2019	Cr+6 PART OF TITLE 22 NEXT DUE 2019	Q3	NOT REQUIRED IN NORTH SERVICE AREA		Q3	SOCs PART OF TITLE 22 NEXT DUE 2019	RADs DUE EVERY COMPLIANCE CYCLE. NEXT DUE 2023[4] - GA ONLY	DISTRIBUTION SYSTEM SAMPLES; SYSTEM ASBESTOS NEXT DUE 2020, SOURCE ASBESTOS NEXT DUE 2022 (request triennial system waiver)	DISTRIBUTION SYSTEM SAMPLES DUE: JUNE - SEPTEMBER 2019	QUARTERLY DISTRIBUTION SYSTEM SAMPLES		
N	Evergreen	N1	Active	Q1-4					Q3										
N	Engle	N3	Active	Q1-4					Q1-4										Q1-4
N	Hillsdale	N5	Active	Q1-4					Q3			Q3							
N	Palm	N6	Destroyed																
N	Rosebud	N7	Active	Q1-4					Q3			Q3							
N	Field	N8	Active	Q1-4					Q3			Q1-4							
N	Cameron	N9	Active	Q1-4					Q3										
N	Walnut	N10	Active	Q1-4					Q3			Q1-4							
N	St. Johns	N12	Active	Q1-4					Q1-4			Q3							Q1-4
N	Orange Grove	N14	Active	Q1-4					Q3			Q3							
N	Cabana	N15	Active	Q1-4					Q3			Q1-4							
N	Oakdale	N17	Active	Q1-4					Q3			Q3							
N	Cypress	N20	Active	Q1-4					Q3		Q1-4								Q1-4
N	River College	N22	Active	Q1-4					Q3										
N	Freeway	N23A	Active	Q1-4					Q3			Q1-4							
N	Don Julio	N24	Active	Q1-4					Q3										
N	Sutter	N25	Active	Q1-4					Q3										
N	Monument	N26	Active	Q1-4					Q3			Q3							
N	Merrihill	N29	Active	Q1-4					Q1-4										
N	Park Oaks	N30	Active	Q1-4					Q1-4			Q3							
N	Barrett Meadows	N31	Inactive																
N	Poker 1	N32-A	Active	Q1-4					Q3			Q1-4							
N	Poker 2	N32-B	Active	Q1-4					Q3		Q1-4	Q1-4							
N	Poker 3	N32-C	Stand-by	Next monitoring= 2022															
N	Walerga	N33	Stand-by	Next monitoring= 2022															
N	Cottage	N34	Active	Q1-4					Q3			Q3							
N	North Antelope	N35	Active	Q1-4					Q3			Q1-4							
N	Verner	N36	Active	Q1-4					Q3		Q1-4	Q3							
N	Coyle	N38	Active	Q1-4					Q3		Q3	Q3							
N	Rutland	N39	Active	M thru Sep			Q1		Q3			Q1-2	Q1-2	Q1-2					
N	Distribution System	NA	NA												Q2		Q1-4		

SACRAMENTO SUBURBAN WATER DISTRICT
2017 MONITORING PLAN

Exhibit 1

SSA Monitoring Plan 2017				2017															
This plan is subject to changes that result from: well status or condition, monitoring results, waivers, new regulations and/or other requirements.				Raw Bac-T	Inorganics	Secondary	Perchlorate	Chrome 6 (Cr+6)[3]	Nitrate (as N)	Annual Fluoride	Special Fe/Mn	VOC	SOC	Radionuclides	Asbestos	Pb & Cu	Stage 2 DBPs	Other - Special	Nitrosamines (Process Sampling)
Area	Facility Name (F)[2]	No.	Status																
S	El Prado / Park Estates (F)	2A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3	RADs DUE EVERY COMPLIANCE CYCLE. NEXT DUE 2023[4] - GA ONLY	DISTRIBUTION SYSTEM SAMPLES; SYSTEM ASBESTOS NEXT DUE 2020, SOURCE ASBESTOS NEXT DUE 2023 (request triennial system waiver)	DISTRIBUTION SYSTEM SAMPLES DUE: JUNE - SEPTEMBER 2019	QUARTERLY DISTRIBUTION SYSTEM SAMPLES		
S	Kubel / Armstrong	3A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Bell / Marconi (F)	4B	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Bell / El Camino	5	Inactive																
S	Ravenwood / Eastern (F)	9	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Hernando / Santa Anita Park	12	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Calderwood / Marconi (F)	13	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Marconi South / Fulton	14	Active	M Jan-July,Q4	Q3	Q3	Q3	Cr-T	Q1-4	---	Fe,Q1,2,4	Q3	Q1/3						
S	Riding Club / Ladino (F)	18	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Watt / Arden (F)	20A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	West / Bercerra (F)	22	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Marconi North / Fulton	23	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Beccerra / Woodcrest (F)	24	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q1-4	---		Q1&3	Q1/3						
S	Thor/Mercury (F)	25	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Greenwood / Marconi (F)	26	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q1-4	---		Q1-4	Q1/3						
S	Red Robin / Darwin (F)	28	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Rockbridge / Bowling Green (F)	30	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Eden / Root (F)	32A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---	M	Q3	Q1/3						Q3
S	Eden / Root - Treated	32A	Active	-----	Q3	Q3	---	---	---	---	M	---	---					----	---
S	Auburn / Norris (F)	33A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Ulysses/Mercury (F)	35	Active	M-10T	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Morse / Cottage Park	37	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Watt / Auburn	38	Stand-by	Next monitoring= 2023															
S	Auburn / Yard	40	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Auburn / Yard (F)	40A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---	---	Q3	Q1/3						
S	Albatross / Iris (F)	41	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Edison / Truax (F)	43	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Jamestown / Middleberry	45	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Jonas / Sierra Mills	46	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q1-4	---		Q3	Q1/3						
S	Copenhagen / Arden (F)	47	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						Q3
S	Stewart / Lynndale (F)	55A	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Whitney / Concetta (F)	60	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Merrily / Annadale (F)	65	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q1-4	---		Q3	Q1/3						
S	Eastern / Woodside Church (F)	66	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Northrop / Dornajo	68	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---	Q1,2,4	Q3	Q1/3						
S	Hilldale / Cooper (F)	69	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Sierra / Blackmer (F)	70	Active	M start Apr	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Rodney T. Franz (F)	71	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	River Walk / NETP (F)	72	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---	As+Fe,Q1,2,4	Q3	Q1/3						
S	River Walk / NETP East (F)	73	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q1-4	Q1/3						
S	River Walk / NETP South (F)	74	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Enterprise / Northrop (F)	75	Inactive																
S	Enterprise / Northrop - Treated	75	Inactive																
S	Fulton / Fair Oaks	76	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Larch / Northrup	77	Active	Q1-4	Q3	Q3	Q3	Cr-T	Q3	---		Q3	Q1/3						
S	Distribution System	NA	NA												Q2		Q1-4		

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	1B - Brewster Mill Circle	07/05/2017	0.70	A	A
TCR Sample Station	2B - 7840 Aztec Way	07/05/2017	0.71	A	A
TCR Sample Station	3B - 4501 Courtyard Way	07/05/2017	0.72	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	07/05/2017	0.87	A	A
TCR Sample Station	5B - 3311 Q Street	07/05/2017	0.79	A	A
TCR Sample Station	6B - 6813 Sprig Drive	07/05/2017	0.73	A	A
TCR Sample Station	7B - 6020 Gilman Way	07/05/2017	0.66	A	A
TCR Sample Station	8B - 6447 Villa Drive	07/05/2017	0.73	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	07/05/2017	0.65	A	A
TCR Sample Station	10B - 6512 32nd Street	07/05/2017	0.61	A	A
TCR Sample Station	11B - 5436 Poplar Ave	07/05/2017	0.77	A	A
TCR Sample Station	12B - 3917 Renick Way	07/05/2017	0.77	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	07/05/2017	0.63	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	07/05/2017	0.67	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	07/05/2017	0.80	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	07/05/2017	0.76	A	A
TCR Sample Station	17B - 5607 Milburn Street	07/05/2017	1.16	A	A
TCR Sample Station	18B - 4876 Crestview Drive	07/05/2017	0.77	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	07/05/2017	0.81	A	A
TCR Sample Station	20B - 4607 Rutgers Way	07/05/2017	0.70	A	A
TCR Sample Station	21B - 3517 Domich Way	07/05/2017	1.12	A	A
TCR Sample Station	22B - 4722 Oakshire Court	07/05/2017	**1.47**	A	A
TCR Sample Station	23B - 1939 Iris Ave	07/05/2017	0.72	A	A
TCR Sample Station	24B - 3211 Chenu Ave	07/05/2017	0.70	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	07/05/2017	0.54	A	A
TCR Sample Station	26B - 3750 Random Lane	07/05/2017	0.80	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	07/05/2017	0.70	A	A
TCR Sample Station	28B - 5011 Keane Drive	07/05/2017	0.56	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	07/05/2017	1.08	A	A
TCR Sample Station	30B - 1128 Wayland Ave	07/05/2017	0.59	A	A
TCR Sample Station	1B - Brewster Mill Circle	07/11/2017	0.53	A	A
TCR Sample Station	2B - 7840 Aztec Way	07/11/2017	0.57	A	A
TCR Sample Station	3B - 4501 Courtyard Way	07/11/2017	0.92	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	07/11/2017	0.71	A	A
TCR Sample Station	5B - 3311 Q Street	07/11/2017	0.56	A	A
TCR Sample Station	6B - 6813 Sprig Drive	07/11/2017	0.63	A	A
TCR Sample Station	7B - 6020 Gilman Way	07/11/2017	0.55	A	A
TCR Sample Station	8B - 6447 Villa Drive	07/11/2017	0.72	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	07/11/2017	0.65	A	A
TCR Sample Station	10B - 6512 32nd Street	07/11/2017	0.53	A	A
TCR Sample Station	11B - 5436 Poplar Ave	07/11/2017	0.51	A	A
TCR Sample Station	12B - 3917 Renick Way	07/11/2017	0.67	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	07/11/2017	0.46	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	07/11/2017	0.63	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	07/11/2017	0.76	A	A

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	16B - 5569 Keoncrest Circle	07/11/2017	0.72	A	A
TCR Sample Station	17B - 5607 Milburn Street	07/11/2017	**0.02**	A	A
TCR Sample Station	18B - 4876 Crestview Drive	07/11/2017	0.62	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	07/11/2017	0.56	A	A
TCR Sample Station	20B - 4607 Rutgers Way	07/11/2017	0.60	A	A
TCR Sample Station	21B - 3517 Domich Way	07/11/2017	0.84	A	A
TCR Sample Station	22B - 4722 Oakshire Court	07/11/2017	0.72	A	A
TCR Sample Station	23B - 1939 Iris Ave	07/11/2017	0.35	A	A
TCR Sample Station	24B - 3211 Chenu Ave	07/11/2017	0.64	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	07/11/2017	0.91	A	A
TCR Sample Station	26B - 3750 Random Lane	07/11/2017	0.77	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	07/11/2017	0.71	A	A
TCR Sample Station	28B - 5011 Keane Drive	07/11/2017	0.90	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	07/11/2017	0.81	A	A
TCR Sample Station	30B - 1128 Wayland Ave	07/11/2017	0.89	A	A
TCR Sample Station	1B - Brewster Mill Circle	07/18/2017	0.90	A	A
TCR Sample Station	2B - 7840 Aztec Way	07/18/2017	0.65	A	A
TCR Sample Station	3B - 4501 Courtyard Way	07/18/2017	0.61	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	07/18/2017	0.72	A	A
TCR Sample Station	5B - 3311 Q Street	07/18/2017	0.81	A	A
TCR Sample Station	6B - 6813 Sprig Drive	07/18/2017	0.40	A	A
TCR Sample Station	7B - 6020 Gilman Way	07/18/2017	0.77	A	A
TCR Sample Station	8B - 6447 Villa Drive	07/18/2017	0.67	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	07/18/2017	0.81	A	A
TCR Sample Station	10B - 6512 32nd Street	07/18/2017	0.80	A	A
TCR Sample Station	11B - 5436 Poplar Ave	07/18/2017	0.78	A	A
TCR Sample Station	12B - 3917 Renick Way	07/18/2017	0.67	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	07/18/2017	0.57	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	07/18/2017	0.65	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	07/18/2017	0.73	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	07/18/2017	0.79	A	A
TCR Sample Station	17B - 5607 Milburn Street	07/18/2017	1.17	A	A
TCR Sample Station	18B - 4876 Crestview Drive	07/18/2017	0.64	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	07/18/2017	0.85	A	A
TCR Sample Station	20B - 4607 Rutgers Way	07/18/2017	0.74	A	A
TCR Sample Station	21B - 3517 Domich Way	07/18/2017	0.90	A	A
TCR Sample Station	22B - 4722 Oakshire Court	07/18/2017	0.93	A	A
TCR Sample Station	23B - 1939 Iris Ave	07/18/2017	0.79	A	A
TCR Sample Station	24B - 3211 Chenu Ave	07/18/2017	0.64	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	07/18/2017	0.78	A	A
TCR Sample Station	26B - 3750 Random Lane	07/18/2017	0.66	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	07/18/2017	1.15	A	A
TCR Sample Station	28B - 5011 Keane Drive	07/18/2017	0.57	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	07/18/2017	0.82	A	A
TCR Sample Station	30B - 1128 Wayland Ave	07/18/2017	0.89	A	A

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	1B - Brewster Mill Circle	07/25/2017	0.67	A	A
TCR Sample Station	2B - 7840 Aztec Way	07/25/2017	0.53	A	A
TCR Sample Station	3B - 4501 Courtyard Way	07/25/2017	0.70	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	07/25/2017	0.68	A	A
TCR Sample Station	5B - 3311 Q Street	07/25/2017	0.94	A	A
TCR Sample Station	6B - 6813 Sprig Drive	07/25/2017	0.58	A	A
TCR Sample Station	7B - 6020 Gilman Way	07/25/2017	0.98	A	A
TCR Sample Station	8B - 6447 Villa Drive	07/25/2017	0.72	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	07/25/2017	0.68	A	A
TCR Sample Station	10B - 6512 32nd Street	07/25/2017	0.99	A	A
TCR Sample Station	11B - 5436 Poplar Ave	07/25/2017	0.89	A	A
TCR Sample Station	12B - 3917 Renick Way	07/25/2017	0.70	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	07/25/2017	0.55	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	07/25/2017	0.59	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	07/25/2017	0.79	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	07/25/2017	0.69	A	A
TCR Sample Station	17B - 5607 Milburn Street	07/25/2017	0.95	A	A
TCR Sample Station	18B - 4876 Crestview Drive	07/25/2017	0.64	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	07/25/2017	0.85	A	A
TCR Sample Station	20B - 4607 Rutgers Way	07/25/2017	0.65	A	A
TCR Sample Station	21B - 3517 Domich Way	07/25/2017	0.35	A	A
TCR Sample Station	22B - 4722 Oakshire Court	07/25/2017	0.90	A	A
TCR Sample Station	23B - 1939 Iris Ave	07/25/2017	0.56	A	A
TCR Sample Station	24B - 3211 Chenu Ave	07/25/2017	0.55	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	07/25/2017	0.57	A	A
TCR Sample Station	26B - 3750 Random Lane	07/25/2017	0.74	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	07/25/2017	0.94	A	A
TCR Sample Station	28B - 5011 Keane Drive	07/25/2017	0.99	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	07/25/2017	0.75	A	A
TCR Sample Station	30B - 1128 Wayland Ave	07/25/2017	0.78	A	A
TCR Sample Station	1B - Brewster Mill Circle	08/01/2017	0.76	A	A
TCR Sample Station	2B - 7840 Aztec Way	08/01/2017	0.66	A	A
TCR Sample Station	3B - 4501 Courtyard Way	08/01/2017	0.65	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	08/01/2017	0.73	A	A
TCR Sample Station	5B - 3311 Q Street	08/01/2017	0.72	A	A
TCR Sample Station	6B - 6813 Sprig Drive	08/01/2017	0.41	A	A
TCR Sample Station	7B - 6020 Gilman Way	08/01/2017	0.92	A	A
TCR Sample Station	8B - 6447 Villa Drive	08/01/2017	0.58	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	08/01/2017	0.69	A	A
TCR Sample Station	10B - 6512 32nd Street	08/01/2017	0.79	A	A
TCR Sample Station	11B - 5436 Poplar Ave	08/01/2017	0.96	A	A
TCR Sample Station	12B - 3917 Renick Way	08/01/2017	0.77	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	08/01/2017	0.58	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	08/01/2017	0.61	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	08/01/2017	0.73	A	A

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	16B - 5569 Keoncrest Circle	08/01/2017	0.75	A	A
TCR Sample Station	17B - 5607 Milburn Street	08/01/2017	1.08	A	A
TCR Sample Station	18B - 4876 Crestview Drive	08/01/2017	0.52	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	08/01/2017	0.73	A	A
TCR Sample Station	20B - 4607 Rutgers Way	08/01/2017	0.67	A	A
TCR Sample Station	21B - 3517 Domich Way	08/01/2017	0.37	A	A
TCR Sample Station	22B - 4722 Oakshire Court	08/01/2017	1.04	A	A
TCR Sample Station	23B - 1939 Iris Ave	08/01/2017	0.76	A	A
TCR Sample Station	24B - 3211 Chenu Ave	08/01/2017	0.55	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	08/01/2017	0.83	A	A
TCR Sample Station	26B - 3750 Random Lane	08/01/2017	0.78	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	08/01/2017	0.94	A	A
TCR Sample Station	28B - 5011 Keane Drive	08/01/2017	1.09	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	08/01/2017	0.76	A	A
TCR Sample Station	30B - 1128 Wayland Ave	08/01/2017	0.81	A	A
TCR Sample Station	1B - Brewster Mill Circle	08/08/2017	0.67	A	A
TCR Sample Station	2B - 7840 Aztec Way	08/08/2017	0.62	A	A
TCR Sample Station	3B - 4501 Courtyard Way	08/08/2017	0.68	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	08/08/2017	0.75	A	A
TCR Sample Station	5B - 3311 Q Street	08/08/2017	0.80	A	A
TCR Sample Station	6B - 6813 Sprig Drive	08/08/2017	0.41	A	A
TCR Sample Station	7B - 6020 Gilman Way	08/08/2017	0.91	A	A
TCR Sample Station	8B - 6447 Villa Drive	08/08/2017	0.60	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	08/08/2017	0.69	A	A
TCR Sample Station	10B - 6512 32nd Street	08/08/2017	0.76	A	A
TCR Sample Station	11B - 5436 Poplar Ave	08/08/2017	0.96	A	A
TCR Sample Station	12B - 3917 Renick Way	08/08/2017	0.70	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	08/08/2017	0.51	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	08/08/2017	0.70	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	08/08/2017	0.78	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	08/08/2017	0.71	A	A
TCR Sample Station	17B - 5607 Milburn Street	08/08/2017	0.82	A	A
TCR Sample Station	18B - 4876 Crestview Drive	08/08/2017	0.57	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	08/08/2017	0.80	A	A
TCR Sample Station	20B - 4607 Rutgers Way	08/08/2017	0.67	A	A
TCR Sample Station	21B - 3517 Domich Way	08/08/2017	0.55	A	A
TCR Sample Station	22B - 4722 Oakshire Court	08/08/2017	0.79	A	A
TCR Sample Station	23B - 1939 Iris Ave	08/08/2017	0.58	A	A
TCR Sample Station	24B - 3211 Chenu Ave	08/08/2017	0.52	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	08/08/2017	0.53	A	A
TCR Sample Station	26B - 3750 Random Lane	08/08/2017	0.74	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	08/08/2017	0.89	A	A
TCR Sample Station	28B - 5011 Keane Drive	08/08/2017	0.98	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	08/08/2017	0.72	A	A
TCR Sample Station	30B - 1128 Wayland Ave	08/08/2017	0.83	A	A

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Exhibit 2

30 samples are required every week to ensure that the water served to customers is free of (the ubiqitous, albeit harmless) total coliform bacteria. Chlorine residual monitoring is also required for disinfectant residual reporting. SSWD also monitors system residual to ensure facilities are operating as intended. Anomalies are investigated and addressed as soon as they are identified. Target range= 0.30 - 1.20 mg/L.			Chlorine	Total Coliform	E. coli
Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	1B - Brewster Mill Circle	08/15/2017	0.69	A	A
TCR Sample Station	2B - 7840 Aztec Way	08/15/2017	0.38	A	A
TCR Sample Station	3B - 4501 Courtyard Way	08/15/2017	0.66	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	08/15/2017	0.62	A	A
TCR Sample Station	5B - 3311 Q Street	08/15/2017	0.61	A	A
TCR Sample Station	6B - 6813 Sprig Drive	08/15/2017	0.53	A	A
TCR Sample Station	7B - 6020 Gilman Way	08/15/2017	0.89	A	A
TCR Sample Station	8B - 6447 Villa Drive	08/15/2017	0.72	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	08/15/2017	0.59	A	A
TCR Sample Station	10B - 6512 32nd Street	08/15/2017	0.76	A	A
TCR Sample Station	11B - 5436 Poplar Ave	08/15/2017	0.92	A	A
TCR Sample Station	12B - 3917 Renick Way	08/15/2017	0.64	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	08/15/2017	0.54	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	08/15/2017	0.61	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	08/15/2017	0.76	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	08/15/2017	0.65	A	A
TCR Sample Station	17B - 5607 Milburn Street	08/15/2017	0.92	A	A
TCR Sample Station	18B - 4876 Crestview Drive	08/15/2017	**0.12**	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	08/15/2017	0.83	A	A
TCR Sample Station	20B - 4607 Rutgers Way	08/15/2017	0.43	A	A
TCR Sample Station	21B - 3517 Domich Way	08/15/2017	0.68	A	A
TCR Sample Station	22B - 4722 Oakshire Court	08/15/2017	0.90	A	A
TCR Sample Station	23B - 1939 Iris Ave	08/15/2017	**0.03**	A	A
TCR Sample Station	24B - 3211 Chenu Ave	08/15/2017	0.65	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	08/15/2017	0.78	A	A
TCR Sample Station	26B - 3750 Random Lane	08/15/2017	0.74	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	08/15/2017	0.67	A	A
TCR Sample Station	28B - 5011 Keane Drive	08/15/2017	0.93	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	08/15/2017	0.77	A	A
TCR Sample Station	30B - 1128 Wayland Ave	08/15/2017	0.96	A	A
TCR Sample Station	1B - Brewster Mill Circle	08/22/2017	0.82	A	A
TCR Sample Station	2B - 7840 Aztec Way	08/22/2017	0.65	A	A
TCR Sample Station	3B - 4501 Courtyard Way	08/22/2017	0.64	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	08/22/2017	0.67	A	A
TCR Sample Station	5B - 3311 Q Street	08/22/2017	0.96	A	A
TCR Sample Station	6B - 6813 Sprig Drive	08/22/2017	0.69	A	A
TCR Sample Station	7B - 6020 Gilman Way	08/22/2017	1.02	A	A
TCR Sample Station	8B - 6447 Villa Drive	08/22/2017	0.83	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	08/22/2017	0.75	A	A
TCR Sample Station	10B - 6512 32nd Street	08/22/2017	0.78	A	A
TCR Sample Station	11B - 5436 Poplar Ave	08/22/2017	1.05	A	A
TCR Sample Station	12B - 3917 Renick Way	08/22/2017	0.66	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	08/22/2017	0.60	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	08/22/2017	0.74	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	08/22/2017	0.73	A	A

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	16B - 5569 Keoncrest Circle	08/22/2017	0.71	A	A
TCR Sample Station	17B - 5607 Milburn Street	08/22/2017	0.85	A	A
TCR Sample Station	18B - 4876 Crestview Drive	08/22/2017	0.72	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	08/22/2017	0.97	A	A
TCR Sample Station	20B - 4607 Rutgers Way	08/22/2017	0.63	A	A
TCR Sample Station	21B - 3517 Domich Way	08/22/2017	0.96	A	A
TCR Sample Station	22B - 4722 Oakshire Court	08/22/2017	0.88	A	A
TCR Sample Station	23B - 1939 Iris Ave	08/22/2017	**0.07**	A	A
TCR Sample Station	24B - 3211 Chenu Ave	08/22/2017	0.68	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	08/22/2017	**0.13**	A	A
TCR Sample Station	26B - 3750 Random Lane	08/22/2017	0.86	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	08/22/2017	1.02	A	A
TCR Sample Station	28B - 5011 Keane Drive	08/22/2017	1.11	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	08/22/2017	1.16	A	A
TCR Sample Station	30B - 1128 Wayland Ave	08/22/2017	0.49	A	A
TCR Sample Station	1B - Brewster Mill Circle	08/29/2017	0.72	A	A
TCR Sample Station	2B - 7840 Aztec Way	08/29/2017	0.65	A	A
TCR Sample Station	3B - 4501 Courtyard Way	08/29/2017	0.74	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	08/29/2017	0.64	A	A
TCR Sample Station	5B - 3311 Q Street	08/29/2017	0.46	A	A
TCR Sample Station	6B - 6813 Sprig Drive	08/29/2017	0.71	A	A
TCR Sample Station	7B - 6020 Gilman Way	08/29/2017	0.75	A	A
TCR Sample Station	8B - 6447 Villa Drive	08/29/2017	0.72	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	08/29/2017	0.77	A	A
TCR Sample Station	10B - 6512 32nd Street	08/29/2017	0.75	A	A
TCR Sample Station	11B - 5436 Poplar Ave	08/29/2017	0.74	A	A
TCR Sample Station	12B - 3917 Renick Way	08/29/2017	0.79	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	08/29/2017	0.55	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	08/29/2017	0.74	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	08/29/2017	0.74	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	08/29/2017	0.79	A	A
TCR Sample Station	17B - 5607 Milburn Street	08/29/2017	0.85	A	A
TCR Sample Station	18B - 4876 Crestview Drive	08/29/2017	0.66	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	08/29/2017	0.87	A	A
TCR Sample Station	20B - 4607 Rutgers Way	08/29/2017	0.76	A	A
TCR Sample Station	21B - 3517 Domich Way	08/29/2017	0.67	A	A
TCR Sample Station	22B - 4722 Oakshire Court	08/29/2017	0.67	A	A
TCR Sample Station	23B - 1939 Iris Ave	08/29/2017	0.52	A	A
TCR Sample Station	24B - 3211 Chenu Ave	08/29/2017	0.72	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	08/29/2017	**0.18**	A	A
TCR Sample Station	26B - 3750 Random Lane	08/29/2017	1.08	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	08/29/2017	0.49	A	A
TCR Sample Station	28B - 5011 Keane Drive	08/29/2017	0.92	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	08/29/2017	0.91	A	A
TCR Sample Station	30B - 1128 Wayland Ave	08/29/2017	0.49	A	A

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Exhibit 2

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	1B - Brewster Mill Circle	09/07/2017	0.72	A	A
TCR Sample Station	2B - 7840 Aztec Way	09/07/2017	0.64	A	A
TCR Sample Station	3B - 4501 Courtyard Way	09/07/2017	0.69	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	09/07/2017	0.68	A	A
TCR Sample Station	5B - 3311 Q Street	09/07/2017	0.51	A	A
TCR Sample Station	6B - 6813 Sprig Drive	09/07/2017	**0.03**	A	A
TCR Sample Station	7B - 6020 Gilman Way	09/07/2017	0.84	A	A
TCR Sample Station	8B - 6447 Villa Drive	09/07/2017	0.67	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	09/07/2017	0.68	A	A
TCR Sample Station	10B - 6512 32nd Street	09/07/2017	0.79	A	A
TCR Sample Station	11B - 5436 Poplar Ave	09/07/2017	0.67	A	A
TCR Sample Station	12B - 3917 Renick Way	09/07/2017	0.74	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	09/07/2017	0.52	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	09/07/2017	0.63	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	09/07/2017	0.72	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	09/07/2017	0.69	A	A
TCR Sample Station	17B - 5607 Milburn Street	09/07/2017	0.58	A	A
TCR Sample Station	18B - 4876 Crestview Drive	09/07/2017	0.68	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	09/07/2017	0.75	A	A
TCR Sample Station	20B - 4607 Rutgers Way	09/07/2017	0.55	A	A
TCR Sample Station	21B - 3517 Domich Way	09/07/2017	0.74	A	A
TCR Sample Station	22B - 4722 Oakshire Court	09/07/2017	0.75	A	A
TCR Sample Station	23B - 1939 Iris Ave	09/07/2017	0.60	A	A
TCR Sample Station	24B - 3211 Chenu Ave	09/07/2017	0.70	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	09/07/2017	0.31	A	A
TCR Sample Station	26B - 3750 Random Lane	09/07/2017	0.92	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	09/07/2017	0.71	A	A
TCR Sample Station	28B - 5011 Keane Drive	09/07/2017	0.83	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	09/07/2017	0.80	A	A
TCR Sample Station	30B - 1128 Wayland Ave	09/07/2017	0.36	A	A
TCR Sample Station	1B - Brewster Mill Circle	09/12/2017	0.71	A	A
TCR Sample Station	2B - 7840 Aztec Way	09/12/2017	0.63	A	A
TCR Sample Station	3B - 4501 Courtyard Way	09/12/2017	0.84	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	09/12/2017	0.68	A	A
TCR Sample Station	5B - 3311 Q Street	09/12/2017	**1.22**	A	A
TCR Sample Station	6B - 6813 Sprig Drive	09/12/2017	0.67	A	A
TCR Sample Station	7B - 6020 Gilman Way	09/12/2017	0.94	A	A
TCR Sample Station	8B - 6447 Villa Drive	09/12/2017	0.80	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	09/12/2017	0.70	A	A
TCR Sample Station	10B - 6512 32nd Street	09/12/2017	0.90	A	A
TCR Sample Station	11B - 5436 Poplar Ave	09/12/2017	1.07	A	A
TCR Sample Station	12B - 3917 Renick Way	09/12/2017	0.77	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	09/12/2017	0.68	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	09/12/2017	0.95	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	09/12/2017	0.69	A	A

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	16B - 5569 Keoncrest Circle	09/12/2017	0.74	A	A
TCR Sample Station	17B - 5607 Milburn Street	09/12/2017	**1.21**	A	A
TCR Sample Station	18B - 4876 Crestview Drive	09/12/2017	0.75	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	09/12/2017	0.60	A	A
TCR Sample Station	20B - 4607 Rutgers Way	09/12/2017	0.84	A	A
TCR Sample Station	21B - 3517 Domich Way	09/12/2017	0.79	A	A
TCR Sample Station	22B - 4722 Oakshire Court	09/12/2017	0.80	A	A
TCR Sample Station	23B - 1939 Iris Ave	09/12/2017	0.82	A	A
TCR Sample Station	24B - 3211 Chenu Ave	09/12/2017	0.59	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	09/12/2017	0.79	A	A
TCR Sample Station	26B - 3750 Random Lane	09/12/2017	1.06	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	09/12/2017	0.95	A	A
TCR Sample Station	28B - 5011 Keane Drive	09/12/2017	1.07	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	09/12/2017	0.95	A	A
TCR Sample Station	30B - 1128 Wayland Ave	09/12/2017	0.71	A	A
TCR Sample Station	1B - Brewster Mill Circle	09/19/2017	0.73	A	A
TCR Sample Station	2B - 7840 Aztec Way	09/19/2017	0.51	A	A
TCR Sample Station	3B - 4501 Courtyard Way	09/19/2017	0.39	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	09/19/2017	0.69	A	A
TCR Sample Station	5B - 3311 Q Street	09/19/2017	0.98	A	A
TCR Sample Station	6B - 6813 Sprig Drive	09/19/2017	0.32	A	A
TCR Sample Station	7B - 6020 Gilman Way	09/19/2017	1.00	A	A
TCR Sample Station	8B - 6447 Villa Drive	09/19/2017	0.92	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	09/19/2017	0.69	A	A
TCR Sample Station	10B - 6512 32nd Street	09/19/2017	0.99	A	A
TCR Sample Station	11B - 5436 Poplar Ave	09/19/2017	**1.22**	A	A
TCR Sample Station	12B - 3917 Renick Way	09/19/2017	0.57	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	09/19/2017	0.55	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	09/19/2017	0.96	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	09/19/2017	0.74	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	09/19/2017	0.71	A	A
TCR Sample Station	17B - 5607 Milburn Street	09/19/2017	1.08	A	A
TCR Sample Station	18B - 4876 Crestview Drive	09/19/2017	0.85	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	09/19/2017	0.73	A	A
TCR Sample Station	20B - 4607 Rutgers Way	09/19/2017	0.79	A	A
TCR Sample Station	21B - 3517 Domich Way	09/19/2017	0.91	A	A
TCR Sample Station	22B - 4722 Oakshire Court	09/19/2017	0.93	A	A
TCR Sample Station	23B - 1939 Iris Ave	09/19/2017	0.67	A	A
TCR Sample Station	24B - 3211 Chenu Ave	09/19/2017	0.88	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	09/19/2017	0.77	A	A
TCR Sample Station	26B - 3750 Random Lane	09/19/2017	0.77	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	09/19/2017	1.11	A	A
TCR Sample Station	28B - 5011 Keane Drive	09/19/2017	0.96	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	09/19/2017	0.95	A	A
TCR Sample Station	30B - 1128 Wayland Ave	09/19/2017	0.68	A	A

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Facility	**Sampling Point**	**Collection Date**	**mg/L**	**P/A**	**P/A**
TCR Sample Station	1B - Brewster Mill Circle	09/26/2017	0.59	A	A
TCR Sample Station	2B - 7840 Aztec Way	09/26/2017	0.57	A	A
TCR Sample Station	3B - 4501 Courtyard Way	09/26/2017	0.60	A	A
TCR Sample Station	4B - 4535 Dunnbury Way	09/26/2017	**0.05**	A	A
TCR Sample Station	5B - 3311 Q Street	09/26/2017	0.93	A	A
TCR Sample Station	6B - 6813 Sprig Drive	09/26/2017	0.51	A	A
TCR Sample Station	7B - 6020 Gilman Way	09/26/2017	0.88	A	A
TCR Sample Station	8B - 6447 Villa Drive	09/26/2017	0.93	A	A
TCR Sample Station	9B - 4528 Loch Haven Way	09/26/2017	0.70	A	A
TCR Sample Station	10B - 6512 32nd Street	09/26/2017	**1.21**	A	A
TCR Sample Station	11B - 5436 Poplar Ave	09/26/2017	1.04	A	A
TCR Sample Station	12B - 3917 Renick Way	09/26/2017	0.68	A	A
TCR Sample Station	13B - 3406-08 McClellan Mall	09/26/2017	0.54	A	A
TCR Sample Station	14B - 3632 Jenny Lind Ave	09/26/2017	0.88	A	A
TCR Sample Station	15B - 6013 Broken Arrow Court	09/26/2017	0.71	A	A
TCR Sample Station	16B - 5569 Keoncrest Circle	09/26/2017	0.62	A	A
TCR Sample Station	17B - 5607 Milburn Street	09/26/2017	0.82	A	A
TCR Sample Station	18B - 4876 Crestview Drive	09/26/2017	0.77	A	A
TCR Sample Station	19B - 4817 Brittney Lee Court	09/26/2017	0.58	A	A
TCR Sample Station	20B - 4607 Rutgers Way	09/26/2017	0.75	A	A
TCR Sample Station	21B - 3517 Domich Way	09/26/2017	0.94	A	A
TCR Sample Station	22B - 4722 Oakshire Court	09/26/2017	0.71	A	A
TCR Sample Station	23B - 1939 Iris Ave	09/26/2017	**2.20**	A	A
TCR Sample Station	24B - 3211 Chenu Ave	09/26/2017	0.95	A	A
TCR Sample Station	25B - 1812 Jamestown Drive	09/26/2017	0.69	A	A
TCR Sample Station	26B - 3750 Random Lane	09/26/2017	0.85	A	A
TCR Sample Station	27B - 2016 Santa Lucia Court	09/26/2017	1.01	A	A
TCR Sample Station	28B - 5011 Keane Drive	09/26/2017	1.09	A	A
TCR Sample Station	29B - 3853 Exmoor Circle	09/26/2017	0.89	A	A
TCR Sample Station	30B - 1128 Wayland Ave	09/26/2017	0.84	A	A
		Max	**2.20**		
		Min	**0.02**		
		Average	**0.74**		

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Exhibit 3

RAW WATER BACTERIOLOGICAL MONITORING

Raw water bactis are collected every quarter in accordance with WSP requirements. If a trend of "P" occurs at any source, a sanitary survey is conducted. Deficiencies are defined and mitigated ASAP. DDW also may increase monitoring frequency to monthly if they believe that a source requires more frequent surveillance.			Total coliform	E. coli	Total coliform	E. coli
Service Area	**Sampling Point**	**Collection Date**	**P/A**	**P/A**	**MPN/100 mL**	**MPN/100 mL**
NSA	27 - MELROSE/CHANNING	07/05/2017	A	A		
NSA	52 - WEDDIGEN/GOTHBERG	07/05/2017	A	A		
NSA	56A - FAIRBAIN/KARL	07/06/2017	A	A		
NSA	58 - THIRTY SECOND/ELKHORN	07/05/2017	A	A		
NSA	59A - BAINBRIDGE/HOLMES SCHOOL	07/05/2017	A	A		
NSA	64 - GALBRATH/ANTELOPE WOODS	07/12/2017			< 1.1	< 1.1
NSA	64 - GALBRATH/ANTELOPE WOODS	08/14/2017			< 1.1	< 1.1
NSA	64 - GALBRATH/ANTELOPE WOODS	09/11/2017			< 1.1	< 1.1
NSA	MC10 - McCLELLAN PARK	08/01/2017	A	A		
NSA	N 1 - EVERGREEN	07/17/2017	A	A		
NSA	N 3 - ENGLE	07/18/2017	A	A		
NSA	N 5 - HILLSDALE	07/05/2017	A	A		
NSA	N 7 - ROSEBUD	07/12/2017	A	A		
NSA	N 8 - FIELD	09/12/2017	A	A		
NSA	N 9 - CAMERON	07/17/2017	A	A		
NSA	N10 - WALNUT	07/17/2017	A	A		
NSA	N12 - ST. JOHNS	07/12/2017	A	A		
NSA	N14 - ORANGE GROVE	07/27/2017	A	A		
NSA	N20 - CYPRESS	07/19/2017	A	A		
NSA	N22 - RIVER COLLEGE	07/18/2017	A	A		
NSA	N23A - FREEWAY	07/17/2017	A	A		
NSA	N24 - DON JULIO	07/05/2017	A	A		
NSA	N25 - SUTTER	07/05/2017	A	A		
NSA	N26 - MONUMENT	07/05/2017	A	A		
NSA	N29 - MERRIHILL	07/05/2017	A	A		
NSA	N30 - PARKOAKS	07/13/2017	A	A		
NSA	N32A - POKER LANE CENTER	07/05/2017	A	A		
NSA	N32B - POKER LANE EAST	07/05/2017	A	A		
NSA	N34 - COTTAGE	07/06/2017	A	A		
NSA	N35 - ANTELOPE NORTH	07/05/2017	A	A		
NSA	N36 - VERNER WELL	07/18/2017	A	A		
NSA	N38 - COYLE WELL	07/05/2017	A	A		
NSA	N39 - RUTLAND	07/05/2017	A	A		
NSA	N39 - RUTLAND	08/14/2017	A	A		
NSA	N39 - RUTLAND	09/13/2017	A	A		
SSA	2A - EL PRADO/PARK ESTATES	07/11/2017	A	A		
SSA	3A - KUBEL/ARMSTRONG	08/29/2017	A	A		
SSA	4B - BELL/MARCONI	07/17/2017	A	A		
SSA	9 - RAVENWOOD/EASTERN	07/17/2017	A	A		
SSA	12 - HERNANDO/SANTA ANITA PARK	07/12/2017	A	A		
SSA	13 - CALDERWOOD/MARCONI	09/14/2017	A	A		
SSA	18 - RIDING CLUB/LADINO	07/18/2017	A	A		
SSA	20A - WATT/ARDEN	07/12/2017	A	A		
SSA	24 - BECERRA/WOODCREST	07/06/2017	A	A		
SSA	25 - THOR/MERCURY	07/05/2017	A	A		
SSA	26 - GREENWOOD/MARCONI	07/13/2017	A	A		
SSA	28 - RED ROBIN/DARWIN	07/13/2017	A	A		

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Exhibit 3

RAW WATER BACTERIOLOGICAL MONITORING

Raw water bactis are collected every quarter in accordance with WSP requirements. If a trend of "P" occurs at any source, a sanitary survey is conducted. Deficiencies are defined and mitigated ASAP. DDW also may increase monitoring frequency to monthly if they believe that a source requires more frequent surveillance.			Total coliform	E. coli	Total coliform	E. coli
Service Area	**Sampling Point**	**Collection Date**	**P/A**	**P/A**	**MPN/100 mL**	**MPN/100 mL**
SSA	30 - ROCKBRIDGE/BOWLING GREEN	07/13/2017	A	A		
SSA	32A - EDEN/ROOT	07/05/2017	A	A		
SSA	33A - AUBURN/NORRIS	07/06/2017	A	A		
SSA	35 - ULYSSES/MERCURY	07/13/2017			< 1.1	< 1.1
SSA	35 - ULYSSES/MERCURY	08/15/2017			< 1.1	< 1.1
SSA	35 - ULYSSES/MERCURY	09/13/2017			< 1.1	< 1.1
SSA	37 - MORSE/COTTAGE	07/27/2017	A	A		
SSA	40A - AUBURN/YARD	08/22/2017	A	A		
SSA	41 - ALBATROSS/IRIS	07/11/2017	A	A		
SSA	43 - EDISON/TRUAX	07/06/2017	A	A		
SSA	46 - JONAS/SIERRA MILLS	07/13/2017	A	A		
SSA	47 - COPENHAGEN/ARDEN	07/18/2017	A	A		
SSA	55A - STEWART/LYNNDALE	07/17/2017	A	A		
SSA	60 - WHITNEY/CONCETTA	07/06/2017	A	A		
SSA	65 - MERRILY/ANNADALE	07/06/2017	A	A		
SSA	66 - EASTERN/WOODSIDE CHURCH	07/11/2017	A	A		
SSA	68 - NORTHROP/DORNAJO	07/17/2017	A	A		
SSA	70 - SIERRA/BLACKMER	07/11/2017	A	A		
SSA	70 - SIERRA/BLACKMER	08/21/2017	A	A		
SSA	70 - SIERRA/BLACKMER	09/14/2017	A	A		
SSA	71 - RIVER DRIVE	07/17/2017	A	A		
SSA	72 - RIVER WALKNETP	07/18/2017	A	A		
SSA	73 - RIVER WALKNETP EAST	07/05/2017	A	A		
SSA	74 - RIVER WALKNETP SOUTH	07/18/2017	A	A		
SSA	76 - FULTON/FAIR OAKS	07/13/2017	A	A		
SSA	77 - LARCH/NORTHROP	07/13/2017	A	A		

SSWD Q3 2017
DISINFECTION BY-PRODUCT MONITORING

Exhibit 4

Disinfection By-Products (DBP) monitoring is required on a quarterly basis at eight distribution system locations by the Stage 2 DBP Rule. The columns in grey are calculated totals.			Bromodichloromethane	Bromoform	Chloroform	Dibromochloro-methane	Total Trihalomethanes / TTHM
Facility	**Sampling Point**	**Collection Date**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
System	3853 Exmoor Cir.	07/31/2017	**2.2**	ND	**55**	ND	**57**
System	4431 Altadena Way	07/31/2017	**1.5**	ND	**36**	ND	**38**
System	4501 Courtyard Way	07/31/2017	**1.8**	ND	**43**	ND	**45**
System	4535 Dunnbury Way	07/31/2017	**1.4**	ND	**38**	ND	**39**
System	5641 Luce Ave	07/31/2017	**3.1**	ND	**42**	**0.8**	**46**
System	6447 Villa Dr.	07/31/2017	**1.4**	ND	**36**	ND	**37**
System	6813 Sprig Dr.	07/31/2017	**1.3**	ND	**37**	ND	**38**
System	7800 Antelope North Rd.	07/31/2017	**1.2**	ND	**35**	ND	**36**

Facility	Sampling Point	Collection Date	Dibromoacetic acid	Dichloroacetic acid	Monobromoacetic acid	Monochloroacetic acid	Trichloroacetic acid	Haloacetic acids 5 / HAA5
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
System	3853 Exmoor Cir.	07/31/2017	ND	**14**	ND	ND	**25**	**39**
System	4431 Altadena Way	07/31/2017	ND	**17**	ND	ND	**19**	**36**
System	4501 Courtyard Way	07/31/2017	ND	**14**	ND	ND	**17**	**31**
System	4535 Dunnbury Way	07/31/2017	ND	**17**	ND	ND	**18**	**35**
System	5641 Luce Ave	07/31/2017	ND	**17**	ND	ND	**19**	**36**
System	6447 Villa Dr.	07/31/2017	ND	**16**	ND	ND	**18**	**34**
System	6813 Sprig Dr.	07/31/2017	ND	**16**	ND	ND	**18**	**34**
System	7800 Antelope North Rd.	07/31/2017	ND	**18**	ND	ND	**18**	**36**

DBPs form when a drinking water disinfectant reacts with organic matter (OM) that may be present in the water. Most disinfected GW will produce little to none DBPs. DBPs are typically associated with surface water as it tends to have elevated levels of OM. DBP formation type and amount are controlled by: amount of OM present, amount and type of disinfectant and contact time between the two.

Results reported: 1 July - 30 September 2017

SSWD Q3 2017
GENERAL PHYSICAL AND INORGANIC MONITORING

Exhibit 5

See the notes below for the discussion describing why specific monitoring was performed.			Aggressiveness Index	Alkalinity (bicarbonate, as CaCO3)	Alkalinity (carbonate, as CaCO3)	Alkalinity (hydroxide, as CaCO3)	Alkalinity (total, as CaCO3)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
Service Area	Sampling Point	Collection Date		mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	mg/L	µg/L	µg/L	mg/L
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	7/12/2017												
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	8/14/2017												
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	9/11/2017												
NSA	N20 - CYPRESS (2)	7/19/2017												
NSA	N32B - POKER LANE EAST (2) *	7/27/2017									0.067			
NSA	N36 - VERNER WELL (2)	7/18/2017												
SSA	3A - KUBEL/ARMSTRONG (4)	7/18/2017	12	160	ND	ND	160	0.150	ND	ND	0.100	ND	ND	34
SSA	30 - ROCKBRIDGE/BOWLING GREEN	9/11/2017	12	180			150	ND	ND	2.5	0.110	ND	ND	35
SSA	32A - EDEN/ROOT - RAW (3)	7/13/2017												
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017												
SSA	32A - EDEN/ROOT - RAW (3)	8/15/2017												
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017												
SSA	32A - EDEN/ROOT - RAW (3)	9/19/2017												
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017												
SSA	40A - AUBURN/YARD (5)	9/7/2017	12	120			99	ND	ND	1.8	0.130	ND	ND	24
SSA	46 - JONAS/SIERRA MILLS (5)	9/11/2017	12	360			300	ND	ND	2.0	0.160	ND	ND	69
SSA	65 - MERRILY/ANNADALE (5)	9/11/2017	11	130			100	ND	ND	1.9	0.071	ND	ND	21
SSA	66 - EASTERN/WOODSIDE CHURCH (5)	9/11/2017	11	120			100	ND	ND	2.4	0.052	ND	ND	19

(1) Monthly Hg monitoring required following catastrophic failure of a submersible pump with a mercury seal. WQ staff worked with a consultant to develop and implement a plan designed to remove most of the Hg, then encase any that remained in concrete. The plan was approved by DDW and implemented. Monthly monitoring (for 1 year total) to date indicates the plan worked as intended.
(2) Secondary MCL exceedance triggered quarterly monitoring. Compliance is based on a running annual average (RAA). Sources where the RAA is over the Secondary MCL, are generally set for fire flow/emergency use only. Possible mitigation may include: abandoning deeper sections of the well, swadging sections of screen, or treatment.
(3) Mn/Fe removal treatment plant, pre- and post- filter results. Treated water monitoring required monthly, raw water required quarterly, however, monitored monthly to evaluate removal efficiency and assess raw water changes.
(4) Monitoring that was required previously but not performed due to construction/maintenance.
(5) Triennial monitoring required for Title-22 compliance.
* Well N32B monitoring includes additional analytes used as control for in-house blending study.
** The 7/18/17 sample from Well 3A was analyzed by a different lab than the other total chromium samples. As a result, the reporting level is higher than for the other samples (10 µg/L instead of 1 µg/L).

SSWD Q3 2017
GENERAL PHYSICAL AND INORGANIC MONITORING

Exhibit 5

See the notes below for the discussion describing why specific monitoring was performed.			Carbon dioxide (free)	Carbonate (as CO3)	Chloride	Chromium (total)	Color	Conductivity	Copper	Cyanide	Fluoride	Hardness (total, as CaCO3)	Hydroxide (as OH)	Iron (total)
Service Area	**Sampling Point**	**Collection Date**	**mg/L**	**mg/L**	**mg/L**	**µg/L**	**CU**	**µmho/cm**	**µg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	7/12/2017												
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	8/14/2017												
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	9/11/2017												
NSA	N20 - CYPRESS (2)	7/19/2017												0.052
NSA	N32B - POKER LANE EAST (2) *	7/27/2017			57									
NSA	N36 - VERNER WELL (2)	7/18/2017												0.04
SSA	3A - KUBEL/ARMSTRONG (4)	7/18/2017			31	ND**	ND	470	ND	ND	ND	180		0.25
SSA	30 - ROCKBRIDGE/BOWLING GREEN	9/11/2017	ND	ND	42	2.5	ND	450	ND	ND	0.071	180	ND	ND
SSA	32A - EDEN/ROOT - RAW (3)	7/13/2017												ND
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017												ND
SSA	32A - EDEN/ROOT - RAW (3)	8/15/2017												ND
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017												ND
SSA	32A - EDEN/ROOT - RAW (3)	9/19/2017												ND
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017												ND
SSA	40A - AUBURN/YARD (5)	9/7/2017	ND	ND	50	2.7	ND	ND	ND	ND	0.100	120	ND	ND
SSA	46 - JONAS/SIERRA MILLS (5)	9/11/2017	ND	ND	36	3.9	ND	ND	ND	ND	0.065	380	ND	ND
SSA	65 - MERRILY/ANNADALE (5)	9/11/2017	ND	ND	18	6.4	ND	ND	ND	ND	0.130	120	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (5)	9/11/2017	ND	ND	13	3.6	ND	ND	ND	ND	0.140	100	ND	ND

SSWD Q3 2017
GENERAL PHYSICAL AND INORGANIC MONITORING

Exhibit 5

See the notes below for the discussion describing why specific monitoring was performed.			Langelier Index	Langelier Index (@ 25 C)	Langelier Index (@ 60 C)	Lead	Magnesium	Manganese	Mercury	Nickel	Nitrite (as N)	Odor	Perchlorate	pH
Service Area	**Sampling Point**	**Collection Date**				**µg/L**	**mg/L**	**mg/L**	**µg/L**	**µg/L**	**µg/L**	**TON**	**µg/L**	
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	7/12/2017							ND					
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	8/14/2017							ND					
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	9/11/2017							ND					
NSA	N20 - CYPRESS (2)	7/19/2017						ND						
NSA	N32B - POKER LANE EAST (2) *	7/27/2017						0.012						
NSA	N36 - VERNER WELL (2)	7/18/2017						0.033						
SSA	3A - KUBEL/ARMSTRONG (4)	7/18/2017	0.094			ND	24	0.043	ND	ND	ND	ND	ND	7.9
SSA	30 - ROCKBRIDGE/BOWLING GREEN	9/11/2017		0.077	0.52	ND	23	ND	ND	ND	ND	ND	ND	7.7
SSA	32A - EDEN/ROOT - RAW (3)	7/13/2017						0.074						
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017						ND						
SSA	32A - EDEN/ROOT - RAW (3)	8/15/2017						0.089						
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017						ND						
SSA	32A - EDEN/ROOT - RAW (3)	9/19/2017						0.13						
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017						ND						
SSA	40A - AUBURN/YARD (5)	9/7/2017		-0.18	0.26	ND	16	0.0062	ND	ND	ND	ND	ND	7.8
SSA	46 - JONAS/SIERRA MILLS (5)	9/11/2017		0.58	1	ND	51	ND	ND	ND	ND	1	ND	7.6
SSA	65 - MERRILY/ANNADALE (5)	9/11/2017		-0.65	-0.23	ND	16	ND	ND	ND	ND	ND	ND	7.4
SSA	66 - EASTERN/WOODSIDE CHURCH (5)	9/11/2017		-0.56	-0.14	ND	14	ND	ND	ND	ND	ND	ND	7.5

SSWD Q3 2017
GENERAL PHYSICAL AND INORGANIC MONITORING

Exhibit 5

See the notes below for the discussion describing why specific monitoring was performed.			Potassium	Selenium	Silver	Sodium	Sulfate	Thallium	Total Dissolved Solids (TDS)	Turbidity	Zinc
Service Area	**Sampling Point**	**Collection Date**	**mg/L**	**µg/L**	**µg/L**	**mg/L**	**mg/L**	**µg/L**	**mg/L**	**NTU**	**µg/L**
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	7/12/2017									
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	8/14/2017									
NSA	59A - BAINBRIDGE/HOLMES SCHOOL (1)	9/11/2017									
NSA	N20 - CYPRESS (2)	7/19/2017									
NSA	N32B - POKER LANE EAST (2) *	7/27/2017				47					
NSA	N36 - VERNER WELL (2)	7/18/2017									
SSA	3A - KUBEL/ARMSTRONG (4)	7/18/2017	2.4	3.2	ND	18	21	ND	320	0.45	ND
SSA	30 - ROCKBRIDGE/BOWLING GREEN	9/11/2017	5.6	ND	ND	18	12	ND	300	ND	ND
SSA	32A - EDEN/ROOT - RAW (3)	7/13/2017									
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017									
SSA	32A - EDEN/ROOT - RAW (3)	8/15/2017									
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017									
SSA	32A - EDEN/ROOT - RAW (3)	9/19/2017									
SSA	32A - EDEN/ROOT - TREATED (3)	7/13/2017									
SSA	40A - AUBURN/YARD (5)	9/7/2017	3.8	ND	ND	22	2	ND	250	ND	ND
SSA	46 - JONAS/SIERRA MILLS (5)	9/11/2017	3.6	ND	ND	24	48	ND	500	ND	ND
SSA	65 - MERRILY/ANNADALE (5)	9/11/2017	2.1	ND	ND	15	3.8	ND	220	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (5)	9/11/2017	2.2	ND	ND	14	3.7	ND	190	ND	ND

SSWD Q3 2017
NITRATE MONITORING

Exhibit 6

Q3 2017 nitrate monitoring was required at the following wells due to either: (1) a previous detection over one-half (5 mg/L) of the MCL, (2) monitoring that was required previously but not performed due to construction/maintenance, or (3) annual monitoring.			Nitrate (as N)
Service Area	**Sampling Point**	**Collection Date**	**mg/L**
NSA	27 - MELROSE/CHANNING (3)	09/13/2017	0.6
NSA	52 - WEDDIGEN/GOTHBERG (3)	09/13/2017	0.6
NSA	56A - FAIRBAIN/KARL (3)	09/13/2017	0.5
NSA	58 - THIRTY SECOND/ELKHORN (3)	09/13/2017	1.0
NSA	N 3 - ENGLE (1)	08/16/2017	2.9
NSA	N 5 - HILLSDALE (3)	09/13/2017	1.3
NSA	N 7 - ROSEBUD (3)	09/06/2017	4.7
NSA	N 8 - FIELD (1) (2)	09/12/2017	3.1
NSA	N 9 - CAMERON (3)	09/26/2017	1.8
NSA	N12 - ST. JOHNS (1)	07/12/2017	3.1
NSA	N14 - ORANGE GROVE (3)	09/12/2017	0.5
NSA	N14 - ORANGE GROVE (3)	09/26/2017	0.5
NSA	N20 - CYPRESS (3)	09/26/2017	1.2
NSA	N24 - DON JULIO (3)	09/06/2017	0.6
NSA	N25 - SUTTER (3)	09/07/2017	3.0
NSA	N26 - MONUMENT (3)	09/06/2017	1.6
NSA	N29 - MERRIHILL (1)	07/05/2017	2.0
NSA	N30 - PARKOAKS (1)	07/13/2017	4.7
NSA	N32A - POKER LANE CENTER (3)	09/12/2017	1.4
NSA	N32B - POKER LANE EAST (3)	09/12/2017	1.2
NSA	N34 - COTTAGE (3)	09/06/2017	0.5
NSA	N35 - ANTELOPE NORTH (3)	09/12/2017	0.9
NSA	N36 - VERNER WELL (3)	09/06/2017	0.5
NSA	N38 - COYLE WELL (3)	09/05/2017	1.9
SSA	3A - KUBEL/ARMSTRONG (2)	07/18/2017	3.7
SSA	24 - BECERRA/WOODCREST (1)	07/13/2017	5.5
SSA	26 - GREENWOOD/MARCONI (1)	07/13/2017	7.0
SSA	30 - ROCKBRIDGE/BOWLING GREEN (3)	09/11/2017	0.8
SSA	40A - AUBURN/YARD (3)	09/07/2017	0.4
SSA	46 - JONAS/SIERRA MILLS (1)	07/13/2017	5.4
SSA	46 - JONAS/SIERRA MILLS (3)	09/11/2017	5.7
SSA	65 - MERRILY/ANNADALE (1)	07/13/2017	5.6
SSA	65 - MERRILY/ANNADALE (3)	09/11/2017	2.5
SSA	66 - EASTERN/WOODSIDE CHURCH (3)	09/11/2017	1.8

SSWD Q3 2017
VOC MONITORING

Exhibit 7

The following wells were monitored for VOCs during Q3 for several reasons including: (1) previous detections (below an MCL) that triggered quarterly monitoring, (2) DDW directive associated with local GW contamination, (3) District staff's concerns, (4) missed monitoring because sources were off-line for construction/maintenance activities, or (5) triennial monitoring required for Title-22 compliance.			1,1,1 - Trichloro-ethane	1,1,2 - Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1-Dichloro-ethane	1,2,4-Trichloro-benzene	1,2-Dichloro-benzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3-Dichloro-propene	1,4-Dichloro-benzene	Benzene	Carbon tetrachloride	cis-1,2-Dichloro-ethylene	Dichloro-methane
Service Area	**Sampling Point**	**Collection Date**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
NSA	56A - FAIRBAIN/KARL (2)	09/13/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N 5 - HILLSDALE (2)	09/13/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N 7 - ROSEBUD (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N 8 - FIELD (1) (4)	09/12/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N10 - WALNUT (1) (2) (3)	07/17/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N12 - ST. JOHNS (2)	09/05/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N14 - ORANGE GROVE (2)	09/12/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N23A - FREEWAY (1) (2)	07/17/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N26 - MONUMENT (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N34 - COTTAGE (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N36 - VERNER WELL (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N38 - COYLE WELL (2)	09/05/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	3A - KUBEL/ARMSTRONG (1) (5)	07/18/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	26 - GREENWOOD/MARCONI (1) (2)	07/13/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	30 - ROCKBRIDGE/BOWLING GREEN (5)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	40A - AUBURN/YARD (5)	09/07/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	46 - JONAS/SIERRA MILLS (5)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	65 - MERRILY/ANNADALE (5)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	73 - RIVER WALKNETP EAST (5)	07/12/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Results reported: 1 April - 30 June 2017

SSWD Q3 2017
VOC MONITORING

Exhibit 7

The following wells were monitored for VOCs during Q3 for several reasons including: (1) previous detections (below an MCL) that triggered quarterly monitoring, (2) DDW directive associated with local GW contamination, (3) District staff's concerns, (4) missed monitoring because sources were off-line for construction/maintenance activities, or (5) triennial monitoring required for Title-22 compliance.			Ethylbenzene	Methyl tert-butyl ether (MTBE)	Mono-chloro-benzene	Styrene	Tetra-chloro-ethylene (PCE)	Toluene	Total Xylenes	trans-1,2-Dichloro-ethylene	Trichloro-ethylene (TCE)	Trichloro-fluoro-methane	Vinyl chloride
Service Area	**Sampling Point**	**Collection Date**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
NSA	56A - FAIRBAIN/KARL (2)	09/13/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N 5 - HILLSDALE (2)	09/13/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N 7 - ROSEBUD (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N 8 - FIELD (1) (4)	09/12/2017	ND	ND	ND	ND	**1.2**	ND	ND	ND	ND	ND	ND
NSA	N10 - WALNUT (1) (2) (3)	07/17/2017	ND	ND	ND	ND	**0.68**	ND	ND	ND	ND	ND	ND
NSA	N12 - ST. JOHNS (2)	09/05/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N14 - ORANGE GROVE (2)	09/12/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N23A - FREEWAY (1) (2)	07/17/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N26 - MONUMENT (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N34 - COTTAGE (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N36 - VERNER WELL (2)	09/06/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NSA	N38 - COYLE WELL (2)	09/05/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	3A - KUBEL/ARMSTRONG (1) (5)	07/18/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	26 - GREENWOOD/MARCONI (1) (2)	07/13/2017	ND	ND	ND	ND	**1.2**	ND	ND	ND	ND	ND	ND
SSA	30 - ROCKBRIDGE/BOWLING GREEN (5)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	40A - AUBURN/YARD (5)	09/07/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	46 - JONAS/SIERRA MILLS (5)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	65 - MERRILY/ANNADALE (5)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	73 - RIVER WALKNETP EAST (5)	07/12/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SSWD Q3 2017
SOC MONITORING

Exhibit 8

Three wells required SOC monitoring during Q3 as a result of either: (1) missed Q1 monitoring because sources were off-line for construction/maintenance activities, or (2) triennial monitoring required for Title-22 compliance			2,3,7,8-Tetrachloro-dibenzo-p-dioxin (TCDD)	2,4,5-TP (Silvex)	2,4-Dichloro-phenoxy-acetic acid (2,4-D)	Alachlor	Atrazine	Bentazon	Benzo(a)-pyrene	Carbofuran	Chlordane	Dalapon	Di(2-ethylhexyl) adipate	Di(2-ethylhexyl) phthalate (DEHP)	1,2-Dibromo-3-chloropropane (DBCP)
Facility	**Sampling Point**	**Collection Date**	**pg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
SSA	3A - KUBEL/ARMSTRONG (1)	07/18/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	30 - ROCKBRIDGE/BOWLING GREEN (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	40A - AUBURN/YARD (2)	09/07/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	46 - JONAS/SIERRA MILLS (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	65 - MERRILY/ANNADALE (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SSWD Q3 2017
SOC MONITORING

Exhibit 8

Three wells required SOC monitoring during Q3 as a result of either: (1) missed Q1 monitoring because sources were off-line for construction/maintenance activities, or (2) triennial monitoring required for Title-22 compliance			Dinoseb	Diquat	Endothall	Endrin	Ethylene dibromide (EDB)	Glyphosate	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachloro-cyclopenta-diene (HEX)	Lindane	Methoxy-chlor	Molinate
Facility	**Sampling Point**	**Collection Date**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
SSA	3A - KUBEL/ARMSTRONG (1)	07/18/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	30 - ROCKBRIDGE/BOWLING GREEN (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	40A - AUBURN/YARD (2)	09/07/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	46 - JONAS/SIERRA MILLS (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	65 - MERRILY/ANNADALE (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

SSWD Q3 2017
SOC MONITORING

Exhibit 8

Three wells required SOC monitoring during Q3 as a result of either: (1) missed Q1 monitoring because sources were off-line for construction/maintenance activities, or (2) triennial monitoring required for Title-22 compliance			Oxamyl	Pentachloro-phenol (PCP)	Picloram	Polychlorinated Biphenyls (PCBs)	Simazine	Thiobencarb	Toxaphene
Facility	**Sampling Point**	**Collection Date**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
SSA	3A - KUBEL/ARMSTRONG (1)	07/18/2017	ND	ND	ND	ND	ND	ND	ND
SSA	30 - ROCKBRIDGE/BOWLING GREEN (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND
SSA	40A - AUBURN/YARD (2)	09/07/2017	ND	ND	ND	ND	ND	ND	ND
SSA	46 - JONAS/SIERRA MILLS (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND
SSA	65 - MERRILY/ANNADALE (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND
SSA	66 - EASTERN/WOODSIDE CHURCH (2)	09/11/2017	ND	ND	ND	ND	ND	ND	ND

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SACRAMENTO SUBURBAN WATER DISTRICT

Water Quality Committee

Agenda Item: 5

Date: September 28, 2017

Subject: New Replacement Well #N6A – Manganese Treatment

Staff Contact: David Espinoza, Senior Engineer

Recommended Committee Action:
Receive written report from staff and direct staff as appropriate.

Background:
This project was brought before the Water Quality Committee on July 17, 2017, providing an overview of the project's status. The District contracted with Luhdorff & Scalmanini Consulting Engineers (LSCE) to investigate the occurrence of manganese in the new, replacement Palm Well (#N6A). The investigation included pumping the well at various flow rates to determine if the manganese concentrations were flow dependent and flow surveys under static and dynamic conditions to deduce if water samples varied with depth. The investigation indicated manganese concentrations could not be reduced through well modifications or flow rate adjustment, and wellhead treatment would be required. The Palm Well project consists of drilling a new well with a pump station and equipping a manganese removal system. The target production rate for the well is 1,500 gallons per minute (gpm).

Discussion:
Well #N6A replaced the original site Well #N6 which was destroyed in 2016. Upon completion, Well #N6A was found to have manganese levels above the Secondary Drinking Water Maximum Contaminant Level (MCL) of 50 parts per million (ppm). The project background and status report pertaining to the District selected treatment process to mitigate the manganese is provided below.

1. **Treatment Selection**
   The following are District staff and LSCE's recommendations towards the selection of the Loprest manganese removal system for this project:

   - Manganese greensand media systems are utilized in the District's existing manganese removal filters at the Enterprise (Well #75) and Eden Root (Well #32) wells. Other vendors were available but staff has selected Loprest due to the District's Operations

Department having operated two Loprest treatment facilities for the past two decades with success and satisfaction.

- Costs and other non-monetary factors for manganese treatment systems from several manufacturers were evaluated. Loprest quoted the District $330,000 while other manufacturers quoted up to $1,058,000.

- The manganese removal system footprint provided by Loprest was one of the most compact, which is especially needed at this site considering the limited size of the workable area at the well site.

2. **Project Schedule**
   The final design should be complete by mid-November by LSCE. Upon completion of final design, staff intends on putting the project out to bid for the pump station and treatment integration. It is anticipated that construction bids will be due in early-December with the anticipation of having a signed contract by the end of the year. Weather permitting; construction should begin early in 2018 with the well being ready for the summer's peak demand.

3. **Summary**
   Loprest was unanimously selected to provide the manganese treatment system for the replacement Palm Well. Staff has directed LSCE to proceed with the facility design and a bid package will be ready to bid in mid-November 2017.

Fiscal Impact:

The fiscal impact created for manganese removal will be approximately $600,000* in capital cost with ongoing operational costs associated with the treatment.

*Note: This is just the cost for engineering and construction related to manganese treatment and does not include the costs (engineering and construction) for other pump station facilities.

Strategic Plan Alignment:

Water Supply – 1.A. Protect public health and the environment through compliance with all applicable federal, state and local regulations.

Water Supply – 1.B. Provide for the long-term water supply needs of the customers through prudent planning that will ensure capacity to serve system demands.

Water Supply – 1.D. Manage the District's water supplies to ensure their quality and quantity.

This project meets the above goals as the requirement for manganese treatment will enable the District to meet all applicable drinking water standards. The new well and pump station will also provide a reliable and high quality water supply into the future.

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SACRAMENTO SUBURBAN WATER DISTRICT

Water Quality Committee

Agenda Item: 6

Date: October 4, 2017

Subject: SB 427 – Lead User Service Lines

Staff Contact: David Armand, Environmental Compliance Supervisor

Recommended Committee Action:
Receive written staff report.

Background:
Senate Bill (SB) 427 (Leyva) was signed by the Governor on September 11, 2017. It makes minor changes to SB 1398 (Leyva) that was signed by the Governor last year (September 27, 2016), and added Section 116885 to the CA Health and Safety Code. SB 1398 required Public Water Systems (PWS) to compile an inventory of known and suspected partial or total lead user service lines in its distribution system by July 1, 2018. A user service line is defined as: "The pipe, tubing, and fittings connecting a water main to an individual water meter or service connection."

Upon completion of the above inventory, SB 1398 also required PWS to provide a timeline to the State Water Resources Control Board, Division of Drinking Water (DDW) for the replacement of known and suspected partial or total lead user service lines. By July 1, 2020, SB 1398 also required PWS to determine the existence or absence of lead user service lines in the distribution system and provide a timeline to the DDW to replace those lead user service lines identified, as well as those whose content could not be determined.

Discussion:
While the deadline to compile the inventory of known partial or total lead user service lines remains unchanged, SB 427 amended Section 116885 of the CA Health and Safety Code so that it only applies to Community Water Systems (CWS). A CWS is: "A PWS that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system." SB 427 also added Section 116890 (definitions and enforcement) to the CA Health and Safety Code. Furthermore, it established July 1, 2020 as the deadline for which a proposed timeline to replace all lead user service lines and user service lines of unknown materials must be submitted to DDW.

If the inventory does not identify any areas of lead user service lines or identify areas of user service lines made of unknown materials, the CWS must submit a letter certified under penalty of perjury that the inventory was completed and the date it was completed. Specific details and examples concerning how the inventory was conducted must be included. Examples may include a description of: records searched, field investigations, operator interviews and maps of the distribution system. Guidance describing various methods on how to conduct a user service line inventory is currently available on DDW's website. When conducting the user service line inventory, DDW also recommends that the PWS notify customer(s) if a lead service line is found on the customer side of the meter.

DDW requires electronic submittal of the inventory letter and replacement timeline(s). They are currently developing a web portal to receive these documents. All submissions except timelines must be certified under penalty of perjury. Template letters and other revised guidance are expected to be available on DDW's website by mid October 2017. The final timeline for replacement of lead user service lines and user service lines with unknown materials will also be included on DDW's website.

Upon submittal of a user service line replacement timeline, DDW is required to respond to the timeline proposed by the CWS within 30 days, or the timeline shall be deemed approved. If the DDW submits a revised replacement timeline and the CWS rejects it, the CWS and DDW shall develop a compromise timeline within 30 days. DDW recommends that the CWS include an estimated cost summary when submitting a proposed timeline for user service line replacement.

It is important to note that final language in SB 427 that is now included in Section 116885 of the CA Health and Safety Code may impact how the District conducts a user service line inventory in the portion of the system that serves the former McClellan Air Force Base. It states: "In cases where a portion of a community water system's distribution system is located within a Superfund site, as designated under the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. Sec. 9601 et seq.), under an active cleanup order, the state board shall not propose a timeline for lead user service line replacement that does not conform to any applicable federal regulatory requirements or timelines."