

Southern Field Division - West Branch																																				
Date	Pyramid Lake PY001 (1m) Angeles Tunnel Inlet				Pyramid Lake PY001 (surface) Angeles Tunnel Inlet				Pyramid Lake Emigrant Landing Swim Beach (surface)				Pyramid Lake Vaquero Swim Beach (surface)				Castaic Lake CA002 (1m) Castaic Outlet				Castaic Lake CA002 (surface) Castaic Outlet				Castaic Lake Boat Launch (surface)				Castaic Lagoon Swim Beach (surface)							
	MC	CYN	STX	ANT	MC	CYN	STX	ANT	MC	CYN	STX	ANT	MC	CYN	STX	ANT	MC	CYN	STX	ANT	MC	CYN	STX	ANT	MC	CYN	STX	ANT	MC	CYN	STX	ANT				
	4/23/2018																npt	npt	npt	npt																
4/24/2018	0.23	ND	ND	ND																																
5/21/2018																ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	nr	nr	nr	nr						
5/29/2018																																				
5/31/2018					Sample delivery was delayed; not analyzed due to temperature exceedence.																															
6/4/2018																																				
6/5/2018					0.22	ND	ND	ND	npt	npt	npt	npt	0.15*	npt	npt	npt																				
6/11/2018																																				
6/12/2018	1.41	npt	npt	npt	1.53	nr	nr	nr	npt	npt	npt	npt	0.38	nr	nr	nr																				
6/18/2018																																				
6/19/2018					0.91	nr	nr	nr	ND	npt	npt	npt	1.27	nr	nr	nr																				
6/25/2018																																				
6/26/2018	3.00	ND	ND	ND	3.55	ND	ND	ND	2.78	ND	ND	ND	4.53	ND	ND	ND																				
7/2/2018																																				
7/9/2018																																				
7/10/2018	3.95	ND	ND	ND	4.68	ND	ND	ND	22.8	ND	ND	ND	2.95	ND	ND	ND																				
7/16/2018																																				
7/17/2018	3.00	ND	ND	ND	3.13	ND	ND	ND	3.10	ND	ND	ND	3.50	ND	ND	ND																				
7/23/2018	2.25*	nr	nr	nr	6.60*	npt	npt	npt	2.58*	nr	nr	nr	3.90*	nr	nr	nr	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	nr	0.19*	ND*	ND*		
7/30/2018																																				
7/31/2018	6.08*	nr	nr	nr	5.40*	nr	nr	nr	2.15*	nr	nr	nr	3.73*	nr	nr	nr																				
8/6/2018																																				
8/7/2018	3.50	nr	nr	nr	4.43	nr	nr	nr	2.93	nr	nr	nr	3.20	nr	nr	nr																				
8/13/2018																																				
8/14/2018	3.78	nr	nr	nr	4.88	nr	nr	nr	3.50	ND	ND	ND	3.25	nr	nr	nr																				
8/21/2018	2.12	ND	ND	ND	2.53	ND	ND	ND	1.33	ND	ND	ND	2.00	ND	ND	ND																				
8/28/2018	2.60	nr	nr	nr	2.83	nr	nr	nr	1.26	nr	nr	nr	2.28	nr	nr	nr																				
9/4/2018	2.13	nr	nr	nr	2.24	nr	nr	nr	2.57	nr	nr	nr	2.67	nr	nr	nr																				
9/10/2018																																				
9/11/2018	2.93	ND	ND	ND	3.15	ND	ND	ND	1.04	ND	ND	ND	3.09	ND	ND	ND																				
9/17/2018																																				
9/18/2018	1.07	nr	nr	nr	0.72	nr	nr	nr	3.26	nr	nr	nr	0.57	nr	nr	nr																				
9/24/2018																																				
9/25/2018	0.32	npt	npt	npt	0.33	npt	npt	npt	0.45	npt	npt	npt	0.27	npt	npt	npt																				
10/1/2018																																				
10/2/2018	0.19	npt	npt	npt	0.20	npt	npt	npt	0.22	npt	npt	npt	0.21	npt	npt	npt																				
10/8/2018																																				
10/9/2018	ND	npt	npt	npt	ND	npt	npt	npt	ND	npt	npt	npt	ND	npt	npt	npt																				
10/16/2018	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt	npt																				
10/22/2018																																				
10/23/2018	0.19	npt	npt	npt	ND	npt	npt	npt	0.22	npt	npt	npt	ND	npt	npt	npt																				
10/29/2018																																				
10/30/2018	ND	npt	npt	npt	ND	npt	npt	npt	ND	npt	npt	npt	ND	npt	npt	npt																				
11/5/2018																																				
11/6/2018	ND	npt	npt	npt	ND	npt	npt	npt	ND	npt	npt	npt	ND	npt	npt	npt																				

Units = ng/mL
Toxins – Microcystins (MC), cylindrospermopsin (CYN), saxitoxin (STX), anatoxin-A (ANT)
ND = Not detected above the LOD;
"npt" = No potential toxin producers observed by microscopy and ELISA analysis not conducted
"nr" = potential toxin producers present but toxin analysis not recommended by the lab due to low abundance or previous toxin analyses
LOD = 0.05 ng/mL (ANT, STX, CYN) 0.15 ng/mL MC
** Indicates LC/MS conducted to determine concentration of microcystin variants (see MC-variant worksheet)

GreenWater Laboratories

Sample Preparation

Water Sample Ultrasonication

Samples were received and inverted for 60 seconds to mix. A subset was removed prior to dismembration for algal identification purposes. The remaining sample was sonicated to release toxins and prepared for analyses.

Quality Control

Lab Fortified Sample Matrix/Lab Fortified Sample Matrix Duplicate and SUR/IS QC samples prepared for analyses pre-extraction

Potentially Toxicogenic (PTOX) Cyanobacteria Screen

One mL aliquots of the samples were prepared using Sedgewick Rafter cells. Each sample was scanned at 100X for the presence of potentially toxicogenic (PTOX) cyanobacteria using a Nikon Eclipse TS100 Inverted Microscope equipped with phase contrast optics. Higher magnification was used as necessary for identification and micrographs.

Analytical Techniques

Enzyme-Linked Immunosorbent Assay (ELISA)

MCs/NODs

A microcystins/nodularins Adda ELISA (Abraxis) was utilized for the quantitative and sensitive congener-independent detection of MCs/NODs (US EPA Method 546 & Ohio EPA DES 701.0). The current method reporting limit is 0.15 ng/mL (ppb) based on kit sensitivity, dilution factors and initial demonstration of capability.

STX

A saxitoxin specific ELISA (Abraxis PN 52255B) was utilized for the detection and quantification of saxitoxin and related analogs (paralytic shellfish toxins – PSTs). The current method reporting limit is 0.05 ng/mL (ppb) based on kit sensitivity and dilution factors. Based on manufacture instructions, the STX ELISA is less cross-reactive to other PSTs and will likely underestimate total PSTs/Saxitoxins. Reported cross-reactivities are as follows: NEO (1.3%), dcSTX (29%), GTX2/3 (23%), GTX5 (23%), dcGTX2/3 (1.4%), dcNEO (0.6%) & GTX1/4 (<0.2%).

Liquid chromatography mass spectrometry/mass spectrometry (LC-MS/MS)

ANTX-a (Method 545)

The [M+H]⁺ ion for ANTX-A (166 m/z) was fragmented and the product ions (91, 131 & 149 m/z) were monitored. The quantification ion, 91 m/z, was extracted and responses compared to the internal standard L-phenylalanine-d5 (171 to 125 m/z).

CYN (Method 545)

The [M+H]⁺ ion for CYN (416 m/z) was fragmented and the product ions (194, 274, 336 m/z) were monitored. The quantification ion, 274 m/z, was extracted and responses compared to the internal standard uracil-d4 (115 to 98 m/z).

PTOX species, detectable toxin levels and variant concentration determined by LC/MS and external standard.

Toxins – Anatoxin-a (ANT) cylindrospermopsin (CYN), microcystin (MC), saxitoxin (STX)

Date	Station	Sample depth	Toxin (Drop list)	Conc. (ng/mL)	PTOX Species (Drop list)	(Drop list)	(Drop list)	(Drop list)	Flags	Notes
1/2/2018	Perris Outlet	1 m	CYN	0.07	none observed					
1/16/2018	Perris Outlet	1 m	CYN	0.09	none observed					
2/12/2018	Perris Outlet	1 m	CYN	ND	none observed					
4/23/2018	Lake Oroville near Dam	surface	MC-CYN-STX-ANTX	ND	Dolichospermum					
4/24/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	0.23	Aphanizomenon flos-aquae/lebahonii	Dolichospermum		Microcystis		
4/24/2018	Pyramid-Angeles Tunnel Inlet	1 m	CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/lebahonii	Dolichospermum		Microcystis		
4/23/2018	Perris Outlet	1 m	MC-CYN-STX-ANTX	ND	Dolichospermum cf. mendotae	Aphanizomenon flos-aquae/lebahonii		Woronichinia naegeliana		
4/23/2018	Silverwood Outlet	1 m	CYN-STX-ANTX	ND	Aphanizomenon					
5/21/2018	Check 13	~15 ft	MC	0.15*	Oscillatoria					two filaments per mL observed. *Analyte was positively identified; the associated numerical value is estimated.
5/21/2018	Check 13	~15 ft	CYN	ND	Aphanizomenon					two filaments per mL observed.
5/21/2018	Check 13	~15 ft	ANTX-A	ND	Aphanizomenon					two filaments per mL observed.
5/21/2018	San Luis Basalt Boat Launch	surface	MC	0.24	Microcystis	Aphanizomenon		Dolichospermum		3 colonies/mL microcystis, 1 filament/mL Aphanizomenon, 1 filament/mL Dolichospermum
5/21/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon		Dolichospermum		3 colonies/mL microcystis, 1 filament/mL Aphanizomenon, 1 filament/mL Dolichospermum
5/21/2018	Gianelli PP	~5-10 ft	MC	0.16*	Dolichospermum					Aphanizomenon, 1 filament/mL Dolichospermum
5/21/2018	Gianelli PP	~5-10 ft	CYN-STX-ANTX	ND	Dolichospermum					2 filaments/mL. *Analyte was positively identified; the associated numerical value is estimated.
5/21/2018	Castaic Outlet	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum				2 filaments/mL
5/21/2018	Castaic Outlet	1 m	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum				Several colonies /mL Aphanocapsa, 3 filaments/mL Dolichospermum
5/21/2018	Castaic Outlet	1 m	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum				Several colonies /mL Aphanocapsa, >5 filaments/mL Dolichospermum
5/21/2018	Castaic Lake Boat Launch	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Aphanizomenon				several colonies/mL Aphanocapsa, single filament/mL Aphanizomenon
5/21/2018	Castaic Lagoon Swim Beach	surface		nr	Cyanophyte filament(s)					Several cyanophyte filaments observed, morphologically similar to Limnithrix sp.
5/21/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC-CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/lebahonii	Oscillatoria				Aphanizomenon dominant
5/21/2018	Pyramid-Vaquero Swim Beach	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon		Aphanocapsa		1 filament/mL of Dolichospermum and Aphanizomenon, several colonies Aphanocapsa
5/21/2018	Banks PP	~10-15 ft	CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/lebahonii					<10 filaments/mL
5/21/2018	Clifton Court Forebay	~10-15 ft	CYN-STX-ANTX	ND	Aphanizomenon					<10 filaments/mL
5/21/2018	Perris Outlet	1 m	MC	ND	Aphanizomenon flos-aquae/lebahonii	Aphanocapsa		Dolichospermum cf. mendotae		Woronichinia naegeliana
5/21/2018	Perris Outlet	surface	MC	ND	Aphanizomenon flos-aquae/lebahonii	Aphanocapsa		Dolichospermum cf. mendotae		Woronichinia naegeliana
5/21/2018	Perris Swim Beach	surface	MC	ND	Aphanizomenon flos-aquae/lebahonii	Aphanocapsa		Dolichospermum cf. mendotae		Woronichinia naegeliana
5/23/2018	Silverwood Outlet	1 m	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon flos-aquae/lebahonii				
5/23/2018	Silverwood Outlet	surface	MC-CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/lebahonii	Dolichospermum				
5/23/2018	Silverwood Sawpit Swim Beach	surface	MC	ND*	Dolichospermum	Microcystis		Aphanizomenon cf. flos-aquae/lebahonii		*Analytical result is estimated. Values achieved were outside calibration range.
5/23/2018	Silverwood Sawpit Swim Beach	surface	CYN-STX-ANTX	ND	Dolichospermum	Microcystis		Aphanizomenon cf. flos-aquae/lebahonii		
5/23/2018	Silverwood Cleghorn Swim Beach	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon cf. flos-aquae/lebahonii				
5/30/2018	Silverwood Outlet	surface		nr	Dolichospermum	Aphanizomenon				Dolichospermum >30 filaments/mL, Aphanizomenon <10 filaments/mL
5/30/2018	Silverwood Sawpit Swim Beach	surface		nr	Dolichospermum	Aphanizomenon				<10 filaments/mL
5/30/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum	Aphanizomenon				Dolichospermum <10 filaments/mL, Aphanizomenon <5 filaments/mL
5/29/2018	San Luis Basalt Boat Launch	surface	MC	0.35	Microcystis	Aphanizomenon cf. flos-aquae/lebahonii		Dolichospermum		Dolichospermum >30 filaments/mL, Aphanizomenon <10 filaments/mL
5/29/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon cf. flos-aquae/lebahonii		Dolichospermum		Small Microcystis colonies (<5/mL), >10 filaments/mL Aphanizomenon, 5 filaments/mL Dolichospermum
5/29/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon cf. flos-aquae/lebahonii		Dolichospermum		Small Microcystis colonies (<5/mL), >10 filaments/mL Aphanizomenon, 5 filaments/mL Dolichospermum
5/29/2018	Castaic Outlet	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum		Aphanizomenon cf. flos-aquae/lebahonii		Aphanocapsa >10 colonies/mL, Dolichospermum >10 filaments/mL, 2 filaments/mL Aphanizomenon
5/29/2018	Castaic Lake Boat Launch	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum		Aphanizomenon cf. flos-aquae/lebahonii		Aphanocapsa >10 colonies/mL, Dolichospermum >20 filaments/mL, >5 filaments/mL Aphanizomenon
5/29/2018	Castaic Lagoon Swim Beach	surface	MC	ND	Anabaenopsis	Cyanophyte filament(s)				>2 filaments/mL Anabaenopsis, several cyanophyte filaments that resembled Limnithrix
5/29/2018	Perris Outlet	surface	MC	ND*	Aphanocapsa	Woronichinia naegeliana				*The reported result is estimated because the sample exceeded temperature threshold when received. PTOX diversity decreased since last sample on 5/21. Aphanocapsa >10 colonies/mL, Woronichinia > 10 colonies/mL.
5/29/2018	Perris Swim Beach	surface	MC	0.39*	Woronichinia naegeliana	Aphanocapsa		Aphanizomenon cf. flos-aquae/lebahonii		Microcystis
5/29/2018	Perris Swim Beach	surface	MC	0.39*	Woronichinia naegeliana	Aphanocapsa		Aphanizomenon cf. flos-aquae/lebahonii		Microcystis
5/31/2018	Pyramid-Angeles Tunnel Inlet	surface		nr	Microcystis					*The reported result is estimated because the sample exceeded temperature threshold when received. PTOX diversity decreased since last sample on 5/21. Aphanocapsa >10 colonies/mL, Woronichinia > 10 colonies/mL.
6/3/2018	Lake Oroville- North Fork Arm	surface	MC	0.17*	Dolichospermum	Aphanizomenon flos-aquae/lebahonii				Toxin analysis not performed due to sample received 4 days after shipment at 28.2 °C.
6/3/2018	Lake Oroville- North Fork Arm	surface	CYN-STX-ANTX	ND*	Dolichospermum	Aphanizomenon flos-aquae/lebahonii				*The reported result is estimated because the sample exceeded temperature threshold when received. Per Mark Aabel, temperature exceedence was slight and should not have affected results.
6/3/2018	Lake Oroville- North Fork Arm	surface	CYN-STX-ANTX	ND*	Dolichospermum	Aphanizomenon flos-aquae/lebahonii				*The reported result is estimated because the sample exceeded temperature threshold when received. Per Mark Aabel, temperature exceedence was slight and should not have affected results.
6/4/2018	San Luis Basalt Boat Launch	surface	MC	0.45	Microcystis	Aphanizomenon flos-aquae/lebahonii		Dolichospermum		Microcystis >10 colonies/mL, Aphanizomenon >30 filaments/mL, Dolichospermum >10 filaments/mL
6/4/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii		Dolichospermum		Microcystis >10 colonies/mL, Aphanizomenon >30 filaments/mL, Dolichospermum >10 filaments/mL
6/4/2018	Perris Outlet	1 m	MC	ND	Aphanocapsa	Woronichinia naegeliana				Aphanocapsa >20 colonies/mL, Woronichinia >5 colonies/mL
6/4/2018	Perris Outlet	surface	MC	ND	Aphanocapsa	Woronichinia naegeliana				Aphanocapsa >20 colonies/mL, Woronichinia >20 colonies/mL
6/4/2018	Perris Swim Beach	surface	MC	ND	Aphanocapsa	Woronichinia naegeliana				Aphanocapsa >20 colonies/mL, Woronichinia 1 colony/mL

6/5/2018	Silverwood Outlet	1 m	MC-CYN-STX-ANTX	ND	Dolichospermum					>5 large filaments
6/5/2018	Silverwood Outlet	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon				Dolichospermum large filaments >30/mL, Aphanizomenon 2 filaments/mL.
6/5/2018	Silverwood Sawpit Swim Beach	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon				Dolichospermum large filaments >50/mL, Aphanizomenon 4 filaments/mL.
6/5/2018	Silverwood Cleghorn Swim Beach	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon				Dolichospermum filaments >5/mL, Aphanizomenon 3 filaments/mL.
6/4/2018	Castaic Outlet	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum	Aphanizomenon			Aphanocapsa >20 colonies/mL, Dolichospermum >20 partial filaments/mL (many partials), Aphanizomenon >5 filaments/mL.
6/4/2018	Castaic Lake Boat Launch	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum				Aphanocapsa >20 colonies/mL, Dolichospermum >30 partial filaments/mL.
6/4/2018	Castaic Lagoon Swim Beach	surface		nr	Cyanophyte filament(s)					Several cyanophyte filaments observed resembling Limnothrix.
6/5/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	0.22	Gloeotrichia echinulata	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/kebahonii		Gloeotrichia >5 colonies/mL, Microcystis 3/mL, Dolichospermum 3 filaments/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/5/2018	Pyramid-Vaquero Swim Beach	surface	MC	0.15*	Gloeotrichia echinulata	Microcystis				*Analyte was positively identified; the associated numerical value is estimated. Gloeotrichia 3 colonies/mL, Microcystis 2 colonies/mL.
6/4/2018	Thermalito Forebay Swim Beach	surface	MC-CYN-STX-ANTX	ND*	cf. Dolichospermum					*The reported result is estimated because the sample exceeded temperature threshold when received. Per Mark Aubel, temperature exceedence was slight and should not have affected results. Dolichospermum >10 filaments/mL.
6/11/2018	O'Neill Forebay Boat Launch	surface		nr	Aphanizomenon flos-aquae/kebahonii					<10 filaments/mL
6/11/2018	San Luis Basalt Boat Launch	surface	MC	1.33	Microcystis	Aphanizomenon flos-aquae/kebahonii	Dolichospermum			Microcystis 3 colonies/mL, Aphanizomenon >30 filaments/mL, Dolichospermum >15 filaments/mL.
6/11/2018	Check 13	~15 feet	MC	ND	none observed					
6/11/2018	Gianelli PP	~5-10 feet	MC	0.16	none observed					
6/11/2018	Lake Oroville- North Fork Arm	surface	MC-CYN-STX-ANTX	ND*	Dolichospermum	Aphanizomenon flos-aquae/kebahonii				*The reported result is estimated because the sample exceeded temperature threshold when received. Per Mark Aubel it should not have affected results. 3 species of Dolichospermum, 1 single fascicle of Aphanizomenon
6/11/2018	Lake Oroville - Middle Fork Arm	surface	MC-CYN-STX-ANTX	ND*	Dolichospermum	cf. Aphanizomenon				*The reported result is estimated because the sample exceeded temperature threshold when received. Per Mark Aubel it should not have affected results. 3 species of Dolichospermum, 1 single filament/mL of cf. Aphanizomenon
6/11/2018	Thermalito Forebay Swim Beach	surface		nr	cf. Dolichospermum					Same cf. Dolichospermum observed, but in lesser densities (2 filaments/mL) than previously.
6/11/2018	Clifton Court Forebay	~10-15 feet		nr	Aphanizomenon flos-aquae/kebahonii					<10 filaments/mL
6/11/2018	Dyer Res	1 m		nr	Aphanizomenon					2 filaments/mL
6/11/2018	Perris Outlet	1 m	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum	Woronichinia naegeliana	Aphanizomenon		Aphanocapsa >20 colonies/mL, broken filaments of Dolichospermum, Woronichinia 1 colony/mL, 1 Aphanizomenon filament.
6/11/2018	Perris Outlet	surface		nr	Aphanocapsa	Woronichinia naegeliana				Aphanocapsa >10 colonies/mL, 1 colony Woronichinia
6/11/2018	Perris Swim Beach	surface		nr	Woronichinia naegeliana	Aphanocapsa				Woronichinia >5 colonies/mL, Aphanocapsa <5 colonies/mL.
6/12/2018	Silverwood Outlet	1 m	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon cf. flos-aquae/kebahonii				Increase in Dolichospermum from last week (>20 filaments/mL), Aphanizomenon >10 filaments/mL.
6/12/2018	Silverwood Outlet	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon				Large Dolichospermum filaments (>40/mL), 1 Aphanizomenon filament.
6/12/2018	Silverwood Sawpit Swim Beach	surface		nr	Dolichospermum					<5 filaments/mL, lower density than last week.
6/12/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum					<5 filaments/mL
6/11/2018	Castaic Outlet	1 m	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum	Aphanizomenon			Aphanocapsa >20 colonies/mL, Dolichospermum >50 filaments/mL, Aphanizomenon >10 filaments/mL
6/11/2018	Castaic Outlet	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum	Aphanizomenon			Aphanocapsa >20 colonies/mL, Dolichospermum >50 filaments/mL, Aphanizomenon >5 filaments/mL
6/11/2018	Castaic Lake Boat Launch	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum	Microcystis	Aphanizomenon		Aphanocapsa >20 colonies/mL, Dolichospermum >50 filaments/mL, Microcystis 1 colony, Aphanizomenon 1 filament/mL.
6/11/2018	Castaic Lagoon Swim Beach	surface	MC-CYN-STX-ANTX	ND	Cyanophyte filament(s)	Anabaenopsis				Cyanophyte filaments resembling Limnothrix >100 filaments/mL, Anabaenopsis <5 filaments/mL
6/12/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	1.41	Gloeotrichia echinulata	Microcystis	Woronichinia naegeliana			Gloeotrichia 1 colony and several loose filaments/mL, Microcystis 2 colonies/mL, Woronichinia 1 colony/mL.
6/12/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	1.53	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana	Aphanizomenon flos-aquae/kebahonii	Gloeotrichia >5 colonies/mL, Microcystis >10 colonies/mL, Dolichospermum 3 filaments/mL, Woronichinia >5 colonies/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/12/2018	Pyramid-Angeles Tunnel Inlet	surface	CYN-STX-ANTX	nr	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana	Aphanizomenon flos-aquae/kebahonii	Gloeotrichia >5 colonies/mL, Microcystis >10 colonies/mL, Dolichospermum 3 filaments/mL, Woronichinia >5 colonies/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/12/2018	Pyramid-Vaquero Swim Beach	surface	MC	0.38	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia >10 loose filaments/mL, Microcystis >3 colonies/mL, Dolichospermum 4 filaments/mL, Woronichinia 1 colony/mL.
6/12/2018	Pyramid-Vaquero Swim Beach	surface	CYN-STX-ANTX	nr	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia >10 loose filaments/mL, Microcystis >3 colonies/mL, Dolichospermum 4 filaments/mL, Woronichinia 1 colony/mL.
6/18/2018	Castaic Outlet	surface		nr	Aphanocapsa	Dolichospermum				Aphanocapsa <5 colonies/mL, Dolichospermum 1 filament/mL
6/18/2018	Castaic Lake Boat Launch	surface		nr	Aphanocapsa	Dolichospermum				Aphanocapsa <5 colonies/mL, Dolichospermum <5 partial filaments/mL
6/18/2018	Castaic Lagoon Swim Beach	surface		nr	Cyanophyte filament(s)	Anabaenopsis				Cyanophyte filaments resembling Limnothrix >100 filaments/mL, Anabaenopsis 1 filament/mL
6/19/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	0.91	Gloeotrichia echinulata	Microcystis	Dolichospermum			Gloeotrichia >5 filaments/mL, Microcystis >10 colonies/mL, Dolichospermum >5 filaments/mL
6/19/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	ND	Gloeotrichia echinulata					1 filament/mL
6/19/2018	Pyramid-Vaquero Swim Beach	surface	MC	1.27	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia 3 colonies/mL, Microcystis >5 colonies/mL, Dolichospermum >5 filaments/mL, Woronichinia >3 colonies/mL.

6/18/2018	O'Neill Forebay Boat Launch	surface	MC	0.27	Aphanizomenon flos-aquae/klebahnii	Dolichospermum				Aphanizomenon >15 fascicles/mL, Dolichospermum <5 filaments/mL
6/18/2018	O'Neill Forebay Boat Launch	surface	CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/klebahnii	Dolichospermum				Aphanizomenon >15 fascicles/mL, Dolichospermum <5 filaments/mL
6/18/2018	San Luis Basalt Boat Launch	surface	MC	4.53	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/klebahnii	Woronichinia naegeliana		Microcystis >15 colonies/mL, Dolichospermum >15 filaments/mL, Aphanizomenon >5 filaments/mL, Woronichinia 1 colony/mL.
6/18/2018	Perris Outlet	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Dolichospermum	Aphanizomenon			Aphanocapsa >10 colonies/mL, Dolichospermum 3 filaments/mL, Aphanizomenon 1 filament/mL
6/18/2018	Perris Swim Beach	surface	MC-CYN-STX-ANTX	ND	Aphanocapsa	Woronichinia naegeliana	Dolichospermum			Aphanocapsa >5 colonies/mL, Woronichinia 1 colony/mL, Dolichospermum >5 partial filaments/mL.
6/19/2018	Silverwood Outlet	surface		nr	Dolichospermum	Aphanizomenon flos-aquae/klebahnii				Dolichospermum >20 filaments/mL, Aphanizomenon 1 fascicle/mL.
6/19/2018	Silverwood Sawpit Swim Beach	surface		nr	Dolichospermum					>20 filaments/mL. Many filaments appear to be in a state of senescence, with the presence of bacteria within the mucilage.
6/19/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum					>5 filaments/mL. Many filaments appear to be in a state of senescence, with the presence of bacteria within the mucilage.
6/19/2018	Lake Oroville - Middle Fork Arm	surface	MC-CYN-STX-ANTX	ND	Dolichospermum	Aphanizomenon				Bloom levels of >3 species of Dolichospermum, Aphanizomenon >5 filaments/mL.
6/18/2018	Thermalito Forebay Swim Beach	surface	MC-CYN-STX-ANTX	ND	Anabaena					>20 filaments/mL
6/25/2018	Banks PP	~10-15 feet		nr	Aphanizomenon flos-aquae/klebahnii					1 fascicle/mL
6/25/2018	Clifton Court Forebay	~10-15 feet		nr	Aphanizomenon flos-aquae/klebahnii					<10 filaments/mL
6/25/2018	Dyer Res	1 m		nr	Aphanizomenon flos-aquae/klebahnii					<10 filaments/mL
6/25/2018	Lake Del Valle	1 m		nr	Aphanizomenon flos-aquae/klebahnii					<10 filaments/mL
6/25/2018	Castaic Outlet	surface		nr	Dolichospermum					<5 filaments/mL
6/25/2018	Castaic Outlet	1 m		nr	Dolichospermum					<5 filaments/mL
6/25/2018	Castaic Lake Boat Launch	surface		nr	Dolichospermum					<5 filaments/mL
6/25/2018	Castaic Lagoon Swim Beach	surface		nr	Cyanophyte filament(s)	Raphidiopsis				Cyanophyte filaments resembling Limnothrix sp. >100 filaments/mL, 1 Raphidiopsis filament (previously classified as Cylindrospermopsis)
6/26/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	3.55	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana	Aphanizomenon flos-aquae/klebahnii	Gloeotrichia loose filaments, Microcystis spp. >30 colonies/mL, Dolichospermum 2 species >15 filaments/mL, Woronichinia >3 colonies/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/26/2018	Pyramid-Angeles Tunnel Inlet	surface	CYN-STX-ANTX	ND	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana	Aphanizomenon flos-aquae/klebahnii	Gloeotrichia loose filaments, Microcystis spp. >30 colonies/mL, Dolichospermum 2 species >15 filaments/mL, Woronichinia >3 colonies/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/26/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	3.00	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia loose filaments, Microcystis spp. >15 colonies/mL, Dolichospermum >10 filaments/mL, Woronichinia 1 colony/mL
6/26/2018	Pyramid-Angeles Tunnel Inlet	1 m	CYN-STX-ANTX	ND	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia loose filaments, Microcystis spp. >15 colonies/mL, Dolichospermum >10 filaments/mL, Woronichinia 1 colony/mL
6/26/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	2.78	Gloeotrichia echinulata	Microcystis	Dolichospermum			Microcystis >10 colonies/mL, Dolichospermum >5 filaments/mL.
6/26/2018	Pyramid-Emigrant Landing Swim Beach	surface	CYN-STX-ANTX	ND	Gloeotrichia echinulata	Microcystis	Dolichospermum			Microcystis >10 colonies/mL, Dolichospermum >5 filaments/mL.
6/26/2018	Pyramid-Vaquero Swim Beach	surface	MC	4.53	Gloeotrichia echinulata	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/klebahnii		Microcystis sp. >30 colonies/mL, Dolichospermum >25 filaments/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/26/2018	Pyramid-Vaquero Swim Beach	surface	CYN-STX-ANTX	ND	Gloeotrichia echinulata	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/klebahnii		Microcystis sp. >30 colonies/mL, Dolichospermum >25 filaments/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
6/25/2018	Perris Outlet	1 m		nr	Aphanocapsa	Dolichospermum	Woronichinia naegeliana	Aphanizomenon		Aphanocapsa <5 colonies/mL, Dolichospermum <5 partial filaments/mL, Woronichinia 1 colony/mL, 1 Aphanizomenon filament/mL.
6/25/2018	Perris Outlet	surface		nr	Aphanocapsa	Woronichinia naegeliana				Aphanocapsa <5 colonies/mL, 1 colony Woronichinia.
6/25/2018	Perris Swim Beach	surface		nr	Dolichospermum					<5 partial filaments/mL
6/26/2018	Silverwood Outlet	surface		nr	Dolichospermum					loose cells present.
6/25/2018	O'Neill Forebay Boat Launch	surface	MC	0.34	Aphanizomenon flos-aquae/klebahnii	Dolichospermum	Microcystis			Aphanizomenon >15 fascicles/mL, Dolichospermum 2 filaments/mL, Microcystis 1 colony/mL.
6/25/2018	Check 13	~15 feet		nr	Dolichospermum	Aphanizomenon				Dolichospermum >2 partial filaments/mL, Aphanizomenon >10 partial filaments/mL.
6/25/2018	San Luis Basalt Boat Launch	surface	MC	2.65	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/klebahnii			Microcystis >10 colonies/mL, Dolichospermum >5 filaments/mL, Aphanizomenon >10 filaments/mL.
6/25/2018	Gianelli PP	~5-10 feet	MC	ND	none observed					1 filament/mL
6/25/2018	Thermalito Forebay Swim Beach	surface		nr	cf. Dolichospermum					<5 filaments/mL
6/25/2018	Lake Oroville near Dam	surface		nr	Dolichospermum					Decrease in Dolichospermum from previous sample collection.
6/25/2018	Lake Oroville - Middle Fork Arm	surface		nr	Dolichospermum					low density, <5 filaments/mL
7/9/2018	Banks PP	~10-15 feet		nr	Aphanizomenon					>10 filaments/mL
7/9/2018	Dyer Res	1 m		nr	Aphanizomenon flos-aquae/klebahnii					3 filaments/mL
7/9/2018	Thermalito Forebay Swim Beach	surface		nr	cf. Dolichospermum					Bloom levels of Dolichospermum.
7/10/2018	Lake Oroville - South Fork Arm	surface	MC-CYN-STX-ANTX	ND*	Dolichospermum	Aphanizomenon flos-aquae/klebahnii				*The reported result is estimated because the sample exceeded temperature threshold when received.
7/9/2018	Castaic Lagoon Swim Beach	surface	MC-CYN-STX-ANTX	ND	Cyanophyte filament(s)	Pseudanabaena	Nostoclean filament(s)			Increase in PTOX cyanobacteria from previous sample date. Cyanophyte filaments resembling Limnothrix, nostoclean filaments resembling Aphanizomenon/Sphaerospermopsis, and Raphidiopsis present. Planktolyngbya also present in high densities but is not currently considered PTOX.
7/10/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	4.68	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/klebahnii			Microcystis >30 colonies/mL, 2+ species of Dolichospermum >100 filaments/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.

7/10/2018	Pyramid-Angeles Tunnel Inlet	surface	CYN-STX-ANTX	ND	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/lebahonii			Microcystis >30 colonies/mL, 2+ species of Dolichospermum >100 filaments/mL, Aphanizomenon 1 fascicle and >5 loose filaments/mL.
7/10/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	3.95	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia multiple colonies and loose filaments, Microcystis >15 colonies/mL, Dolichospermum spp. >100 filaments/mL, 1 colony Woronichinia.
7/10/2018	Pyramid-Angeles Tunnel Inlet	1 m	CYN-STX-ANTX	ND	Gloeotrichia echinulata	Microcystis	Dolichospermum	Woronichinia naegeliana		Gloeotrichia multiple colonies and loose filaments, Microcystis >15 colonies/mL, Dolichospermum spp. >100 filaments/mL, 1 colony Woronichinia.
7/10/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	22.8	Microcystis	Aphanizomenon flos-aquae/lebahonii	Woronichinia naegeliana	Dolichospermum		Microcystis >40 colonies/mL, Aphanizomenon >2 fascicles and >10 loose filaments, Woronichinia 1 colony/mL, Dolichospermum >50 filaments/mL.
7/10/2018	Pyramid-Emigrant Landing Swim Beach	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii	Woronichinia naegeliana	Dolichospermum		Microcystis >40 colonies/mL, Aphanizomenon >2 fascicles and >10 loose filaments, Woronichinia 1 colony/mL, Dolichospermum >50 filaments/mL.
7/10/2018	Pyramid-Vaquero Swim Beach	surface	MC	2.95	Gloeotrichia echinulata	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/lebahonii		Gloeotrichia loose filaments, Microcystis >10 colonies/mL, Dolichospermum >50 filaments/mL, Aphanizomenon >5 loose filaments/mL.
7/10/2018	Pyramid-Vaquero Swim Beach	surface	CYN-STX-ANTX	ND	Gloeotrichia echinulata	Microcystis	Dolichospermum	Aphanizomenon flos-aquae/lebahonii		Gloeotrichia loose filaments, Microcystis >10 colonies/mL, Dolichospermum >50 filaments/mL, Aphanizomenon >5 loose filaments/mL.
7/9/2018	O'Neill Forebay Boat Launch	surface	MC	0.33*	Aphanizomenon flos-aquae/lebahonii					*Analyte was positively identified; the associated numerical value is estimated.
7/9/2018	San Luis Basalt Boat Launch	surface	MC	4.51	Aphanizomenon flos-aquae/lebahonii	Dolichospermum		Microcystis		Aphanizomenon >5 fascicles/mL, Dolichospermum spp. >20 filaments/mL, Microcystis >10 colonies/mL.
7/9/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/lebahonii	Dolichospermum		Microcystis		Aphanizomenon >5 fascicles/mL, Dolichospermum spp. >20 filaments/mL, Microcystis >10 colonies/mL.
7/10/2018	Check 13	~15 feet	MC	0.26		Dolichospermum		Microcystis		1 partial filament Dolichospermum, 1 colony Microcystis/mL.
7/10/2018	Silverwood Sawpit Swim Beach	surface	MC-CYN-STX-ANTX	ND		Dolichospermum	Aphanizomenon flos-aquae/lebahonii			Dolichospermum >50 filaments/mL, Aphanizomenon >2 fascicles
7/10/2018	Silverwood Outlet	1 m		nr		Dolichospermum	Aphanizomenon flos-aquae/lebahonii			Partial filaments of Dolichospermum and one degraded fascicle of Aphanizomenon.
7/10/2018	Silverwood Outlet	surface		nr	Aphanizomenon flos-aquae/lebahonii					<10 filaments/mL
7/9/2018	Perris Outlet	1 m		nr	Aphanizomenon flos-aquae/lebahonii					1 fascicle/mL
7/9/2018	Perris Outlet	surface		nr	Dolichospermum					<5 partial filaments/mL
7/9/2018	Perris Swim Beach	surface		nr	Dolichospermum					<5 partial filaments/mL
7/16/2018	O'Neill Forebay Boat Launch	surface	MC	0.28	Aphanizomenon flos-aquae/lebahonii			Microcystis	Dolichospermum	Aphanizomenon >25 filaments/mL, Microcystis >5 colonies/mL, Dolichospermum spp. >5 filaments/mL.
7/16/2018	O'Neill Forebay Boat Launch	surface	CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/lebahonii			Microcystis	Dolichospermum	Aphanizomenon >25 filaments/mL, Microcystis >5 colonies/mL, Dolichospermum spp. >5 filaments/mL.
7/16/2018	San Luis Basalt Boat Launch	surface	MC	6.65	Aphanizomenon flos-aquae/lebahonii	Dolichospermum	Woronichinia naegeliana		Microcystis	Aphanizomenon >15 filaments/mL, Dolichospermum >5 filaments/mL, Woronichinia 1 colony/mL, Microcystis >20 colonies/mL.
7/16/2018	Castaic Lagoon Swim Beach	surface		nr	Aphanizomenon		Anabaenopsis			Aphanizomenon >5 filaments/mL, Anabaenopsis >5 filaments/mL.
7/17/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	3.13	Microcystis	Aphanizomenon flos-aquae/lebahonii	Dolichospermum		Gloeotrichia echinulata	Microcystis spp. >20 colonies/mL, Aphanizomenon >2 fascicles and >100 filaments/mL, Dolichospermum 1 filament/mL, Gloeotrichia multiple colonies and loose filaments.
7/17/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	3.00	Microcystis	Gloeotrichia echinulata	Dolichospermum			Microcystis >15 colonies/mL, Gloeotrichia 1 colony/mL and loose filaments, Dolichospermum 1 filament/mL.
7/17/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	3.10	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata			Microcystis >20 colonies/mL, Aphanizomenon >2 fascicles and >100 loose filaments/mL, Gloeotrichia 2 colonies/mL and loose filaments.
7/17/2018	Pyramid-Vaquero Swim Beach	surface	MC	3.50	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata			Microcystis >15 colonies/mL, Aphanizomenon >2 fascicles and >100 loose filaments/mL, Gloeotrichia 4 colonies/mL and loose filaments.
7/17/2018	Perris Outlet	surface	MC	ND	Woronichinia naegeliana					2 colonies/mL
7/17/2018	Perris Swim Beach	surface	MC	ND	Woronichinia naegeliana					1 colony/mL
7/16/2018	Silverwood Sawpit Swim Beach	surface	MC	ND	Dolichospermum			Microcystis		Dolichospermum >5 partial filaments/mL, Microcystis 1 colony/mL.
7/23/2018	Thermalito Forebay Swim Beach	surface		nr	cf. Dolichospermum					3 filaments/mL
7/23/2018	Lake Oroville near Dam	surface		nr	Dolichospermum	Aphanizomenon flos-aquae/lebahonii				Dolichospermum 2 filaments/mL, Aphanizomenon <10 filaments/mL.
7/23/2018	Perris Outlet	surface		nr	Woronichinia naegeliana					2 colonies/mL.
7/23/2018	Perris Swim Beach	surface	MC-CYN-STX-ANTX	ND	Woronichinia naegeliana	Aphanizomenon		Dolichospermum		Woronichinia 1 colony/mL, Aphanizomenon >10 filaments/mL, Dolichospermum 1 filament/mL.
7/24/2018	Silverwood Sawpit Swim Beach	surface	MC-CYN-STX-ANTX	ND	Dolichospermum					>50 filaments/mL
7/24/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum					2 filaments/mL
7/23/2018	Castaic Lagoon Swim Beach	surface	CYN	0.19*	Raphidiopsis raciborskii	Aphanizomenon		Anabaenopsis		*The reported result is estimated because the sample exceeded temperature threshold when received.
7/23/2018	Castaic Lagoon Swim Beach	surface	STX	ND*	Raphidiopsis raciborskii	Aphanizomenon		Anabaenopsis		*The reported result is estimated because the sample exceeded temperature threshold when received.
7/23/2018	Castaic Lagoon Swim Beach	surface	ANTX-A	ND*	Raphidiopsis raciborskii	Aphanizomenon		Anabaenopsis		*The reported result is estimated because the sample exceeded temperature threshold when received.
7/23/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	6.60*	Microcystis	Gloeotrichia echinulata				*The reported result is estimated because the sample exceeded temperature threshold when received.

7/23/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	2.25*	Microcystis	Gloeotrichia echinulata	Aphanizomenon flos-aquae/lebahonii			*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >10 colonies/mL, Gloeotrichia loose filaments, Aphanizomenon >5 fascicles/mL.
7/23/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	2.58*	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum		*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >20 colonies/mL, Aphanizomenon >10 fascicles/mL, Dolichospermum 1 filament/mL, Gloeotrichia >5 colonies/mL and loose filaments.
7/23/2018	Pyramid-Vaquero Swim Beach	surface	MC	3.90*	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata			*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >10 colonies/mL, Aphanizomenon >2 fascicles and >100 loose filaments/mL, Dolichospermum 1 filament/mL, Gloeotrichia >2 colonies/mL and loose filaments.
7/23/2018	Lake Del Valle	1 m	STX	0.06	Dolichospermum						>5 filaments/mL.
7/23/2018	Lake Del Valle	1 m	MC-CYN-ANTX	ND	Dolichospermum						>5 filaments/mL.
7/23/2018	O'Neill Forebay Boat Launch	surface	MC	ND	Aphanizomenon flos-aquae/lebahonii	Microcystis					Aphanizomenon >5 filaments/mL, Microcystis 2 colonies/mL.
7/23/2018	Check 13	~15 feet	MC	0.16*	Aphanizomenon flos-aquae/lebahonii					*Analyte was positively identified; the associated numerical value is estimated.	>5 filaments/mL.
7/23/2018	San Luis Basalt Boat Launch	surface	MC	7.55	Aphanizomenon flos-aquae/lebahonii	Dolichospermum	Microcystis				Aphanizomenon >15 filaments/mL, Dolichospermum >5 filaments/mL, Microcystis spp. >20 colonies/mL.
7/30/2018	O'Neill Forebay Boat Launch	surface	MC	ND	Aphanizomenon flos-aquae/lebahonii	Planktothrix	Microcystis				Aphanizomenon >10 filaments/mL, Planktothrix ≥1 filaments/mL, Microcystis ≥3 colonies/mL.
7/30/2018	San Luis Basalt Boat Launch	surface	MC	13.8	Dolichospermum	Microcystis					Dolichospermum <5 filaments/mL, Microcystis spp. >15 colonies/mL.
7/30/2018	Castaic Outlet	surface		nr	Dolichospermum					*The reported result is estimated because the sample exceeded temperature threshold when received.	≥1 filament/mL
7/30/2018	Castaic Lagoon Swim Beach	surface	CYN	0.23*	Raphidiopsis raciborskii	Aphanizomenon	Anabaenopsis	Planktolyngbya	Limnothrix		Raphidiopsis >50 filaments/mL
7/31/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	5.40*	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata			*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >40 colonies/mL, Aphanizomenon >2 fascicles/mL, Gloeotrichia >2 colonies and loose filaments/mL.
7/31/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	6.08*	Microcystis	Gloeotrichia echinulata	Aphanizomenon flos-aquae/lebahonii			*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >50 colonies/mL, Gloeotrichia loose filaments, Aphanizomenon >5 fascicles/mL.
7/31/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	2.15*	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata			*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >40 colonies/mL, Aphanizomenon ≥2 fascicles/mL, Gloeotrichia ≥1 colony and loose filaments/mL.
7/31/2018	Pyramid-Vaquero Swim Beach	surface	MC	3.73*	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata			*The reported result is estimated because the sample exceeded temperature threshold when received.	Microcystis spp. >30 colonies/mL, Aphanizomenon >2 fascicles/mL, Gloeotrichia >2 colonies and loose filaments/mL.
7/30/2018	Perris Outlet	surface		nr	Dolichospermum						≥2 filaments/mL
7/31/2018	Silverwood Sawpit Swim Beach	surface		nr	Dolichospermum						≥2 filaments/mL
8/6/2018	Castaic Outlet	surface		nr	Dolichospermum						≥1 filament/mL
8/6/2018	Castaic Lagoon Swim Beach	surface	CYN	0.25	Raphidiopsis raciborskii	Nostoclean filament(s)	Anabaenopsis				Raphidiopsis >200 filaments/mL, nostoclean filaments >10 filaments/mL resembling Aphanizomenon, Cuspidothrix and Sphaerospermopsis, Anabaenopsis observed. Planktolyngbya and cf. Limnothrix also observed but not currently considered PTOX. Note: COC and lab results say 1 m but sample was actually taken at surface.
8/6/2018	Castaic Lagoon Swim Beach	surface	MC-ANTX-STX	ND	Raphidiopsis raciborskii	Nostoclean filament(s)	Anabaenopsis				Raphidiopsis >200 filaments/mL, nostoclean filaments >10 filaments/mL resembling Aphanizomenon, Cuspidothrix and Sphaerospermopsis, Anabaenopsis observed. Planktolyngbya and cf. Limnothrix also observed but not currently considered PTOX. Note: COC and lab results say 1 m but sample was actually taken at surface.
8/7/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	4.43	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >60 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia >2 colonies and loose filaments, Dolichospermum ≥1 filament/mL.
8/7/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	3.50	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >50 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia >2 colonies and loose filaments, Dolichospermum ≥1 filament/mL.
8/7/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	2.93	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >50 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia ≥1 colony and loose filaments, Dolichospermum ≥1 filament/mL. Note: COC and lab results say 1 m but sample was actually taken at surface.
8/7/2018	Pyramid-Vaquero Swim Beach	surface	MC	3.20	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >50 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia ≥1 colony and loose filaments, Dolichospermum ≥1 filament/mL. Note: COC and lab results say 1 m but sample was actually taken at surface.
8/6/2018	Clifton Court Forebay	10-15 ft		nr	Dolichospermum						1 filament/mL
8/6/2018	Dyer Res	1 m	MC	ND*	Microcystis					*The reported result is estimated because the sample exceeded temperature threshold when received.	>5 colonies/mL.
8/6/2018	Perris Outlet	1 m		nr	Woronichinia naegeliana						≥1 colony/mL
8/6/2018	Perris Swim Beach	surface	MC	ND*	Microcystis					*The reported result is estimated because the sample exceeded temperature threshold when received.	≥2 colonies/mL
8/7/2018	Silverwood Sawpit Swim Beach	surface	MC-CYN-STX-ANTX	ND*	Dolichospermum					*The reported result is estimated because the sample exceeded temperature threshold when received.	≥10 filaments/mL
8/7/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum						1 filament/mL
8/6/2018	O'Neill Forebay Boat Launch	surface	MC	0.15*	Microcystis					*Analyte was positively identified; the associated numerical value is estimated.	≥3 colonies/mL
8/6/2018	Check 13	~15 feet	MC	0.26	Aphanizomenon	Microcystis					Aphanizomenon 1 filament/mL and Microcystis 1 colony/mL.
8/6/2018	San Luis Basalt Boat Launch	surface	MC	24.6	Dolichospermum	Microcystis	Woronichinia naegeliana				Dolichospermum >10 filaments/mL, Microcystis spp. >30 colonies/mL and many loose cells, Woronichinia 1 colony/mL.
8/6/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Dolichospermum	Microcystis	Woronichinia naegeliana				Dolichospermum >10 filaments/mL, Microcystis spp. >30 colonies/mL and many loose cells, Woronichinia 1 colony/mL.
8/6/2018	Gianelli PP	~5-10 feet	MC	ND	Microcystis	Aphanizomenon					loose cells of Microcystis and 3 filaments/mL of Aphanizomenon.
8/6/2018	Thermalito Forebay Swim Beach	surface	MC-CYN-STX-ANTX	ND*	Geitlerinema	Planktothrix cf. perornata	cf. Dolichospermum			*The reported result is estimated because the sample exceeded temperature threshold when received.	Geitlerinema ≥10 filaments/mL, Planktothrix ≥5 filaments/mL, cf. Dolichospermum ≥3 filaments/mL.

8/6/2018	Thermalito Afterbay Swim Beach	surface	MC-CYN-STX-ANTX	ND*	Oscillatoria	cf. Dolichospermum				*The reported result is estimated because the sample exceeded temperature threshold when received.	Oscillatoria >20 filaments/mL, cf. Dolichospermum ≥1 filament/mL.
8/14/2018	Silverwood Sawpit Swim Beach	surface		nr	Dolichospermum						≥5 filaments/mL
8/14/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum						≥3 filaments/mL
8/13/2018	Castaic Lagoon Swim Beach	surface	CYN	0.29	Raphidiopsis raciborskii	Nostoclean filament(s)	Anabaenopsis				Raphidiopsis >200 filaments/mL, nostoclean filaments >20 filaments/mL resembling Aphanizomenon and Sphaerospermopsis, Anabaenopsis ≥10 filaments/mL. cf. Limnothrix also observed but not currently considered PTOX.
8/14/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	4.88	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >60 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia ≥1 colony and loose filaments, Dolichospermum ≥1 filament/mL.
8/14/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	3.78	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata				Microcystis spp. >50 colonies/mL, Aphanizomenon >2 filaments/mL, Gloeotrichia loose filaments.
8/14/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	3.50	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >30 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia ≥3 colonies/mL and loose filaments, Dolichospermum spp. ≥20 filaments/mL.
8/14/2018	Pyramid-Emigrant Landing Swim Beach	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >30 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia ≥3 colonies/mL and loose filaments, Dolichospermum spp. ≥20 filaments/mL.
8/14/2018	Pyramid-Vaquero Swim Beach	surface	MC	3.25	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >20 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia ≥1 colony/mL and loose filaments, Dolichospermum sp. ≥2 filaments/mL.
8/13/2018	O'Neill Forebay Boat Launch	surface	MC	ND	Microcystis						≥1 colony/mL
8/13/2018	San Luis Basalt Boat Launch	surface	MC	12.2	Dolichospermum	Microcystis	Woronichinia naegeliana	Aphanizomenon flos-aquae/lebahonii			Dolichospermum >5 filaments/mL, Microcystis spp. >25 colonies/mL, Woronichinia 1 colony/mL, Aphanizomenon >20 filaments/mL.
8/13/2018	Gianelli PP	~5-10 feet		nr	Aphanizomenon						1 filament/mL
8/14/2018	NBA Barker SI PP	~10-15 feet	ANTX-A	ND	Planktothrix cf. perornata						≥2 filaments/mL
8/14/2018	NBA Barker SI PP	~10-15 feet	MC	ND	Planktothrix cf. perornata						≥2 filaments/mL
8/20/2018	Banks PP	~10-15 feet	MC	ND	Microcystis						2 colonies/mL
8/20/2018	Clifton Court Forebay	~10-15 feet	MC	0.20	Microcystis						1 colony/mL
8/20/2018	Lake Del Valle	1 m	STX	ND	Anabaenopsis						1 filament/mL
8/20/2018	O'Neill Forebay Boat Launch	surface	MC	ND	Microcystis						≥3 colonies/mL
8/20/2018	Check 13	~15 feet	MC	ND	Aphanizomenon	Microcystis					Aphanizomenon ≥3 filaments/mL, Microcystis 1 colony/mL.
8/20/2018	San Luis Basalt Boat Launch	surface	MC	15.7	Dolichospermum	Microcystis	Anabaenopsis				Dolichospermum ≥5 filaments/mL, Microcystis spp. >25 colonies/mL, Aphanizomenon >5 filaments/mL.
8/20/2018	Gianelli PP	~5-10 feet		nr	Aphanizomenon						3 filaments/mL
8/20/2018	San Luis Pacheco PP	~170-230 feet	MC	1.25	none observed						
8/21/2018	Castaic Lake Boat Launch	surface		nr	Aphanizomenon flos-aquae/lebahonii						≥10 filaments/mL
8/21/2018	Castaic Lagoon Swim Beach	surface	CYN	0.38	Raphidiopsis raciborskii						>100 filaments/mL, cf. Limnothrix also observed, but not currently considered PTOX.
8/21/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	2.53	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >30 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia loose filaments, Dolichospermum ≥20 filaments/mL.
8/21/2018	Pyramid-Angeles Tunnel Inlet	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >30 colonies/mL, Aphanizomenon >2 fascicles, Gloeotrichia loose filaments, Dolichospermum ≥20 filaments/mL.
8/21/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	2.12	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >60 colonies/mL, Aphanizomenon >20 filaments/mL, Gloeotrichia loose filaments, Dolichospermum ≥20 filaments/mL.
8/21/2018	Pyramid-Angeles Tunnel Inlet	1 m	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >60 colonies/mL, Aphanizomenon >20 filaments/mL, Gloeotrichia loose filaments, Dolichospermum ≥20 filaments/mL.
8/21/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	1.33	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >20 colonies/mL, Aphanizomenon >2 fascicles/mL, Gloeotrichia loose filaments, Dolichospermum spp. ≥50 filaments/mL.
8/21/2018	Pyramid-Emigrant Landing Swim Beach	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >20 colonies/mL, Aphanizomenon >2 fascicles/mL, Gloeotrichia loose filaments, Dolichospermum spp. ≥50 filaments/mL.
8/21/2018	Pyramid-Vaquero Swim Beach	surface	MC	2.00	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >20 colonies/mL, Aphanizomenon >5 fascicles/mL, Gloeotrichia loose filaments, Dolichospermum sp. ≥30 filaments/mL.
8/21/2018	Pyramid-Vaquero Swim Beach	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahonii	Gloeotrichia echinulata	Dolichospermum			Microcystis spp. >20 colonies/mL, Aphanizomenon >5 fascicles/mL, Gloeotrichia loose filaments, Dolichospermum sp. ≥30 filaments/mL.
8/20/2018	Thermalito Forebay Swim Beach	surface	MC-CYN-STX-ANTX	ND	Cyanophyte filament(s)	cf. Chrysochlorum ovalisporum					≥5/mL, resembling Dolichospermum.
8/20/2018	Thermalito Afterbay Swim Beach	surface	MC-CYN-STX-ANTX	ND	Cyanophyte filament(s)	cf. Chrysochlorum ovalisporum					cyanophyte filaments ≥3/mL and cf. Chrysochlorum 1 filament/mL.
8/20/2018	Lake Oroville near Dam	surface	MC-CYN-STX-ANTX	ND	Chrysochlorum ovalisporum	Dolichospermum					Chrysochlorum >100 filaments/mL, Dolichospermum spp. ≥5 filaments/mL.
8/21/2018	Silverwood Outlet	1 m	MC	ND	Microcystis						1 colony/mL
8/21/2018	Silverwood Outlet	surface		nr	Dolichospermum						1 filament/mL
8/21/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum						1 filament/mL
8/27/2018	Thermalito Forebay Swim Beach	surface		nr	cf. Chrysochlorum ovalisporum						≥3 filaments/mL
8/27/2018	Thermalito Afterbay Swim Beach	surface		nr	Trichodesmium	cf. Anabaena					Filaments identified in the previous week's sample as cyanophyte filaments resembling Dolichospermum have now been identified as Trichodesmium (≥10/mL); cf. Anabaena ≥5 filaments/mL.
8/27/2018	San Luis Pacheco PP	~170-230 feet	MC	1.88	Microcystis						≥4 colonies/mL. Sample arrived partially frozen, which may have caused cell lysis and affected the PTOX screen.
8/27/2018	O'Neill Forebay Boat Launch	surface	MC	ND	Microcystis						≥4 colonies/mL
8/27/2018	San Luis Basalt Boat Launch	surface	MC	5.64	Microcystis	Aphanizomenon flos-aquae/lebahonii					Microcystis spp. >20 colonies/mL, Aphanizomenon >25 filaments/mL
8/27/2018	Gianelli PP	~5-10 feet	MC	ND	Microcystis						≥1 colony/mL
8/28/2018	Castaic Lake Boat Launch	surface	MC	0.16*	Dolichospermum						≥2 filaments/mL
8/28/2018	Castaic Lake Boat Launch	surface	CYN-STX-ANTX	ND	Dolichospermum						≥2 filaments/mL

*Analyte was positively identified; the associated numerical value is estimated.

8/28/2018	Castaic Lagoon Swim Beach	surface	CYN	0.23	Raphidiopsis raciborskii	Anabaenopsis	Nostoclean filament(s)	Oscillatorialean filament(s)	Raphidiopsis >100 filaments/mL, Anabaenopsis >2 filaments/mL, nostoclean filaments resembling Aphanizomenon and nostoclean filament resembling Sphaerospermopsis sp., and filaments resembling Limnothrix observed (not PTOX)
8/28/2018	Castaic Lagoon Swim Beach	surface	MC-ANTX-STX	ND	Raphidiopsis raciborskii	Anabaenopsis	Nostoclean filament(s)	Oscillatorialean filament(s)	Raphidiopsis >100 filaments/mL, Anabaenopsis >2 filaments/mL, nostoclean filaments resembling Aphanizomenon and nostoclean filament resembling Sphaerospermopsis sp., and filaments resembling Limnothrix observed (not PTOX)
8/28/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	2.83	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis spp. >30 colonies/mL, Aphanizomenon >2 fascicles, Dolichospermum ≥2 filaments/mL.
8/28/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	2.60	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis spp. >40 colonies/mL, Aphanizomenon >5 filaments/mL, Dolichospermum ≥2 filaments/mL.
8/28/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	1.26	Microcystis	Aphanizomenon flos-aquae/lebahnii	Gloeotrichia echinulata	Dolichospermum	Microcystis spp. >20 colonies/mL, Aphanizomenon >2 fascicles/mL, Gloeotrichia 1 colony/mL, Dolichospermum spp. ≥50 filaments/mL.
8/28/2018	Pyramid-Vaquero Swim Beach	surface	MC	2.28	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis spp. >20 colonies/mL, Aphanizomenon >1 fascicles, Dolichospermum ≥10 filaments/mL.
8/27/2018	Perris Outlet	surface	CYN-STX-ANTX	ND	Nostoclean filament(s)				Nostoclean filaments resembling Aphanizomenon >3/mL
8/27/2018	Perris Swim Beach	surface	CYN-STX-ANTX	ND	none observed				>3 filaments/mL.
8/28/2018	Silverwood Sawpit Swim Beach	surface		nr	Dolichospermum				1 filament/mL
8/28/2018	Silverwood Cleghorn Swim Beach	surface		nr	Dolichospermum				cf. Aphanizomenon 2 filaments/mL, Dolichospermum 1 filament/mL
8/29/2018	Lake Davis	surface	MC-CYN-STX-ANTX	ND	cf. Aphanizomenon	Dolichospermum			
9/4/2018	Castaic Outlet	surface	MC	ND	Microcystis	Aphanizomenon flos-aquae/lebahnii			Microcystis ≥1 colony/mL, Aphanizomenon >2 fascicles/mL
9/4/2018	Castaic Lake Boat Launch	surface	MC	ND	Microcystis	Aphanizomenon flos-aquae/lebahnii			Microcystis ≥1 colony/mL, Aphanizomenon >2 fascicles/mL
9/4/2018	Castaic Lagoon Swim Beach	surface	CYN	0.23	Chrysochlorum ovalisporum	Raphidiopsis raciborskii	Anabaenopsis	Nostoclean filament(s)	Chrysochlorum ovalisporum >5 filaments/mL, Raphidiopsis >20 filaments/mL, Anabaenopsis >2 filaments/mL, nostoclean filaments resembling Aphanizomenon and nostoclean filament resembling Sphaerospermopsis sp., and filaments resembling Limnothrix observed (not PTOX)
9/4/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	2.24	Microcystis		Dolichospermum		Microcystis spp. >30 colonies/mL, Dolichospermum ≥5 filaments/mL
9/4/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	2.13	Microcystis		Dolichospermum		Microcystis spp. >20 colonies/mL, Dolichospermum ≥10 filaments/mL
9/4/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	2.57	Microcystis		Dolichospermum		Microcystis spp. >30 colonies/mL, Dolichospermum ≥50 filaments/mL
9/4/2018	Pyramid-Vaquero Swim Beach	surface	MC	2.67	Microcystis		Dolichospermum		Microcystis spp. >20 colonies/mL, Dolichospermum spp. ≥30 filaments/mL
9/4/2018	San Luis Pacheco PP	~170-230 feet	MC	0.64	Microcystis				≥4 colonies/mL
9/4/2018	San Luis Basalt Boat Launch	surface	MC	3.35	Microcystis	Aphanizomenon cf. flos-aquae/lebahnii			Microcystis spp. ≥20 colonies/mL, Aphanizomenon >10 filaments/mL
9/4/2018	Gianelli PP	~5-10 feet	MC	ND	Microcystis	Aphanizomenon			Microcystis spp. ≥1 colony/mL, Aphanizomenon ≥1 filament/mL
9/10/2018	Banks PP	~10-15 feet	MC	0.25	Microcystis				2 colonies/mL
9/10/2018	Clifton Court Forebay	~10-15 feet	MC	ND	Aphanizomenon flos-aquae/lebahnii				≥2 fascicles/mL
9/10/2018	San Luis Pacheco PP	~170-230 feet	MC	0.41	Microcystis				≥4 colonies/mL
9/10/2018	Check 13	~15 feet	MC	ND	Microcystis				≥2 colonies/mL
9/10/2018	San Luis Basalt Boat Launch	surface	MC	2.36	Microcystis		Dolichospermum	Aphanizomenon flos-aquae/lebahnii	Microcystis >10 colonies/mL, Dolichospermum >5 filaments/mL, Aphanizomenon >10 filaments/mL
9/10/2018	San Luis Basalt Boat Launch	surface	CYN-STX-ANTX	ND	Microcystis		Dolichospermum	Aphanizomenon flos-aquae/lebahnii	Microcystis >10 colonies/mL, Dolichospermum >5 filaments/mL, Aphanizomenon >10 filaments/mL
9/10/2018	Castaic Outlet	surface		nr	Aphanizomenon flos-aquae/lebahnii				≥2 filaments/mL
9/10/2018	Castaic Lake Boat Launch	surface		nr	Dolichospermum	Aphanizomenon flos-aquae/lebahnii			Dolichospermum ≥1 filament/mL, Aphanizomenon >2 fascicles/mL
9/10/2018	Castaic Lagoon Swim Beach	surface	CYN	0.23	Chrysochlorum ovalisporum	Raphidiopsis raciborskii	Anabaenopsis	Nostoclean filament(s)	Chrysochlorum ovalisporum ≥1 filament/mL, Raphidiopsis ≥2 filaments/mL, Anabaenopsis ≥5 filaments/mL, nostoclean filaments resembling Aphanizomenon and Sphaerospermopsis sp., and filaments resembling Limnothrix observed (not PTOX)
9/11/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	3.15	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis spp. >60 colonies/mL, Aphanizomenon >2 fascicles/mL, Dolichospermum >150 filaments/mL
9/11/2018	Pyramid-Angeles Tunnel Inlet	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis spp. >60 colonies/mL, Aphanizomenon >2 fascicles/mL, Dolichospermum >150 filaments/mL
9/11/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	2.93	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum	Gloeotrichia	Microcystis spp. >60 colonies/mL, Aphanizomenon >2 filaments/mL, Dolichospermum >150 filaments/mL, Gloeotrichia 1 colony/mL
9/11/2018	Pyramid-Angeles Tunnel Inlet	1 m	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum	Gloeotrichia	Microcystis spp. >60 colonies/mL, Aphanizomenon >2 filaments/mL, Dolichospermum >150 filaments/mL, Gloeotrichia 1 colony/mL
9/11/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	1.04	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis sp. >30 colonies/mL, Aphanizomenon >2 filaments/mL, Dolichospermum spp. ≥60 filaments/mL
9/11/2018	Pyramid-Emigrant Landing Swim Beach	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahnii	Dolichospermum		Microcystis sp. >30 colonies/mL, Aphanizomenon >2 filaments/mL, Dolichospermum spp. ≥60 filaments/mL
9/11/2018	Pyramid-Vaquero Swim Beach	surface	MC	3.09	Microcystis	Aphanizomenon flos-aquae/lebahnii	cf. Cuspidothrix	Dolichospermum	Microcystis spp. >50 colonies/mL, Aphanizomenon >2 filaments/mL, cf. Cuspidothrix 1 filament/mL, Dolichospermum spp. >50 filaments/mL
9/11/2018	Pyramid-Vaquero Swim Beach	surface	CYN-STX-ANTX	ND	Microcystis	Aphanizomenon flos-aquae/lebahnii	cf. Cuspidothrix	Dolichospermum	Microcystis spp. >50 colonies/mL, Aphanizomenon >2 filaments/mL, cf. Cuspidothrix 1 filament/mL, Dolichospermum spp. >50 filaments/mL
9/10/2018	Perris Outlet	1 m	MC-CYN-STX-ANTX	ND	Dolichospermum				>3 filaments/mL.
9/11/2018	Silverwood Outlet	1 m	MC	ND	Microcystis				>1 colony/mL
9/17/2018	San Luis Pacheco PP	~170-230 feet	MC	0.24	Microcystis				≥1 colony/mL

9/17/2018	San Luis Basalt Boat Launch	surface	MC	0.75	Microcystis	Dolichospermum	Aphanizomenon cf. flos-aquae/kelebahii				Microcystis spp. >5 colonies/mL, Dolichospermum ≥1 filament/mL, Aphanizomenon >20 filaments/mL
9/17/2018	Castaic Outlet	surface		nr	Aphanizomenon cf. flos-aquae/kelebahii	Dolichospermum					Aphanizomenon ≥20 filaments/mL, Dolichospermum ≥2 filaments/mL
9/17/2018	Castaic Lake Boat Launch	surface		nr	Aphanizomenon flos-aquae/kelebahii						Aphanizomenon ≥20 filaments/mL
9/17/2018	Castaic Lagoon Swim Beach	surface	CYN	0.19	Chrysochloris ovalisporum	Raphidiopsis raciborskii	Anabaenopsis	Nostoclean filament(s)			Chrysochloris ovalisporum ≥1 filament/mL, Raphidiopsis >100 filaments/mL, Anabaenopsis ≥5 filaments/mL, nostoclean filaments resembling Sphaerospermopsis sp., and filaments resembling Limnithrix observed (not PTOX)
9/18/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	0.72	Microcystis	Dolichospermum					Microcystis spp. >15 colonies/mL, Dolichospermum ≥1 filaments/mL.
9/18/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	1.07	Microcystis	Dolichospermum					Microcystis spp. >10 colonies/mL, Dolichospermum ≥2 filaments/mL.
9/18/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	3.26	Microcystis	Dolichospermum					Microcystis spp. >40 colonies/mL, Dolichospermum ≥5 filaments/mL.
9/18/2018	Pyramid-Vaquero Swim Beach	surface	MC	0.57	Microcystis	Dolichospermum					Microcystis spp. >10 colonies/mL, Dolichospermum ≥2 filaments/mL.
9/19/2018	NBA Barker SI PP	~10-15 feet	MC-CYN-STX-ANTX	ND	Aphanizomenon flos-aquae/kelebahii	Dolichospermum	Planktothrix cf. peromata				Aphanizomenon >10 filaments/mL, Dolichospermum ≥3 filaments/mL, Planktothrix ≥5 filaments/mL
9/24/2018	San Luis Pacheco PP	~170-230 feet	MC	0.23	Microcystis						≥2 colonies/mL
9/24/2018	San Luis Basalt Boat Launch	surface	MC	2.23	Microcystis	Dolichospermum	Aphanizomenon cf. flos-aquae/kelebahii				Microcystis spp. >10 colonies/mL, Dolichospermum ≥5 filaments/mL, Aphanizomenon >20 filaments/mL.
9/24/2018	Perris Outlet	1 m	MC-CYN-STX-ANTX	ND	Sphaerospermopsis aphanizomenoides	cf. Aphanizomenon gracile	Cuspidothrix issatschenkoi	Chrysochloris ovalisporum	Dolichospermum	Geitlerinema	Total of all nostoclean filaments >100/mL.
9/25/2018	Silverwood Outlet	1 m		nr	Dolichospermum						1 filament/mL
9/24/2018	Clifton Court Forebay	~10-15 feet		nr	cf. Aphanizomenon flos-aquae/kelebahii						≥1 filament/mL
9/24/2018	Banks PP	~10-15 feet	MC	ND	none observed						>5 filaments/mL
9/24/2018	Lake Oroville near Dam	surface	MC-CYN-STX-ANTX	ND	Dolichospermum						Aphanizomenon ≥20 filaments/mL, Aphanocapsa ≥10 colonies/mL, Dolichospermum ≥1 filament/mL
9/24/2018	Castaic Outlet	surface		nr	Aphanizomenon cf. flos-aquae/kelebahii	Aphanocapsa	Dolichospermum				Aphanizomenon ≥2 filaments/mL, Aphanocapsa ≥10 colonies/mL
9/24/2018	Castaic Lake Boat Launch	surface		nr	Aphanizomenon cf. flos-aquae/kelebahii	Aphanocapsa					Aphanizomenon ≥2 filaments/mL, Aphanocapsa ≥10 colonies/mL
9/24/2018	Castaic Lagoon Swim Beach	surface	CYN	0.10	Chrysochloris ovalisporum	Raphidiopsis raciborskii	Anabaenopsis	Aphanizomenon			Chrysochloris ovalisporum ≥1 filament/mL, Raphidiopsis >100 filaments/mL, Anabaenopsis ≥15 filaments/mL, Aphanizomenon ≥2 filaments/mL, and filaments resembling Limnithrix observed (not PTOX)
9/25/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	0.33	Microcystis						1 colony/mL
9/25/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	0.32	none observed						
9/25/2018	Pyramid-Emigrant Landing Swim Beach		MC	0.45	none observed						
9/25/2018	Pyramid-Vaquero Swim Beach		MC	0.27	none observed						
10/1/2018	Castaic Outlet	surface		nr	cf. Aphanizomenon	Aphanocapsa					Aphanizomenon 1 filament/mL, Aphanocapsa ≥10 colonies/mL
10/1/2018	Castaic Lake Boat Launch	surface		nr	Aphanocapsa						≥10 colonies/mL
10/1/2018	Castaic Lagoon Swim Beach	surface	MC	ND	Pseudanabaena	Raphidiopsis raciborskii	Anabaenopsis	cf. Aphanizomenon	Oscillatorialean filament(s)		Pseudanabaena >1000 filaments/mL; dominant. Raphidiopsis >100 filaments/mL, Anabaenopsis ≥10 filaments/mL, cf. Aphanizomenon ≥4 filaments/mL, oscillatorialean filaments resembling Limnithrix (not PTOX) observed.
10/1/2018	Castaic Lagoon Swim Beach	surface	CYN	0.15	Pseudanabaena	Raphidiopsis raciborskii	Anabaenopsis	cf. Aphanizomenon	Oscillatorialean filament(s)		Pseudanabaena >1000 filaments/mL; dominant. Raphidiopsis >100 filaments/mL, Anabaenopsis ≥10 filaments/mL, cf. Aphanizomenon ≥4 filaments/mL, oscillatorialean filaments resembling Limnithrix (not PTOX) observed.
10/2/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	0.20	none observed						1 colony/mL
10/2/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	0.19	Microcystis						1 colony/mL
10/2/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	0.22	Microcystis						1 colony/mL
10/2/2018	Pyramid-Vaquero Swim Beach	surface	MC	0.21	Microcystis						≥1 colony/mL
10/1/2018	San Luis Pacheco PP	~170-230 feet	MC	0.24	Microcystis						Microcystis >10 colonies/mL, Aphanizomenon >2 filaments/mL
10/1/2018	San Luis Basalt Boat Launch	surface	MC	3.35	Microcystis	Aphanizomenon cf. flos-aquae/kelebahii					Microcystis spp. >10 colonies/mL, Woronichinia 1 colony/mL, Aphanizomenon >10 filaments/mL
10/8/2018	San Luis Basalt Boat Launch	surface	MC	1.94	Microcystis	Woronichinia naegeliana	Aphanizomenon cf. flos-aquae/kelebahii				
10/8/2018	San Luis Pacheco PP	~170-230 feet	MC	ND	none observed						≥10 colonies/mL
10/8/2018	Castaic Outlet	surface		nr	cf. Aphanocapsa						≥10 colonies/mL
10/8/2018	Castaic Lake Boat Launch	surface		nr	Aphanocapsa						Pseudanabaena >1000 filaments/mL; dominant.
10/8/2018	Castaic Lagoon Swim Beach	surface	CYN	0.24	Pseudanabaena	Raphidiopsis raciborskii	Anabaenopsis				Raphidiopsis >10 filaments/mL, Anabaenopsis ≥5 filaments/mL.
10/9/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	ND	none observed						loose cells
10/9/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	ND	Microcystis						
10/9/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	ND	none observed						
10/9/2018	Pyramid-Vaquero Swim Beach	surface	MC	ND	none observed						
10/9/2018	Perris Outlet	1 m		nr	Aphanizomenon gracile	Dolichospermum					
10/9/2018	Silverwood Outlet	1 m		nr	Dolichospermum						Aphanizomenon ≥2 filaments/mL, Dolichospermum ≥3 filaments/mL
10/15/2018	San Luis Basalt Boat Launch	surface	MC	1.50	Microcystis	Woronichinia naegeliana	Dolichospermum	Aphanizomenon flos-aquae/kelebahii			1 filament/mL
10/16/2018	NBA Barker SI PP	~10-15 feet	MC	ND	Microcystis						Microcystis spp. >10 colonies/mL, Woronichinia ≥2 colonies/mL, Dolichospermum ≥1 filament/mL,
10/23/2018	Lake Oroville near Dam	surface	CYN-STX-ANTX	ND	Aphanizomenon	Dolichospermum					Aphanizomenon >40 filaments/mL
10/22/2018	Perris Outlet	1 m		nr	Dolichospermum						≥1 colony/mL
10/23/2018	Silverwood Outlet	1 m		nr	Dolichospermum						1 filament/mL
10/22/2018	San Luis Basalt Boat Launch	surface	MC	1.21	Microcystis	Dolichospermum	Aphanizomenon cf. flos-aquae/kelebahii				1 filament/mL
10/22/2018	Castaic Lagoon Swim Beach	surface	CYN	0.19	Pseudanabaena	Raphidiopsis raciborskii	cf. Aphanizomenon				Microcystis spp. >5 colonies/mL, Dolichospermum ≥2 filaments/mL, Aphanizomenon >10 filaments/mL
10/23/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	ND	Microcystis						Pseudanabaena >3000 filaments/mL, Raphidiopsis >20 filaments/mL, cf. Aphanizomenon ≥1 filament/mL
10/23/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	0.19	Microcystis						≥1 colony/mL
10/23/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	0.22	Microcystis						≥1 colony/mL
10/23/2018	Pyramid-Vaquero Swim Beach	surface	MC	ND	Microcystis						≥2 colonies/mL
10/29/2018	San Luis Basalt Boat Launch	surface	MC	1.13	none observed						≥1 colony/mL

10/29/2018	Castaic Lagoon Swim Beach	surface	CYN	0.16	Pseudanabaena	Raphidiopsis raciborskii	Anabaenopsis	Pseudanabaena >5000 filaments/mL, Raphidiopsis >10 filaments/mL, Anabaenopsis ≥1 filament/mL
10/29/2018	Castaic Lagoon Swim Beach	surface	MC	ND	Pseudanabaena	Raphidiopsis raciborskii	Anabaenopsis	Pseudanabaena >5000 filaments/mL, Raphidiopsis >10 filaments/mL, Anabaenopsis ≥1 filament/mL
10/30/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	ND	none observed			
10/30/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	ND	none observed			
10/30/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	ND	none observed			
10/30/2018	Pyramid-Vaquero Swim Beach	surface	MC	ND	none observed			
11/5/2018	San Luis Basalt Boat Launch	surface	MC	0.37	Microcystis			1 colony/mL
11/5/2018	Castaic Lagoon Swim Beach	surface	CYN	0.12	Pseudanabaena	Raphidiopsis raciborskii	cf. Chrysochlorum	Pseudanabaena >5000 filaments/mL, Raphidiopsis >20 filaments/mL, cf. Chrysochlorum ≥1 filament/mL
11/6/2018	Pyramid-Angeles Tunnel Inlet	surface	MC	ND	none observed			
11/6/2018	Pyramid-Angeles Tunnel Inlet	1 m	MC	ND	none observed			
11/6/2018	Pyramid-Emigrant Landing Swim Beach	surface	MC	ND	none observed			
11/6/2018	Pyramid-Vaquero Swim Beach	surface	MC	ND	none observed			
11/27/2018	San Luis Basalt Boat Launch	surface	MC	ND*	Microcystis			
12/3/2018	San Luis Basalt Boat Launch	surface	MC	ND	none observed			

*Analytical result is estimated. Values achieved were outside calibration range.

3 colonies/mL

Abraxis Microcystin Field Test Strip Results

Date	Location	Depth	Result (ppb)	Notes
4/23/2018	Castaic Outlet	1 m	nd	
4/23/2018	Lake Oroville near Dam	surface	nd	
4/24/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
5/21/2018	Castaic Outlet	surface	nd	
5/21/2018	Castaic Outlet	1 m	nd	
5/21/2018	Castaic Lake Boat Launch	surface	nd	
5/21/2018	Castaic Lagoon Swim Beach	surface	nd	
5/21/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
5/21/2018	Pyramid-Vaquero Swim Beach	surface	nd	
5/21/2018	San Luis Basalt Boat Launch	surface	nd	
5/21/2018	O'Neill Forebay Boat Launch	surface	nd	
5/21/2018	Lake Oroville near Dam	surface	nd	
5/21/2018	Thermalito Afterbay Swim Beach	surface	nd	
5/21/2018	Thermalito Forebay Swim Beach	surface	nd	
5/21/2018	Perris Swim Beach	surface	nd	
5/21/2018	Perris Outlet	surface	nd	
5/23/2018	Silverwood Outlet	surface	nd	
5/23/2018	Silverwood Cleghorn Swim Beach	surface	nd	
5/23/2018	Silverwood Sawpit Swim Beach	surface	nd	
5/29/2018	Thermalito Afterbay Swim Beach	surface	nd	
5/29/2018	Thermalito Forebay Swim Beach	surface	nd	
5/29/2018	San Luis Basalt Boat Launch	surface	nd	
5/29/2018	O'Neill Forebay Boat Launch	surface	nd	
5/29/2018	Perris Swim Beach	surface	nd	
5/29/2018	Perris Outlet	surface	nd	
5/29/2018	Castaic Lagoon Swim Beach	surface	invalid result	
5/29/2018	Castaic Outlet	surface	invalid result	
5/29/2018	Castaic Lake Boat Launch	surface	invalid result	
5/30/2018	Silverwood Cleghorn Swim Beach	surface	nd	
5/30/2018	Silverwood Outlet	surface	nd	
5/30/2018	Silverwood Sawpit Swim Beach	surface	nd	
5/31/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
5/31/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
5/31/2018	Pyramid-Vaquero Swim Beach	surface	nd	
6/4/2018	Lake Oroville- North Fork Arm	surface	nd	
6/4/2018	Castaic Outlet	surface	nd	
6/4/2018	Castaic Lake Boat Launch	surface	nd	
6/4/2018	Castaic Lagoon Swim Beach	surface	nd	
6/4/2018	Perris Outlet	surface	nd	
6/4/2018	Perris Swim Beach	surface	nd	
6/4/2018	O'Neill Forebay Boat Launch	surface	nd	
6/4/2018	San Luis Basalt Boat Launch	surface	nd	
6/4/2018	Thermalito Forebay Swim Beach	surface	nd	
6/4/2018	Thermalito Afterbay Swim Beach	surface	nd	
6/5/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
6/5/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
6/5/2018	Pyramid-Vaquero Swim Beach	surface	nd	
6/5/2018	Silverwood Outlet	surface	invalid control	
6/5/2018	Silverwood Sawpit Swim Beach	surface	~2.5*	Accuracy of this result is questionable.
6/5/2018	Silverwood Cleghorn Swim Beach	surface	invalid control	
6/11/2018	Castaic Outlet	surface	nd	
6/11/2018	Castaic Lake Boat Launch	surface	nd	
6/11/2018	Castaic Lagoon Swim Beach	surface	nd	
6/11/2018	Castaic Outlet	1 m	nd	
6/11/2018	O'Neill Forebay Boat Launch	surface	nd	
6/11/2018	San Luis Basalt Boat Launch	surface	nd	
6/11/2018	Lake Oroville- North Fork Arm	surface	nd	
6/11/2018	Lake Oroville - Middle Fork Arm	surface	nd	
6/11/2018	Thermalito Afterbay Swim Beach	surface	nd	
6/11/2018	Thermalito Forebay Swim Beach	surface	nd	
6/12/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
6/12/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
6/12/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
6/12/2018	Pyramid-Vaquero Swim Beach	surface	nd	
6/14/2018	Lake Oroville - Foreman Creek Boat Launch	surface	nd	
6/14/2018	Lake Oroville - Middle Fork Arm	surface	nd	Sample collected at downstream end of bloom.
6/14/2018	Lake Oroville - Middle Fork Arm	surface	nd	Sample collected at upstream end of bloom.
6/14/2018	Lake Oroville- North Fork Arm	surface	nd	
6/14/2018	Lake Oroville - Potters Ravine	surface	nd	
6/15/2018	San Luis WTP		nd	Finished water
6/18/2018	Castaic Outlet	surface	nd	

6/18/2018	Castaic Lake Boat Launch	surface	nd	
6/18/2018	Castaic Lagoon Swim Beach	surface	nd	
6/18/2018	San Luis Basalt Boat Launch	surface	~5	
6/18/2018	O'Neill Forebay Boat Launch	surface	nd	
6/18/2018	Lake Oroville- North Fork Arm	surface	nd	
6/18/2018	Thermalito Afterbay Swim Beach	surface	nd	
6/18/2018	Thermalito Forebay Swim Beach	surface	nd	
6/19/2018	Lake Oroville - Middle Fork Arm	surface	nd	
6/19/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
6/19/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
6/19/2018	Pyramid-Vaquero Swim Beach	surface	nd	
6/25/2018	San Luis Basalt Boat Launch	surface	~5	
6/25/2018	O'Neill Forebay Boat Launch	surface	nd	
6/25/2018	Castaic Outlet	surface	nd	
6/25/2018	Castaic Outlet	1 m	nd	
6/25/2018	Castaic Lake Boat Launch	surface	nd	
6/25/2018	Castaic Lagoon Swim Beach	surface	nd	
6/26/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
6/26/2018	Pyramid-Angeles Tunnel Inlet	1 m	~5	
6/26/2018	Pyramid-Angeles Tunnel Inlet	surface	~7.5	
6/26/2018	Pyramid-Vaquero Swim Beach	surface	~7.5	
6/27/2018	San Luis WTP		nd	Finished water
7/2/2018	San Luis Basalt Boat Launch	surface	nd	
7/2/2018	O'Neill Forebay Boat Launch	surface	nd	
7/2/2018	Lake Oroville - Middle Fork Arm	surface	nd	
7/2/2018	Thermalito Afterbay Swim Beach	surface	nd	
7/2/2018	Thermalito Forebay Swim Beach	surface	nd	
7/2/2018	Castaic Outlet	surface	nd	
7/2/2018	Castaic Lake Boat Launch	surface	nd	
7/2/2018	Castaic Lagoon Swim Beach	surface	nd	
7/3/2018	San Luis WTP		nd	Finished water
7/3/2018	Pyramid-Angeles Tunnel Inlet	surface	~2.5	
7/3/2018	Pyramid-Vaquero Swim Beach	surface	~5	
7/3/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
7/9/2018	Thermalito Forebay Swim Beach	surface	nd	
7/9/2018	Thermalito Afterbay Swim Beach	surface	nd	
7/9/2018	San Luis Basalt Boat Launch	surface	nd	
7/9/2018	O'Neill Forebay Boat Launch	surface	nd	
7/10/2018	Lake Oroville - South Fork Arm	surface	nd	
7/10/2018	San Luis WTP		nd	Finished water
7/9/2018	Castaic Outlet	surface	nd	
7/9/2018	Castaic Outlet	1 m	nd	
7/9/2018	Castaic Lake Boat Launch	surface	nd	
7/9/2018	Castaic Lagoon Swim Beach	surface	nd	
7/10/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
7/10/2018	Pyramid-Angeles Tunnel Inlet	1 m	~5	
7/10/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
7/10/2018	Pyramid-Vaquero Swim Beach	surface	~5	
7/16/2018	Lake Oroville - South Fork Arm	surface	nd	
7/16/2018	San Luis Basalt Boat Launch	surface	~7.5	
7/16/2018	O'Neill Forebay Boat Launch	surface	nd	
7/16/2018	Castaic Outlet	surface	nd	
7/16/2018	Castaic Lake Boat Launch	surface	nd	
7/16/2018	Castaic Lagoon Swim Beach	surface	nd	
7/17/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
7/17/2018	Pyramid-Angeles Tunnel Inlet	1 m	~5	
7/17/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
7/17/2018	Pyramid-Vaquero Swim Beach	surface	nd	
7/20/2018	San Luis WTP		nd	Finished water
7/20/2018	Pyramid-Emigrant Landing Swim Beach	surface	~7.5	
7/20/2018	Pyramid-Vaquero Swim Beach	surface	~5	
7/23/2018	Lake Oroville near Dam	surface	nd	
7/23/2018	Lake Oroville - South Fork Arm	surface	nd	
7/23/2018	Thermalito Afterbay Swim Beach	surface	nd	
7/23/2018	Thermalito Forebay Swim Beach	surface	nd	
7/23/2018	San Luis Basalt Boat Launch	surface	~10	Sample diluted 1:1 with DI water prior to analysis (diluted result ~5 ppb).
7/23/2018	O'Neill Forebay Boat Launch	surface	nd	
7/23/2018	Castaic Outlet	surface	nd	
7/23/2018	Castaic Outlet	1 m	nd	
7/23/2018	Castaic Lake Boat Launch	surface	nd	
7/23/2018	Castaic Lagoon Swim Beach	surface	nd	
7/23/2018	Pyramid-Emigrant Landing Swim Beach	surface	~2.5	

7/23/2018	Pyramid-Angeles Tunnel Inlet	surface	~2.5	
7/23/2018	Pyramid-Vaquero Swim Beach	surface	~2.5	
7/23/2018	Pyramid-Angeles Tunnel Inlet	1 m	~2.5	
7/24/2018	San Luis WTP		nd	Finished water
7/30/2018	Lake Oroville - South Fork Arm	surface	nd	
7/30/2018	Thermalito Afterbay Swim Beach	surface	nd	
7/30/2018	Thermalito Forebay Swim Beach	surface	nd	
7/30/2018	San Luis Basalt Boat Launch	surface	~15	Sample diluted 1:1 with DI water prior to analysis (diluted result ~7.5 ppb).
7/30/2018	O'Neill Forebay Boat Launch	surface	nd	
7/31/2018	San Luis WTP		nd	Finished water
7/30/2018	Castaic Outlet	surface	nd	
7/30/2018	Castaic Lake Boat Launch	surface	nd	
7/30/2018	Castaic Lagoon Swim Beach	surface	nd	
7/31/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
7/31/2018	Pyramid-Emigrant Landing Swim Beach	surface	~5	
7/31/2018	Pyramid-Vaquero Swim Beach	surface	~5	
7/31/2018	Pyramid-Angeles Tunnel Inlet	1 m	~2.5	
8/6/2018	San Luis Basalt Boat Launch	surface	~15	Sample diluted 1:1 with DI water prior to analysis (diluted result ~7.5 ppb).
8/6/2018	O'Neill Forebay Boat Launch	surface	nd	
8/6/2018	Lake Oroville - Middle Fork Arm	surface	nd	
8/6/2018	Lake Oroville - South Fork Arm	surface	nd	
8/6/2018	Thermalito Afterbay Swim Beach	surface	nd	
8/6/2018	Thermalito Forebay Swim Beach	surface	nd	
8/10/2018	San Luis WTP		nd	Finished water
8/13/2018	Perris Outlet	surface	nd	
8/13/2018	Perris Swim Beach	surface	nd	
8/13/2018	San Luis Basalt Boat Launch	surface	~15	Sample diluted 1:1 with DI water prior to analysis (diluted result ~7.5 ppb).
8/13/2018	O'Neill Forebay Boat Launch	surface	nd	
8/13/2018	Castaic Outlet	surface	nd	
8/13/2018	Castaic Lake Boat Launch	surface	nd	
8/13/2018	Castaic Lagoon Swim Beach	surface	nd	
8/14/2018	Silverwood Outlet	surface	nd	
8/14/2018	Silverwood Cleghorn Swim Beach	surface	nd	
8/14/2018	Silverwood Sawpit Swim Beach	surface	nd	
8/14/2018	Pyramid-Angeles Tunnel Inlet	surface	~7.5	
8/14/2018	Pyramid-Emigrant Landing Swim Beach	surface	~2.5	
8/14/2018	Pyramid-Vaquero Swim Beach	surface	~5	
8/14/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
8/13/2018	Lake Oroville - Middle Fork Arm	surface	nd	
8/13/2018	Lake Oroville - Middle Fork Arm	surface	nd	
8/13/2018	Thermalito Afterbay Swim Beach	surface	nd	
8/13/2018	Thermalito Forebay Swim Beach	surface	nd	
8/17/2018	San Luis WTP		nd	Finished water
8/20/2018	Perris Outlet	surface	nd	
8/20/2018	Perris Swim Beach	surface	nd	
8/20/2018	San Luis Basalt Boat Launch	surface	~5	Sample diluted 1:1 with DI water prior to analysis (diluted result ~2.5 ppb).
8/20/2018	O'Neill Forebay Boat Launch	surface	nd	
8/20/2018	Lake Oroville near Dam	surface	nd	
8/20/2018	Thermalito Afterbay Swim Beach	surface	nd	
8/20/2018	Thermalito Forebay Swim Beach	surface	nd	
8/21/2018	Castaic Outlet	surface	nd	
8/21/2018	Castaic Lake Boat Launch	surface	nd	
8/21/2018	Castaic Lagoon Swim Beach	surface	nd	
8/21/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
8/21/2018	Pyramid-Angeles Tunnel Inlet	1 m	invalid	
8/21/2018	Pyramid-Vaquero Swim Beach	surface	nd	
8/21/2018	Pyramid-Angeles Tunnel Inlet	surface	~5	
8/21/2018	Silverwood Outlet	surface	nd	
8/21/2018	Silverwood Sawpit Swim Beach	surface	nd	
8/21/2018	Silverwood Cleghorn Swim Beach	surface	invalid control	
8/23/2018	San Luis WTP		nd	Finished water
8/27/2018	San Luis Basalt Boat Launch	surface	~5	
8/27/2018	O'Neill Forebay Boat Launch	surface	nd	
8/27/2018	Thermalito Afterbay Swim Beach	surface	nd	
8/27/2018	Thermalito Forebay Swim Beach	surface	nd	
8/28/2018	Castaic Lake Boat Launch	surface	nd	
8/28/2018	Castaic Lagoon Swim Beach	surface	nd	
8/28/2018	Castaic Outlet	surface	nd	
8/28/2018	Pyramid-Vaquero Swim Beach	surface	nd	

8/28/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
8/28/2018	Pyramid-Angeles Tunnel Inlet	surface	~7.5	
8/28/2018	Pyramid-Angeles Tunnel Inlet	1 m	~7.5	
8/29/2018	Silverwood Cleghorn Swim Beach	surface	nd	
8/29/2018	Silverwood Sawpit Swim Beach	surface	nd	
8/29/2018	Perris Swim Beach	surface	nd	
8/29/2018	Silverwood Outlet	surface	nd	
8/29/2018	Perris Outlet	surface	nd	
8/29/2018	San Luis WTP		nd	Finished water
9/4/2018	San Luis Basalt Boat Launch	surface	~2.5	
9/4/2018	Castaic Lake Boat Launch	surface	nd	
9/4/2018	Castaic Outlet	surface	nd	
9/4/2018	Castaic Lagoon Swim Beach	surface	nd	
9/4/2018	Pyramid-Angeles Tunnel Inlet	surface	~5	
9/4/2018	Pyramid-Emigrant Landing Swim Beach	surface	~5	
9/4/2018	Pyramid-Vaquero Swim Beach	surface	~7.5	
9/4/2018	Pyramid-Angeles Tunnel Inlet	1 m	~7.5	
9/6/2018	San Luis WTP		nd	Finished water
9/10/2018	San Luis Basalt Boat Launch	surface	~2.5	
9/11/2018	San Luis WTP		nd	Finished water
9/10/2018	Castaic Lagoon Swim Beach	surface	nd	
9/10/2018	Castaic Lake Boat Launch	surface	nd	
9/10/2018	Castaic Outlet	surface	nd	
9/11/2018	Pyramid-Angeles Tunnel Inlet	1 m	~5	
9/11/2018	Pyramid-Angeles Tunnel Inlet	surface	~10	
9/11/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
9/11/2018	Pyramid-Vaquero Swim Beach	surface	~2.5	
9/13/2018	Pyramid Emigrant WTP		nd	raw water
9/13/2018	Pyramid Emigrant WTP		nd	Finished water
8/14/2018	Pyramid Emigrant WTP		nd	raw water
8/14/2018	Pyramid Emigrant WTP		nd	Finished water
8/1/2018	Pyramid Emigrant WTP		nd	Finished water
8/1/2018	Pyramid Emigrant WTP		nd	raw water
7/25/2018	Pyramid Emigrant WTP		nd	Finished water
7/25/2018	Pyramid Emigrant WTP		nd	raw water
7/16/2018	Pyramid Emigrant WTP		nd	Finished water
6/27/2018	Pyramid Emigrant WTP		nd	Finished water
9/13/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/13/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/10/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/10/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/6/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/6/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/31/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/31/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/29/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/29/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/17/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/17/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/9/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/9/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/14/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/14/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/15/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/15/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/6/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/6/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/3/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/3/2018	Pyramid Vista Del Lago WTP		nd	Finished water
8/2/2018	Pyramid Vista Del Lago WTP		nd	raw water
8/2/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/31/2018	Pyramid Vista Del Lago WTP		nd	raw water
7/28/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/28/2018	Pyramid Vista Del Lago WTP		nd	raw water
7/20/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/20/2018	Pyramid Vista Del Lago WTP		nd	raw water
7/18/2018	Pyramid Vista Del Lago WTP		nd	raw water
7/18/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/16/2018	Pyramid Vista Del Lago WTP		nd	raw water
7/16/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/14/2018	Pyramid Vista Del Lago WTP		nd	clear well
7/14/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/11/2018	Pyramid Vista Del Lago WTP		nd	Finished water

7/9/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/6/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/5/2018	Pyramid Vista Del Lago WTP		nd	Finished water
7/2/2018	Pyramid Vista Del Lago WTP		nd	Finished water
6/27/2018	Pyramid Vista Del Lago WTP		nd	Finished water
6/26/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/17/2018	San Luis Basalt Boat Launch	surface	nd	
9/17/2018	Castaic Lake Boat Launch	surface	nd	
9/17/2018	Castaic Outlet	surface	nd	
9/17/2018	Castaic Lagoon Swim Beach	surface	nd	
9/17/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/17/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/18/2018	Pyramid-Angeles Tunnel Inlet	1 m	~2.5	
9/18/2018	Pyramid-Angeles Tunnel Inlet	surface	~2.5	
9/18/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
9/18/2018	Pyramid-Vaquero Swim Beach	surface	nd	
9/20/2018	San Luis WTP		nd	Finished water
9/20/2018	Pyramid Emigrant WTP		nd	Finished water
9/20/2018	Pyramid Emigrant WTP		nd	raw water
9/20/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/20/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/24/2018	San Luis Basalt Boat Launch	surface	nd	
9/25/2018	San Luis WTP		nd	Finished water
9/24/2018	Castaic Lake Boat Launch	1 m	nd	
9/24/2018	Castaic Outlet	surface	nd	
9/24/2018	Castaic Lagoon Swim Beach	surface	nd	
9/25/2018	Pyramid Vista Del Lago WTP		nd	Finished water
9/25/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/25/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
9/25/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
9/25/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
9/25/2018	Pyramid-Vaquero Swim Beach	surface	nd	
9/26/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/26/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/1/2018	San Luis Basalt Boat Launch	surface	nd	
10/2/2018	San Luis WTP		nd	Finished water
10/2/2018	Castaic Lake Boat Launch	surface	nd	
10/2/2018	Castaic Lagoon Swim Beach	surface	nd	
10/2/2018	Castaic Outlet	surface	nd	
10/2/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
10/2/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
10/2/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
10/2/2018	Pyramid-Vaquero Swim Beach	surface	nd	
10/2/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/2/2018	Pyramid Vista Del Lago WTP		nd	raw water
9/28/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/3/2018	Pyramid Vista Del Lago WTP		nd	raw water
10/3/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/3/2018	Pyramid Emigrant WTP		nd	raw water
10/3/2018	Pyramid Emigrant WTP		nd	Finished water
10/8/2018	San Luis Basalt Boat Launch	surface	nd	
10/9/2018	San Luis WTP		nd	Finished water
10/9/2018	Castaic Lake Boat Launch	surface	nd	
10/9/2018	Castaic Outlet	surface	nd	
10/9/2018	Castaic Lagoon Swim Beach	surface	nd	
10/9/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
10/9/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
10/9/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
10/9/2018	Pyramid-Vaquero Swim Beach	surface	nd	
10/15/2018	San Luis Basalt Boat Launch	surface	~2.5	
10/17/2018	San Luis WTP		nd	Finished water
10/16/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
10/16/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
10/16/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
10/16/2018	Pyramid-Vaquero Swim Beach	surface	nd	
10/15/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/15/2018	Pyramid Vista Del Lago WTP		nd	raw water
10/12/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/12/2018	Pyramid Vista Del Lago WTP		nd	raw water
10/10/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/10/2018	Pyramid Vista Del Lago WTP		nd	raw water
10/19/2018	Pyramid Vista Del Lago WTP		nd	raw water
10/19/2018	Pyramid Vista Del Lago WTP		nd	Finished water

10/23/2018	Pyramid Vista Del Lago WTP		nd	raw water
10/23/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/23/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
10/23/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
10/23/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
10/23/2018	Pyramid-Vaquero Swim Beach	surface	nd	
10/22/2018	Castaic Outlet	surface	nd	
10/22/2018	Castaic Outlet	1 m	nd	
10/22/2018	Castaic Lagoon Swim Beach	surface	nd	
10/24/2018	San Luis WTP		nd	Finished water
10/29/2018	San Luis Basalt Boat Launch	surface	nd	
10/30/2018	San Luis WTP		nd	Finished water
10/30/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
10/30/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
10/30/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
10/30/2018	Pyramid-Vaquero Swim Beach	surface	nd	
10/29/2018	Pyramid Vista Del Lago WTP		nd	Finished water
10/29/2018	Pyramid Vista Del Lago WTP		nd	raw water
11/5/2018	San Luis Basalt Boat Launch	surface	nd	
11/6/2018	San Luis WTP		nd	Finished water
11/6/2018	Pyramid-Angeles Tunnel Inlet	surface	nd	
11/6/2018	Pyramid-Angeles Tunnel Inlet	1 m	nd	
11/6/2018	Pyramid-Emigrant Landing Swim Beach	surface	nd	
11/6/2018	Pyramid-Vaquero Swim Beach	surface	nd	
11/5/2018	Pyramid Vista Del Lago WTP		nd	Finished water
11/5/2018	Pyramid Vista Del Lago WTP		nd	raw water
11/2/2018	Pyramid Vista Del Lago WTP		nd	raw water
11/2/2018	Pyramid Vista Del Lago WTP		nd	Finished water
11/15/2018	San Luis WTP		nd	Finished water
11/20/2018	San Luis WTP		nd	Finished water
11/27/2018	San Luis Basalt Boat Launch	surface	nd	
11/28/2018	San Luis WTP		nd	Finished water
12/3/2018	San Luis Basalt Boat Launch	surface	nd	
12/3/2018	San Luis WTP		nd	Finished water

Name	Sample Location	Sample depth	Sample collection method
Clifton Court Forebay Inlet	Water Quality Station	Approx 10-15 ft (depends on Clifton Court Forebay elevation)	raw water tap
Dyer Reservoir Outlet	outlet	1 meter	grab sample
Banks Pumping Plant	Water Quality Station	Approx 10-15 ft (depends on CCF elevation)	raw water tap
Lake Del Valle	Boat ramp near dam	1 meter	grab sample
Barker Slough Pumping Plant	Water Quality Station	Approx 10-15 ft (depends on water depth)	raw water tap
Pacheco Pumping Plant	Water Quality Station	Approx 170-230 feet (depends on elevation of San Luis Res. and if SCVWD is drawing from upper or lower intake.	raw water tap
O'Neill Forebay Outlet/Check 13	Water Quality Station	Approx 15 ft	raw water tap
Gianelli Pumping Plant	Water Quality Station	Approx 5-10 feet (depends on O'Neill Forebay elevation)	raw water tap
Pyramid Lake	PY001 Angeles Tunnel Inlet WQ Station	1 meter	
Castaic Lake	CA002 Castaic Lake Outlet tower Water Quality Station	1 meter	
Silverwood Lake	SI002 Silverwood Lake at San Bernardino Tunnel	1 meter	
Lake Perris	PE002 Lake Perris Outlet	1 meter	