

# **Water Quality Analysis Reports of the Damanganga River**

**April-2015 to November-2018**



**By**  
**Pollution Control Committee**  
**Daman & Diu and Dadra & Nagar Haveli**



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## LISTS OF LOCATION

Sr. No.	Location Code	Location Name
1.	SW-1	Vapi Weir
2.	SW-2	Lavacha Temple
3.	SW-3	Surat Beverages
4.	SW-4	Madhuban Dam
5.	SW-5	Naroli Bridge
6.	SW-6	Namadha
7.	SW-7	Zari Causway
8.	SW-8	Moti Daman Jetty
9.	SW-9	At D/S of discharge of distillery
10.	SW:10	CETP O/L
11.	SW:11	100 mtr. Down Strem From CETP
12.	SW-12	N.H.8 (Kolak)#
13.	SW:13	O/L of GHCL Bhilad
14.	SW-14	Pataliya Bridge(Kolak)#
15.	SW:15	Koteshwar Temple (Kolak)#

## Drinking Water Permissible Limit as Per IS-10500:2012

Parameter	Unit	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	METHOD ADOPTED
<b>pH</b>	--	6.5 – 8.5	Not Relaxation	IS:3025 (P-11) 1983 (Re.2002)
<b>Turbidity</b>	NTU	1	5	IS:3025 (P-10) 1984 (Re.2002)
<b>Conductivity</b>	µmho/cm	----	----	IS:3025 (P-14) 1984 (Re.2002)
<b>Total Dissolved Solid</b>	mg/L	500	2000	IS:3025 (P-16) 1984 (Re.2002)
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	200	600	IS:3025 (P-21) 1984 EDTA (Re.2002)
<b>Chloride as Cl</b>	mg/L	250	1000	IS:3025 (P-32) 1988 (Re.1999) (Argentometric method)
<b>Dissolved Oxygen</b>	mg/L	----	----	IS:3025 (P-38) 1989 (Re.1999) (Titrimetric method)
<b>Calcium as Ca</b>	mg/L	75	200	IS:3025 (P-40) 1991 (Re.2003) (EDTA Titrimetric method)
<b>Chromium as Cr</b>	mg/L	----	----	AAS APHA (22nd Edi) 3111 B
<b>Sodium as Na</b>	mg/L	----	----	AAS APHA (22nd Edi) 3111 B
<b>COD</b>	mg/L	----	----	APHA (22nd Edition) 5220 B (Open Reflux Method)
<b>BOD (3 Days @ 27°C)</b>	mg/L	----	----	IS:3025 (P-44) 1993 (Re.2003) Edi.2.1
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	200	600	IS:3025 (P-23) 1986 (Re.2003)
<b>Fecal Coliform</b>	MPN/100 mL	Absent	Absent	IS:1622:1981
<b>Total Coliform</b>	MPN/100 mL	Absent	Absent	IS:1622:1981
<b>Note: Requirement (Acceptable Limit) as per IS-10500:2012 is indicated in graph with red colour line.</b>				

**SW 1: Vapi Weir**

SW 1: Vapi Weir													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.58	8.33	8.4	8.45	8.26	8.26	7.4	8.36	8.48	8.45	8.49	8.35
<b>Turbidity</b>	NTU	32.2	14.8	7.4	9.6	10.2	12.1	3.8	1.18	24.2	11.6	7.3	10.4
<b>Conductivity</b>	µmho/cm	156	351	518	610	590	560	532	501	418	219	232	224
<b>Total Dissolved Solid</b>	mg/L	98	246	332	380	354	396	372	326	270	210	128	148
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	43	134	190	224	219	241	90	103	148	100	88	99
<b>Chloride as Cl</b>	mg/L	5.99	40.99	50.9	60.9	59	84	21	18.5	45.9	21.99	12.49	14.9
<b>Dissolved Oxygen</b>	mg/L	5.85	5.5	6	6.4	5.7	6.1	5.6	5.15	6.2	6.8	6.2	6.4
<b>Calcium as Ca</b>	mg/L	11.6	31.2	42	50	49	48	21	25.2	34	28	22.8	25
<b>Chromium as Cr</b>	mg/L	0.023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.011	0.016	< 0.005
<b>Sodium as Na</b>	mg/L	7.19	24.05	40	39	36.8	37	15	50	25	19	2	18
<b>COD</b>	mg/L	12	12	16	< 5	< 5	< 5	< 5	8	14	< 5	< 5	16
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	< 10	< 10	< 5	<10	< 1	4	< 1	< 1	4
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	38	115	140	156	151	168	104	93	110	84	80	82
<b>Fecal Coliform</b>	MPN/100 mL	Present	90	84	33	33	120	< 1.8	>1600	540	46	350	540
<b>Total Coliform</b>	MPN/100 mL	Present	280	240	170	170	240	170	>1600	1600	70	1600	> 1600

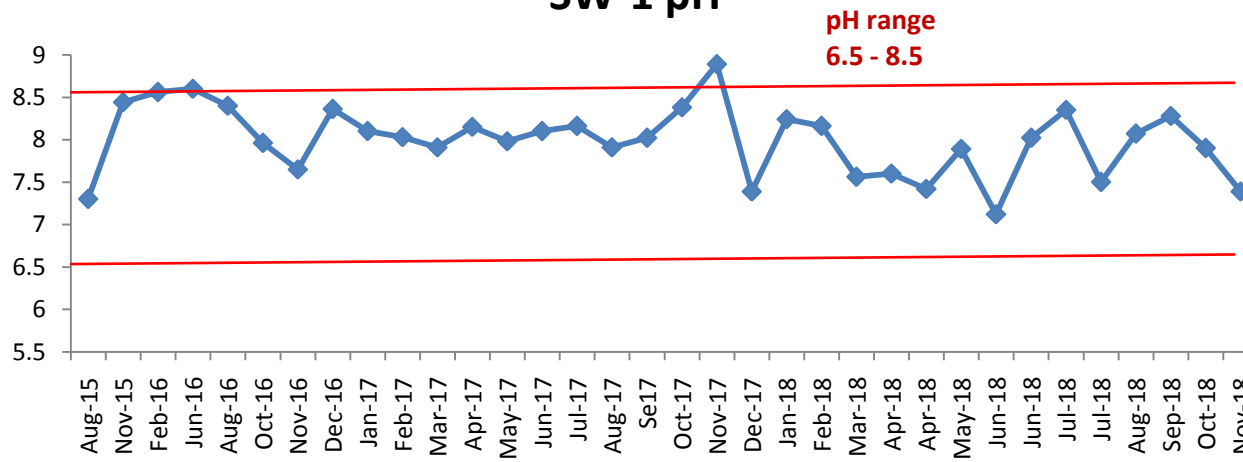
SW 1: Vapi Weir												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.42	7.89	7.12	8.02	8.35	7.50	8.07	8.28	7.90	7.39	7.42
<b>Turbidity</b>	NTU	6.10	10.11	7.42	26.3	31.00	10.12	58.00	21.24	17.4	11.20	6.10
<b>Conductivity</b>	µmho/cm	253	233	369	256	354	302	163	374	360	311	253
<b>Total Dissolved Solid</b>	mg/L	170	192	254	179	224	198	114	276	258	218	170
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	80	84	114	90	112	76	78	104	116	120	80
<b>Chloride as Cl</b>	mg/L	32	21	51	28	53.1	22.0	58.0	56.0	35.0	25	32
<b>Dissolved Oxygen</b>	mg/L	4.9	5.9	5.7	5.3	6.1	6.4	5.5	6.2	5.6	5.9	4.9
<b>Calcium as Ca</b>	mg/L	18.2	24.8	31.2	24.8	32.3	15.2	20.1	26.0	28.0	30.4	18.2
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	10.4	16.2	15.5	13.2	11.0	8.0	11.6	26.0	20.0	6.0	10.4
<b>COD</b>	mg/L	21.0	18.0	< 5.0	< 5.0	6.0	12.0	< 5.0	10.0	16.0	20.0	21.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	3	4	< 1.0	< 1.0	2	4	< 1.0	3	5	6	3
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	< 0.5	< 0.5	10	12	8	26	12	6	< 0.5	< 0.5	< 0.5
<b>Fecal Coliform</b>	MPN/100 mL	140	540	220	94	58	70	64	34	920	170	140
<b>Total Coliform</b>	MPN/100 mL	350	> 1600	920	350	250	280	350	220	> 1600	920	350

SW 1: Vapi Weir												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	8.57	8.45	8.11	7.91	8.02	8.38	8.89	7.39	8.24	8.16	7.56
<b>Turbidity</b>	NTU	8.4	13.2	122	61	40.4	18.2	2.08	1.8	21.8	18.8	12.4
<b>Conductivity</b>	µmho/cm	198	184	163	195	210	344	278	266	283	252	207
<b>Total Dissolved Solid</b>	mg/L	138	126	110	134	142	210	195	160	184	178	158
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	95	80	55	60	65	110	86	58	94	74	89
<b>Chloride as Cl</b>	mg/L	13.99	10.9	8.49	11.99	13.9	35.9	16.99	26	19	24	14.6
<b>Dissolved Oxygen</b>	mg/L	6.7	6.6	7.2	7.1	6.8	6.4	4.6	5.5	6	5.8	5.4
<b>Calcium as Ca</b>	mg/L	24.8	20	16	16	18	28	22.4	14.4	20	15.2	17.8
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	0.022	< 0.005	< 0.005	< 0.005	0.01	<0.005	< 0.005	< 0.005	0.008
<b>Sodium as Na</b>	mg/L	24	6.8	7.918	5.22	7	20	18	15.1	13	10	6.56
<b>COD</b>	mg/L	20	14	<5	< 5.0	10	24	19	6	8	7	< 5.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	6	3	<1	< 1	2	8	< 1.0	< 1.0	2	2	< 1.0
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	90	70	48	62	58	90	98	84	78	87	102
<b>Fecal Coliform</b>	MPN/100 mL	920	40	120	50	31	63	79	240	180	70	170
<b>Total Coliform</b>	MPN/100 mL	1600	140	240	120	280	240	350	920	540	280	240

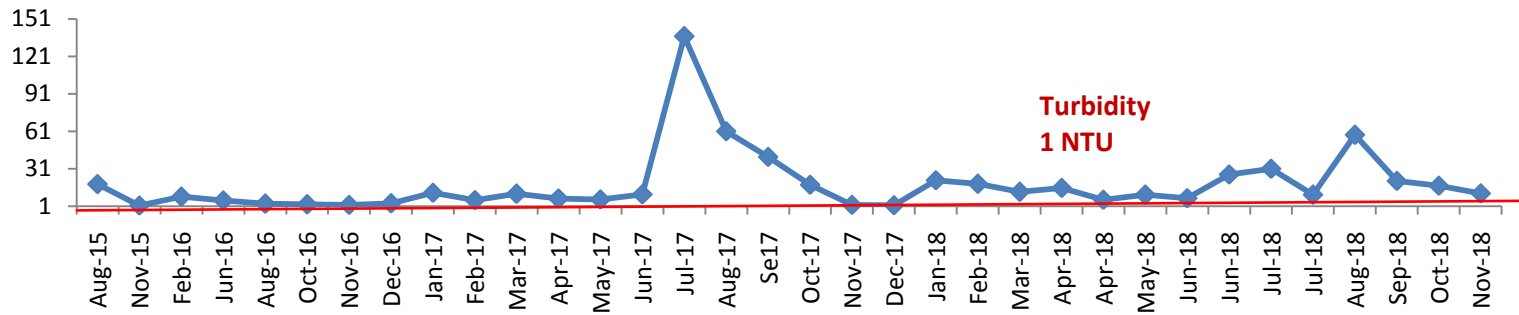
SW 1: Vapi Weir												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.60	7.42	7.89	7.12	8.02	8.35	7.50	8.07	8.28	7.90	7.39
<b>Turbidity</b>	NTU	15.60	6.10	10.11	7.42	26.3	31.00	10.12	58.00	21.24	17.4	11.20
<b>Conductivity</b>	µmho/cm	290	253	233	369	256	354	302	163	374	360	311
<b>Total Dissolved Solid</b>	mg/L	182	170	192	254	179	224	198	114	276	258	218
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	102	80	84	114	90	112	76	78	104	116	120
<b>Chloride as Cl</b>	mg/L	42	32	21	51	28	53.1	22.0	58.0	56.0	35.0	25
<b>Dissolved Oxygen</b>	mg/L	5.4	4.9	5.9	5.7	5.3	6.1	6.4	5.5	6.2	5.6	5.9
<b>Calcium as Ca</b>	mg/L	21.1	18.2	24.8	31.2	24.8	32.3	15.2	20.1	26.0	28.0	30.4
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	8.6	10.4	16.2	15.5	13.2	11.0	8.0	11.6	26.0	20.0	6.0
<b>COD</b>	mg/L	28.0	21.0	18.0	< 5.0	< 5.0	6.0	12.0	< 5.0	10.0	16.0	20.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	6	3	4	< 1.0	< 1.0	2	4	< 1.0	3	5	6
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	2	< 0.5	< 0.5	10	12	8	26	12	6	< 0.5	< 0.5
<b>Fecal Coliform</b>	MPN/100 mL	350	140	540	220	94	58	70	64	34	920	170
<b>Total Coliform</b>	MPN/100 mL	1600	350	> 1600	920	350	250	280	350	220	> 1600	920



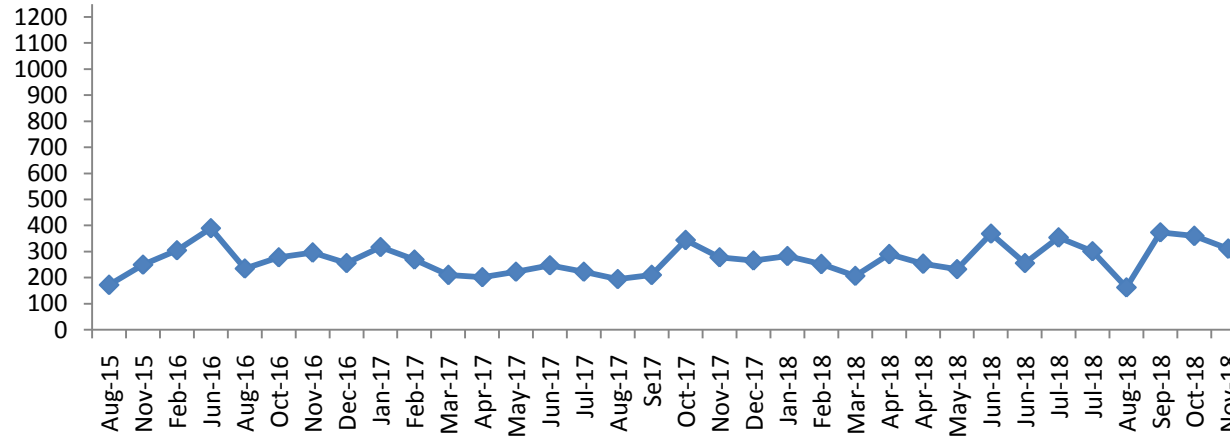
### SW-1 pH



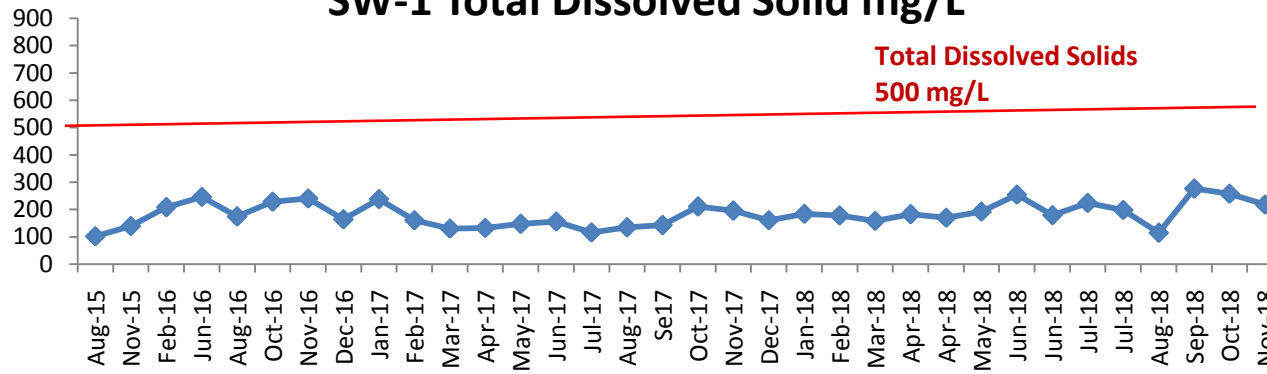
### SW-1 Turbidity NTU



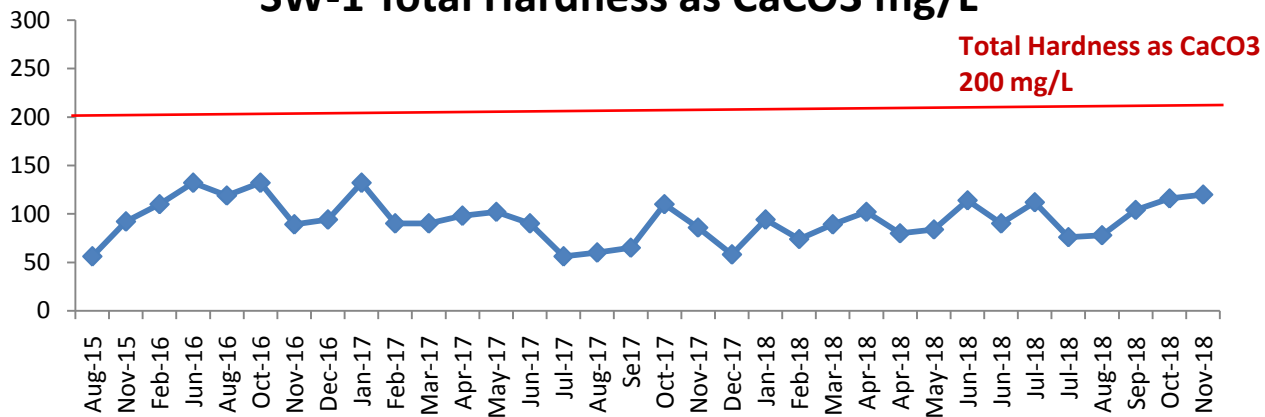
### SW-1 Conductivity $\mu\text{mho/cm}$



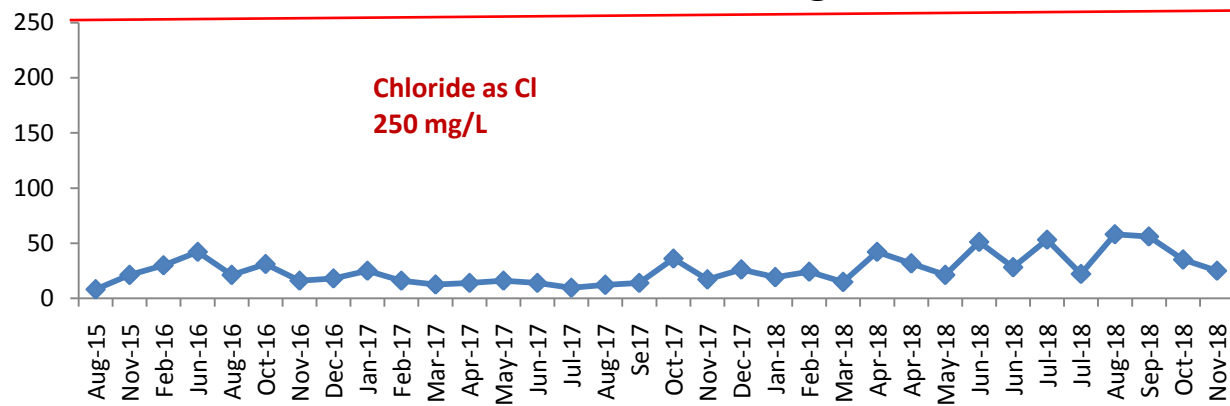
### SW-1 Total Dissolved Solid mg/L



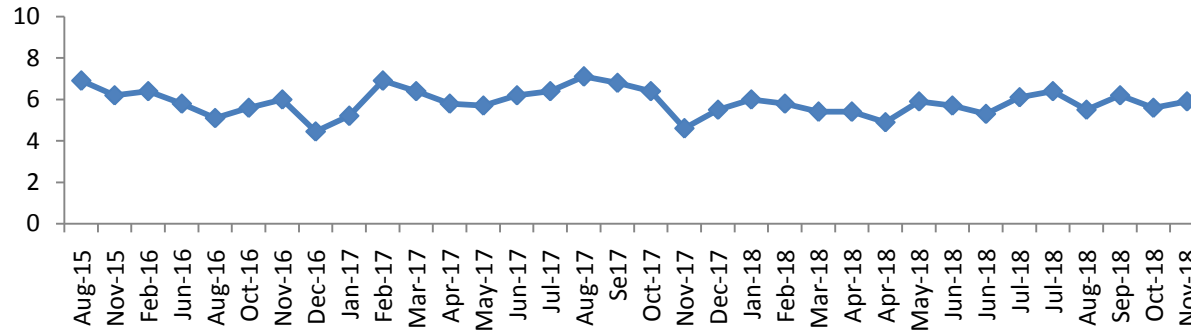
### SW-1 Total Hardness as CaCO3 mg/L



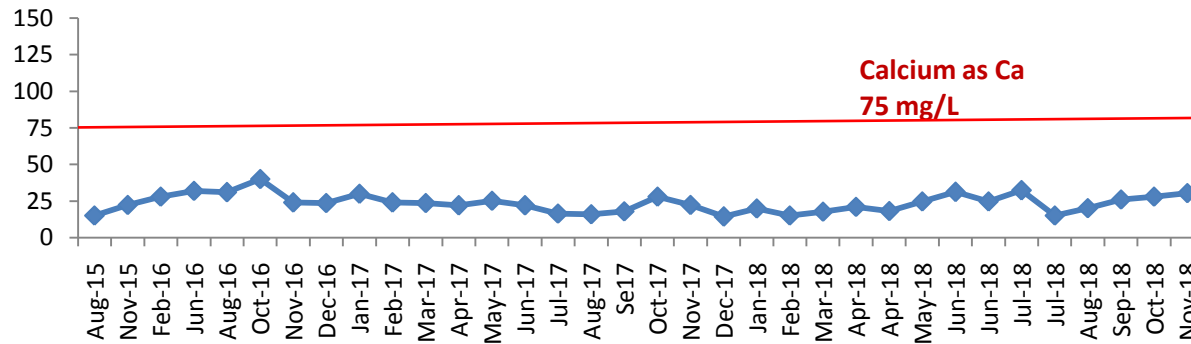
### SW-1 Chloride as Cl mg/L



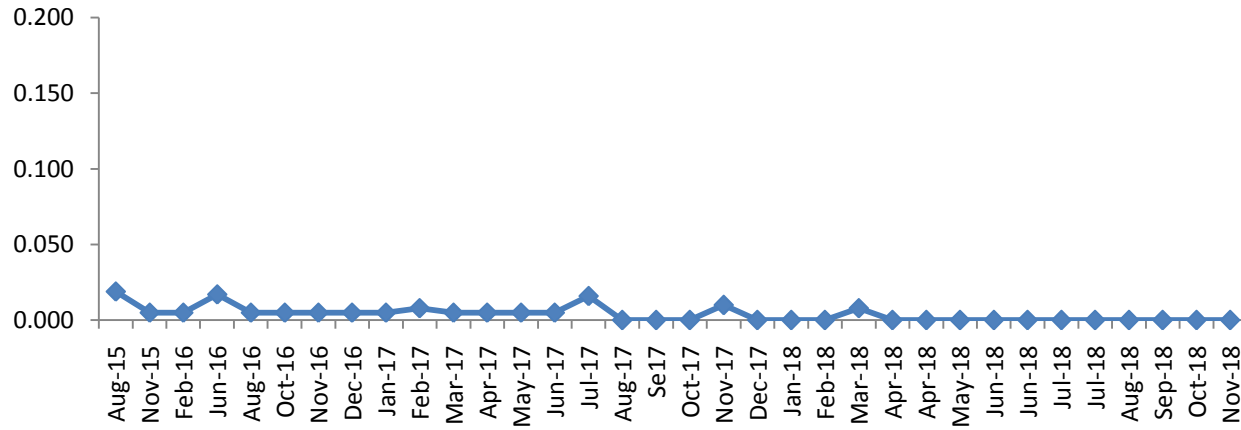
### SW-1 Dissolved Oxygen mg/L



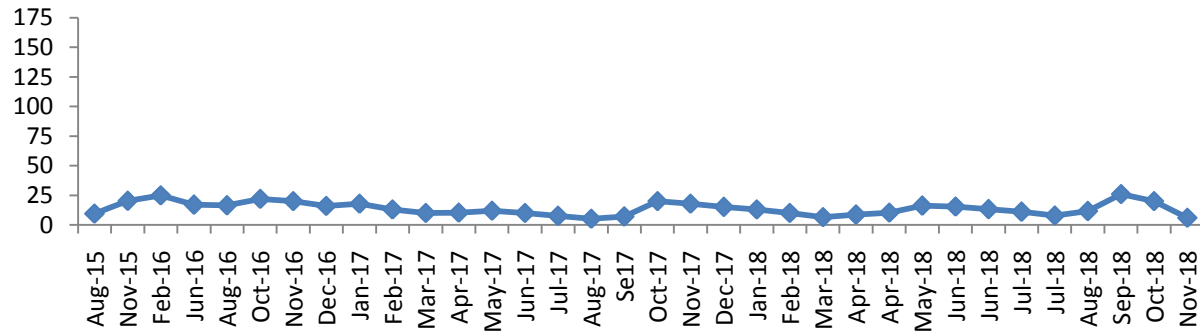
### SW-1 Calcium as Ca mg/L



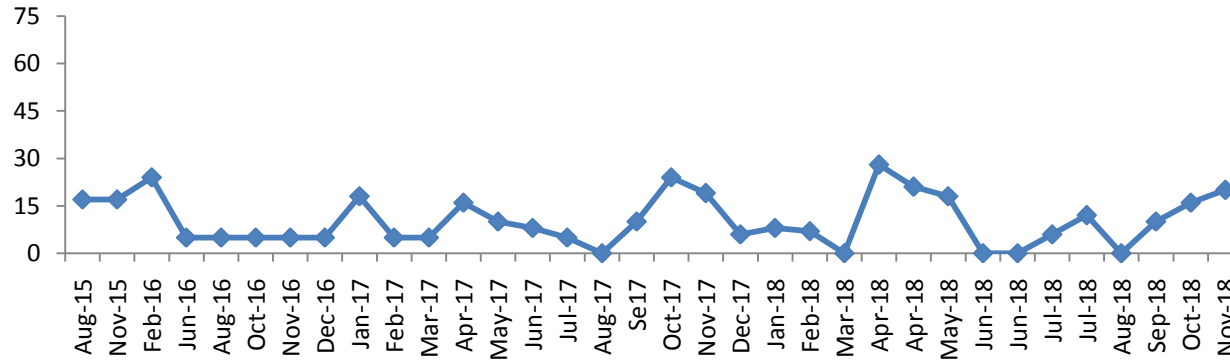
### SW-1 Chromium as Cr mg/L



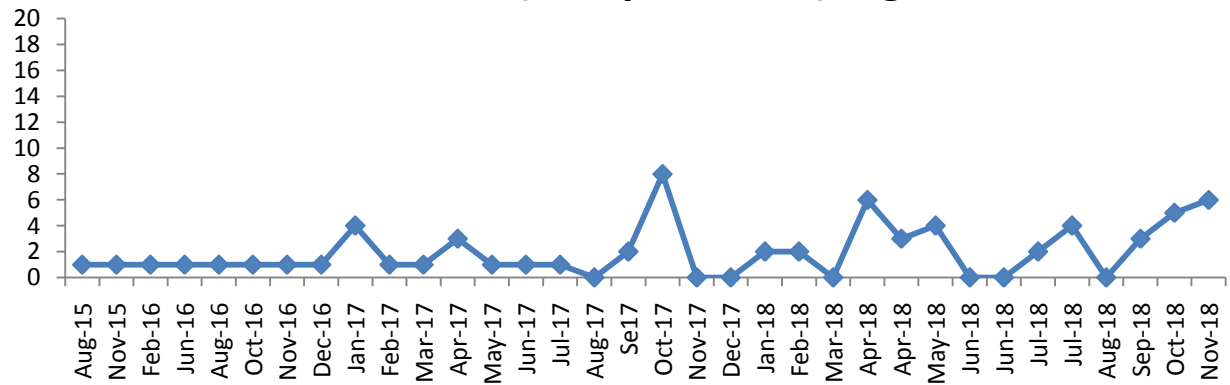
### SW-1 Sodium as Na mg/L



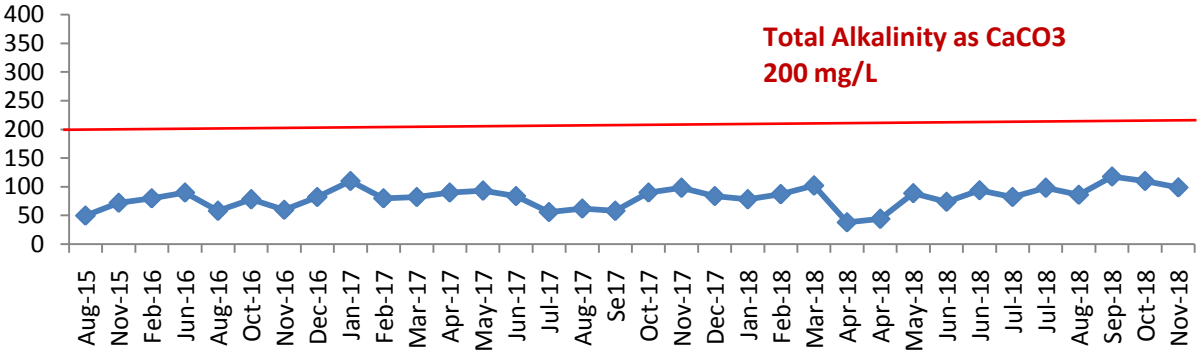
### SW-1 COD mg/L



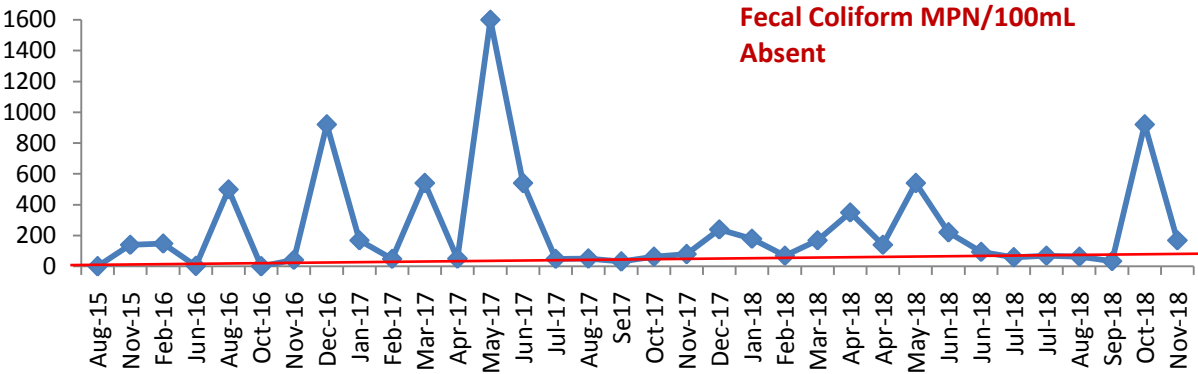
### SW-1 BOD (3 Days @ 27°C) mg/L



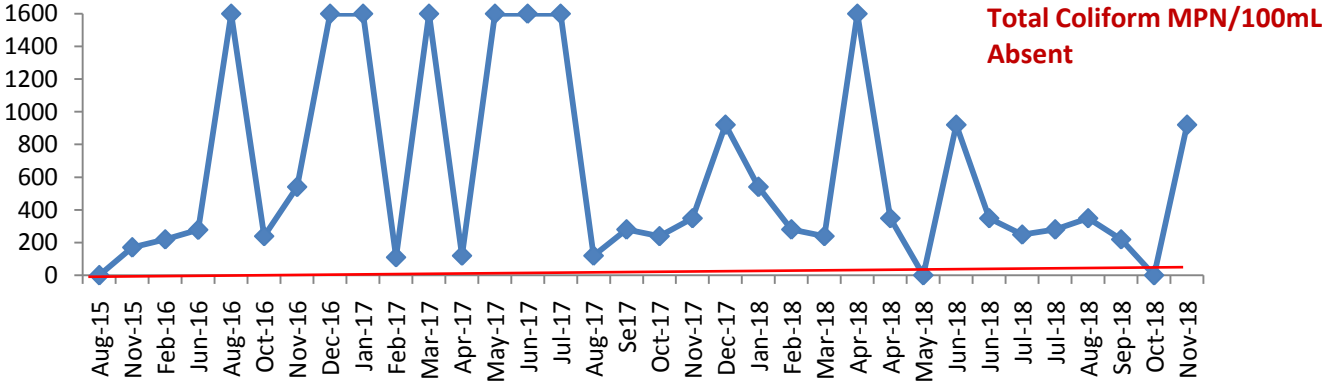
### SW-1 Total Alkalinity as CaCO3 mg/L



### SW-1 Fecal Coliform MPN/100 mL



### SW-1 Total Coliform MPN/100 mL





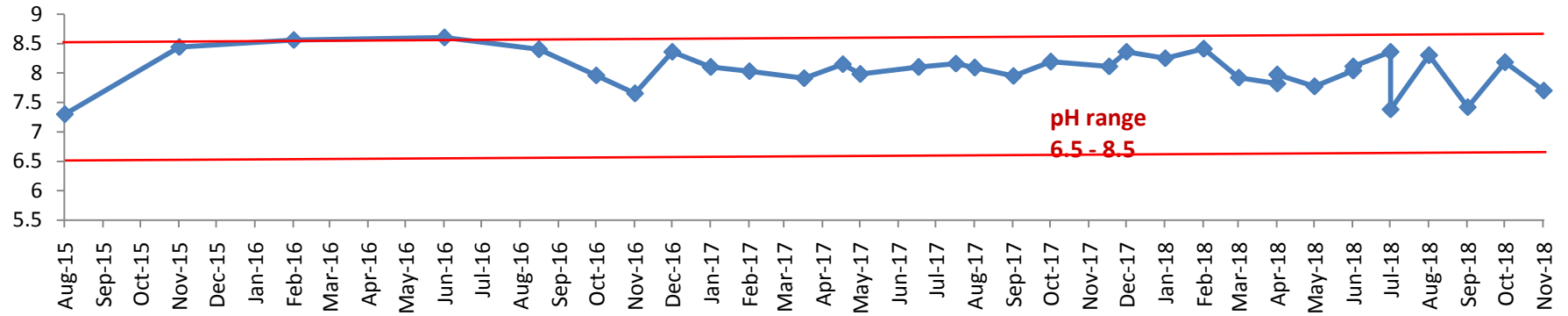
## SW 2: Lavacha Temple

SW 2: Lavacha Temple													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.3	8.44	8.56	8.6	8.4	7.96	7.65	8.36	8.1	8.03	7.91	8.15
<b>Turbidity</b>	NTU	18.68	1.47	8.6	5.6	2.9	2.4	2.1	3.2	11.8	5.8	10.9	7.2
<b>Conductivity</b>	µmho/cm	172	250	305	390	235	278	296	256	318	270	210	202
<b>Total Dissolved Solid</b>	mg/L	102	139	208	246	174	228	240	164	238	160	130	132
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	56	92	110	132	119	132	89	94	132	90	90	98
<b>Chloride as Cl</b>	mg/L	7.99	20.99	29.9	42	21	31	16	17.99	24.9	15.99	12.39	13.9
<b>Dissolved Oxygen</b>	mg/L	6.9	6.2	6.4	5.8	5.1	5.6	6	4.45	5.2	6.9	6.4	5.8
<b>Calcium as Ca</b>	mg/L	15.2	22.4	28	32	31	40	24	23.6	30	24	23.6	22
<b>Chromium as Cr</b>	mg/L	0.019	< 0.005	< 0.005	0.017	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.008	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	9.59	20.2	25	17	16.4	22	20	16	18	13	10	10.4
<b>COD</b>	mg/L	17	17	24	< 5	< 5	< 5	< 5	< 5	18	< 5	< 5	16
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	< 10	< 10	< 5	< 10	< 1	4	< 1	< 1	3
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	50	72	80	90	58	78	60	82	110	80	82	90
<b>Fecal Coliform</b>	MPN/100 mL	Present	140	148	2	500	< 1.8	43	920	170	49	540	50
<b>Total Coliform</b>	MPN/100 mL	Present	170	220	278	> 1600	240	540	>1600	> 1600	110	1600	120

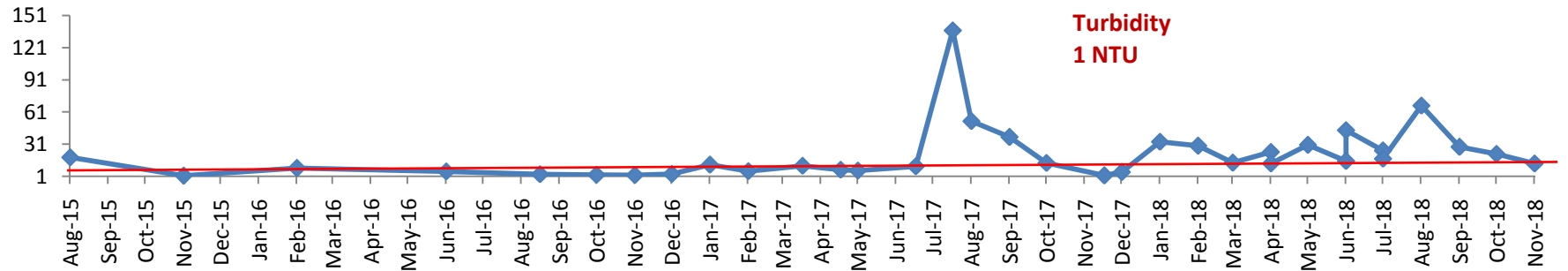
SW 2: Lavacha Temple												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	7.98	8.1	8.16	8.09	7.95	8.19	8.11	8.36	8.25	8.41	7.92
<b>Turbidity</b>	NTU	6.3	10.4	137	52.5	37.6	13.4	1.79	4.9	33.2	29.4	13.6
<b>Conductivity</b>	µmho/cm	223	248	223	199	228	275	239	305	320	264	247
<b>Total Dissolved Solid</b>	mg/L	147	156	116	140	158	172	164	182	208	176	188
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	102	90	56	62	72	142	92	89	101	70	88
<b>Chloride as Cl</b>	mg/L	15.99	13.9	9.49	10.99	12.9	30.9	20.99	23	32	22.9	17.9
<b>Dissolved Oxygen</b>	mg/L	5.7	6.2	6.4	6.5	5.8	5.8	6	5.4	6.1	6.2	4.8
<b>Calcium as Ca</b>	mg/L	25.2	22	16.4	16.8	20	26	24.8	24	28	22	18
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	0.016	0.012	0.017	< 0.005	< 0.005	<0.005	<0.005	<0.005	0.012
<b>Sodium as Na</b>	mg/L	12	10	7.493	7.28	9	15	20	11.9	13.1	14.4	8.98
<b>COD</b>	mg/L	10	8	<5	< 5	< 5	14	28	8	18	12	9
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 1	< 1	<1	< 1	< 1	3	5	< 1.0	6	5	2
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	93	84	56	62	52	70	104	96	89	78	90
<b>Fecal Coliform</b>	MPN/100 mL	1600	540	49	49	14	170	140	240	120	33	79
<b>Total Coliform</b>	MPN/100 mL	> 1600	1600	1600	110	21	> 1600	1600	350	280	220	350

SW 2: Lavacha Temple												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.82	7.97	7.77	8.04	8.11	8.36	7.38	8.30	7.42	8.18	7.70
<b>Turbidity</b>	NTU	23.80	12.90	30.21	15.20	44.0	24.90	17.40	67.00	28.40	21.9	13.00
<b>Conductivity</b>	µmho/cm	336	184	208	331	252	284	270	185	385	317	256
<b>Total Dissolved Solid</b>	mg/L	214	170	198	223	168	181	192	130	241	206	170
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	75	80	84	110	92	134	78	92	117	102	98
<b>Chloride as Cl</b>	mg/L	30	11	18	21	14	36.0	11.0	74.0	52.0	26.0	17.0
<b>Dissolved Oxygen</b>	mg/L	4.2	5.9	5.2	6.8	6.4	6.6	6.2	5.7	5.9	5.4	6.1
<b>Calcium as Ca</b>	mg/L	20.8	21.0	22.4	29.6	22.4	29.6	13.6	24.8	32.0	25.0	27.2
<b>Chromium as Cr</b>	mg/L	0.04	0.024	0.016	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	15.0	7.9	6.2	10.0	8.1	12.4	9.2	14.8	18.0	22.0	8.6
<b>COD</b>	mg/L	20.0	< 5	< 5	< 5	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	10.0	12.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	4	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3	4
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	68	80	88	118	98	110	86	102	122	100	92
<b>Fecal Coliform</b>	MPN/100 mL	94	350	280	220	70	58	34	64	41	26	280
<b>Total Coliform</b>	MPN/100 mL	350	1600	> 1600	540	220	250	220	350	240	> 1600	1600

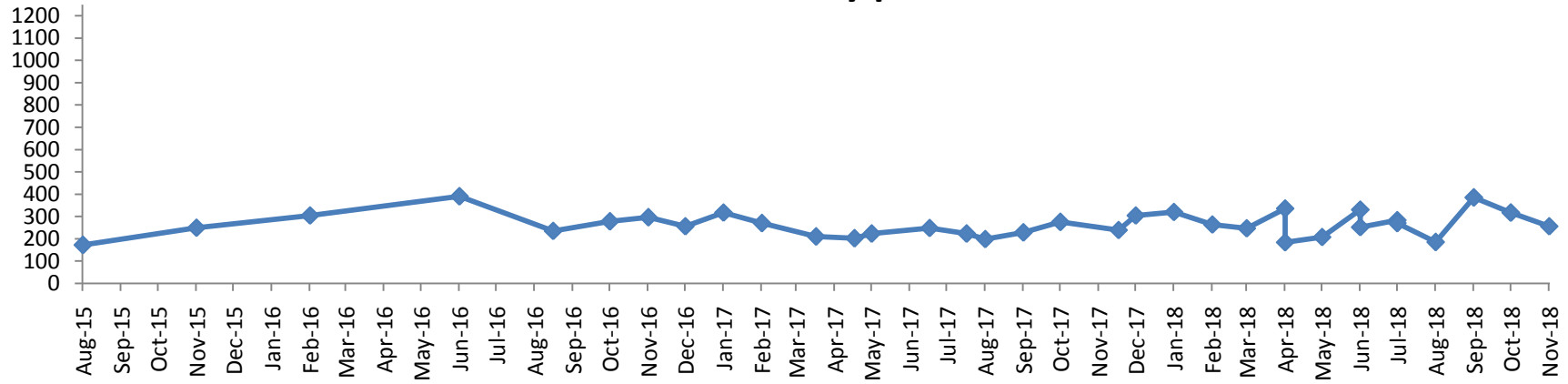
### SW-2 pH



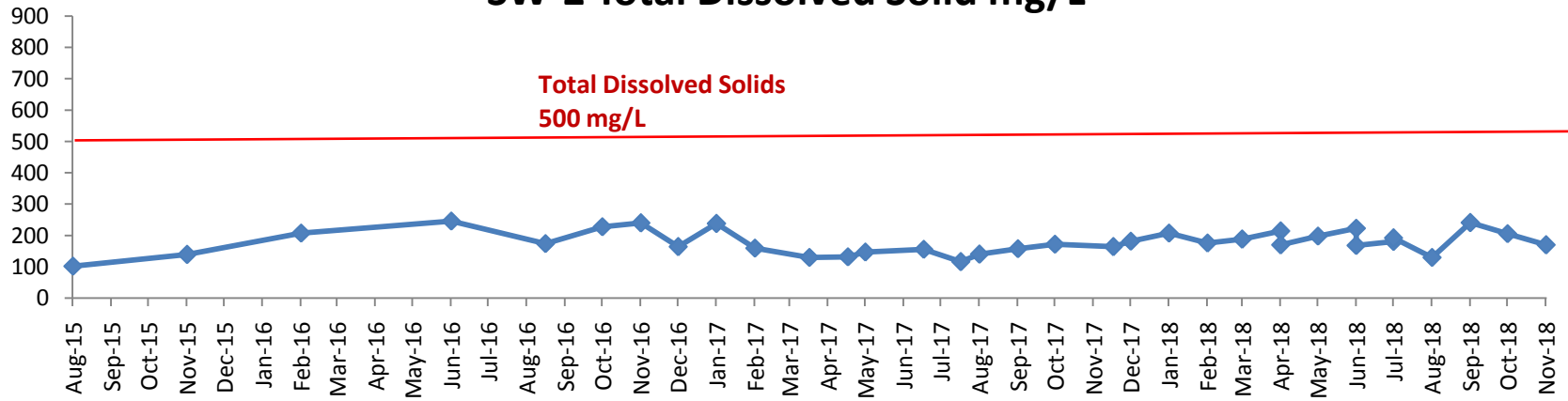
### SW-2 Turbidity NTU



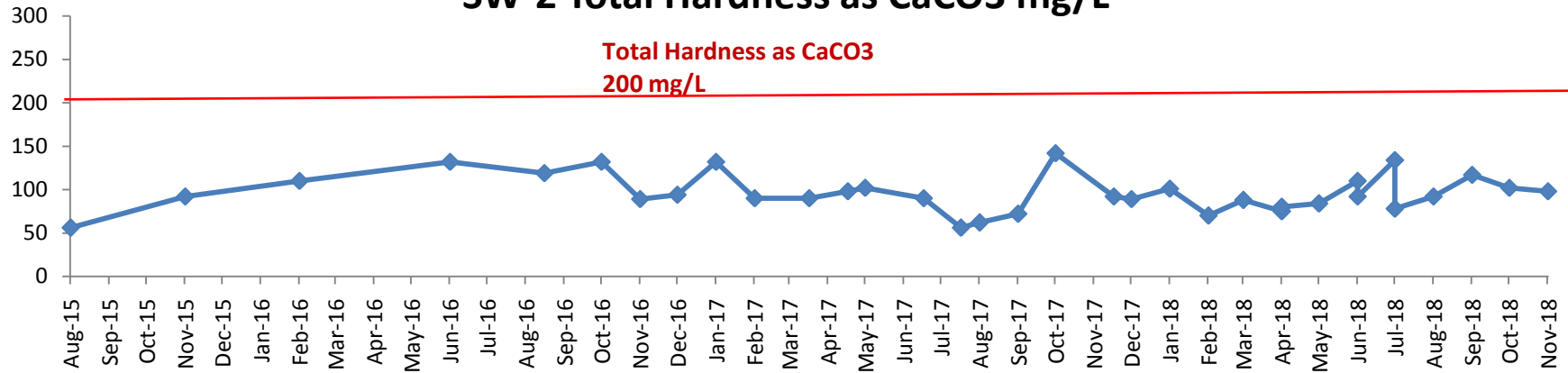
### SW-2 Conductivity $\mu\text{mho/cm}$



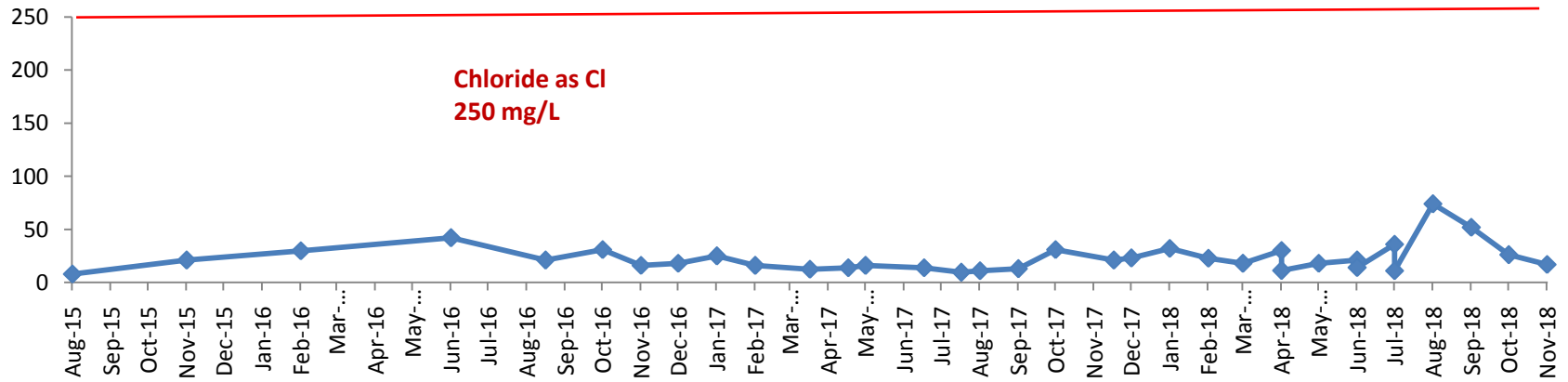
### SW-2 Total Dissolved Solid mg/L



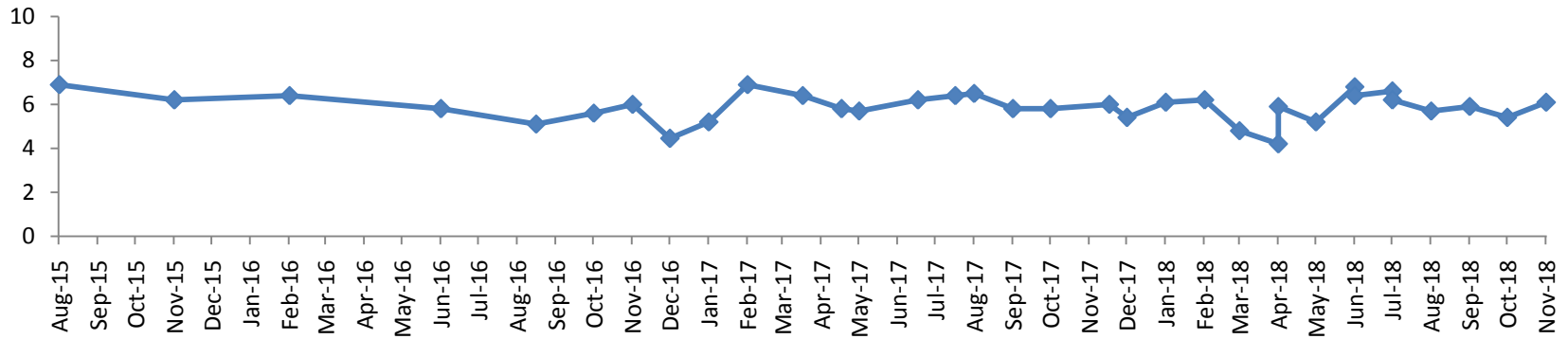
### SW-2 Total Hardness as CaCO3 mg/L



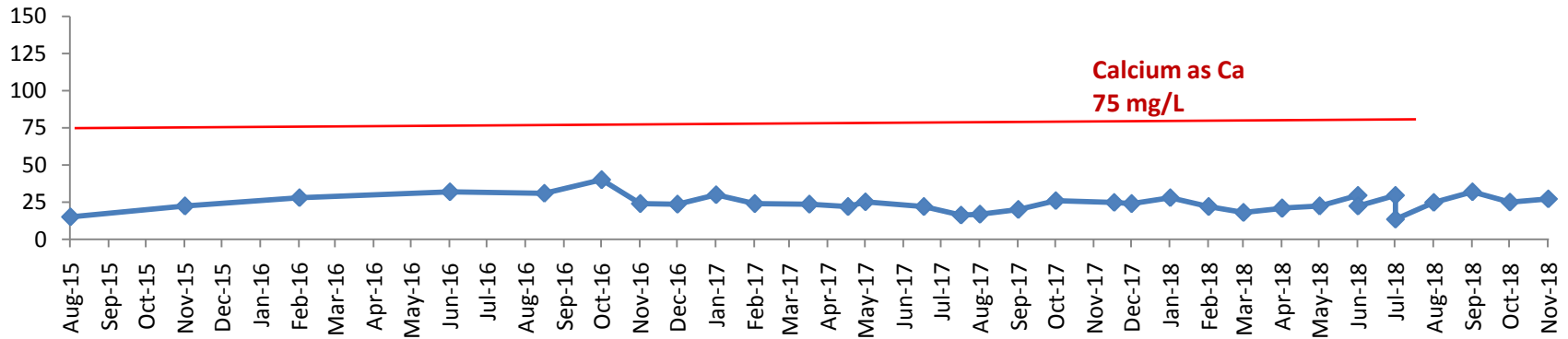
### SW-2 Chloride as Cl mg/L



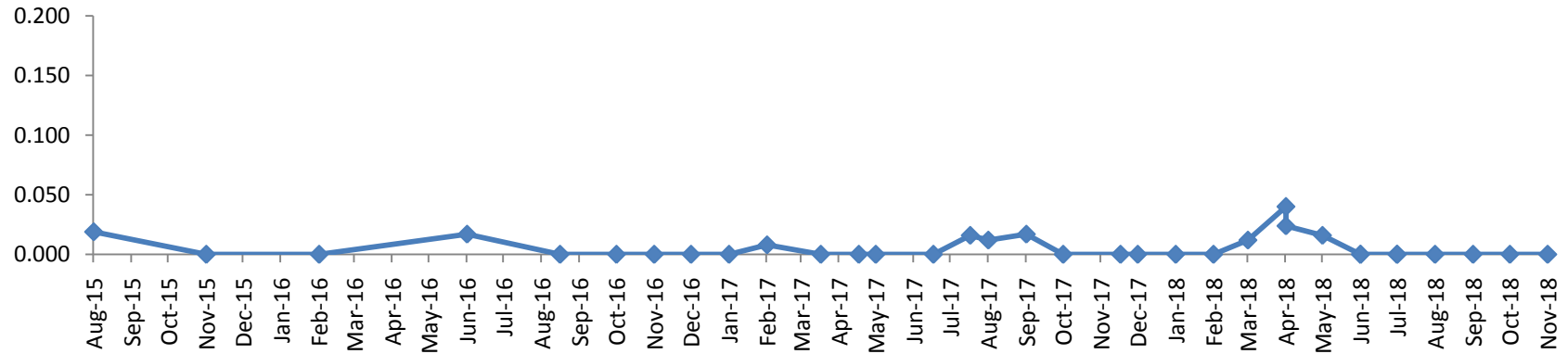
### SW-2 Dissolved Oxygen mg/L



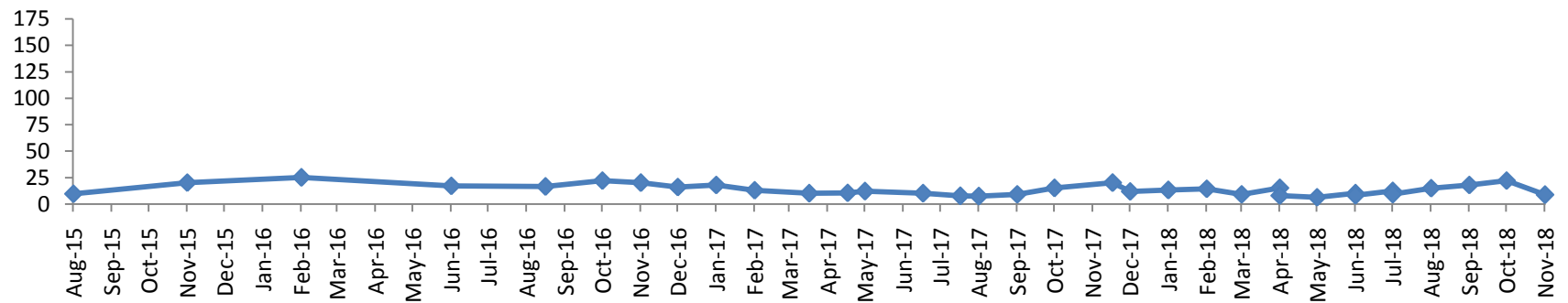
### SW-2 Calcium as Ca mg/L



### SW-2 Chromium as Cr mg/L

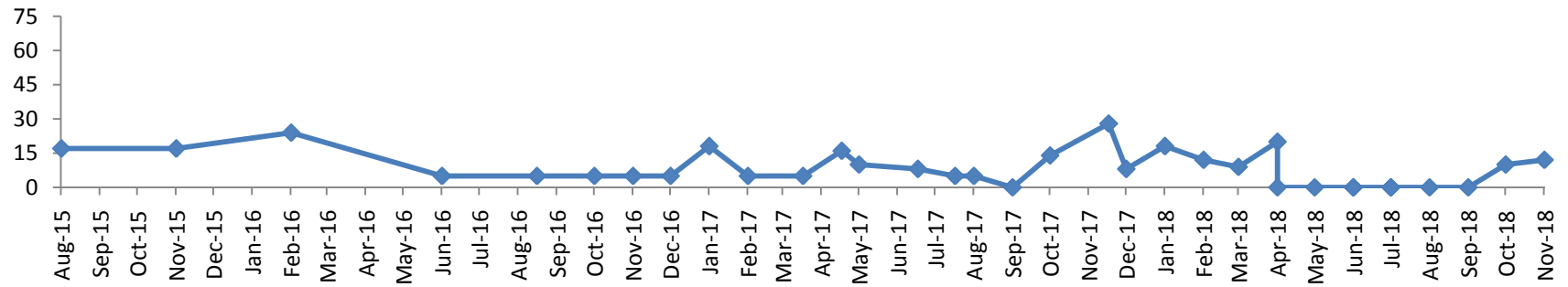


### SW-2 Sodium as Na mg/L

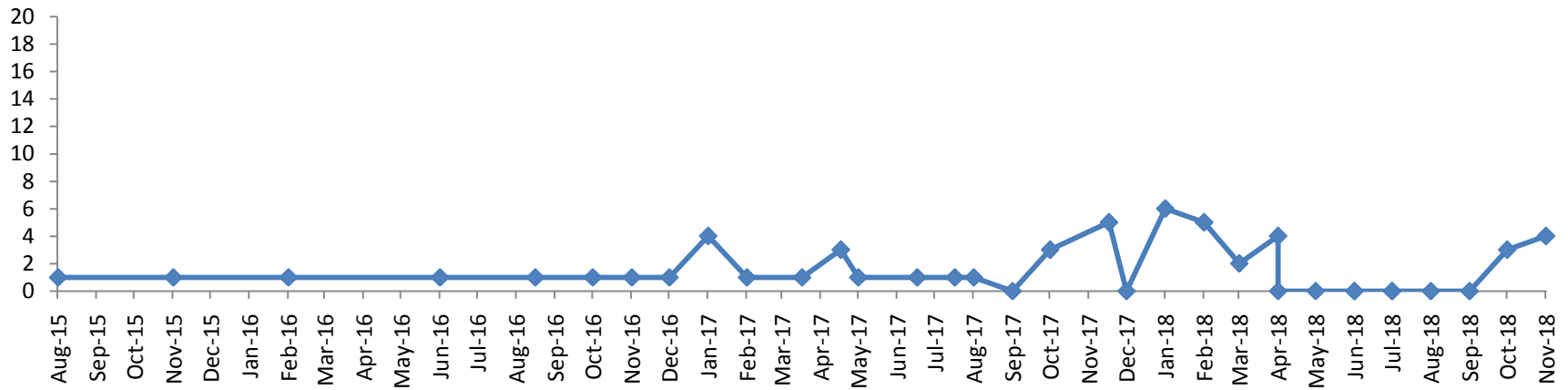




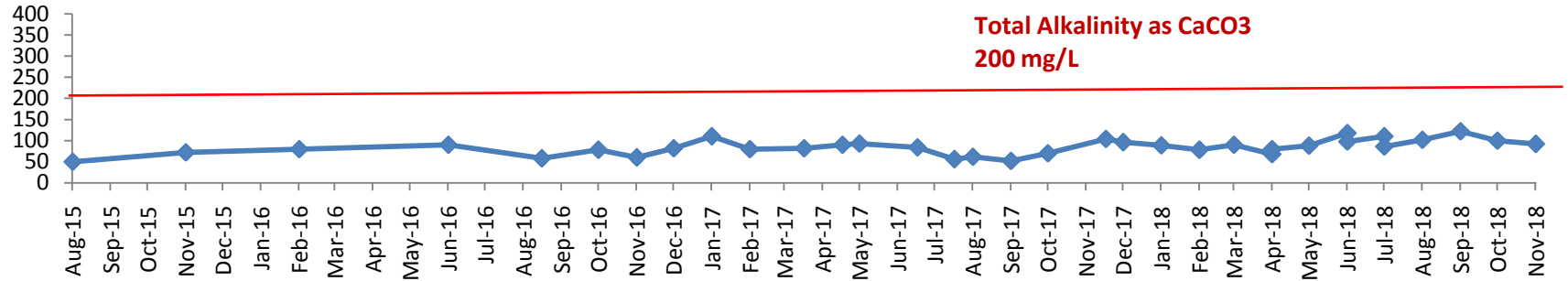
### SW-2 COD mg/L



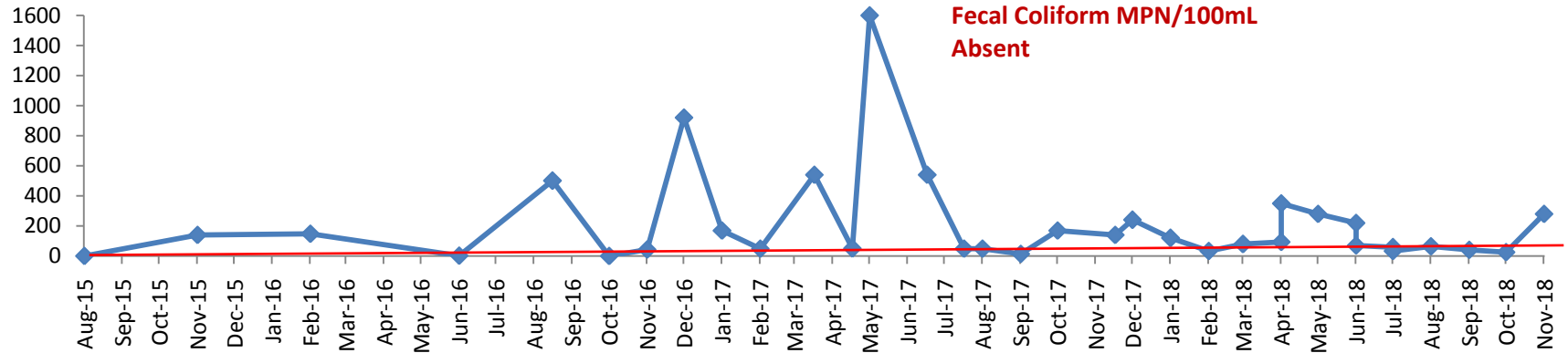
### SW-2 BOD (3 Days @ 27°C) mg/L



### SW-2 Total Alkalinity as CaCO3 mg/L

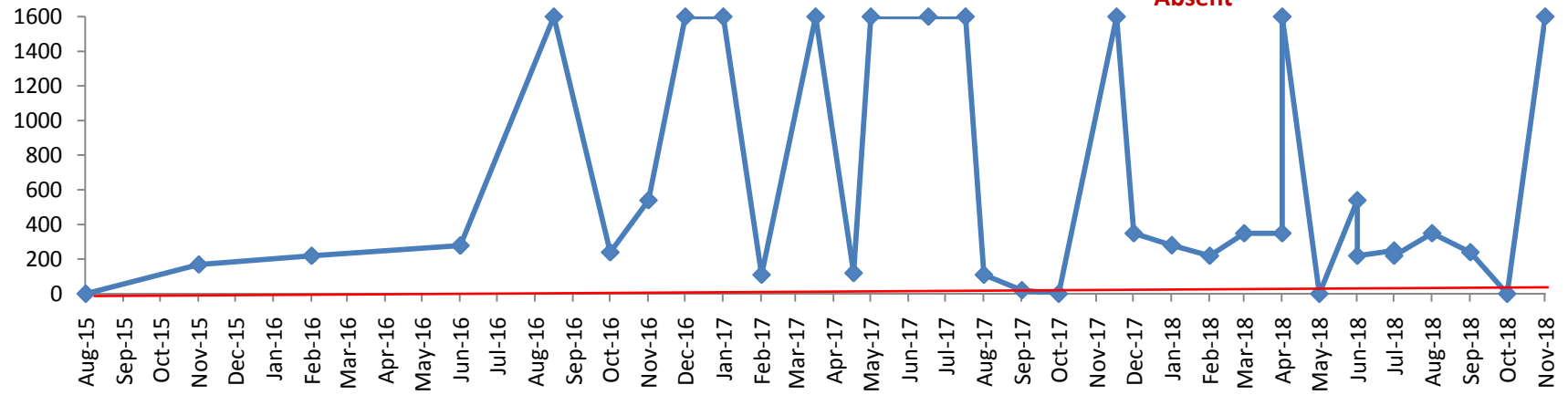


### SW-2 Fecal Coliform MPN/100 mL



### SW-2 Total Coliform MPN/100 mL

Total Coliform MPN/100mL  
Absent



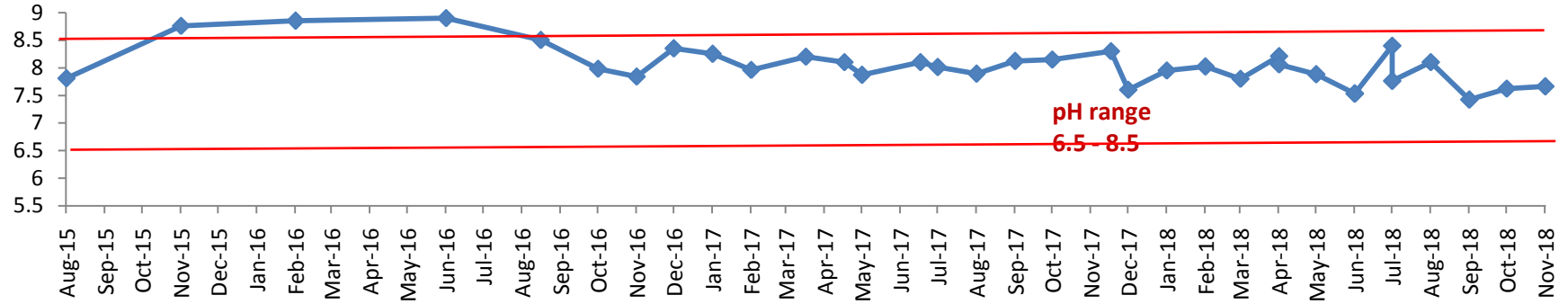
### SW 3: Surat Beverages

SW 3: Surat Beverages													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.81	8.76	8.85	8.9	8.5	7.98	7.84	8.35	8.25	7.96	8.2	8.1
<b>Turbidity</b>	NTU	2.25	1.46	10.3	3.6	4.9	3.4	9.6	0.8	3.6	7.4	12.2	14.8
<b>Conductivity</b>	µmho/cm	303	380	348	240	378	424	380	236	320	272	258	272
<b>Total Dissolved Solid</b>	mg/L	212	260	233	168	236	246	230	151	208	156	142	180
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	102	116	158	124	129	146	90	90	110	100	81	120
<b>Chloride as Cl</b>	mg/L	12.99	16.99	34.9	22	39	53	14.9	13.99	19.9	17.99	12.49	17.9
<b>Dissolved Oxygen</b>	mg/L	5.65	6.8	6.4	6	6.12	6.2	5.8	6.5	5.8	6.6	6.2	5.8
<b>Calcium as Ca</b>	mg/L	24.8	30	48	36	33	44	18	20.8	32	24	22.8	30
<b>Chromium as Cr</b>	mg/L	0.018	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.006	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	13.48	14.54	40	10	19.8	30.4	12.8	11	16	10	9.5	13
<b>COD</b>	mg/L	17	17	24	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	< 10	< 10	< 5	< 5	< 1	< 1	< 1	< 1	< 1
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	106	65	88	60	89	86	70	81	72	78	86	98
<b>Fecal Coliform</b>	MPN/100 mL	Present	100	141	500	2	< 2	70	540	110	430	240	430
<b>Total Coliform</b>	MPN/100 mL	Present	900	430	> 1600	278	172	930	920	350	920	920	> 1600

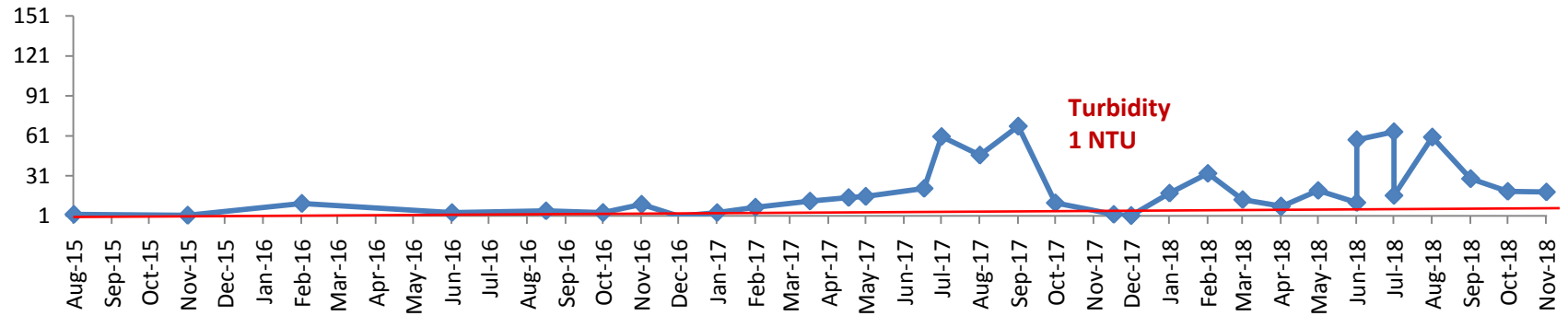
SW 3: Surat Beverages												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	7.87	8.1	8.01	7.89	8.12	8.15	8.3	7.6	7.95	8.02	7.8
<b>Turbidity</b>	NTU	15.6	21.6	60.6	46.5	68.2	10.8	2.14	1.2	18.1	33	13.2
<b>Conductivity</b>	µmho/cm	265	202	313	193	202	248	353	373	411	358	372
<b>Total Dissolved Solid</b>	mg/L	146	138	213	138	132	154	244	256	272	239	256
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	100	96	118	64	58	68	122	86	96	79	102
<b>Chloride as Cl</b>	mg/L	14.49	14.9	14.99	10.99	8.9	21.9	45.98	16	32	36	44.8
<b>Dissolved Oxygen</b>	mg/L	4.5	5.6	5.9	5.75	6.2	5.6	5.6	6.1	5.2	6.3	5.4
<b>Calcium as Ca</b>	mg/L	24	20	35.2	16	14	16	32	21.6	24.2	22	32
<b>Chromium as Cr</b>	mg/L	0.008	< 0.005	0.014	0.008	0.012	< 0.005	0.01	<0.005	<0.005	<0.005	< 0.005
<b>Sodium as Na</b>	mg/L	8	5	10.96	4.51	4	20	30	2.4	12	14	10
<b>COD</b>	mg/L	10	< 5	<5	< 5	< 5	< 5	9	< 5.0	< 5.0	10	8
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 1	< 1	<1	< 1	< 1	< 1	1	< 1.0	< 1.0	3	2
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	93	78	90	56	50	80	108	98	106	90	82
<b>Fecal Coliform</b>	MPN/100 mL	920	32	50	130	12	120	350	920	220	120	94
<b>Total Coliform</b>	MPN/100 mL	> 1600	920	120	540	24	350	>1600	1600	540	430	350

SW 3: Surat Beverages												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	8.21	8.06	7.88	7.53	7.53	8.4	7.76	8.1	7.42	7.62	7.66
<b>Turbidity</b>	NTU	8.30	7.91	20.15	11.00	58.00	64.00	16.40	60.00	28.84	19.40	19.00
<b>Conductivity</b>	µmho/cm	258	223	199	301	398	270	250	197	371	351	240
<b>Total Dissolved Solid</b>	mg/L	168	148	136	198	258	171	152	138	275	243	172
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	91	82	89	111	104	109	66	96	118	106	89
<b>Chloride as Cl</b>	mg/L	22	12	10	21	30	27	8	82	64	40	19
<b>Dissolved Oxygen</b>	mg/L	5.8	5.8	7	6.3	5.5	6.7	6.5	5.1	5.8	5.4	6
<b>Calcium as Ca</b>	mg/L	16.0	21.4	17.6	28.1	25.6	27.9	18.4	21.6	16.2	24.0	24.0
<b>Chromium as Cr</b>	mg/L	0.02	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	8.0	7.7	3.8	5.0	4.2	9.9	7.2	15.0	18.0	10.6	9.8
<b>COD</b>	mg/L	6.0	12.0	< 5	< 5	18.0	22.0	< 5	11.0	< 5.0	< 5.0	< 5.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	1	5	< 1	< 1	4	6	< 1	4	< 1.0	< 1.0	< 1.0
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	98	88	84	112	134	120	78	90	104	122	93
<b>Fecal Coliform</b>	MPN/100 mL	350	79	220	84	140	72	70	84	170	350	34
<b>Total Coliform</b>	MPN/100 mL	1600	240	920	210	350	220	350	210	> 1600	>1600	540

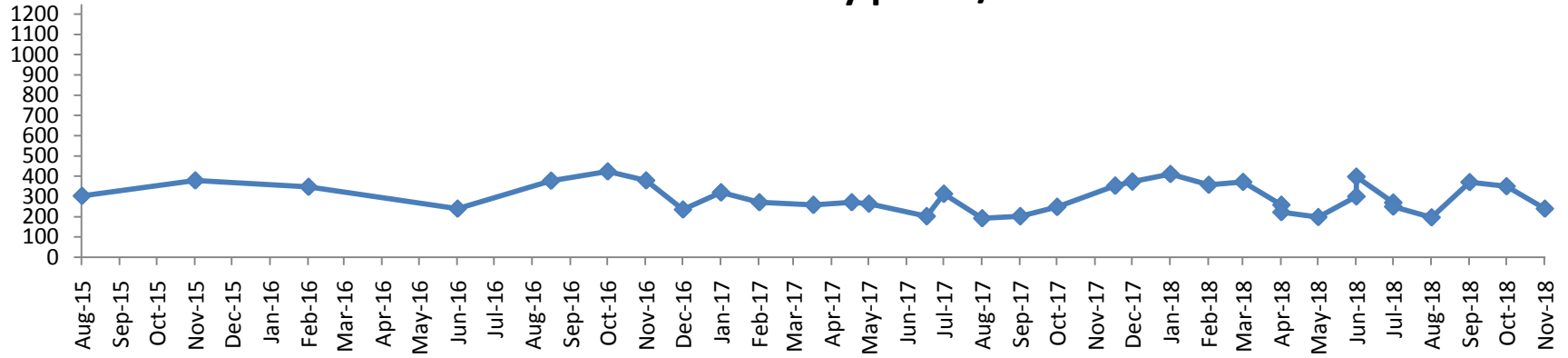
### SW-3 pH



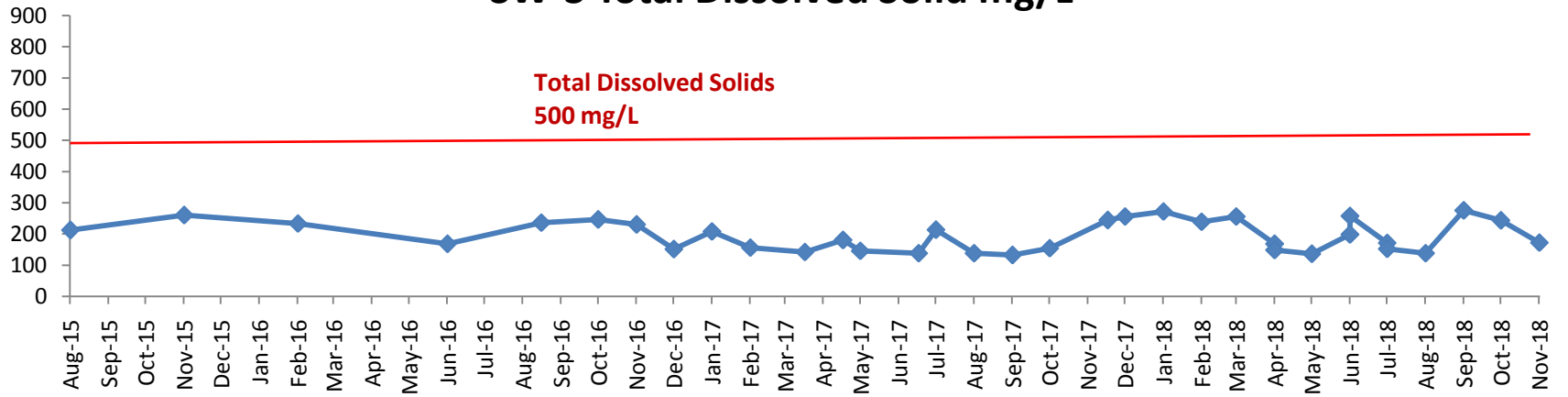
### SW-3 Turbidity NTU



### SW-3 Conductivity $\mu\text{mho/cm}$

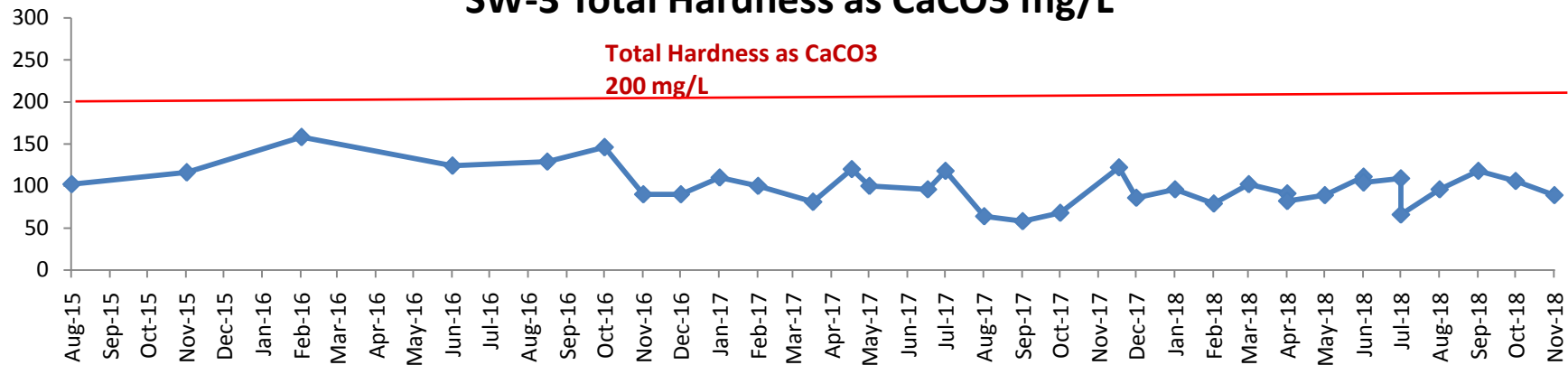


### SW-3 Total Dissolved Solid mg/L

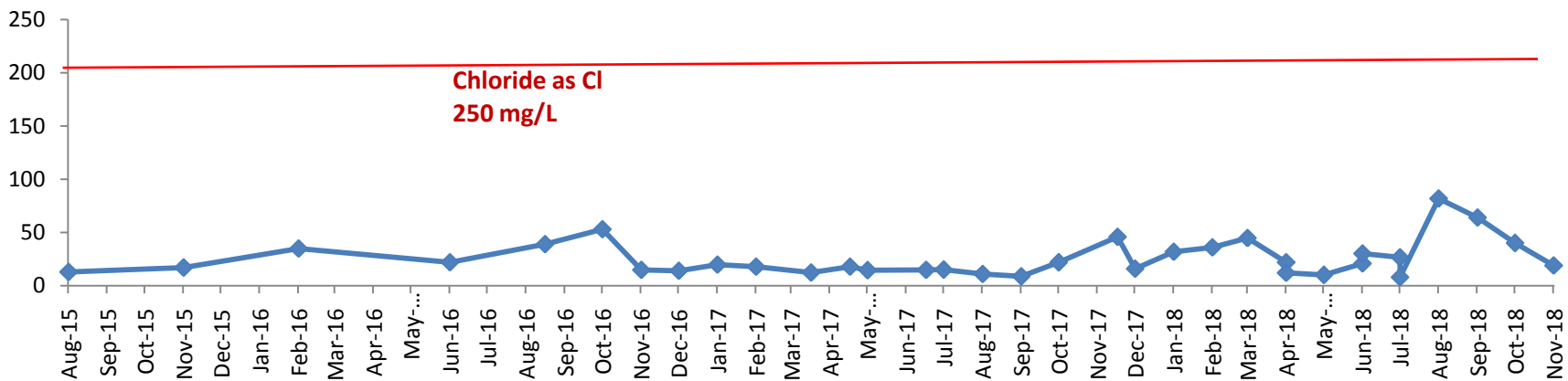




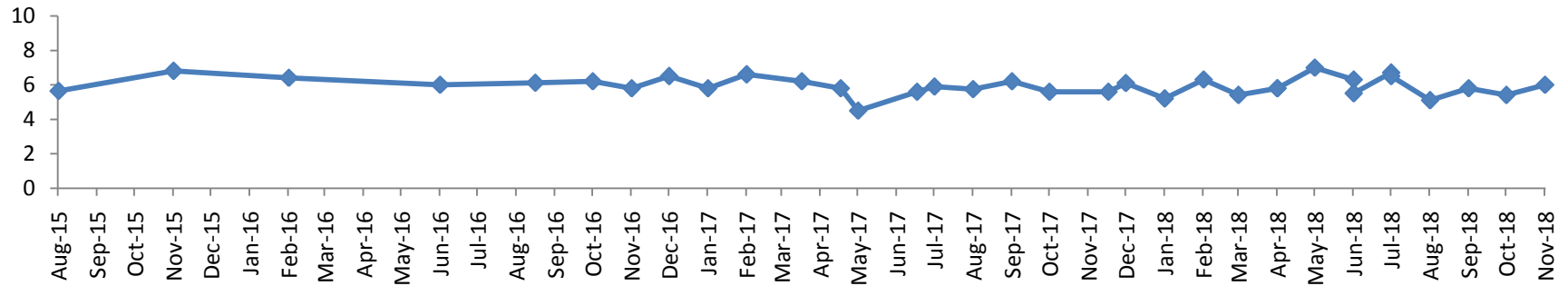
### SW-3 Total Hardness as CaCO3 mg/L



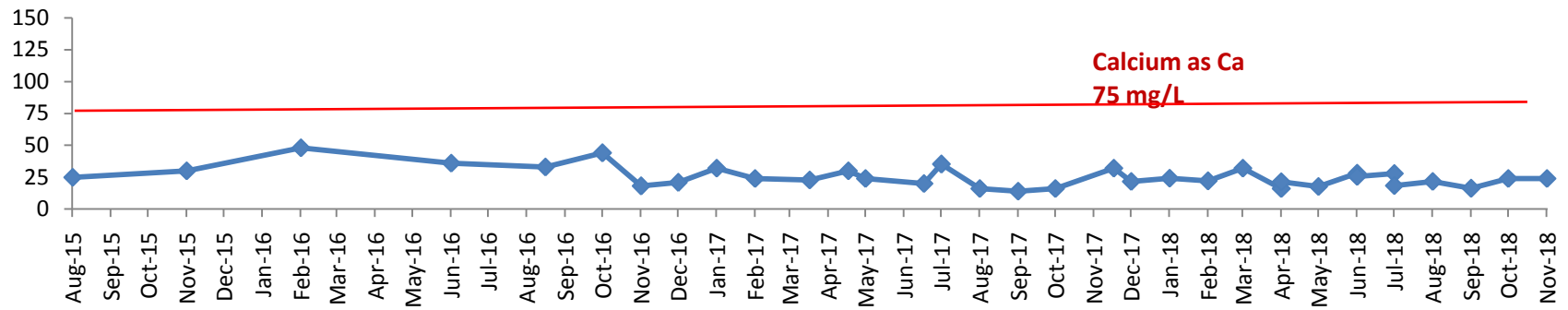
### SW-3 Chloride as Cl mg/L



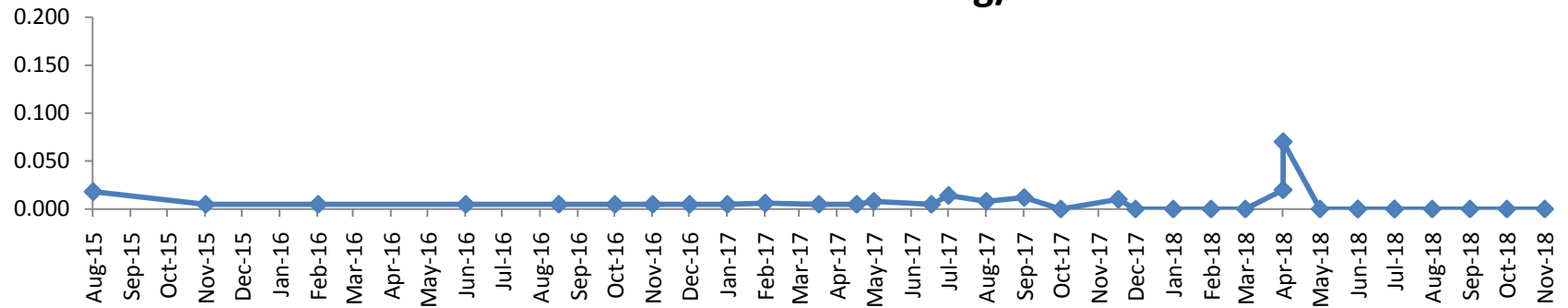
### SW-3 Dissolved Oxygen mg/L



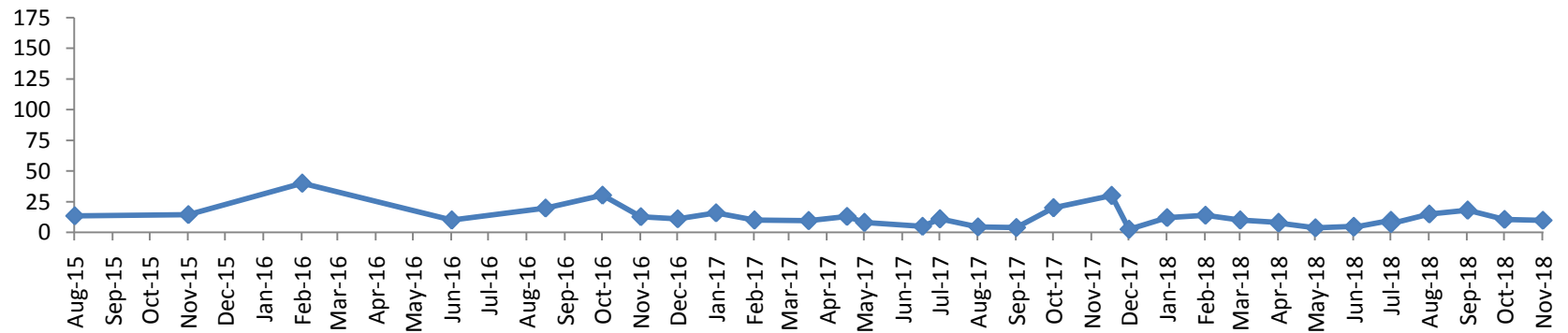
### SW-3 Calcium as Ca mg/L



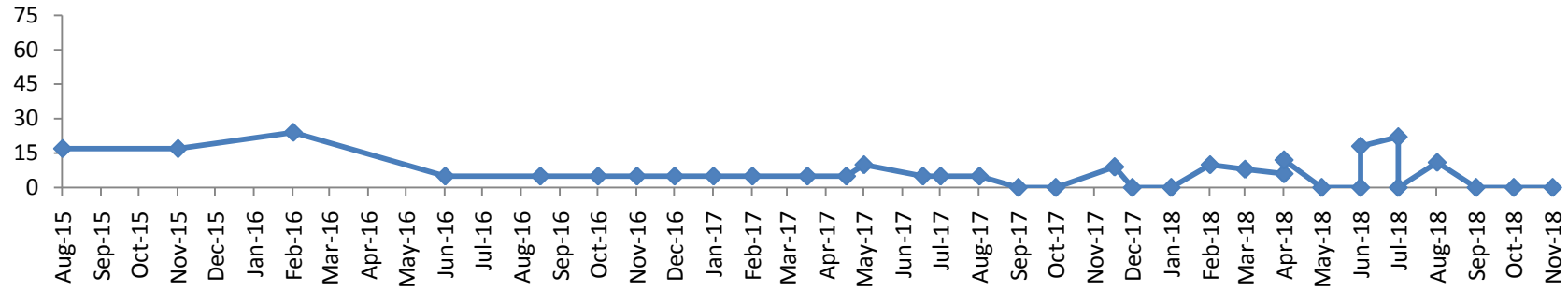
### SW-3 Chromium as Cr mg/L



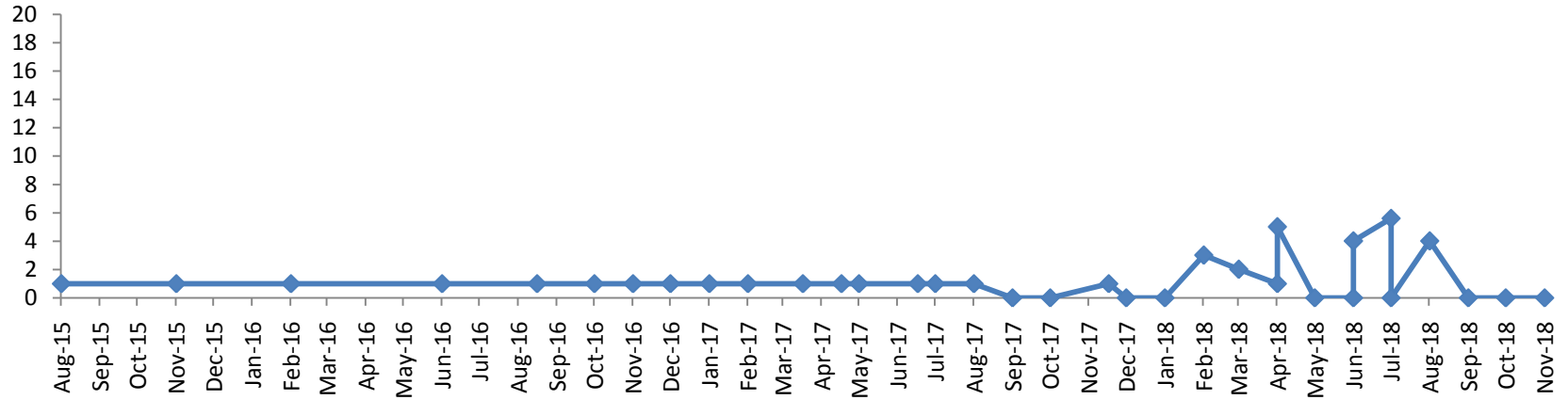
### SW-3 Sodium as Na mg/L



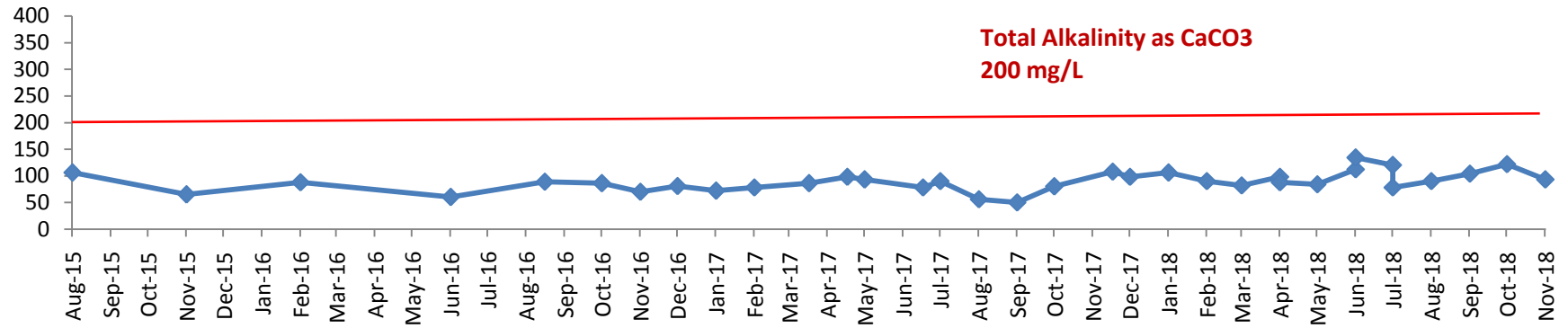
### SW-3 COD mg/L



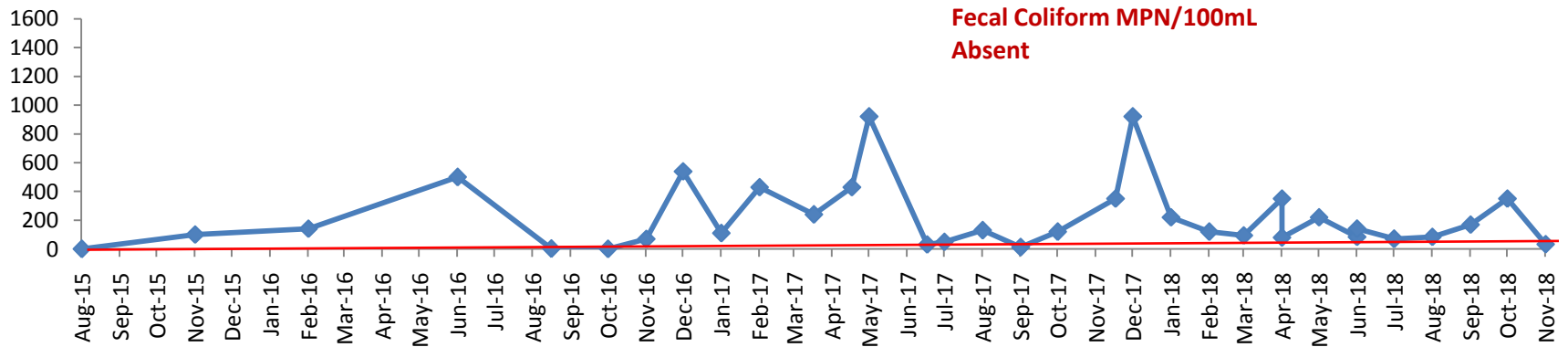
### SW-3 BOD (3 Days @ 27°C) mg/L



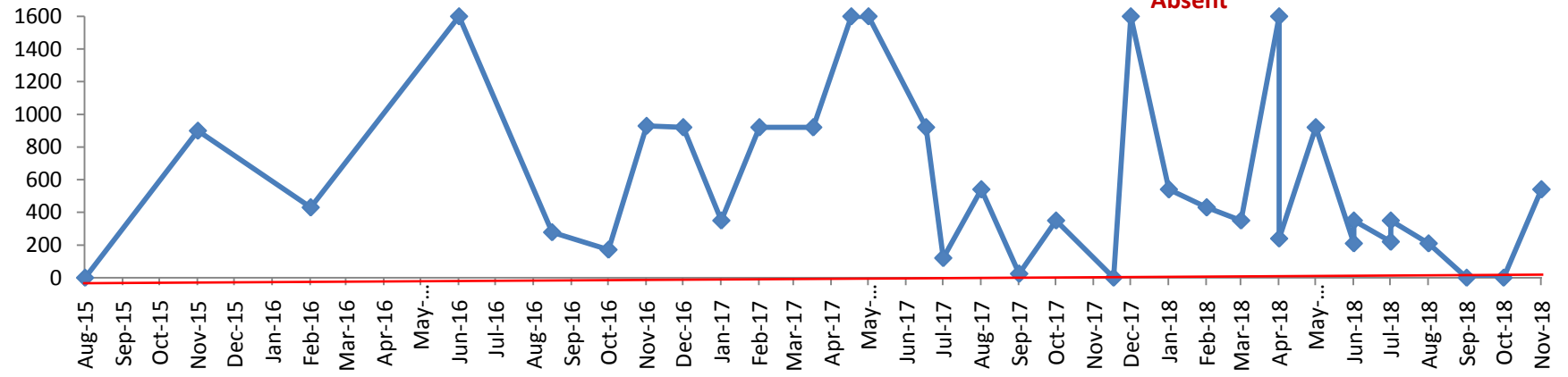
### SW-3 Total Alkalinity as CaCO3 mg/L



### SW-3 Fecal Coliform MPN/100 mL



### SW-3 Total Coliform MPN/100 mL



## SW 4: Madhuban Dam

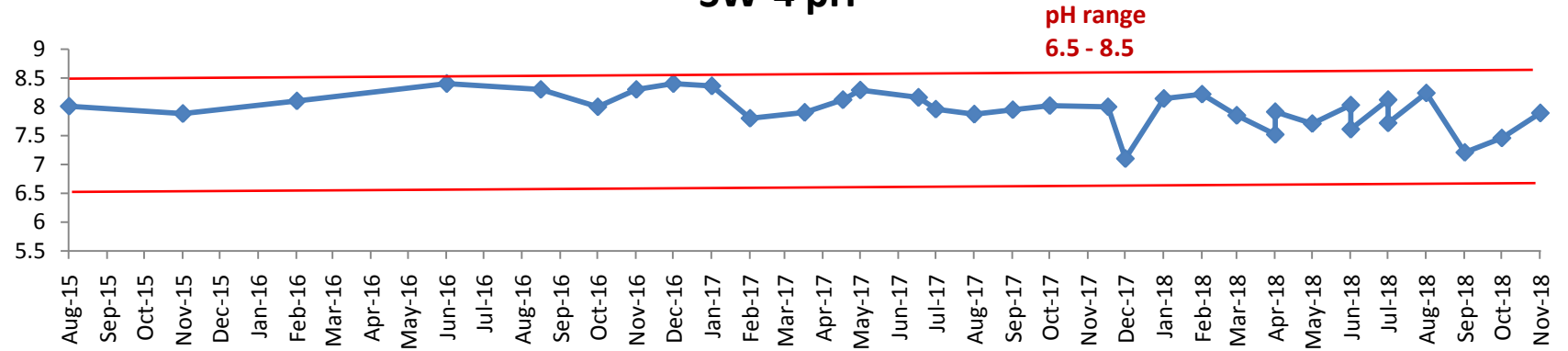
SW 4: Madhuban Dam													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	8.01	7.88	8.1	8.4	8.3	8	8.3	8.4	8.36	7.8	7.9	8.12
<b>Turbidity</b>	NTU	11.35	1.59	2.1	5.6	5.3	3.8	9.6	0.9	2.4	9.6	6.8	7.2
<b>Conductivity</b>	µmho/cm	141	158	161	192	189	226	217	183	220	210	196	208
<b>Total Dissolved Solid</b>	mg/L	84	88	108	140	138	154	98	121	143	132	118	142
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	47	70	90	74	76	84	72	51	72	80	86	72
<b>Chloride as Cl</b>	mg/L	4.99	6.99	10.9	28	30	34	10.9	8.49	12.4	13.99	7.5	13
<b>Dissolved Oxygen</b>	mg/L	6.6	6.5	4.8	5.2	5.3	6	5.8	4.7	6	6.7	6.4	6.6
<b>Calcium as Ca</b>	mg/L	9.4	16	12	18	19	21	16	14.4	16	23.2	18.8	18
<b>Chromium as Cr</b>	mg/L	0.019	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	6.98	8	10	10	13.8	18	8	13	14	10	5	9
<b>COD</b>	mg/L	8.5	18	12	< 5	< 5	< 5	14	< 5	10	< 5	< 5	< 5
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	< 10	< 10	< 5	< 5	< 1	< 1	< 1	< 1	< 1
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	46	50	56	52	51.4	61	68	68	78	70	75	80
<b>Fecal Coliform</b>	MPN/100 mL	Present	33	40	17	17	< 1.8	33	7.8	23	17	150	17
<b>Total Coliform</b>	MPN/100 mL	Present	300	280	170	170	345	240	120	94	48	350	50

SW 4: Madhuban Dam												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	8.29	8.16	7.96	7.87	7.95	8.02	8	7.1	8.14	8.22	7.85
<b>Turbidity</b>	NTU	6.8	13.8	114	57.8	32.6	23.1	2	1.1	17.6	39	27.2
<b>Conductivity</b>	µmho/cm	232	233	161	177	190	236	143	407	204	270	240
<b>Total Dissolved Solid</b>	mg/L	165	152	110	120	124	142	98	220	150	162	148
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	88	82	56	50	52	62	60	72	68	74	56
<b>Chloride as Cl</b>	mg/L	6.49	6	7.99	8.99	11.7	32.9	9.99	12	14.9	26.9	15.9
<b>Dissolved Oxygen</b>	mg/L	6.3	6.4	6.95	6.8	6.4	5.6	7.7	5.5	6.1	5.8	5.2
<b>Calcium as Ca</b>	mg/L	21.6	23	16.8	13.6	8	15	16	18	20.8	14	17.2
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	0.003	0.059	< 0.005	< 0.005	0.01	< 0.005	< 0.005	0.02	< 0.005
<b>Sodium as Na</b>	mg/L	6	5	4.907	4.2	5.2	18	5.38	1.51	6.7	7.1	8.06
<b>COD</b>	mg/L	20	< 5	<5	< 5	< 5	12	< 5.0	< 5.0	< 5.0	5	< 5.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	5	< 1	<1	< 1	< 1	3	< 1.0	< 1.0	< 1.0	2	< 1.0
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	85	84	46	44	50	68	70	82	90	76	92
<b>Fecal Coliform</b>	MPN/100 mL	17	12	130	<10	7.8	10	17	350	94	84	33
<b>Total Coliform</b>	MPN/100 mL	32	17	540	33	14	31	70	540	280	210	920

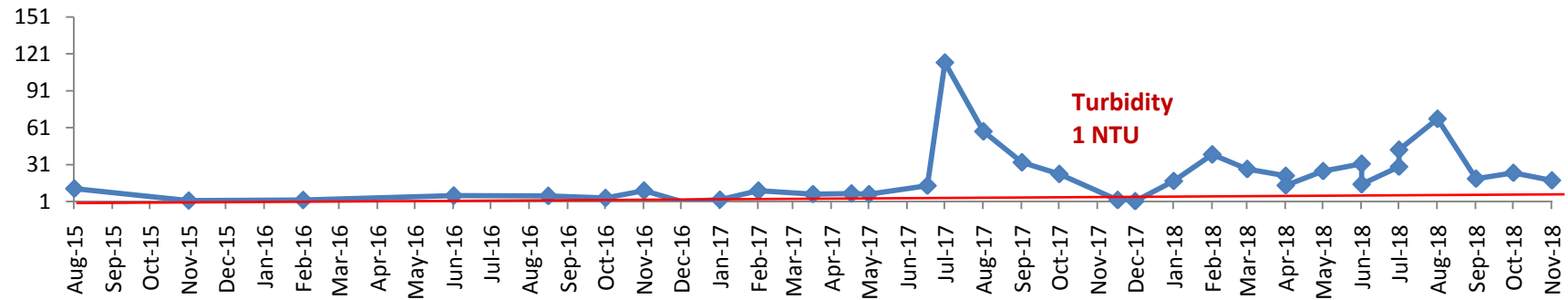


SW 4: Madhuban Dam												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.52	7.91	7.71	8.03	7.61	8.12	7.72	8.24	7.21	7.46	7.89
<b>Turbidity</b>	NTU	21.80	13.97	25.60	31.40	14.80	29.20	42.80	68.00	19.40	24.15	18.00
<b>Conductivity</b>	µmho/cm	198	187	186	290	226	211	258	134	276	203	232
<b>Total Dissolved Solid</b>	mg/L	120	108	131	157	145	148	168	94	192	146	158
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	60	69	80	90	78	82	70	50	76	65	84
<b>Chloride as Cl</b>	mg/L	16	22	8	19	20	14	12	18	30	18	10
<b>Dissolved Oxygen</b>	mg/L	5	6.3	4.5	6.6	6.4	6.4	5.9	4.9	5.6	5.8	5.1
<b>Calcium as Ca</b>	mg/L	14.1	20.0	18.6	22.0	18.4	16.8	17.6	14.4	9.8	15.2	20.8
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	12.3	5.0	6.0	9.0	9.2	6.7	14.0	8.4	11.0	6.0	4.0
<b>COD</b>	mg/L	6.0	9.0	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0	8.0	< 5.0	10.0
<b>BOD (3 Days @ 27°C)</b>	mg/L	2	2	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	3	< 1.0	2
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	8	< 0.5	14	5	4	6	12	26	16	< 0.5	< 0.5
<b>Fecal Coliform</b>	MPN/100 mL	72	130	170	46	26	110	33	70	79	33	79
<b>Total Coliform</b>	MPN/100 mL	220	350	540	170	120	260	210	350	920	350	240

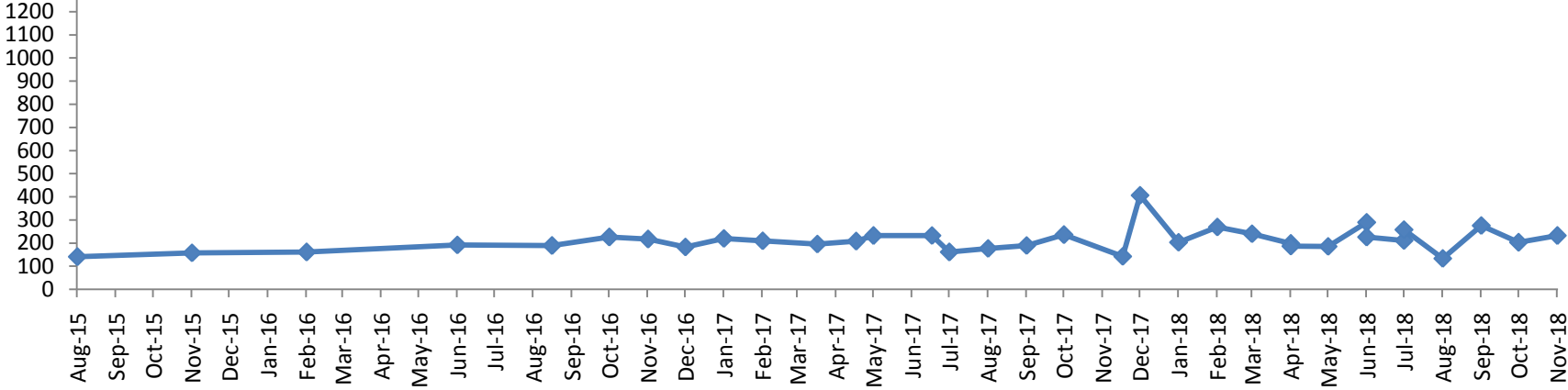
### SW-4 pH



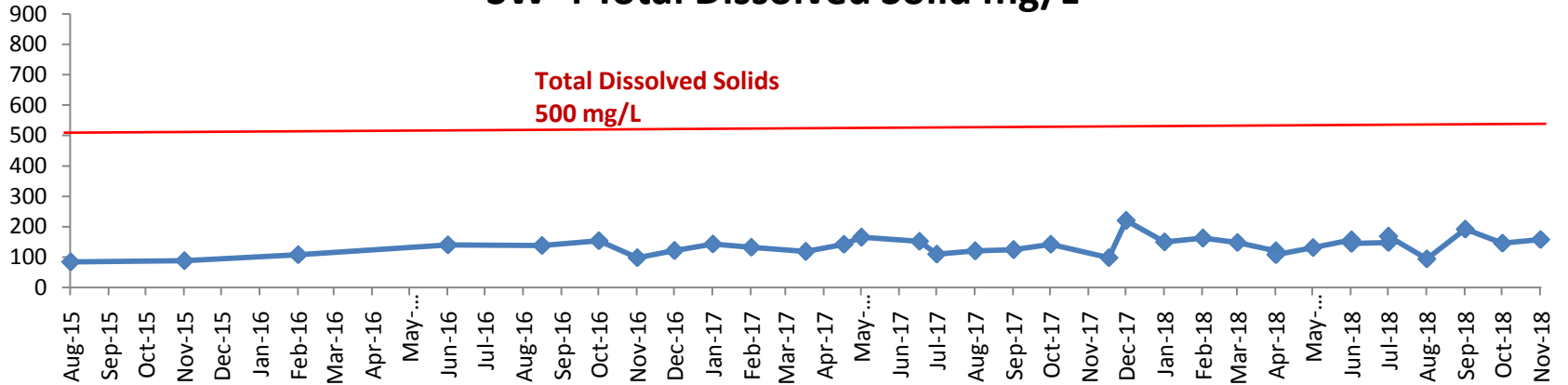
### SW-4 Turbidity NTU



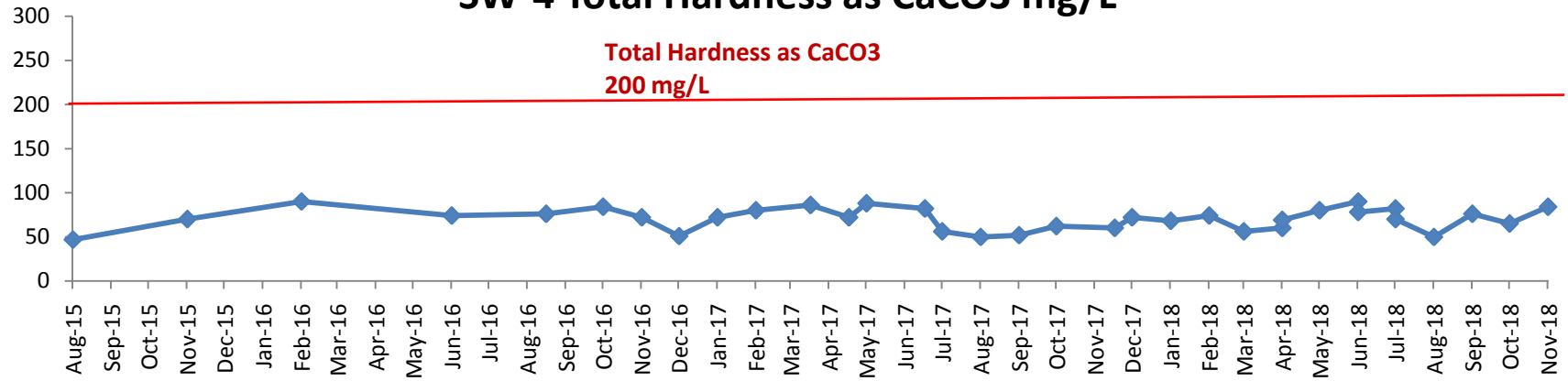
### SW-4 Conductivity $\mu\text{mho/cm}$



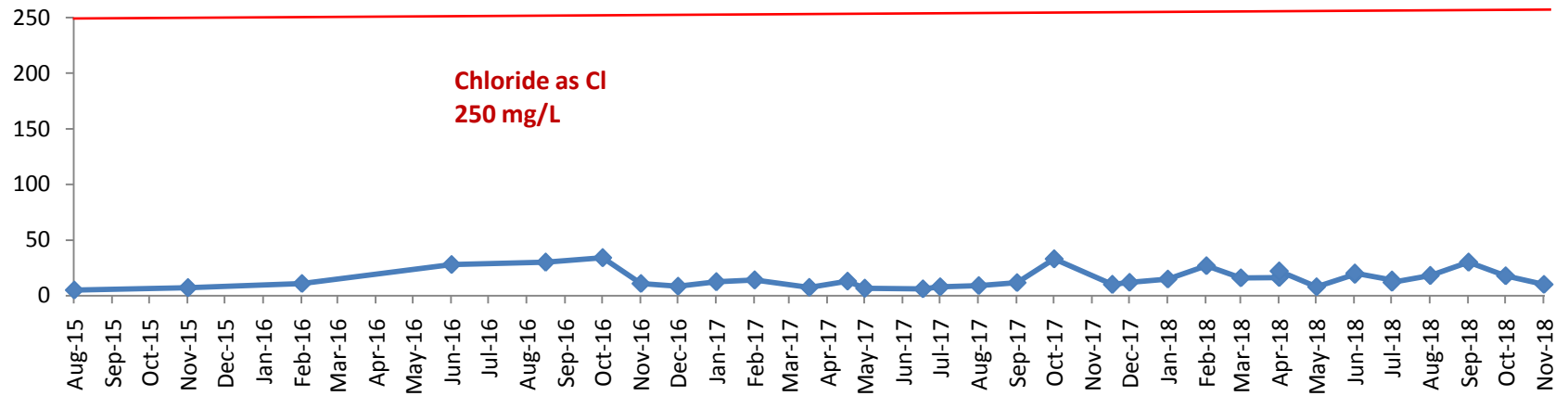
### SW-4 Total Dissolved Solid mg/L



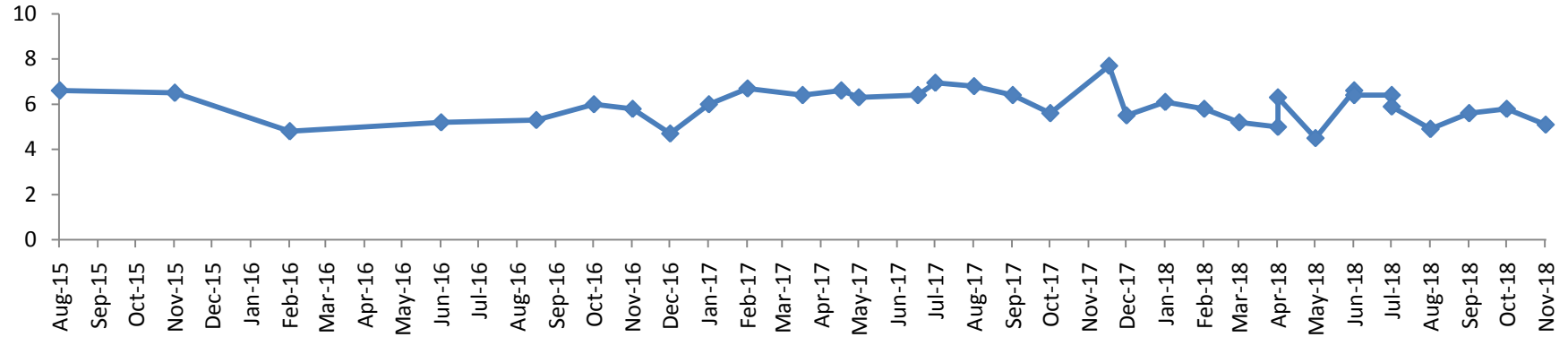
### SW-4 Total Hardness as CaCO3 mg/L



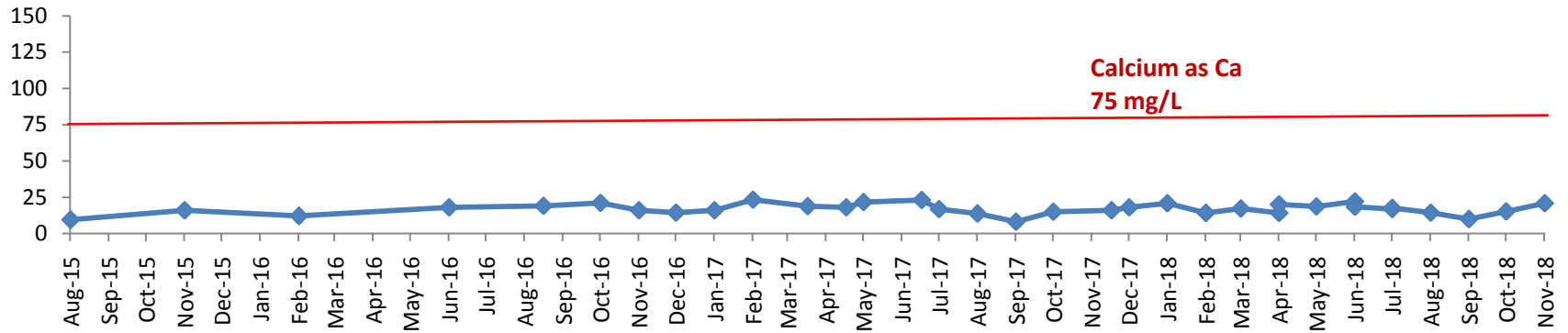
### SW-4 Chloride as Cl mg/L



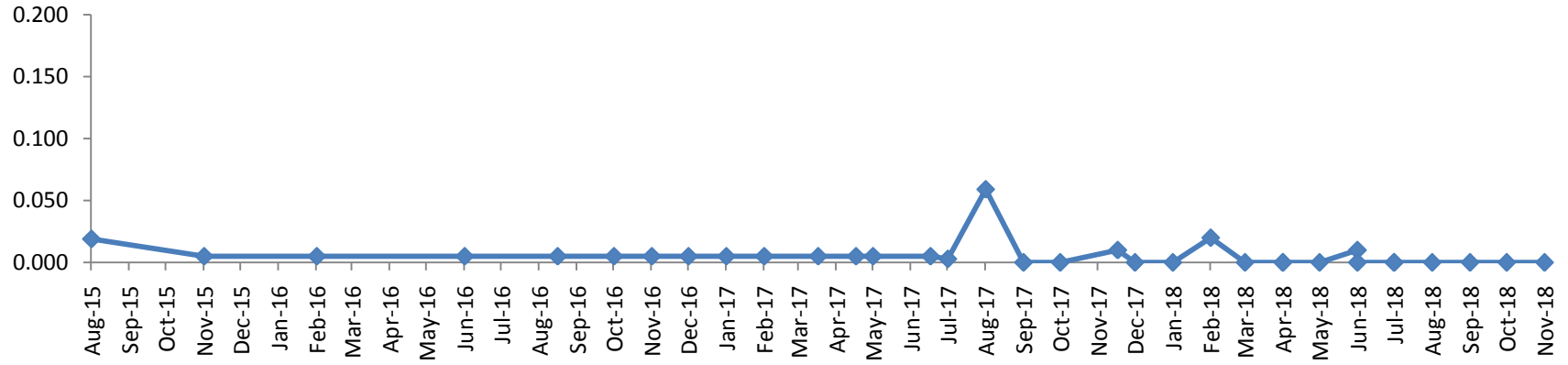
### SW-4 Dissolved Oxygen mg/L



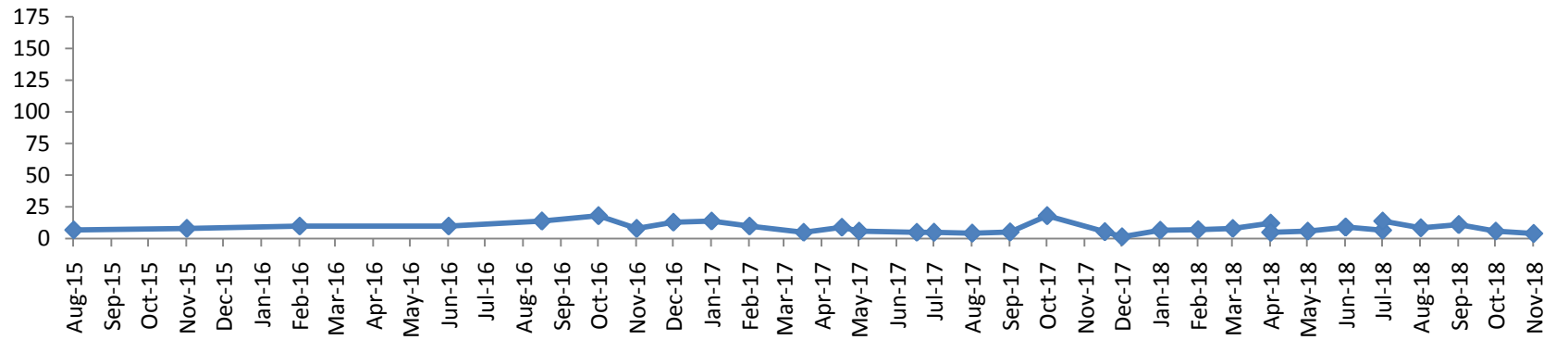
### SW-4 Calcium as Ca mg/L



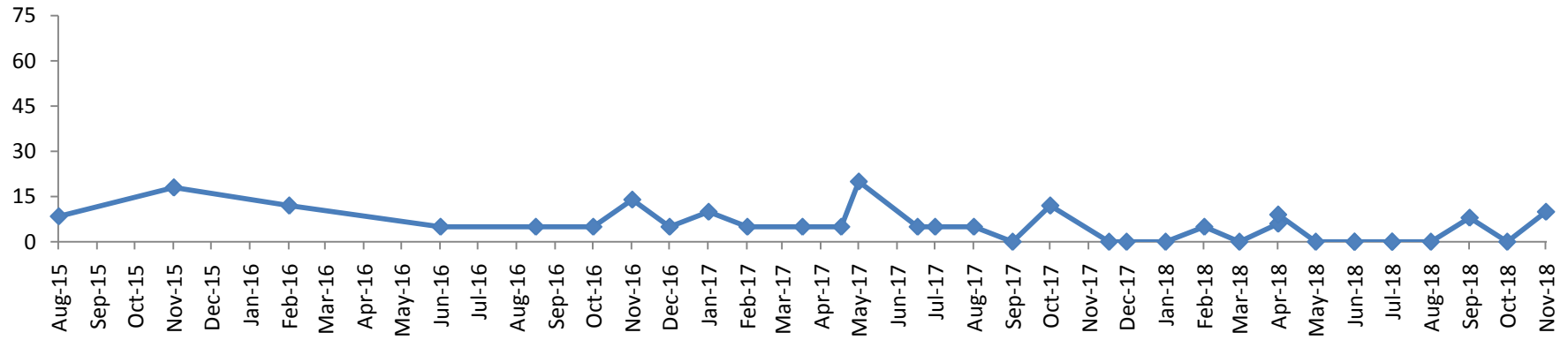
### SW-4 Chromium as Cr mg/L



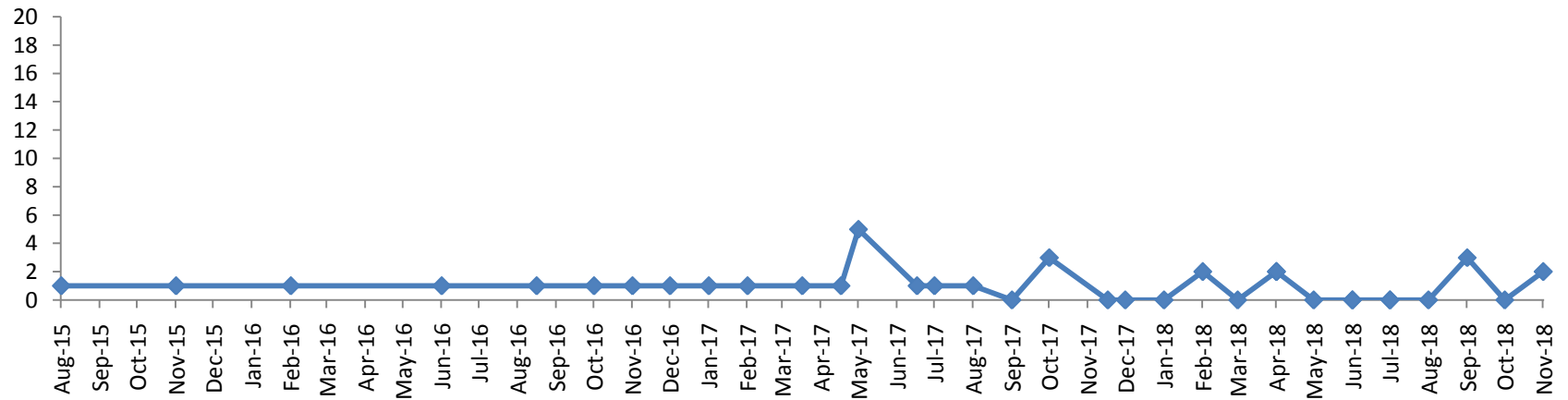
### SW-4 Sodium as Na mg/L



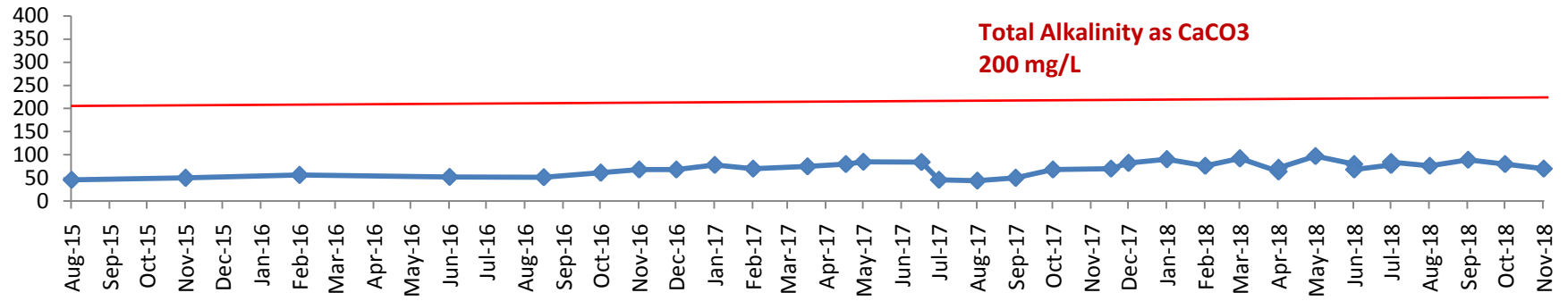
### SW-4 COD mg/L



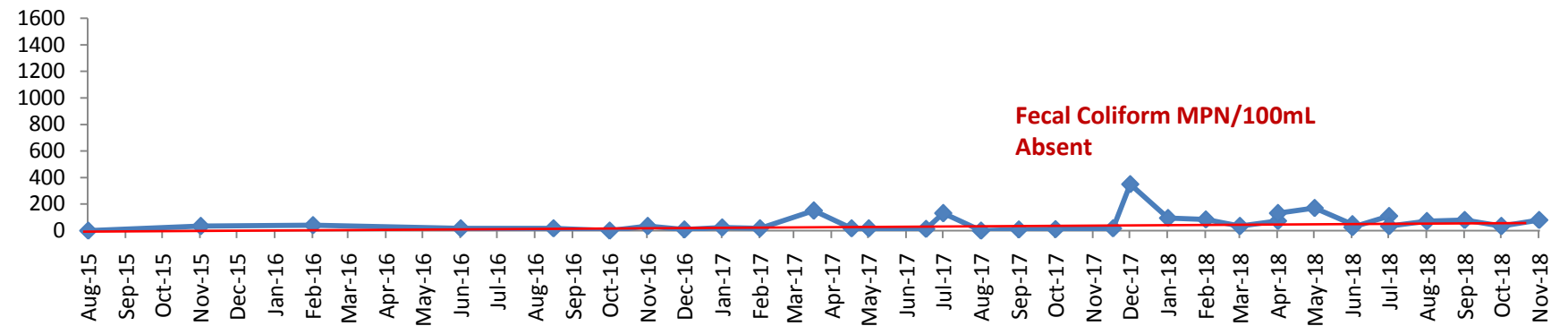
### SW-4 BOD (3 Days @ 27°C) mg/L



### SW-4 Total Alkalinity as CaCO3 mg/L

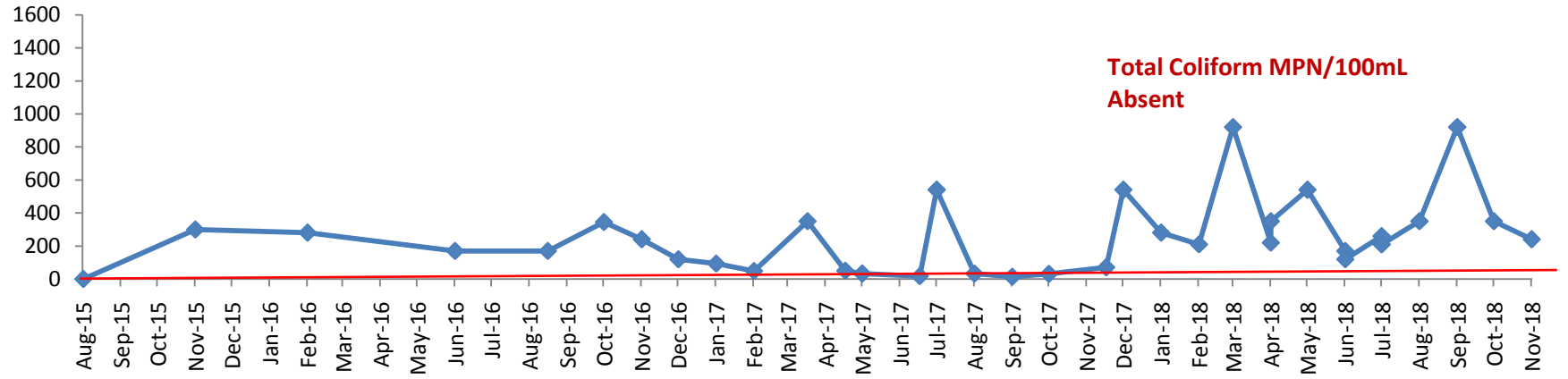


### SW-4 Fecal Coliform MPN/100 mL





### SW-4 Total Coliform MPN/100 mL



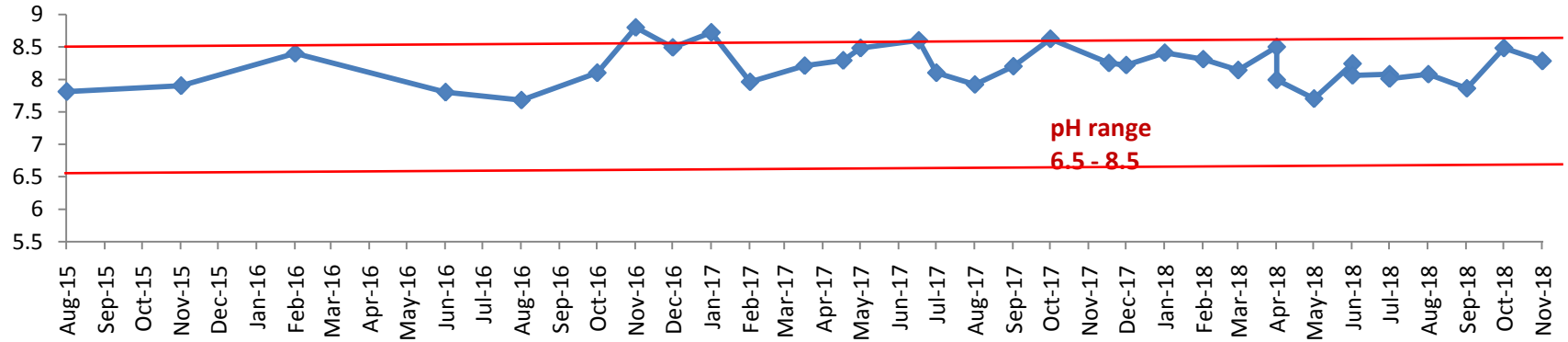
## SW 5: Naroli Bridge

SW 5: Naroli Bridge													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.81	7.9	8.4	7.8	7.68	8.1	8.8	8.49	8.72	7.96	8.21	8.29
<b>Turbidity</b>	NTU	49.2	28.6	10.3	12.8	11.7	14.4	40.32	0.1	0.98	15.43	7.2	14.2
<b>Conductivity</b>	µmho/cm	157	212	264	240	236	180	158	204	256	156	174	201
<b>Total Dissolved Solid</b>	mg/L	92	136	152	176	136	146	112	146	165	116	128	132
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	48	64	88	55	53	72	60	83	78	80	82	92
<b>Chloride as Cl</b>	mg/L	5.99	10.99	13.99	25	23	23.8	8.9	9.99	14.9	25.99	8.5	10.9
<b>Dissolved Oxygen</b>	mg/L	6.15	5.8	5.6	5.4	5.5	5.6	4.8	2.65	5.8	6.6	5.6	5.8
<b>Calcium as Ca</b>	mg/L	10	12	18	22	21	18	16	19.6	16	20.8	22	28
<b>Chromium as Cr</b>	mg/L	0.022	0.026	0.018	0.018	0.016	0.028	< 0.005	< 0.005	< 0.005	0.011	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	10.42	11.5	13	9	8.66	5	8	12	18	14	10	14
<b>COD</b>	mg/L	8.5	12	12	38	36.4	24	< 5	< 5	< 5	< 5	< 5	< 5
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	12	11	6	< 5	< 1	< 1	< 1	< 1	< 1
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	44	51	60	40	38	52	58	80	85	72	83	88
<b>Fecal Coliform</b>	MPN/100 mL	Present	280	221	> 1600	> 1600	< 1.8	58	>1600	170	94	240	100
<b>Total Coliform</b>	MPN/100 mL	Present	900	540	> 1600	> 1600	136	280	>1600	920	280	1600	920

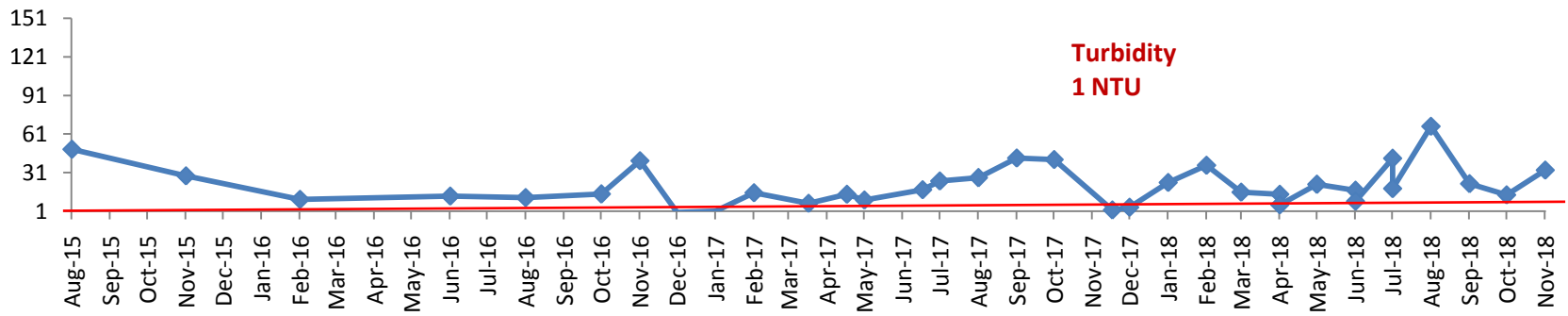
SW 5: Naroli Bridge												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	8.48	8.6	8.1	7.92	8.2	8.62	8.25	8.22	8.41	8.31	8.14
<b>Turbidity</b>	NTU	9.8	17.8	24.6	27	42.4	41.2	2	4.1	23.4	36.8	15.9
<b>Conductivity</b>	µmho/cm	177	189	191	197	214	180	197	230	248	296	269
<b>Total Dissolved Solid</b>	mg/L	118	146	129	145	152	160	136	140	158	172	184
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	88	80	70	56	68	72	76	69	82	92	74
<b>Chloride as Cl</b>	mg/L	9.49	7.9	8	10.99	14.9	13	11.99	14.1	17.2	13	19
<b>Dissolved Oxygen</b>	mg/L	7.25	6	6.2	6.4	5.9	5.6	8	5.6	7	6.2	5.4
<b>Calcium as Ca</b>	mg/L	23.2	25	21	15.2	18	14	20	16	22	26	19
<b>Chromium as Cr</b>	mg/L	0.013	< 0.005	< 0.005	0.029	0.018	< 0.005	0.006	< 0.005	0.009	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	12	10	12	6.68	8	16	6.54	1.6	10	12.1	5.67
<b>COD</b>	mg/L	10	< 5	< 5	< 5	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0	10
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	3
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	85	81	77	54	66	72	80	69	77	72	86
<b>Fecal Coliform</b>	MPN/100 mL	1600	210	17	1600	17	<1.8	94	76	120	46	49
<b>Total Coliform</b>	MPN/100 mL	> 1600	540	33	>1600	63	40	>1600	170	210	170	130

SW 5: Naroli Bridge												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	8.5	7.99	7.7	8.24	8.06	8.08	8.01	8.08	7.86	8.48	8.28
<b>Turbidity</b>	NTU	14.3	6.09	21.9	17.2	8.81	42	18.6	67	22.4	13.8	33
<b>Conductivity</b>	µmho/cm	258	205	276	257	230	260	304	165	217	243	289
<b>Total Dissolved Solid</b>	mg/L	162	149	192	166	149	152	198	116	148	175	190
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	96	80	88	77	80	87	68	82	90	85	110
<b>Chloride as Cl</b>	mg/L	20.2	8.5	8.99	11.99	13.1	15	11	62	21	13	8
<b>Dissolved Oxygen</b>	mg/L	3.9	6	5.1	6.8	6.1	6.4	6.2	5.6	5.6	6.4	5.7
<b>Calcium as Ca</b>	mg/L	14.8	17.8	21.3	20.7	19.9	20.1	14.4	20	18	22	25
<b>Chromium as Cr</b>	mg/L	< 0.005	0.04	0.1	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	11.9	4.96	7	6.1	9.2	7.7	8.2	11.95	15	10	6
<b>COD</b>	mg/L	23	< 5	< 5	12	< 5	8	< 5	< 5.0	10	< 5.0	14
<b>BOD (3 Days @ 27°C)</b>	mg/L	5	< 1	< 1	4	< 1	2	< 1	< 1.0	< 1.0	< 1.0	3
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	52	68	90	82	88	84	80	90	70	86	78
<b>Fecal Coliform</b>	MPN/100 mL	350	140	140	72	170	58	46	49	920	1600	110
<b>Total Coliform</b>	MPN/100 mL	920	350	540	220	240	280	350	130	> 1600	>1600	540

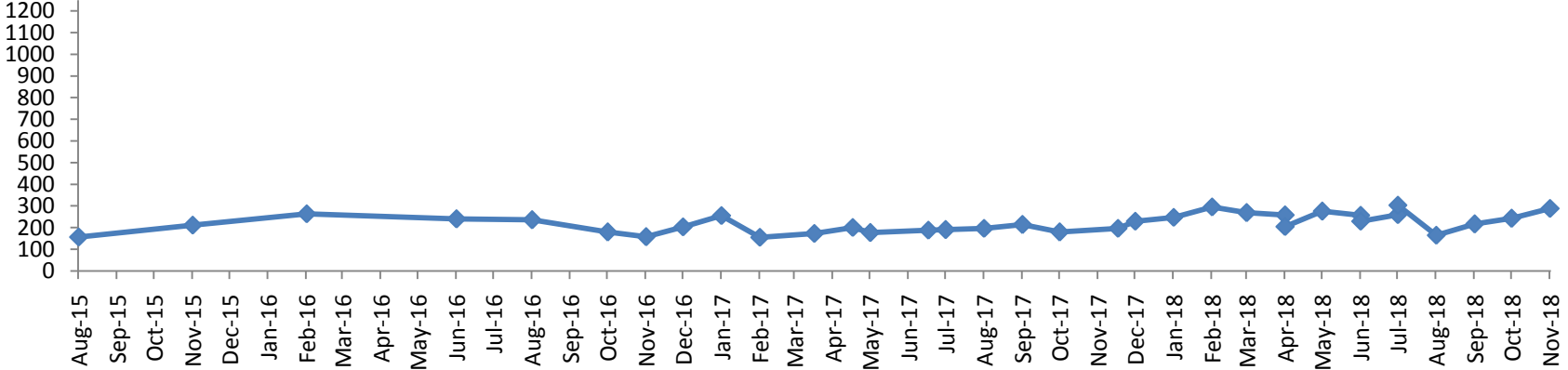
### SW-5 pH



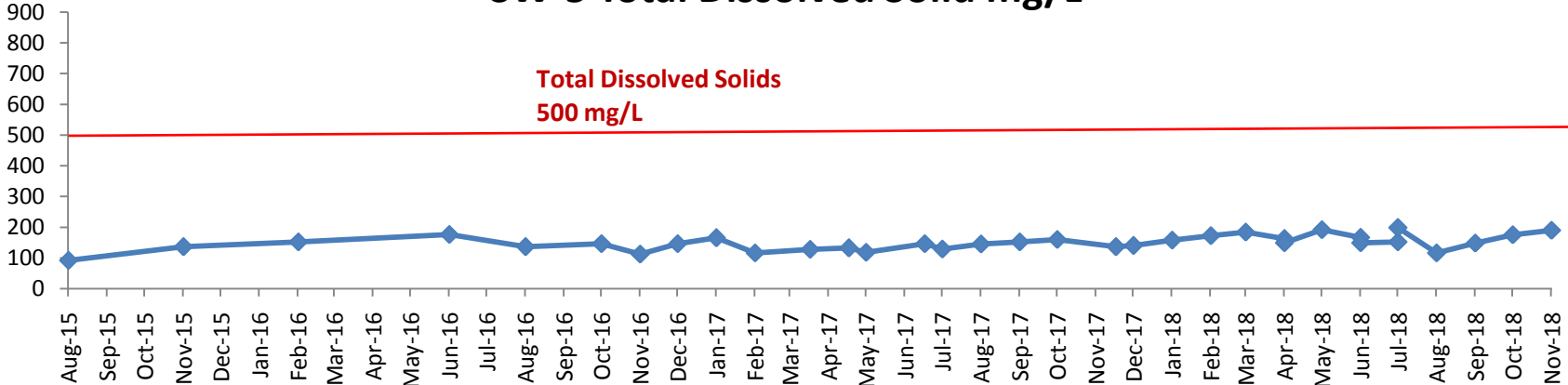
### SW-5 Turbidity NTU



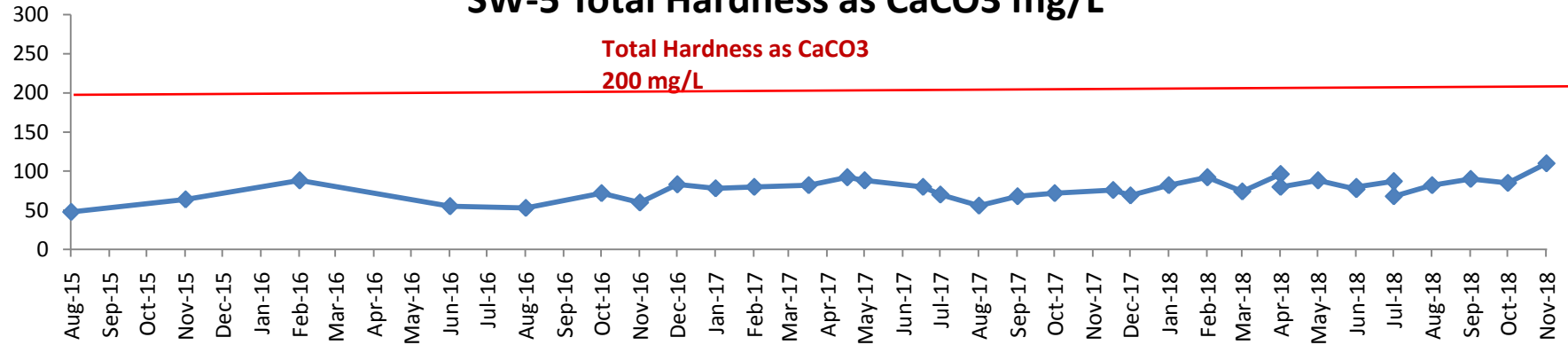
### SW-5 Conductivity $\mu\text{mho/cm}$



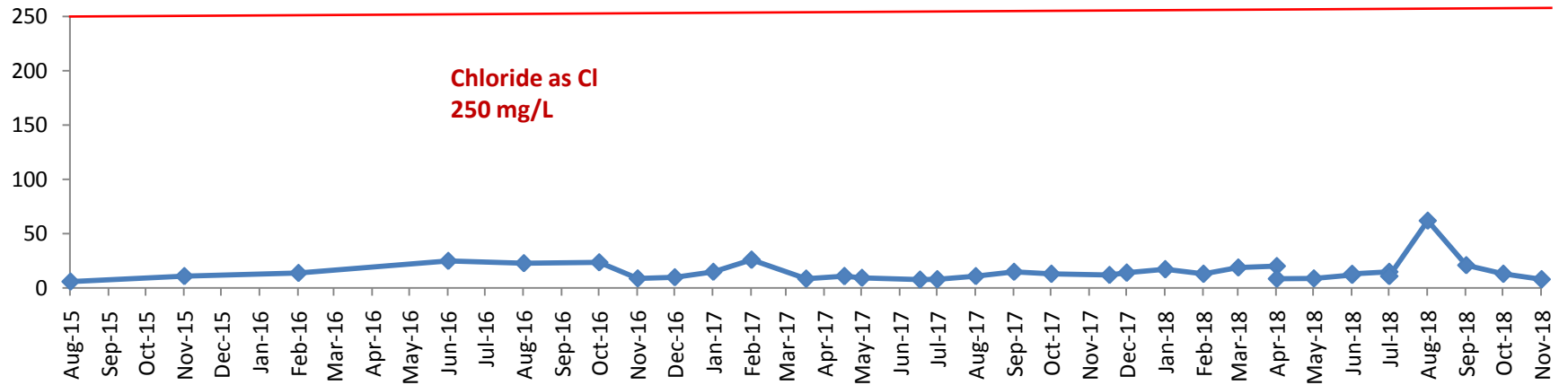
### SW-5 Total Dissolved Solid mg/L



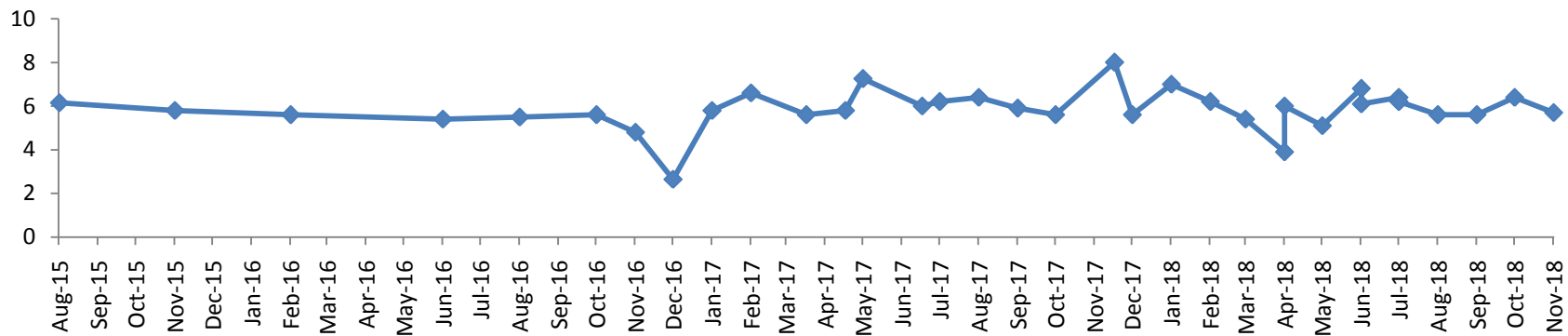
### SW-5 Total Hardness as CaCO3 mg/L



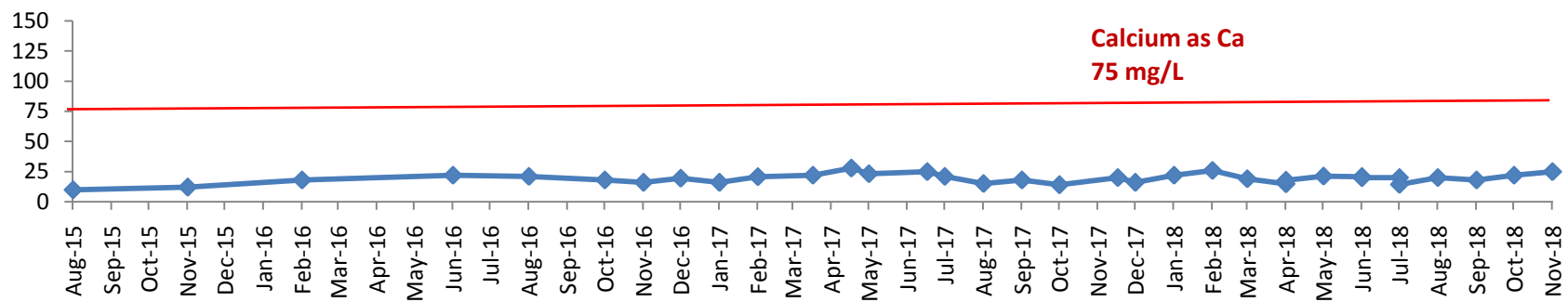
### SW-5 Chloride as Cl mg/L



### SW-5 Dissolved Oxygen mg/L

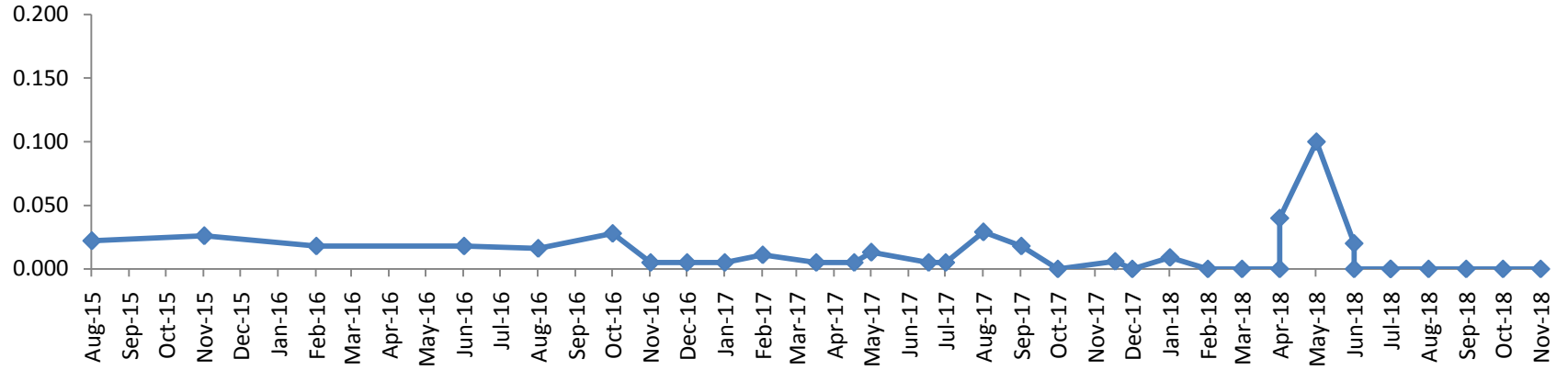


### SW-5 Calcium as Ca mg/L

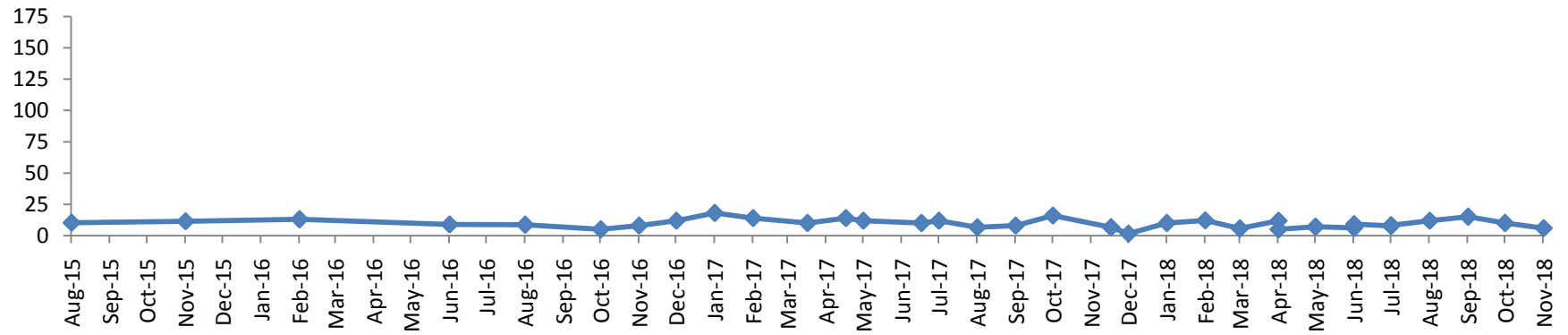




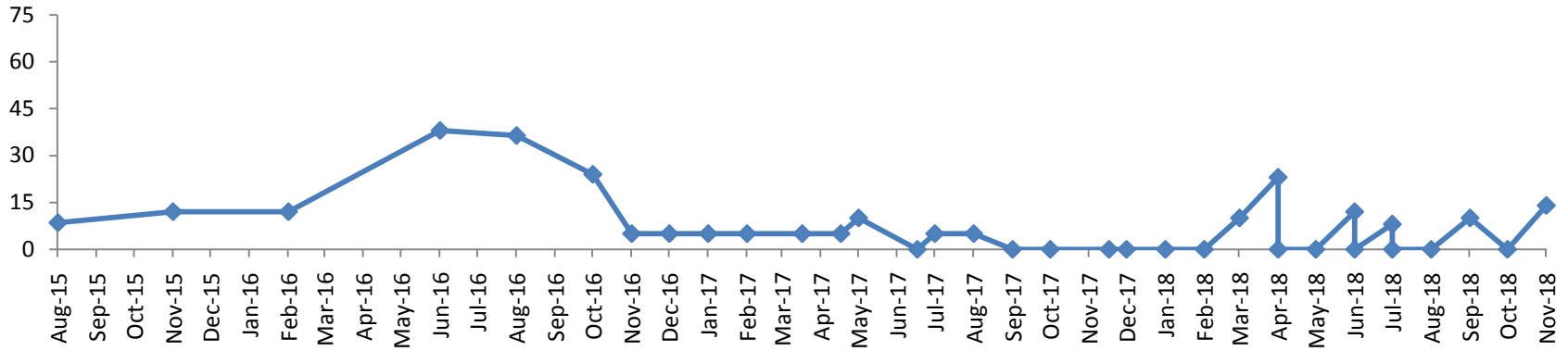
### SW-5 Chromium as Cr mg/L



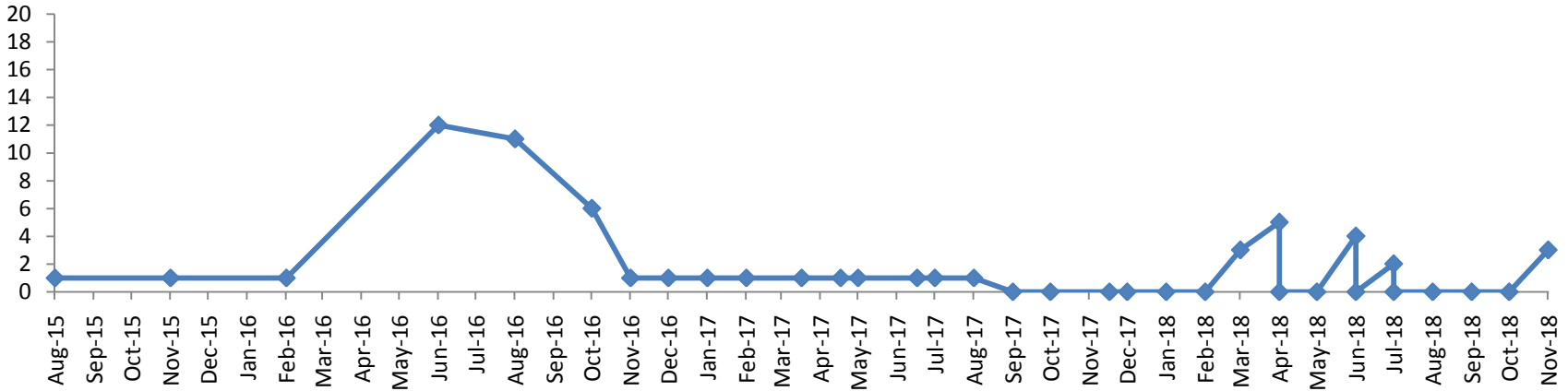
### SW-5 Sodium as Na mg/L



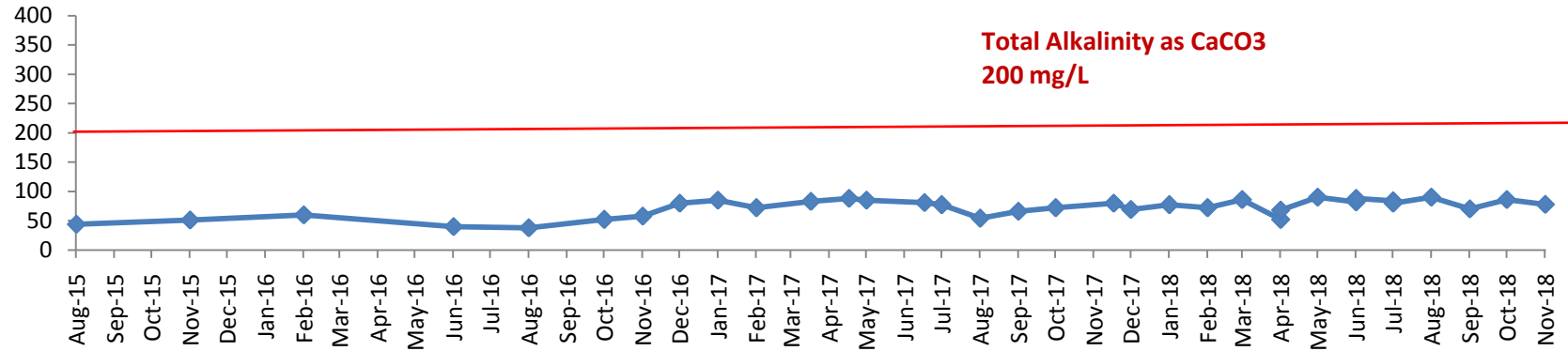
### SW-5 COD mg/L



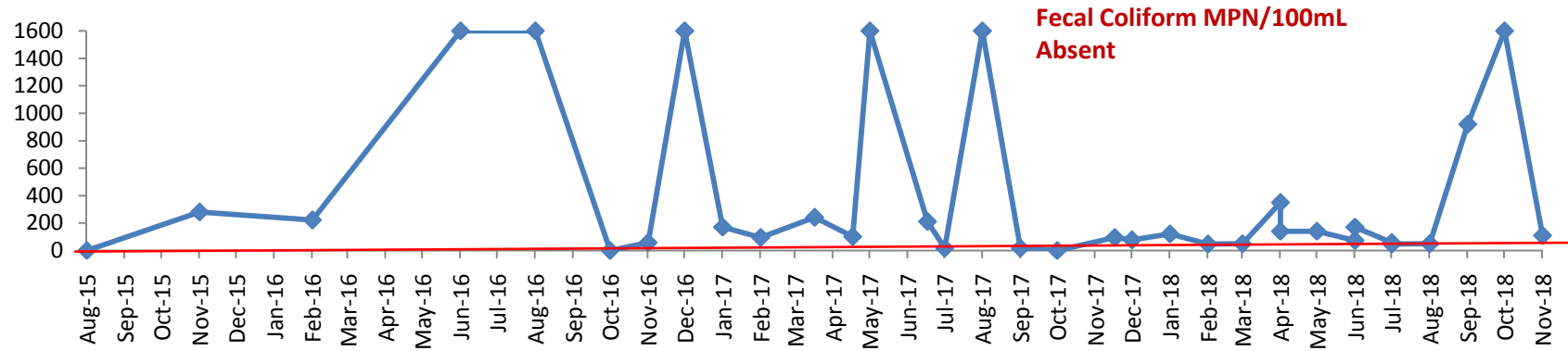
### SW-5 BOD (3 Days @ 27°C) mg/L



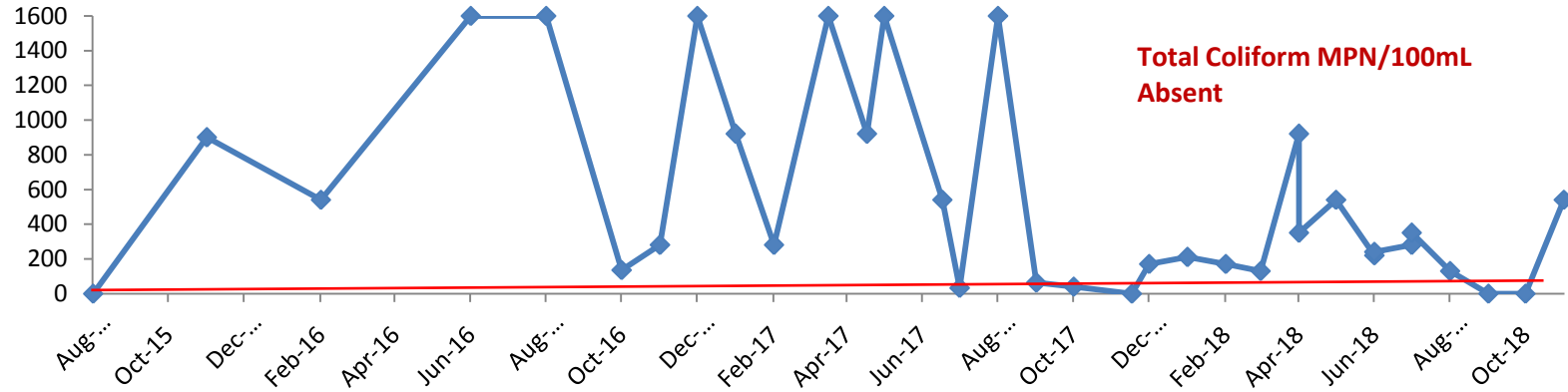
### SW-5 Total Alkalinity as CaCO3 mg/L



### SW-5 Fecal Coliform MPN/100 mL



### SW-5 Total Coliform MPN/100 mL



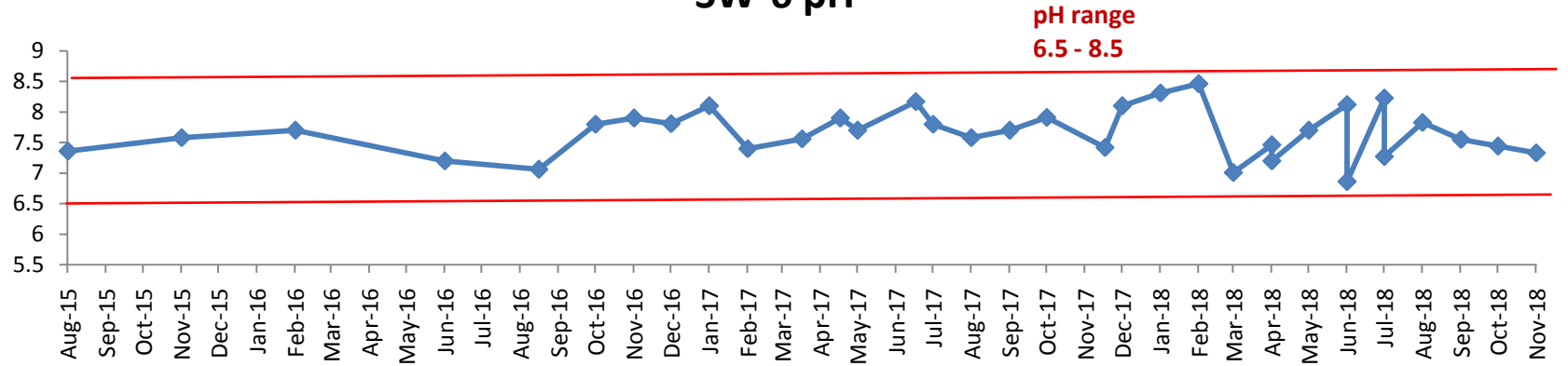
**SW 6: Namadha**

SW 6: Namadha													
	UNIT	Aug-15	Nov-16	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.36	7.58	7.7	7.2	7.06	7.8	7.9	7.81	8.1	7.4	7.56	7.9
<b>Turbidity</b>	NTU	3.01	5.2	0.59	8.4	7.9	6.8	13.2	1.7	3.4	12.7	12.7	44.6
<b>Conductivity</b>	µmho/cm	238	264	978	706	692	812	598	1830	860	1214	1020	35400
<b>Total Dissolved Solid</b>	mg/L	127	159	665	490	472	559	410	1259	562	847	650	24718
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	46	56	230	107	99	212	208	280	110	244	202	3840
<b>Chloride as Cl</b>	mg/L	23.99	28.99	275	196	182	112	199	499	218	230	214	11912
<b>Dissolved Oxygen</b>	mg/L	4.6	5.2	5	3.9	4.1	5.4	5	3.45	4.4	6.8	6.2	7.2
<b>Calcium as Ca</b>	mg/L	10	12	56	24	26	30	50	51.2	30	35.5	51.2	250
<b>Chromium as Cr</b>	mg/L	0.089	0.056	0.032	0.02	< 0.005	0.012	0.19	< 0.005	< 0.005	0.009	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	23.94	30.4	187	160	156	172	130	400	170	190	180	7500
<b>COD</b>	mg/L	17	17	36	< 5	< 5	< 5	48	61	48	27	31	24
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	< 10	< 10	< 5	15	15	12	10	10	8
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	40	52	104	51	49.6	62	138	156	72	140	170	132
<b>Fecal Coliform</b>	MPN/100 mL	Present	70	76	12	348	150	26	9.3	48	23	130	250
<b>Total Coliform</b>	MPN/100 mL	Present	240	280	190	240	540	1600	38	63	210	540	>1600

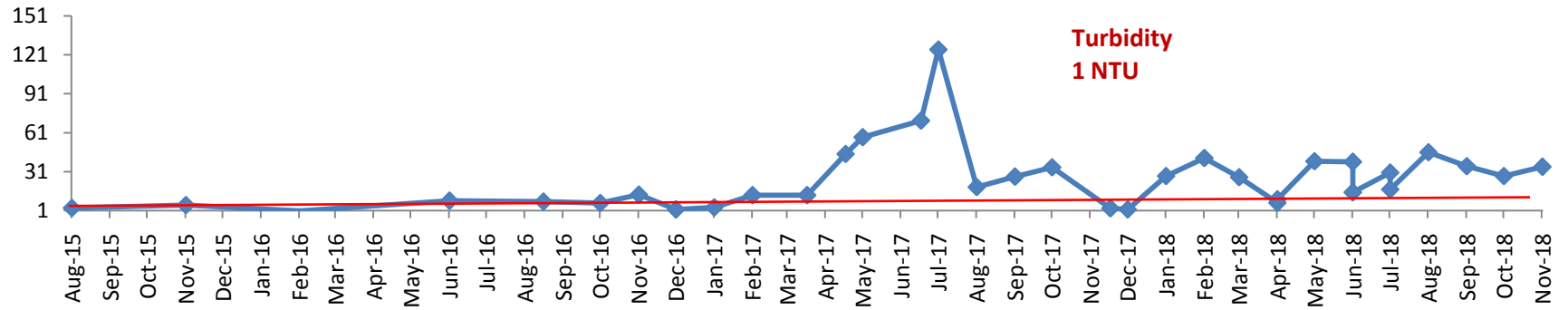
SW 6: Namadha												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	7.7	8.17	7.8	7.58	7.7	7.91	7.42	8.1	8.31	8.46	7.01
<b>Turbidity</b>	NTU	57.5	70.2	125	19	27	34.2	2.57	1.82	27.6	41.4	26.7
<b>Conductivity</b>	µmho/cm	45740	36274	301	449	350	310	3459	2766	3754	4750	1427
<b>Total Dissolved Solid</b>	mg/L	32016	24352	208	312	218	195	2416	1792	2628	3040	992
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	4620	4110	97	152	90	94	480	452	520	610	248
<b>Chloride as Cl</b>	mg/L	13945	12420	26.49	30	32	28	1225	840	1349	1580	347
<b>Dissolved Oxygen</b>	mg/L	8.6	6.6	5.55	5.7	6.2	5.9	3.2	5.6	4.9	5.6	6
<b>Calcium as Ca</b>	mg/L	296	310	25.2	48	26	24	88	80	92	110	51.2
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	0.014	0.022	< 0.005	< 0.005	0.008	< 0.005	< 0.005	0.03	0.015
<b>Sodium as Na</b>	mg/L	8110	7750	22.13	16.94	24	17	569	259	629	710	287
<b>COD</b>	mg/L	13	15	<5	15	<5	36	97	80	64	48	53
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 1	4	<1	< 1	< 1	10	25	19	14	12	15
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	148	160	108	150	130	66	196	86	90	110	158
<b>Fecal Coliform</b>	MPN/100 mL	240	21	23	33	33	22	120	540	350	140	920
<b>Total Coliform</b>	MPN/100 mL	540	150	210	348	120	94	>1600	1600	920	280	>1600

SW 6: Namadha												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.46	7.2	7.7	8.12	6.86	8.23	7.27	7.83	7.55	7.44	7.33
<b>Turbidity</b>	NTU	6.82	9.69	39	38.4	14.88	30.2	17.3	45.89	35.2	27.54	34.6
<b>Conductivity</b>	µmho/cm	1368	1387	1853	5042	1218	1531	1160	422	1198	3561	974
<b>Total Dissolved Solid</b>	mg/L	868	964	1292	3344	880	968	780	296	930	2564	664
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	232	256	288	704	252	270	162	110	212	516	226
<b>Chloride as Cl</b>	mg/L	288	326	493	1419	280	238	94	164	352	1099	201
<b>Dissolved Oxygen</b>	mg/L	3.8	6.6	5.8	4.6	6.4	4.9	5.6	5.95	5.6	6.1	5.5
<b>Calcium as Ca</b>	mg/L	46.8	49.6	53.4	119	24.1	29.6	39.2	29.6	48.2	86.4	54.4
<b>Chromium as Cr</b>	mg/L	< 0.005	0.023	0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	210.1	222	350	756	130	143	92	79.79	240	820	126
<b>COD</b>	mg/L	18	10	20	58	< 5.0	34	28	< 5.0	28	46	70
<b>BOD (3 Days @ 27°C)</b>	mg/L	3	< 1.0	< 1.0	18	< 1.0	16	6	< 1.0	8	19	24
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	101	99	12	184	116	123	110	92	106	152	140
<b>Fecal Coliform</b>	MPN/100 mL	120	240	70	49	220	170	46	120	79	920	220
<b>Total Coliform</b>	MPN/100 mL	280	350	220	170	540	240	170	280	350	>1600	920

### SW-6 pH

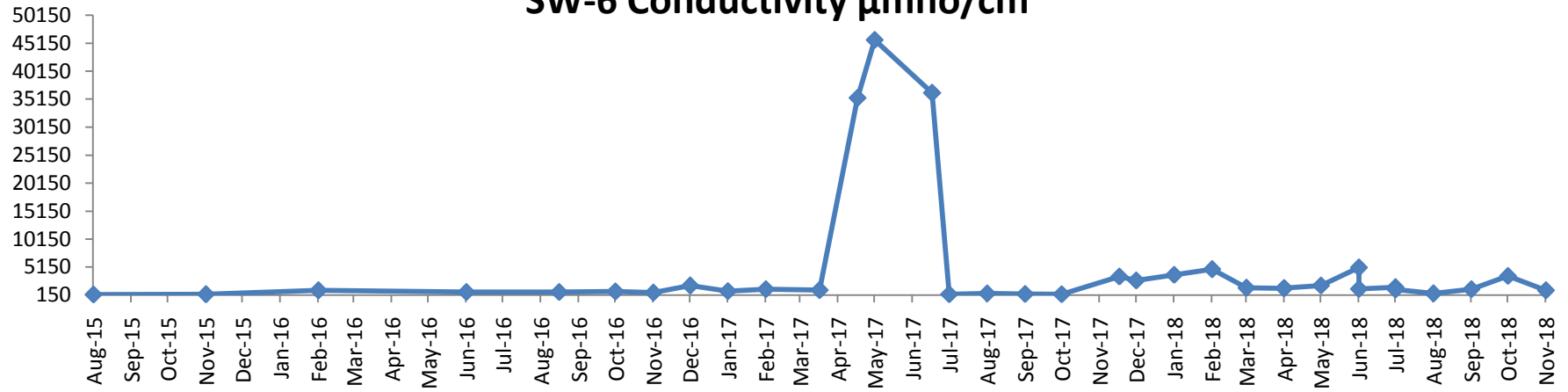


### SW-6 Turbidity NTU

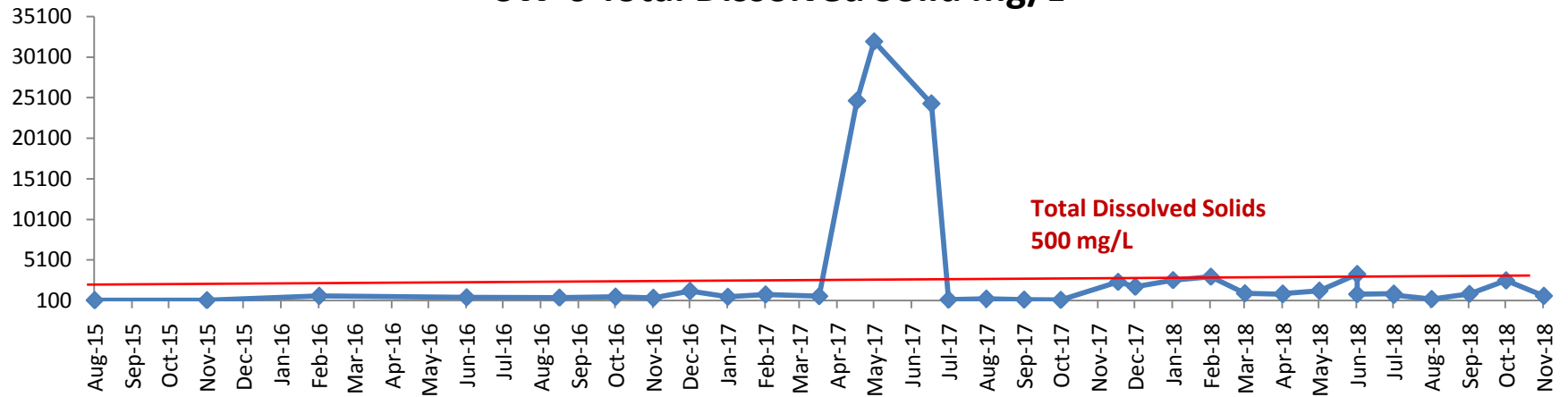




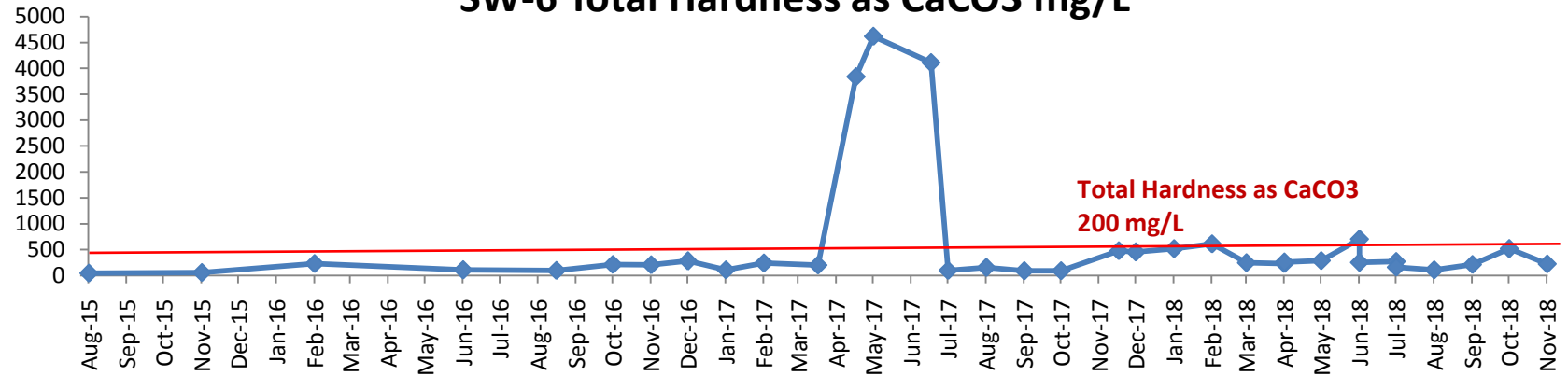
### SW-6 Conductivity $\mu\text{mho/cm}$



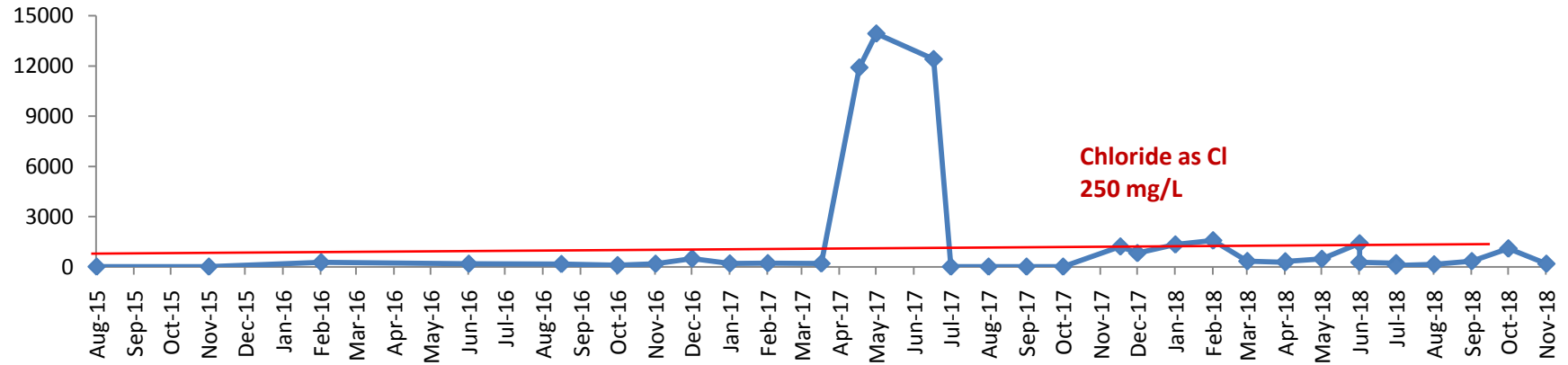
### SW-6 Total Dissolved Solid mg/L



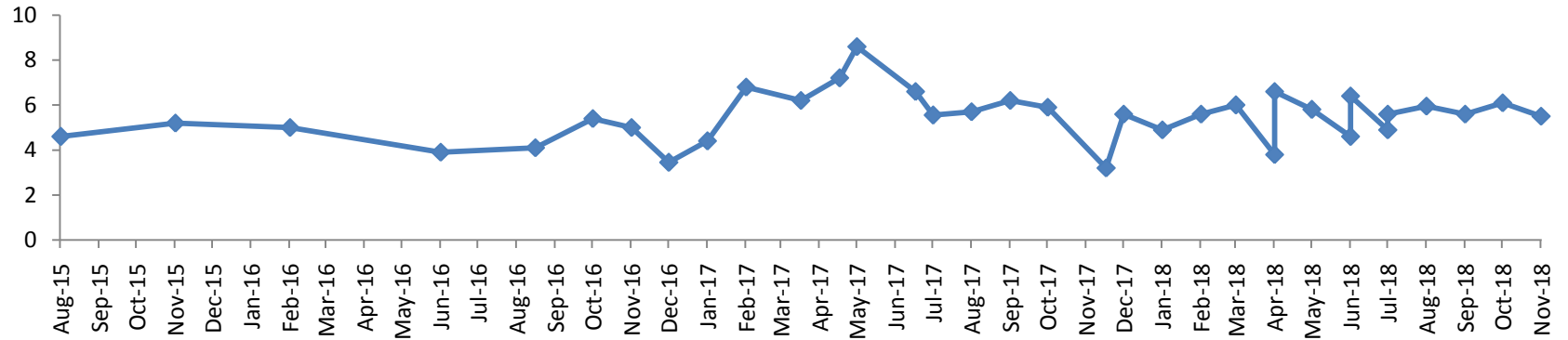
### SW-6 Total Hardness as CaCO3 mg/L



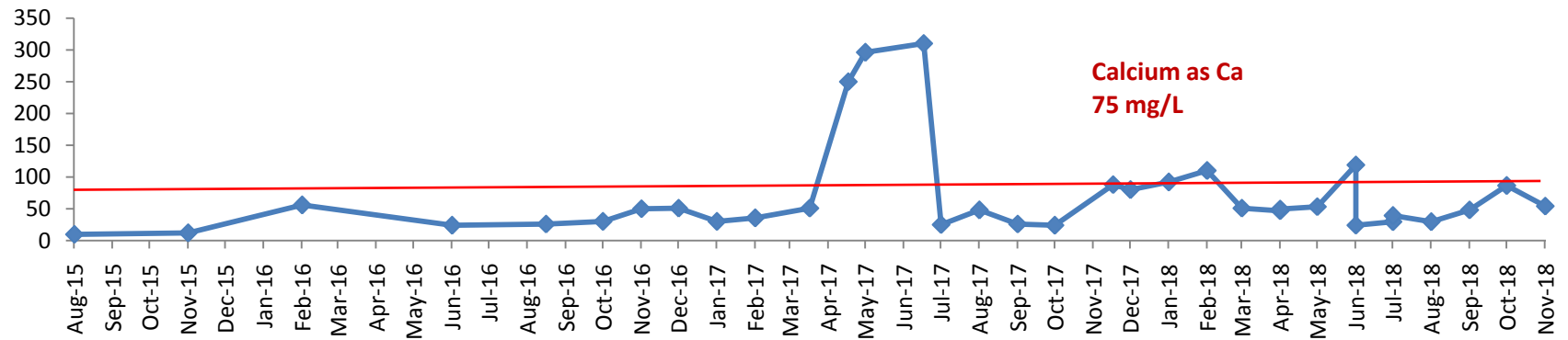
### SW-6 Chloride as Cl mg/L



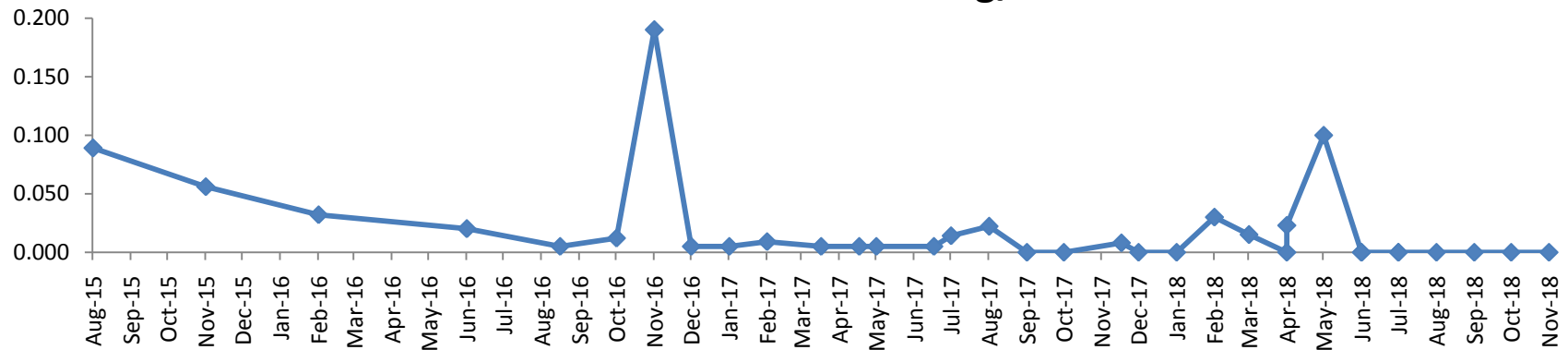
### SW-6 Dissolved Oxygen mg/L



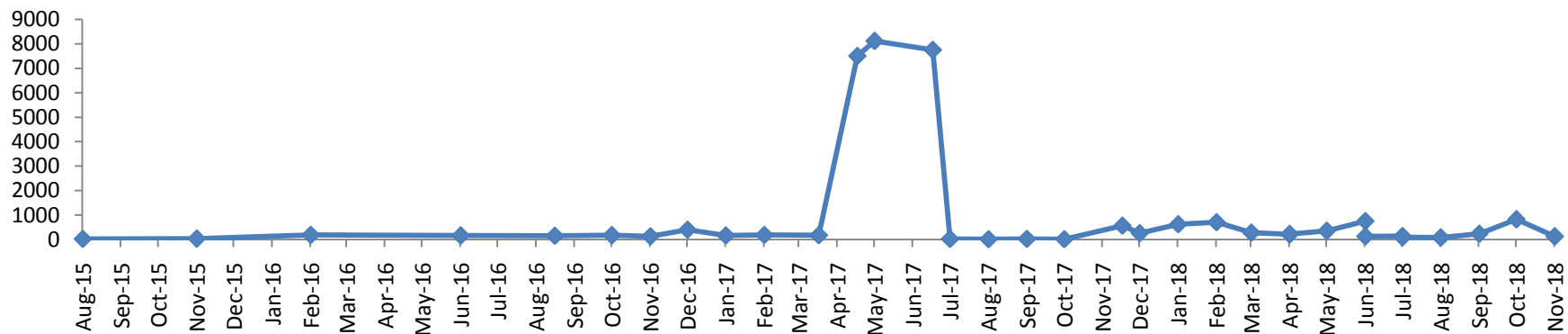
### SW-6 Calcium as Ca mg/L



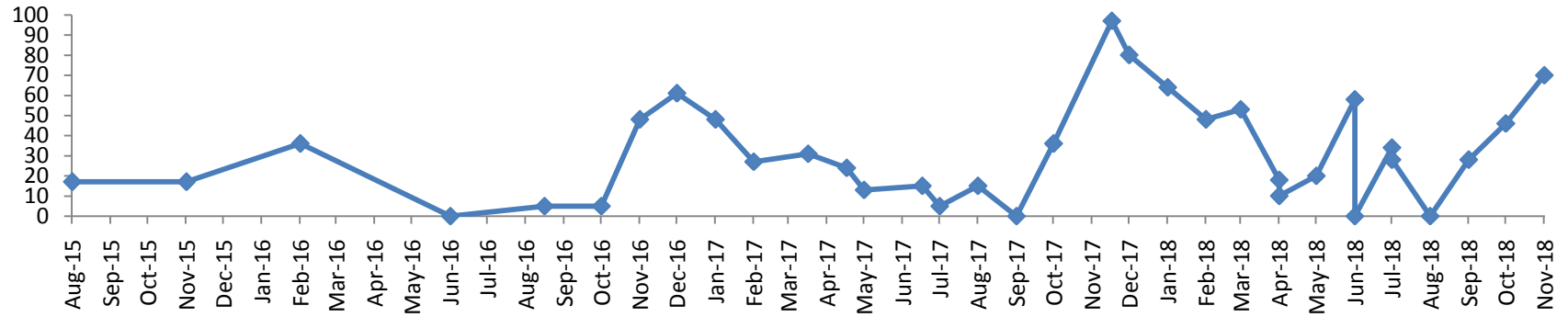
### SW-6 Chromium as Cr mg/L



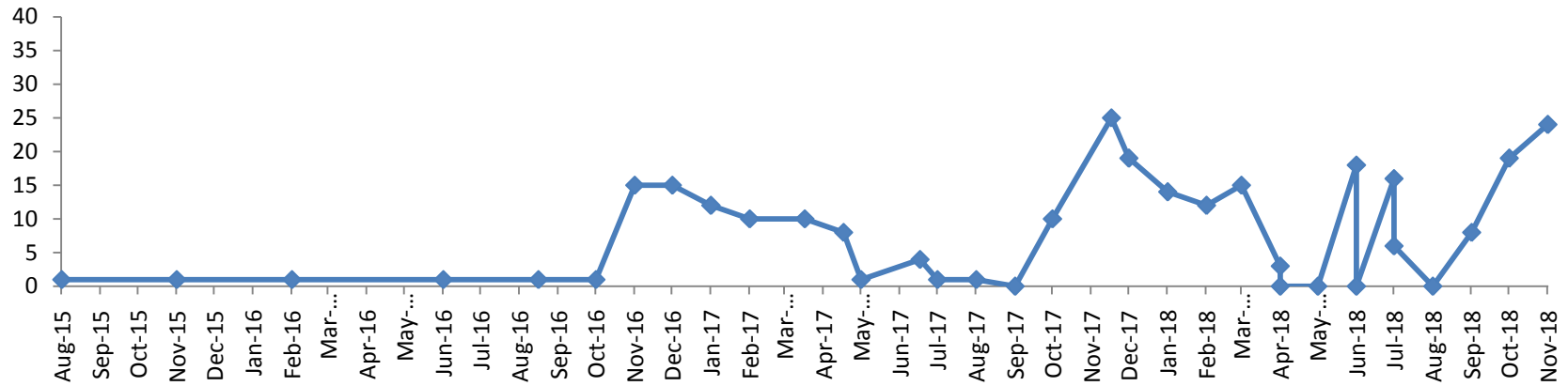
### SW-6 Sodium as Na mg/L



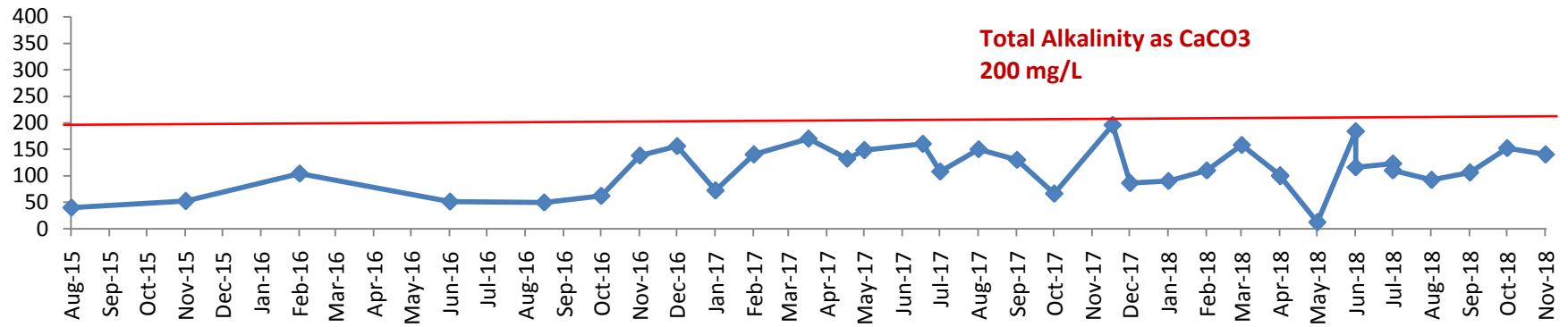
### SW-6 COD mg/L



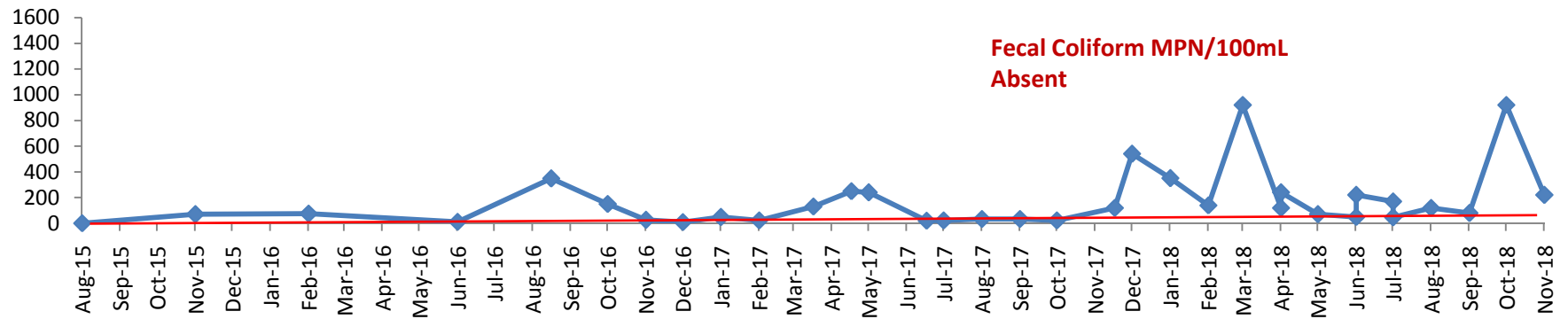
### SW-6 BOD (3 Days @ 27°C) mg/L



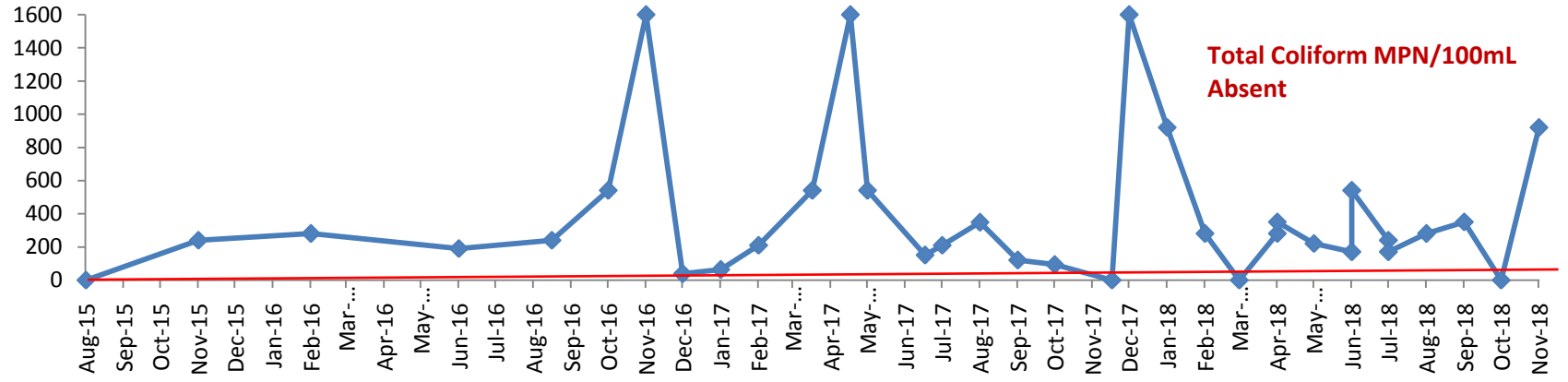
### SW-6 Total Alkalinity as CaCO3 mg/L



### SW-6 Fecal Coliform MPN/100 mL



### SW-6 Total Coliform MPN/100 mL



**SW 7: Zari Causway**

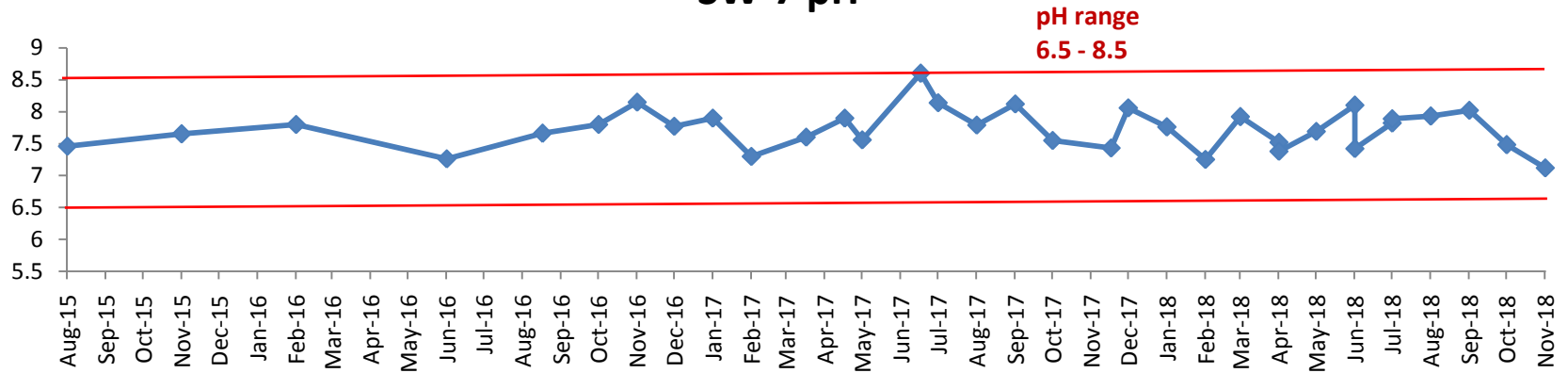
SW 7: Zari Causway													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.46	7.65	7.8	7.26	7.66	7.8	8.15	7.77	7.9	7.3	7.6	7.9
<b>Turbidity</b>	NTU	30.6	20.8	1.11	12.4	4.26	14.6	3.4	1.9	2.6	4.8	10.61	42.4
<b>Conductivity</b>	µmho/cm	198	294	1060	23564	1833	28400	372	3410	2630	1990	1520	52920
<b>Total Dissolved Solid</b>	mg/L	124	172	698	16495	1717	17648	240	2465	1640	1410	1010	35440
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	39	48	250	4000	360	9998	69	480	318	280	216	4420
<b>Chloride as Cl</b>	mg/L	21.99	24.99	258	10870	905	3868	11	1124	714	499	245	14912
<b>Dissolved Oxygen</b>	mg/L	5.99	5.8	5.8	5.2	5.5	5.8	2.8	5.4	5.8	4.8	4.2	5.2
<b>Calcium as Ca</b>	mg/L	8	10	52	372	40	936	13.6	62.4	52	52.8	52.8	310
<b>Chromium as Cr</b>	mg/L	0.038	0.028	0.042	0.02	0.017	0.03	< 0.005	< 0.005	< 0.005	0.004	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	25.27	27.5	160	5602	562	6600	12	835	530	410	330	8900
<b>COD</b>	mg/L	12	12	50	88	100	72	18	123	98	59	65	62
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	14	22	26	16	2	45	24	17	18	18
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	36	44	140	112	60	128	72	154	130	180	176	132
<b>Fecal Coliform</b>	MPN/100 mL	Present	17	20	> 1600	1600	< 10	12	47	94	79	1600	720
<b>Total Coliform</b>	MPN/100 mL	Present	141	170	> 1600	> 1600	141	43	70	150	170	> 1600	> 1600



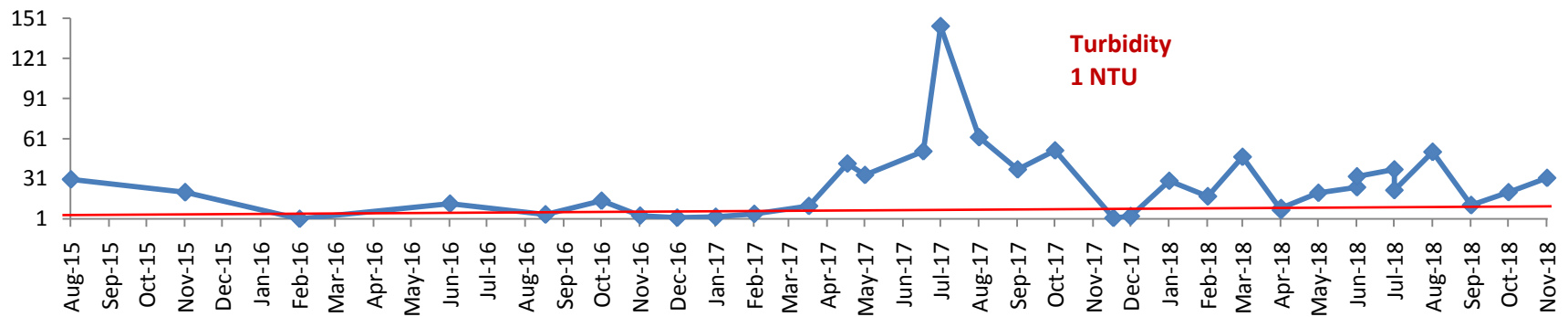
SW 7: Zari Causway												
	UNIT	May-17	Jun-17	Jul- 17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	7.56	8.6	8.14	7.79	8.12	7.55	7.43	8.06	7.76	7.25	7.92
<b>Turbidity</b>	NTU	33.8	51.6	145	62	38	52.2	1.7	2.91	29.4	17.8	47.4
<b>Conductivity</b>	µmho/cm	58350	44470	163	273	312	2110	37289	5700	8155	10794	2833
<b>Total Dissolved Solid</b>	mg/L	40832	29664	110	190	202	1380	26100	3720	5709	7210	1976
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	5580	4600	54	66	72	290	1900	990	1480	2010	424
<b>Chloride as Cl</b>	mg/L	18399	15210	9.99	22.99	28.9	540	5499	1620	2490	2640	839
<b>Dissolved Oxygen</b>	mg/L	4.2	5.6	6.6	6.4	5.8	6.2	4.9	6	5.2	6	5.2
<b>Calcium as Ca</b>	mg/L	360	370	16	16.8	20	56	192	96	210	270	62.4
<b>Chromium as Cr</b>	mg/L	0.014	0.021	0.019	0.034	< 0.005	< 0.005	0.015	< 0.005	0.01	< 0.005	0.012
<b>Sodium as Na</b>	mg/L	9110	8900	9.159	16.5	20	480	2827	703	1180	1250	506
<b>COD</b>	mg/L	53	44	9	45	18	72	232	53	42	68	74
<b>BOD (3 Days @ 27°C)</b>	mg/L	13	12	<1	8	5	28	60	12	18	20	28
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	124	118	48	58	80	90	196	148	172	180	90
<b>Fecal Coliform</b>	MPN/100 mL	920	920	49	440	210	13	130	240	94	70	49
<b>Total Coliform</b>	MPN/100 mL	> 1600	1600	110	1600	920	49	> 1600	430	350	350	170

SW 7: Zari Causway												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.52	7.38	7.69	8.1	7.42	7.82	7.89	7.93	8.02	7.48	7.12
<b>Turbidity</b>	NTU	7.6	9.2	20.49	24.6	32.6	38	22.4	51	11.2	20.9	31.6
<b>Conductivity</b>	µmho/cm	1982	2120	3137	8947	1780	1994	1117	365	1899	5816	1310
<b>Total Dissolved Solid</b>	mg/L	1180	1272	2188	5972	1145	1260	810	256	944	4288	880
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	408	392	448	1092	320	364	204	118	188	780	274
<b>Chloride as Cl</b>	mg/L	580	667	1124	3049	539	430	222	144	370	1809	341
<b>Dissolved Oxygen</b>	mg/L	5.4	5.9	6.6	3.8	6.4	5.1	6.6	6.1	6.4	5.8	6.1
<b>Calcium as Ca</b>	mg/L	70.1	51	60	160	51.2	53.6	46.4	25.6	51.2	108	64
<b>Chromium as Cr</b>	mg/L	< 0.005	0.02	0.09	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	260.4	237	565	1660	232.4	260	184	55.72	178	1370	204
<b>COD</b>	mg/L	90	80	70	94	16	42	12	11	28	50	38
<b>BOD (3 Days @ 27°C)</b>	mg/L	21	19.1	18.5	22	4	16	3	2	9	14	8
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	122	108	128	164	102	120	116	96	119	156	126
<b>Fecal Coliform</b>	MPN/100 mL	120	70	350	220	84	33	46	170	26	170	90
<b>Total Coliform</b>	MPN/100 mL	280	220	1600	540	210	920	280	240	120	>1600	540

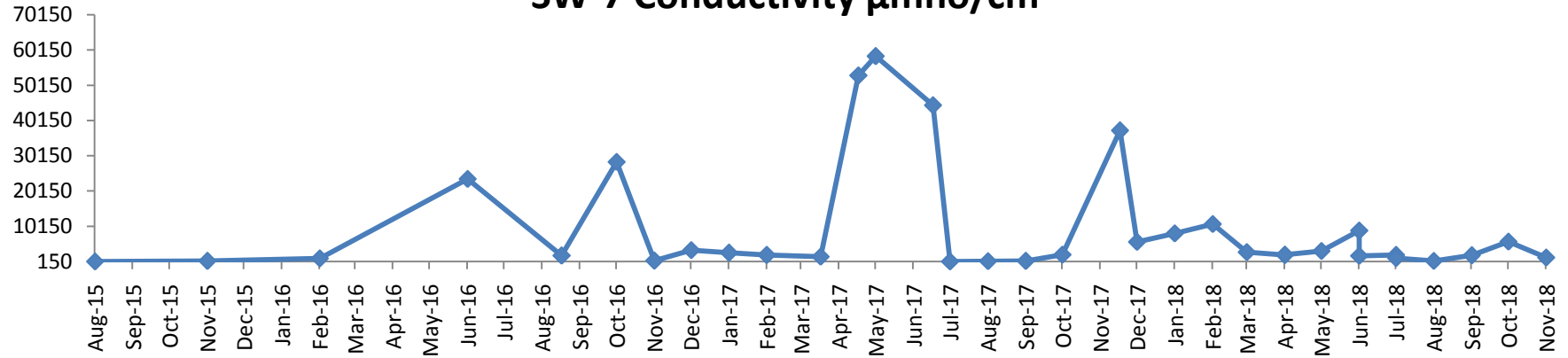
### SW-7 pH



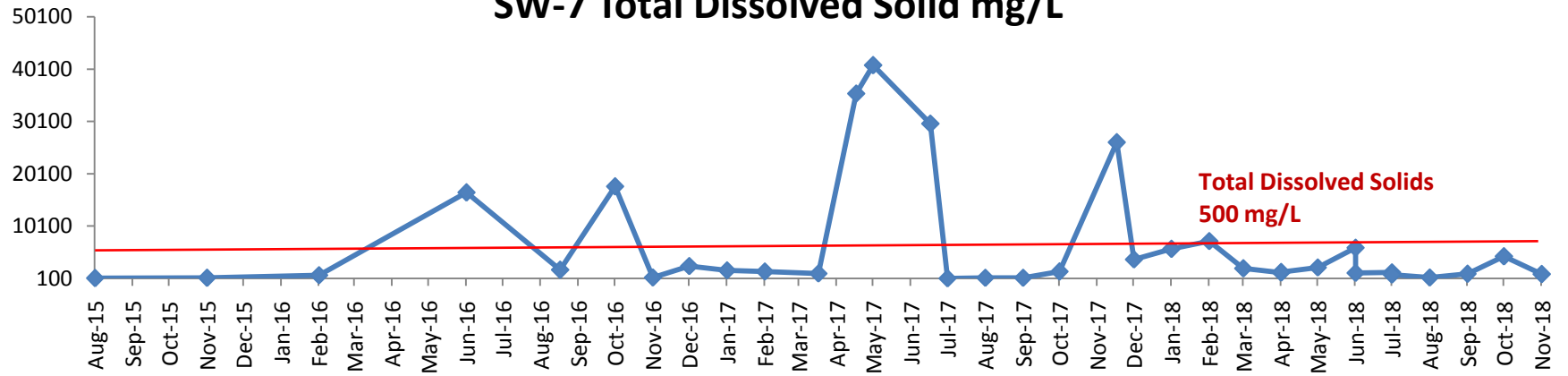
### SW-7 Turbidity NTU



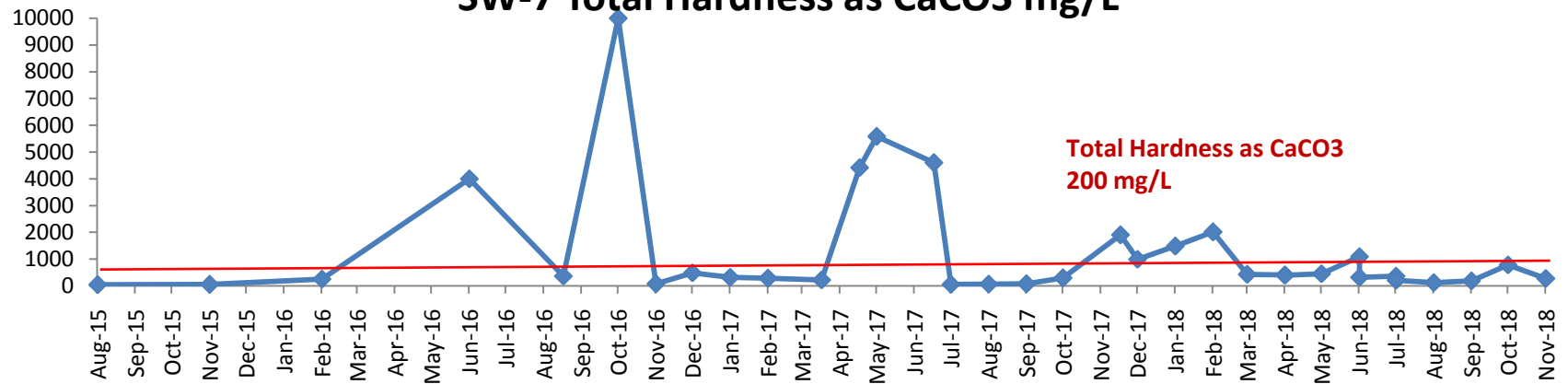
### SW-7 Conductivity $\mu\text{mho/cm}$



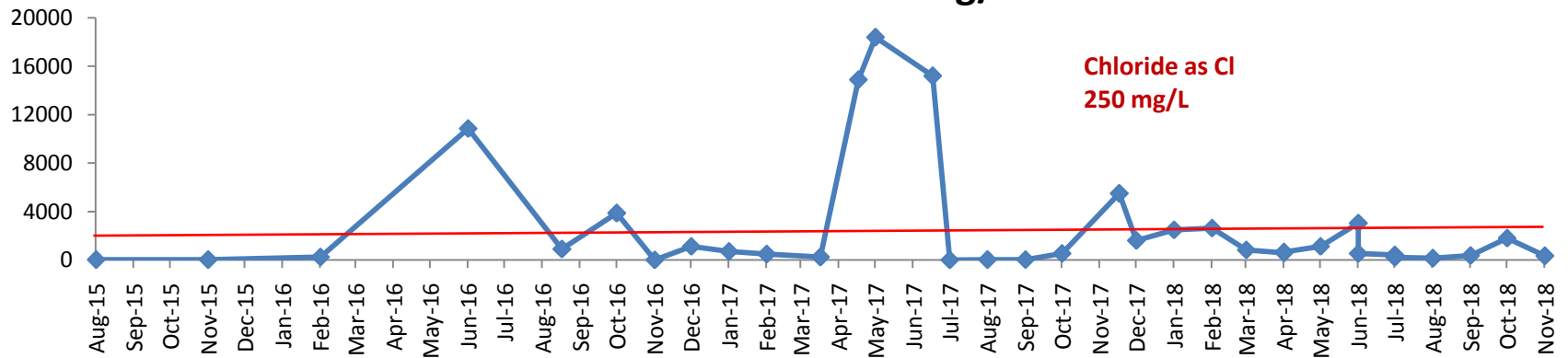
### SW-7 Total Dissolved Solid mg/L



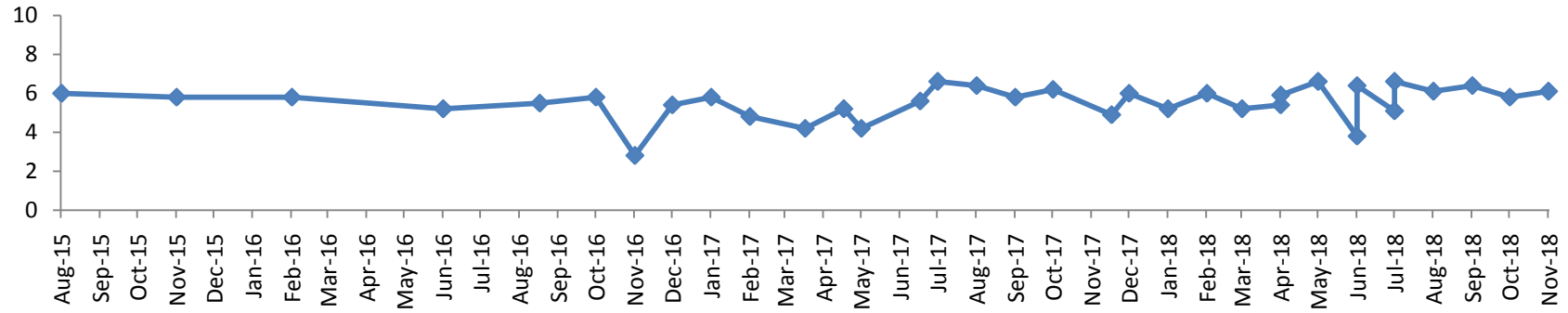
### SW-7 Total Hardness as CaCO3 mg/L



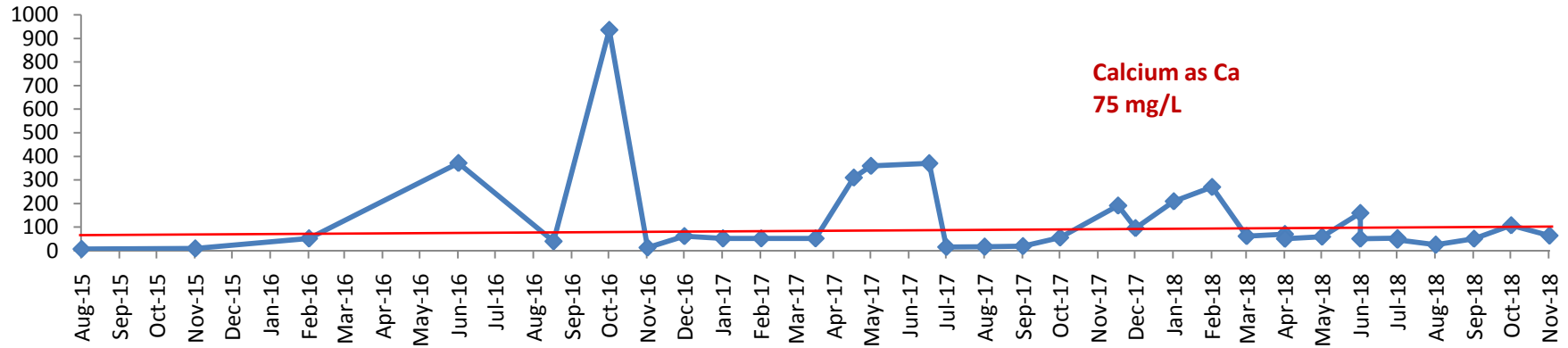
### SW-7 Chloride as Cl mg/L



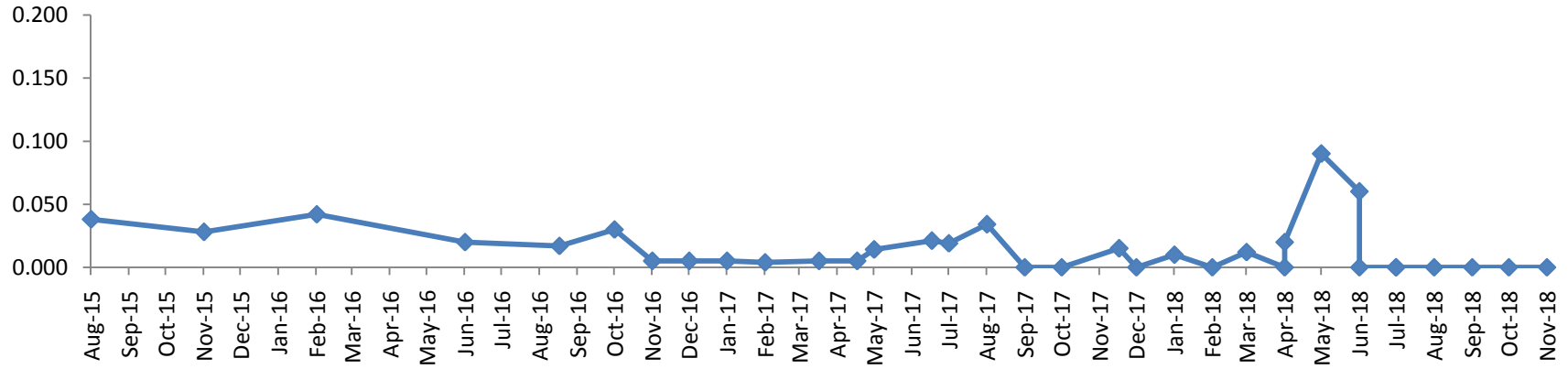
### SW-7 Dissolved Oxygen mg/L



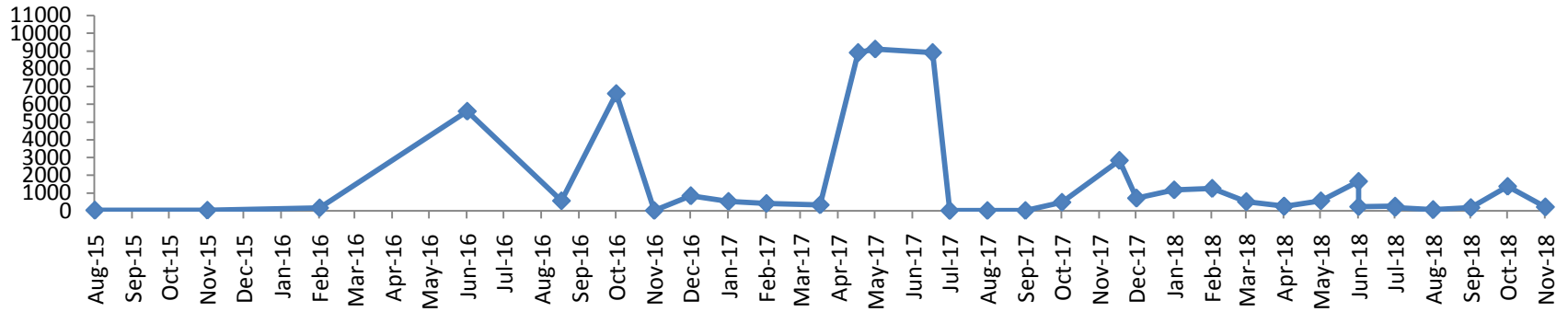
### SW-7 Calcium as Ca mg/L



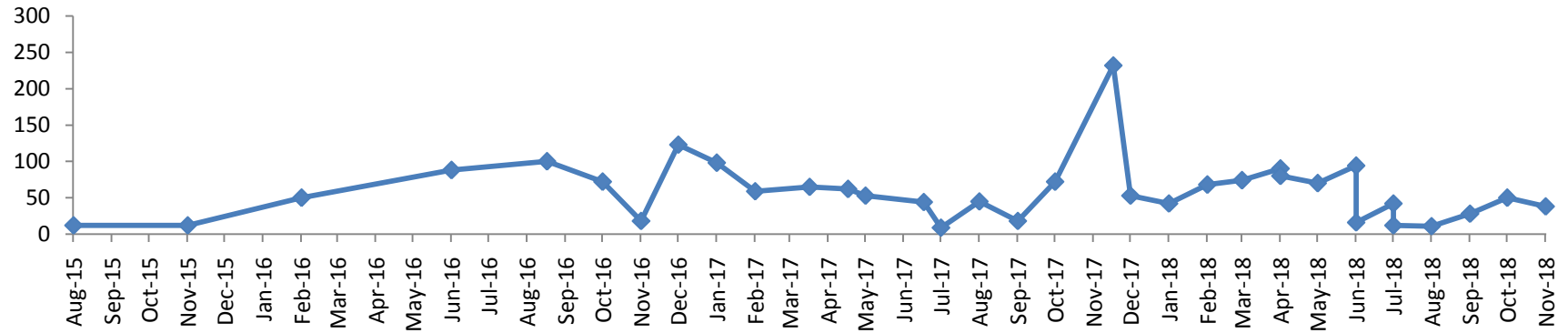
### SW-7 Chromium as Cr mg/L



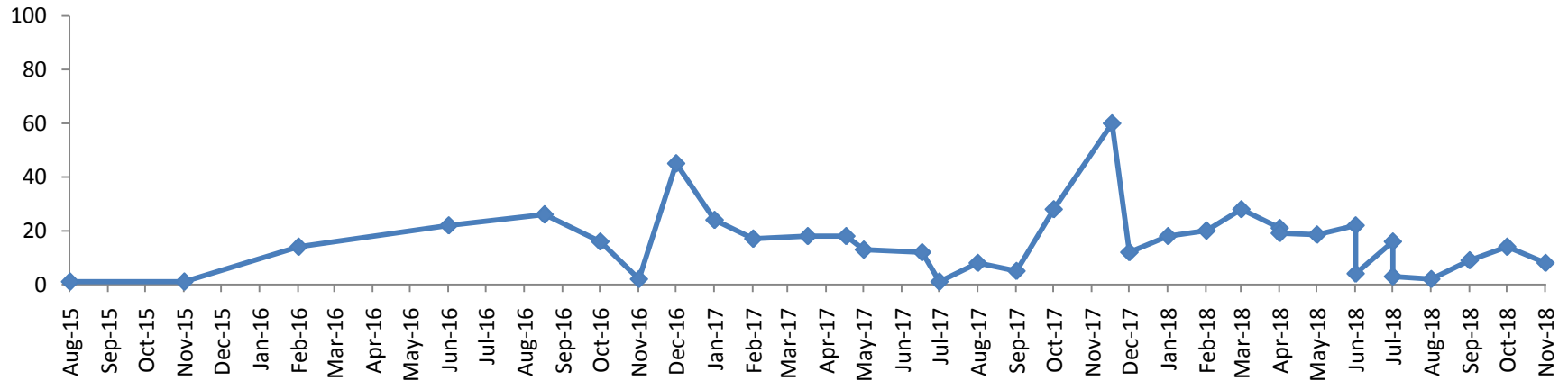
### SW-7 Sodium as Na mg/L



### SW-7 COD mg/L

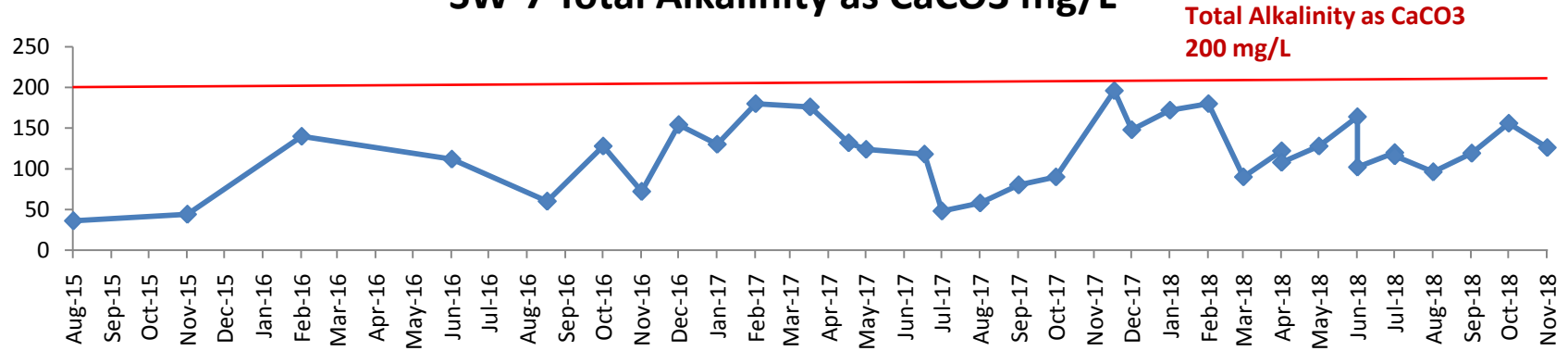


### SW-7 BOD (3 Days @ 27°C) mg/L

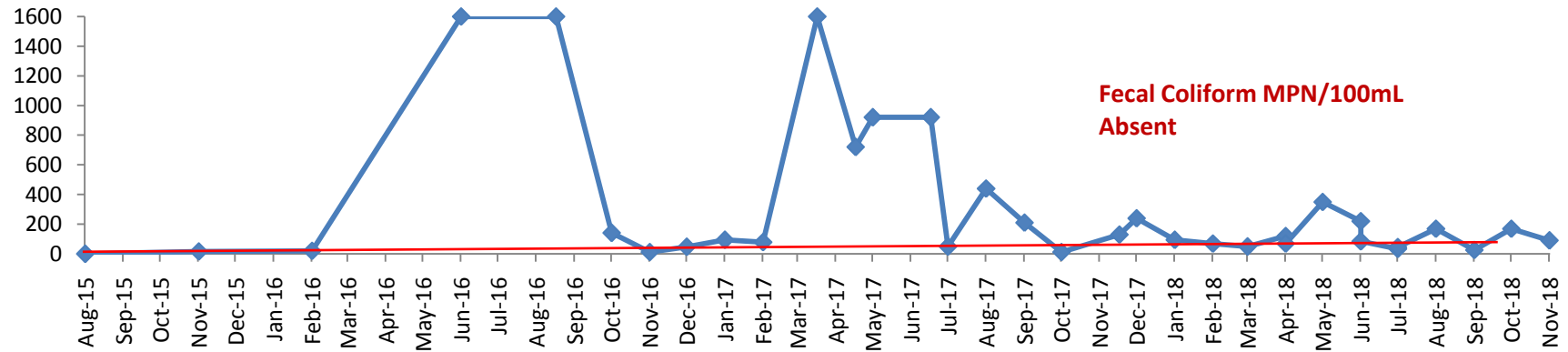




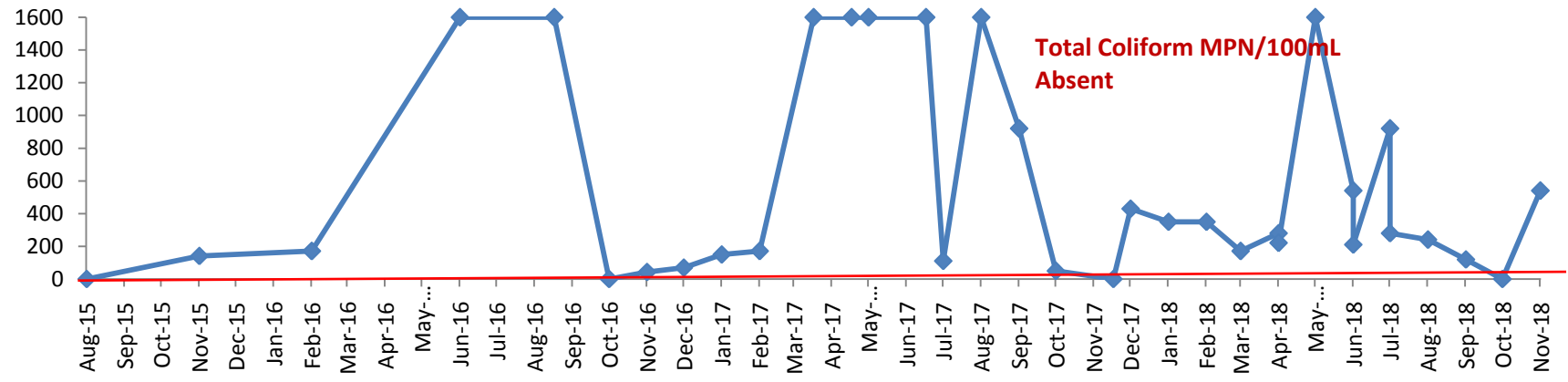
### SW-7 Total Alkalinity as CaCO3 mg/L



### SW-7 Fecal Coliform MPN/100 mL



### SW-7 Total Coliform MPN/100 mL



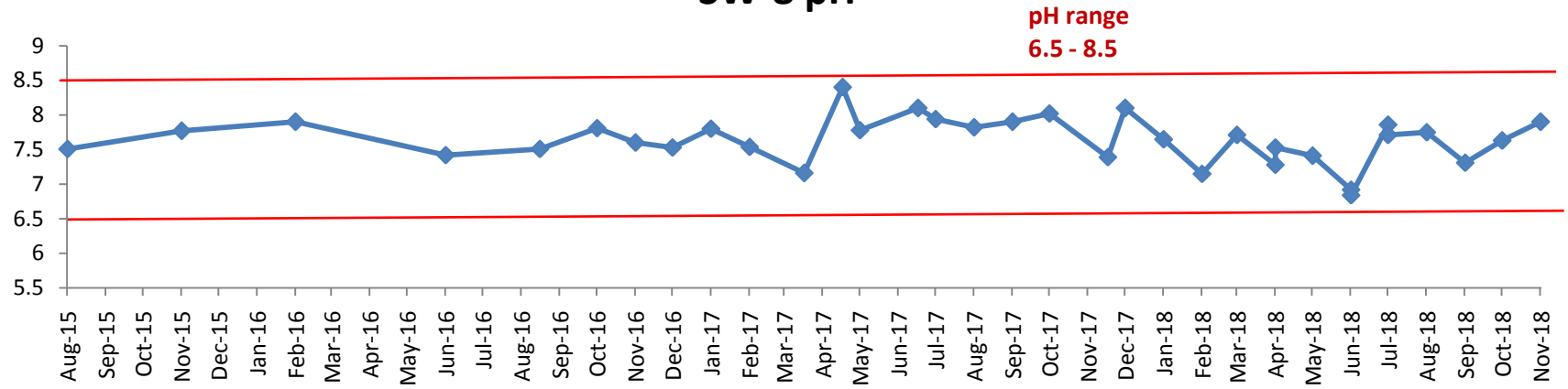
## SW 8: Moti Daman Jetty

SW 8: Moti Daman Jetty													
	UNIT	Aug-15	Nov-15	Feb-16	Jun-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17
<b>pH</b>	----	7.51	7.77	7.9	7.42	7.51	7.81	7.6	7.53	7.8	7.54	7.16	8.4
<b>Turbidity</b>	NTU	2.56	24.3	4.1	16.2	4.18	12.8	5.6	2.6	7.8	15.4	21.2	90
<b>Conductivity</b>	µmho/cm	1248	24700	37672	31802	245	34500	28750	21283	34510	25810	20160	60612
<b>Total Dissolved Solid</b>	mg/L	740	16780	24487	22268	132	21398	18900	16040	26427	17328	13240	41206
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	150	3450	4430	4810	80	12480	8640	3000	14480	2328	1796	5200
<b>Chloride as Cl</b>	mg/L	341	9696	13895	13495	23.99	4688	3840	7947	9090	6598	5048	19800
<b>Dissolved Oxygen</b>	mg/L	5.85	5.6	5	4.2	6.2	4.6	6	4.6	5.2	5.8	5.9	5.2
<b>Calcium as Ca</b>	mg/L	18.4	220	288	332	24	1080	310	144	380	176	152	290
<b>Chromium as Cr</b>	mg/L	0.06	< 0.005	< 0.005	< 0.005	0.022	< 0.005	< 0.005	< 0.005	< 0.005	0.021	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	243	6243	9380	8051	14.07	9040	2410	6370	5200	4440	3400	9020
<b>COD</b>	mg/L	68	68	118	86	12	74	36	24	32	16	20	46
<b>BOD (3 Days @ 27°C)</b>	mg/L	16	16	32	36	< 10	28	14	9	10	4	< 1	12
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	40	120	150	108	52	98	110	150	180	140	176	140
<b>Fecal Coliform</b>	MPN/100 mL	Present	900	542	348	1600	120	4	33	26	17	170	440
<b>Total Coliform</b>	MPN/100 mL	Present	1600	1600	240	> 1600	> 1600	31	79	34	33	540	> 1600

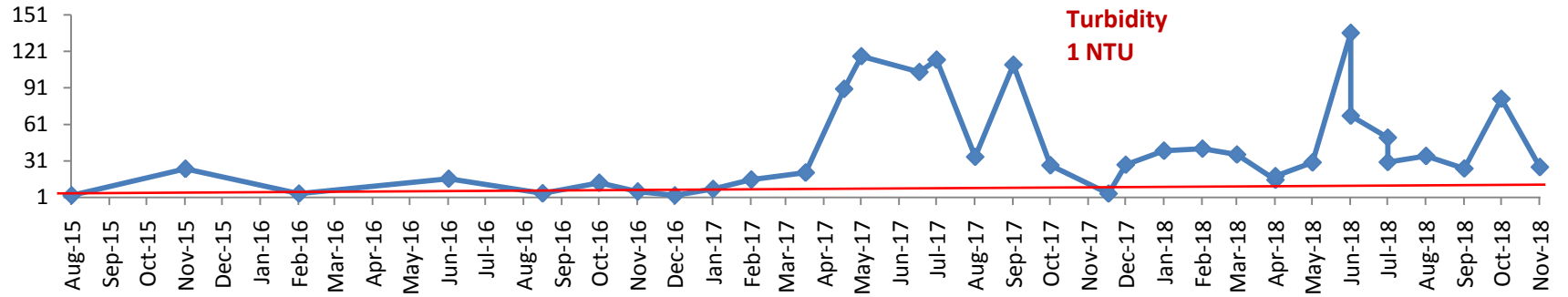
SW 8: Moti Daman Jetty												
	UNIT	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
<b>pH</b>	----	7.78	8.1	7.94	7.82	7.9	8.02	7.39	8.1	7.65	7.15	7.71
<b>Turbidity</b>	NTU	117	104	114	34.2	110	27.2	4.05	27.7	39.2	40.9	36.1
<b>Conductivity</b>	µmho/cm	65980	58964	1823	14459	58940	39218	25641	28283	31200	28426	22127
<b>Total Dissolved Solid</b>	mg/L	46468	40966	1272	10120	40210	25418	17940	19796	21840	19210	15484
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	6400	5060	188	1680	5170	6200	3760	4420	4490	3240	2600
<b>Chloride as Cl</b>	mg/L	20393	18912	349	4648	19690	8880	11547	10997	11499	12599	7575
<b>Dissolved Oxygen</b>	mg/L	5.4	6.2	6.8	6.75	5.4	5.4	4.4	5.6	6.1	5.2	6.4
<b>Calcium as Ca</b>	mg/L	360	296	27.2	136	440	360	272	252	261	250	216
<b>Chromium as Cr</b>	mg/L	0.011	0.008	0.004	0.028	< 0.005	< 0.005	0.025	< 0.005	0.02	0.04	0.028
<b>Sodium as Na</b>	mg/L	10200	9400	29.71	2853	8800	4990	6240	4970	5200	6310	4894
<b>COD</b>	mg/L	80	56	24	28	36	42	206	160	120	156	378
<b>BOD (3 Days @ 27°C)</b>	mg/L	22	16	8	4	10	15	58	46	34	48	108
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	120	180	48	74	112	170	192	210	228	240	154
<b>Fecal Coliform</b>	MPN/100 mL	510	240	540	240	17	12	920	240	280	220	140
<b>Total Coliform</b>	MPN/100 mL	> 1600	350	>1600	540	21	17	>1600	920	1600	540	1600

SW 8: Moti Daman Jetty												
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Jun-18	Jul-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18
<b>pH</b>	----	7.28	7.53	7.41	6.92	6.84	7.86	7.71	7.75	7.31	7.63	7.9
<b>Turbidity</b>	NTU	15.3	18.5	29.6	136	68.1	50	30	34.86	24.6	82	25.7
<b>Conductivity</b>	µmho/cm	32910	26059	35929	59212	34980	39990	26882	5531	15588	31320	15318
<b>Total Dissolved Solid</b>	mg/L	25382	18232	17250	39736	22389	25318	19380	4140	10922	22552	10530
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	2998	3560	3050	4900	4300	4468	6468	736	1800	3980	1700
<b>Chloride as Cl</b>	mg/L	7832	9697	9397	13645	12995	10180	7986	2089	5698	11896	5248
<b>Dissolved Oxygen</b>	mg/L	5	5.9	7.2	4.6	6.2	4.9	5.8	5.7	5.4	6.1	5.8
<b>Calcium as Ca</b>	mg/L	238.4	208	300	328	319	264	240	70.4	144	328	149.6
<b>Chromium as Cr</b>	mg/L	<0.005	<0.005	0.1	0.16	0.12	0.095	0.062	< 0.005	< 0.005	0.028	0.1
<b>Sodium as Na</b>	mg/L	4330.1	5937	5050	8850	4828	4920	4320	1240	3364	7287	3348
<b>COD</b>	mg/L	94	76	13	120	22.6	88	66	202	53	80	62
<b>BOD (3 Days @ 27°C)</b>	mg/L	24	20	2.01	26	6	24	14	64	10	22	18
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	144	116	134	231	318	370	340	118	121	160	130
<b>Fecal Coliform</b>	MPN/100 mL	84	70	< 10	33	46	94	49	220	130	94	41
<b>Total Coliform</b>	MPN/100 mL	210	350	>1600	220	170	540	430	540	350	210	240

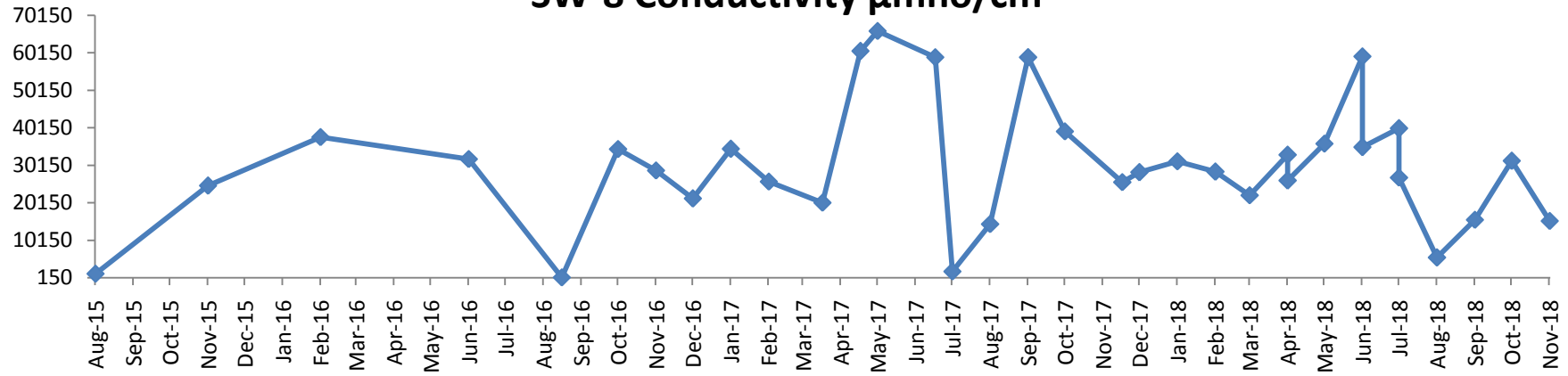
### SW-8 pH



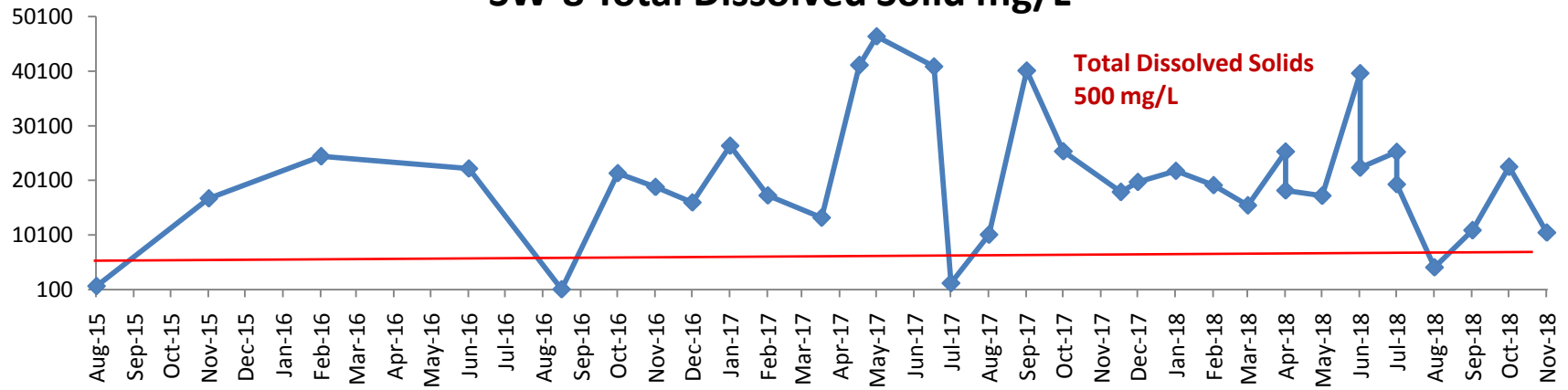
### SW-8 Turbidity NTU



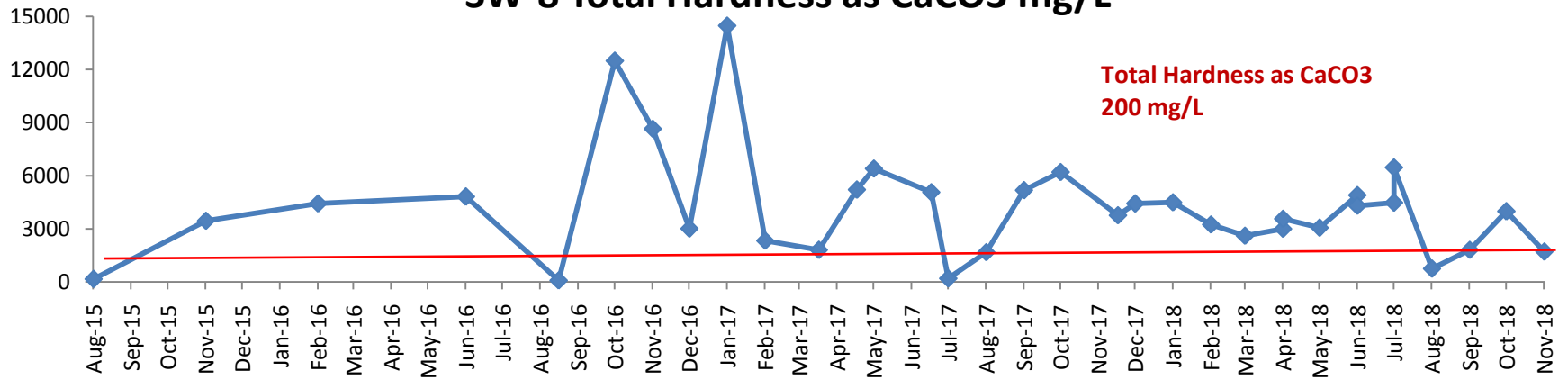
### SW-8 Conductivity $\mu\text{mho/cm}$



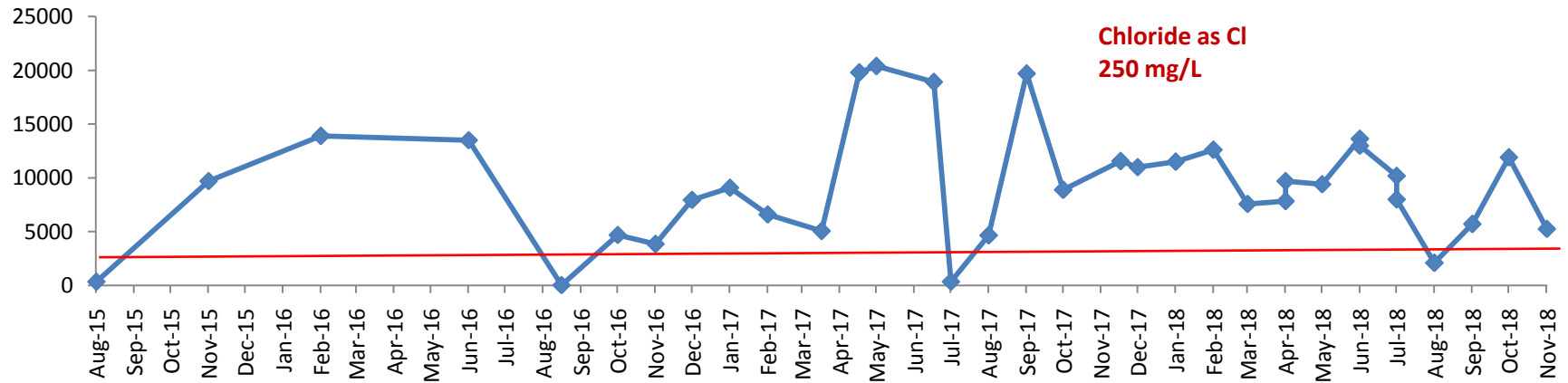
### SW-8 Total Dissolved Solid mg/L



### SW-8 Total Hardness as CaCO3 mg/L

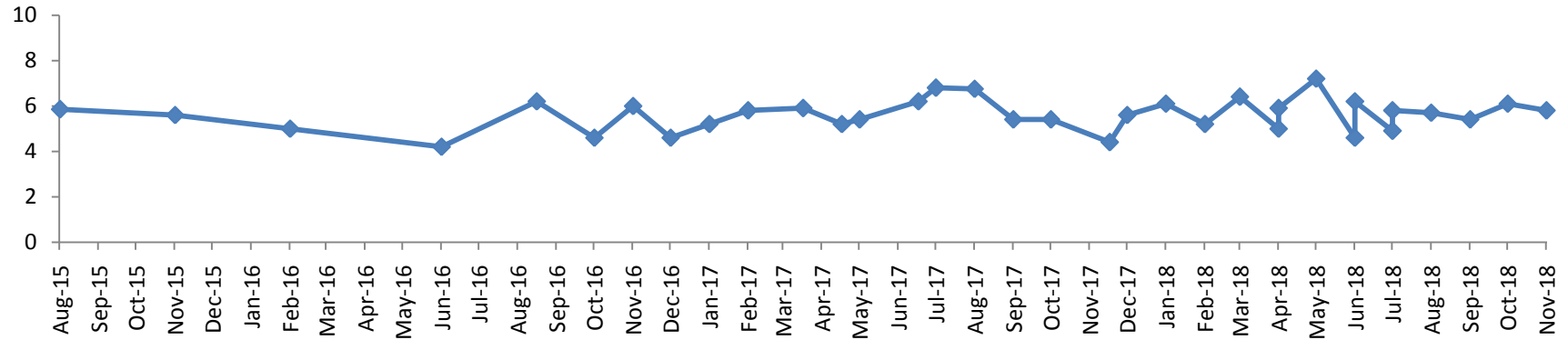


### SW-8 Chloride as Cl mg/L

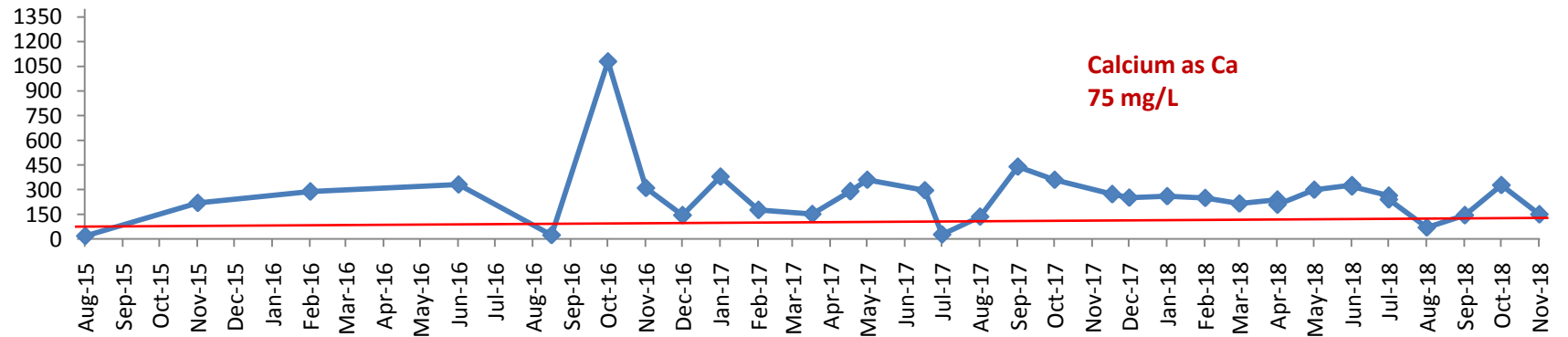




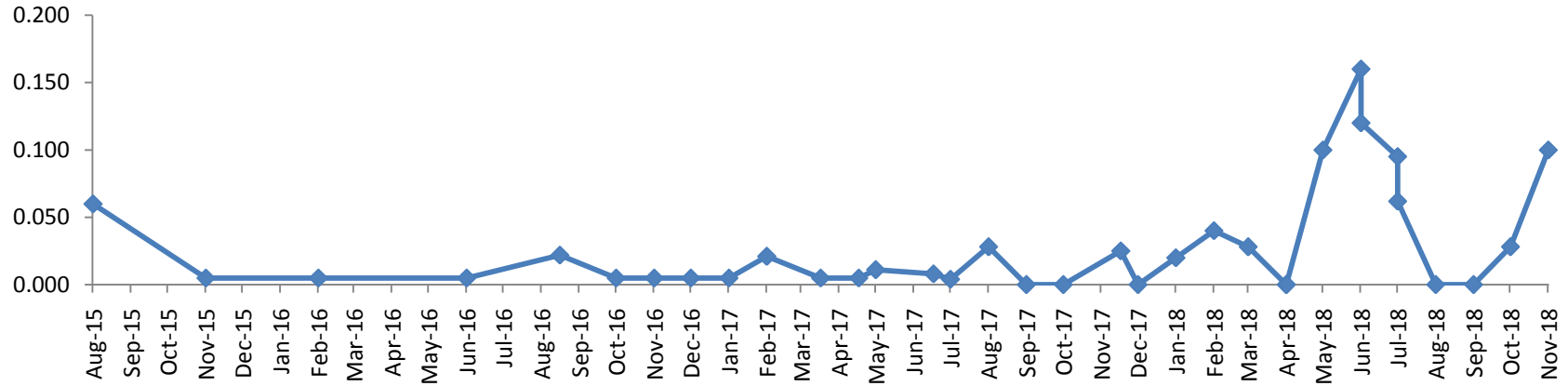
### SW-8 Dissolved Oxygen mg/L



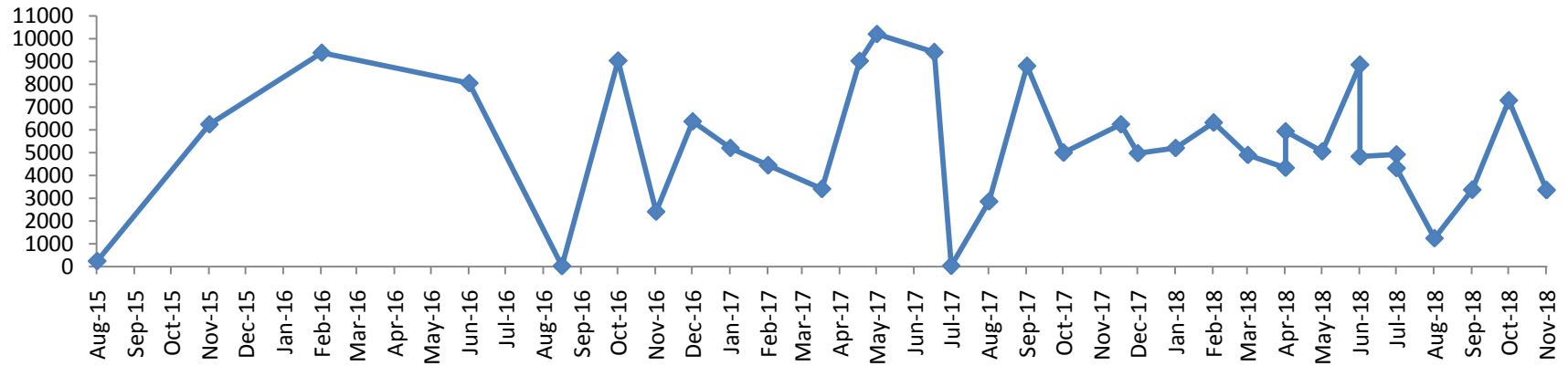
### SW-8 Calcium as Ca mg/L



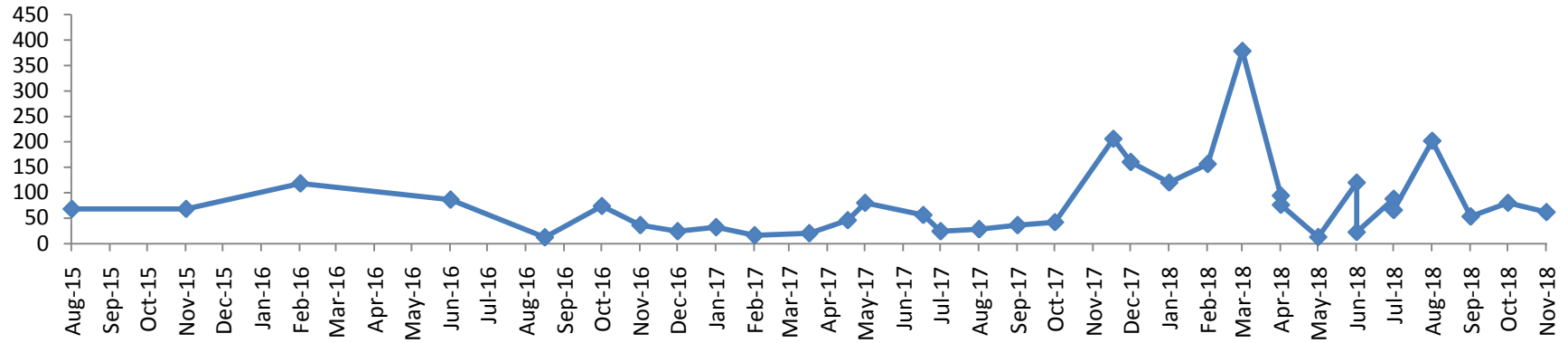
### SW-8 Chromium as Cr mg/L



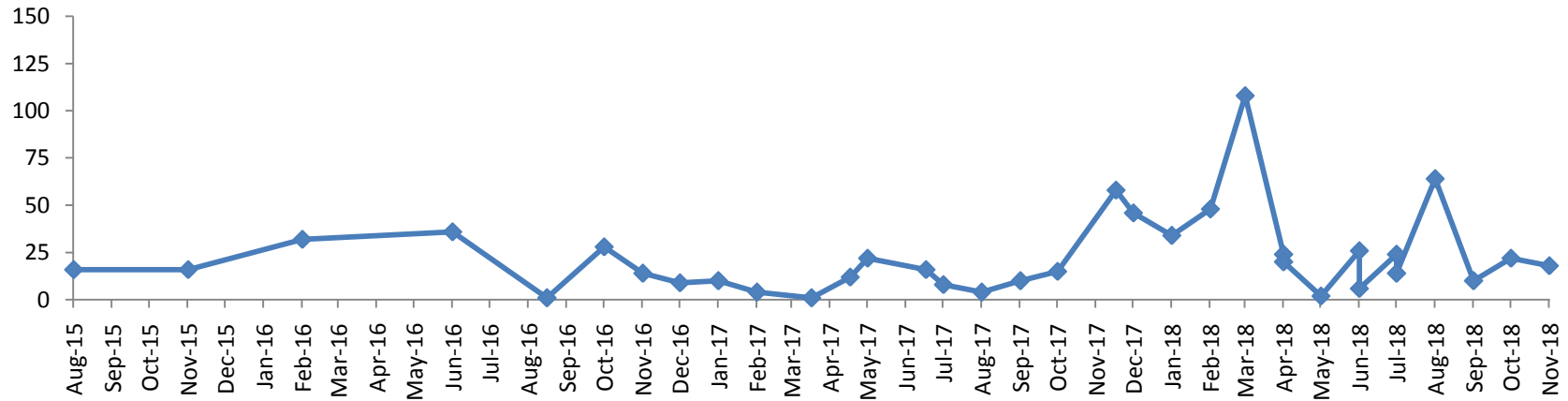
### SW-8 Sodium as Na mg/L



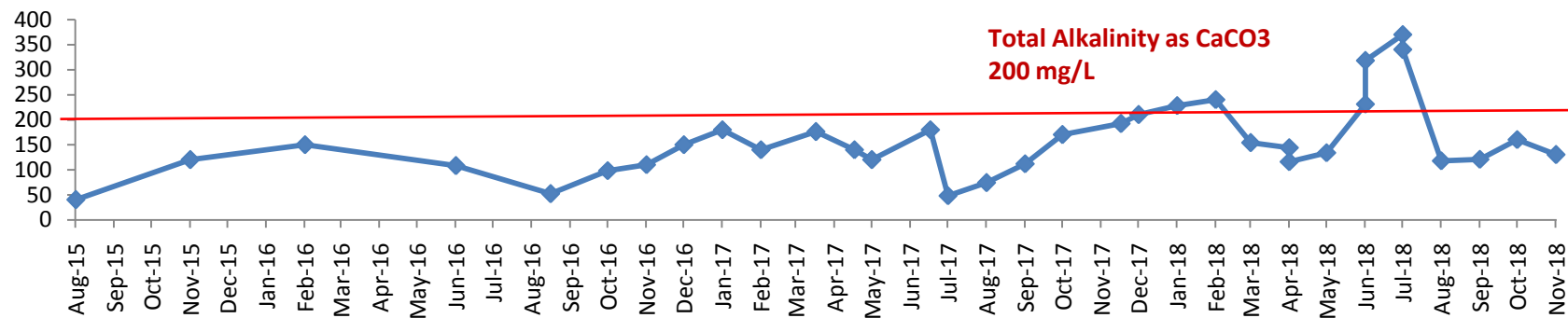
### SW-8 COD mg/L



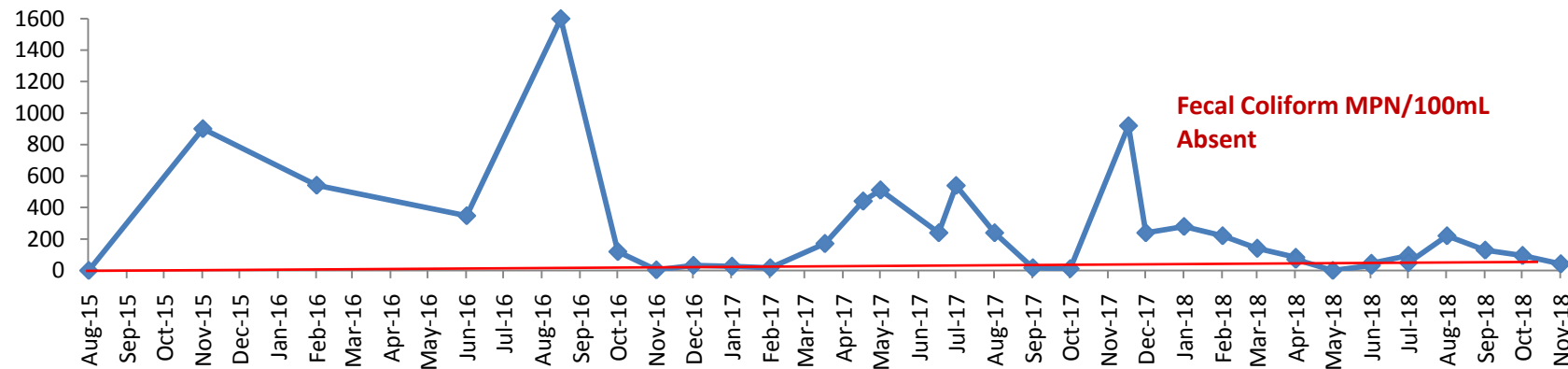
### SW-8 BOD (3 Days @ 27°C) mg/L



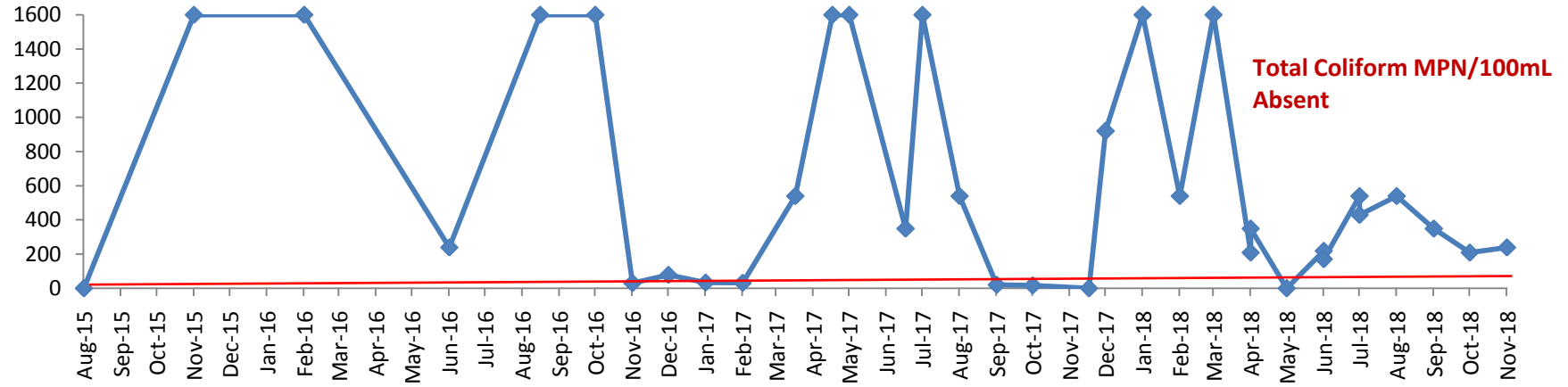
### SW-8 Total Alkalinity as CaCO3 mg/L



### SW-8 Fecal Coliform MPN/100 mL



### SW-8 Total Coliform MPN/100 mL



**SW 9: At D/S of discharge of distillery**

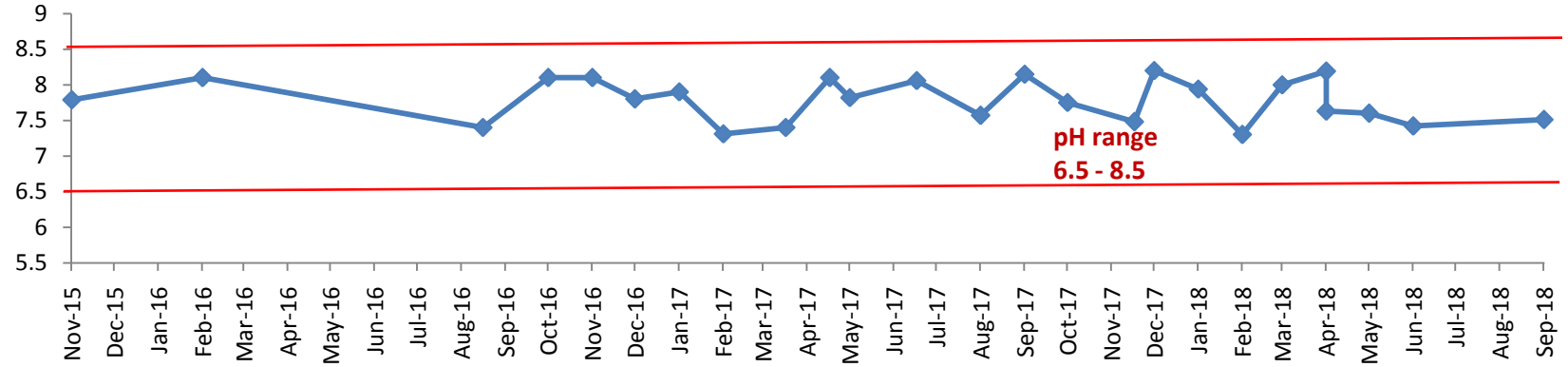
SW 9: At D/S of discharge of distillery										
	UNIT	Nov-15	Feb-16	Aug-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
<b>pH</b>	----	7.79	8.1	7.4	8.1	8.1	7.8	7.9	7.31	7.4
<b>Turbidity</b>	NTU	13.1	18.6	1.1	10.8	5.26	4.6	3.8	8.4	4.4
<b>Conductivity</b>	µmho/cm	23940	30626	1490	30200	9150	31203	36810	11450	18510
<b>Total Dissolved Solid</b>	mg/L	15670	21132	849	19880	6410	19970	27751	7998	11850
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	3150	3366	776	3200	5320	9840	2800	1316	1664
<b>Chloride as Cl</b>	mg/L	9397	11496	145	1240	3240	3290	13840	3494	4698
<b>Dissolved Oxygen</b>	mg/L	5.6	5.8	4.5	5	4.9	5.2	5.2	5.9	6.2
<b>Calcium as Ca</b>	mg/L	220	280	129	770	770	110	198	115	124
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.015	0.012
<b>Sodium as Na</b>	mg/L	5966	7860	81.4	6380	1380	1740	10960	2710	1580
<b>COD</b>	mg/L	< 5	16	18	< 5	10	32	18	16	28
<b>BOD (3 Days @ 27°C)</b>	mg/L	< 10	< 10	< 10	< 5	<10	10	5	< 1	10
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	110	130	370	98	85	106	180	148	168
<b>Fecal Coliform</b>	MPN/100 mL	500	542	> 1600	33	< 10	10	280	170	240
<b>Total Coliform</b>	MPN/100 mL	1600	1600	> 1600	170	>1600	220	1600	240	920

SW 9: At D/S of discharge of distillery										
	UNIT	May-17	Jun-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18
<b>pH</b>	----	7.82	8.06	7.57	8.15	7.75	7.48	8.2	7.94	7.3
<b>Turbidity</b>	NTU	50	68	26.3	76	10.8	2.11	7.24	5.9	22.9
<b>Conductivity</b>	µmho/cm	66950	48142	1867	62980	41860	28011	17300	32534	31910
<b>Total Dissolved Solid</b>	mg/L	46862	32732	1324	42950	26790	19608	11240	22774	21410
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	6100	5600	250	5770	5200	3840	2998	4720	4980
<b>Chloride as Cl</b>	mg/L	20910	19799	604	20310	12200	12007	6102	11800	11972
<b>Dissolved Oxygen</b>	mg/L	5.35	5.8	5.95	5.8	5.6	5.1	3.6	4.4	5.6
<b>Calcium as Ca</b>	mg/L	360	320	40	560	488	248	192	426	48
<b>Chromium as Cr</b>	mg/L	0.009	< 0.005	0.029	0.052	< 0.005	0.022	< 0.005	0.04	< 0.005
<b>Sodium as Na</b>	mg/L	9400	9200	357	9800	10210	7210	2391	7900	8100
<b>COD</b>	mg/L	53	44	64	58	28	102	26	31	44
<b>BOD (3 Days @ 27°C)</b>	mg/L	15	12	17	20	8	33	5	10	14
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	120	140	60	180	170	184	156	178	192
<b>Fecal Coliform</b>	MPN/100 mL	540	130	240	220	34	170	240	220	70
<b>Total Coliform</b>	MPN/100 mL	> 1600	280	540	540	540	>1600	350	430	350

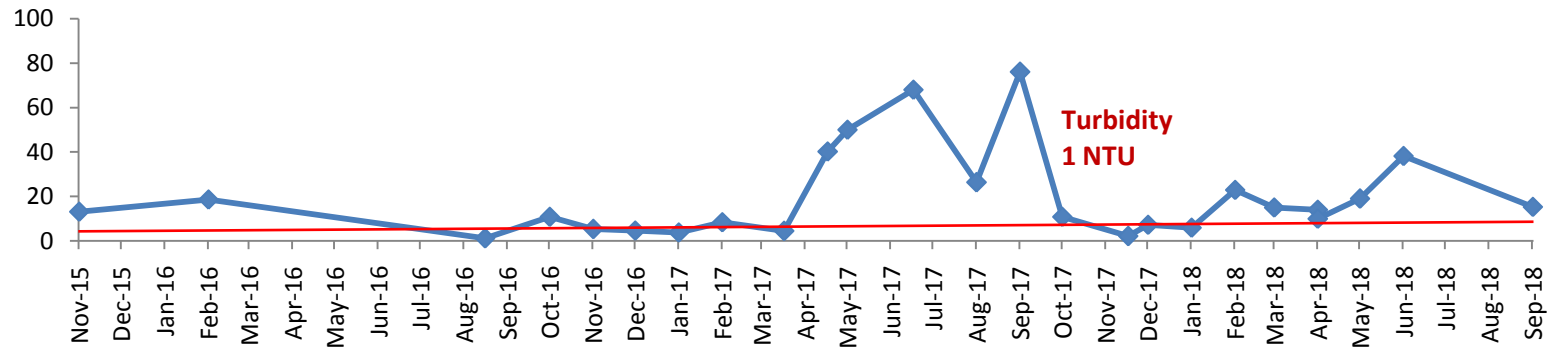
SW 9: At D/S of discharge of distillery						
	UNIT	Apr-18	Apr-18	May-18	Jun-18	Sep-18
<b>pH</b>	----	8.19	7.63	7.6	7.42	7.51
<b>Turbidity</b>	NTU	13.98	9.96	18.94	38.2	15.3
<b>Conductivity</b>	µmho/cm	16936	16067	16463	750	7650
<b>Total Dissolved Solid</b>	mg/L	11008	11236	11524	478	5366
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	2998	2160	2000	208	1200
<b>Chloride as Cl</b>	mg/L	5582	6697	5798	131	2490
<b>Dissolved Oxygen</b>	mg/L	7.2	5.9	6.8	6.6	6.2
<b>Calcium as Ca</b>	mg/L	172	168	180	51.2	96
<b>Chromium as Cr</b>	mg/L	< 0.005	0.082	0.1	< 0.005	0.008
<b>Sodium as Na</b>	mg/L	3600	3944	3540	96.2	1740
<b>COD</b>	mg/L	40	25	29	8	44
<b>BOD (3 Days @ 27°C)</b>	mg/L	12	6	8	3	12
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	123	112	121	68	108
<b>Fecal Coliform</b>	MPN/100 mL	920	33	350	130	240
<b>Total Coliform</b>	MPN/100 mL	1600	220	> 1600	920	540



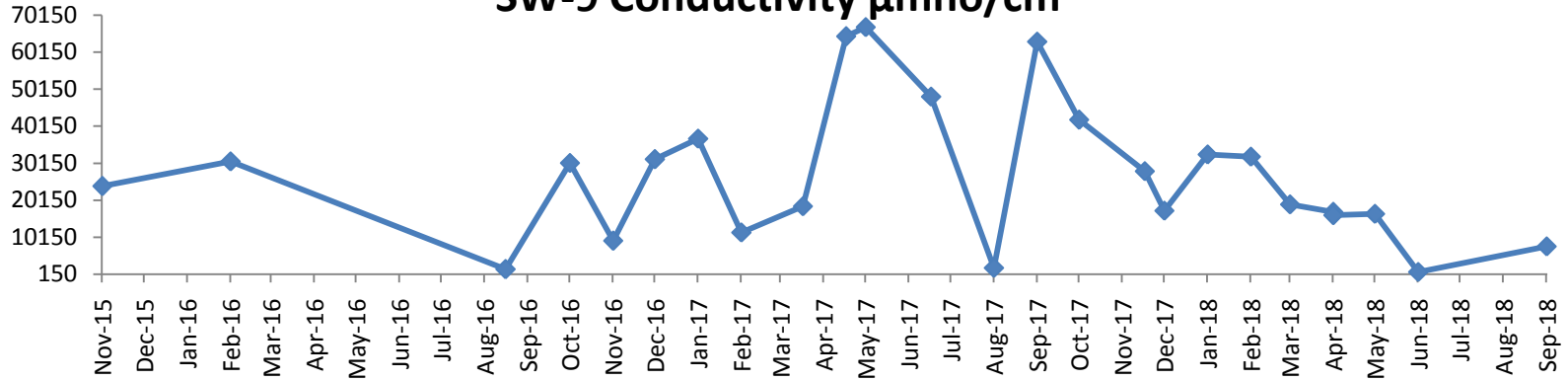
### SW-9 pH



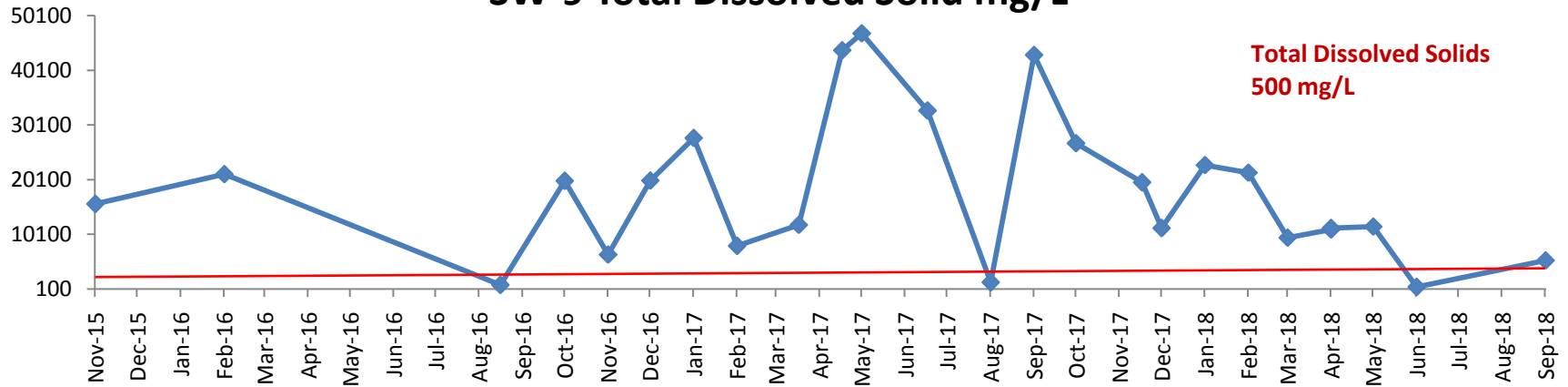
### SW-9 Turbidity NTU



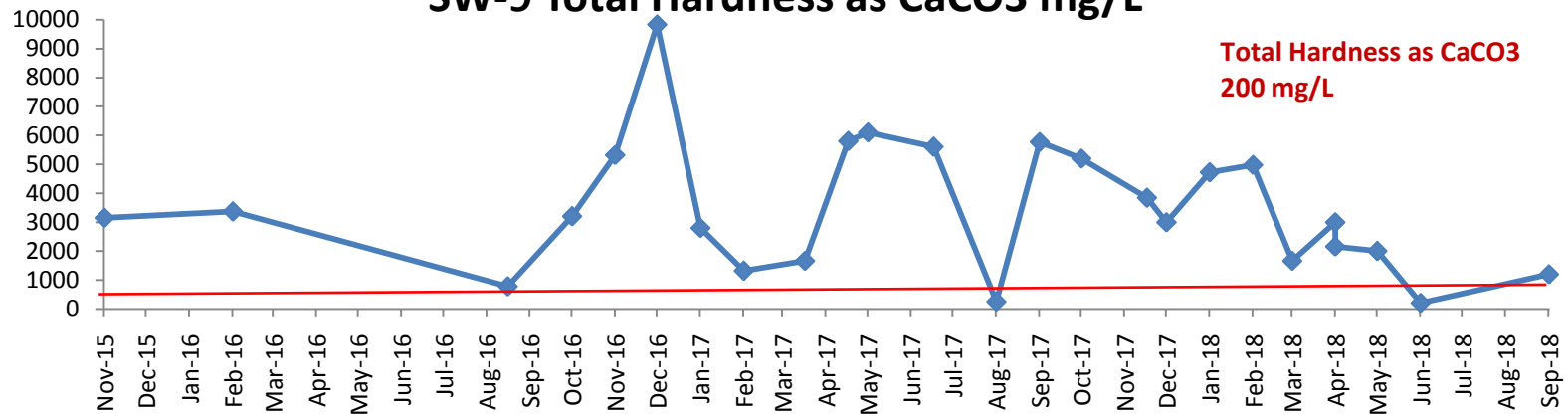
### SW-9 Conductivity $\mu\text{mho/cm}$



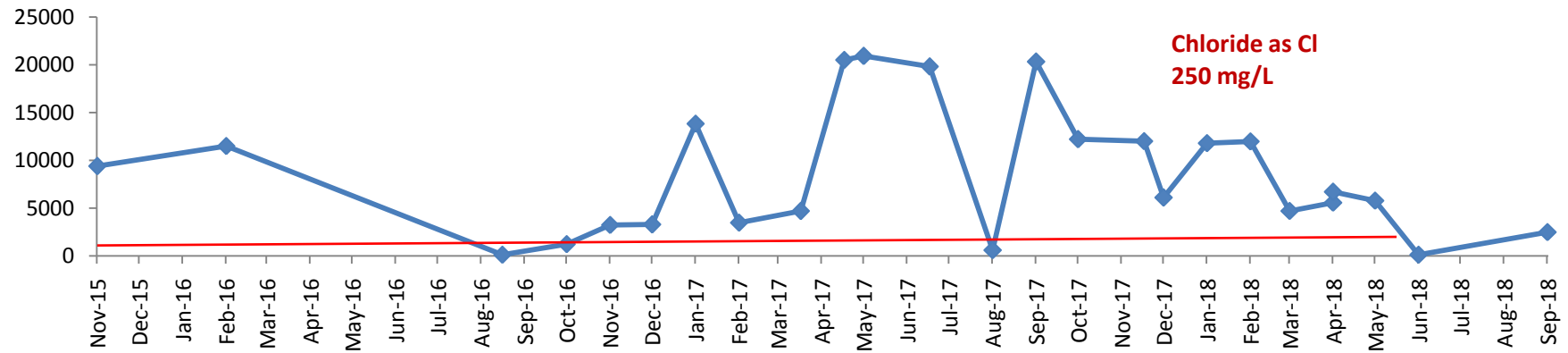
### SW-9 Total Dissolved Solid mg/L



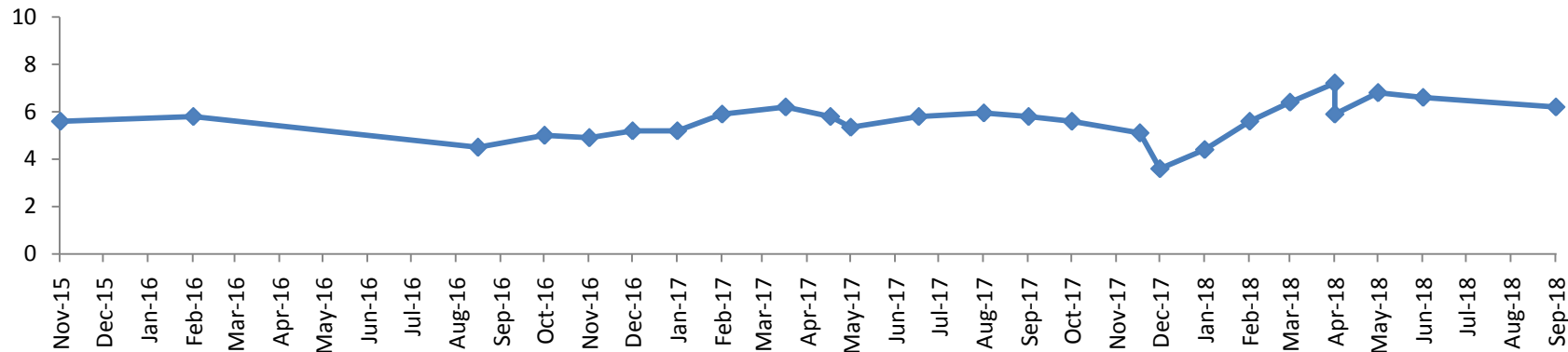
### SW-9 Total Hardness as CaCO3 mg/L



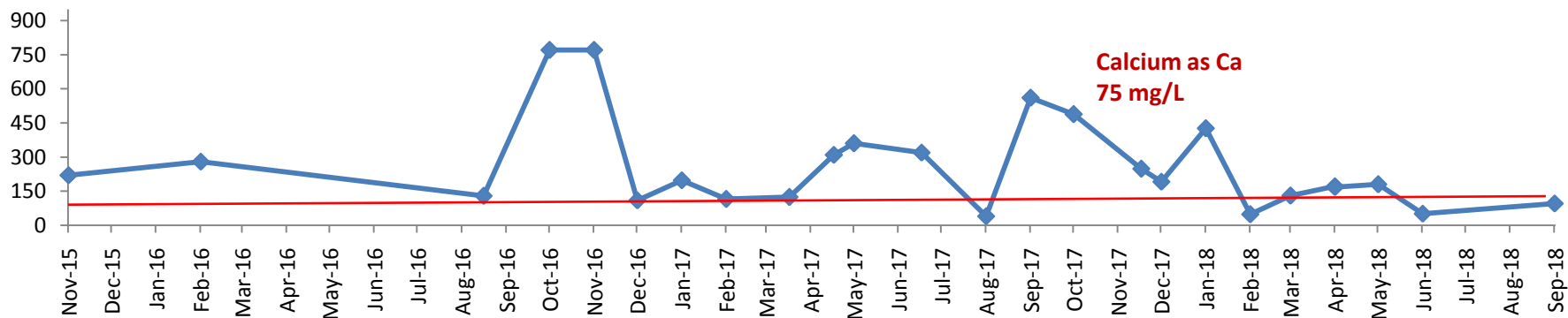
### SW-9 Chloride as Cl mg/L



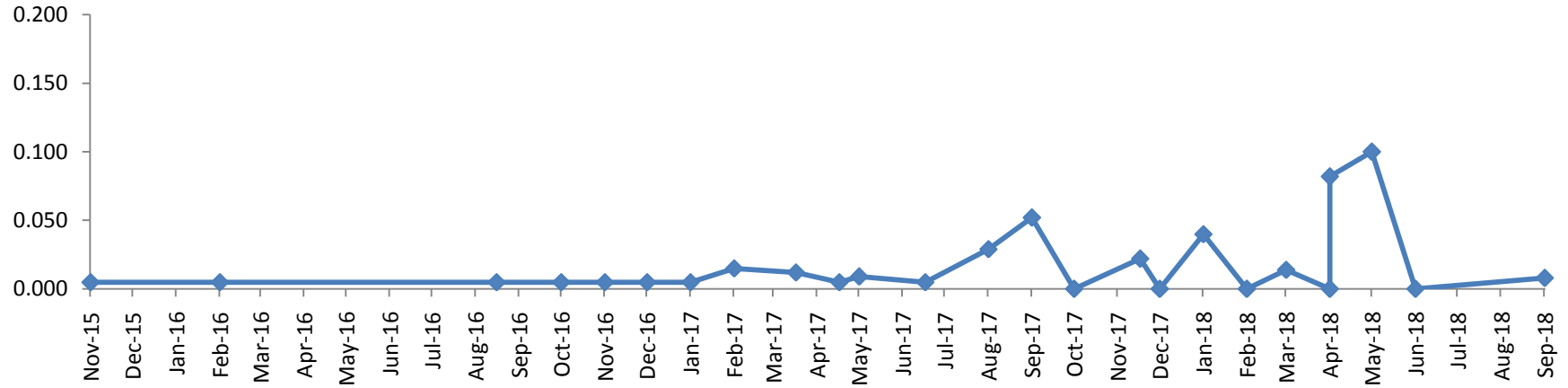
### SW-9 Dissolved Oxygen mg/L



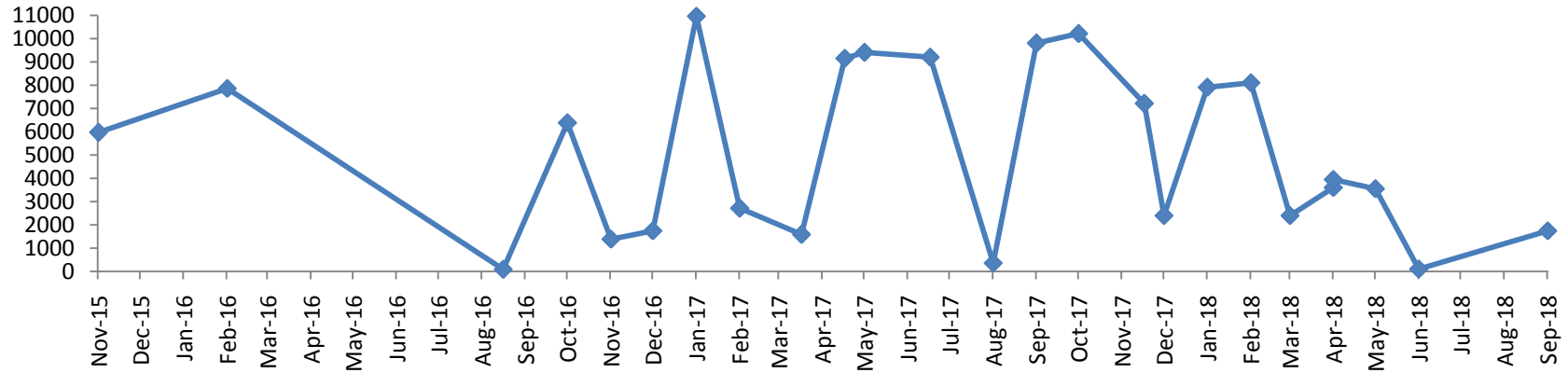
### SW-9 Calcium as Ca mg/L



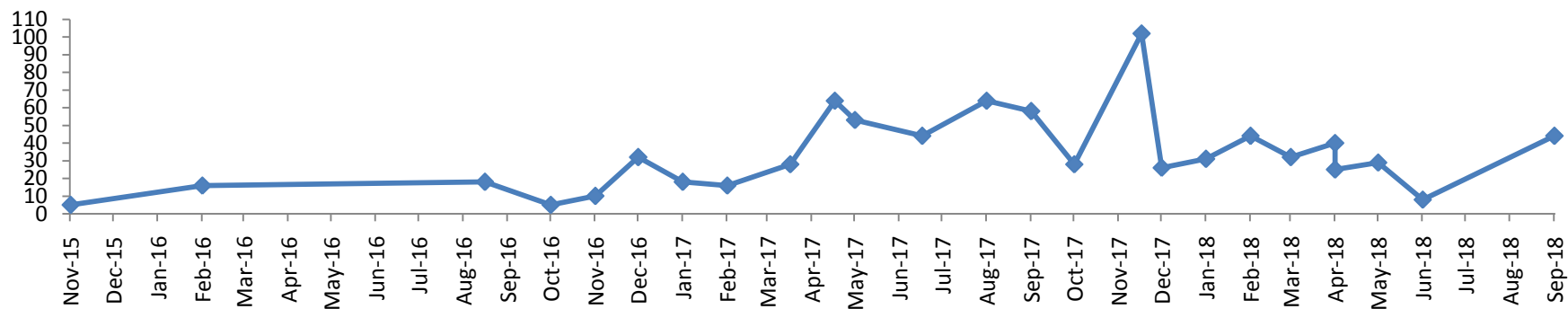
### SW-9 Chromium as Cr mg/L



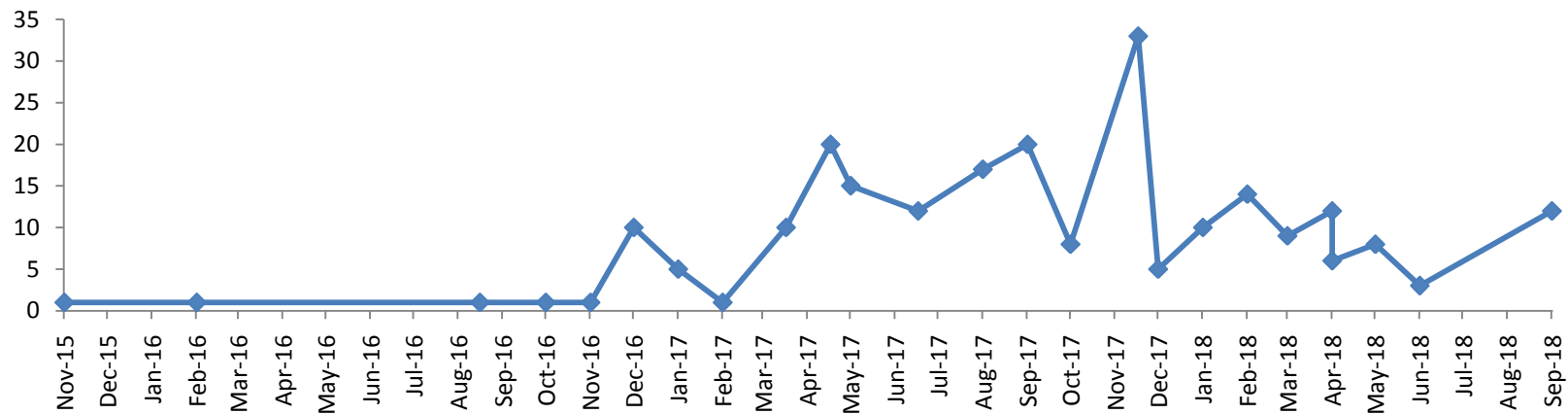
### SW-9 Sodium as Na mg/L



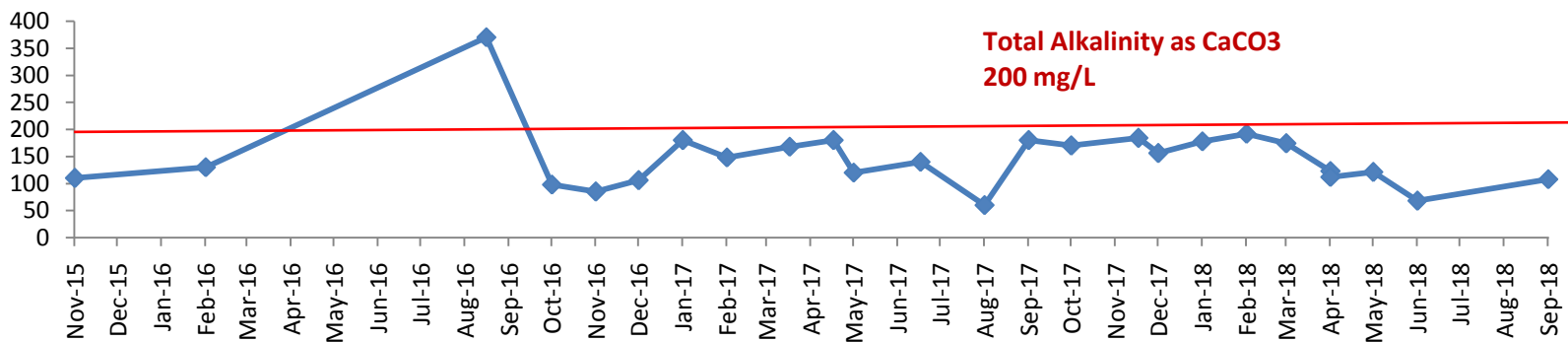
### SW-9 COD mg/L



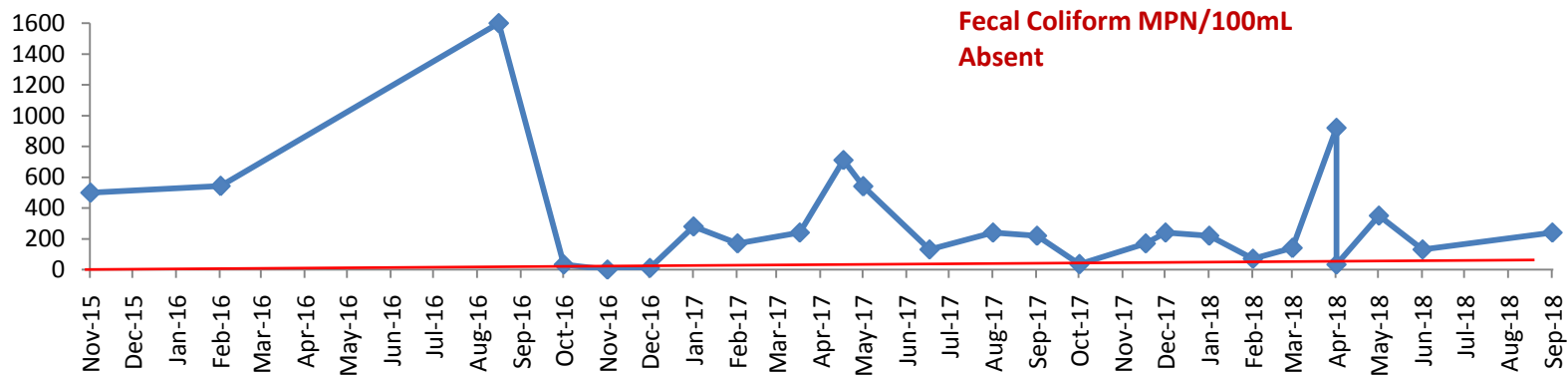
### SW-9 BOD (3 Days @ 27°C) mg/L



### SW-9 Total Alkalinity as CaCO3 mg/L

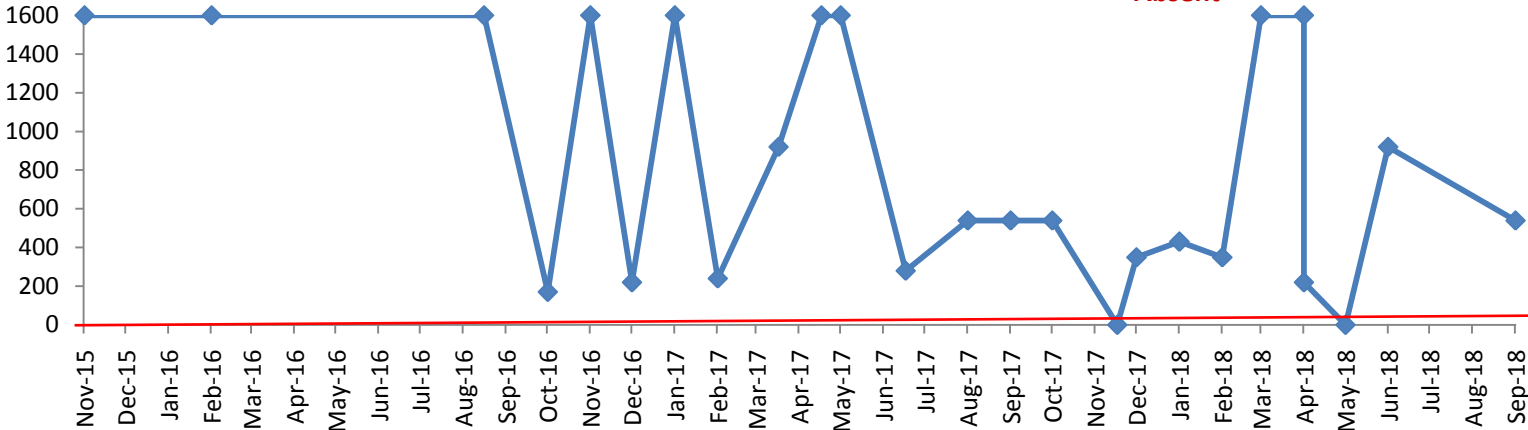


### SW-9 Fecal Coliform MPN/100 mL



### SW-9 Total Coliform MPN/100 mL

Total Coliform MPN/100mL  
Absent

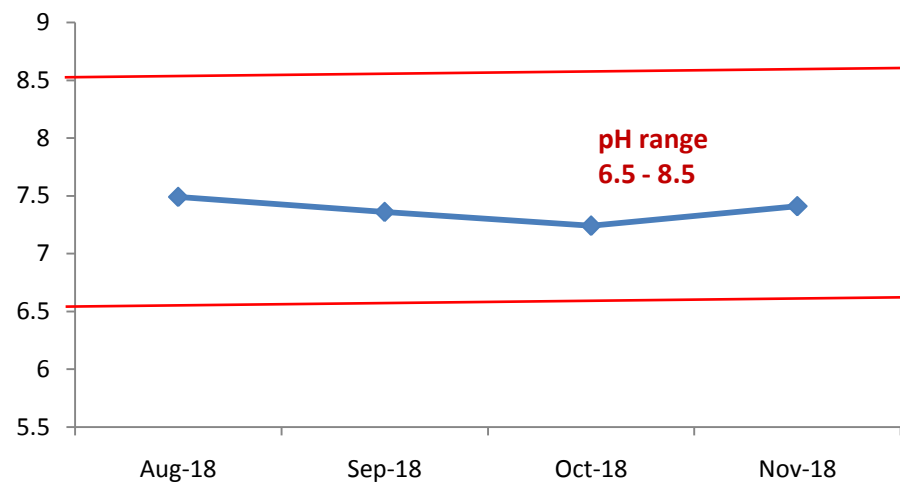




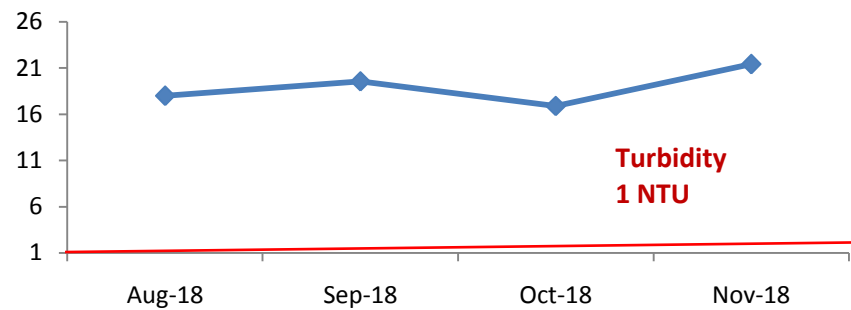
**SW:10 CETP O/L****SW:10 CETP O/L**

	<b>UNIT</b>	<b>Aug-18</b>	<b>Sep-18</b>	<b>Oct-18</b>	<b>Nov-18</b>
<b>pH</b>	----	7.49	7.36	7.24	7.41
<b>Turbidity</b>	NTU	17.98	19.55	16.88	21.4
<b>Conductivity</b>	µmho/cm	16321	11730	10352	8410
<b>Total Dissolved Solid</b>	mg/L	10802	8224	7454	5780
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	4140	3200	1720	2318
<b>Chloride as Cl</b>	mg/L	4373	3248	2759	1510
<b>Dissolved Oxygen</b>	mg/L	5.4	5.6	5.1	4.9
<b>Calcium as Ca</b>	mg/L	1348	928	376	530
<b>Chromium as Cr</b>	mg/L	0.006	0.03	0.093	0.057
<b>Sodium as Na</b>	mg/L	2620	1461	1750	810
<b>COD</b>	mg/L	290	434	262	282
<b>BOD (3 Days @ 27°C)</b>	mg/L	52	131	42	48
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	172	272	130	352
<b>Fecal Coliform</b>	MPN/100 mL	350	170	220	94
<b>Total Coliform</b>	MPN/100 mL	1600	240	> 1600	540

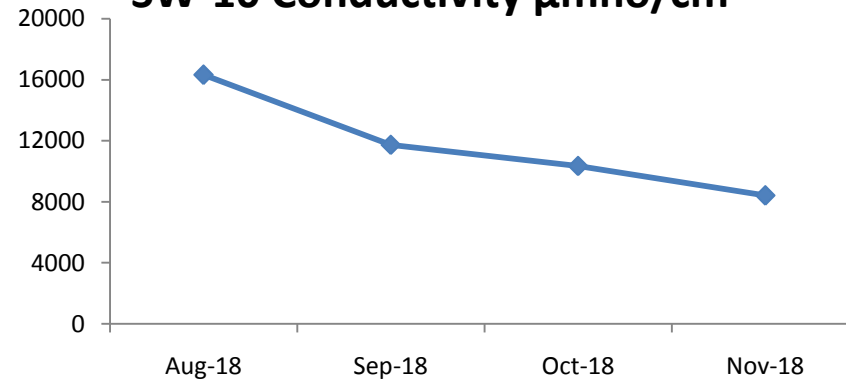
### SW-10 pH



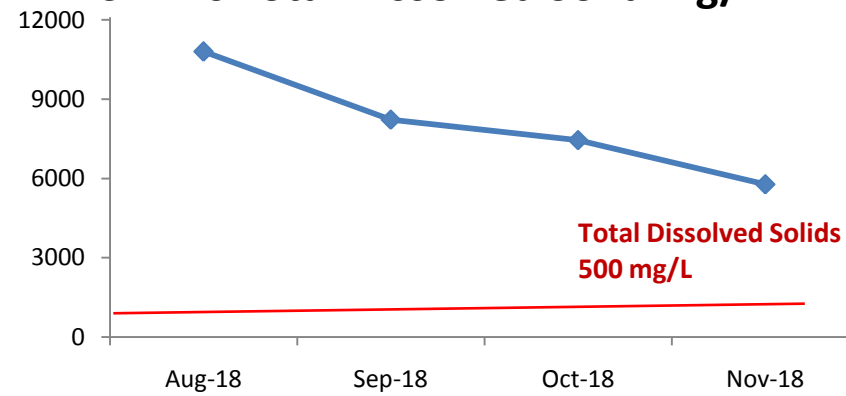
### SW-10 Turbidity NTU



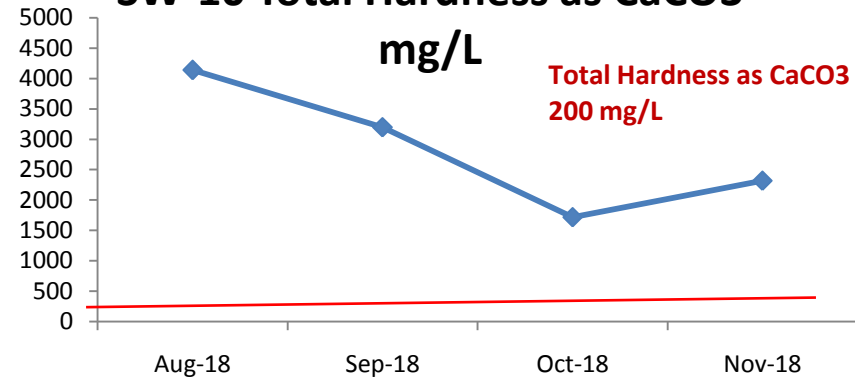
**SW-10 Conductivity  $\mu\text{mho/cm}$**



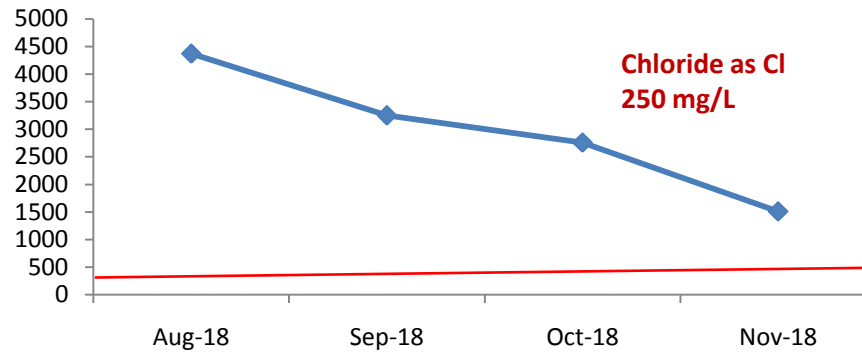
**SW-10 Total Dissolved Solid mg/L**



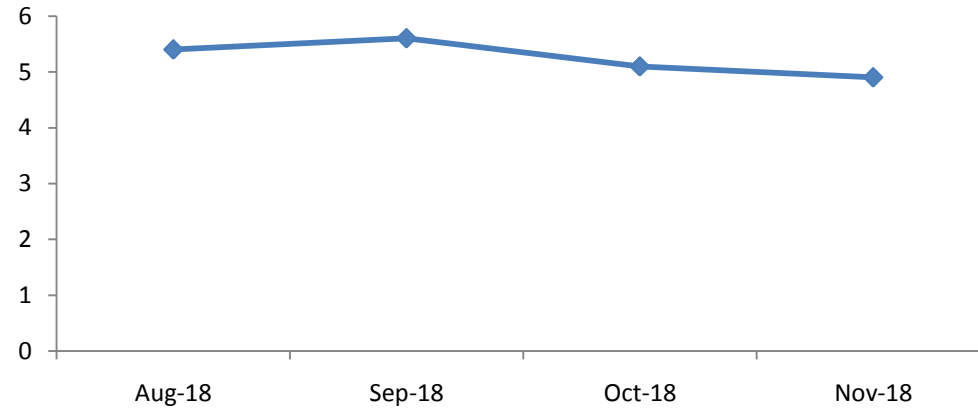
### SW-10 Total Hardness as CaCO<sub>3</sub>



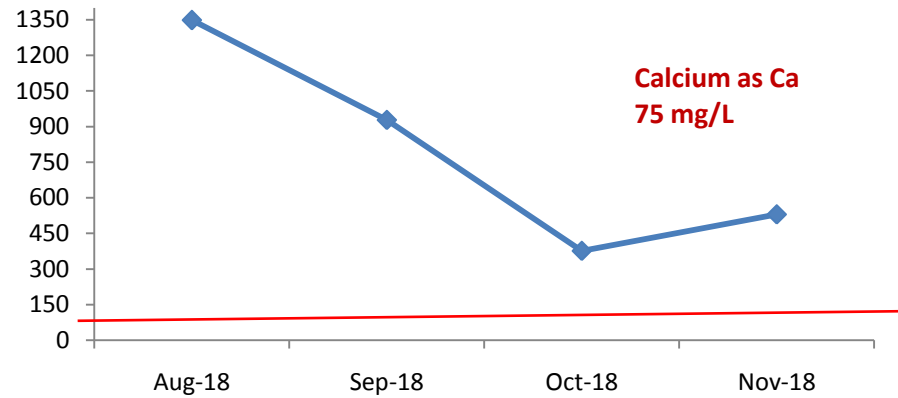
### SW-10 Chloride as Cl mg/L



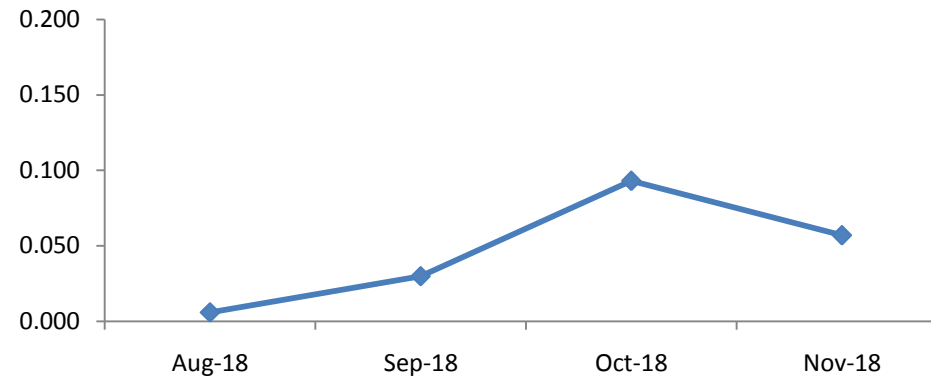
### SW-10 Dissolved Oxygen mg/L



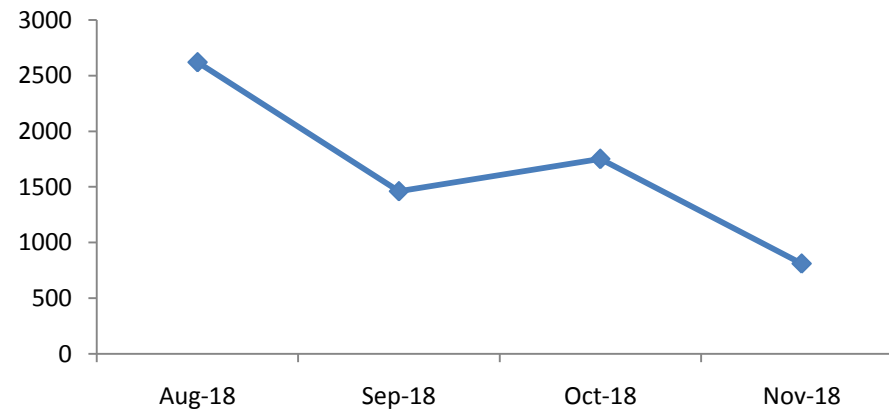
### SW-10 Calcium as Ca mg/L



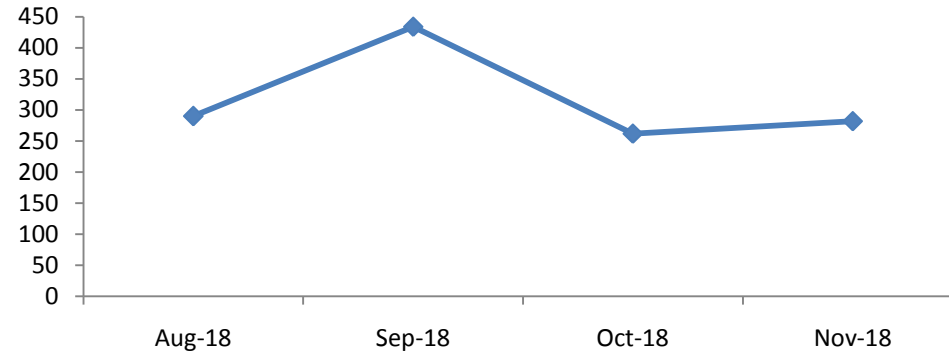
**SW-10 Chromium as Cr mg/L**



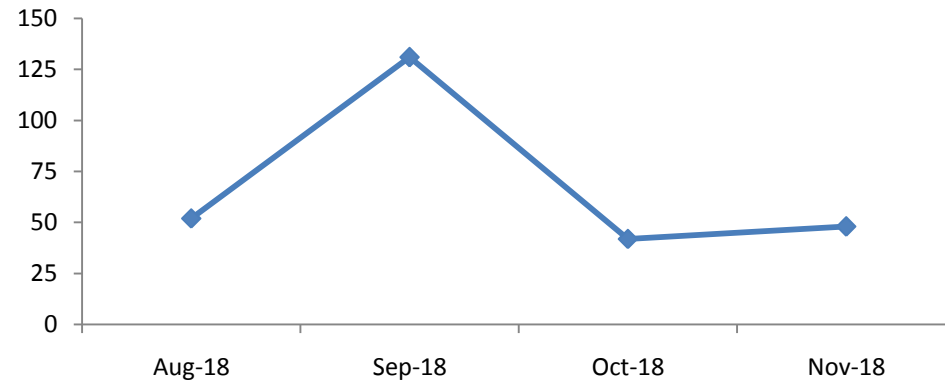
**SW-10 Sodium as Na mg/L**



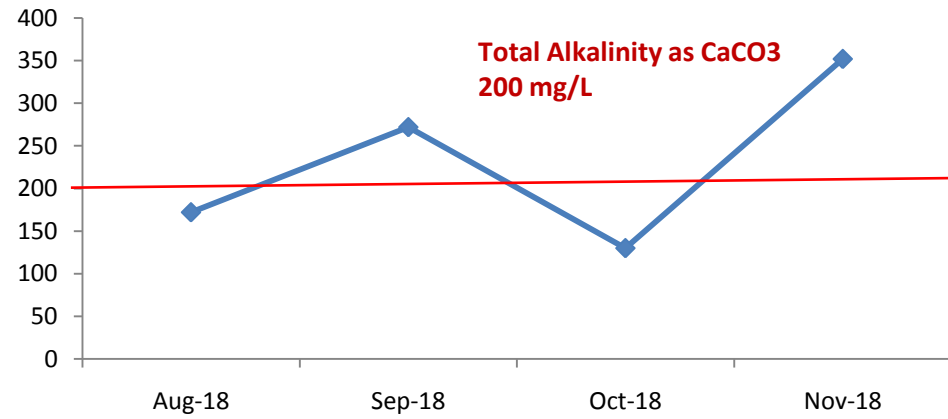
### SW-10 COD mg/L



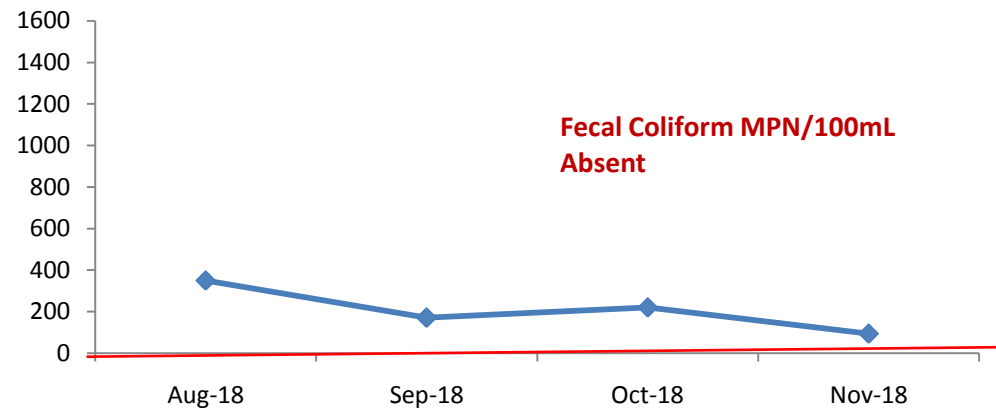
### SW-10 BOD (3 Days @ 27°C) mg/L



### SW-10 Total Alkalinity as CaCO3 mg/L

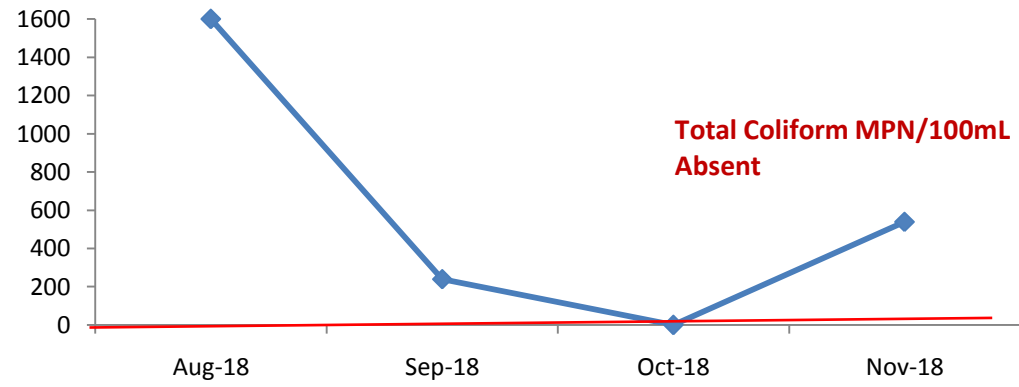


### SW-10 Fecal Coliform MPN/100 mL





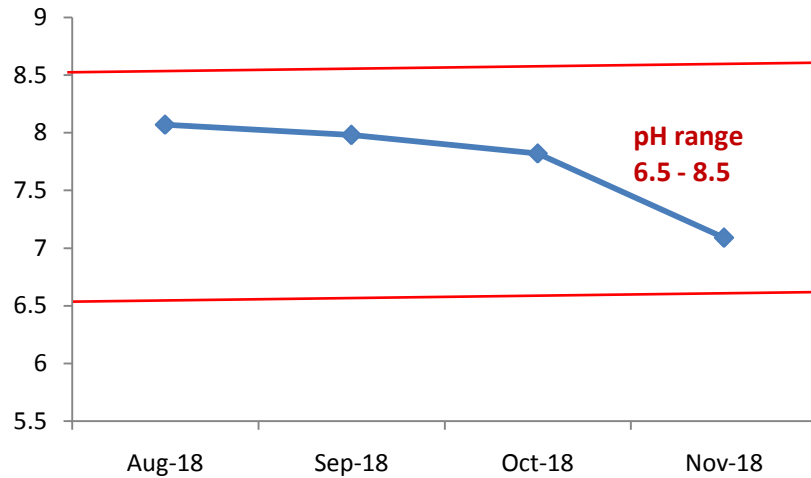
### SW-10 Total Coliform MPN/100 mL



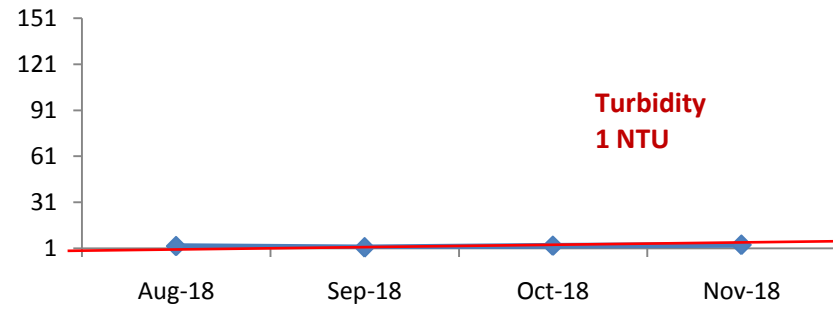
**SW:11 100 mtr. Down Strem From CETP**

<b>SW:11 100 mtr. Down Strem From CETP</b>					
	<b>UNIT</b>	<b>Aug-18</b>	<b>Sep-18</b>	<b>Oct-18</b>	<b>Nov-18</b>
<b>pH</b>	----	8.07	7.98	7.82	7.09
<b>Turbidity</b>	NTU	2.54	1.62	2.81	3.3
<b>Conductivity</b>	µmho/cm	943	1140	1231	1123
<b>Total Dissolved Solid</b>	mg/L	648	799	887	752
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	244	199	208	280
<b>Chloride as Cl</b>	mg/L	203	214	248	221
<b>Dissolved Oxygen</b>	mg/L	5.4	5	4.8	5.2
<b>Calcium as Ca</b>	mg/L	76.8	30.72	49	64
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	44	158	130	152
<b>COD</b>	mg/L	11	72	48	36
<b>BOD (3 Days @ 27°C)</b>	mg/L	4	18	14	8
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	100	120	396	116
<b>Fecal Coliform</b>	MPN/100 mL	920	220	920	350
<b>Total Coliform</b>	MPN/100 mL	> 1600	540	> 1600	920

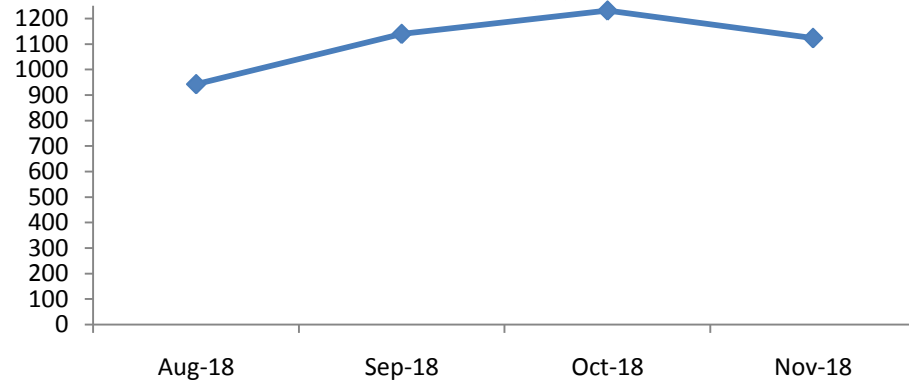
### SW-11 pH



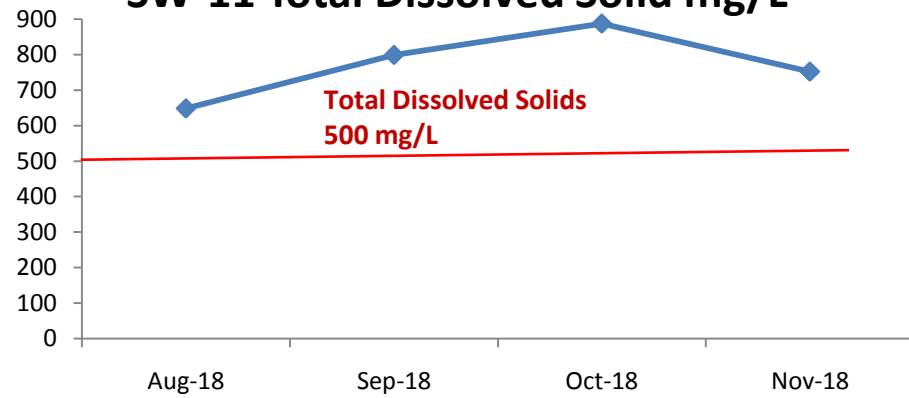
### SW-11 Turbidity NTU



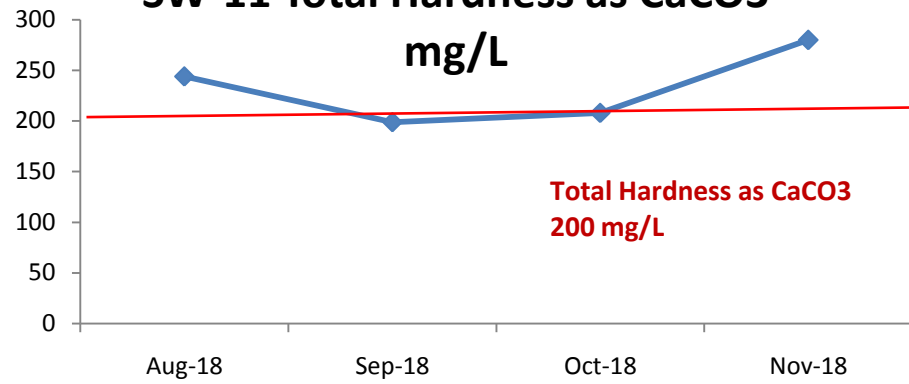
**SW-11 Conductivity  $\mu\text{mho/cm}$**



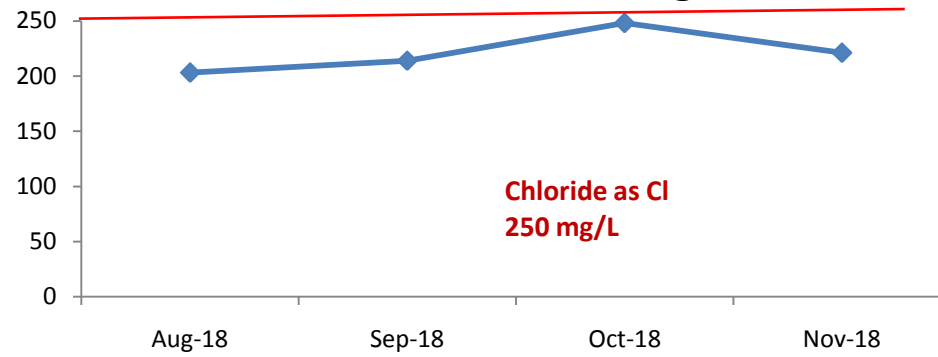
**SW-11 Total Dissolved Solid mg/L**



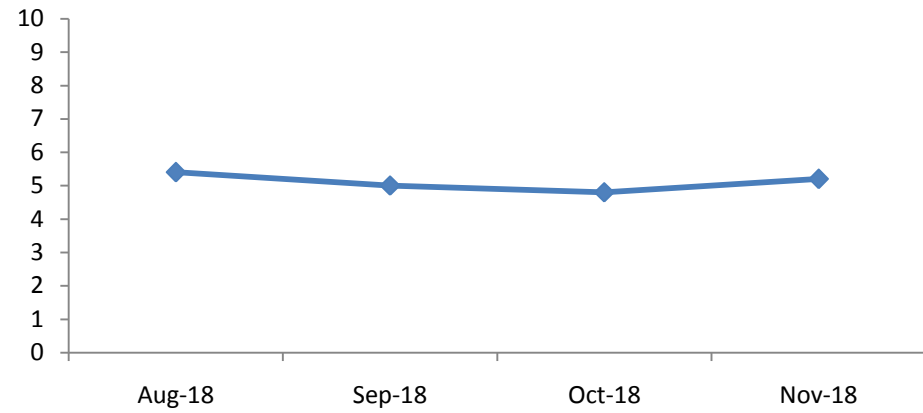
### SW-11 Total Hardness as CaCO<sub>3</sub> mg/L



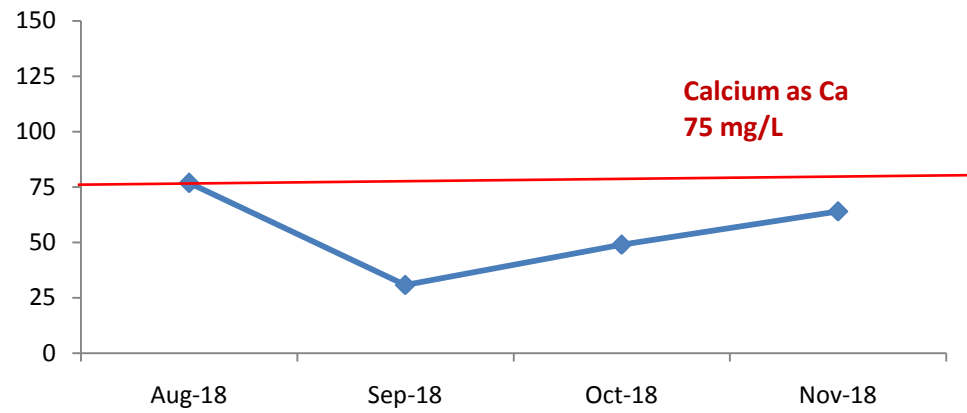
### SW-11 Chloride as Cl mg/L



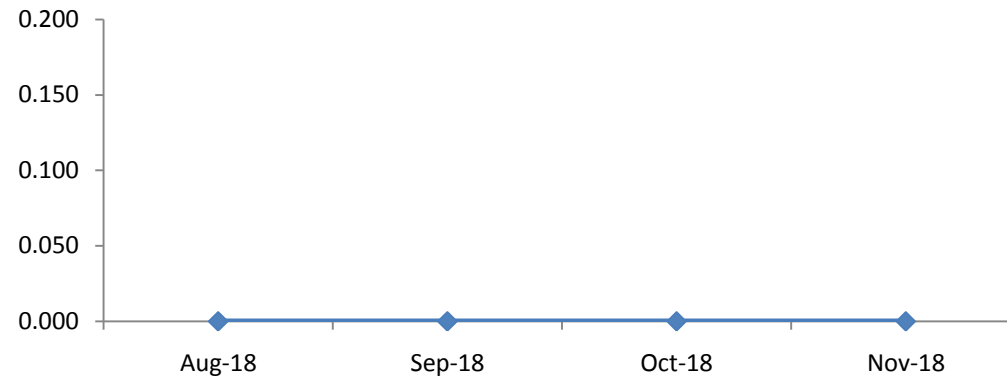
### SW-11 Dissolved Oxygen mg/L



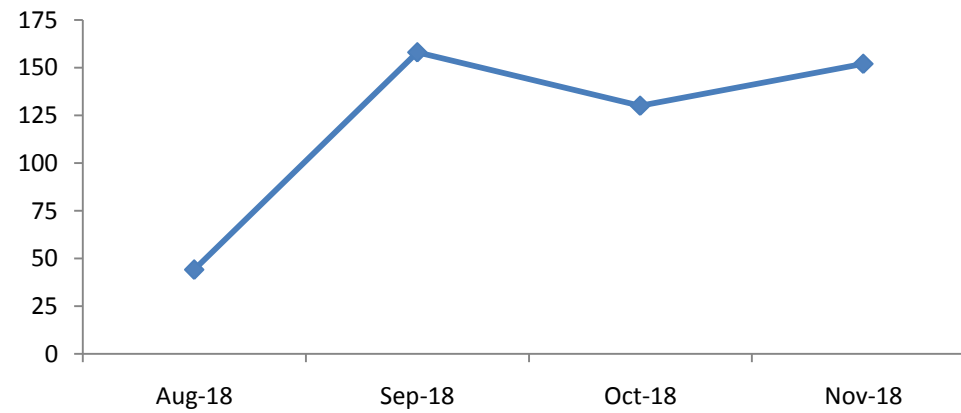
### SW-11 Calcium as Ca mg/L



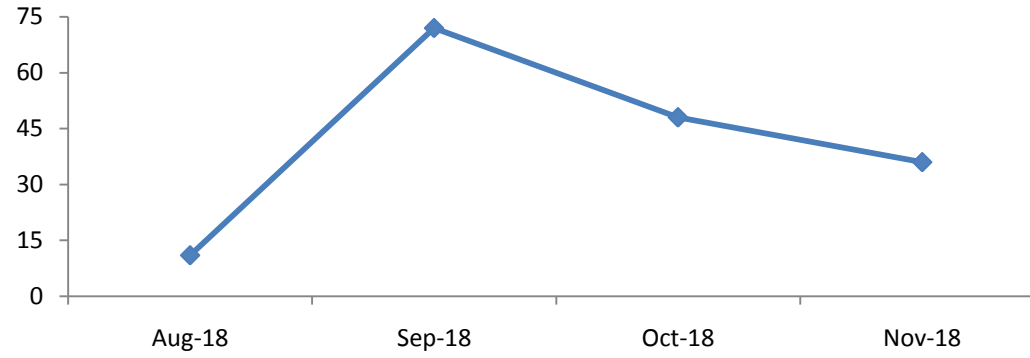
**SW-11 Chromium as Cr mg/L**



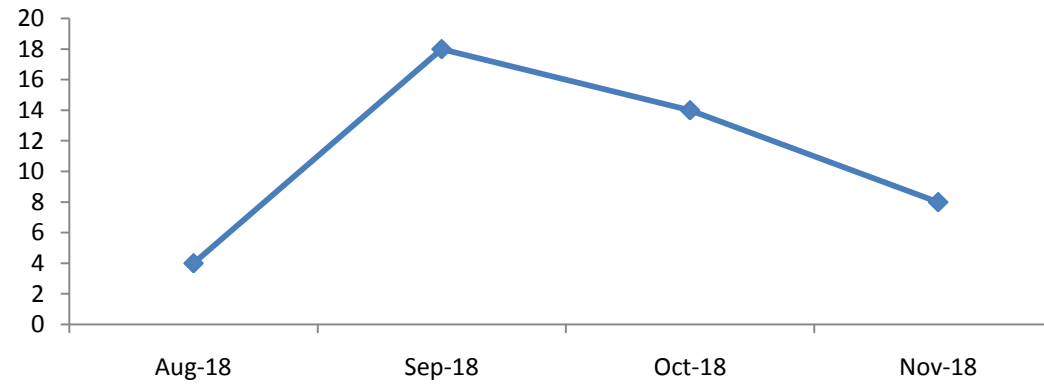
**SW-11 Sodium as Na mg/L**



**SW-11 COD mg/L**

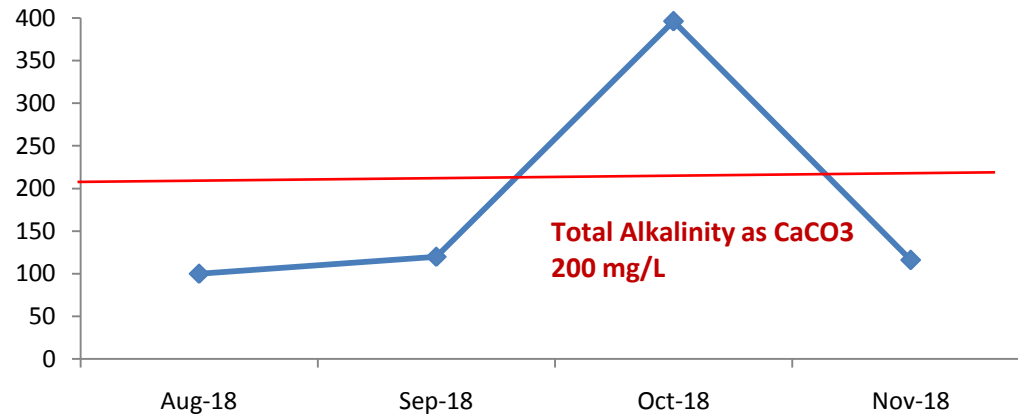


**SW-11 BOD (3 Days @ 27°C) mg/L**

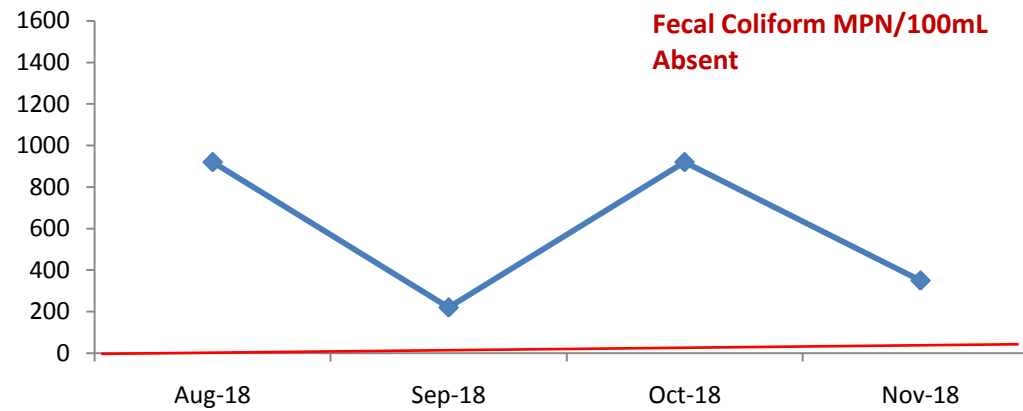




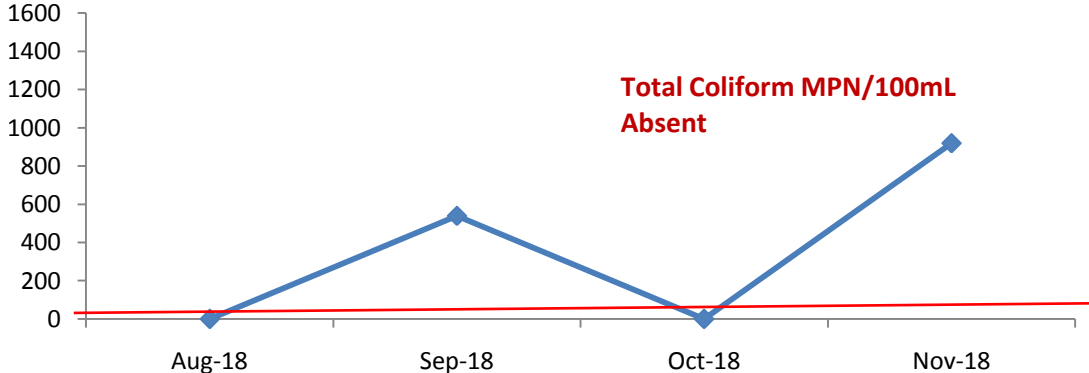
### SW-11 Total Alkalinity as CaCO3 mg/L



### SW-11 Fecal Coliform MPN/100 mL



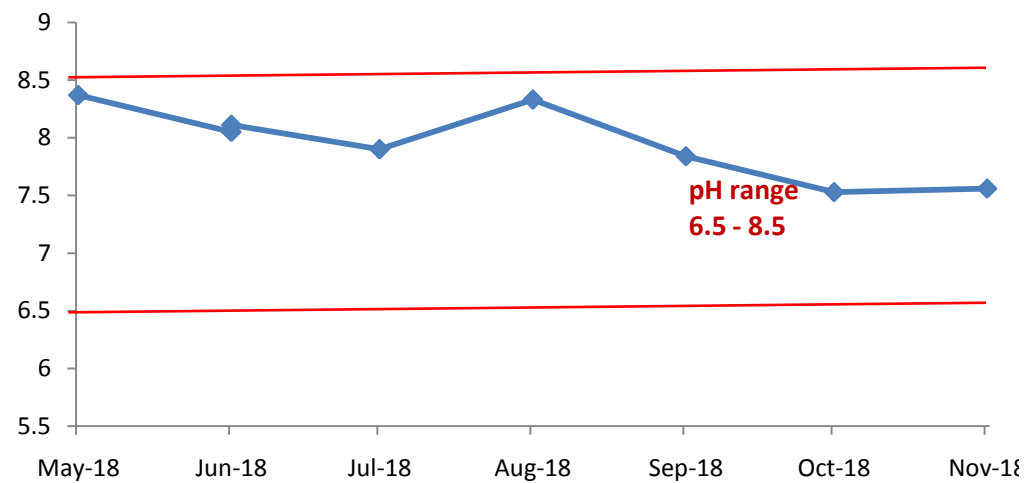
### SW-11 Total Coliform MPN/100 mL



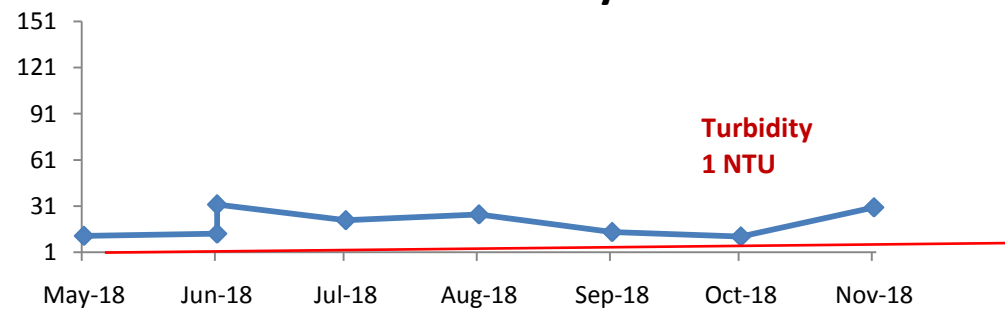
**SW-12 N.H.8 (Kolak)#**

<b>SW-12 N.H.8 (Kolak)#</b>								
	<b>UNIT</b>	<b>May-18</b>	<b>Jun-18</b>	<b>Jul-18</b>	<b>Jul-18</b>	<b>Aug-18</b>	<b>Sep-18</b>	<b>Oct-18</b>
<b>pH</b>	----	8.37	8.05	8.11	7.9	8.33	7.84	7.53
<b>Turbidity</b>	NTU	11.66	13.2	32	21.9	25.72	14.2	11.37
<b>Conductivity</b>	µmho/cm	287	301	378	430	210	621	870
<b>Total Dissolved Solid</b>	mg/L	198	212	238	280	217	404	643
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	94	114	124	168	140	210	204
<b>Chloride as Cl</b>	mg/L	12.99	16.1	23	26	120	129	160
<b>Dissolved Oxygen</b>	mg/L	5.5	6.2	5.8	5.7	6.1	5.8	5.2
<b>Calcium as Ca</b>	mg/L	26.4	27.1	31.2	26.4	36	44	49.6
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	10	12	18	20	35.54	59	130
<b>COD</b>	mg/L	11	16	26	32	< 5.0	13	46
<b>BOD (3 Days @ 27°C)</b>	mg/L	1	3	6	8	< 1.0	2	12
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	100	110	128	139	138	144	136
<b>Fecal Coliform</b>	MPN/100 mL	170	210	120	170	970	210	920
<b>Total Coliform</b>	MPN/100 mL	350	540	430	540	350	> 1600	1600

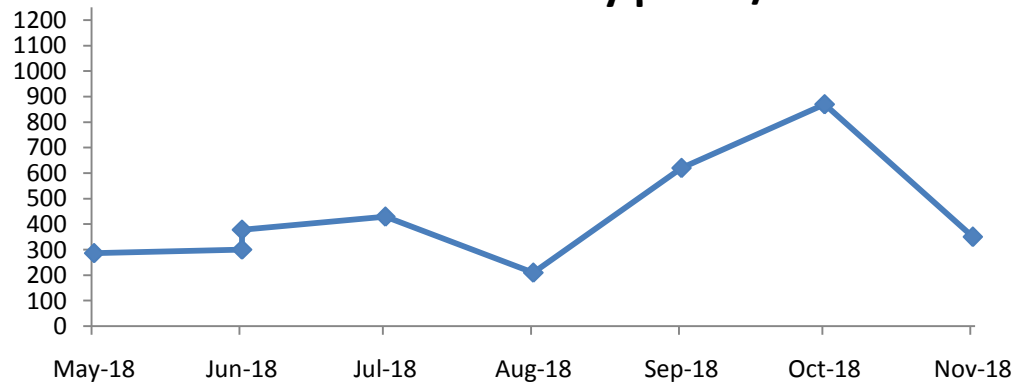
### SW-12 pH



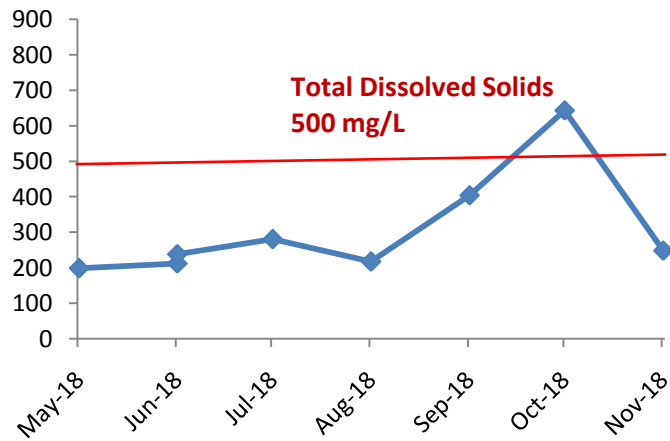
### SW-12 Turbidity NTU



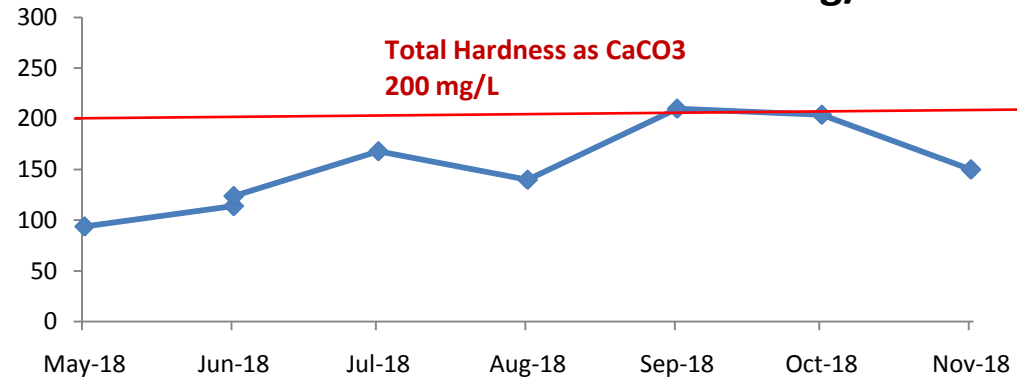
### SW-12 Conductivity $\mu\text{mho/cm}$



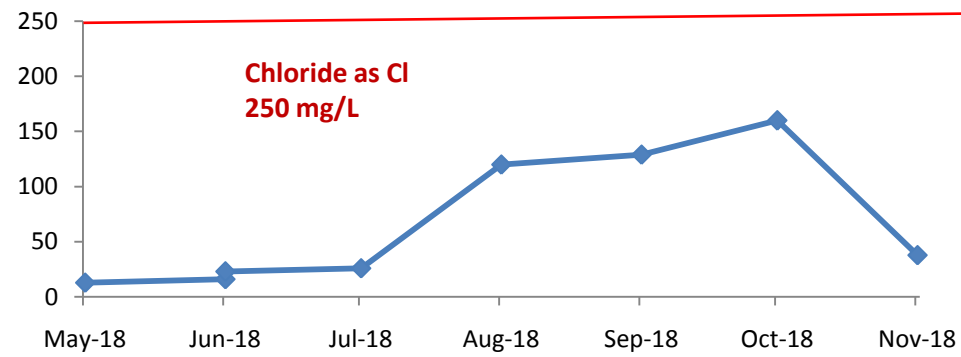
### SW-12 Total Dissolved Solid mg/L



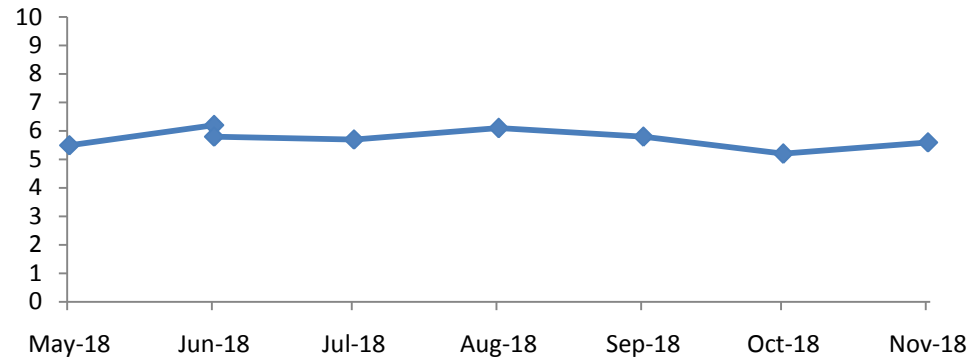
### SW-12 Total Hardness as CaCO3 mg/L



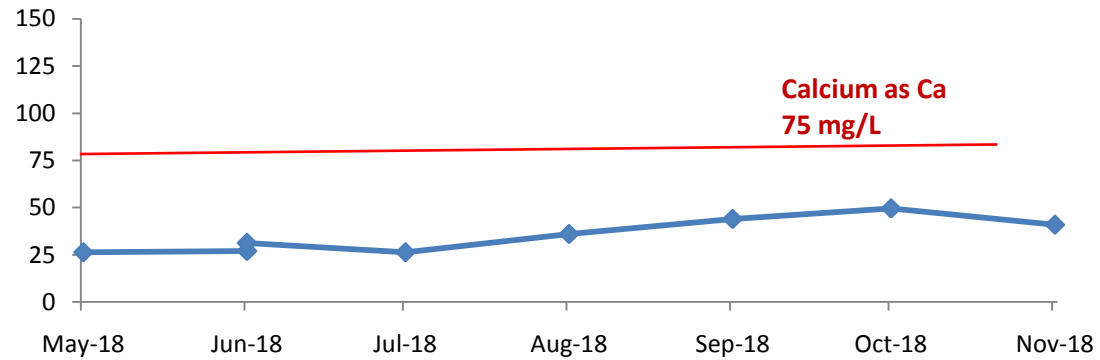
### SW-12 Chloride as Cl mg/L



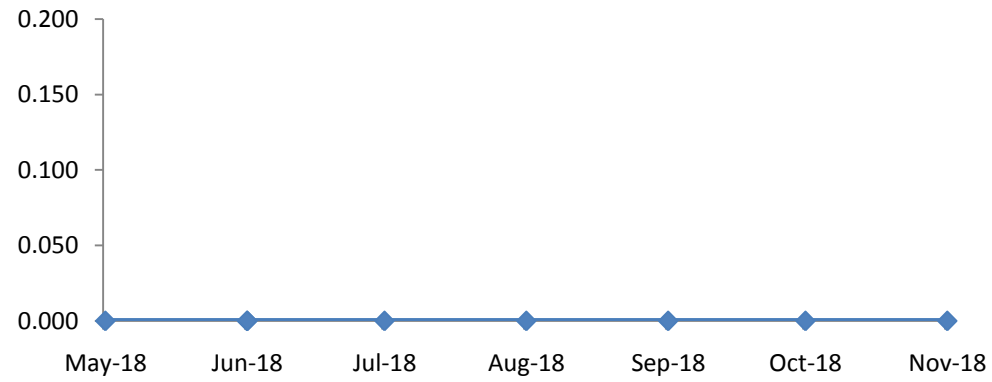
### SW-12 Dissolved Oxygen mg/L



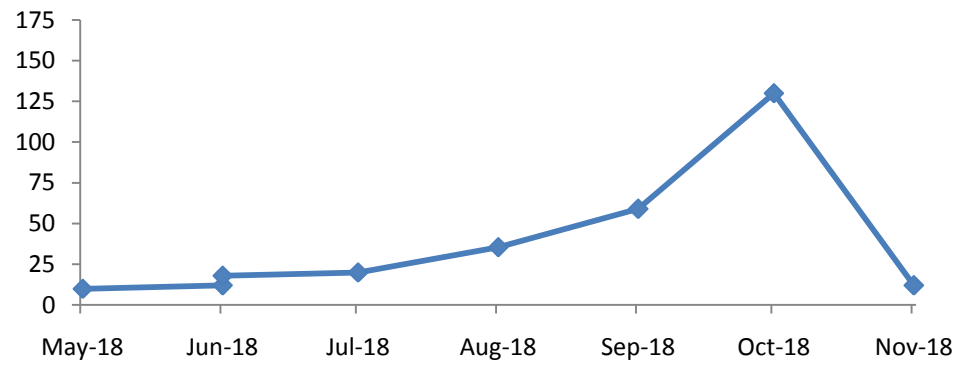
### SW-12 Calcium as Ca mg/L



### SW-12 Chromium as Cr mg/L

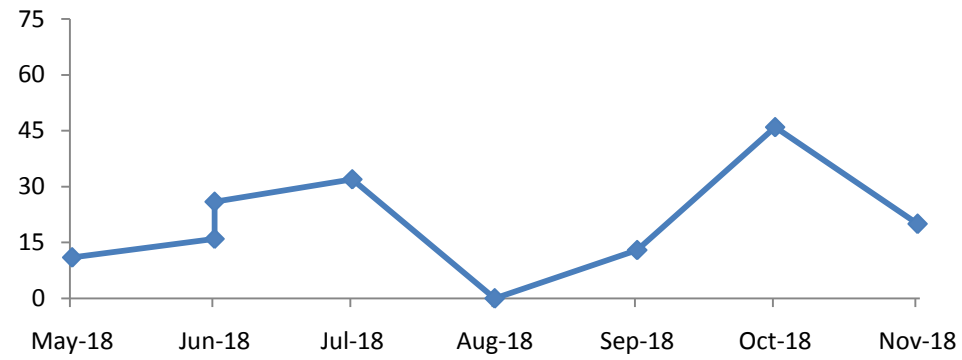


### SW-12 Sodium as Na mg/L

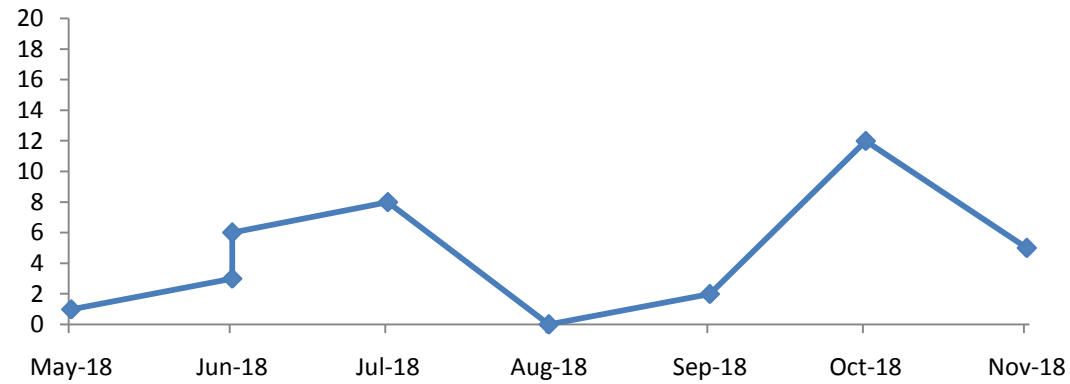




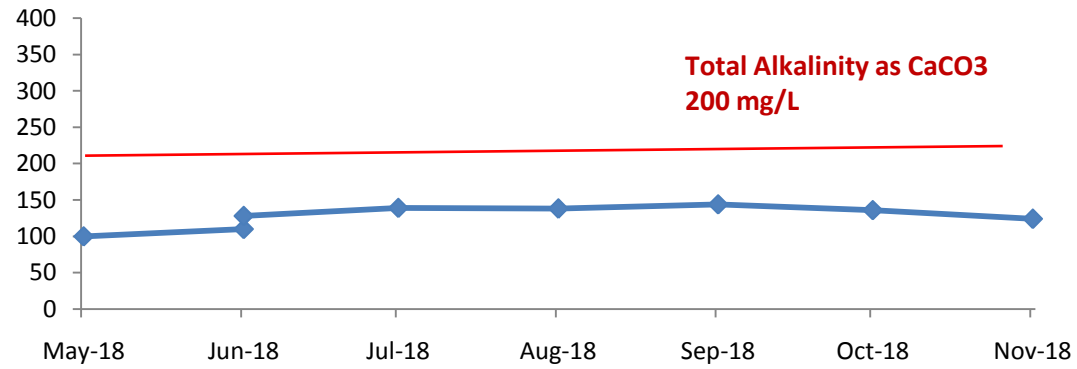
### SW-12 COD mg/L



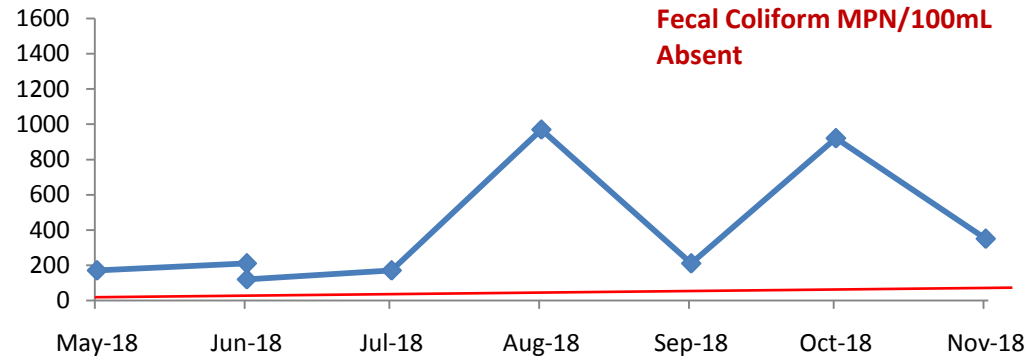
### SW-12 BOD (3 Days @ 27°C) mg/L



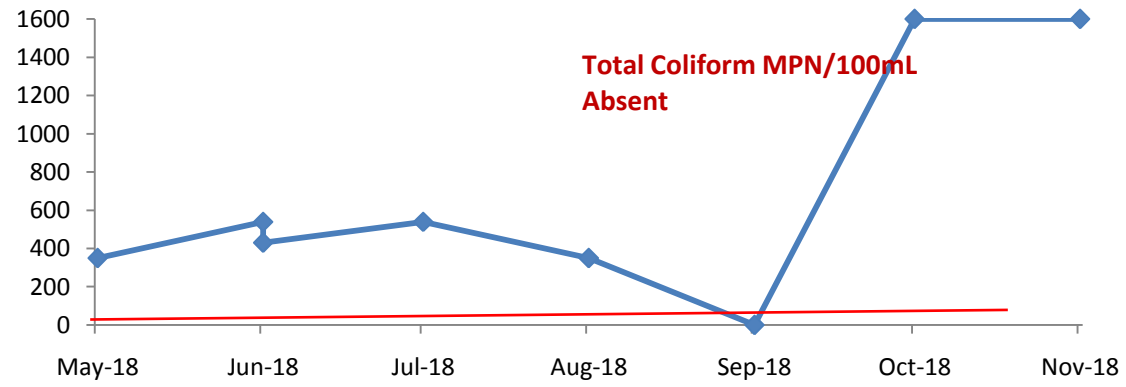
### SW-12 Total Alkalinity as CaCO3 mg/L



### SW-12 Fecal Coliform MPN/100 mL



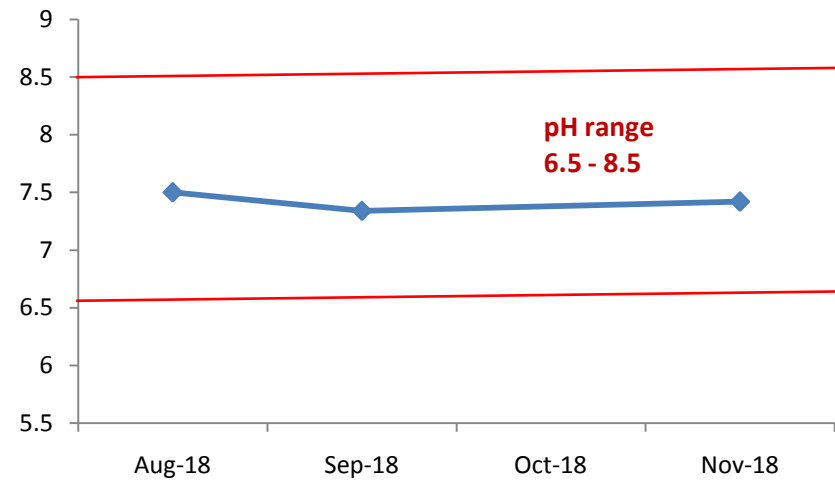
### SW-12 Total Coliform MPN/100 mL



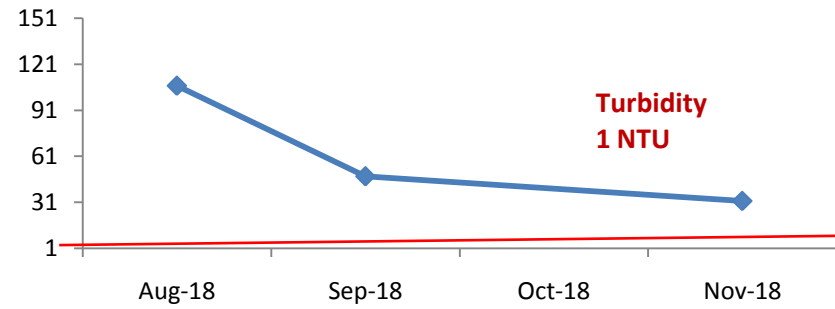
**SW:13 O/L of GHCL Bhilad****SW:13 O/L of GHCL Bhilad**

	<b>UNIT</b>	<b>Aug-18</b>	<b>Sep-18</b>	<b>Nov-18</b>
<b>pH</b>	----	7.5	7.34	7.42
<b>Turbidity</b>	NTU	107	48	32
<b>Conductivity</b>	µmho/cm	2863	1748	2098
<b>Total Dissolved Solid</b>	mg/L	1868	1240	1410
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	604	310	256
<b>Chloride as Cl</b>	mg/L	331	211	249
<b>Dissolved Oxygen</b>	mg/L	3.9	4.8	4.4
<b>Calcium as Ca</b>	mg/L	70.4	84.8	51
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	0.075
<b>Sodium as Na</b>	mg/L	593	170	110
<b>COD</b>	mg/L	276	183	316
<b>BOD (3 Days @ 27°C)</b>	mg/L	44	38	65
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	630	368	210
<b>Fecal Coliform</b>	MPN/100 mL	540	350	220
<b>Total Coliform</b>	MPN/100 mL	1600	920	540

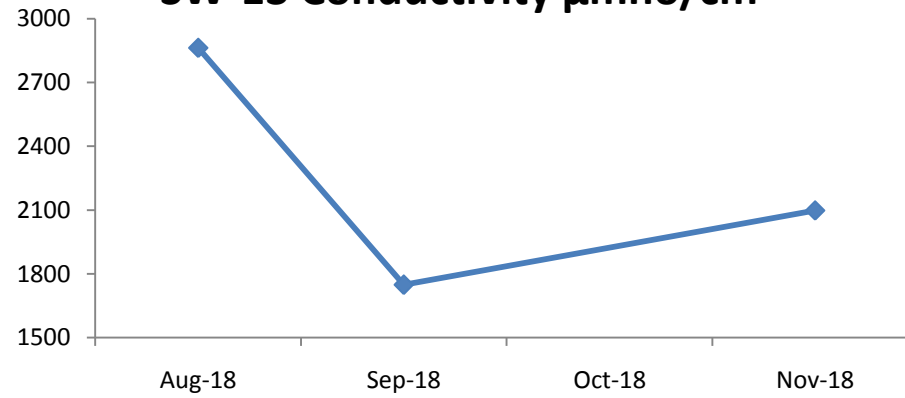
### SW-13 pH



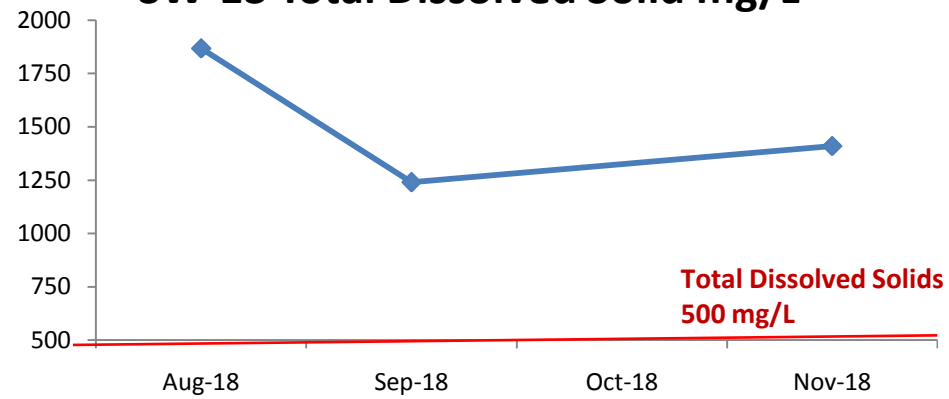
### SW-13 Turbidity NTU



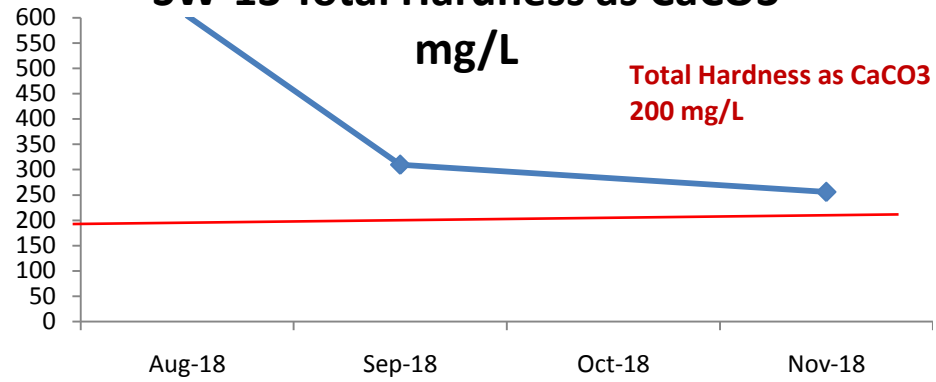
**SW-13 Conductivity  $\mu\text{mho/cm}$**



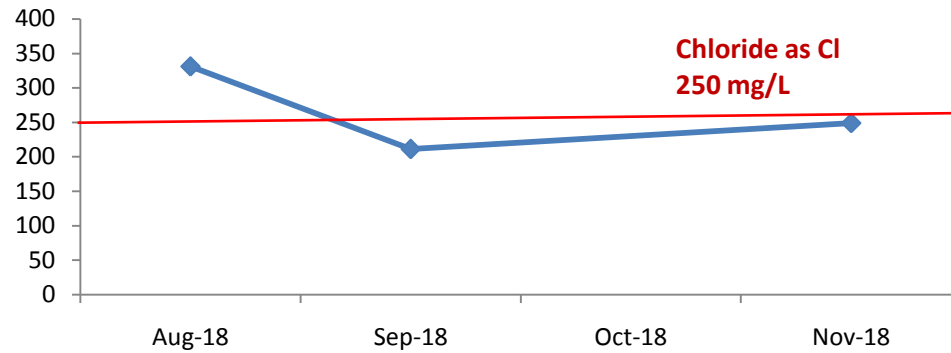
**SW-13 Total Dissolved Solid mg/L**



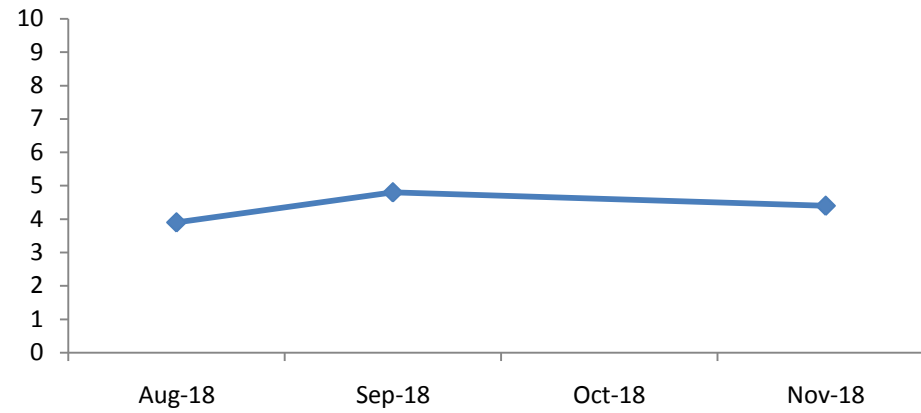
### SW-13 Total Hardness as CaCO<sub>3</sub>



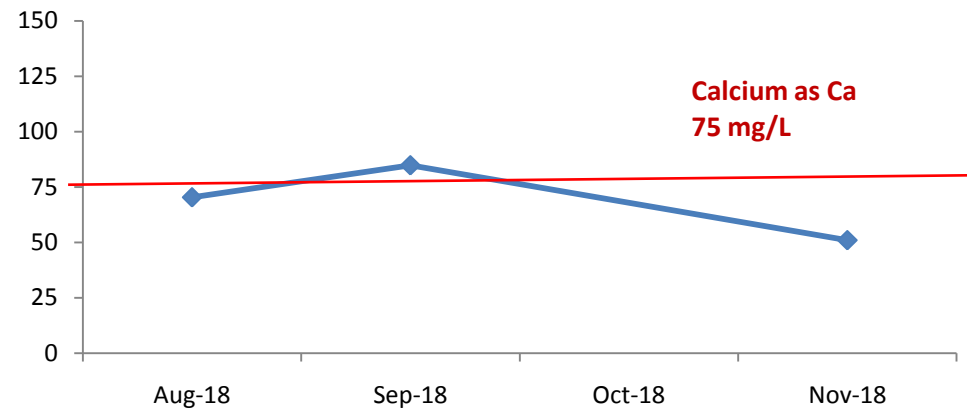
### SW-13 Chloride as Cl mg/L



### SW-13 Dissolved Oxygen mg/L

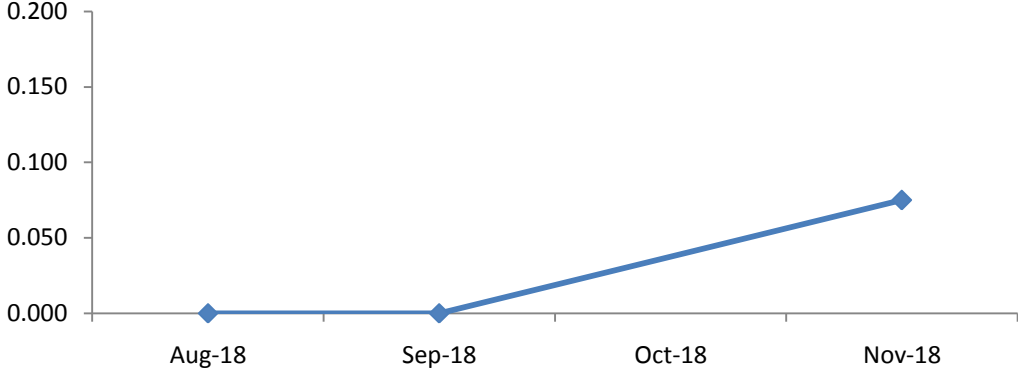


### SW-13 Calcium as Ca mg/L

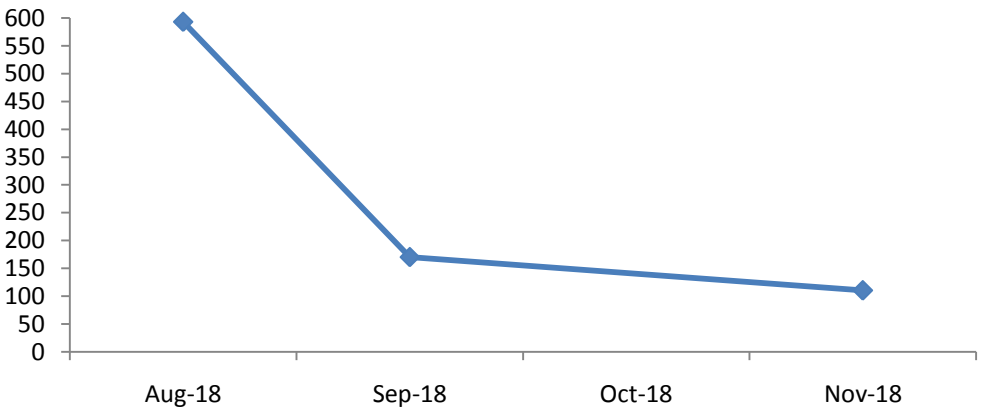




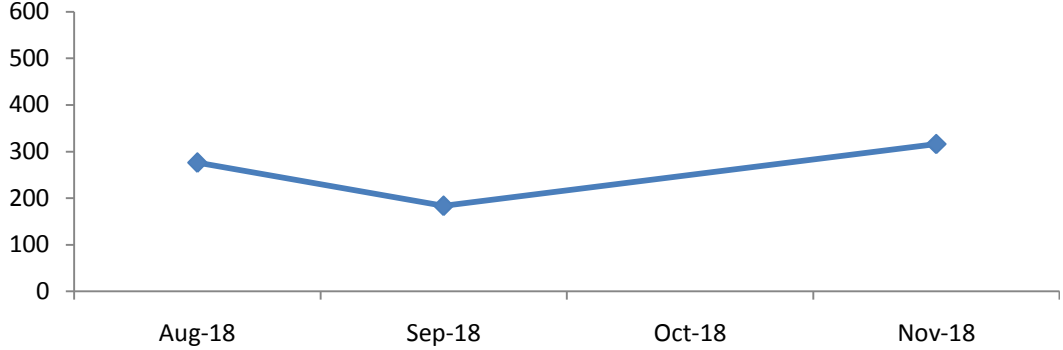
**SW-13 Chromium as Cr mg/L**



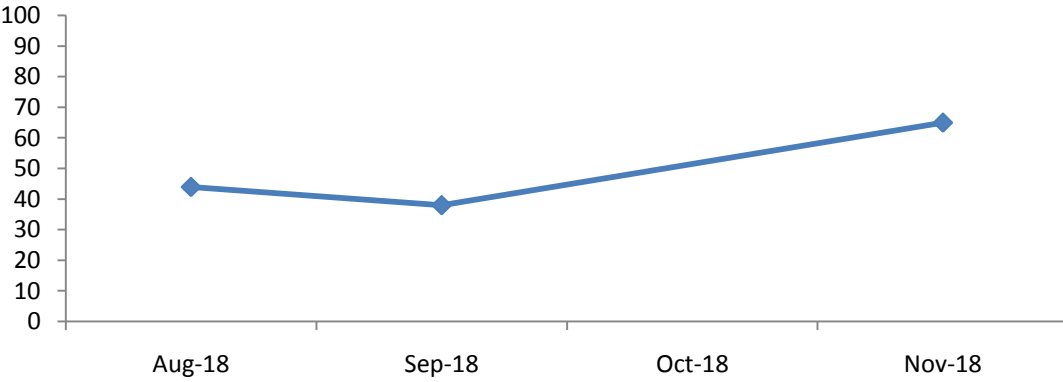
**SW-13 Sodium as Na mg/L**



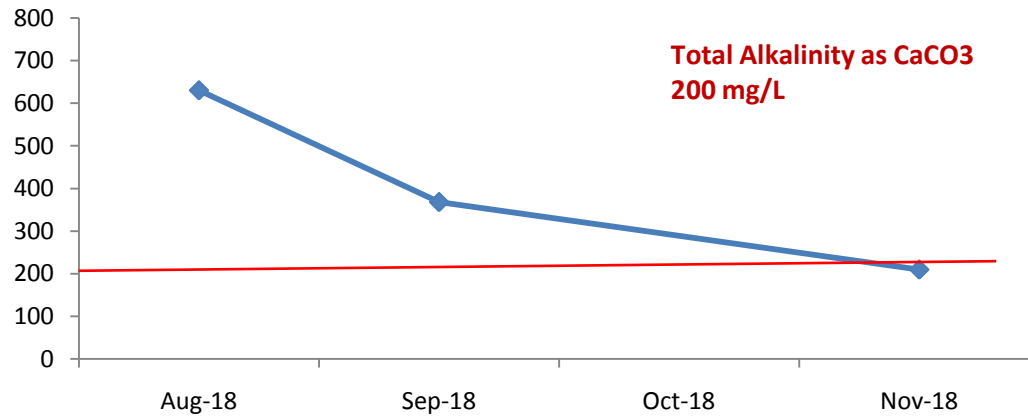
### SW-13 COD mg/L



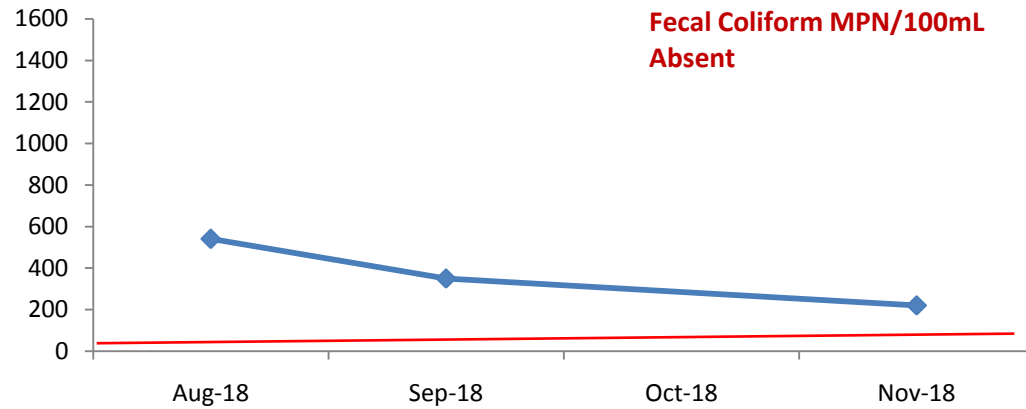
### SW-13 BOD (3 Days @ 27°C) mg/L



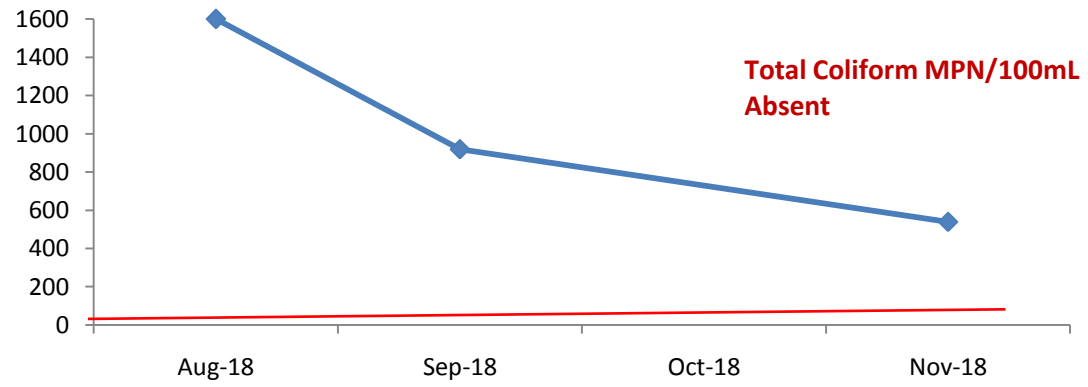
### SW-13 Total Alkalinity as CaCO3 mg/L



### SW-13 Fecal Coliform MPN/100 mL



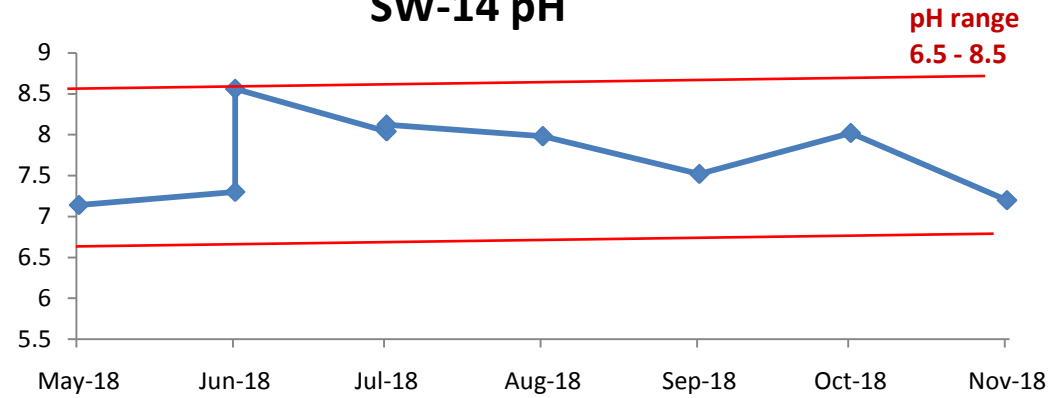
### SW-13 Total Coliform MPN/100 mL



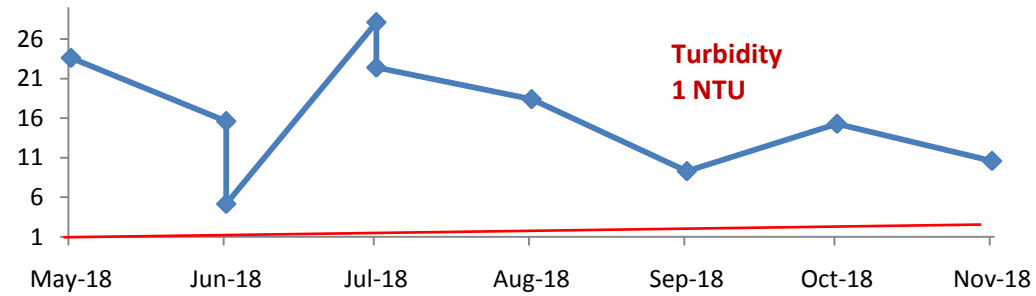
**SW-14 Pataliya Bridge(Kolak)#****SW-14 Pataliya Bridge(Kolak)#**

	<b>UNIT</b>	<b>May-18</b>	<b>Jun-18</b>	<b>Jun-18</b>	<b>Jul-18</b>	<b>Jul-18</b>	<b>Aug-18</b>	<b>Sep-18</b>	<b>Oct-18</b>	<b>Nov-18</b>
<b>pH</b>	----	7.14	7.3	8.56	8.04	8.12	7.98	7.52	8.02	7.2
<b>Turbidity</b>	NTU	23.63	15.6	5.18	28.1	22.4	18.4	9.3	15.3	10.6
<b>Conductivity</b>	µmho/cm	2137	990	240	26890	13264	269	627	395	926
<b>Total Dissolved Solid</b>	mg/L	1490	712	168	16980	9910	187	445	285	610
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	318	246	96	2690	3890	130	152	137	202
<b>Chloride as Cl</b>	mg/L	624	147.95	16.6	5498	4158	108	114	30	125
<b>Dissolved Oxygen</b>	mg/L	4.8	5.8	6.2	5.6	5.8	6.2	5.4	4.8	4.4
<b>Calcium as Ca</b>	mg/L	60.8	56	27.2	296	396	30	40.1	32	48.8
<b>Chromium as Cr</b>	mg/L	< 0.005	0.01	< 0.005	0.21	0.14	< 0.005	< 0.005	0.018	0.014
<b>Sodium as Na</b>	mg/L	310	160	6.4	2614	2030	25	58.9	20.84	80
<b>COD</b>	mg/L	99	56	< 5.0	104	42	48	< 5.0	38	56
<b>BOD (3 Days @ 27°C)</b>	mg/L	28.75	18	< 1.0	38	46	14	< 1.0	12	18
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	236	220	112	192	338	130	160	156	218
<b>Fecal Coliform</b>	MPN/100 mL	240	220	94	350	220	34	120	350	130
<b>Total Coliform</b>	MPN/100 mL	1600	540	350	920	1600	170	430	> 1600	540

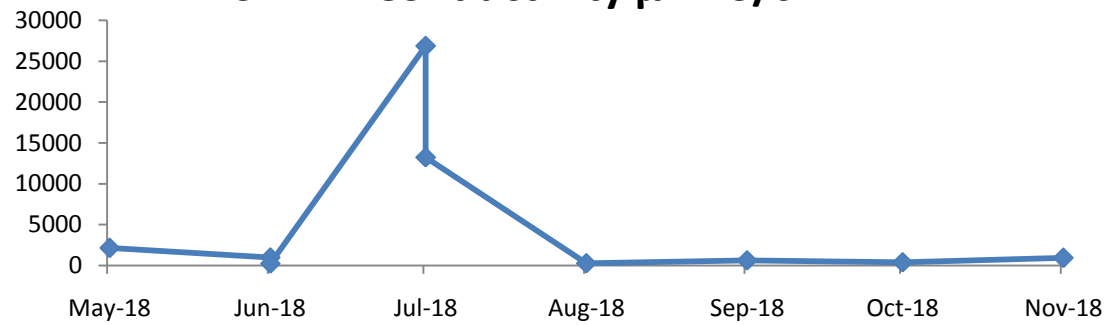
### SW-14 pH



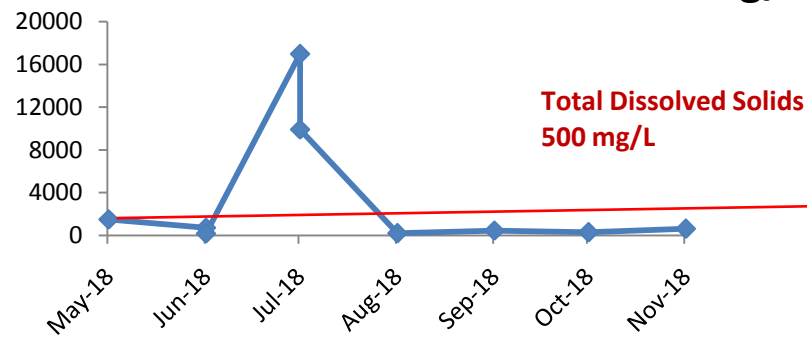
### SW-14 Turbidity NTU



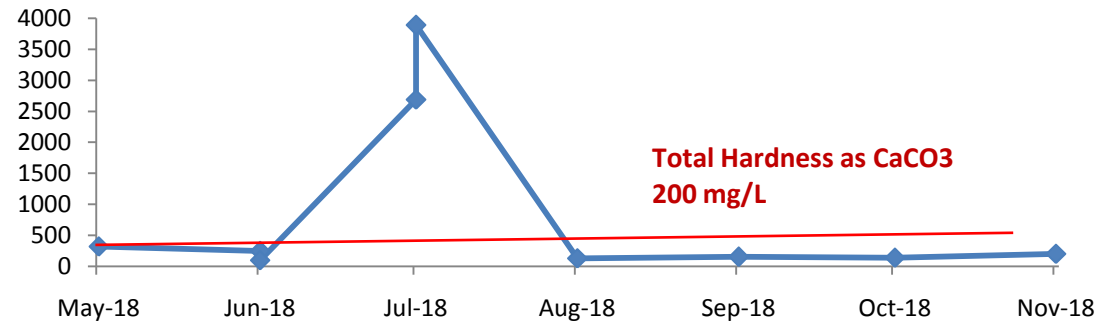
### SW-14 Conductivity $\mu\text{mho/cm}$



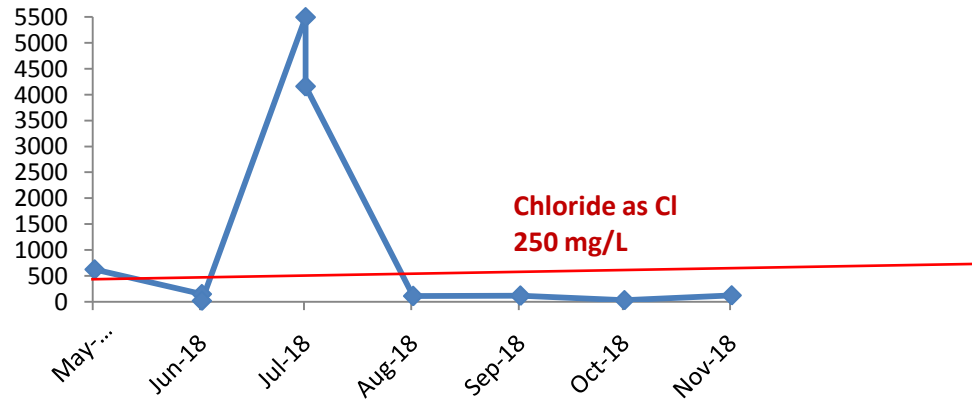
### SW-14 Total Dissolved Solid mg/L



### SW-14 Total Hardness as CaCO3 mg/L

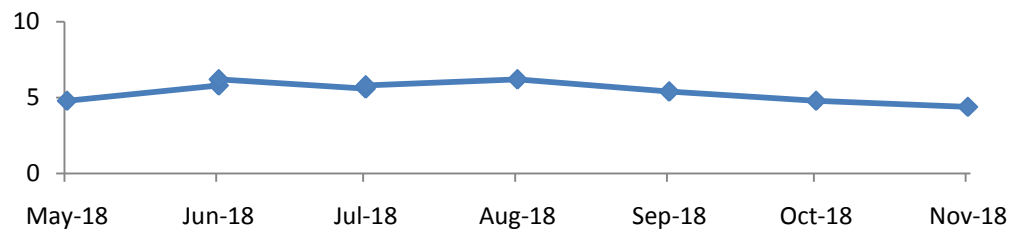


### SW-14 Chloride as Cl mg/L

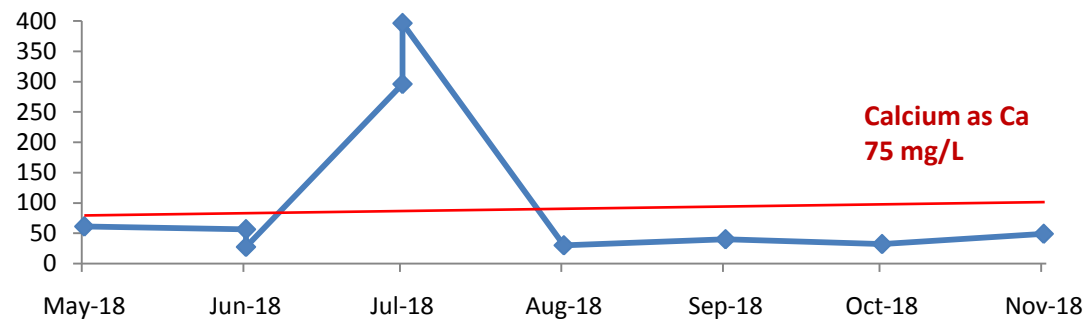




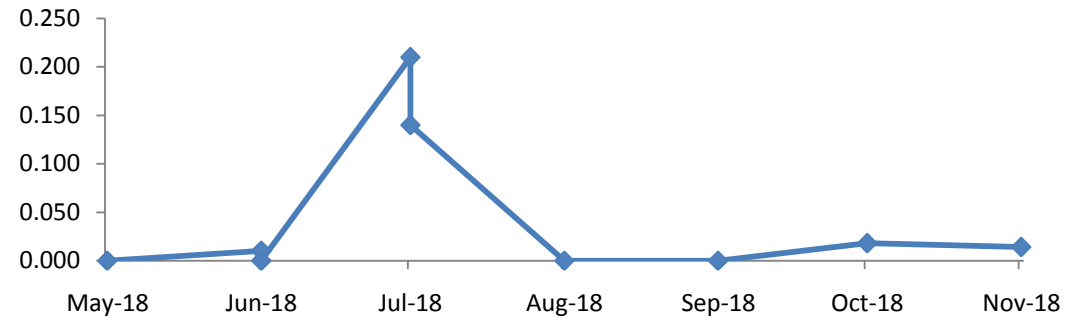
### SW-14 Dissolved Oxygen mg/L



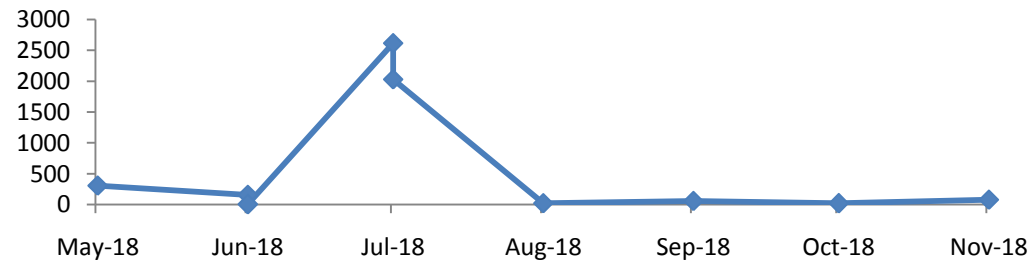
### SW-14 Calcium as Ca mg/L



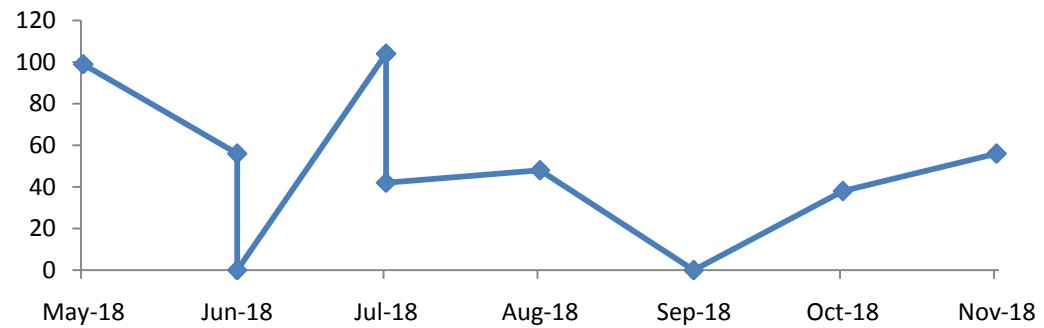
### SW-14 Chromium as Cr mg/L



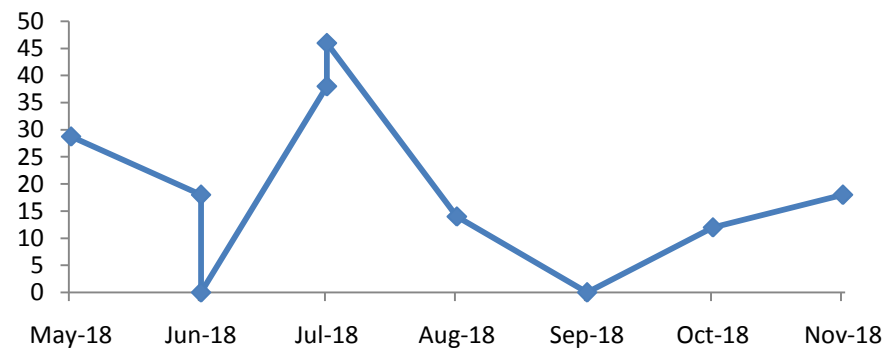
### SW-14 Sodium as Na mg/L



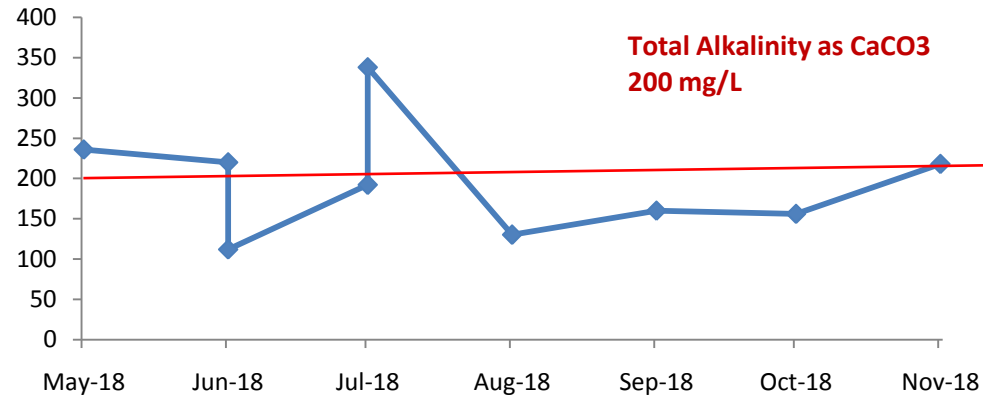
### SW-14 COD mg/L



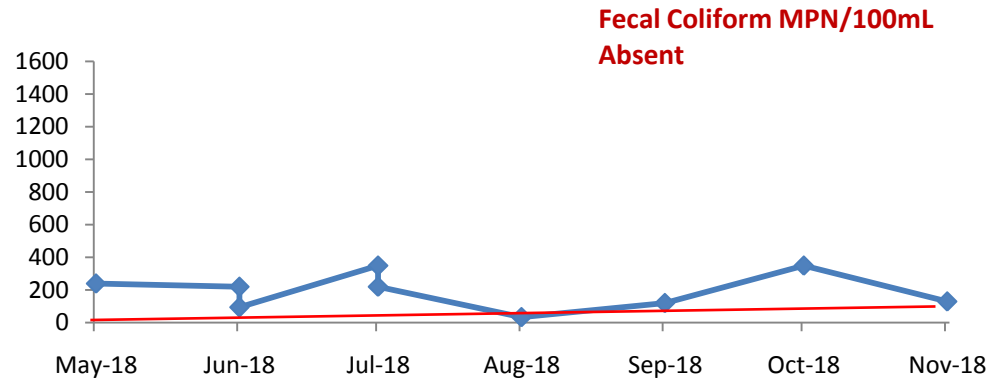
### SW-14 BOD (3 Days @ 27°C) mg/L



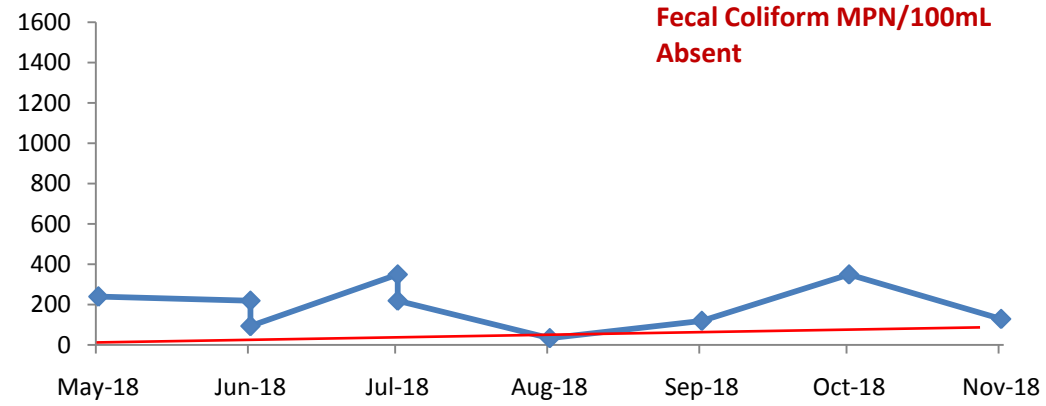
### SW-14 Total Alkalinity as CaCO3 mg/L



### SW-14 Fecal Coliform MPN/100 mL



### SW-14 Fecal Coliform MPN/100 mL

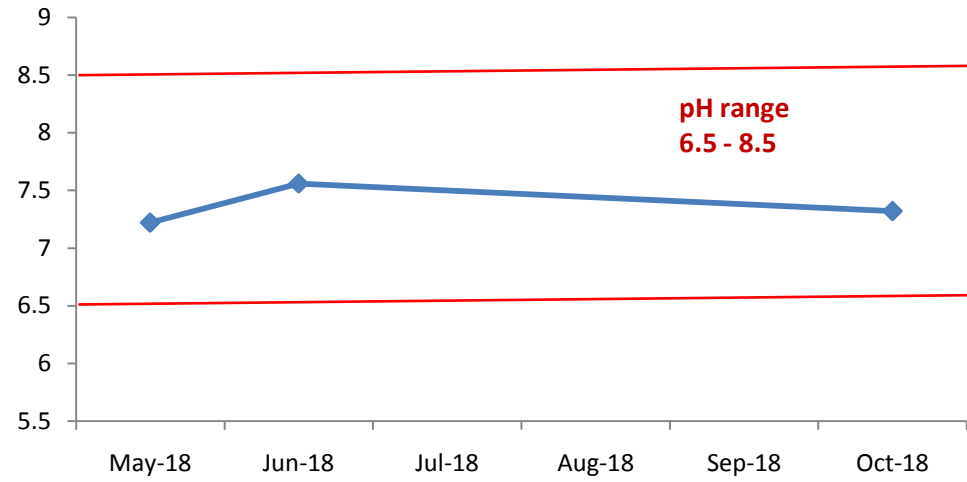


**SW:15 Koteswar Temple (Kolak)#**

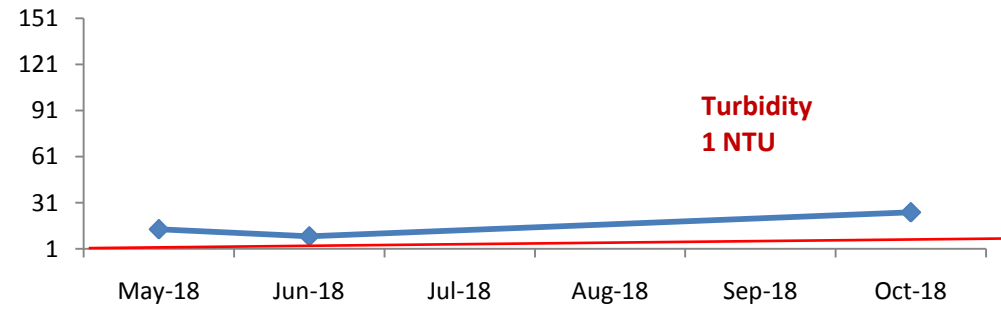
SW:15 Koteswar Temple (Kolak)#

	<b>UNIT</b>	<b>May-18</b>	<b>1St Visit</b>	<b>Oct-18</b>
<b>pH</b>	----	7.22	7.56	7.32
<b>Turbidity</b>	NTU	13.67	9.2	24.68
<b>Conductivity</b>	µmho/cm	529	540	705
<b>Total Dissolved Solid</b>	mg/L	368	374	508
<b>Total Hardness as CaCO<sub>3</sub></b>	mg/L	190	170	162
<b>Chloride as Cl</b>	mg/L	75.97	66.97	48
<b>Dissolved Oxygen</b>	mg/L	6.1	5.6	5.3
<b>Calcium as Ca</b>	mg/L	56.8	46.4	40
<b>Chromium as Cr</b>	mg/L	< 0.005	< 0.005	< 0.005
<b>Sodium as Na</b>	mg/L	20	36	40
<b>COD</b>	mg/L	66	54	38
<b>BOD (3 Days @ 27°C)</b>	mg/L	16.94	12	9
<b>Total Alkalinity as CaCO<sub>3</sub></b>	mg/L	138	156	320
<b>Fecal Coliform</b>	MPN/100 mL	220	79	110
<b>Total Coliform</b>	MPN/100 mL	May-18	1St Visit	Oct-18

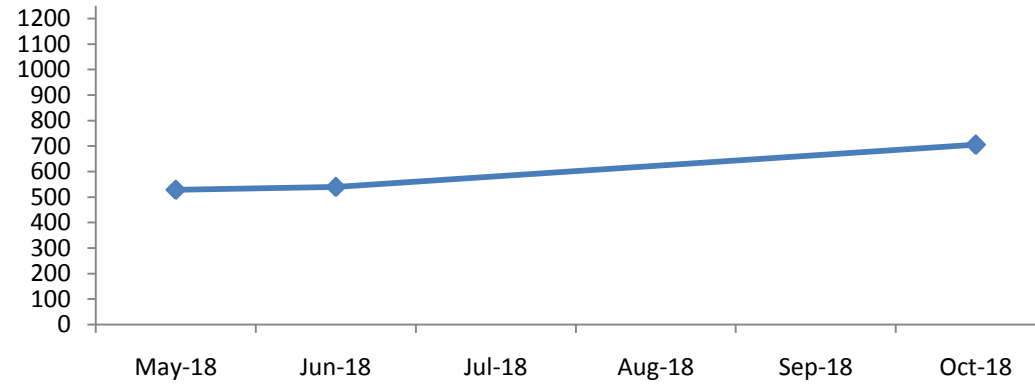
### SW-15 pH



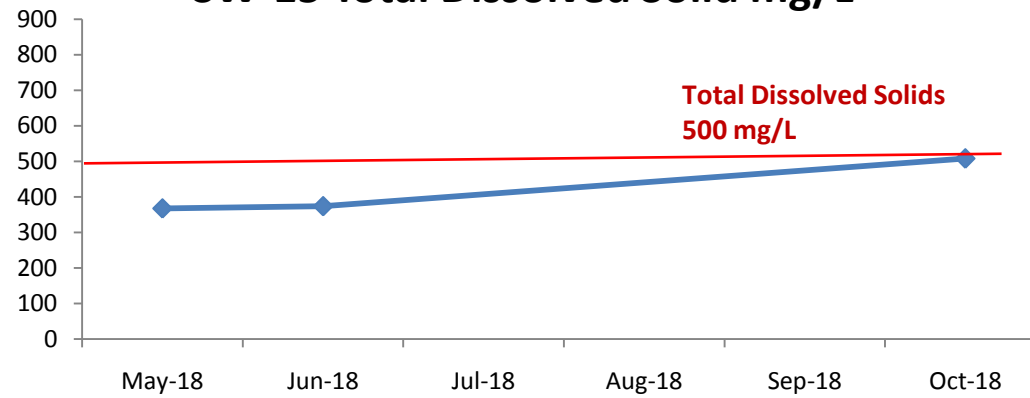
### SW-15 Turbidity NTU



### SW-15 Conductivity $\mu\text{mho/cm}$

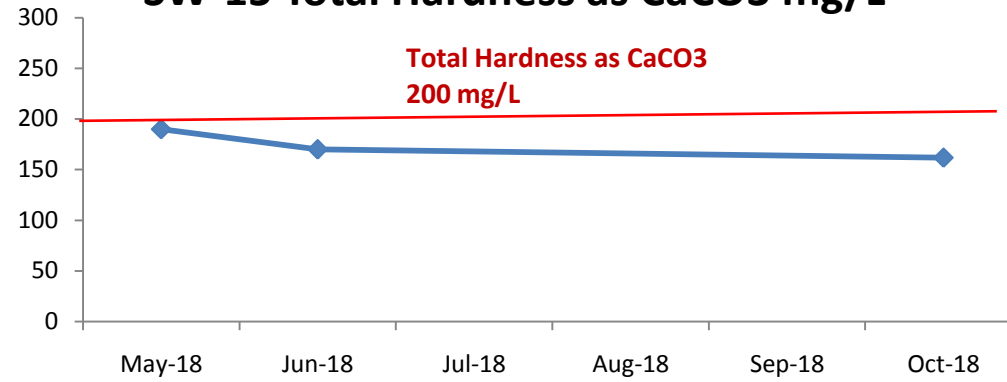


### SW-15 Total Dissolved Solid mg/L

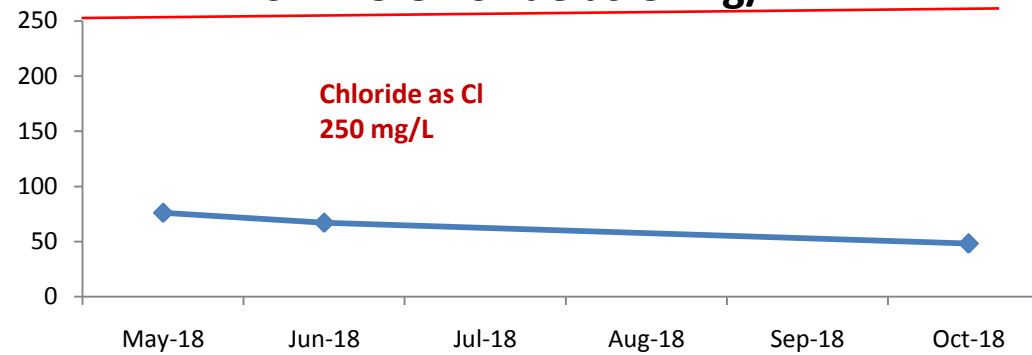




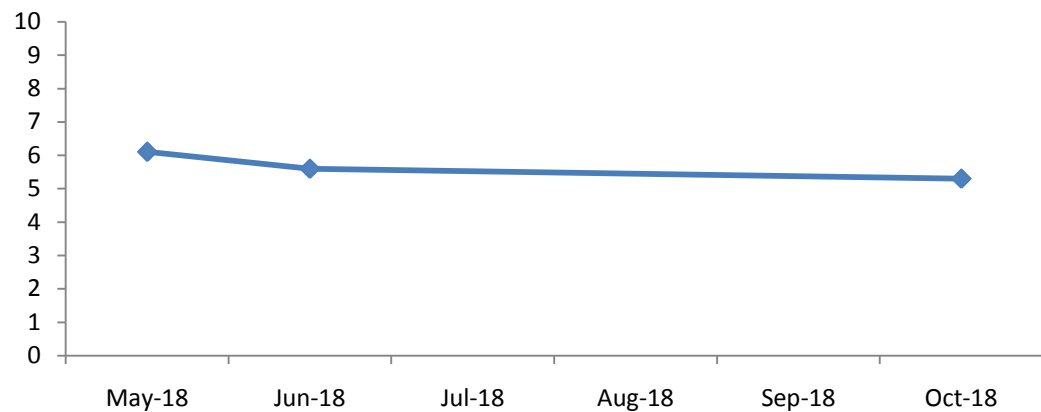
### SW-15 Total Hardness as CaCO3 mg/L



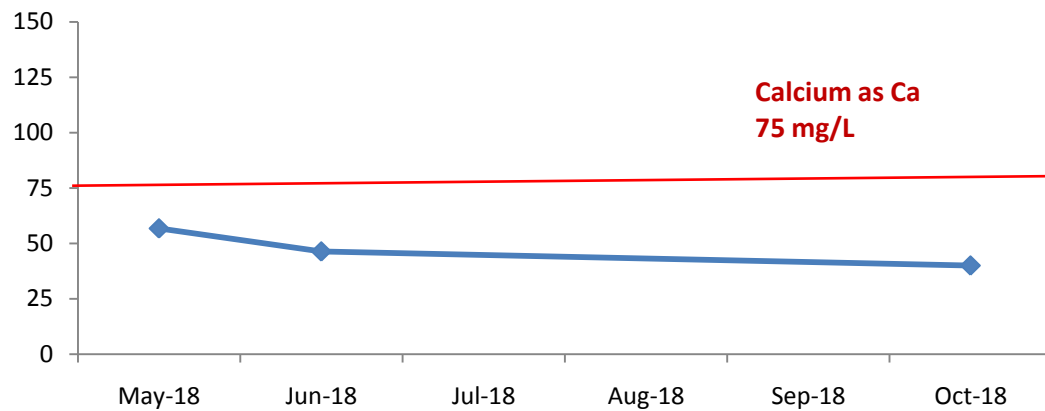
### SW-15 Chloride as Cl mg/L



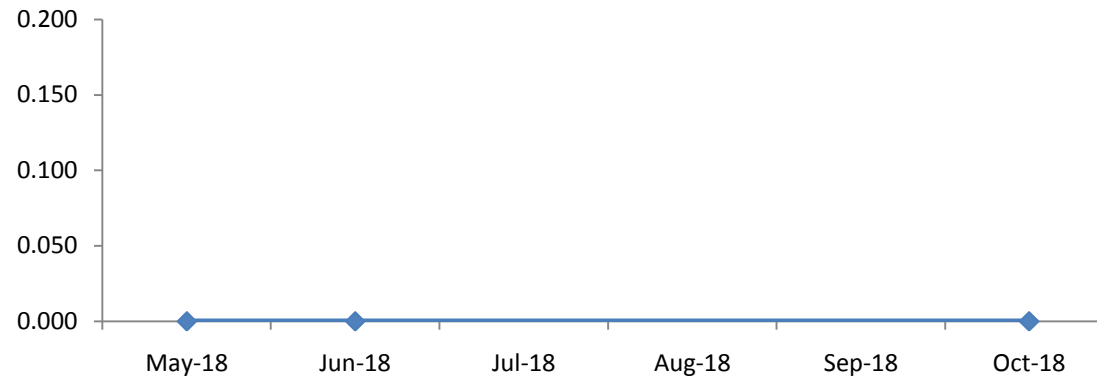
### SW-15 Dissolved Oxygen mg/L



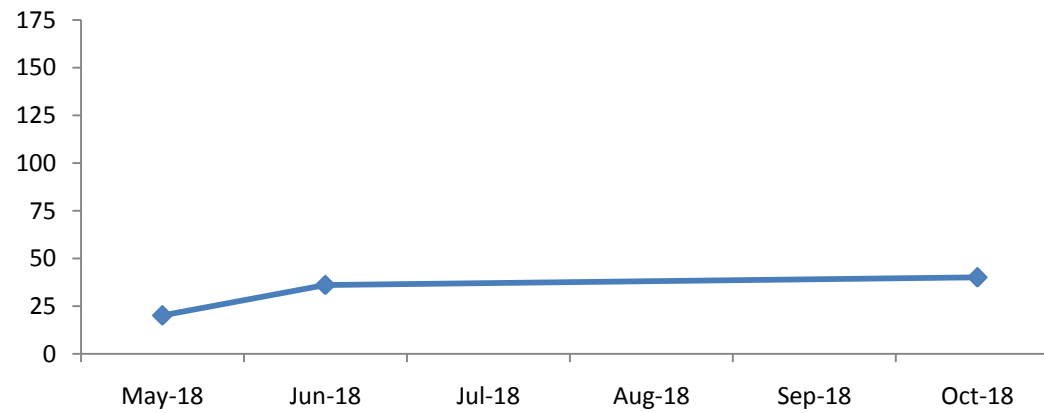
### SW-15 Calcium as Ca mg/L



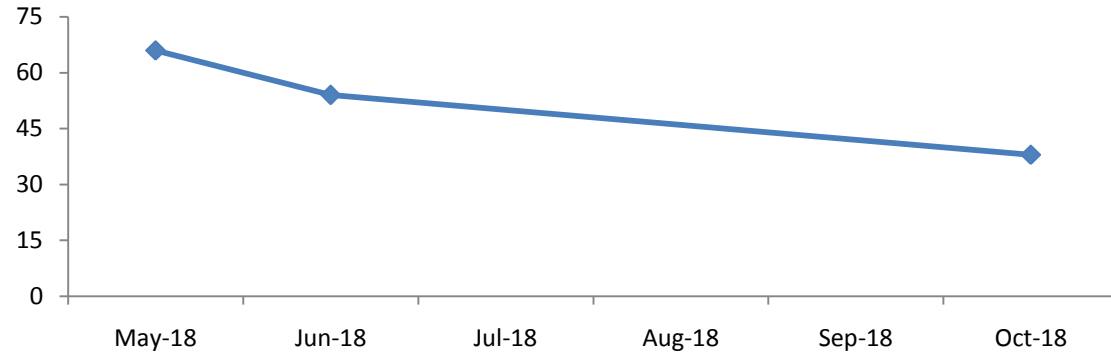
### SW-15 Chromium as Cr mg/L



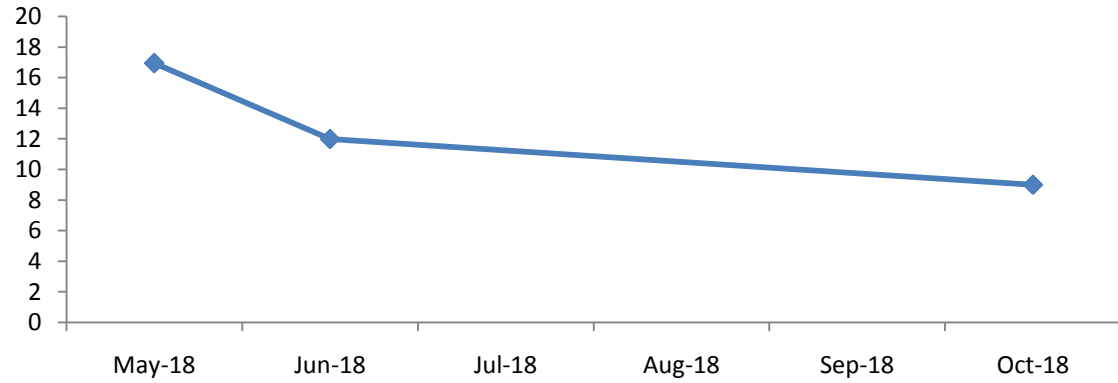
### SW-15 Sodium as Na mg/L



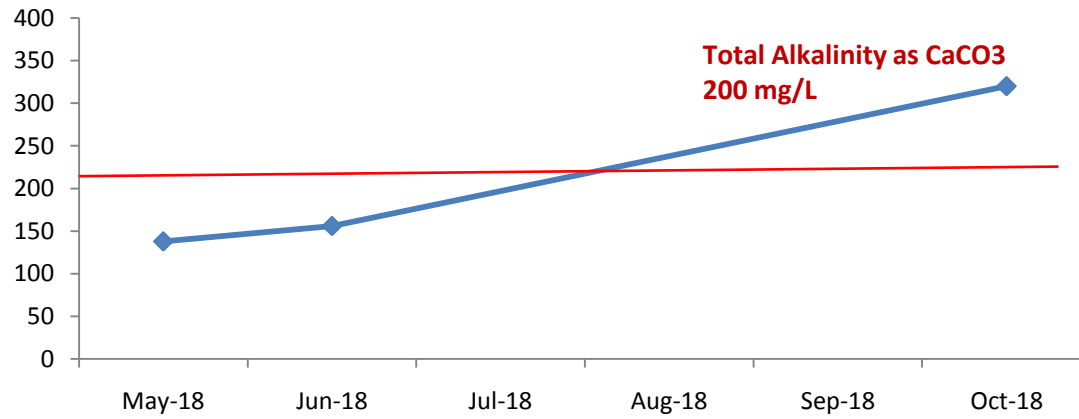
**SW-15 COD mg/L**



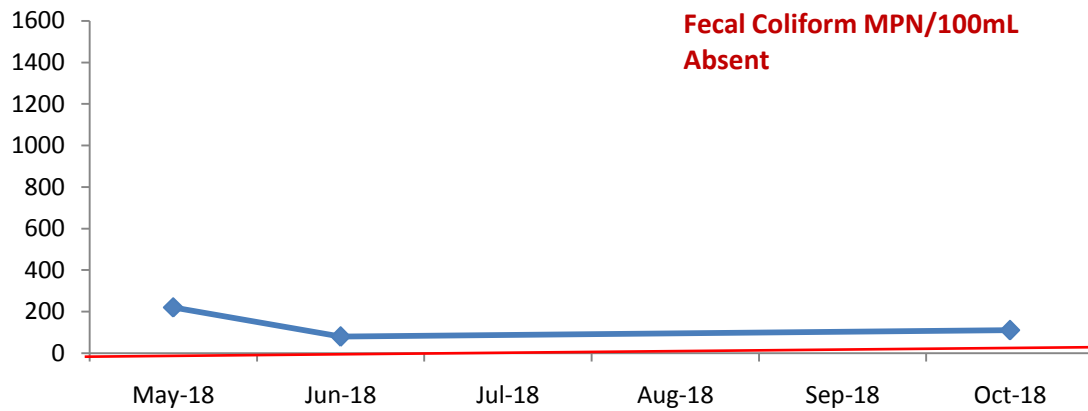
**SW-15 BOD (3 Days @ 27°C) mg/L**



### SW-15 Total Alkalinity as CaCO3 mg/L



### SW-15 Fecal Coliform MPN/100 mL



### SW-15 Total Coliform MPN/100 mL

