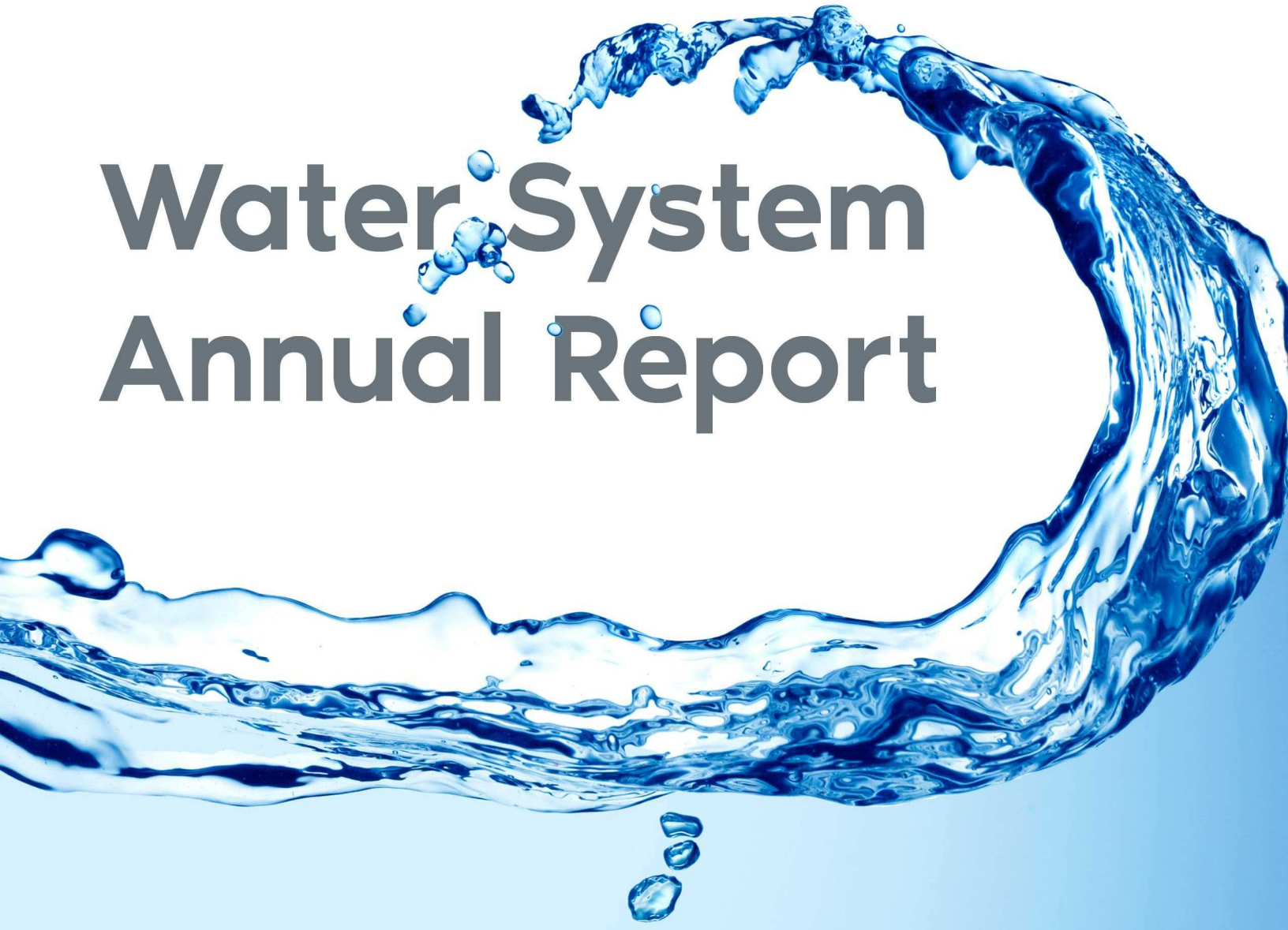
CITY OF SURREY

the future lives here.



Water System Annual Report

2018

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REPORT SUMMARY

In 2018, the City of Surrey purchased all the water that it supplied to its residents from Metro Vancouver (i.e., the Greater Vancouver Water District).

The City's water distribution mains are approximately 1861 km in length making it the longest distribution network in British Columbia. Main length increased by 0.2% in 2018 due to growth and development.

Surrey's geography and development pattern is serviced with thirty-nine (39) pressure zones and nine (9) pump stations.

The City's maintenance program includes a unidirectional flushing program of its mains once every five (5) years. This is to maintain high water quality throughout the distribution network. This program combined with pipe upgrades and water supply controls by Metro Vancouver has minimized the need for any abrasive, or mechanical cleaning of the City's water mains.

Monitoring of the water quality within the City's system is undertaken at fifty-one (51) strategically located sampling sites. Weekly samples are collected and tested by Metro Vancouver at their Water Laboratory in Burnaby. Tests include bacteriological analysis, turbidity, and chlorine residuals.

In 2018, 19% of the City's water operating and maintenance budget was spent ensuring the City's water quality met the B.C. Drinking Water Protection Regulation (BCDWPR). Three thousand two hundred eight (3208) water samples were analyzed and all were in compliance with schedule A of the BCDWPR.

The City has response procedures dealing with water quality issues or infrastructure failures such as water main breaks. These procedures incorporate steps for repairs and communication between the City, Metro Vancouver, and Fraser Health Authority (FHA).

Chlorine residuals are monitored throughout the distribution system. In 2018, 87% of the 3208 samples taken were greater than 0.2 mg/L. Where there are increased HPC (heterotrophic plate counts), as the result of low chlorine residual and circulation issues, staff flush the affected section to replace water in the mains thus increasing chlorine residuals. HPC is not mandatory under the 2018 Guidelines for Canadian Drinking Water Quality; however, the City of Surrey continues to use this methodology to ensure the quality of the water is maintained. The City continues to improve these low flow areas by looping of mains and increased water usage through service connections to new residences and businesses.

Metro Vancouver Water Laboratory tests the water within the City's system quarterly for disinfection by-products (Haloacetic Acids and Trihalomethanes), and semi-annually for pH and select metal concentrations. Sampling sites for these tests were selected in accordance with a monitoring and reporting plan established between the City and Metro Vancouver staff. The results of these tests meet or exceed the 2018 Guidelines for Canadian Drinking Water Quality.

There were no reported incidences of tampering or vandalism with the City's water system in 2018. System security includes lighting, locks, and alarms at pump stations as well as back flow prevention check valves on service connections. The City also has a cross-connection program to guard against contaminants entering the system due to faulty connections.

In 2018, the number of testable backflow preventers registered with the City increased by 1,382 (9.3%), for a total of 13,171 assemblies. These assemblies were installed through development, renovations or the cross-connection control (CCC) survey requirement. Through the CCC survey, the City ensures institutional, commercial and industrial (ICI) operations remain in compliance with the Surrey Waterworks Cross Connection Control By-law, 2013, No. 17988.

The City of Surrey remains diligent in maintaining its water distribution system to high quality standards and in ensuring the delivery of high-quality water to the City's residents and businesses.

2018 WATER SYSTEM ANNUAL REPORT

A. System Makeup

The City of Surrey purchases all the water it supplies to its residents from Metro Vancouver. The water originates from rain and snowmelt which is collected in three impounded reservoirs on the Capilano, Seymour and Coquitlam rivers. Metro Vancouver is responsible for the monitoring, treatment and delivery of the water to the member municipalities. The treatment methods deactivate all disease-causing micro-organisms. Secondary chlorination is added to the water prior to entering the City's distribution system to prevent any regrowth of micro-organisms. There is no further treatment within the City of Surrey's distribution system.

The City installed 5412m of new watermain in 2018, bringing the total length of the water distribution network to approximately 1861 km in length (0.2% increase from 2017). The City's network is the longest in British Columbia. The system incorporates pump stations, water mains, pressure reducing valves, water sampling stations, service connections, and water meters. Figure 1 illustrates the water distribution system (pg. 2). The detailed breakdown of the water main inventory is provided in Table 1, "City of Surrey 2018 Water Main Inventory" (pg. 3).

To illustrate 1862 km of water main, this would be from Surrey to approximately 160 km east of Regina Saskatchewan.

Through the use of pressure reducing stations, closed valves, check valves, and dead-end pipe runs, the distribution system is separated into 39 pressure zones. Each zone's pressure is correlated to the topographical elevations within the zone in order to provide sufficient water pressure to each resident.

The City has a considerable number of dead-end conditions created by pressure zone boundaries, cul-de-sacs, water mains extensions into sparsely populated rural areas, and geographical constraints of ravines, creeks, foreshores, and floodplains. To enhance the water quality in these areas, City crews conduct regular flushing of the mains.

The City has 8 water fill stations for use by construction companies to meet their water needs. The fill stations minimize the use of fire hydrants for filling tanker trucks and allows the City to monitor water consumption. Where Possible, Water Fill stations were installed on dead end mains to increase flow and improve water quality in these areas.

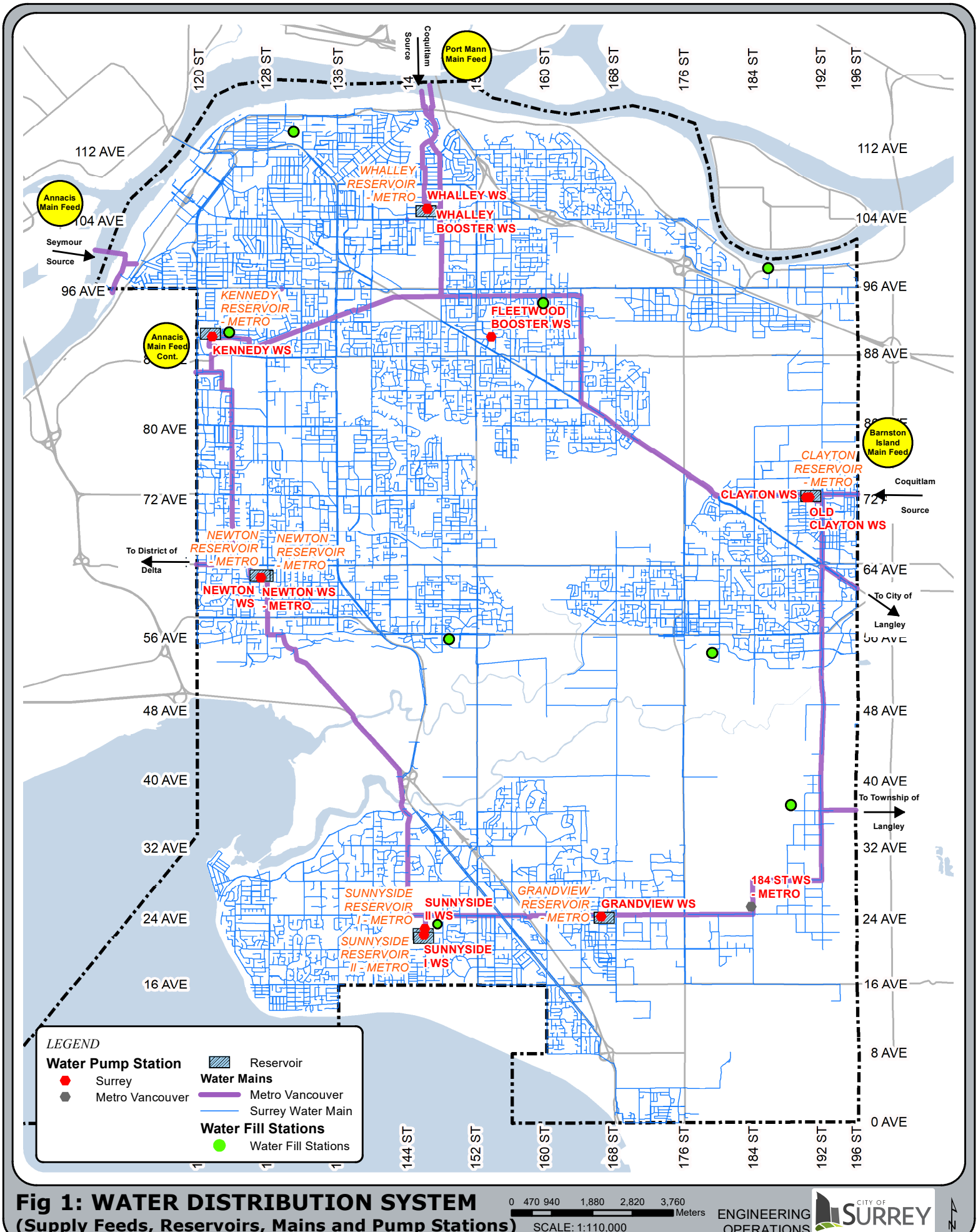


Fig 1: WATER DISTRIBUTION SYSTEM

(Supply Feeds, Reservoirs, Mains and Pump Stations)

0 470 940 1,880 2,820 3,760 Meters

SCALE: 1:110,000

ENGINEERING OPERATIONS

CITY OF SURREY

Source: L:\ENG\Water\Engineering\GIS\maps\2017 wtrPumpStationsReservoirs.mxd

Cartographer: B1H Date: 26-Nov-2018 © City of Surrey

Table 1:
City of Surrey 2018 Water Main Inventory

Main Size (mm)	AC	CC	CI	CU	DI	GI	PE	PVC	PVCO	ST	Material Unknown	Total by Size (m)
50				1	72	1,569	3,322	3,595				8,559
75					163			578				741
100	3,109		4,963		64,069		30,084	10,526		110		112,861
125							925					925
150	21,977		48,496		304,446		6,842	90,113		194		472,068
200	13,279		15,695		193,964		2	325,710	503	1,013		550,166
250	172		2,704		64,950			71,727		169		139,722
300	10,603	2	13,208		259,330		221	108,268		1,009		392,641
350					43,934			1,335		485		45,754
400					42,013			36		588		42,637
450		8,633			40,805			353		166		49,957
500		2			7,591					16		7,609
525										3,323		3,323
560										721		721
600		8,894			12,618			10		3,788		25,310
750		305			3,281					3,861		7,447
900		33			894					313		1,240
1050										62		62
1200										50		50
Total by Material (m)	49,140	17,869	85,066	1	1,038,130	1,569	41,396	612,251	503	15,868	0	1,861,793
% change from 2017	-11.8%	2.6%	-4.2%	0.0%	0.5%	-1.3%	4.6%	1.3%	0.0%	-1.6%	-100.0%	0.3%

Total Main Length (2018): 1,861,793 m (0.3% increase from 2018)

Total Main Length (2017): 1,857,117 m (0.4% increase from 2017)
Total Main Length (2016): 1,850,107 m (0.22% increase from 2016)
Total Main Length (2015): 1,846,124 m (0.6% increase from 2015)

Pipe Material Legend	
AC	Asbestos-Cement
CC	Concrete Cylinder
CI	Cast Iron
CU	Copper
DI	Ductile Iron
GI	Galvanized Iron
PE	Polyethylene
PVC	Polyvinyl Chloride
PVCO	Biaxially Oriented Polyvinyl Chloride
ST	Steel

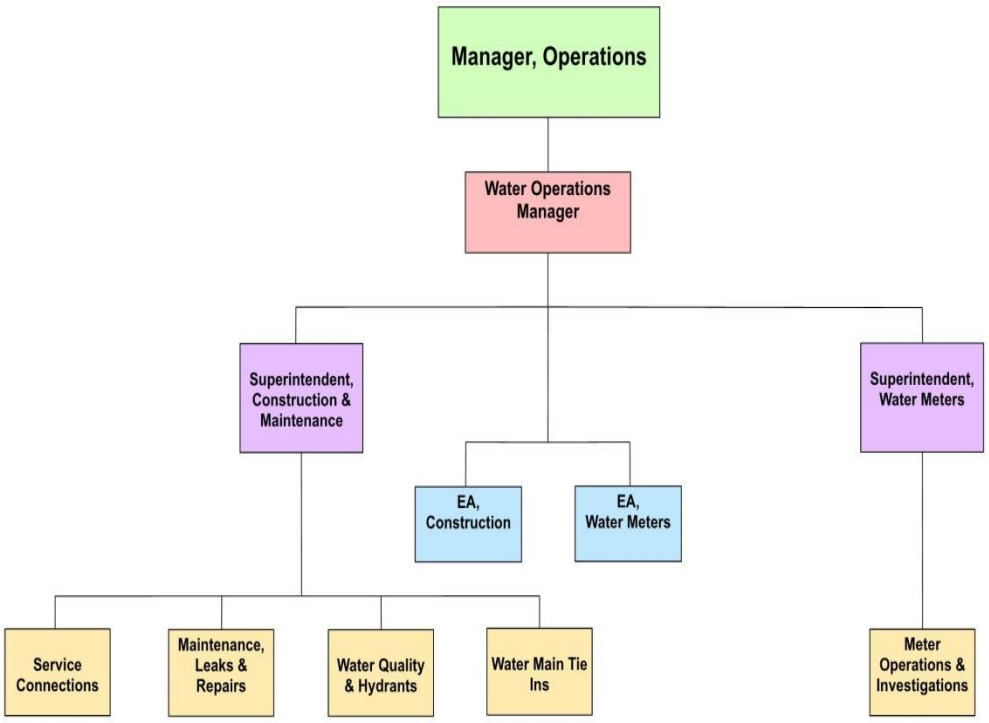
Colour Legend	Comparison to 2017 Inventory
	Increasing Main Inventory
	Decreasing Main Inventory
	No Change in Main Inventory

B. System Maintenance

The City of Surrey has a team of forty-two personnel assigned specifically to the operation and maintenance of the water distribution system.

The maintenance organization structure is shown in Figure 2 (below).

Figure 2:
2018 City of Surrey Water Operations Organizational Chart



The duties and responsibilities of the various crews and staff members are as follows:

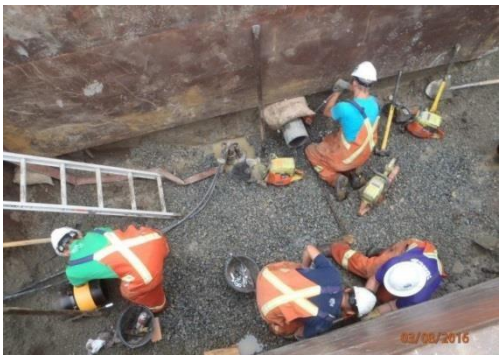
a) Water Operations Superintendent and Water Meter Superintendent:
Supervise and provide technical assistance to Operations Crews, provide input and technical assistance on distribution system expansions and upgrades.

b) Engineering Assistant Meters and Engineering Assistant Construction Provide technical and organizational assistance and support to Operations Crews and Management. Assist in work programming, data management, quality control and department planning.

c) Water Services and Renewals Crew:
Install and renew services throughout the City

d) Maintenance & Leak Repair Crew:
Provide maintenance of services, mains, and appurtenances. Provide emergency repairs to the water system as required. Conduct both proactive and reactive leak detection work using acoustic leak detection equipment and other detection methods. Assist in accurately locating known leaks.

e) Water Main Tie-in Crew:
Provide construction of existing main to new main tie-ins, monitoring of private contractor's tie-in construction, and record keeping of tie-in details.



Water Main Tie-In at 145 ST and 109 AVE Aug 16, 2016

f) Water Quality & Hydrants Crew:
Provide scheduled and on-demand flushing of City mains, on-demand testing for chlorine residuals of City mains and new construction, water sampling collection for quality analysis, hydrant maintenance.

C. Flushing Maintenance

Typical set-up for water hydrant flushing

To maintain the quality of the water throughout the distribution system, the City has an annual unidirectional flushing program which aims to flush all mains at least once every five years. The flushing of the mains helps to remove stagnant water and sediment from with-in the pipes. Unscheduled or "on-demand" flushing is conducted by the City in conjunction with line repairs or noncompliant water quality test results.

Figure 3, "Unidirectional Flushing Program" (pg. 7), shows the water service areas that were flushed in 2018. The flushing program is carried out during the low demand season (September to May) of the year. Uni-direction flushing moves water from a service area's primary source and discharges it through a series of downstream hydrants, ensuring water from non-flushed mains does not flow into recently flushed mains. Water flushed out through the hydrants is treated with a dechlorinating agent to ensure compliance with Ministry of Environment guidelines for water entering streams.

The City does not utilize abrasive cleaning methods (e.g. pigging, swabbing.) of the water system as neither quality assessments nor pipeline flow restrictions have justified such procedures. The City continues to replace and upgrade its aging water mains to meet current fire flow standards and pipe material specifications.

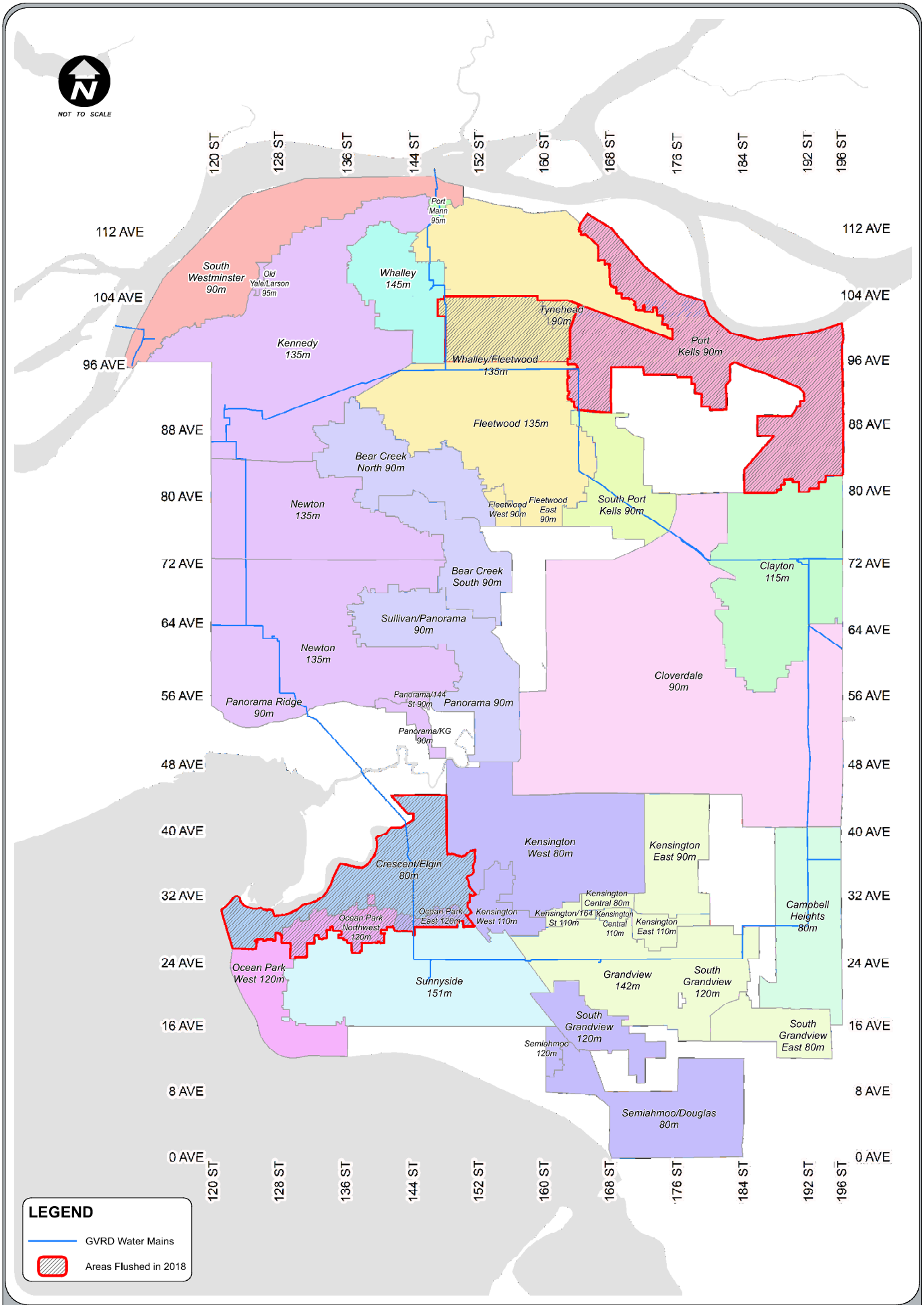


FIG 3: UNIDIRECTIONAL FLUSHING PROGRAM - 2017

D. System Budget

A summary of activities and annual budgets related to water quality preservation is shown in Table 2 (below). The 2018 budget represents 19% of the City's annual Water Utility Operations & Maintenance budget. The remaining 81% is utilized for the operation and maintenance of the City's water valves, meters, and service connections, for the provision of related operational support services, and for electrical power for the water pump stations.

Table 2:
City of Surrey Water Distribution System
2018 and 2019 Water Quality Maintenance Budgets

Description	2018 Budget	2019 Budget
Main Line Repairs	$518,528	$568,101
Line Flushing (140 km/yr)	$278,725	$284,300
Hydrant Repair/Maintenance	$518,528	$538,899
PRV Maintenance	$652,064	$301,251
Pump Stations Maintenance	$495,672	$514,663
Water Quality Monitoring	$111,496	$81,496
TOTALS*	$2,575,013	$2,288,710

* Total Water Distribution System Operations & Maintenance Budget is: $11,501,000 for 2017, and $11,786,334 for 2018.

E. Water Sampling & Testing Program

In accordance with The City of Surrey's Permit to Operate a Drinking Water System requirement under Fraser Health Authority, bacteriological and chemical water results are required annually.

Fifty-one (51) water sampling sites are utilized to monitor the City's water quality. Metro Vancouver staff collect test samples from these sites on a weekly basis, and the samples are analyzed in the Metro Vancouver Water Laboratory. The Laboratory is approved by the Provincial Health Officer for bacteriological analysis and is certified by the Canadian Association for Laboratory Accreditation (CALA) for the testing of general parameters which include metals, trihalomethanes (THM's), total coliforms, and E. coli. The sampling sites and their locations are displayed in Figure 4, "Water Sampling Sites Legend" (pg. 11) and Figure 5, "Water Sampling Sites" (pg. 12). The weekly water testing results for 2018 are included in Appendix A of this report.

Water Sampling Station at 148 ST and 66 AVE

In 2018, a total of 3208 water samples were tested, with a monthly maximum of 343, a monthly minimum of 164, and a monthly median of 258 samples being taken. The number of samples taken exceeds the standards set by the B.C. Drinking Water Protection Regulation, Schedule B which requires a minimum number of monthly samples of 137. A summary of the number of samples taken at each sampling site is shown in Appendix A, "Number of Monthly Water Test Samples 2018"

The City relies extensively on both the specific results and general trends of these weekly test results to ensure that conditions are not present, nor developing, which could pose a risk to our residents.

Guidelines for a sample containing a heterotrophic plate count (HPC) greater than 500 CFU/ml is to immediately flush the water main and resample. Flushing is continued until the HPCs falls below 500 CFU/ml. High turbidity and/or E. coliform results are referred directly from Metro Vancouver Water Laboratory to Fraser Health Authority.

E. Coliform and Total coliform testing was completed on the 3208 water samples and all were in compliance with schedule A of the B.C. Drinking Water Protection Regulation.

In addition to bacteriological testing, Metro Vancouver's laboratory tests the City water system for pH, disinfection bi-products, Haloacetic acids (HAA5), and Trihalomethanes (THM's). The results of these tests along with a comparison of annual disinfection by-products are included in Appendix A. pH measurements were analyzed at three of the test sampling sites. The recorded pH's had a median value of 7.3 with a maximum of 7.4, and a minimum of 7.0.

THM disinfection by-products were measured at seven of the test sampling sites. The results show the total THM's 2018 running average to be 49 parts per billion (ppb), which is less than the Guidelines for Canadian Drinking Water Quality (GCDWQ) recommended acceptable concentration of 100 ppb.

HAA5 disinfection by-products were measured at six of the test sampling sites. The results show the total HAA5's 2018 running average to be 47 ppb which is less than the GCDWQ recommended acceptable concentration of 80 ppb.

Water samples were obtained from three sampling stations in May and October and were submitted to the Metro Vancouver Water Laboratory for metal analysis; Testing included copper, iron, lead, zinc, chromium, manganese and other metals. Two of the samples obtained in October were lost due to a laboratory accident. Results of the metal analysis were less than the GCDWQ recommended maximum concentrations (see Appendix A).

The City has 612 km of polyvinyl chloride mains in the distribution system. Metro Vancouver's laboratory examined four sampling sites for the presence of vinyl chlorides and determined the concentration of vinyl chlorides to be less than the laboratory's minimum detection limit of 1 ppb. The maximum acceptable concentration recommended by the GCDWQ is 2 ppb. The results of these tests are included in Appendix A.

The source water for the City of Surrey is supplied by Metro Vancouver via a closed piping system, resulting in no contact with pesticides, herbicides, or parasites; hence the City does not test for these substances or organisms.

SITE NUMBER	LOCATION	SAMPLED BY
901	17988 93A ST	Metro Vancouver
902	18995 87A AVE	Metro Vancouver
903	19287 98A AVE	Metro Vancouver
904	17815 TRIGGS RD	Metro Vancouver
905	17052 102 AVE	Metro Vancouver
906	10184 161 ST	Metro Vancouver
907	10796 155A ST	Metro Vancouver
908	15985 112 AVE	Metro Vancouver
909	14674 ST ANDREWS DR	Metro Vancouver
910	14396 115 AVE	Metro Vancouver
911	12893 114A AVE	Metro Vancouver
912	10619 TIMBERLAND RD	Metro Vancouver
913	11878 98A AVE	Metro Vancouver
914	10478 132 ST	Metro Vancouver
915	14620 105A AVE	Metro Vancouver
916	13705 97A AVE	Metro Vancouver
917	13031 LANARK PL	Metro Vancouver
918	13738 GLEN PL	Metro Vancouver
919	15091 92A AVE	Metro Vancouver
920	16222 90 AVE	Metro Vancouver
921	17079 80 AVE	Metro Vancouver
922	7768 155 ST	Metro Vancouver
923	8241 120A ST	Metro Vancouver
924	13782 74 AVE	Metro Vancouver
925	6234 128 ST	Metro Vancouver
926	12049 56 AVE	Metro Vancouver
927	6651 148 ST	Metro Vancouver
928	15335 57 AVE	Metro Vancouver
929	14488 LOMBARD PL	Metro Vancouver
930	3031 139 ST	Metro Vancouver
931	2389 124 ST	Metro Vancouver
932	1473 126A ST	Metro Vancouver
933	1547 133B ST	Metro Vancouver
934	1662 146 ST	Metro Vancouver
935	16391 11 AVE	Metro Vancouver
936	17195 0 AVE	Metro Vancouver
937	2158 180 ST	Metro Vancouver
938	17214 31 AVE	Metro Vancouver
939	3831 156 ST	Metro Vancouver
940	CROYDON DR & 24 AVE	Metro Vancouver
941	BELL RD & OLD MCLELLAND RD	Metro Vancouver
942	5963 176 ST	Metro Vancouver
943	18425 53 AVE	Metro Vancouver
944	6008 189 ST	Metro Vancouver
945	5517 PRODUCTION BLVD	Metro Vancouver
946	6332 195B ST	Metro Vancouver
947	6803 192 ST	Metro Vancouver
948	66 AVE & 172 ST	Metro Vancouver
949	7362 182 ST	Metro Vancouver
951	2150 192 ST	Metro Vancouver
952	19026 28 AVE	Metro Vancouver

Fig. 4: WATER SAMPLING SITES LEGEND

GIS SECTION

CITY OF SURREY

Source: G:\Mapping\GIS\Maps\Recurring\wtrMainSamplingSitesList_A.mxd
 Date Printed: November 26, 2018

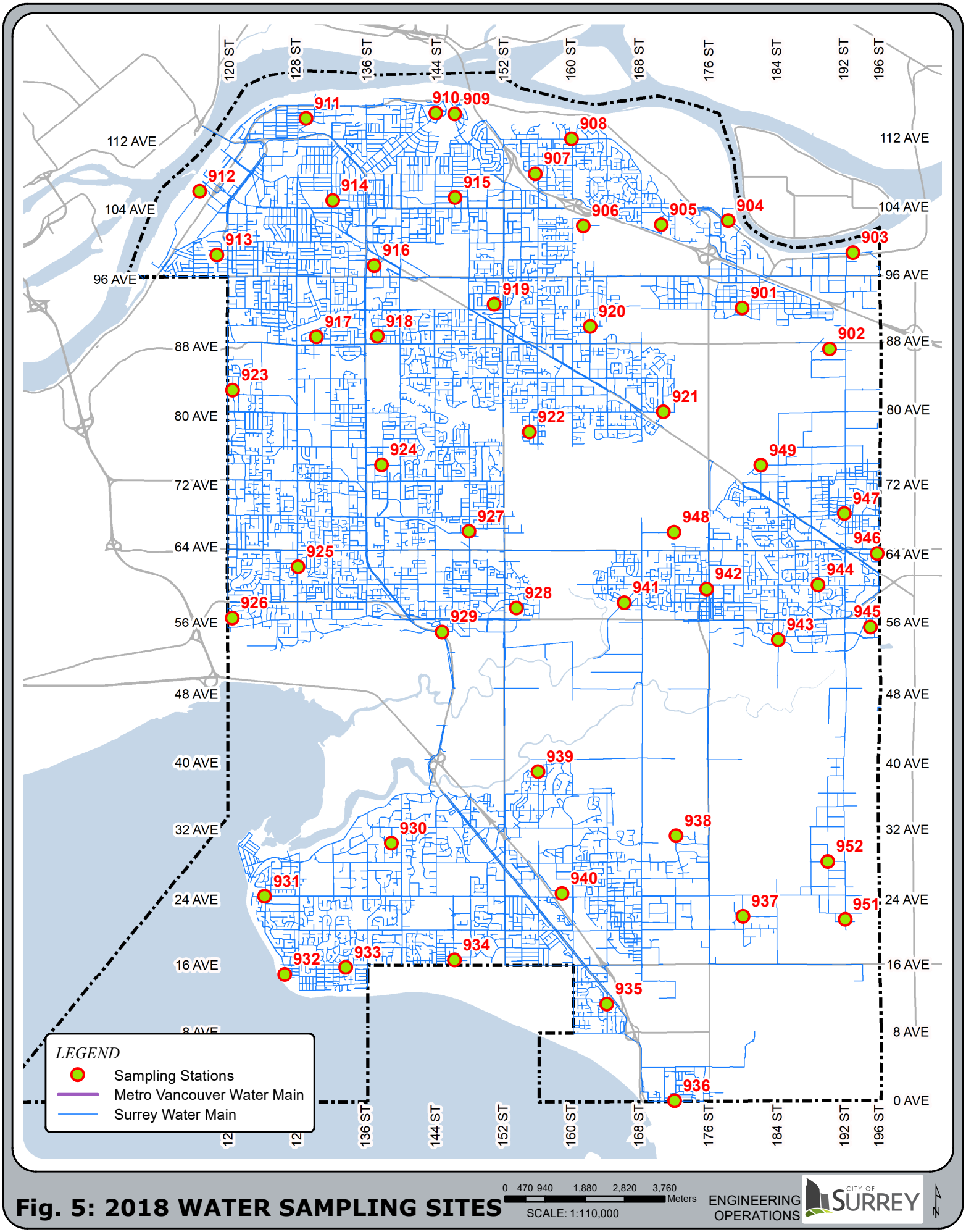
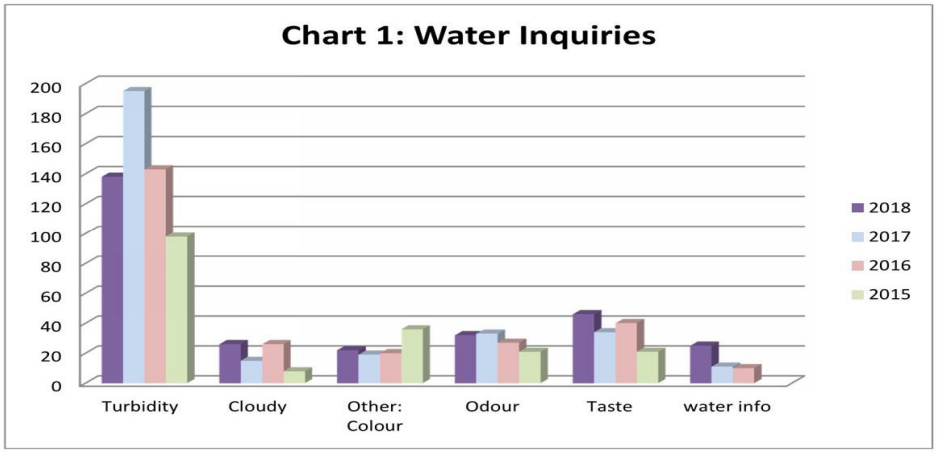


Fig. 5: 2018 WATER SAMPLING SITES

Source: L:\ENG\Water\Engineering\GIS\maps\2017 wtrMainSamplingSites.mxd
Cartographer: B1H Date: 26-Nov-2018 © City of Surrey

F. Water Quality Inquiries

In 2018, City crews responded to 289 reported water quality issues, a decrease of 31 from 2017. While the largest number of inquiries were still related to turbidity or 'dirty water' which accounted for 138 (48%) of residents' concerns, the percentage has dropped since 2017, which accounted for 196 (61%) of residents' concerns.



Turbidity issues may result from a sudden increase or decrease of water flow in a distribution system due to valve operations, firefighting and power disruption at pumping stations. These situations are often remedied quickly through flushing.

Odour and taste may result from people with sensitivity to low levels of chlorine residual in the system and is removed by storing an open jug of water in the fridge or using a charcoal water filter. Other tastes and odours may result from water not being recirculated at a dead-end of a water main. This is resolved by flushing the end of the main.

Cloudy water is the result of increased velocity of water through parts of our system resulting in trapped air bubbles, which are harmless. A glass filled with water will clear from the bottom of the glass upwards, within a few minutes.

Other issues, usually involving concerns such as pink colour and white particles in the hot water side are caused by internal plumbing issues.

Regardless of the water quality concern raised, Water Operations responds to each issue on a case by case basis.

With Surrey's population of 557,310 (2017)[1], the water quality concern responses are less than 1% (0.05%) or approximately 5 inquiries per 10,000 customers.

[1] Surrey Population (2017) 557,310 Population Estimates and Projections, https://www.surrey.ca/business-economic-development/1418.aspx

G. Water Quality Response Notification

The City, along with Metro Vancouver and its member municipalities, and FHA, have developed a notification procedure for situations affecting water quality. The City adheres to this procedure when line breaks occur or if a contamination condition is suspected. The City, through Metro Vancouver's testing laboratory, also notifies FHA if any E. coli bacteria are detected. This notification procedure is shown below.

Water Quality Response Procedure

Situation	Notifying Agency	Agency Notified	Time Frame for Notification
Metro Vancouver E. Coli Positive Sample	Metro Vancouver	Metro Vancouver, MHo City of Surrey	Immediate
Municipal E.Coli Positive Sample	Laboratory[2] City of Surrey[3]	MHO (or delegate)	Immediate
Chemical Contamination – Metro Vancouver	Metro Vancouver	Metro Vancouver, MHO, City of Surrey[1]	Immediate
Chemical Contamination – City of Surrey	City of Surrey	MHO (or delegate)	Immediate
Turbidity 5NTU	Metro Vancouver	Metro Vancouver, MHO, and City of Surrey[1]	Immediate
Disinfection Failure – Source Water (Primary Disinfection)	Metro Vancouver	Metro Vancouver, MHO, and City of Surrey[1]	Immediate (As per DWPA)
Disinfection Failure – Rechlorination (Secondary Disinfection)	Metro Vancouver	Metro Vancouver, MHO, and City of Surrey[1]	Immediate, in any situation in which the BCDWPR or the GCDWQ may not be met.
Loss of Pressure Due to High Demand	City of Surrey	MHO (or delegate), Metro Vancouver	Immediate
Line Break – City of Surrey[4]	City of Surrey	MHO (or delegate)	As soon as possible
Line Break – Metro Vancouver[4]	Metro Vancouver	City of Surrey	Optional
Line Break – City of Surrey[5]	City of Surrey	MHO (or delegate)	Immediate
Line Break – Metro Vancouver[5]	Metro Vancouver	Metro Vancouver, MHO, City of Surrey[1]	Immediate

1City of Surrey to notify Fraser Health Authority.
2Laboratory to immediately notify the MHO, DWO (or FHA delegates) and the water supplier as per section 12(1) of the DWPA.
3City of Surrey to immediately notify the MHO, DWO (or FHA delegates) as per section 12(2) of the DWPA.
4With no suspected contamination.
5With suspected contamination.

H. Water Quality Test Results

The City's water quality remains high as evidenced by sampling results related to both E.coli and total coliforms.

Water quality is closely monitored by base indicators (heterotrophic plate counts, chlorine residuals and turbidity) that would indicate conditions are developing that could promote the growth of harmful bacteria. Although the current GCDWQ no longer has an action limit for heterotrophic plate counts, if samples contain more than 500 heterotrophic bacteria colonies (HPC) per milliliter the City of Surrey will flush and re-sample. This is to address water stagnation and/or inadequate circulation in the City's mains.

In 2018, 0.2% of the samples taken showed HPCs higher than 500. These samples are tested in Metro Vancouver's laboratory using a 5 day incubation period at a temperature of 28°C. Table 4, "2006 to 2018 HPC Positive Samples Summary >500 CFU/ml" (pg. 18), summarizes the incidents of HPCs greater than 500 for years from 2000 to 2018. These results are also illustrated in "Graph 1: Comparison of Annual HPC Results >500 CFU/ml in the City of Surrey's Water System" (pg. 19).

Chlorine residuals are monitored throughout the distribution system (see "Fig. 6: Chlorine Residuals" pg. 16). The minimum desired concentration is 0.2 mg/L. Citywide, the percentage of test results where the chlorine residual concentrations were greater than 0.2 mg/L was 87% in 2018 (as shown in Table 3 on pg. 17).

The City continues to closely monitor incidents of low chlorine residuals and high HPC (>500 CFU/ml) to determine if there is any correlation between these results and certain system conditions such as maintenance work or underutilized water mains. Every effort is being made by the City to improve water quality including efforts at the planning level to loop the extremities and non-built out portions of the water infrastructure.

Through chlorine analyzers installed in the City's pump stations and the City's SCADA system, the levels of free chlorine in the water leaving the reservoirs and entering the City's water network can be continuously monitored online.

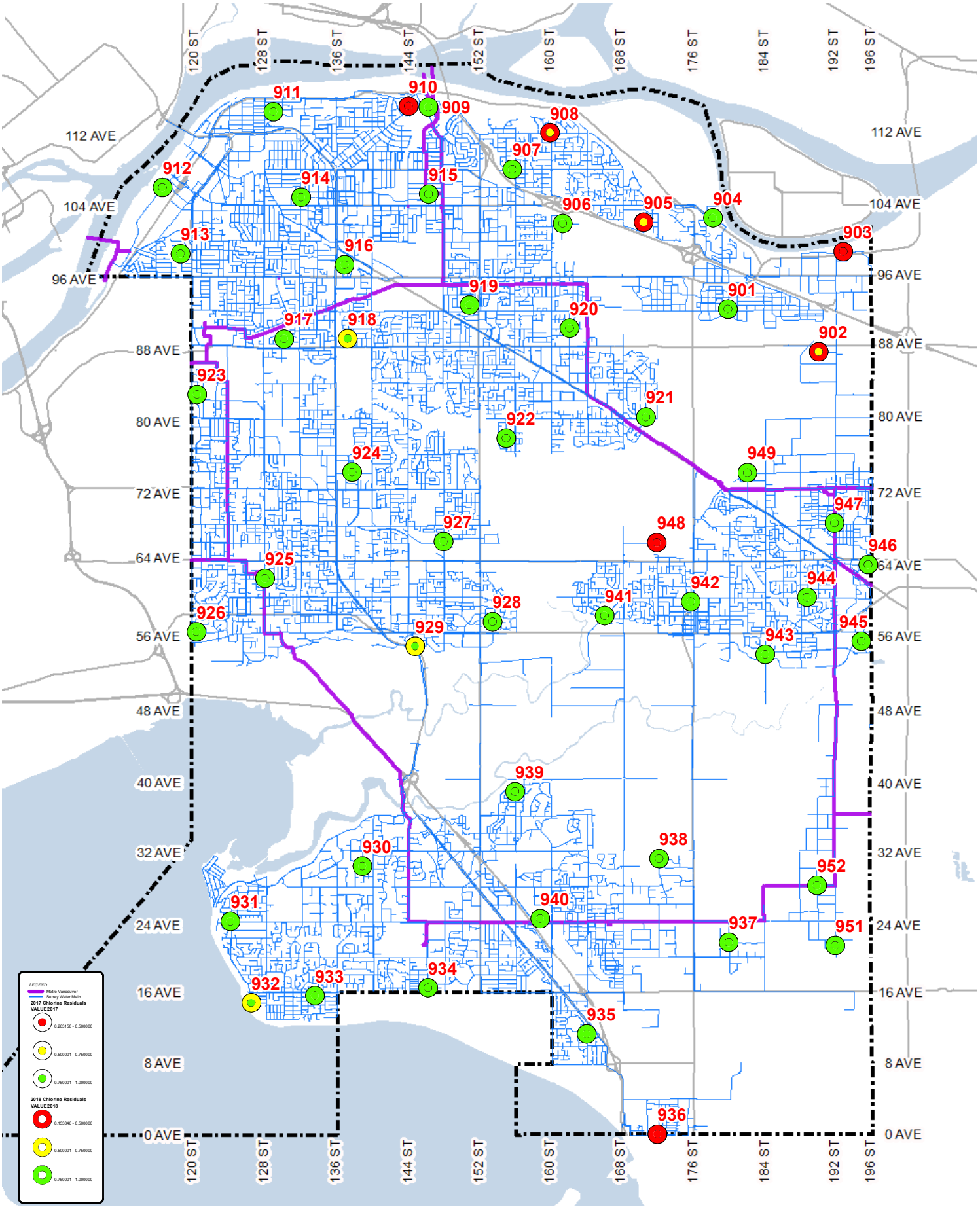


Fig. 6: 2018 CHLORINE RESIDUALS

SCALE: 1:112,000

GIS SECTION

CITY OF SURREY

Source: L:\ENG\Water\Engineering\GIS\maps\2018 Chlorine Residuals Map.mxd
Cartographer: B1H Date: 03-Jan-2019 © City of Surrey

Table 3 Comparisons of Chlorine Residuals Above & Below 0.2 ppm (2017 & 2018)

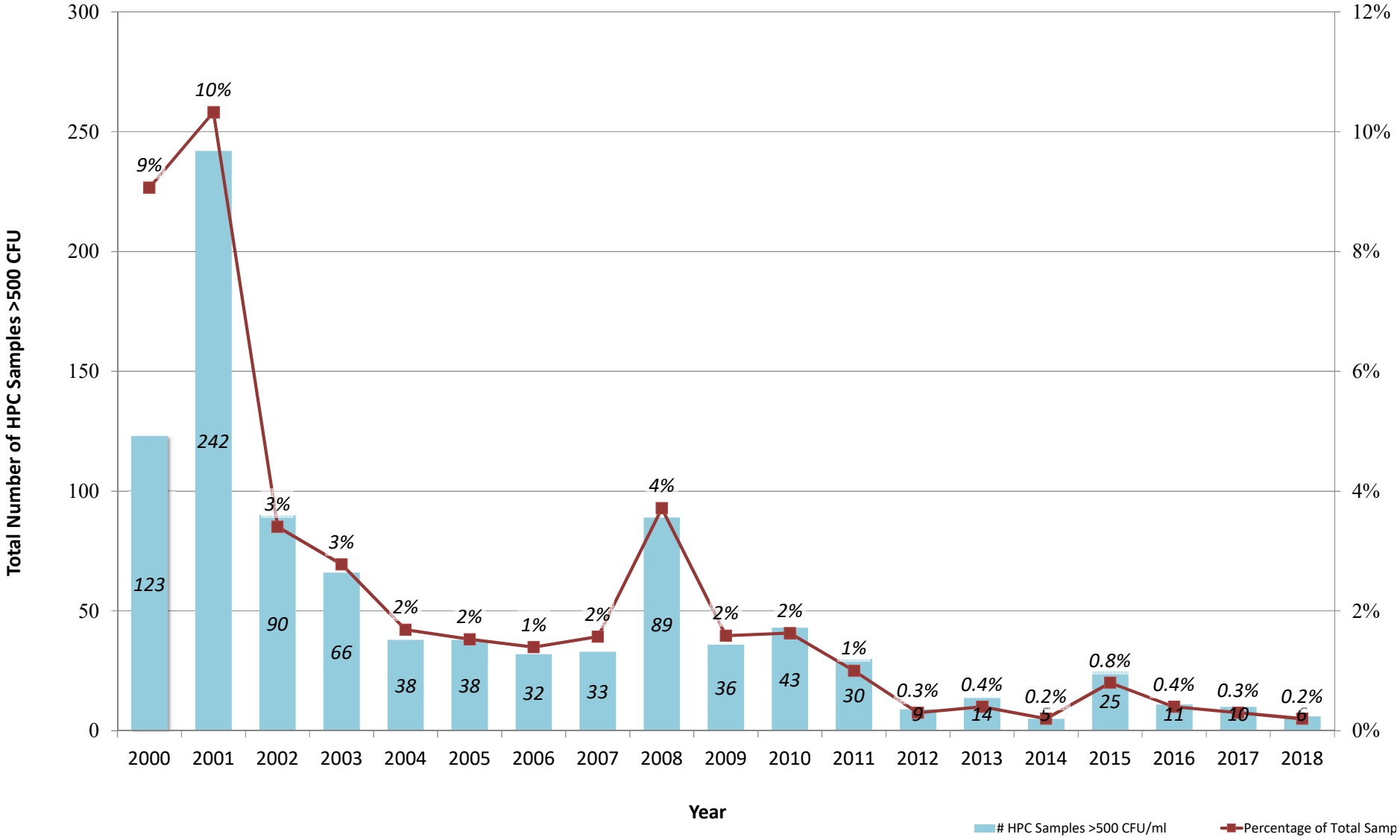
Sampling Site	2018					2017				
	No. of Samples Tested	< 0.2 ppm	> 0.2 ppm	< 0.2 ppm	> 0.2 ppm	> 0.2 ppm	< 0.2 ppm	> 0.2 ppm	< 0.2 ppm	No. of Samples Tested
SUR 901	60	5	55	8%	92%	91%	9%	61	6	67
SUR 902	60	32	28	53%	47%	54%	46%	40	34	74
SUR 903	64	33	31	52%	48%	36%	64%	25	44	69
SUR 904	60	0	60	0%	100%	100%	0%	65	0	65
SUR 905	55	46	9	84%	16%	62%	38%	41	25	66
SUR 906	65	7	58	11%	89%	98%	2%	57	1	58
SUR 907	57	0	57	0%	100%	100%	0%	63	0	63
SUR 908	56	37	19	66%	34%	71%	29%	45	18	63
SUR 909	65	0	65	0%	100%	100%	0%	59	0	59
SUR 910	65	55	10	85%	15%	32%	68%	19	40	59
SUR 911	65	15	50	23%	77%	87%	13%	54	8	62
SUR 912	63	1	62	2%	98%	94%	6%	58	4	62
SUR 913	63	0	63	0%	100%	98%	2%	61	1	62
SUR 914	67	0	67	0%	100%	100%	0%	63	0	63
SUR 915	71	0	71	0%	100%	100%	0%	63	0	63
SUR 916	64	0	64	0%	100%	100%	0%	60	0	60
SUR 917	63	0	63	0%	100%	100%	0%	60	0	60
SUR 918	63	23	40	37%	63%	100%	0%	58	0	58
SUR 919	61	0	61	0%	100%	100%	0%	57	0	57
SUR 920	37	1	36	3%	97%	98%	2%	57	1	58
SUR 921	66	0	66	0%	100%	98%	2%	62	1	63
SUR 922	64	13	51	20%	80%	78%	22%	46	13	59
SUR 923	63	0	63	0%	100%	100%	0%	62	0	62
SUR 924	62	0	62	0%	100%	100%	0%	56	0	56
SUR 925	62	0	62	0%	100%	100%	0%	58	0	58
SUR 926	66	0	66	0%	100%	100%	0%	57	0	57
SUR 927	65	0	65	0%	100%	100%	0%	59	0	59
SUR 928	64	0	64	0%	100%	100%	0%	59	0	59
SUR 929	66	22	44	33%	67%	98%	2%	56	1	57
SUR 930	64	7	57	11%	89%	87%	13%	54	8	62
SUR 931	64	0	64	0%	100%	100%	0%	62	0	62
SUR 932	67	19	48	28%	72%	87%	13%	52	8	60
SUR 933	67	0	67	0%	100%	100%	0%	63	0	63
SUR 934	69	0	69	0%	100%	100%	0%	63	0	63
SUR 935	67	0	67	0%	100%	100%	0%	59	0	59
SUR 936	65	44	20	68%	31%	47%	53%	27	31	58
SUR 937	66	2	64	3%	97%	95%	5%	59	3	62
SUR 938	69	0	69	0%	100%	100%	0%	59	0	59
SUR 939	68	0	68	0%	100%	100%	0%	63	0	63
SUR 940	68	0	68	0%	100%	98%	2%	60	1	61
SUR 941	65	0	65	0%	100%	100%	0%	59	0	59
SUR 942	59	0	59	0%	100%	100%	0%	55	0	55
SUR 943	67	0	67	0%	100%	100%	0%	63	0	63
SUR 944	68	0	68	0%	100%	98%	2%	59	1	60
SUR 945	66	0	66	0%	100%	100%	0%	65	0	65
SUR 946	57	5	52	9%	91%	85%	15%	46	8	54
SUR 947	58	0	58	0%	100%	100%	0%	59	0	59
SUR 948	64	53	10	83%	16%	26%	74%	15	42	57
SUR 949	61	0	61	0%	100%	100%	0%	65	0	65
SUR 951	41	7	34	17%	83%	89%	11%	55	7	62
SUR 952	66	0	66	0%	100%	100%	0%	65	0	65
Total	**3208**	**427**	**2779**	**13%**	**87%**	**90%**	**10%**	**2808**	**306**	**3114**

Table 4: 2008 to 2018 HPC Positive Samples Summary >500 CFU/ml

No. of Samples Tested | **No. of Samples > 500 CFU/ml** | **% of Samples > 500 CFU/ml**

Sampling Site	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	**2018**	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	**2018**	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	**2018**
901	46	55	67	60	63	83	69	60	60	67	60	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
902	47	59	69	67	65	81	69	65	64	74	61	0	0	0	3	0	0	0	0	0	1	0	0%	0%	0%	4%	0%	0%	0%	0%	0%	1%	0%
903	48	55	68	66	64	81	72	67	64	69	64	0	0	3	5	0	0	0	0	0	0	1	0%	0%	4%	8%	0%	0%	0%	0%	0%	0%	2%
904	48	53	67	64	62	79	70	60	57	65	60	0	0	0	0	0	0	2	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%
905	46	59	68	59	56	79	70	72	58	66	55	1	0	0	4	0	0	0	13	0	0	0	2%	0%	0%	7%	0%	0%	0%	0%	18%	0%	0%
906	46	46	58	65	71	73	74	62	55	58	64	0	0	0	5	0	1	0	0	0	0	0	0%	0%	0%	8%	0%	0%	1%	0%	0%	0%	0%
907	47	56	68	65	62	80	69	68	55	63	57	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
908	48	57	68	63	62	79	70	68	57	63	56	1	0	0	6	0	0	0	0	0	1	0	2%	0%	0%	10%	0%	0%	0%	0%	0%	2%	0%
909	59	65	76	77	86	77	71	64	54	59	65	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
910	60	69	73	76	88	80	69	65	54	59	65	2	0	0	0	0	0	0	0	0	0	0	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
911	60	62	77	76	88	81	71	72	59	62	63	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
912	54	65	76	77	85	81	68	69	56	62	61	9	0	0	0	3	3	0	0	4	0	0	17%	0%	0%	0%	4%	4%	4%	0%	0%	0%	0%
913	53	64	77	76	87	82	72	69	54	62	61	0	0	0	0	0	0	0	0	1	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
914	62	67	77	76	88	80	67	68	54	63	65	2	0	0	0	0	0	0	0	0	0	0	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
915	64	66	78	78	84	80	71	68	54	63	71	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
916	55	63	78	77	84	79	75	62	54	60	64	0	0	0	0	0	3	1	0	0	0	0	0%	0%	0%	0%	0%	0%	4%	1%	0%	0%	0%
917	55	63	73	75	86	80	71	61	52	60	63	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
918	55	64	77	76	85	78	73	66	53	58	63	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
919	50	48	58	69	77	70	63	57	54	57	62	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
920	49	58	66	70	74	73	66	59	57	58	38	0	0	1	1	0	0	0	3	0	0	0	0%	0%	2%	1%	0%	0%	0%	0%	3%	0%	0%
921	52	57	67	70	75	74	75	61	57	63	66	0	0	0	1	0	0	0	0	0	0	0	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
922	51	56	66	70	73	71	76	61	55	59	64	1	0	0	0	0	0	0	1	3	0	0	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
923	57	65	78	77	87	81	68	67	55	62	61	1	0	0	0	0	0	0	0	0	0	0	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
924	47	59	65	71	70	67	72	65	53	56	62	0	0	0	0	0	1	0	0	0	0	0	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
925	47	49	52	51	52	51	49	53	59	58	62	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
926	46	49	51	51	51	51	48	52	55	57	66	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
927	44	47	51	51	51	51	48	52	51	59	65	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
928	48	45	51	51	52	51	47	52	56	59	64	1	0	0	0	0	0	0	0	0	0	0	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
929	44	49	51	51	51	51	47	52	57	57	67	0	0	0	0	0	0	0	3	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%
930	47	47	52	48	51	48	50	53	59	62	61	0	0	7	2	0	0	0	0	0	0	0	0%	0%	13%	4%	0%	0%	0%	0%	0%	0%	0%
931	47	49	52	47	51	50	50	51	60	62	61	0	0	5	0	0	0	0	0	0	0	0	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%
932	47	48	52	48	52	50	49	54	57	60	64	1	0	1	0	0	0	0	0	0	0	0	2%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%
933	47	47	52	48	53	50	49	51	61	63	64	11	1	1	0	0	0	0	0	0	0	0	23%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%
934	47	48	51	48	52	50	49	51	62	63	67	5	2	2	0	0	0	0	0	0	1	0	11%	4%	4%	0%	0%	0%	0%	0%	0%	2%	0%
935	47	48	51	49	52	50	49	51	61	59	64	0	2	0	0	0	0	0	0	1	0	0	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
936	48	47	51	48	52	50	50	51	56	58	63	3	2	1	0	0	1	0	1	0	0	1	6%	4%	2%	0%	0%	0%	2%	0%	2%	0%	2%
937	46	49	52	48	52	51	49	51	60	62	63	3	1	0	0	0	0	0	0	0	0	0	7%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
938	47	49	51	47	52	51	49	51	60	59	67	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
939	47	48	52	50	53	50	49	51	58	63	65	1	1	1	0	0	1	0	0	0	0	0	2%	2%	2%	0%	0%	0%	2%	0%	0%	0%	0%
940	47	48	39	50	53	51	49	51	60	61	65	7	2	2	0	0	1	0	0	0	0	0	15%	4%	5%	0%	0%	0%	2%	0%	0%	0%	0%
941	46	48	51	51	51	51	48	51	60	59	66	2	0	1	0	0	0	0	0	0	0	0	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%
942	45	48	51	51	51	51	47	52	57	55	57	0	0	0	0	0	0	0	0	0	1	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
943	51	48	51	50	52	51	50	51	62	63	64	0	0	0	0	0	0	0	0	1	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
944	46	48	51	51	51	51	47	52	62	60	65	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
945	43	48	51	51	51	51	47	52	60	65	64	0	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
946	45	47	51	52	49	51	47	53	59	54	57	0	0	0	0	0	0	1	0	0	1	0	0%	0%	0%	0%	0%	0%	0%	2%	0%	2%	0%
947	48	48	50	51	33	49	48	52	59	59	57	0	0	0	1	0	0	0	0	0	0	0	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
948	46	46	51	51	51	51	47	53	61	57	63	1	0	3	1	0	0	0	0	0	5	2	2%	0%	6%	2%	0%	0%	0%	0%	0%	9%	3%
949	52	78	94	87	98	96	81	72	69	65	61	0	0	0	0	0	0	0	1	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
951	43	43	51	50	52	51	49	50	62	62	40	27	24	14	0	5	3	1	2	1	0	2		56%	27%	0%	10%	10%	6%	2%	4%	0%	5%
952	48	48	51	50	52	49	49	50	62	65	63	10	1	1	1	1	0	0	1	0	0	0		2%	2%	2%	2%	2%	2%	0%	0%	2%	0%
TOTALS	2427	2748	3109	3081	3243	3277	3032	2971	2950	3114	3156	52	89	36	30	9	14	5	25	11	10	6	2%	2%	2%	1%	0.3%	0.3%	0.4%	0.2%	1%	0.3%	0.2%

Graph 1: Comparison of Annual HPC Results >500 CFU/ml in the City of Surrey's Water System



I. Water System Security

A combination of measures is utilized to provide security for the distribution system. All pump stations utilize external security lighting and have locked access doors and/or ground hatches that are surrounded by security fencing. They also have intrusion alarms which are monitored by a SCADA system. There were no reported incidences of tampering or vandalism with the City's water system in 2018.

J. Backflow Prevention and Cross Connection Control

To protect the quality of the water distributed, the City minimizes the risk of backflow occurrence in the system by ensuring that adequate pressure is maintained above 40 psi during peak demand conditions and above 20 psi during emergency conditions, including fire and main breaks.

Additionally, the City administers a comprehensive Cross Connection Control (CCC) program to minimize the risk of contaminants originating from private properties entering into City's water network and private property's plumbing system. The program includes enforcement of annual testing of backflow preventers, installation of backflow preventers for all new construction (plumbing permit requirement) and existing industrial, commercial and institutional (ICI) properties by a cross connection survey requirement.

In 2018, the number of testable backflow preventers registered with the City increased by 1,382 (9.3%) for a total of 13,171 devices. These assemblies were installed through development, renovations or the cross-connection control (CCC) survey requirement. Annual testing of back flow preventers is required by the City. Owners that are found to be in non-compliance were notified to comply or face By-law enforcement.

The City of Surrey remains diligent in maintaining its water distribution system to high quality standards and in ensuring the delivery of high-quality water to the City's residents and businesses.

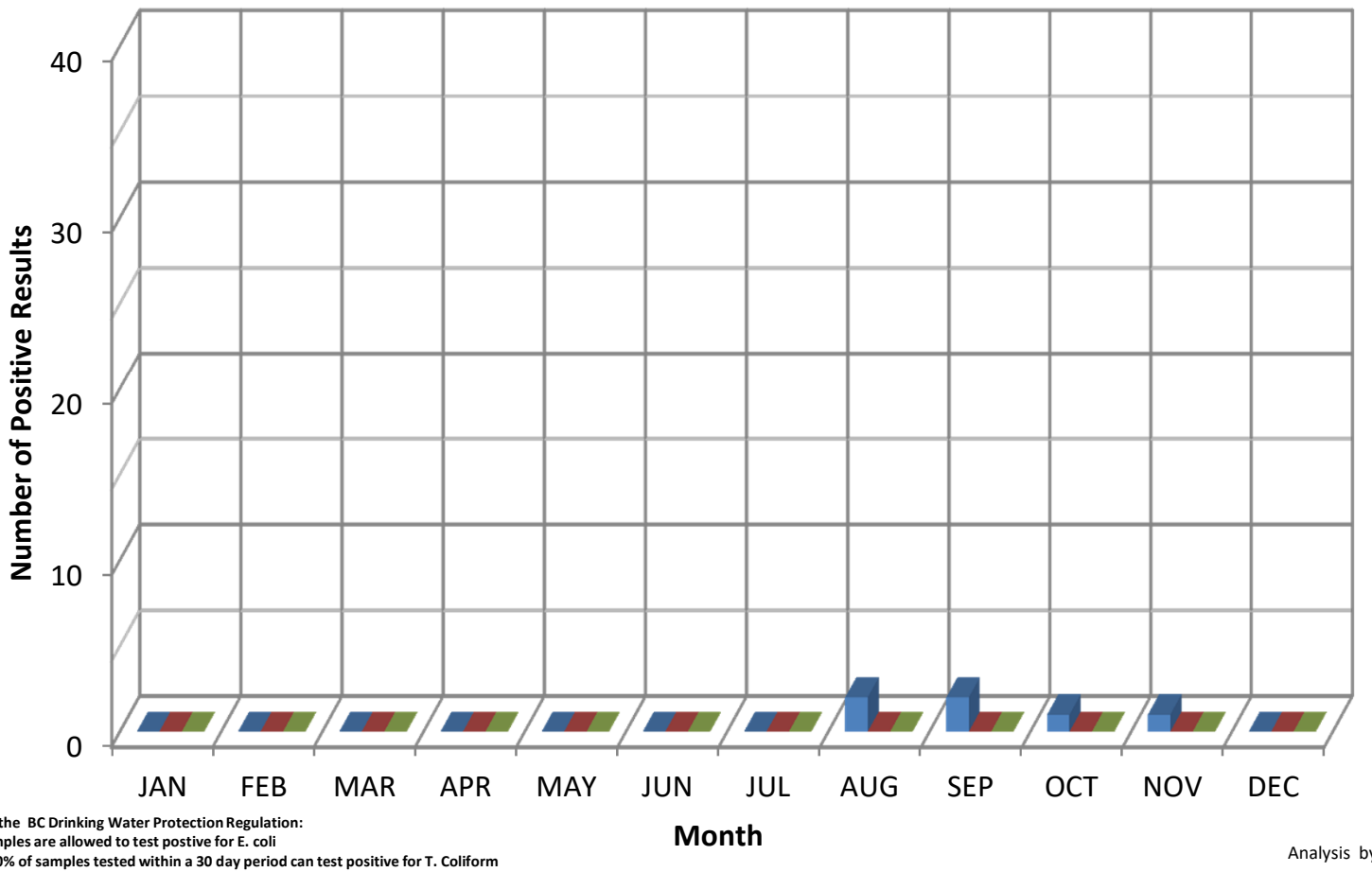
K. Water Emergency Response Plan

Water emergency response is governed by Metro Vancouver and the City of Surrey. Source water from the North shore watersheds to the City of Surrey supply mains are the responsibility of Metro Vancouver (MV). Any emergency response or incident via manmade or natural disaster will enact MV Water Continuity Plan. Likewise, any situation within the boundaries of the City will enact Surrey's Water Continuity Plan. Emergency responses may include but are not limited to loss of MV water supply, water quality degradation, and seismic hazards and flooding. Surrey's plan is continually being updated as new information and best practices are observed. Surrey works closely with Fraser Health in plan review and updates.

APPENDIX A

2018 Water Quality Laboratory Test Results

2018 T. Coliform and E.Coli Positive Test Results



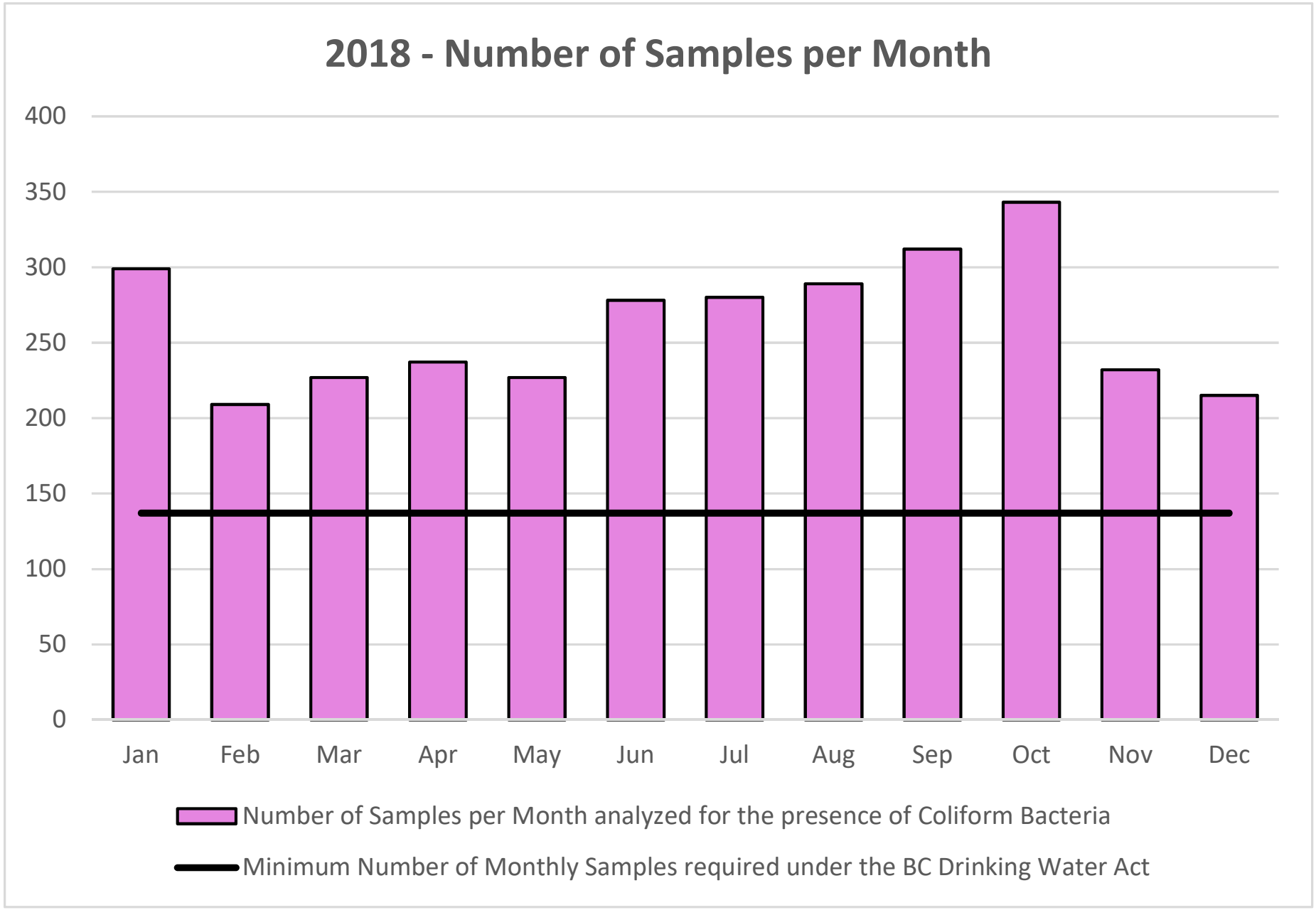
As per the BC Drinking Water Protection Regulation:
No Samples are allowed to test postive for E. coli
Only 10% of samples tested within a 30 day period can test positive for T. Coliform

Analysis by Metro Vancouver Labratories

Number of Monthly Water Test Samples (2018)

SITE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Station Total
901	8	4	5	4	5	5	6	5	4	5	4	5	60
902	8	4	5	4	5	5	6	5	4	5	4	5	60
903	8	5	5	4	5	5	6	6	4	6	5	5	64
904	8	4	5	4	5	5	6	5	4	5	4	5	60
905	8	2	3	4	5	5	6	5	4	5	5	3	55
906	4	2	5	7	4	6	7	7	7	9	4	3	65
907	8	4	5	4	5	5	6	5	4	5	5	1	57
908	8	4	5	4	5	5	6	5	4	5	5	0	56
909	4	5	4	6	4	6	6	6	6	8	5	5	65
910	4	5	4	6	4	6	6	5	7	8	5	5	65
911	6	4	4	5	5	6	5	5	7	8	6	4	65
912	6	4	4	5	5	6	5	5	7	7	5	4	63
913	6	4	4	5	5	6	5	5	7	7	5	4	63
914	6	4	4	5	5	6	5	5	7	8	8	4	67
915	5	5	4	5	5	6	6	5	10	9	6	5	71
916	4	5	4	5	4	6	6	5	6	8	5	6	64
917	3	5	4	6	4	6	6	5	7	8	5	4	63
918	4	4	4	6	4	6	6	5	7	8	5	4	63
919	4	3	5	6	4	5	6	5	6	7	5	5	61
920	4	4	4	6	4	6	4	0	0	0	0	5	37
921	4	5	4	6	4	6	6	5	7	8	5	6	66
922	4	5	4	6	4	5	7	5	7	8	5	4	64
923	6	4	4	5	5	5	5	5	7	7	5	5	63
924	4	5	4	6	4	6	6	5	6	8	5	3	62
925	4	5	4	6	4	5	6	6	6	8	4	4	62
926	4	3	4	6	4	6	6	9	7	8	5	4	66
927	4	5	4	6	4	6	6	5	7	8	5	5	65
928	4	4	5	6	4	5	6	6	7	8	5	4	64
929	4	5	4	6	4	6	6	6	7	8	4	6	66
930	7	2	5	4	5	6	5	7	7	7	5	4	64
931	6	3	5	4	5	5	5	7	7	7	5	5	64
932	7	4	5	4	5	6	5	7	7	7	5	5	67
933	7	4	5	4	5	6	5	7	7	7	5	5	67
934	7	5	5	4	5	6	5	7	9	7	4	5	69
935	7	4	5	4	5	6	5	7	7	7	5	5	67
936	7	4	5	4	5	6	5	7	7	7	4	4	65
937	7	4	5	4	5	6	5	7	8	7	5	3	66
938	7	5	5	4	5	6	5	7	7	10	4	4	69
939	7	4	6	4	5	5	6	7	7	7	5	5	68
940	7	5	5	4	5	6	5	7	7	7	5	5	68
941	4	5	4	6	4	6	6	6	7	8	4	5	65
942	4	4	5	4	5	6	5	7	7	7	4	1	59
943	7	5	5	4	5	6	5	7	7	6	5	5	67
944	7	5	5	4	5	6	5	7	7	7	5	5	68
945	7	5	5	4	5	6	5	7	7	7	4	4	66
946	8	3	5	4	5	5	6	6	4	4	4	3	57
947	8	4	5	4	5	5	6	5	4	4	3	5	58
948	4	4	4	5	4	6	6	5	7	8	5	6	64
949	8	4	5	4	5	5	6	6	4	5	4	5	61
951	6	4	4	0	0	1	5	5	5	5	3	3	41
952	6	4	5	4	5	6	5	7	7	7	5	5	66
Monthly Total	299	209	227	237	227	278	280	289	312	343	232	215	3208

Monthly Min	209
Monthly Max	343
Monthly Med	258


2018 - Number of Samples per Month
400
350
300
250
200
150
100
50
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Number of Samples per Month analyzed for the presence of Coliform Bacteria
Minimum Number of Monthly Samples required under the BC Drinking Water Act

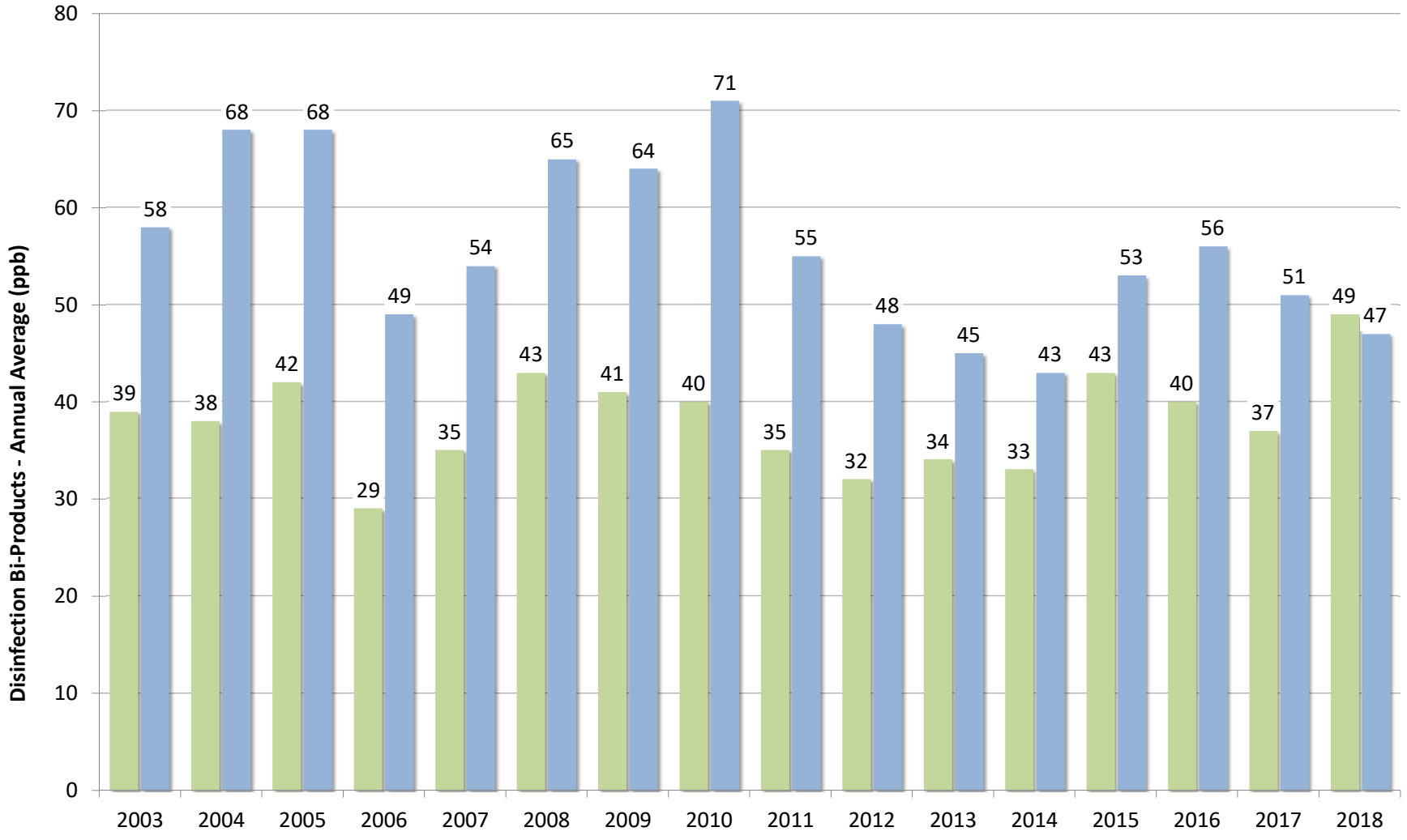
City of Surrey

2018 Disinfection By-Products (THM, HAA) & pH Monitoring Results

Sample Station ID	Sample Station Location	Date Sampled	THM (ppb)							HAA (ppb)								pH units
			Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroform	Total Trihalomethanes	**Total THM Quarterly Average (Guileline Limit 100ppb/mL)**		Dibromoacetic Acid	Dichloroacetic Acid	Monobromoacetic Acid	Monochloroacetic Acid	Trichloroacetic Acid	Total Haloacetic Acid	**Total HAA Quarterly Average (Guileline Limit 80ppb/mL)**		
SUR-902	18995 87A Ave	13/02/2018	<1	<1	<1	36	39	**38**										
SUR-902		30/05/2018	<1	<1	<1	31	33	**35**		<0.5	12	<1	<2	23.3	36.8			
SUR-902		07/08/2018	1	<1	<1	32	34	**36**		<0.5	13	<1	<2	32	46.9			
SUR-902		22/11/2018	2	<1	<1	35	37	**36**		<0.5	7	<1	<2	24.9	33.8			
SUR-922	7768 155 St.	15/02/2018	<1	<1	<1	34	35	**36**		<0.5	10	<1	<2	24.8	36.9	**42**		7.1
SUR-922		28/05/2018	<1	<1	<1	34	35	**36**		<0.5	18	<1	<2	36.6	57.1	**41**		7.2
SUR-922		07/08/2018	1	<1	<1	34	35	**36**		<0.5	17	<1	2	27.1	46.6	**46**		7.3
SUR-922		22/11/2018	2	<1	<1	31	33	**35**		<0.5	7	<1	<2	21.4	29.8	**43**		7.3
SUR-926	12059 56 Ave	15/02/2018	<1	<1	<1	22	24	**26**		<0.5	9	<1	<2	10.1	21.2	**26**		
SUR-926		28/05/2018	<1	<1	<1	25	26	**28**		<0.5	18	<1	<2	23.4	42.9	**32**		
SUR-926		07/08/2018	<1	<1	<1	29	31	**30**		0.9	15	<1	<2	16.2	34	**35**		
SUR-926		22/11/2018	2	<1	<1	42	44	**31**		<0.5	9	<1	<2	12.3	24	**31**		
SUR-928	15349 57 Ave	15/02/2018	<1	<1	<1	20	21	**27**		<0.5	9	<1	<2	9	19.1	**27**		
SUR-928		28/05/2018	<1	<1	<1	24	25	**27**		<0.5	18	<1	<2	23.6	43.3	**32**		
SUR-928		07/08/2018	<1	<1	<1	29	31	**29**		<0.5	17	<1	<2	19.4	39.1	**36**		
SUR-928		22/11/2018	2	<1	<1	34	37	**29**		<0.5	13	<1	<2	15.3	30.1	**33**		
SUR-930	SW Entrance to Parkway, South of 303 139 St.	15/02/2018	<1	<1	<1	43	45	**45**		<0.5	18	<1	<2	44.6	64.8	**61**		7.0
SUR-930		29/05/2018	<1	<1	<1	37	38	**43**		0.5	26	<1	2	41.3	69.6	**60**		7.3
SUR-930		07/08/2018	1	<1	<1	38	39	**43**		<0.5	22	<1	<2	32.7	57.2	**63**		7.4
SUR-930		19/11/2018	1	<1	<1	70	71	**48**		<0.5	15	<1	<2	58.2	74.9	**67**		7.2
SUR-931	124 St. & 24 Ave	15/02/2018	<1	<1	<1	42	44	**43**		<0.5	20	<1	<2	41.7	64.6	**62**		
SUR-931		29/05/2018	<1	<1	<1	36	37	**42**		0.5	24	<1	2	41	68.1	**63**		
SUR-931		07/08/2018	1	<1	<1	37	39	**42**		<0.5	18	<1	2	22.4	43.9	**64**		
SUR-931		19/11/2018	1	<1	<1	60	62	**46**		<0.5	20	<1	2	43.2	65.1	**60**		
SUR-940	24 Ave., by South Depot	15/02/2018	<1	<1	<1	37	38	**39**		<0.5	18	<1	<2	31.1	52.2	**55**		7.2
SUR-940		29/05/2018	<1	<1	<1	35	36	**39**		0.5	24	<1	3	36.3	63.4	**56**		7.2
SUR-940		07/08/2018	1	<1	<1	33	34	**38**		<0.5	21	<1	2	26.9	51.3	**58**		7.4
SUR-940		19/11/2018	1	<1	<1	55	57	**41**		<0.5	27	<1	3	39.8	70.6	**59**		7.4

Analysis by Metro Vancouver Laboratory

Comparison of Annual Disinfection Bi-Product Averages in the City of Surrey's Water System



Note:GCDWQ acceptable concentration for THMs is 100 ppb, and 80 ppb for HAAs

2018 Semi-annual Metals Monitoring Results

Sample Station ID	Sample Station Location	Date & Time Sampled	Aluminum Total	Antimony Total	Arsenic Total	Barium Total	Boron Total	Cadmium Total	Calcium Total	Chromium Total	Cobalt Total	Copper Total	Iron Total	Lead Total	Magnesium Total	Manganese Total	Mercury Total	Molybdenum Total	Nickel Total	Potassium Total	Selenium Total	Silver Total	Sodium Total	Zinc Total
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
SUR-922	7768 - 155 St.	14/06/2018 12:40	74	<0.5	<0.5	2.1	<10	<0.2	913	<0.05	<0.5	<0.5	40	<0.5	83	2	<0.05	<0.5	<0.5	107	<0.5	<0.5	4810	<3.0
SUR-928	15349 - 57 Ave.	14/06/2018 10:50	43	<0.5	<0.5	2.8	<10	<0.2	3740	<0.05	<0.5	2.8	15	<0.5	137	2.5	<0.05	<0.5	<0.5	132	<0.5	<0.5	2310	6.4
SUR-931	124 St. & 24 Ave.	14/06/2018 12:30	76	<0.5	<0.5	2	<10	<0.2	923	<0.05	<0.5	2.2	39	<0.5	69	1.6	<0.05	<0.5	<0.5	104	<0.5	<0.5	4840	4.8
SUR-931	124 St. & 24 Ave.	03/12/2018 11:35	123	<0.5	<0.5	2.7	<10	<0.2	1290	0.06	<0.5	3.3	60	<0.5	78	1.4	<0.05	<0.5	<0.5	118	<0.5	<0.5	6130	5.4

Analysis by Metro Vancouver Laboratory

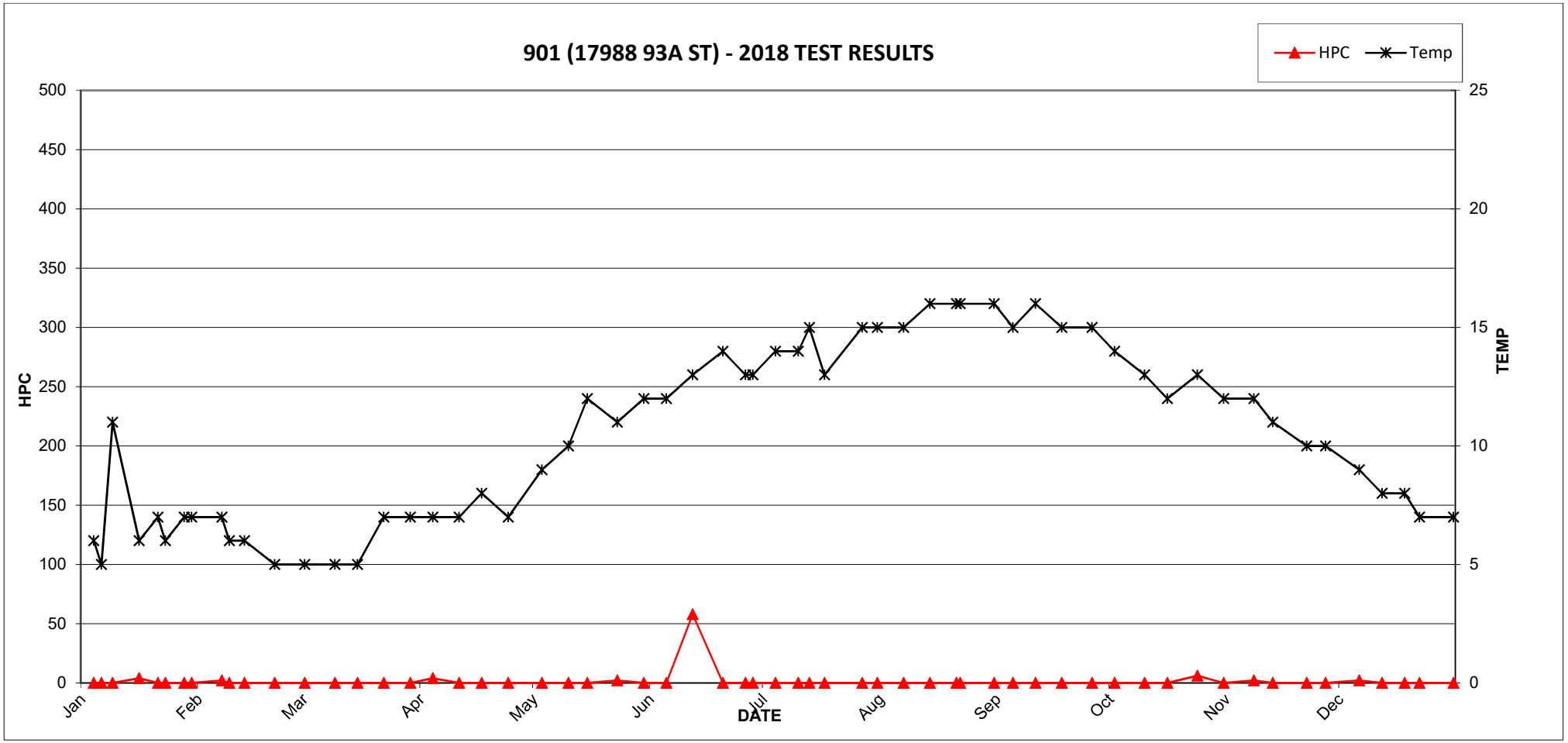
City of Surrey
2018 Vinyl Chloride Results

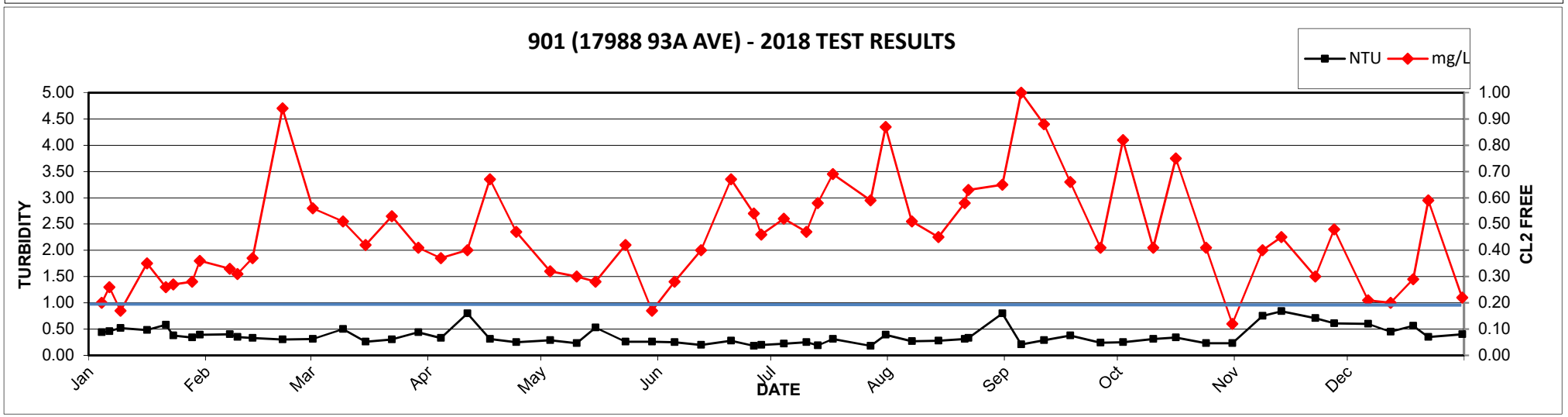
Sample Station ID	Sample Station Location	1st Half of 2017		2nd Half of 2017	
		Date Sampled	Vinyl Chloride mg/L	Date Sampled	Vinyl Chloride mg/L
SUR-901	92 Ave. & 180 St.	20-Jun-18	<0.00040	27-Nov-18	<0.00040
SUR-902	18995 - 87 A Ave.	20-Jun-18	<0.00040	27-Nov-18	<0.00040
SUR-928	15349 - 57 Ave.	18-Jun-18	<0.00040	27-Nov-18	<0.00040
SUR-930	SW Ent. to Pkwy, s. of 3031-139 St.	18-Jun-18	<0.00040	26-Nov-18	<0.00040

Analysis by Metro Vancouver Laboratory

2018 MV Laboratory Report - 901 (17988 93A ST)

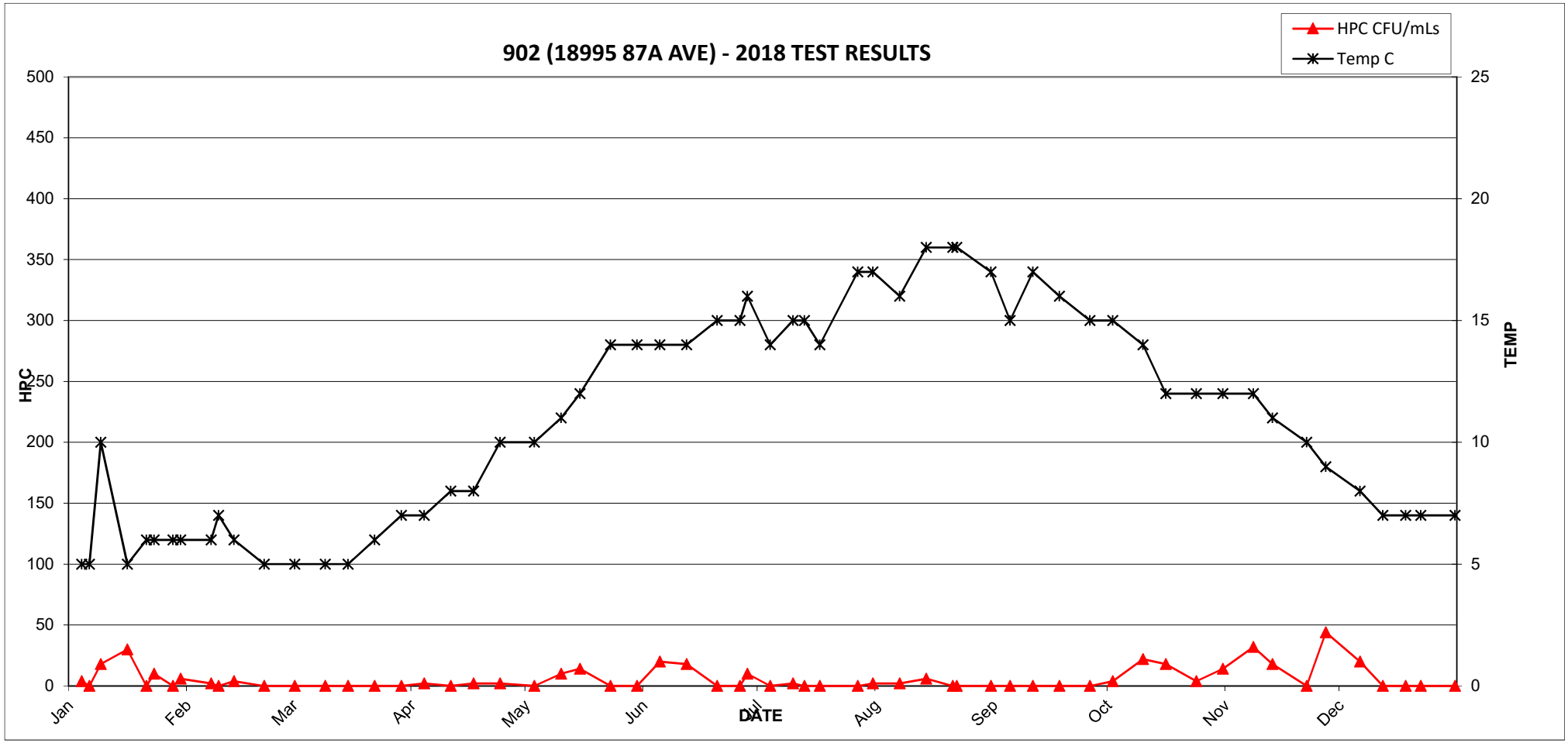
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.20	<1	<2	<1	6	0.44
06-Jan	0.26	<1	<2	<1	5	0.46
09-Jan	0.17	<1	4	<1	11	0.52
16-Jan	0.35	<1	<2	<1	6	0.48
21-Jan	0.26	<1	<2	<1	7	0.58
23-Jan	0.27	<1	<2	<1	6	0.38
28-Jan	0.28	<1	<2	<1	7	0.34
30-Jan	0.36	<1	2	<1	7	0.39
07-Feb	0.33	<1	<2	<1	7	0.40
09-Feb	0.31	<1	<2	<1	6	0.35
13-Feb	0.37	<1	<2	<1	6	0.33
21-Feb	0.94	<1	<2	<1	5	0.30
01-Mar	0.56	<1	<2	<1	5	0.31
09-Mar	0.51	<1	<2	<1	5	0.50
15-Mar	0.42	<1	<2	<1	5	0.26
22-Mar	0.53	<1	<2	<1	7	0.30
29-Mar	0.41	<1	4	<1	7	0.44
04-Apr	0.37	<1	<2	<1	7	0.33
11-Apr	0.4	<1	<2	<1	7	0.8
17-Apr	0.67	<1	<2	<1	8	0.31
24-Apr	0.47	<1	<2	<1	7	0.25
03-May	0.32	<1	<2	<1	9	0.29
10-May	0.30	<1	<2	<1	10	0.23
15-May	0.28	<1	2	<1	12	0.53
23-May	0.42	<1	<2	<1	11	0.26
30-May	0.17	<1	<2	<1	12	0.26
05-Jun	0.28	<1	58	<1	12	0.25
12-Jun	0.40	<1	<2	<1	13	0.20
20-Jun	0.67	<1	<2	<1	14	0.28
26-Jun	0.54	<1	<2	<1	13	0.18
28-Jun	0.46	<1	<2	<1	13	0.20
04-Jul	0.52	<1	<2	<1	14	0.22
10-Jul	0.47	<1	<2	<1	14	0.25
13-Jul	0.58	<1	<2	<1	15	0.19
17-Jul	0.69	<1	<2	<1	13	0.31
27-Jul	0.59	<1	<2	<1	15	0.18
31-Jul	0.87	<1	<2	<1	15	0.39
07-Aug	0.51	<1	<2	<1	15	0.27
14-Aug	0.45	<1	<2	<1	16	0.28
21-Aug	0.58	<1	<2	<1	16	0.31
22-Aug	0.63	<1	<2	<1	16	0.33
31-Aug	0.65	<1	<2	<1	16	0.80
05-Sep	1.00	<1	<2	<1	15	0.21
11-Sep	0.88	<1	<2	<1	16	0.29
18-Sep	0.66	<1	<2	<1	15	0.38
26-Sep	0.41	<1	<2	<1	15	0.24
02-Oct	0.82	<1	<2	<1	14	0.25
10-Oct	0.41	<1	<2	<1	13	0.31
16-Oct	0.75	<1	6	<1	12	0.34
24-Oct	0.41	<1	<2	<1	13	0.23
31-Oct	0.12	<1	2	<1	12	0.23
08-Nov	0.40	<1	<2	<1	12	0.75
13-Nov	0.45	<1	<2	<1	11	0.84
22-Nov	0.30	<1	<2	<1	10	0.71
27-Nov	0.48	<1	2	<1	10	0.61
06-Dec	0.21	<1	<2	<1	9	0.60
12-Dec	0.20	<1	<2	<1	8	0.45
18-Dec	0.29	<1	NA	<1	8	0.56
22-Dec	0.59	<1	NA	<1	7	0.35
31-Dec	0.22	<1	NA	<1	7	0.40

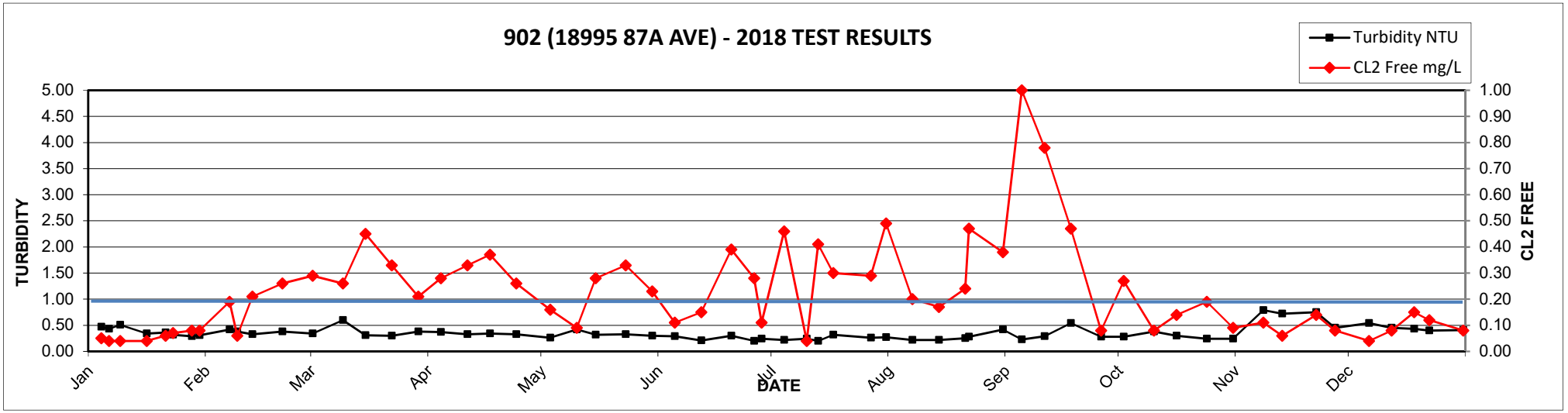

901 (17988 93A ST) - 2018 TEST RESULTS
HPC
Temp
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


901 (17988 93A AVE) - 2018 TEST RESULTS
NTU
mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 902 (18995 87A AVE)

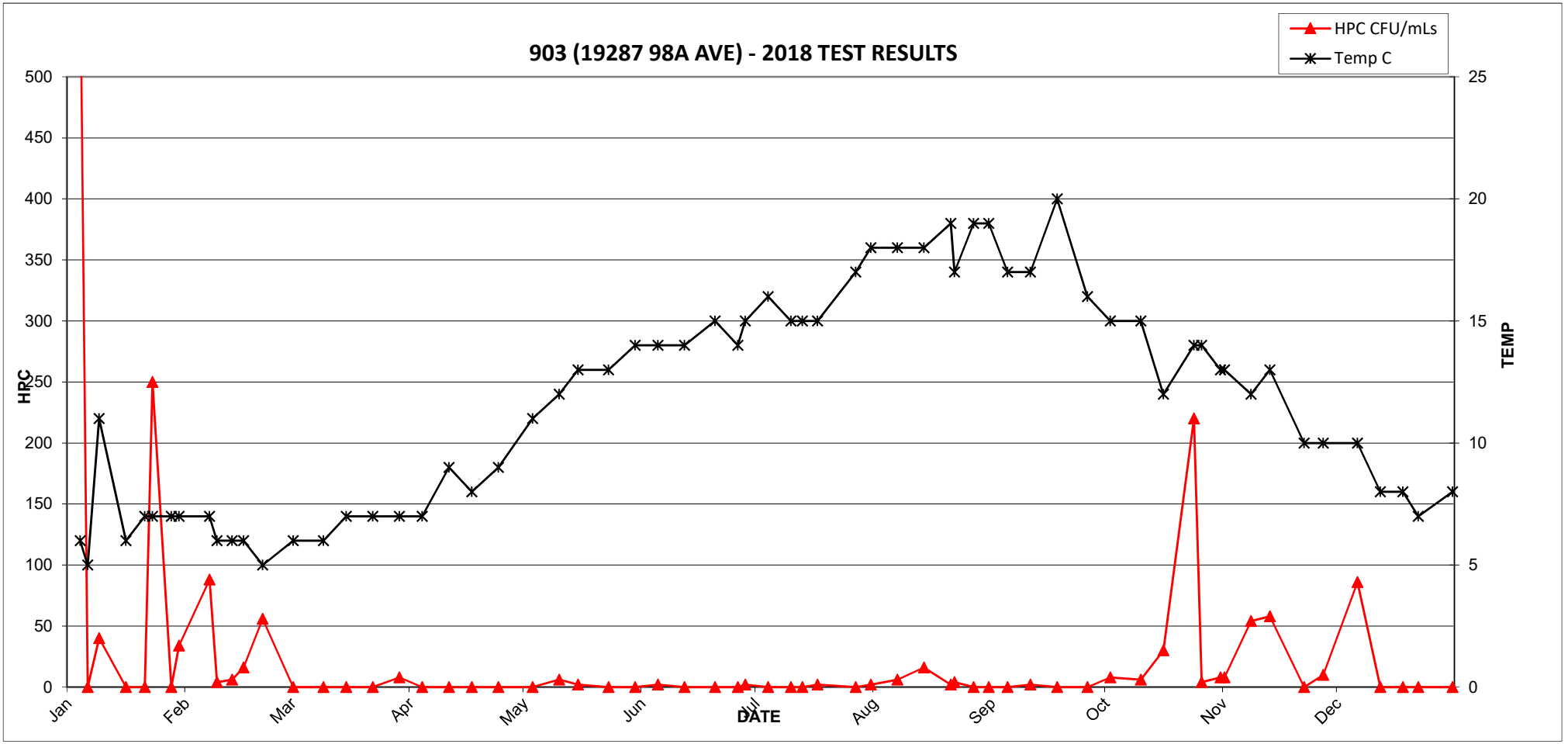
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.05	<1	4	<1	5	0.47
06-Jan	0.04	<1	<2	<1	5	0.43
09-Jan	0.04	<1	18	<1	10	0.51
16-Jan	0.04	<1	30	<1	5	0.34
21-Jan	0.06	<1	<2	<1	6	0.36
23-Jan	0.07	<1	10	<1	6	0.32
28-Jan	0.08	<1	<2	<1	6	0.29
30-Jan	0.08	<1	6	<1	6	0.31
07-Feb	0.19	<1	2	<1	6	0.42
09-Feb	0.06	<1	<2	<1	7	0.38
13-Feb	0.21	<1	4	<1	6	0.33
21-Feb	0.26	<1	<2	<1	5	0.38
01-Mar	0.29	<1	<2	<1	5	0.34
09-Mar	0.26	<1	<2	<1	5	0.60
15-Mar	0.45	<1	<2	<1	5	0.31
22-Mar	0.33	<1	<2	<1	6	0.30
29-Mar	0.21	<1	<2	<1	7	0.38
04-Apr	0.28	<1	2	<1	7	0.37
11-Apr	0.33	<1	<2	<1	8	0.33
17-Apr	0.37	<1	2	<1	8	0.34
24-Apr	0.26	<1	2	<1	10	0.33
03-May	0.16	<1	<2	<1	10	0.26
10-May	0.09	<1	10	<1	11	0.42
15-May	0.28	<1	14	<1	12	0.32
23-May	0.33	<1	<2	<1	14	0.33
30-May	0.23	<1	<2	<1	14	0.30
05-Jun	0.11	<1	20	<1	14	0.29
12-Jun	0.15	<1	18	<1	14	0.21
20-Jun	0.39	<1	<2	<1	15	0.30
26-Jun	0.28	<1	<2	<1	15	0.20
28-Jun	0.11	<1	10	<1	16	0.24
04-Jul	0.46	<1	<2	<1	14	0.22
10-Jul	0.04	<1	2	<1	15	0.24
13-Jul	0.41	<1	<2	<1	15	0.20
17-Jul	0.30	<1	<2	<1	14	0.32
27-Jul	0.29	<1	<2	<1	17	0.26
31-Jul	0.49	<1	2	<1	17	0.27
07-Aug	0.20	<1	2	<1	16	0.22
14-Aug	0.17	<1	6	<1	18	0.22
21-Aug	0.24	<1	<2	<1	18	0.25
22-Aug	0.47	<1	<2	<1	18	0.28
31-Aug	0.38	<1	<2	<1	17	0.42
05-Sep	1.00	<1	<2	<1	15	0.23
11-Sep	0.78	<1	<2	<1	17	0.29
18-Sep	0.47	<1	<2	<1	16	0.54
26-Sep	0.08	<1	<2	<1	15	0.28
02-Oct	0.27	<1	4	<1	15	0.28
10-Oct	0.08	<1	22	<1	14	0.38
16-Oct	0.14	<1	18	<1	12	0.30
24-Oct	0.19	<1	4	<1	12	0.24
31-Oct	0.09	<1	14	<1	12	0.24
08-Nov	0.11	<1	32	<1	12	0.79
13-Nov	0.06	<1	18	<1	11	0.72
22-Nov	0.14	<1	<2	<1	10	0.75
27-Nov	0.08	<1	44	<1	9	0.45
06-Dec	0.04	<1	20	<1	8	0.54
12-Dec	0.08	<1	<2	<1	7	0.45
18-Dec	0.15	<1	NA	<1	7	0.43
22-Dec	0.12	<1	NA	<1	7	0.40
31-Dec	0.08	<1	NA	<1	7	0.41

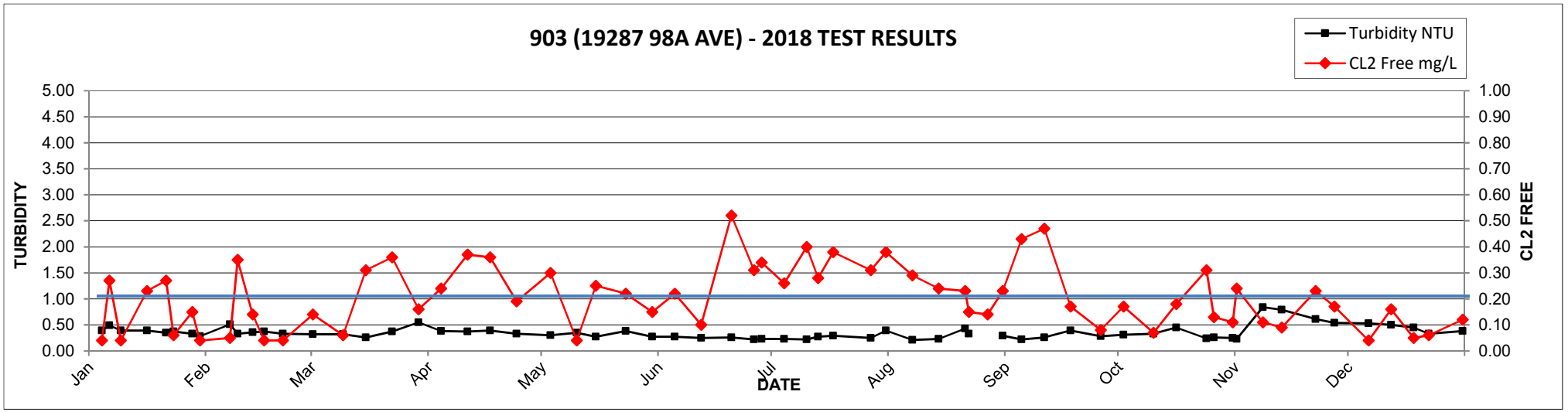

902 (18995 87A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


902 (18995 87A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 903 (19287 98A AVE)

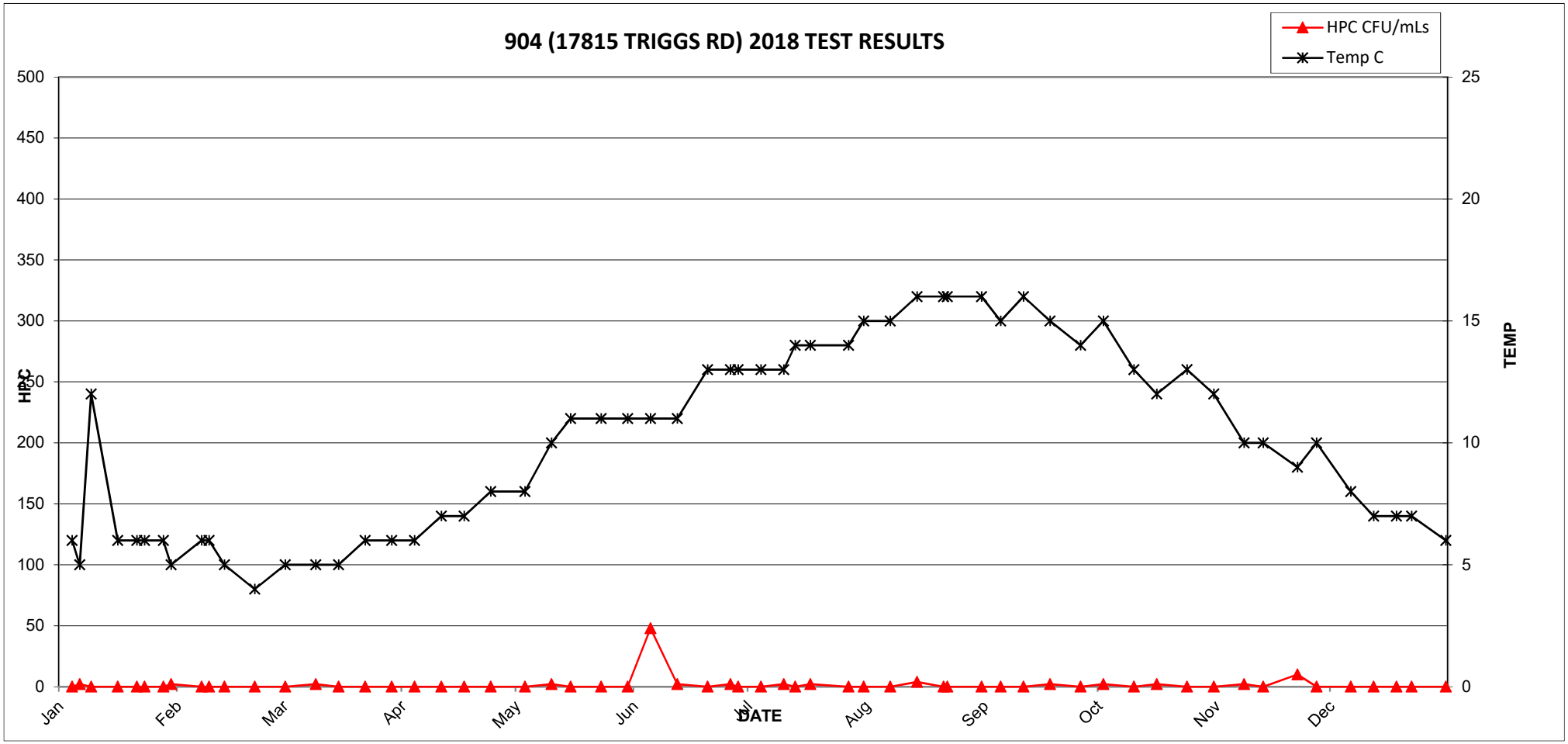
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.04	<1	600	<1	6	0.39
06-Jan	0.27	<1	<2	<1	5	0.49
09-Jan	0.04	<1	40	<1	11	0.39
16-Jan	0.23	<1	<2	<1	6	0.39
21-Jan	0.27	<1	<2	<1	7	0.35
23-Jan	0.06	<1	250	<1	7	0.37
28-Jan	0.15	<1	<2	<1	7	0.33
30-Jan	0.04	<1	34	<1	7	0.28
07-Feb	0.05	<1	88	<1	7	0.51
09-Feb	0.35	<1	4	<1	6	0.33
13-Feb	0.14	<1	6	<1	6	0.36
16-Feb	0.04	<1	16	<1	6	0.37
21-Feb	0.04	<1	56	<1	5	0.33
01-Mar	0.14	<1	<2	<1	6	0.32
09-Mar	0.06	<1	<2	<1	6	0.32
15-Mar	0.31	<1	<2	<1	7	0.26
22-Mar	0.36	<1	<2	<1	7	0.37
29-Mar	0.16	<1	8	<1	7	0.55
04-Apr	0.24	<1	<2	<1	7	0.38
11-Apr	0.37	<1	<2	<1	9	0.37
17-Apr	0.36	<1	<2	<1	8	0.39
24-Apr	0.19	<1	<2	<1	9	0.33
03-May	0.30	<1	<2	<1	11	0.30
10-May	0.04	<1	6	<1	12	0.35
15-May	0.25	<1	2	<1	13	0.27
23-May	0.22	<1	<2	<1	13	0.38
30-May	0.15	<1	<2	<1	14	0.27
05-Jun	0.22	<1	2	<1	14	0.27
12-Jun	0.10	<1	<2	<1	14	0.25
20-Jun	0.52	<1	<2	<1	15	0.26
26-Jun	0.31	<1	<2	<1	14	0.22
28-Jun	0.34	<1	2	<1	15	0.23
04-Jul	0.26	<1	<2	<1	16	0.23
10-Jul	0.40	<1	<2	<1	15	0.22
13-Jul	0.28	<1	<2	<1	15	0.27
17-Jul	0.38	<1	2	<1	15	0.29
27-Jul	0.31	<1	<2	<1	17	0.25
31-Jul	0.38	<1	2	<1	18	0.39
07-Aug	0.29	<1	6	<1	18	0.21
14-Aug	0.24	<1	16	<1	18	0.23
21-Aug	0.23	<1	2	<1	19	0.43
22-Aug	0.15	<1	4	<1	17	0.33
27-Aug	0.14	<1	<2	<1	19	
31-Aug	0.23	<1	<2	<1	19	0.29
05-Sep	0.43	<1	<2	<1	17	0.22
11-Sep	0.47	<1	2	<1	17	0.26
18-Sep	0.17	<1	<2	<1	20	0.39
26-Sep	0.08	<1	<2	<1	16	0.28
02-Oct	0.17	<1	8	<1	15	0.31
10-Oct	0.07	<1	6	<1	15	0.33
16-Oct	0.18	<1	30	<1	12	0.45
24-Oct	0.31	<1	220	<1	14	0.24
26-Oct	0.13	<1	4	<1	14	0.26
31-Oct	0.11	<1	8	<1	13	0.25
01-Nov	0.24	<1	8	<1	13	0.23
08-Nov	0.11	<1	54	<1	12	0.84
13-Nov	0.09	<1	58	<1	13	0.79
22-Nov	0.23	<1	<2	<1	10	0.61
27-Nov	0.17	<1	10	<1	10	0.54
06-Dec	0.04	<1	86	<1	10	0.53


903 (19287 98A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


903 (19287 98A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 904 (17815 TRIGGS RD)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.61	<1	<2	<1	6	0.44
06-Jan	0.48	<1	2	<1	5	0.49
09-Jan	0.41	<1	<2	<1	12	0.50
16-Jan	0.69	<1	<2	<1	6	0.44
21-Jan	0.60	<1	<2	<1	6	0.38
23-Jan	0.75	<1	<2	<1	6	0.41
28-Jan	0.62	<1	<2	<1	6	0.36
30-Jan	0.56	<1	2	<1	5	0.37
07-Feb	0.61	<1	<2	<1	6	0.55
09-Feb	0.65	<1	<2	<1	6	0.37
13-Feb	0.64	<1	<2	<1	5	0.37
21-Feb	0.65	<1	<2	<1	4	0.35
01-Mar	0.72	<1	<2	<1	5	0.33
09-Mar	0.68	<1	2	<1	5	1.40
15-Mar	0.63	<1	<2	<1	5	0.29
22-Mar	0.79	<1	<2	<1	6	0.32
29-Mar	0.72	<1	<2	<1	6	0.67
04-Apr	0.64	<1	<2	<1	6	0.38
11-Apr	0.72	<1	<2	<1	7	0.31
17-Apr	0.67	<1	<2	<1	7	0.37
24-Apr	0.52	<1	<2	<1	8	0.29
03-May	0.46	<1	<2	<1	8	0.29
10-May	0.45	<1	2	<1	10	0.26
15-May	0.65	<1	<2	<1	11	0.65
23-May	0.72	<1	<2	<1	11	0.38
30-May	0.73	<1	<2	<1	11	0.29
05-Jun	0.56	<1	48	<1	11	0.86
12-Jun	0.55	<1	2	<1	11	0.23
20-Jun	0.80	<1	<2	<1	13	0.87
26-Jun	0.54	<1	2	<1	13	0.20
28-Jun	0.59	<1	<2	<1	13	0.25
04-Jul	0.73	<1	<2	<1	13	0.20
10-Jul	0.60	<1	2	<1	13	0.25
13-Jul	0.67	<1	<2	<1	14	0.19
17-Jul	1.00	<1	2	<1	14	0.27
27-Jul	0.58	<1	<2	<1	14	0.26
31-Jul	0.69	<1	<2	<1	15	0.32
07-Aug	0.72	<1	<2	<1	15	0.26
14-Aug	0.48	<1	4	<1	16	0.22
21-Aug	0.64	<1	<2	<1	16	0.37
22-Aug	0.82	<1	<2	<1	16	0.30
31-Aug	0.69	<1	<2	<1	16	0.41
05-Sep	1.10	<1	<2	<1	15	0.24
11-Sep	0.88	<1	<2	<1	16	0.25
18-Sep	0.63	<1	2	<1	15	0.36
26-Sep	0.46	<1	<2	<1	14	0.33
02-Oct	0.63	<1	2	<1	15	0.36
10-Oct	0.54	<1	<2	<1	13	0.33
16-Oct	0.77	<1	2	<1	12	0.35
24-Oct	0.60	<1	<2	<1	13	0.24
31-Oct	0.32	<1	<2	<1	12	0.26
08-Nov	0.46	<1	2	<1	10	0.95
13-Nov	1.10	<1	<2	<1	10	1.00


904 (17815 TRIGGS RD) 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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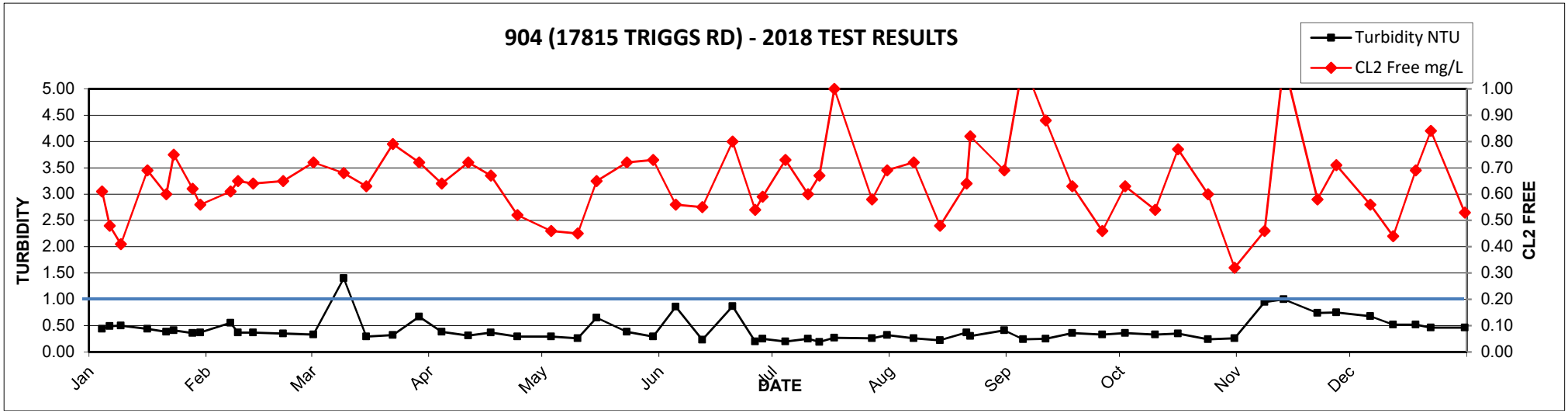
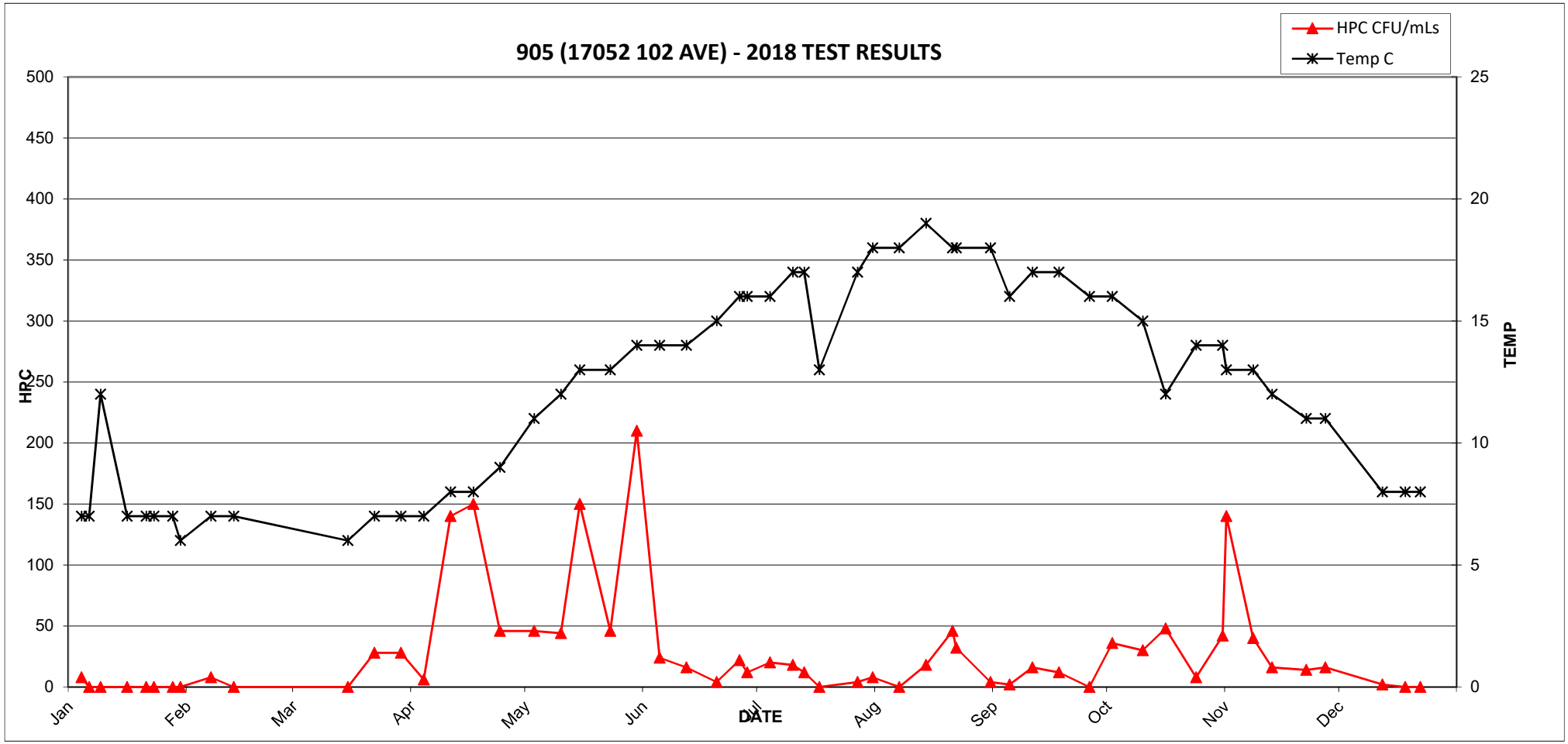
Dec


904 (17815 TRIGGS RD) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 905 (17052 102AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.11	<1	8	<1	7	0.41
06-Jan	0.04	<1	<2	<1	7	0.45
09-Jan	0.04	<1	<2	<1	12	0.46
16-Jan	0.15	<1	<2	<1	7	0.38
21-Jan	0.11	<1	<2	<1	7	0.33
23-Jan	0.13	<1	<2	<1	7	0.34
28-Jan	0.07	<1	<2	<1	7	0.32
30-Jan	0.10	<1	<2	<1	6	0.33
07-Feb	0.08	<1	8	<1	7	0.91
13-Feb	0.14	<1	<2	<1	7	0.41
15-Mar	0.22	<1	<2	<1	6	0.25
22-Mar	0.16	<1	28	<1	7	0.29
29-Mar	0.12	<1	28	<1	7	0.29
04-Apr	0.09	<1	6	<1	7	0.34
11-Apr	0.23	<1	140	<1	8	0.41
17-Apr	0.21	<1	150	<1	8	0.31
24-Apr	0.14	<1	46	<1	9	0.33
03-May	0.05	<1	46	<1	11	0.26
10-May	0.04	<1	44	<1	12	0.29
15-May	0.07	<1	150	<1	13	0.32
23-May	0.13	<1	46	<1	13	0.27
30-May	0.14	<1	210	<1	14	0.24
05-Jun	0.14	<1	24	<1	14	0.26
12-Jun	0.14	<1	16	<1	14	0.19
20-Jun	0.37	<1	4	<1	15	0.25
26-Jun	0.07	<1	22	<1	16	0.21
28-Jun	0.16	<1	12	<1	16	0.18
04-Jul	0.13	<1	20	<1	16	0.18
10-Jul	0.10	<1	18	<1	17	0.28
13-Jul	0.06	<1	12	<1	17	0.21
17-Jul	0.21	<1	LA	<1	13	0.36
27-Jul	0.15	<1	4	<1	17	0.30
31-Jul	0.15	<1	8	<1	18	0.51
07-Aug	0.21	<1	<2	<1	18	0.26
14-Aug	0.04	<1	18	<1	19	0.19
21-Aug	0.11	<1	46	<1	18	0.35
22-Aug	0.16	<1	32	<1	18	0.27
31-Aug	0.23	<1	4	<1	18	0.53
05-Sep	0.21	<1	2	<1	16	0.21
11-Sep	0.17	<1	16	<1	17	0.36
18-Sep	0.11	<1	12	<1	17	0.26
26-Sep	0.05	<1	<2	<1	16	0.25
02-Oct	0.17	<1	36	<1	16	0.48
10-Oct	0.04	<1	30	<1	15	0.30
16-Oct	0.09	<1	48	<1	12	0.31
24-Oct	0.04	<1	8	<1	14	0.28
31-Oct	0.04	<1	42	<1	14	0.24
01-Nov	0.14	<1	140	<1	13	0.22
08-Nov	0.14	<1	40	<1	13	0.60
13-Nov	0.04	<1	16	<1	12	0.74
22-Nov	0.10	<1	14	<1	11	0.67
27-Nov	0.06	<1	16	<1	11	0.51
12-Dec	0.04	<1	2	<1	8	0.40


905 (17052 102 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
Apr
May
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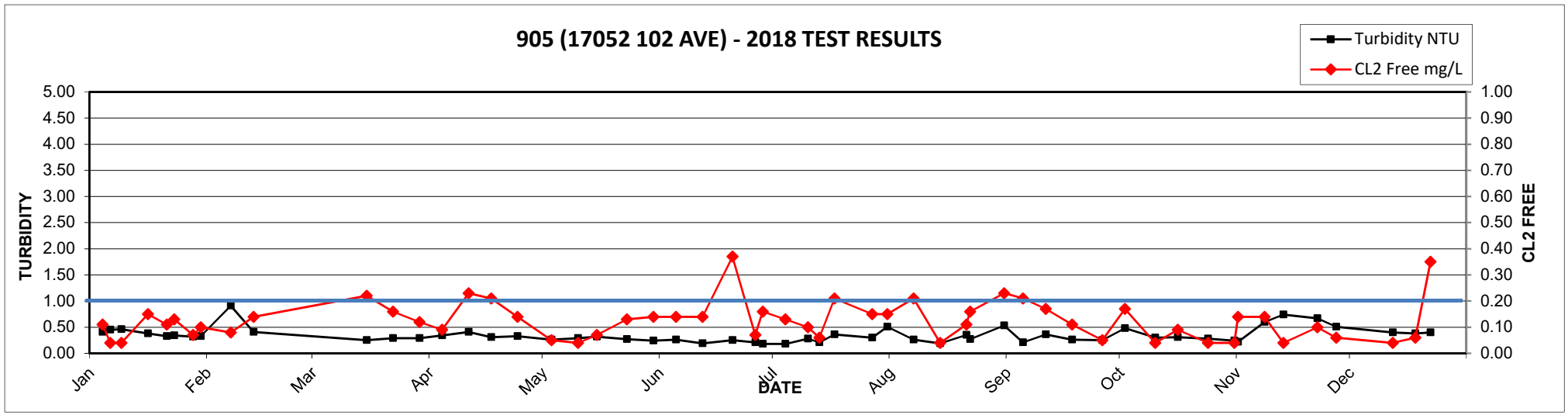
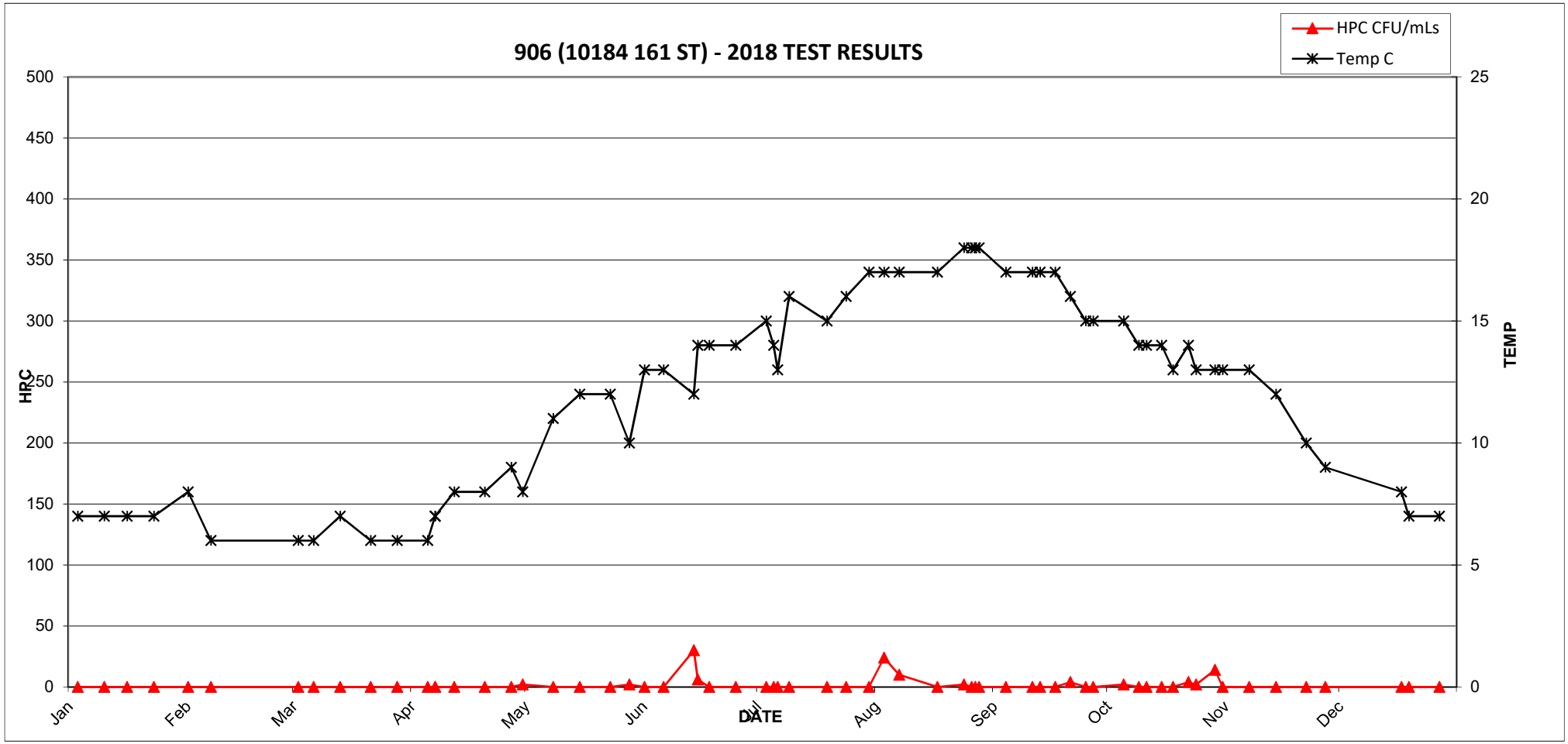
Jul
Aug
Sep
Oct
Nov
Dec


905 (17052 102 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 906 (10184 161ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.66	<1	<2	<1	7	0.47
10-Jan	0.29	<1	<2	<1	7	0.43
16-Jan	0.47	<1	<2	<1	7	0.42
23-Jan	0.30	<1	<2	<1	7	0.41
01-Feb	0.51	<1	<2	<1	8	0.59
07-Feb	0.24	<1	<2	<1	6	0.43
02-Mar	0.54	<1	<2	<1	6	0.40
06-Mar	0.61	<1	<2	<1	6	0.30
13-Mar	0.57	<1	<2	<1	7	0.53
21-Mar	0.41	<1	<2	<1	6	0.39
28-Mar	0.40	<1	<2	<1	6	0.30
05-Apr	0.56	<1	<2	<1	6	0.30
07-Apr	0.50	<1	<2	<1	7	0.27
07-Apr	0.50	<1	<2	<1	7	0.27
12-Apr	0.38	<1	<2	<1	8	0.30
20-Apr	0.39	<1	<2	<1	8	0.30
27-Apr	0.30	<1	<2	<1	9	0.40
30-Apr	0.34	<1	2	<1	8	0.37
08-May	0.50	<1	<2	<1	11	0.27
15-May	0.25	<1	<2	<1	12	0.43
23-May	0.41	<1	<2	<1	12	0.37
28-May	0.40	<1	2	<1	10	0.31
01-Jun	0.33	<1	<2	<1	13	0.36
06-Jun	0.15	<1	<2	<1	13	0.24
14-Jun	0.36	<1	30	<1	12	0.23
15-Jun	0.37	<1	6	<1	14	0.29
18-Jun	0.55	<1	<2	<1	14	0.26
25-Jun	0.45	<1	<2	<1	14	0.19
03-Jul	0.42	<1	<2	<1	15	0.22
05-Jul	0.37	<1	<2	<1	14	0.25
06-Jul	0.49	<1	<2	<1	13	0.42
09-Jul	0.20	<1	<2	<1	16	0.18
19-Jul	0.51	<1	<2	<1	15	0.42
24-Jul	0.53	<1	<2	<1	16	0.29
30-Jul	0.39	<1	<2	<1	17	0.33
03-Aug	0.43	<1	24	<1	17	0.22
07-Aug	0.34	<1	10	<1	17	0.25
17-Aug	0.46	<1	<2	<1	17	0.28
24-Aug	0.37	<1	2	1	18	0.33
26-Aug	0.43	<1	<2	<1	18	0.21
27-Aug	0.39	<1	<2	<1	18	
28-Aug	0.37	<1	<2	<1	18	0.24
04-Sep	0.34	<1	<2	<1	17	0.26
11-Sep	0.34	<1	<2	<1	17	0.21
13-Sep	0.39	<1	<2	<1	17	0.21
17-Sep	0.31	<1	<2	<1	17	0.24
21-Sep	0.24	<1	4	<1	16	0.27
25-Sep	0.17	<1	<2	<1	15	0.34
27-Sep	0.31	<1	<2	<1	15	0.65
05-Oct	0.15	<1	2	<1	15	0.48
09-Oct	0.25	<1	<2	<1	14	0.24
11-Oct	0.25	<1	<2	<1	14	0.46
15-Oct	0.22	<1	<2	<1	14	0.62
18-Oct	0.36	<1	<2	<1	13	0.25
22-Oct	0.19	<1	4	<1	14	0.28
24-Oct	0.29	<1	2	<1	13	0.23


906 (10184 161 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
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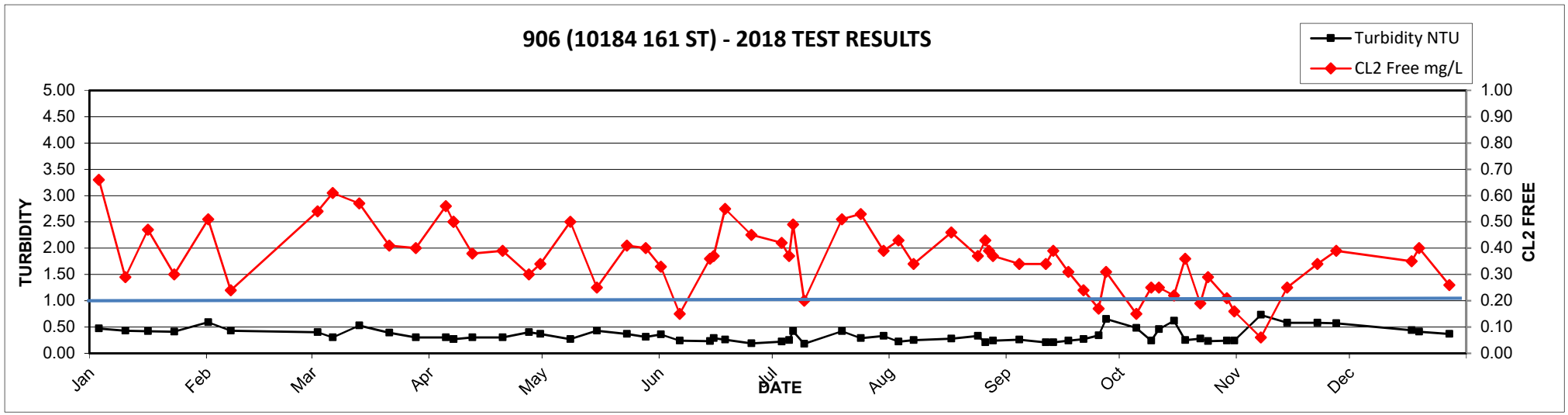
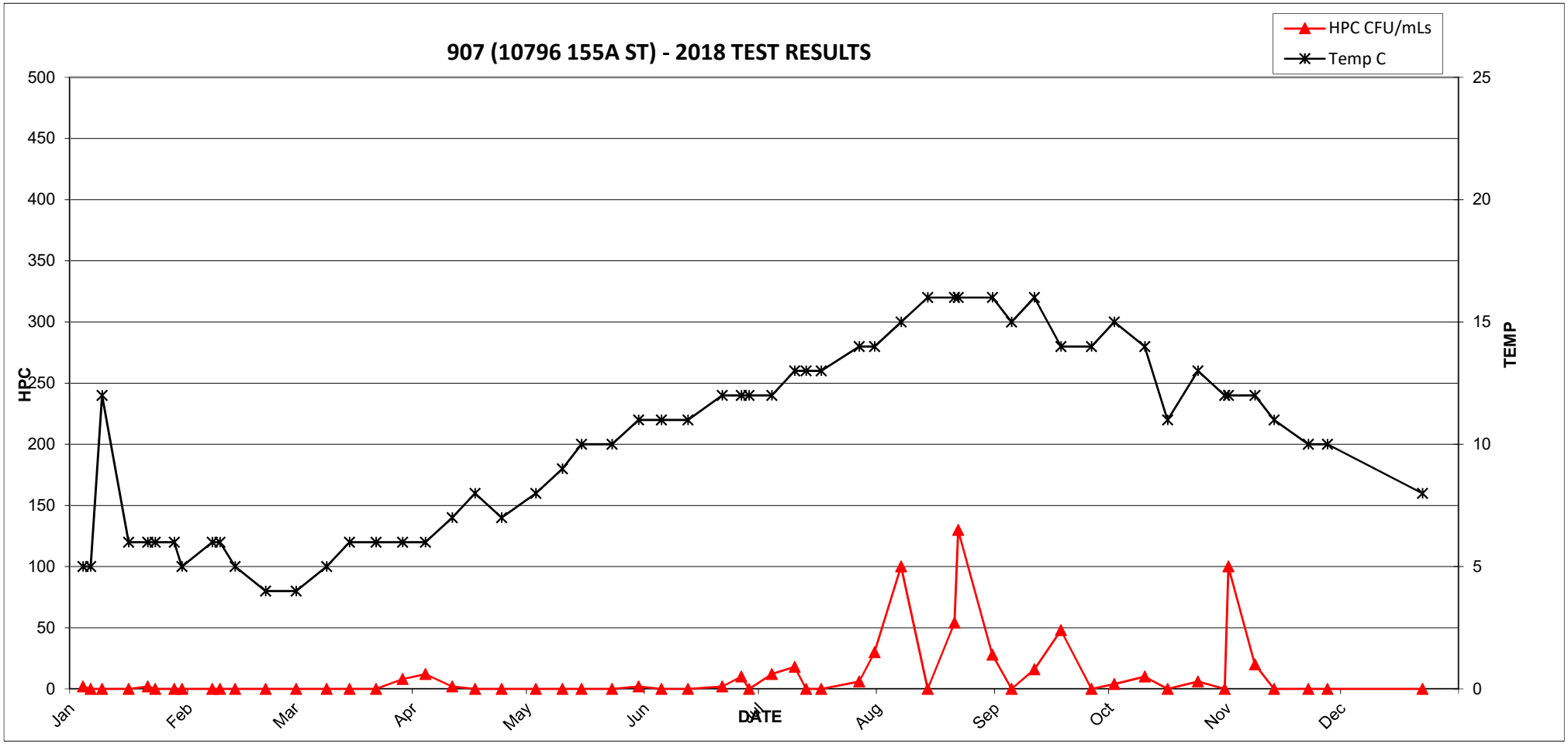
Oct
Nov
Dec


906 (10184 161 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 907 (10796 155A ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.81	<1	2	<1	5	0.50
06-Jan	0.31	<1	<2	<1	5	0.52
09-Jan	0.53	<1	<2	<1	12	0.56
16-Jan	0.65	<1	<2	<1	6	0.43
21-Jan	0.58	<1	2	<1	6	0.39
23-Jan	0.70	<1	<2	<1	6	0.40
28-Jan	0.65	<1	<2	<1	6	0.40
30-Jan	0.64	<1	<2	<1	5	0.40
07-Feb	0.66	<1	<2	<1	6	0.55
09-Feb	0.70	<1	<2	<1	6	0.40
13-Feb	0.68	<1	<2	<1	5	0.39
21-Feb	0.79	<1	<2	<1	4	0.36
01-Mar	0.87	<1	<2	<1	4	0.38
09-Mar	0.65	<1	<2	<1	5	0.33
15-Mar	0.57	<1	<2	<1	6	0.32
22-Mar	0.70	<1	<2	<1	6	0.29
29-Mar	0.71	<1	8	<1	6	0.56
04-Apr	0.67	<1	12	<1	6	0.33
11-Apr	0.67	<1	2	<1	7	0.40
17-Apr	0.63	<1	<2	<1	8	0.39
24-Apr	0.56	<1	<2	<1	7	0.37
03-May	0.69	<1	<2	<1	8	0.36
10-May	0.57	<1	<2	<1	9	0.28
15-May	0.87	<1	<2	<1	10	1.30
23-May	0.69	<1	<2	<1	10	0.62
30-May	0.72	<1	2	<1	11	0.34
05-Jun	0.60	<1	<2	<1	11	0.25
12-Jun	0.77	<1	<2	<1	11	0.22
21-Jun	0.79	<1	2	<1	12	0.28
26-Jun	0.60	<1	10	<1	12	0.25
28-Jun	0.50	<1	<2	<1	12	0.22
04-Jul	0.64	<1	12	<1	12	0.26
10-Jul	0.43	<1	18	<1	13	0.18
13-Jul	0.70	<1	<2	<1	13	0.28
17-Jul	0.64	<1	<2	<1	13	0.45
27-Jul	0.56	<1	6	<1	14	0.23
31-Jul	0.69	<1	30	<1	14	0.32
07-Aug	0.69	<1	100	<1	15	0.40
14-Aug	0.51	<1	<2	<1	16	0.22
21-Aug	0.54	<1	54	<1	16	0.38
22-Aug	0.79	<1	130	<1	16	0.39
31-Aug	0.70	<1	28	<1	16	0.41
05-Sep	1.20	<1	<2	<1	15	0.31
11-Sep	0.58	<1	16	<1	16	0.28
18-Sep	0.59	<1	48	<1	14	0.35
26-Sep	0.42	<1	<2	<1	14	0.33
02-Oct	0.65	<1	4	<1	15	0.36
10-Oct	0.40	<1	10	<1	14	0.25
16-Oct	0.39	<1	<2	<1	11	0.38
24-Oct	0.68	<1	6	<1	13	0.27
31-Oct	0.29	<1	<2	<1	12	0.27
01-Nov	0.33	<1	100	<1	12	0.27
08-Nov	0.37	<1	20	<1	12	0.79
13-Nov	0.77	<1	<2	<1	11	0.78


907 (10796 155A ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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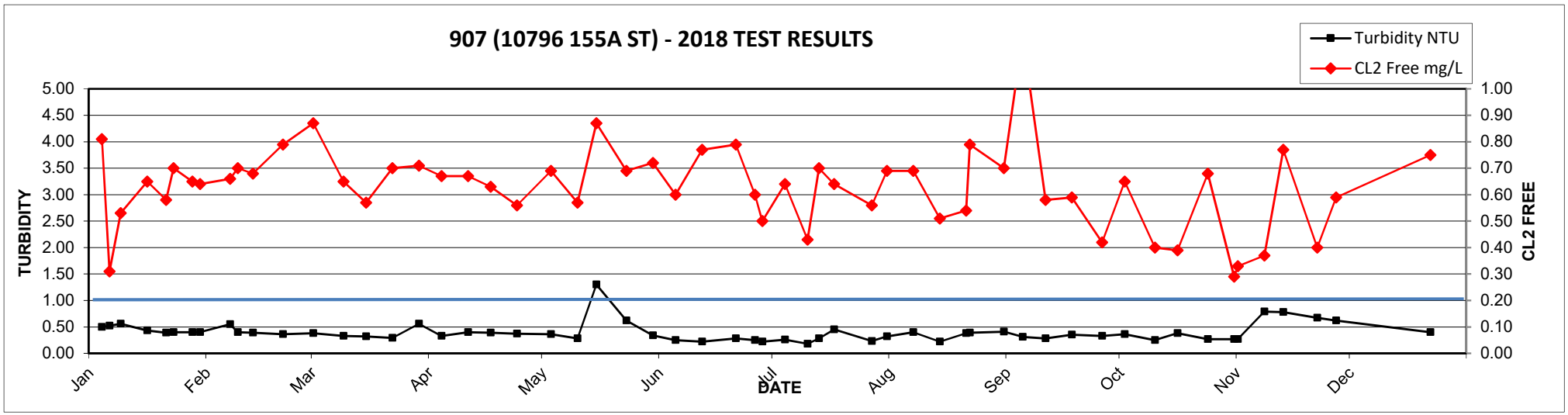
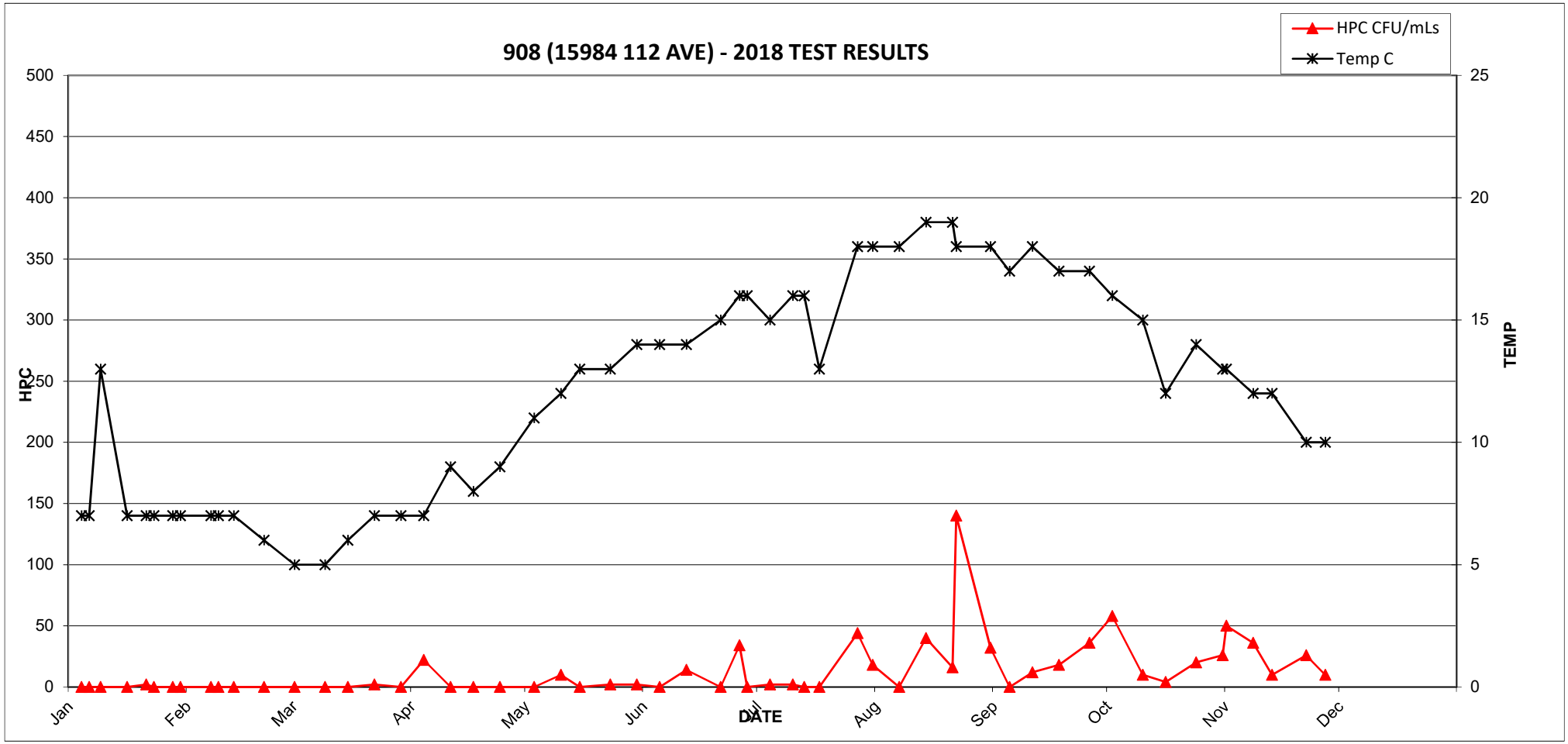

907 (10796 155A ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 908 (15985 112 AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.24	<1	<2	<1	7	0.43
06-Jan	0.14	<1	<2	<1	7	0.44
09-Jan	0.17	<1	<2	<1	13	0.48
16-Jan	0.23	<1	<2	<1	7	0.35
21-Jan	0.19	<1	2	<1	7	0.35
23-Jan	0.18	<1	<2	<1	7	0.34
28-Jan	0.08	<1	<2	<1	7	0.32
30-Jan	0.17	<1	<2	<1	7	0.32
07-Feb	0.18	<1	<2	<1	7	0.55
09-Feb	0.16	<1	<2	<1	7	0.33
13-Feb	0.04	<1	<2	<1	7	0.33
21-Feb	0.14	<1	<2	<1	6	0.32
01-Mar	0.25	<1	<2	<1	5	0.33
09-Mar	0.18	<1	<2	<1	5	0.28
15-Mar	0.22	<1	<2	<1	6	0.32
22-Mar	0.21	<1	2	<1	7	0.33
29-Mar	0.13	<1	<2	<1	7	0.46
04-Apr	0.07	<1	22	<1	7	0.35
11-Apr	0.17	<1	<2	<1	9	0.31
17-Apr	0.17	<1	<2	<1	8	0.30
24-Apr	0.14	<1	<2	<1	9	0.37
03-May	0.12	<1	<2	<1	11	0.29
10-May	0.04	<1	10	<1	12	0.28
15-May	0.08	<1	<2	<1	13	0.87
23-May	0.15	<1	2	<1	13	0.58
30-May	0.17	<1	2	<1	14	0.38
05-Jun	0.13	<1	<2	<1	14	0.28
12-Jun	0.17	<1	14	<1	14	0.24
21-Jun	0.55	<1	<2	<1	15	0.67
26-Jun	0.29	<1	34	<1	16	0.16
28-Jun	0.39	<1	<2	<1	16	0.20
04-Jul	0.40	<1	2	<1	15	0.27
10-Jul	0.14	<1	2	<1	16	0.23
13-Jul	0.35	<1	<2	<1	16	0.23
17-Jul	0.40	<1	<2	<1	13	0.55
27-Jul	0.23	<1	44	<1	18	0.28
31-Jul	0.24	<1	18	<1	18	0.40
07-Aug	0.23	<1	<2	<1	18	0.32
14-Aug	0.17	<1	40	<1	19	0.26
21-Aug	0.14	<1	16	<1	19	0.37
22-Aug	0.27	<1	140	<1	18	0.36
31-Aug	0.14	<1	32	<1	18	0.31
05-Sep	0.23	<1	<2	<1	17	0.65
11-Sep	0.07	<1	12	<1	18	0.24
18-Sep	0.19	<1	18	<1	17	0.32
26-Sep	0.10	<1	36	<1	17	0.25
02-Oct	0.17	<1	58	<1	16	0.32
10-Oct	0.16	<1	10	<1	15	0.31
16-Oct	0.13	<1	4	<1	12	0.30
24-Oct	0.15	<1	20	<1	14	0.23
31-Oct	0.04	<1	26	<1	13	0.29
01-Nov	0.13	<1	50	<1	13	0.21
08-Nov	0.17	<1	36	<1	12	0.78
13-Nov	0.29	<1	10	<1	12	0.82


908 (15984 112 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
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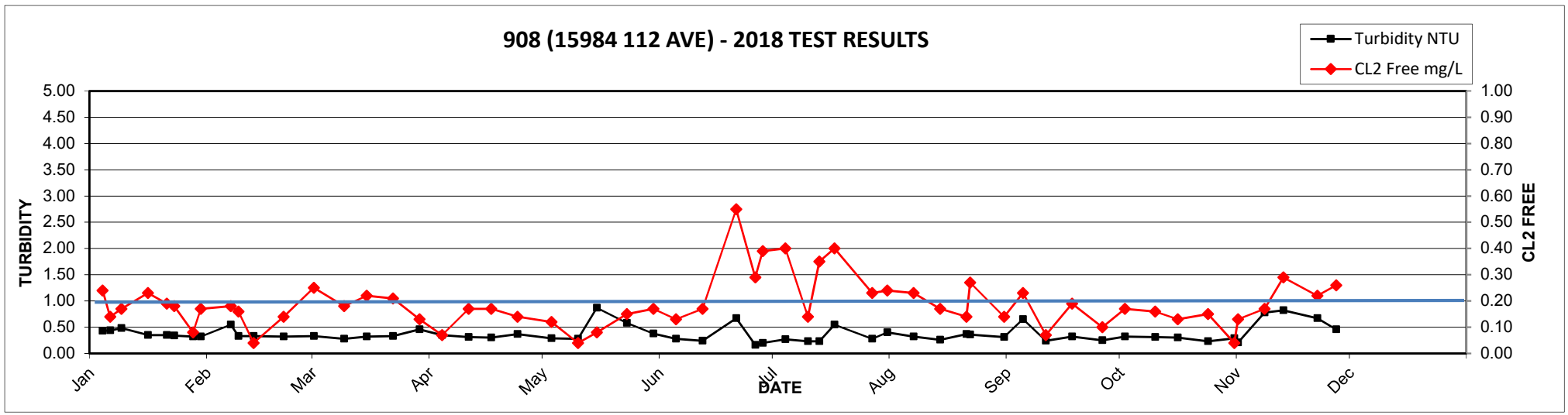
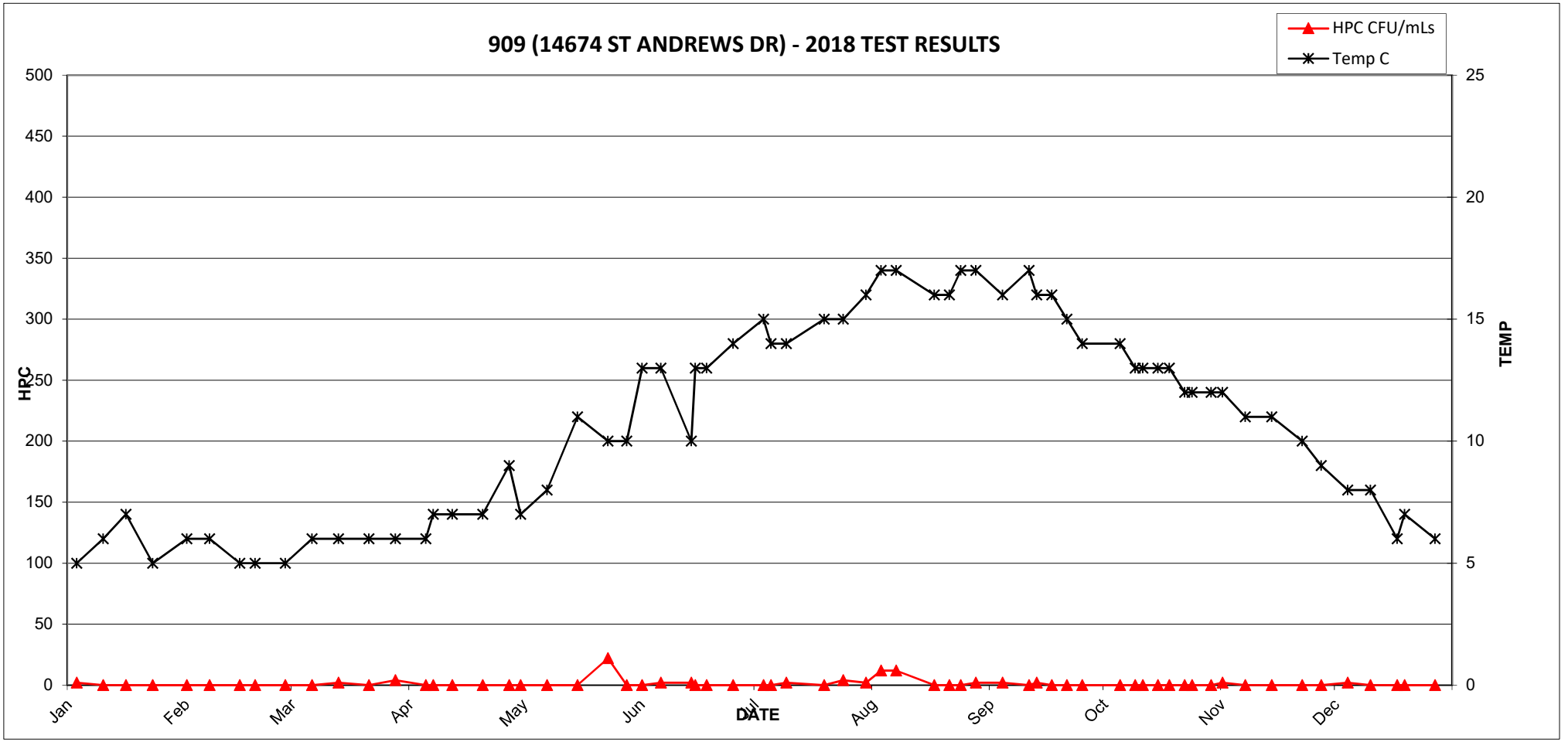
Jul
Aug
Sep
Oct
Nov
Dec


908 (15984 112 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 909 (14674 ST ANDREWS DR)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.38	<1	2	<1	5	0.41
10-Jan	0.76	<1	<2	<1	6	0.43
16-Jan	0.76	<1	<2	<1	7	0.39
23-Jan	0.66	<1	<2	<1	5	0.42
01-Feb	0.93	<1	<2	<1	6	0.77
07-Feb	0.71	<1	<2	<1	6	1.40
15-Feb	0.77	<1	<2	<1	5	0.34
19-Feb	0.73	<1	<2	<1	5	0.41
27-Feb	0.82	<1	<2	<1	5	0.42
06-Mar	0.96	<1	<2	<1	6	0.33
13-Mar	0.69	<1	2	<1	6	0.41
21-Mar	0.74	<1	<2	<1	6	0.39
28-Mar	0.50	<1	4	<1	6	0.32
05-Apr	0.89	<1	<2	<1	6	0.29
07-Apr	0.70	<1	<2	<1	7	0.33
12-Apr	0.70	<1	<2	<1	7	0.31
20-Apr	0.67	<1	<2	<1	7	0.31
27-Apr	0.36	<1	<2	<1	9	0.30
30-Apr	0.40	<1	<2	<1	7	0.35
07-May	0.69	<1	<2	<1	8	0.28
15-May	0.58	<1	<2	<1	11	0.35
23-May	0.51	<1	22	<1	10	0.22
28-May	0.56	<1	<2	<1	10	0.27
01-Jun	0.63	<1	<2	<1	13	0.34
06-Jun	0.67	<1	2	<1	13	0.22
14-Jun	0.71	<1	2	<1	10	0.31
15-Jun	0.61	<1	<2	<1	13	0.23
18-Jun	0.73	<1	<2	<1	13	0.27
25-Jun	0.49	<1	<2	<1	14	0.20
03-Jul	0.42	<1	<2	<1	15	0.24
05-Jul	0.43	<1	<2	<1	14	0.20
09-Jul	0.54	<1	2	<1	14	0.19
19-Jul	0.68	<1	<2	<1	15	0.23
24-Jul	0.60	<1	4	<1	15	0.21
30-Jul	0.53	<1	2	<1	16	0.25
03-Aug	0.62	<1	12	<1	17	0.20
07-Aug	0.52	<1	12	<1	17	0.21
17-Aug	0.51	<1	<2	<1	16	0.33
21-Aug	0.59	<1	<2	<1	16	0.26
24-Aug	0.67	<1	<2	<1	17	0.36
28-Aug	0.49	<1	2	<1	17	0.29
04-Sep	0.66	<1	2	<1	16	0.24
11-Sep	0.46	<1	<2	<1	17	0.23
13-Sep	0.62	<1	2	<1	16	0.30
17-Sep	0.50	<1	<2	<1	16	0.23
21-Sep	0.40	<1	<2	<1	15	0.29
25-Sep	0.81	<1	<2	<1	14	0.41
05-Oct	0.46	<1	<2	<1	14	0.54
09-Oct	0.57	<1	<2	<1	13	0.26
11-Oct	0.52	<1	<2	<1	13	0.44
15-Oct	0.41	<1	<2	<1	13	0.33
18-Oct	0.51	<1	<2	<1	13	0.27


909 (14674 ST ANDREWS DR) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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Jul
Aug
Sep
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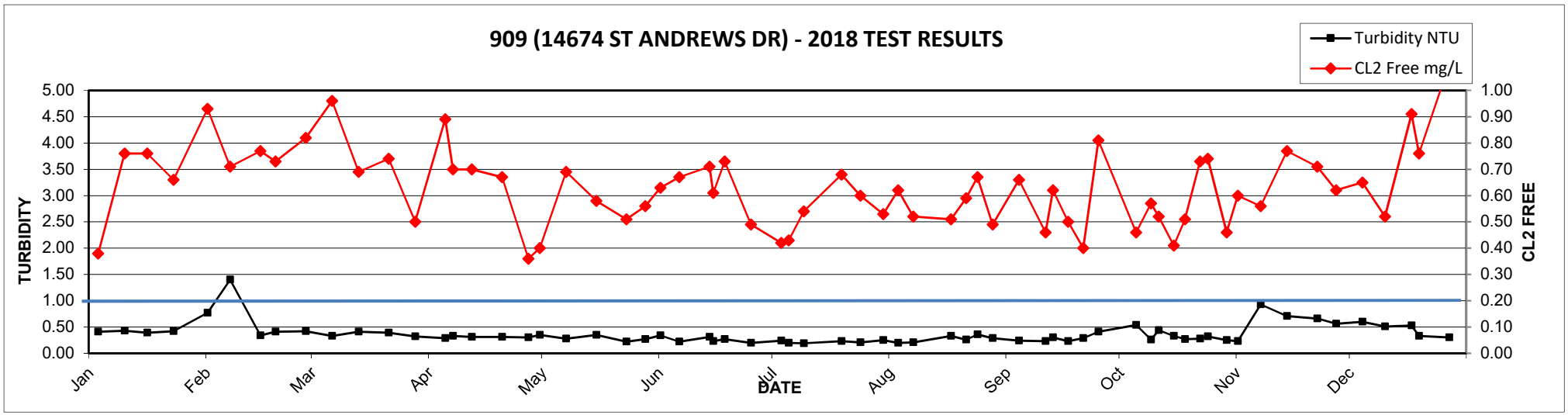
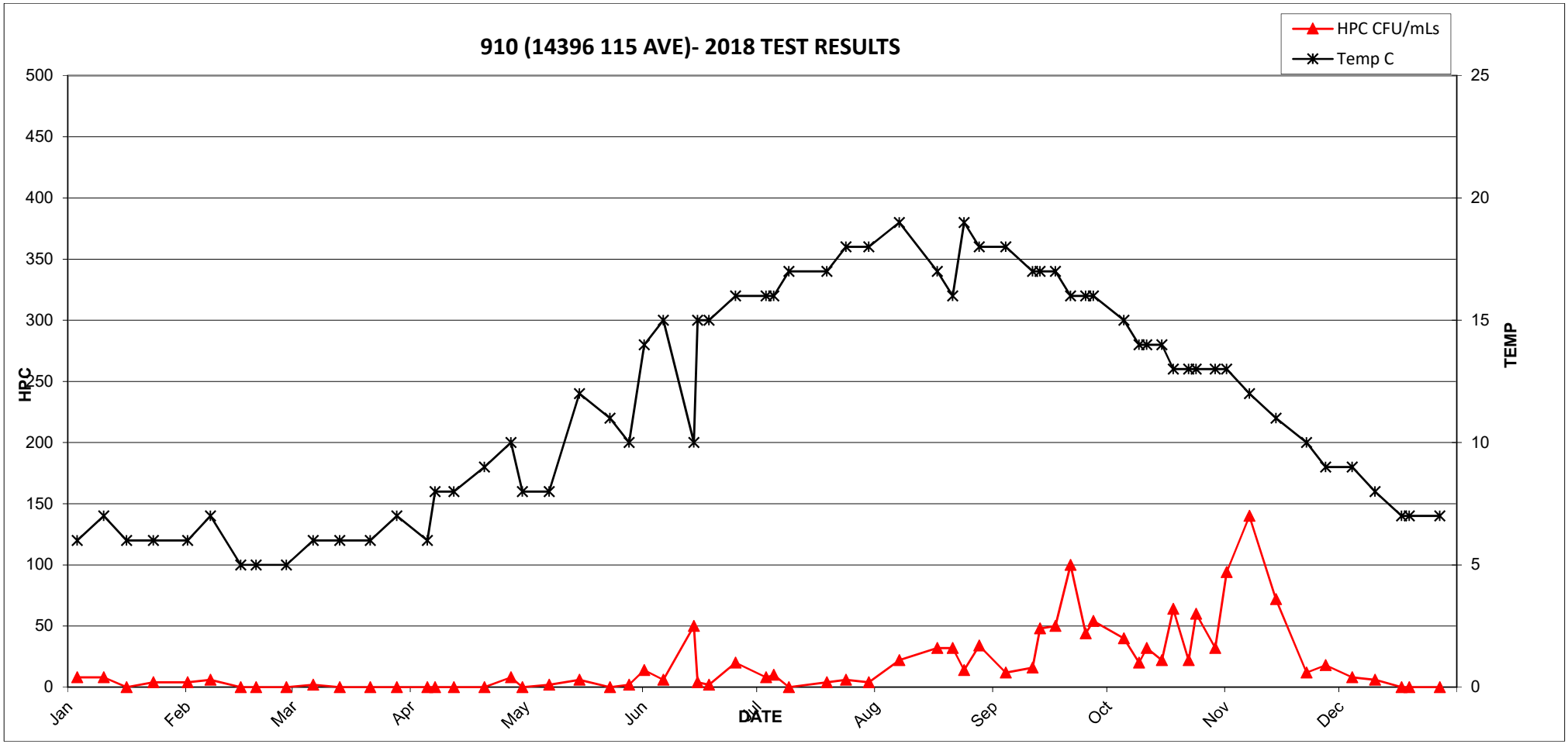
Nov
Dec


909 (14674 ST ANDREWS DR) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 910 (14396 115 AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.18	<1	8	<1	6	0.41
10-Jan	0.20	<1	8	<1	7	0.40
16-Jan	0.12	<1	<2	<1	6	0.36
23-Jan	0.19	<1	4	<1	6	0.46
01-Feb	0.15	<1	4	<1	6	0.43
07-Feb	0.08	<1	6	<1	7	0.40
15-Feb	0.19	<1	<2	<1	5	0.30
19-Feb	0.12	<1	<2	<1	5	0.46
27-Feb	0.35	<1	<2	<1	5	0.35
06-Mar	0.33	<1	2	<1	6	0.32
13-Mar	0.26	<1	<2	<1	6	0.33
21-Mar	0.13	<1	<2	<1	6	0.33
28-Mar	0.09	<1	<2	<1	7	0.34
05-Apr	0.30	<1	<2	<1	6	0.28
07-Apr	0.15	<1	<2	<1	8	0.23
12-Apr	0.09	<1	<2	<1	8	0.31
20-Apr	0.11	<1	<2	<1	9	0.32
27-Apr	0.07	<1	8	<1	10	0.28
30-Apr	0.32	<1	<2	<1	8	0.41
07-May	0.15	<1	2	<1	8	0.25
15-May	0.12	<1	6	<1	12	0.35
23-May	0.27	<1	<2	<1	11	0.21
28-May	0.16	<1	2	<1	10	0.32
01-Jun	0.11	<1	14	<1	14	0.29
06-Jun	0.08	<1	6	<1	15	0.23
14-Jun	0.12	<1	50	<1	10	0.22
15-Jun	0.07	<1	4	<1	15	0.25
18-Jun	0.09	<1	2	<1	15	0.24
25-Jun	0.08	<1	20	<1	16	0.22
03-Jul	0.06	<1	8	<1	16	0.17
05-Jul	0.04	<1	10	<1	16	0.34
09-Jul	0.04	<1	<2	<1	17	0.20
19-Jul	0.22	<1	4	<1	17	0.30
24-Jul	0.10	<1	6	<1	18	0.24
30-Jul	0.10	<1	4	<1	18	0.35
07-Aug	0.07	<1	22	<1	19	0.26
17-Aug	0.12	<1	32	<1	17	0.30
21-Aug	0.11	<1	32	<1	16	0.26
24-Aug	0.11	<1	14	<1	19	0.28
28-Aug	0.13	<1	34	<1	18	0.25
04-Sep	0.1	<1	12	<1	18	0.23
11-Sep	0.04	<1	16	<1	17	0.22
13-Sep	0.04	<1	48	<1	17	0.21
17-Sep	0.04	<1	50	<1	17	0.22
21-Sep	0.05	<1	100	<1	16	0.24
25-Sep	0.04	<1	44	<1	16	0.40
27-Sep	0.09	<1	54	<1	16	0.44
05-Oct	0.04	<1	40	<1	15	0.38
09-Oct	0.05	<1	20	<1	14	0.24
11-Oct	0.05	<1	32	<1	14	0.39
15-Oct	0.04	<1	22	<1	14	0.44
18-Oct	0.17	<1	64	<1	13	0.25


910 (14396 115 AVE)- 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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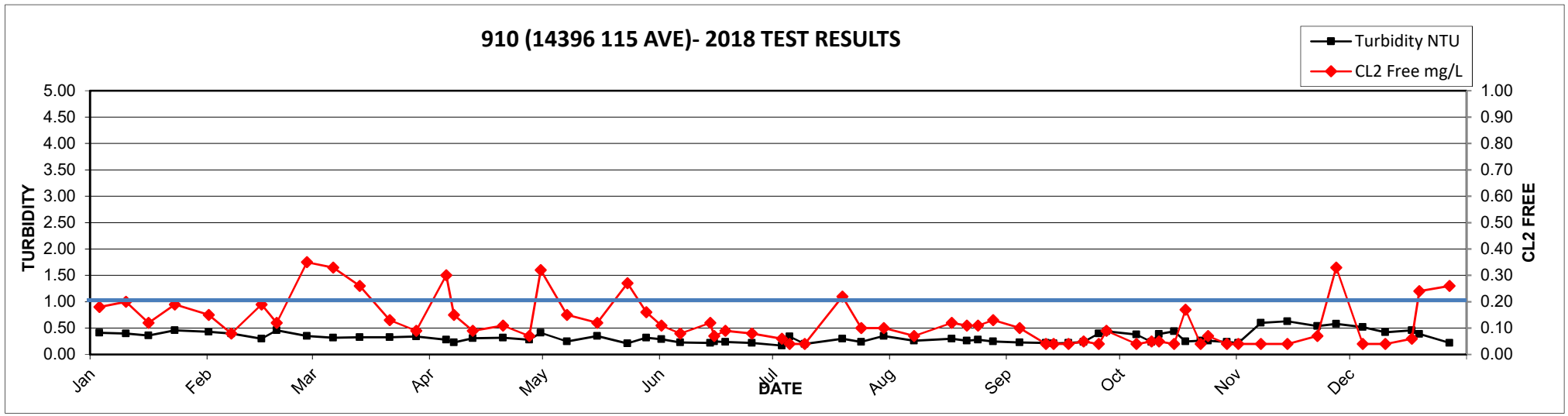
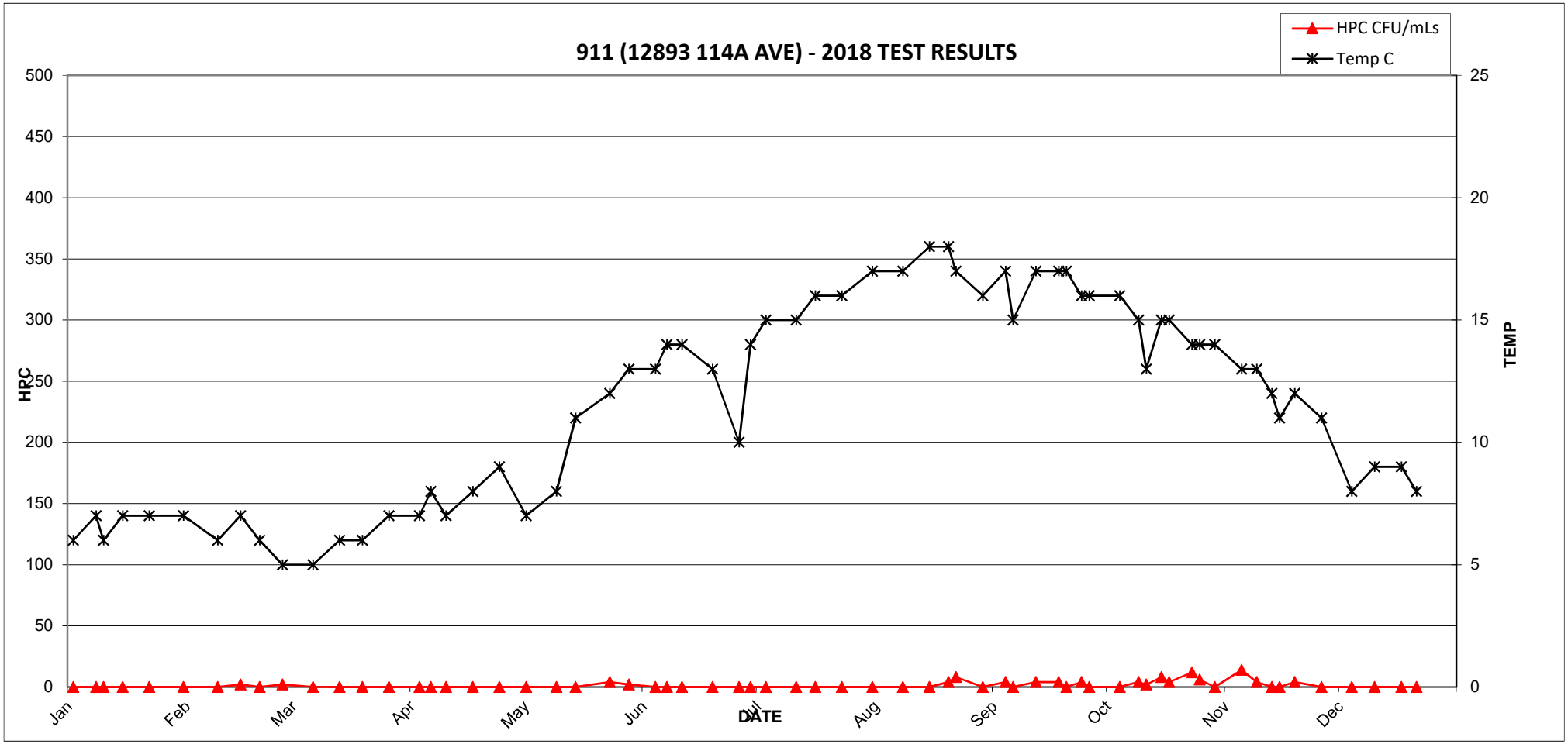
Nov
Dec


910 (14396 115 AVE)- 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 911 (12893 - 114A AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.42	<1	<2	<1	6	0.44
08-Jan	0.50	<1	<2	<1	7	0.49
10-Jan	0.28	<1	<2	<1	6	0.43
15-Jan	0.40	<1	<2	<1	7	0.44
22-Jan	0.33	<1	<2	<1	7	0.39
31-Jan	0.63	<1	<2	<1	7	0.54
09-Feb	0.43	<1	<2	<1	6	0.39
15-Feb	0.62	<1	2	<1	7	0.34
20-Feb	0.65	<1	<2	<1	6	0.38
26-Feb	0.62	<1	2	<1	5	0.32
06-Mar	0.62	<1	<2	<1	5	0.30
13-Mar	0.67	<1	<2	<1	6	0.29
19-Mar	0.58	<1	<2	<1	6	0.34
26-Mar	0.63	<1	<2	<1	7	0.31
03-Apr	0.58	<1	<2	<1	7	0.31
06-Apr	0.72	<1	<2	<1	8	0.33
10-Apr	0.55	<1	<2	<1	7	0.31
17-Apr	0.54	<1	<2	<1	8	0.35
24-Apr	0.32	<1	<2	<1	9	0.31
01-May	0.61	<1	<2	<1	7	0.25
09-May	0.60	<1	<2	<1	8	0.32
14-May	0.54	<1	<2	<1	11	0.35
23-May	0.60	<1	4	<1	12	0.26
28-May	0.44	<1	2	<1	13	0.27
04-Jun	0.45	<1	<2	<1	13	0.29
07-Jun	0.47	<1	<2	<1	14	0.24
11-Jun	0.54	<1	<2	<1	14	0.36
19-Jun	0.75	<1	<2	<1	13	0.28
26-Jun	0.69	<1	<2	<1	10	0.18
29-Jun	0.55	<1	<2	<1	14	0.28
03-Jul	0.40	<1	<2	<1	15	0.21
11-Jul	0.66	<1	<2	<1	15	0.35
16-Jul	0.71	<1	<2	<1	16	0.27
23-Jul	0.62	<1	<2	<1	16	0.18
31-Jul	0.47	<1	<2	<1	17	0.22
08-Aug	0.31	<1	<2	<1	17	0.28
15-Aug	0.06	<1	<2	<1	18	0.23
20-Aug	0.24	<1	4	<1	18	0.24
22-Aug	0.37	<1	8	<1	17	0.28
29-Aug	0.40	<1	<2	<1	16	0.21
04-Sep	0.34	<1	4	<1	17	0.38
06-Sep	0.49	<1	<2	<1	15	0.31
12-Sep	0.25	<1	4	<1	17	0.28
18-Sep	0.28	<1	4	<1	17	0.50
20-Sep	0.58	<1	<2	<1	17	0.18
24-Sep	0.20	<1	4	<1	16	0.15
26-Sep	0.20	<1	<2	<1	16	0.16
04-Oct	0.19	<1	<2	<1	16	0.27
09-Oct	0.18	<1	4	<1	15	0.16
11-Oct	0.31	<1	2	<1	13	0.21
15-Oct	0.11	<1	8	<1	15	0.23
17-Oct	0.21	<1	4	<1	15	0.28
23-Oct	0.16	<1	12	<1	14	0.31
25-Oct	0.19	<1	6	<1	14	0.26
29-Oct	0.16	<1	<2	<1	14	0.25
05-Nov	0.09	<1	14	<1	13	0.32
09-Nov	0.15	<1	4	<1	13	0.64
13-Nov	0.13	<1	<2	<1	12	0.68


911 (12893 114A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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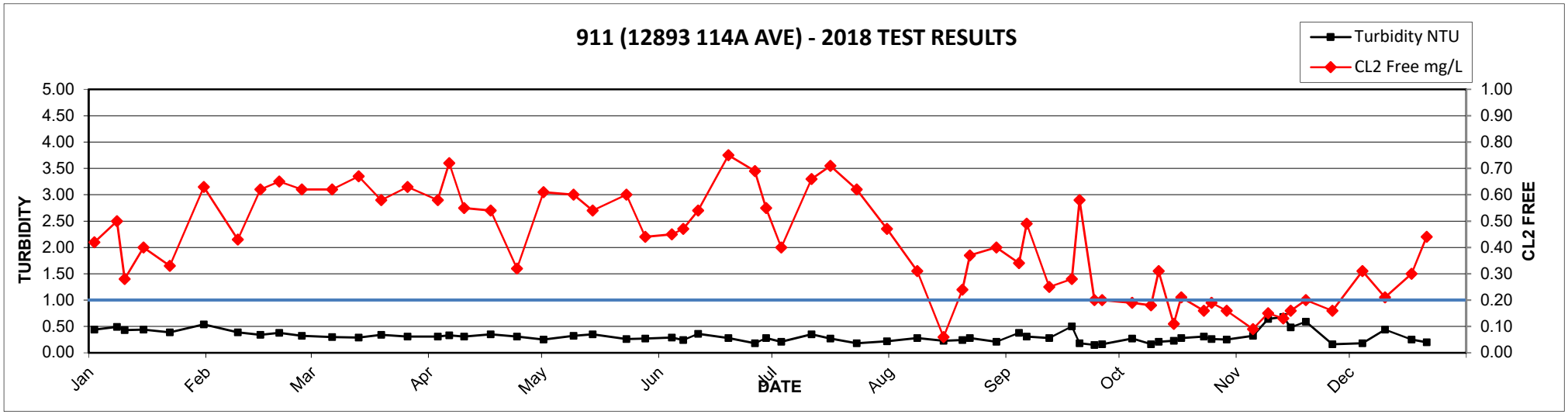
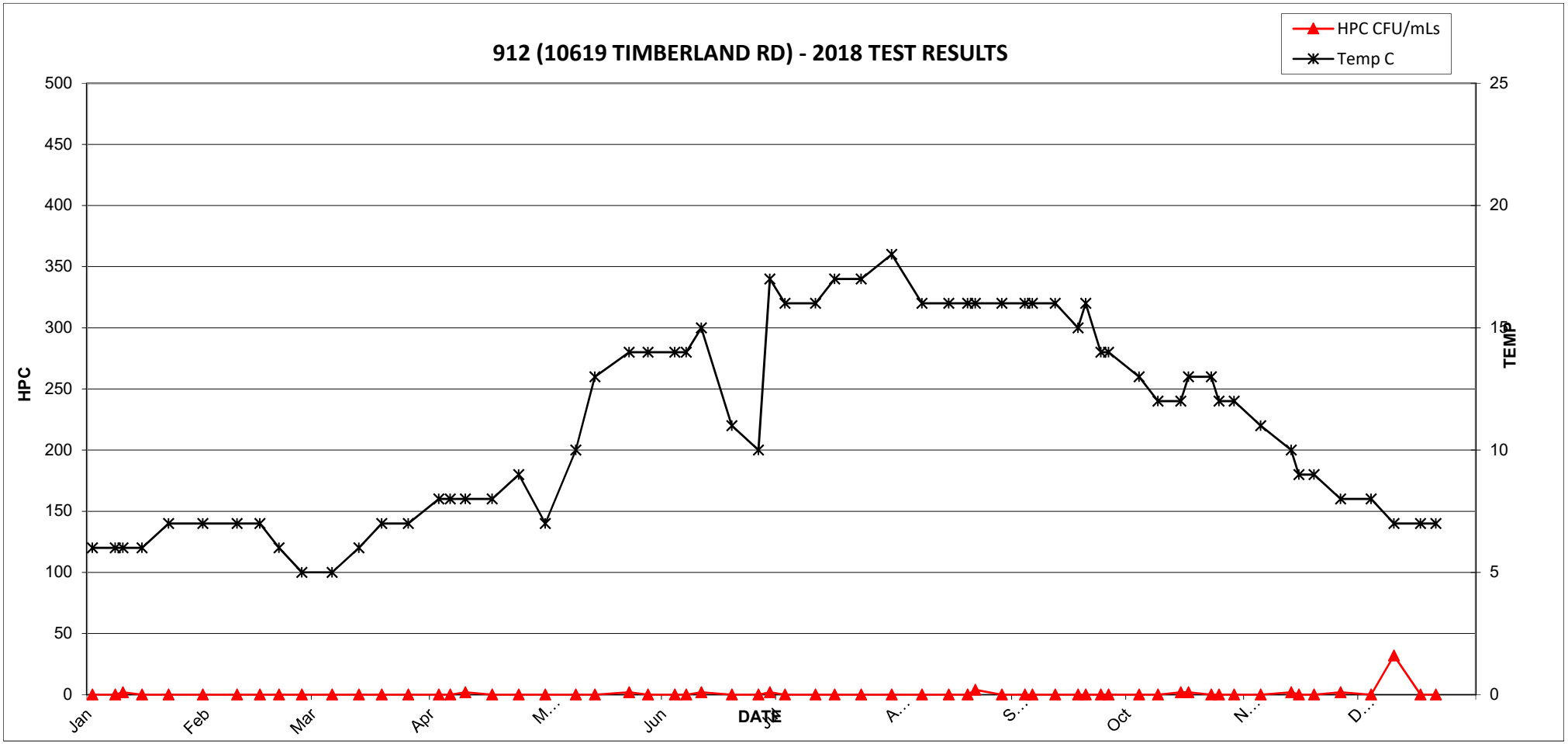

911 (12893 114A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 912 (10619 TIMBERLAND RD)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.22	<1	<2	<1	6	0.46
08-Jan	0.43	<1	<2	<1	6	0.46
10-Jan	0.34	<1	2	<1	6	0.47
15-Jan	0.47	<1	<2	<1	6	0.41
22-Jan	0.36	<1	<2	<1	7	0.36
31-Jan	0.39	<1	<2	<1	7	0.32
09-Feb	0.46	<1	<2	<1	7	0.33
15-Feb	0.52	<1	<2	<1	7	0.39
20-Feb	0.46	<1	<2	<1	6	0.51
26-Feb	0.52	<1	<2	<1	5	0.32
06-Mar	0.45	<1	<2	<1	5	0.29
13-Mar	0.41	<1	<2	<1	6	0.32
19-Mar	0.35	<1	<2	<1	7	0.59
26-Mar	0.40	<1	<2	<1	7	0.28
03-Apr	0.39	<1	<2	<1	8	0.33
06-Apr	0.50	<1	<2	<1	8	0.32
10-Apr	0.38	<1	2	<1	8	0.28
17-Apr	0.41	<1	<2	<1	8	0.26
24-Apr	0.23	<1	<2	<1	9	1.30
01-May	0.30	<1	<2	<1	7	0.25
09-May	0.44	<1	<2	<1	10	0.29
14-May	0.25	<1	<2	<1	13	0.33
23-May	0.34	<1	2	<1	14	0.31
28-May	0.27	<1	<2	<1	14	0.28
04-Jun	0.27	<1	<2	<1	14	0.28
07-Jun	0.23	<1	<2	<1	14	0.26
11-Jun	0.23	<1	2	<1	15	0.25
19-Jun	0.60	<1	<2	<1	11	0.62
26-Jun	0.39	<1	<2	<1	10	0.19
29-Jun	0.20	<1	2	<1	17	0.24
03-Jul	0.39	<1	<2	<1	16	0.17
11-Jul	0.36	<1	<2	<1	16	0.28
16-Jul	0.32	<1	<2	<1	17	0.21
23-Jul	0.45	<1	<2	<1	17	0.21
31-Jul	0.28	<1	<2	<1	18	0.33
08-Aug	0.36	<1	LA	<1	16	0.19
15-Aug	0.74	<1	<2	<1	16	0.34
20-Aug	0.66	<1	<2	<1	16	0.41
22-Aug	0.86	<1	4	<1	16	0.34
29-Aug	1.00	<1	<2	<1	16	0.31
04-Sep	0.85	<1	<2	<1	16	0.46
06-Sep	0.96	<1	<2	<1	16	0.36
12-Sep	0.78	<1	<2	<1	16	0.36
18-Sep	0.50	<1	<2	<1	15	0.36
20-Sep	0.59	<1	<2	<1	16	0.17
24-Sep	0.49	<1	<2	<1	14	0.14
26-Sep	0.57	<1	<2	<1	14	0.17
04-Oct	0.61	<1	<2	<1	13	0.19
09-Oct	0.65	<1	<2	<1	12	0.29
15-Oct	0.64	<1	2	<1	12	0.27
17-Oct	0.79	<1	2	<1	13	0.29
23-Oct	0.70	<1	<2	<1	13	0.27
25-Oct	0.69	<1	<2	<1	12	0.27
29-Oct	0.63	<1	<2	<1	12	0.34
05-Nov	0.49	<1	<2	<1	11	0.87
13-Nov	0.37	<1	2	<1	10	0.52


912 (10619 TIMBERLAND RD) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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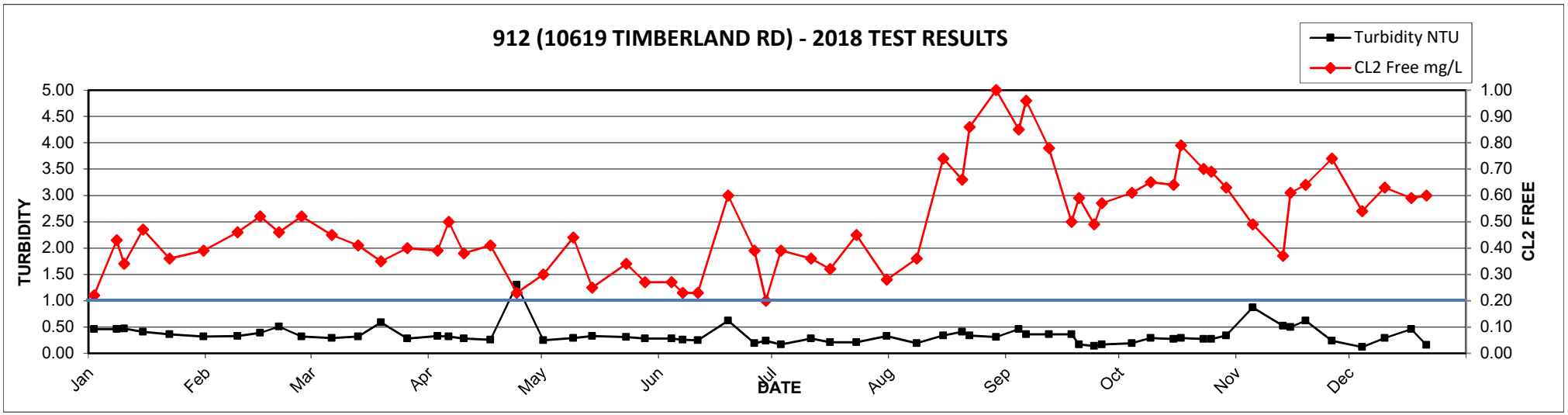
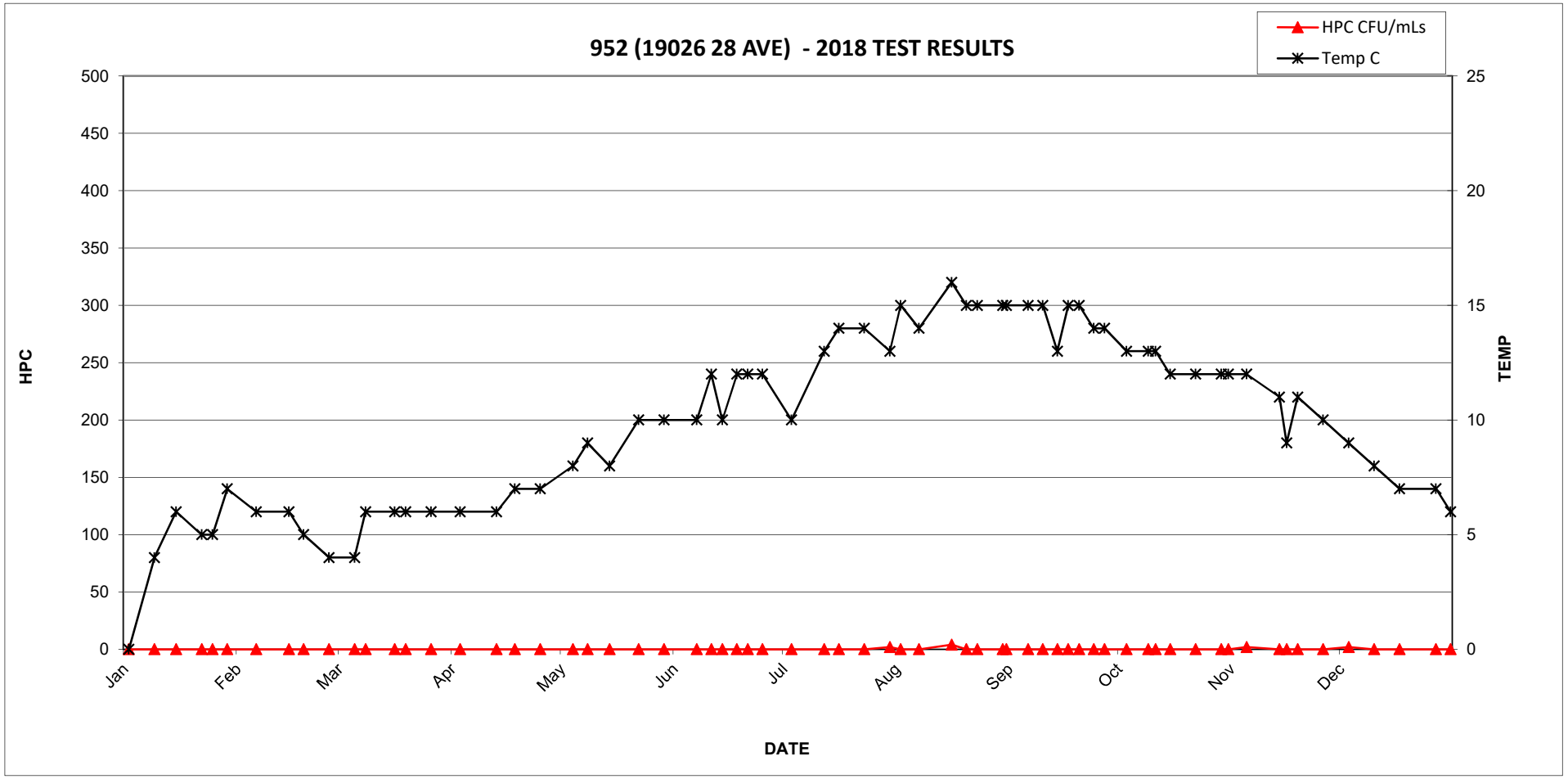
A...
S...
Oct
N...
D...


912 (10619 TIMBERLAND RD) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


952 (19026 28 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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Nov
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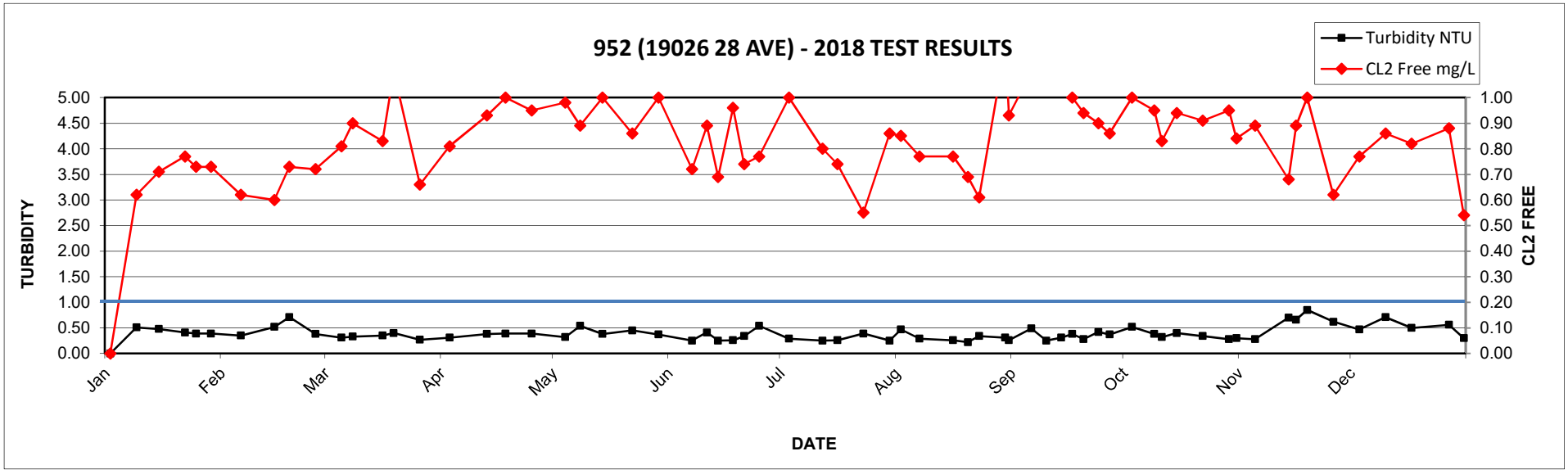
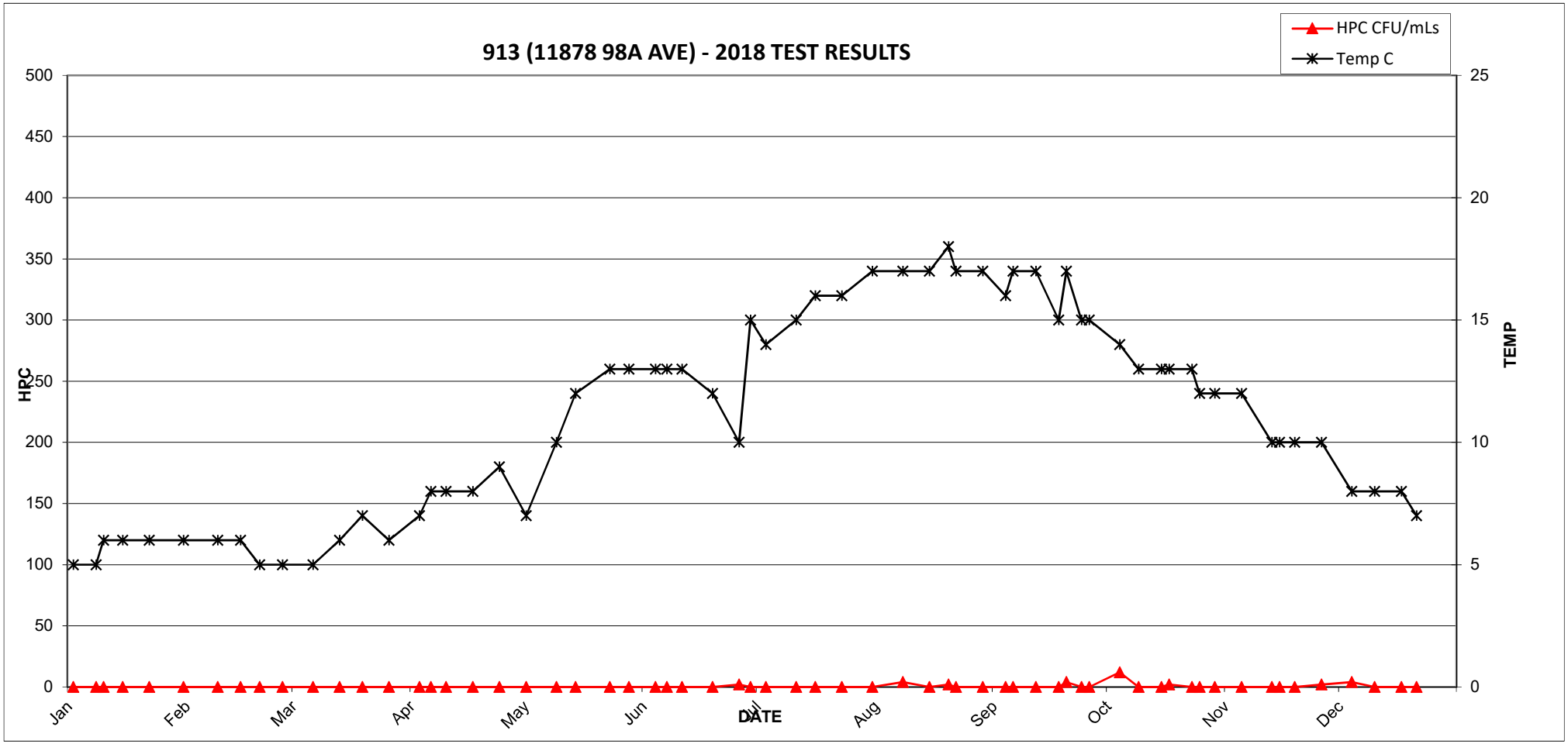

952 (19026 28 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 913 (11878 98A AVE)

Date Collected	CL2Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.77	<1	<2	<1	5	0.50
08-Jan	0.73	<1	<2	<1	5	0.50
10-Jan	0.84	<1	<2	<1	6	0.46
15-Jan	0.52	<1	<2	<1	6	0.47
22-Jan	0.75	<1	<2	<1	6	0.42
31-Jan	0.96	<1	<2	<1	6	0.65
09-Feb	0.63	<1	<2	<1	6	0.37
15-Feb	0.68	<1	<2	<1	6	0.42
20-Feb	0.84	<1	<2	<1	5	1.00
26-Feb	0.79	<1	<2	<1	5	0.34
06-Mar	0.67	<1	<2	<1	5	0.31
13-Mar	0.63	<1	<2	<1	6	0.36
19-Mar	0.78	<1	<2	<1	7	0.47
26-Mar	0.87	<1	<2	<1	6	0.39
03-Apr	0.58	<1	<2	<1	7	0.35
06-Apr	0.55	<1	<2	<1	8	0.32
10-Apr	0.56	<1	<2	<1	8	0.33
17-Apr	0.51	<1	<2	<1	8	0.34
24-Apr	0.51	<1	<2	<1	9	0.27
01-May	0.57	<1	<2	<1	7	0.25
09-May	0.64	<1	<2	<1	10	0.27
14-May	0.41	<1	<2	<1	12	0.52
23-May	0.52	<1	<2	<1	13	0.30
28-May	0.51	<1	<2	<1	13	0.39
04-Jun	0.46	<1	<2	<1	13	0.29
07-Jun	0.53	<1	<2	<1	13	0.26
11-Jun	0.57	<1	<2	<1	13	0.22
19-Jun	0.53	<1	<2	<1	12	0.27
26-Jun	0.42	<1	2	<1	10	0.17
29-Jun	0.47	<1	<2	<1	15	0.32
03-Jul	0.56	<1	<2	<1	14	0.23
11-Jul	0.61	<1	<2	<1	15	0.24
16-Jul	0.59	<1	<2	<1	16	0.26
23-Jul	0.82	<1	<2	<1	16	0.22
31-Jul	0.48	<1	<2	<1	17	0.30
08-Aug	0.37	<1	4	<1	17	0.25
15-Aug	0.45	<1	<2	<1	17	0.22
20-Aug	0.44	<1	2	<1	18	0.32
22-Aug	0.58	<1	<2	<1	17	0.34
29-Aug	0.67	<1	<2	<1	17	0.24
04-Sep	0.67	<1	<2	<1	16	0.24
06-Sep	0.74	<1	<2	<1	17	0.28
12-Sep	0.51	<1	<2	<1	17	0.34
18-Sep	0.42	<1	<2	<1	15	0.31
20-Sep	0.45	<1	4	<1	17	0.30
24-Sep	0.53	<1	<2	<1	15	0.33
26-Sep	0.38	<1	<2	<1	15	0.27
04-Oct	0.41	<1	12	<1	14	0.33
09-Oct	0.46	<1	<2	<1	13	0.26
15-Oct	0.56	<1	<2	<1	13	0.59
17-Oct	0.58	<1	2	<1	13	0.31
23-Oct	0.47	<1	<2	<1	13	0.26
25-Oct	0.51	<1	<2	<1	12	0.26
29-Oct	0.45	<1	<2	<1	12	0.29


913 (11878 98A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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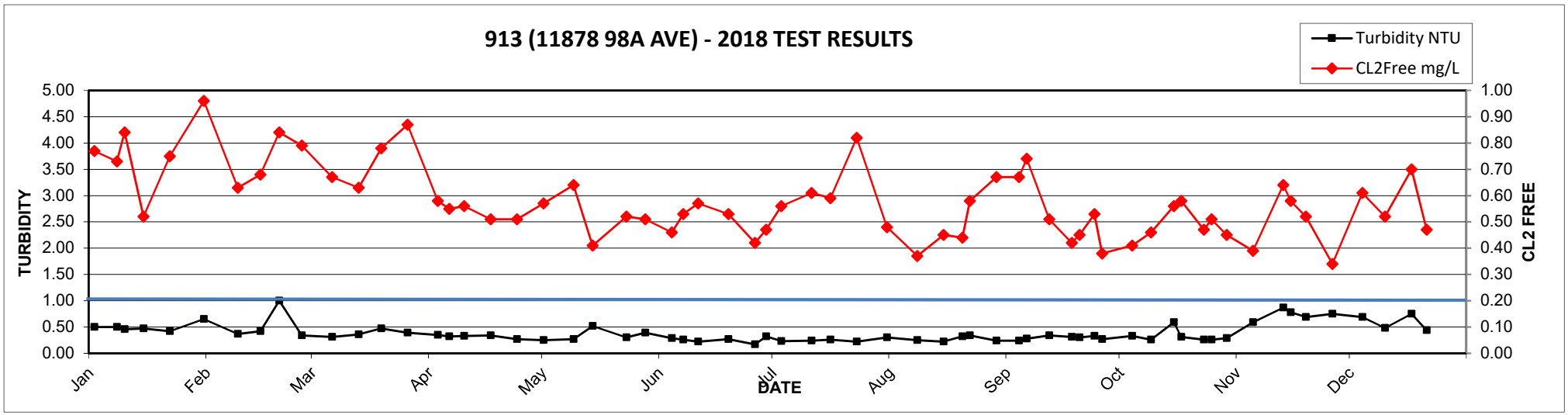
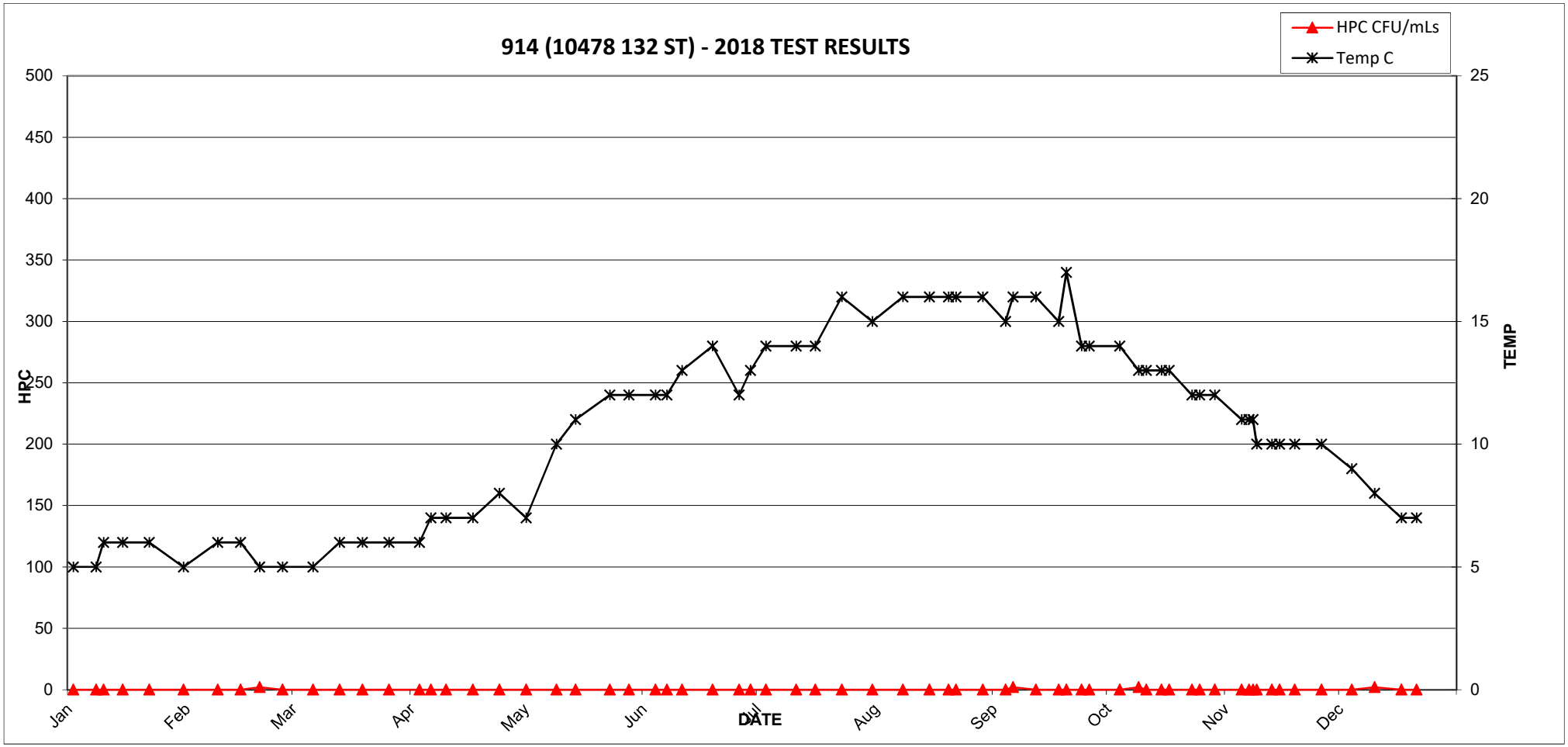

913 (11878 98A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 914 (10478 132 ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.64	<1	<2	<1	5	0.50
08-Jan	0.72	<1	<2	<1	5	0.48
10-Jan	0.68	<1	<2	<1	6	0.44
15-Jan	0.64	<1	<2	<1	6	0.41
22-Jan	0.65	<1	<2	<1	6	0.41
31-Jan	0.95	<1	<2	<1	5	0.59
09-Feb	0.61	<1	<2	<1	6	0.35
15-Feb	0.75	<1	<2	<1	6	0.40
20-Feb	0.77	<1	2	<1	5	0.57
26-Feb	0.73	<1	<2	<1	5	0.35
06-Mar	0.75	<1	<2	<1	5	0.30
13-Mar	0.64	<1	<2	<1	6	0.35
19-Mar	0.64	<1	<2	<1	6	0.39
26-Mar	0.77	<1	<2	<1	6	0.32
03-Apr	0.61	<1	<2	<1	6	0.38
06-Apr	0.64	<1	<2	<1	7	0.29
10-Apr	0.58	<1	<2	<1	7	0.30
17-Apr	0.52	<1	<2	<1	7	0.24
24-Apr	0.45	<1	<2	<1	8	0.26
01-May	0.54	<1	<2	<1	7	0.20
09-May	0.43	<1	<2	<1	10	0.27
14-May	0.43	<1	<2	<1	11	0.22
23-May	0.54	<1	<2	<1	12	0.31
28-May	0.55	<1	<2	<1	12	0.35
04-Jun	0.46	<1	<2	<1	12	0.25
07-Jun	0.58	<1	<2	<1	12	1.40
11-Jun	0.41	<1	<2	<1	13	0.26
19-Jun	0.56	<1	<2	<1	14	0.34
26-Jun	0.57	<1	<2	<1	12	0.32
29-Jun	0.52	<1	<2	<1	13	0.72
03-Jul	0.40	<1	<2	<1	14	0.21
11-Jul	0.61	<1	<2	<1	14	0.25
16-Jul	0.69	<1	<2	<1	14	0.24
23-Jul	0.73	<1	<2	<1	16	0.21
31-Jul	0.53	<1	<2	<1	15	0.24
08-Aug	0.54	<1	<2	<1	16	0.41
15-Aug	0.45	<1	<2	<1	16	0.23
20-Aug	0.46	<1	<2	<1	16	0.39
22-Aug	0.69	<1	<2	<1	16	0.28
29-Aug	0.75	<1	<2	<1	16	0.21
04-Sep	0.62	<1	<2	<1	15	0.25
06-Sep	0.67	<1	2	<1	16	0.31
12-Sep	0.61	<1	<2	<1	16	0.30
18-Sep	0.49	<1	<2	<1	15	0.31
20-Sep	0.64	<1	<2	<1	17	0.30
24-Sep	0.46	<1	<2	<1	14	0.30
26-Sep	0.52	<1	<2	<1	14	0.27
04-Oct	0.53	<1	<2	<1	14	0.33
09-Oct	0.46	<1	2	<1	13	0.26
11-Oct	0.55	<1	<2	<1	13	0.42
15-Oct	0.51	<1	<2	<1	13	0.38
17-Oct	0.54	<1	<2	<1	13	0.33
23-Oct	0.54	<1	<2	<1	12	0.34
25-Oct	0.44	<1	<2	<1	12	0.27


914 (10478 132 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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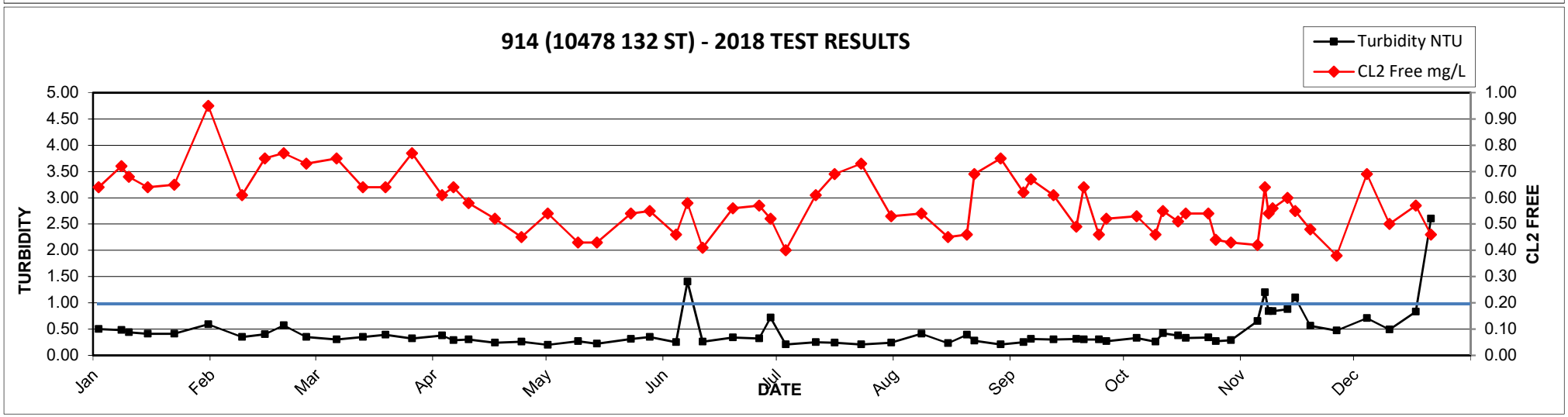
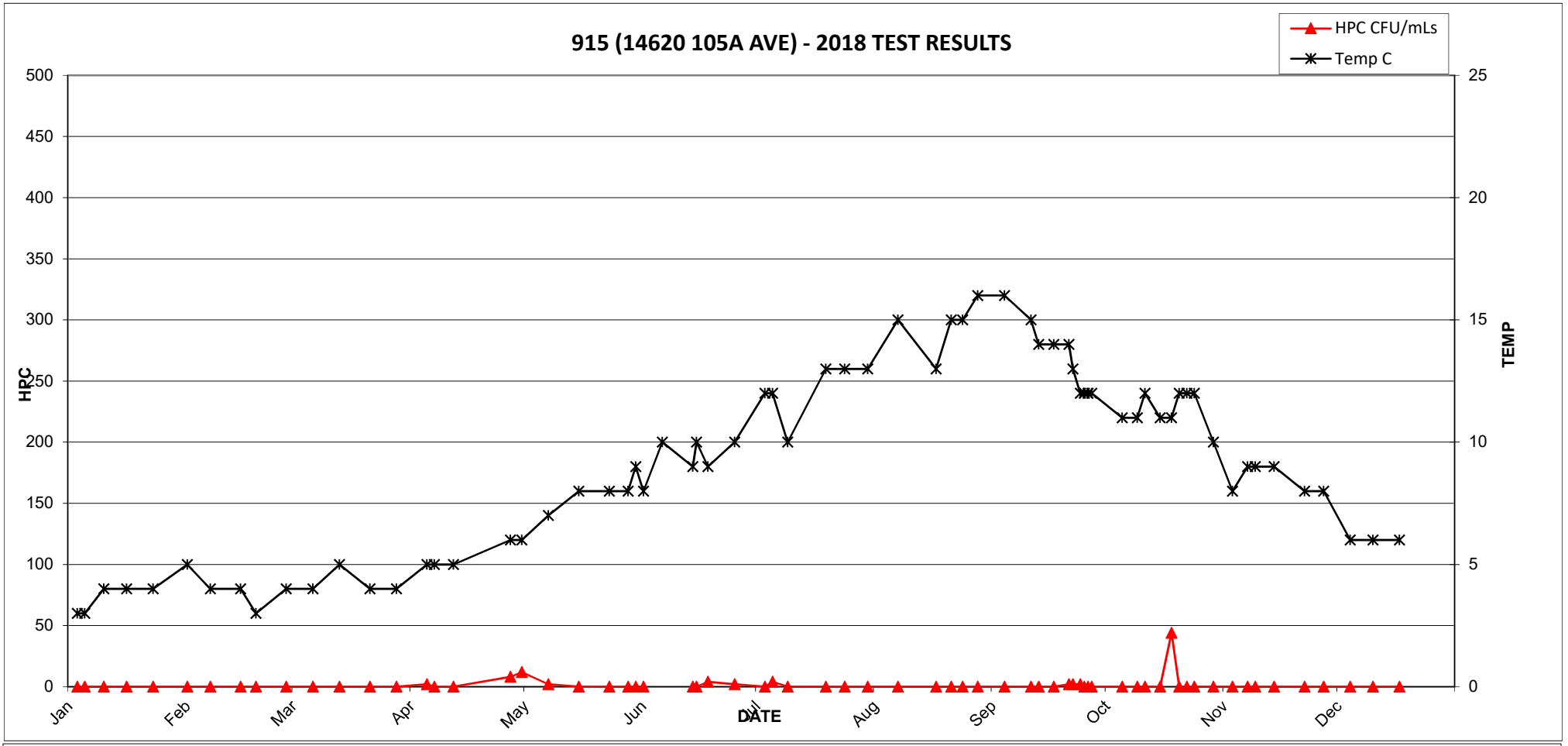
Nov
Dec


914 (10478 132 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 915 (14620 105A AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	1.00	<1	<2	<1	3	0.52
05-Jan	0.93	<1	<2	<1	3	0.52
10-Jan	0.89	<1	<2	<1	4	0.50
16-Jan	0.99	<1	<2	<1	4	0.41
23-Jan	0.85	<1	<2	<1	4	0.49
01-Feb	1.20	<1	<2	<1	5	1.10
07-Feb	1.10	<1	<2	<1	4	0.56
15-Feb	0.90	<1	<2	<1	4	0.39
19-Feb	0.98	<1	<2	<1	3	0.45
27-Feb	0.99	<1	<2	<1	4	0.40
06-Mar	1.10	<1	<2	<1	4	0.33
13-Mar	0.71	<1	<2	<1	5	0.45
21-Mar	1.00	<1	<2	<1	4	0.34
28-Mar	1.20	<1	<2	<1	4	0.85
05-Apr	0.99	<1	2	<1	5	0.39
07-Apr	0.87	<1	<2	<1	5	0.39
12-Apr	0.97	<1	<2	<1	5	0.36
27-Apr	0.62	<1	8	<1	6	0.40
30-Apr	0.71	<1	12	<1	6	0.76
07-May	1.20	<1	2	<1	7	0.26
15-May	0.91	<1	<2	<1	8	0.46
23-May	0.63	<1	<2	<1	8	0.31
28-May	0.88	<1	<2	<1	8	0.34
30-May	0.71	<1	<2	<1	9	0.31
01-Jun	1.10	<1	<2	<1	8	0.43
06-Jun	1.20	<1		<1	10	0.29
14-Jun	1.20	<1	<2	<1	9	0.36
15-Jun	1.10	<1	<2	<1	10	0.41
18-Jun	1.00	<1	4	<1	9	0.42
25-Jun	0.87	<1	2	<1	10	0.31
03-Jul	0.76	<1	<2	<1	12	0.23
05-Jul	0.73	<1	4	<1	12	0.44
09-Jul	0.93	<1	<2	<1	10	0.26
19-Jul	1.00	<1	<2	<1	13	0.39
24-Jul	0.90	<1	<2	<1	13	0.27
30-Jul	0.95	<1	<2	<1	13	0.38
07-Aug	0.77	<1	<2	<1	15	0.28
17-Aug	0.50	<1	<2	<1	13	0.45
21-Aug	0.77	<1	<2	<1	15	0.45
24-Aug	0.92	<1	<2	<1	15	0.36
28-Aug	0.93	<1	<2	<1	16	0.42
04-Sep	0.94	<1	<2	<1	16	0.31
11-Sep	1.20	<1	<2	<1	15	0.40
13-Sep	1.10	<1	<2	<1	14	0.24
17-Sep	1.10	<1	<2	<1	14	0.45
21-Sep	0.93	<1	2	<1	14	0.34
22-Sep	0.97	<1	2	1	13	0.39
24-Sep	1.00	<1	2	<1	12	0.39
25-Sep	1.00	<1	<2	<1	12	0.54
26-Sep	0.82	<1	<2	<1	12	0.35
27-Sep	1.30	<1	<2	<1	12	0.69
05-Oct	1.00	<1	<2	<1	11	0.54


915 (14620 105A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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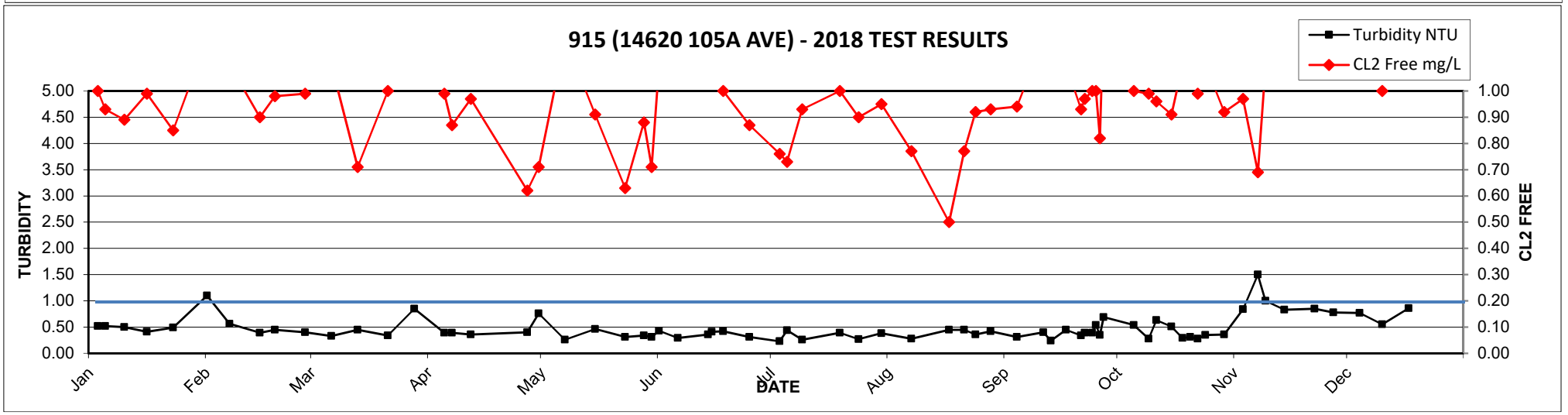
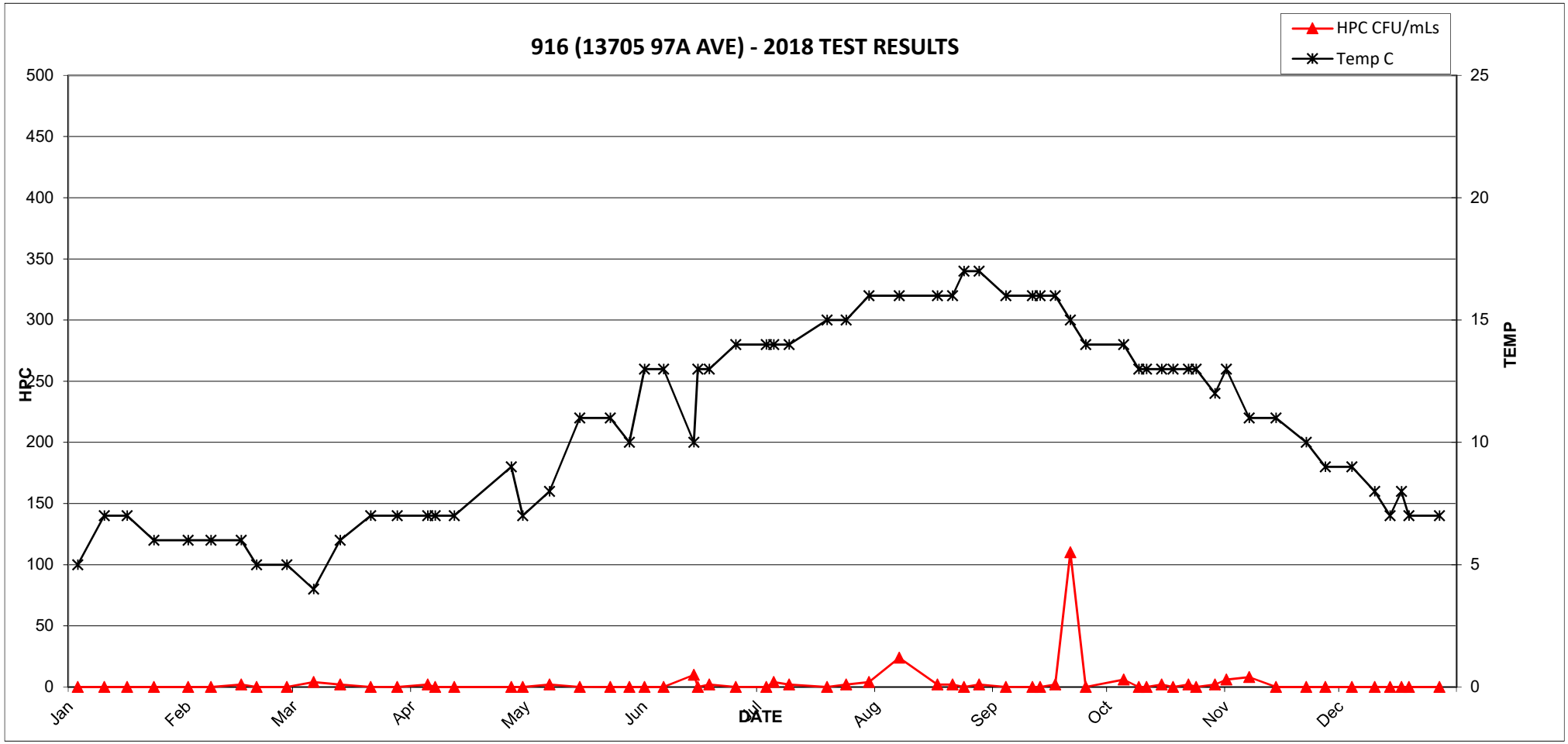

915 (14620 105A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 916 (13705 97A AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.67	<1	<2	<1	5	0.48
10-Jan	0.48	<1	<2	<1	7	0.43
16-Jan	0.80	<1	<2	<1	7	0.36
23-Jan	0.73	<1	<2	<1	6	0.47
01-Feb	0.65	<1	<2	<1	6	0.76
07-Feb	0.54	<1	<2	<1	6	0.43
15-Feb	0.52	<1	2	<1	6	0.31
19-Feb	0.54	<1	<2	<1	5	0.36
27-Feb	0.58	<1	<2	<1	5	0.36
06-Mar	0.84	<1	4	<1	4	0.30
13-Mar	0.59	<1	2	<1	6	0.34
21-Mar	0.64	<1	<2	<1	7	0.49
28-Mar	0.56	<1	<2	<1	7	0.32
05-Apr	0.45	<1	2	<1	7	0.22
07-Apr	0.55	<1	<2	<1	7	0.19
12-Apr	0.46	<1	<2	<1	7	0.25
27-Apr	0.38	<1	<2	<1	9	0.25
30-Apr	0.48	<1	<2	<1	7	0.26
07-May	0.60	<1	2	<1	8	0.27
15-May	0.45	<1	<2	<1	11	0.29
23-May	0.41	<1	<2	<1	11	0.26
28-May	0.41	<1	<2	<1	10	0.24
01-Jun	0.45	<1	<2	<1	13	0.31
06-Jun	0.44	<1	<2	<1	13	0.16
14-Jun	0.58	<1	10	<1	10	0.22
15-Jun	0.39	<1	<2	<1	13	0.20
18-Jun	0.57	<1	2	<1	13	0.20
25-Jun	0.46	<1	<2	<1	14	0.16
03-Jul	0.35	<1	<2	<1	14	0.24
05-Jul	0.33	<1	4	<1	14	0.17
09-Jul	0.68	<1	2	<1	14	0.21
19-Jul	0.80	<1	<2	<1	15	0.23
24-Jul	0.59	<1	2	<1	15	0.24
30-Jul	0.49	<1	4	<1	16	0.24
07-Aug	0.41	<1	24	<1	16	0.22
17-Aug	0.43	<1	2	<1	16	0.27
21-Aug	0.39	<1	2	<1	16	0.44
24-Aug	0.57	<1	<2	<1	17	0.25
28-Aug	0.45	<1	2	<1	17	0.34
04-Sep	0.45	<1	<2	<1	16	0.21
11-Sep	0.47	<1	<2	<1	16	0.24
13-Sep	0.44	<1	<2	<1	16	0.23
17-Sep	0.66	<1	2	<1	16	0.22
21-Sep	0.41	<1	110	<1	15	0.28
25-Sep	0.46	<1	<2	<1	14	0.56
05-Oct	0.28	<1	6	<1	14	0.54
09-Oct	0.41	<1	<2	<1	13	0.25
11-Oct	0.44	<1	<2	<1	13	0.46
15-Oct	0.41	<1	2	<1	13	0.81
18-Oct	0.31	<1	<2	<1	13	0.25
22-Oct	0.36	<1	2	<1	13	0.33
24-Oct	0.52	<1	<2	<1	13	0.25


916 (13705 97A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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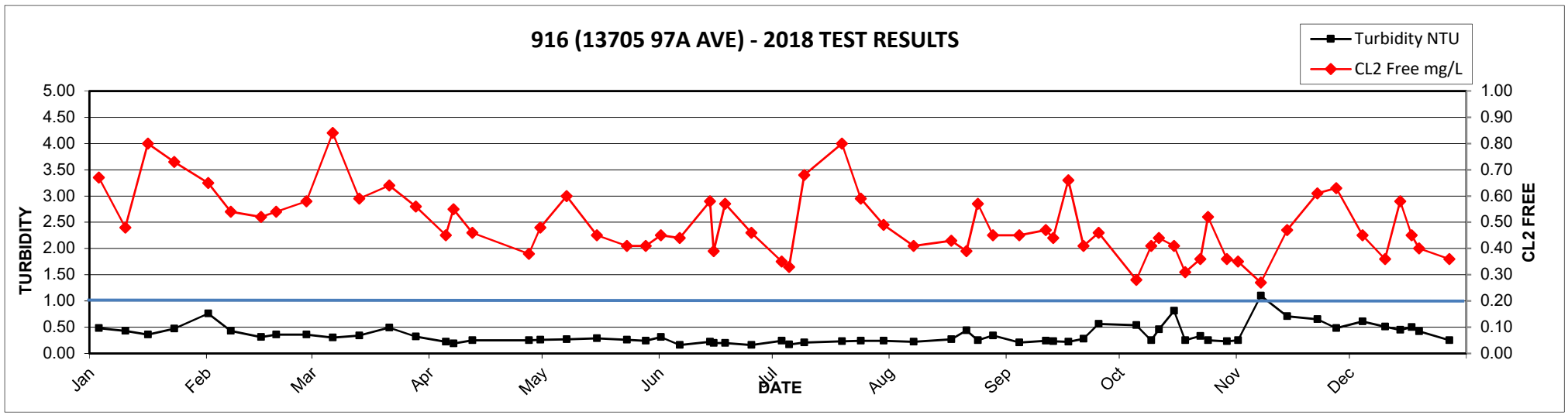

916 (13705 97A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 917 (13031 LANARK PL)

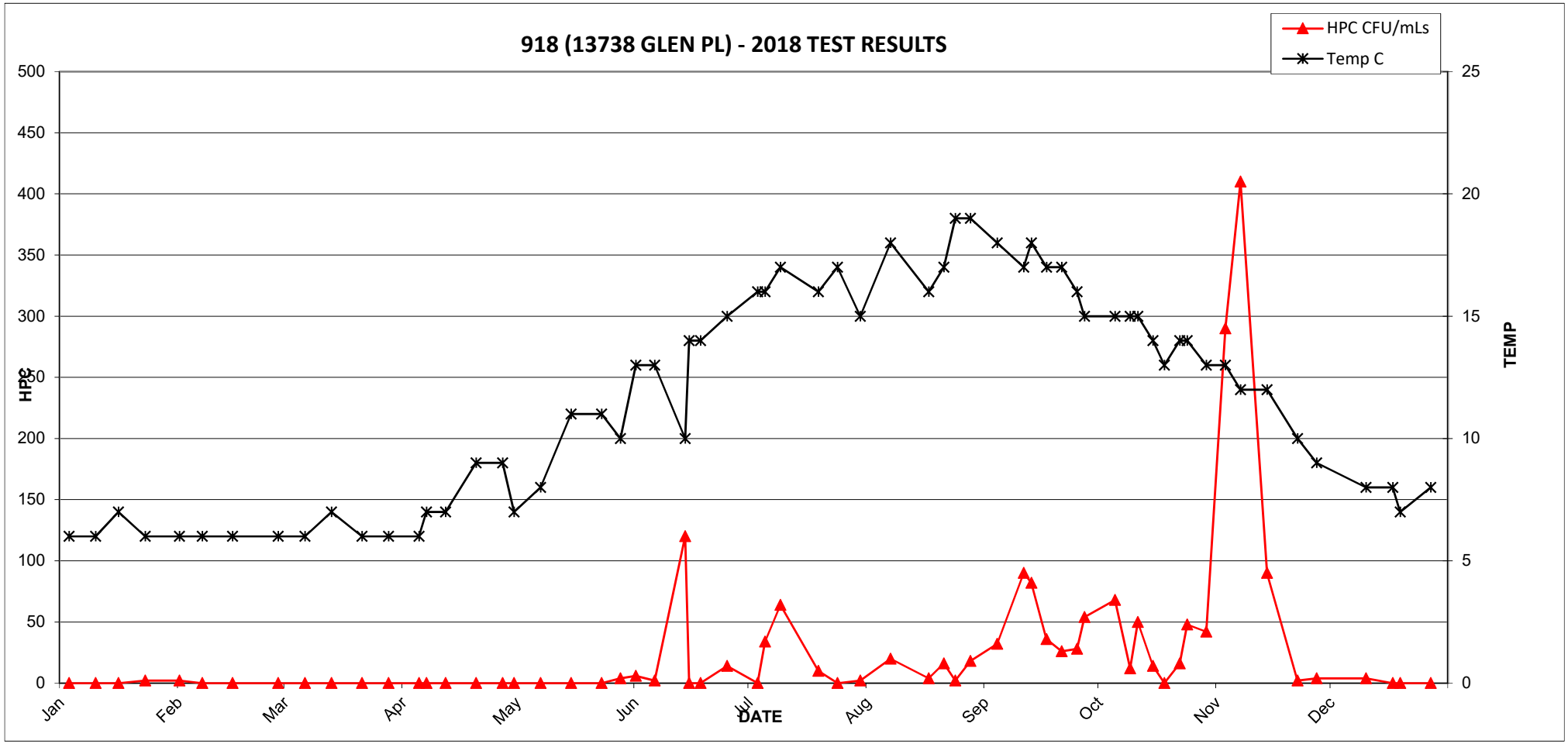
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
10-Jan	0.98	<1	<2	<1	6	0.47
16-Jan	0.74	<1	<2	<1	6	0.44
23-Jan	0.84	<1	<2	<1	6	0.47
01-Feb	1.10	<1	<2	<1	6	0.84
07-Feb	0.80	<1	<2	<1	6	0.51
15-Feb	0.87	<1	<2	<1	5	0.35
19-Feb	0.74	<1	<2	<1	5	0.37
27-Feb	0.89	<1	2	<1	5	0.53
06-Mar	1.20	<1	<2	<1	6	0.35
13-Mar	0.98	<1	4	<1	6	0.45
21-Mar	0.87	<1	<2	<1	5	0.49
28-Mar	0.75	<1	<2	<1	6	0.46
05-Apr	0.65	<1	<2	<1	7	0.28
07-Apr	0.71	<1	<2	<1	7	0.21
12-Apr	0.58	<1	<2	<1	7	0.21
20-Apr	0.48	<1	<2	<1	8	0.22
27-Apr	0.46	<1	<2	<1	8	0.21
30-Apr	0.53	<1	<2	<1	8	0.17
07-May	0.63	<1	2	<1	8	0.17
15-May	0.49	<1	<2	<1	10	0.38
23-May	0.63	<1	10	<1	11	0.23
28-May	0.57	<1	8	<1	10	0.22
01-Jun	0.52	<1	6	<1	12	0.21
06-Jun	0.52	<1	<2	<1	12	0.14
14-Jun	0.71	<1	8	<1	10	0.12
15-Jun	0.53	<1	4	<1	12	0.19
18-Jun	0.66	<1	<2	<1	12	0.23
25-Jun	0.49	<1	10	<1	13	0.16
03-Jul	0.41	<1	2	<1	13	0.20
05-Jul	0.41	<1	2	<1	12	0.21
09-Jul	0.82	<1	16	<1	14	0.20
19-Jul	0.97	<1	6	<1	13	0.32
24-Jul	0.66	<1	8	<1	14	0.21
30-Jul	0.70	<1	14	<1	14	0.24
07-Aug	0.67	<1	24	<1	15	0.22
17-Aug	0.56	<1	20	<1	15	0.34
21-Aug	0.54	<1	2	<1	15	0.33
24-Aug	0.79	<1	14	<1	15	0.34
28-Aug	0.53	<1	14	<1	16	0.39
04-Sep	0.72	<1	20	<1	16	0.24
11-Sep	0.87	<1	<2	<1	16	0.26
13-Sep	0.76	<1	6	<1	16	0.26
17-Sep	0.77	<1	6	<1	15	0.27
21-Sep	0.71	<1	8	<1	15	0.30
25-Sep	0.54	<1	6	<1	14	0.38
27-Sep	0.60	<1	6	<1	14	0.29
05-Oct	0.54	<1	10	<1	13	0.41
09-Oct	0.60	<1	4	<1	13	0.25
11-Oct	0.66	<1	<2	<1	15	0.49
15-Oct	0.43	<1	<2	<1	13	0.35

2018 MV Laboratory Report - 917 (13031 LANARK PL)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
10-Jan	0.98	<1	<2	<1	6	0.47
16-Jan	0.74	<1	<2	<1	6	0.44
23-Jan	0.84	<1	<2	<1	6	0.47
01-Feb	1.10	<1	<2	<1	6	0.84
07-Feb	0.80	<1	<2	<1	6	0.51
15-Feb	0.87	<1	<2	<1	5	0.35
19-Feb	0.74	<1	<2	<1	5	0.37
27-Feb	0.89	<1	2	<1	5	0.53
06-Mar	1.20	<1	<2	<1	6	0.35
13-Mar	0.98	<1	4	<1	6	0.45
21-Mar	0.87	<1	<2	<1	5	0.49
28-Mar	0.75	<1	<2	<1	6	0.46
05-Apr	0.65	<1	<2	<1	7	0.28
07-Apr	0.71	<1	<2	<1	7	0.21
12-Apr	0.58	<1	<2	<1	7	0.21
20-Apr	0.48	<1	<2	<1	8	0.22
27-Apr	0.46	<1	<2	<1	8	0.21
30-Apr	0.53	<1	<2	<1	8	0.17
07-May	0.63	<1	2	<1	8	0.17
15-May	0.49	<1	<2	<1	10	0.38
23-May	0.63	<1	10	<1	11	0.23
28-May	0.57	<1	8	<1	10	0.22
01-Jun	0.52	<1	6	<1	12	0.21
06-Jun	0.52	<1	<2	<1	12	0.14
14-Jun	0.71	<1	8	<1	10	0.12
15-Jun	0.53	<1	4	<1	12	0.19
18-Jun	0.66	<1	<2	<1	12	0.23
25-Jun	0.49	<1	10	<1	13	0.16
03-Jul	0.41	<1	2	<1	13	0.20
05-Jul	0.41	<1	2	<1	12	0.21
09-Jul	0.82	<1	16	<1	14	0.20
19-Jul	0.97	<1	6	<1	13	0.32
24-Jul	0.66	<1	8	<1	14	0.21
30-Jul	0.70	<1	14	<1	14	0.24
07-Aug	0.67	<1	24	<1	15	0.22
17-Aug	0.56	<1	20	<1	15	0.34
21-Aug	0.54	<1	2	<1	15	0.33
24-Aug	0.79	<1	14	<1	15	0.34
28-Aug	0.53	<1	14	<1	16	0.39
04-Sep	0.72	<1	20	<1	16	0.24
11-Sep	0.87	<1	<2	<1	16	0.26
13-Sep	0.76	<1	6	<1	16	0.26
17-Sep	0.77	<1	6	<1	15	0.27
21-Sep	0.71	<1	8	<1	15	0.30
25-Sep	0.54	<1	6	<1	14	0.38
27-Sep	0.60	<1	6	<1	14	0.29
05-Oct	0.54	<1	10	<1	13	0.41
09-Oct	0.60	<1	4	<1	13	0.25
11-Oct	0.66	<1	<2	<1	15	0.49
15-Oct	0.43	<1	<2	<1	13	0.35

2018 MV Laboratory Report - 918 (13738 GLEN PL)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.65	<1	<2	<1	6	0.45
10-Jan	0.69	<1	<2	<1	6	0.46
16-Jan	0.61	<1	<2	<1	7	0.46
23-Jan	0.62	<1	2	<1	6	0.46
01-Feb	0.46	<1	2	<1	6	0.71
07-Feb	0.30	<1	<2	<1	6	0.42
15-Feb	0.38	<1	<2	<1	6	0.33
27-Feb	0.76	<1	<2	<1	6	0.57
06-Mar	0.86	<1	<2	<1	6	0.34
13-Mar	0.82	<1	<2	<1	7	0.38
21-Mar	0.55	<1	<2	<1	6	0.48
28-Mar	0.54	<1	<2	<1	6	0.31
05-Apr	0.83	<1	<2	<1	6	0.33
07-Apr	0.56	<1	<2	<1	7	0.38
12-Apr	0.73	<1	<2	<1	7	0.30
20-Apr	0.31	<1	<2	<1	9	0.20
27-Apr	0.55	<1	<2	<1	9	0.31
30-Apr	0.45	<1	<2	<1	7	0.26
07-May	0.70	<1	<2	<1	8	0.27
15-May	0.58	<1	<2	<1	11	0.37
23-May	0.62	<1	<2	<1	11	0.28
28-May	0.55	<1	4	<1	10	0.28
01-Jun	0.49	<1	6	<1	13	0.36
06-Jun	0.52	<1	2	<1	13	0.21
14-Jun	0.46	<1	120	<1	10	0.34
15-Jun	0.27	<1	<2	<1	14	0.25
18-Jun	0.39	<1	<2	<1	14	0.31
25-Jun	0.34	<1	14	<1	15	0.20
03-Jul	0.20	<1	<2	<1	16	0.20
05-Jul	0.26	<1	34	<1	16	0.21
09-Jul	0.26	<1	64	<1	17	0.19
19-Jul	0.73	<1	10	<1	16	0.23
24-Jul	0.44	<1	<2	<1	17	0.25
30-Jul	0.73	<1	2	<1	15	0.36
07-Aug	0.21	<1	20	<1	18	0.20
17-Aug	0.34	<1	4	<1	16	0.43
21-Aug	0.29	<1	16	<1	17	0.45
24-Aug	0.17	<1	2	<1	19	0.23
28-Aug	0.05	<1	18	<1	19	0.25
04-Sep	0.2	<1	32	<1	18	0.26
11-Sep	0.10	<1	90	<1	17	0.23
13-Sep	0.04	<1	82	<1	18	0.26
17-Sep	0.12	<1	36	<1	17	0.24
21-Sep	0.08	<1	26	<1	17	0.23
25-Sep	0.05	<1	28	<1	16	0.57
27-Sep	0.11	<1	54	<1	15	0.46
05-Oct	0.04	<1	68	<1	15	0.49
09-Oct	0.04	<1	12	<1	15	0.22
11-Oct	0.08	<1	50	<1	15	0.39
15-Oct	0.11	<1	14	<1	14	0.67
18-Oct	0.25	<1	<2	<1	13	0.27


918 (13738 GLEN PL) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
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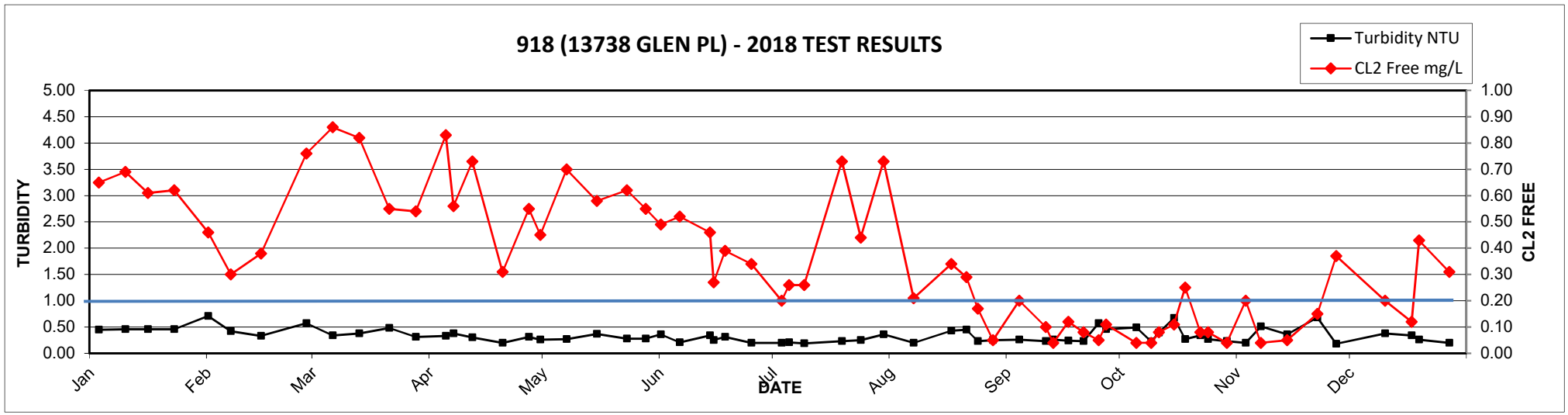
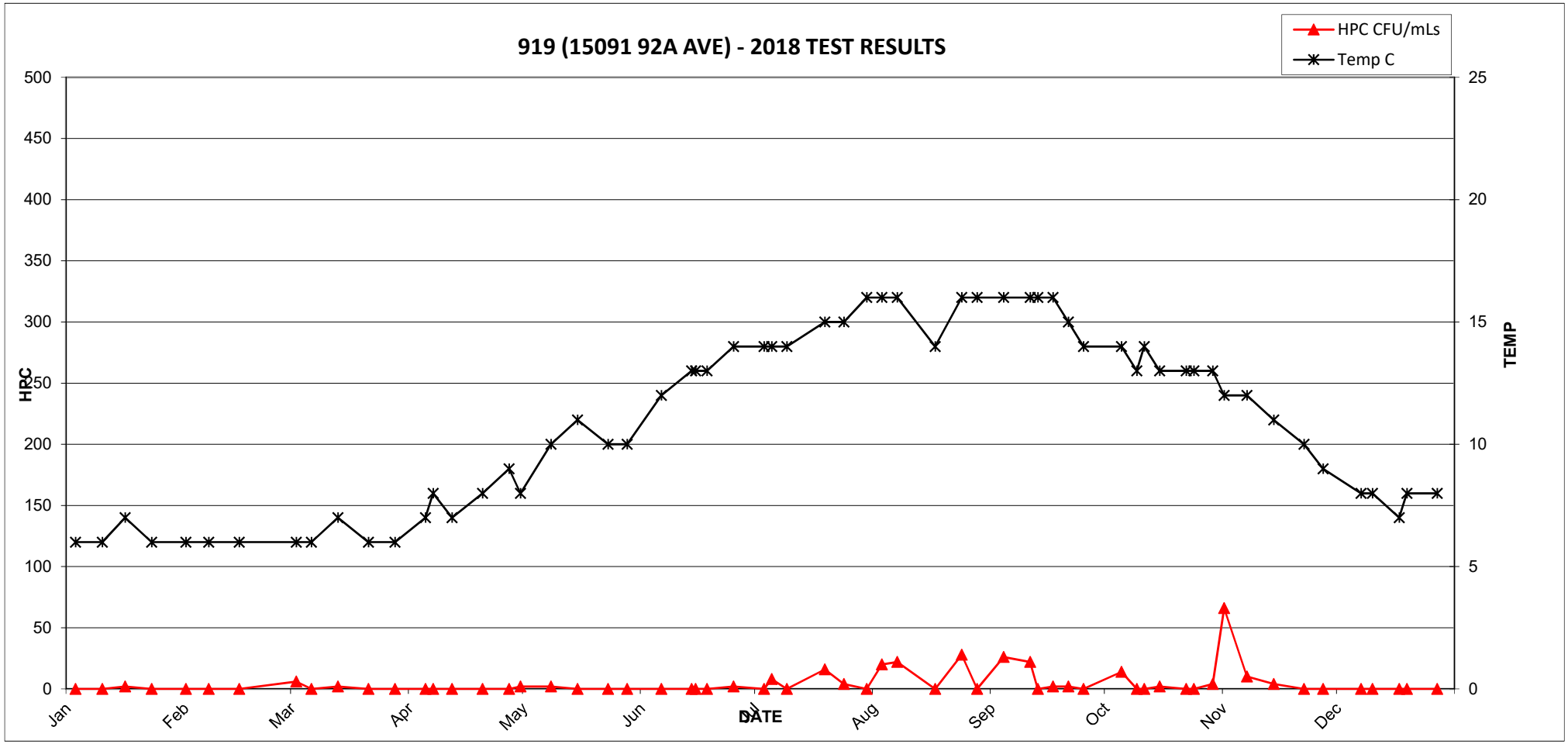
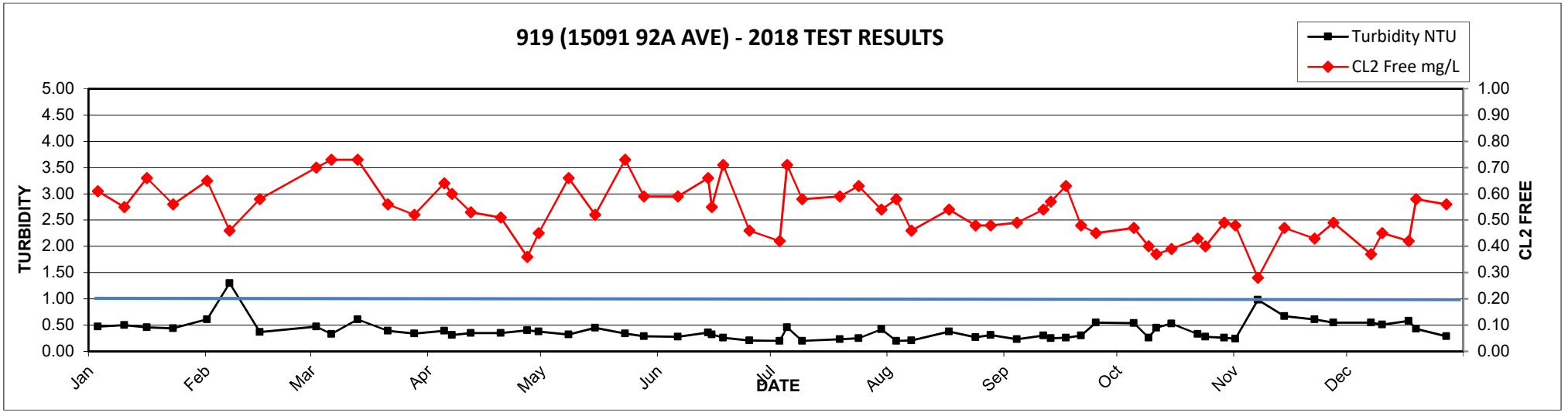
Jul
Aug
Sep
Oct
Nov
Dec


918 (13738 GLEN PL) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 919 (15091 92A AVE)

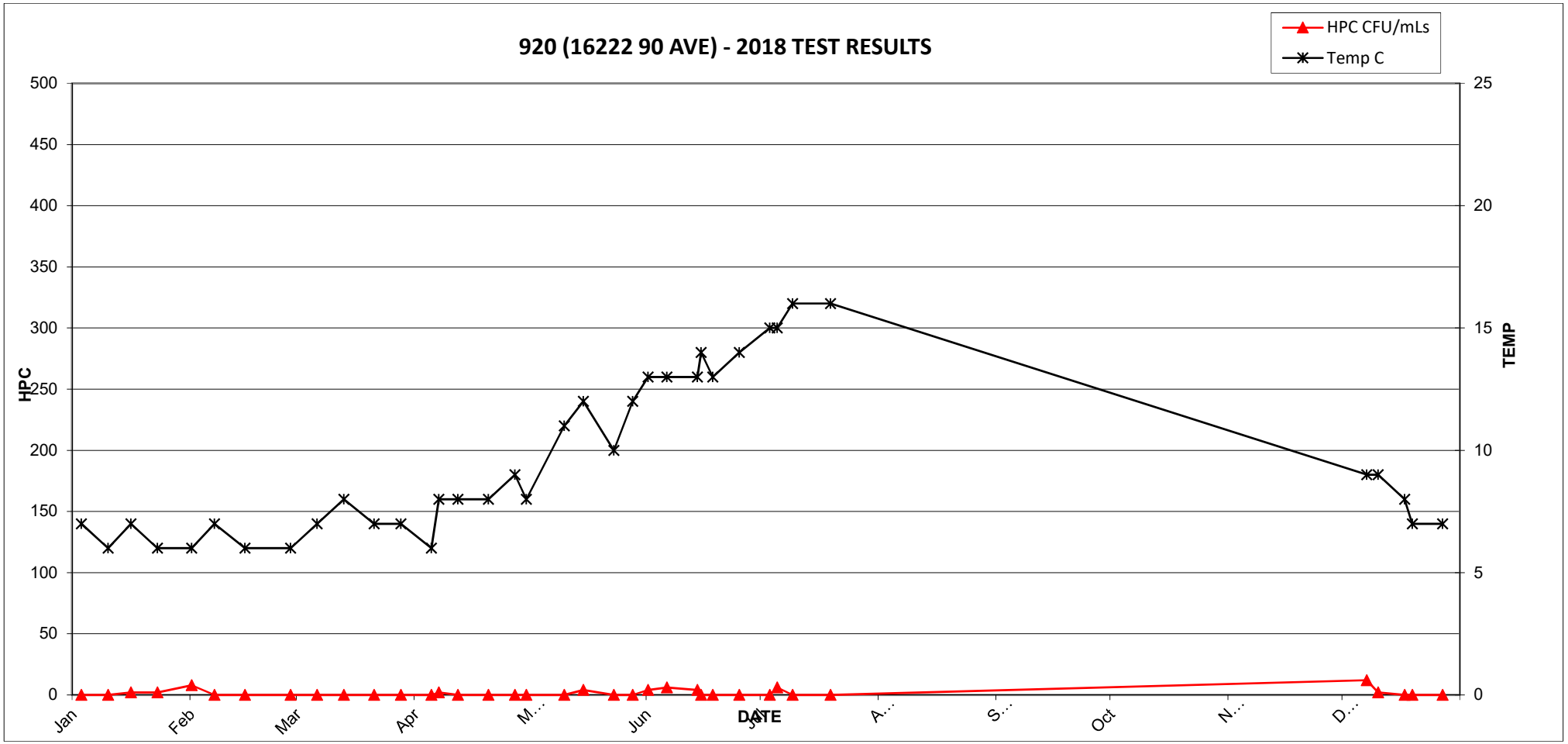
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.61	<1	<2	<1	6	0.47
10-Jan	0.55	<1	<2	<1	6	0.50
16-Jan	0.66	<1	2	<1	7	0.46
23-Jan	0.56	<1	<2	<1	6	0.44
01-Feb	0.65	<1	<2	<1	6	0.61
07-Feb	0.46	<1	<2	<1	6	1.30
15-Feb	0.58	<1	<2	<1	6	0.37
02-Mar	0.70	<1	6	<1	6	0.47
06-Mar	0.73	<1	<2	<1	6	0.33
13-Mar	0.73	<1	2	<1	7	0.61
21-Mar	0.56	<1	<2	<1	6	0.39
28-Mar	0.52	<1	<2	<1	6	0.34
05-Apr	0.64	<1	<2	<1	7	0.39
07-Apr	0.60	<1	<2	<1	8	0.31
12-Apr	0.53	<1	<2	<1	7	0.35
20-Apr	0.51	<1	<2	<1	8	0.35
27-Apr	0.36	<1	<2	<1	9	0.40
30-Apr	0.45	<1	2	<1	8	0.38
08-May	0.66	<1	2	<1	10	0.32
15-May	0.52	<1	<2	<1	11	0.45
23-May	0.73	<1	<2	<1	10	0.34
28-May	0.59	<1	<2	<1	10	0.29
06-Jun	0.59	<1	<2	<1	12	0.28
14-Jun	0.66	<1	<2	<1	13	0.36
15-Jun	0.55	<1	<2	<1	13	0.32
18-Jun	0.71	<1	<2	<1	13	0.26
25-Jun	0.46	<1	2	<1	14	0.21
03-Jul	0.42	<1	<2	<1	14	0.20
05-Jul	0.71	<1	8	<1	14	0.46
09-Jul	0.58	<1	<2	<1	14	0.20
19-Jul	0.59	<1	16	<1	15	0.23
24-Jul	0.63	<1	4	<1	15	0.25
30-Jul	0.54	<1	<2	<1	16	0.42
03-Aug	0.58	<1	20	<1	16	0.20
07-Aug	0.46	<1	22	<1	16	0.21
17-Aug	0.54	<1	<2	<1	14	0.38
24-Aug	0.48	<1	28	<1	16	0.27
28-Aug	0.48	<1	<2	<1	16	0.31
04-Sep	0.49	<1	26	<1	16	0.23
11-Sep	0.54	<1	22	<1	16	0.30
13-Sep	0.57	<1	<2	<1	16	0.25
17-Sep	0.63	<1	2	<1	16	0.26
21-Sep	0.48	<1	2	<1	15	0.30
25-Sep	0.45	<1	<2	<1	14	0.55
05-Oct	0.47	<1	14	<1	14	0.54
09-Oct	0.40	<1	<2	<1	13	0.26
11-Oct	0.37	<1	<2	<1	14	0.45
15-Oct	0.39	<1	2	<1	13	0.53
22-Oct	0.43	<1	<2	<1	13	0.33
24-Oct	0.40	<1	<2	<1	13	0.28
29-Oct	0.49	<1	4	<1	13	0.26
01-Nov	0.48	<1	66	<1	12	0.24

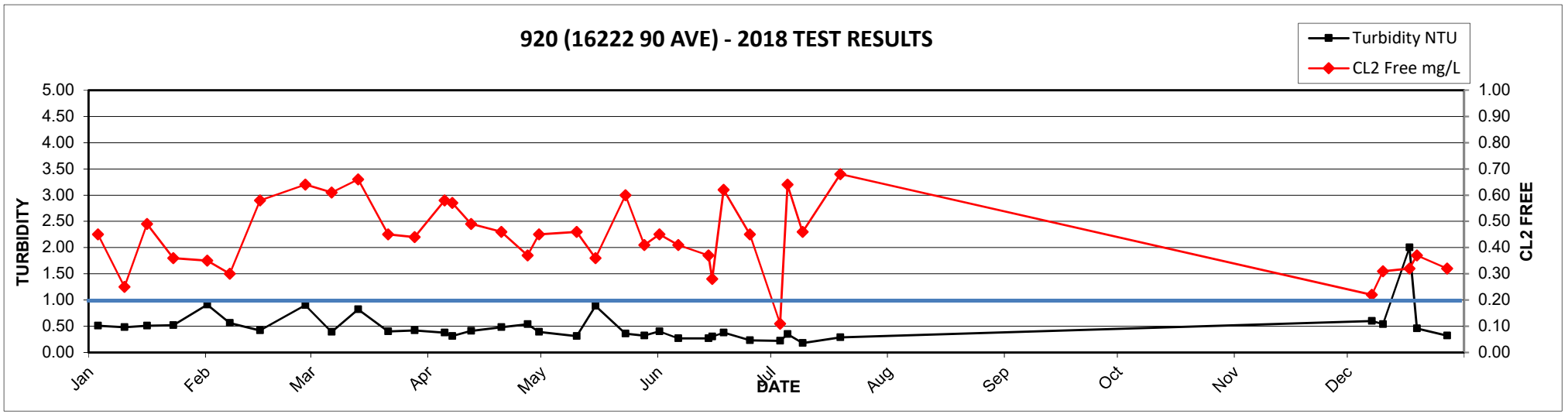

919 (15091 92A AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


919 (15091 92A AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 920 (16222 90 AVE)

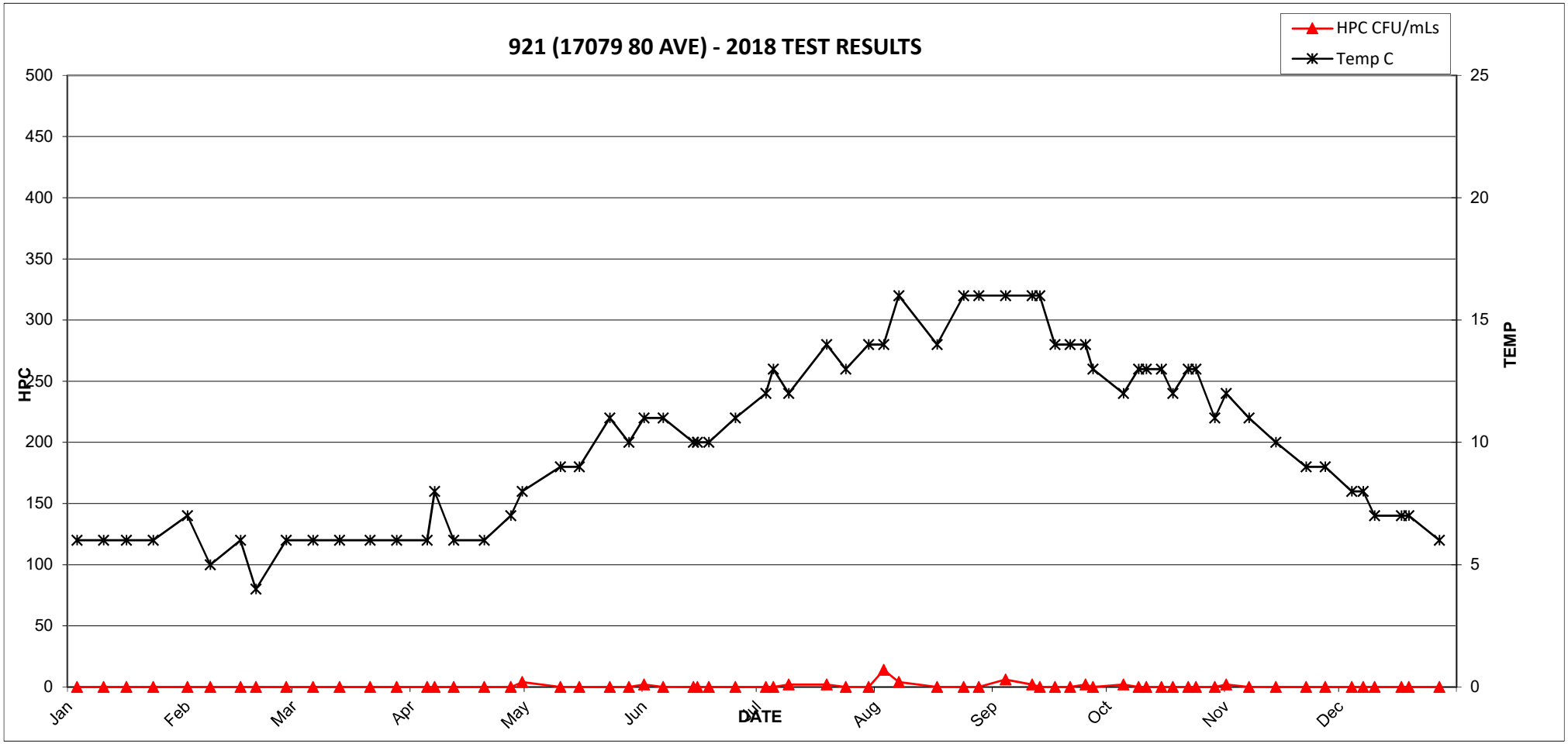
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.45	<1	<2	<1	7	0.51
10-Jan	0.25	<1	<2	<1	6	0.48
16-Jan	0.49	<1	2	<1	7	0.51
23-Jan	0.36	<1	2	<1	6	0.52
01-Feb	0.35	<1	8	<1	6	0.91
07-Feb	0.30	<1	<2	<1	7	0.56
15-Feb	0.58	<1	<2	<1	6	0.42
27-Feb	0.64	<1	<2	<1	6	0.90
06-Mar	0.61	<1	<2	<1	7	0.39
13-Mar	0.66	<1	<2	<1	8	0.82
21-Mar	0.45	<1	<2	<1	7	0.40
28-Mar	0.44	<1	<2	<1	7	0.42
05-Apr	0.58	<1	<2	<1	6	0.38
07-Apr	0.57	<1	2	<1	8	0.31
12-Apr	0.49	<1	<2	<1	8	0.41
20-Apr	0.46	<1	<2	<1	8	0.48
27-Apr	0.37	<1	<2	<1	9	0.54
30-Apr	0.45	<1	<2	<1	8	0.39
10-May	0.46	<1	<2	<1	11	0.31
15-May	0.36	<1	4	<1	12	0.89
23-May	0.60	<1	<2	<1	10	0.36
28-May	0.41	<1	<2	<1	12	0.32
01-Jun	0.45	<1	4	<1	13	0.40
06-Jun	0.41	<1	6	<1	13	0.27
14-Jun	0.37	<1	4	<1	13	0.27
15-Jun	0.28	<1	<2	<1	14	0.30
18-Jun	0.62	<1	<2	<1	13	0.38
25-Jun	0.45	<1	<2	<1	14	0.23
03-Jul	0.11	<1	<2	<1	15	0.22
05-Jul	0.64	<1	6	<1	15	0.35
09-Jul	0.46	<1	<2	<1	16	0.18
19-Jul	0.68	<1	<2	<1	16	0.29
07-Dec	0.22	<1	12	<1	9	0.60
10-Dec	0.31	<1	2	<1	9	0.54
17-Dec	0.32	<1	NA	<1	8	2.00
19-Dec	0.37	<1	NA	<1	7	0.46
27-Dec	0.32	<1	NA	<1	7	0.32

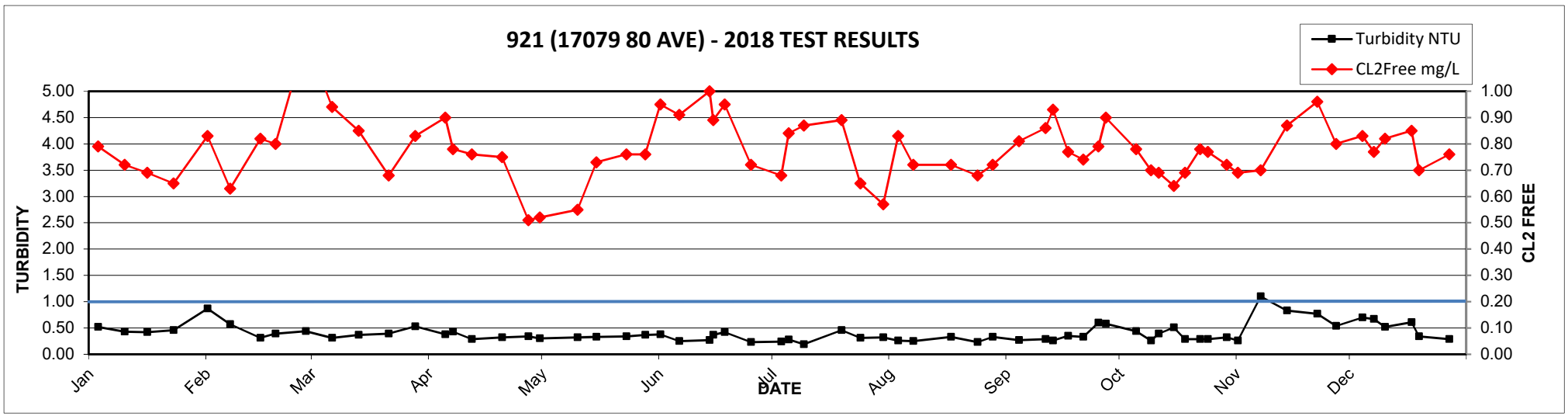

920 (16222 90 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
Jun
Oct


920 (16222 90 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 921 (17079 80 AVE)

Date Collected	CL2Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.79	<1	<2	<1	6	0.52
10-Jan	0.72	<1	<2	<1	6	0.43
16-Jan	0.69	<1	<2	<1	6	0.42
23-Jan	0.65	<1	<2	<1	6	0.46
01-Feb	0.83	<1	<2	<1	7	0.87
07-Feb	0.63	<1	<2	<1	5	0.57
15-Feb	0.82	<1	<2	<1	6	0.31
19-Feb	0.80	<1	<2	<1	4	0.39
27-Feb	1.20	<1	<2	<1	6	0.44
06-Mar	0.94	<1	<2	<1	6	0.31
13-Mar	0.85	<1	<2	<1	6	0.37
21-Mar	0.68	<1	<2	<1	6	0.39
28-Mar	0.83	<1	<2	<1	6	0.53
05-Apr	0.90	<1	<2	<1	6	0.38
07-Apr	0.78	<1	<2	<1	8	0.43
12-Apr	0.76	<1	<2	<1	6	0.29
20-Apr	0.75	<1	<2	<1	6	0.32
27-Apr	0.51	<1	<2	<1	7	0.34
30-Apr	0.52	<1	4	<1	8	0.30
10-May	0.55	<1	<2	<1	9	0.32
15-May	0.73	<1	<2	<1	9	0.33
23-May	0.76	<1	<2	<1	11	0.34
28-May	0.76	<1	<2	<1	10	0.37
01-Jun	0.95	<1	2	<1	11	0.38
06-Jun	0.91	<1	<2	<1	11	0.25
14-Jun	1.00	<1	LA	<1	10	0.27
15-Jun	0.89	<1	<2	<1	10	0.37
18-Jun	0.95	<1	<2	<1	10	0.42
25-Jun	0.72	<1	<2	<1	11	0.23
03-Jul	0.68	<1	<2	<1	12	0.24
05-Jul	0.84	<1	<2	<1	13	0.28
09-Jul	0.87	<1	2	<1	12	0.19
19-Jul	0.89	<1	2	<1	14	0.46
24-Jul	0.65	<1	<2	<1	13	0.31
30-Jul	0.57	<1	<2	<1	14	0.32
03-Aug	0.83	<1	14	<1	14	0.26
07-Aug	0.72	<1	4	<1	16	0.25
17-Aug	0.72	<1	<2	<1	14	0.33
24-Aug	0.68	<1	<2	<1	16	0.23
28-Aug	0.72	<1	<2	<1	16	0.33
04-Sep	0.81	<1	6	<1	16	0.27
11-Sep	0.86	<1	2	<1	16	0.29
13-Sep	0.93	<1	<2	<1	16	0.26
17-Sep	0.77	<1	<2	<1	14	0.35
21-Sep	0.74	<1	<2	<1	14	0.33
25-Sep	0.79	<1	2	<1	14	0.60
27-Sep	0.90	<1	<2	<1	13	0.58
05-Oct	0.78	<1	2	<1	12	0.44
09-Oct	0.70	<1	<2	<1	13	0.26
11-Oct	0.69	<1	<2	<1	13	0.39
15-Oct	0.64	<1	<2	<1	13	0.51
18-Oct	0.69	<1	<2	<1	12	0.29
22-Oct	0.78	<1	<2	<1	13	0.29
24-Oct	0.77	<1	<2	<1	13	0.29
29-Oct	0.72	<1	<2	<1	11	0.32
01-Nov	0.69	<1	2	<1	12	0.26


921 (17079 80 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


921 (17079 80 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
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Jun
Jul
Aug
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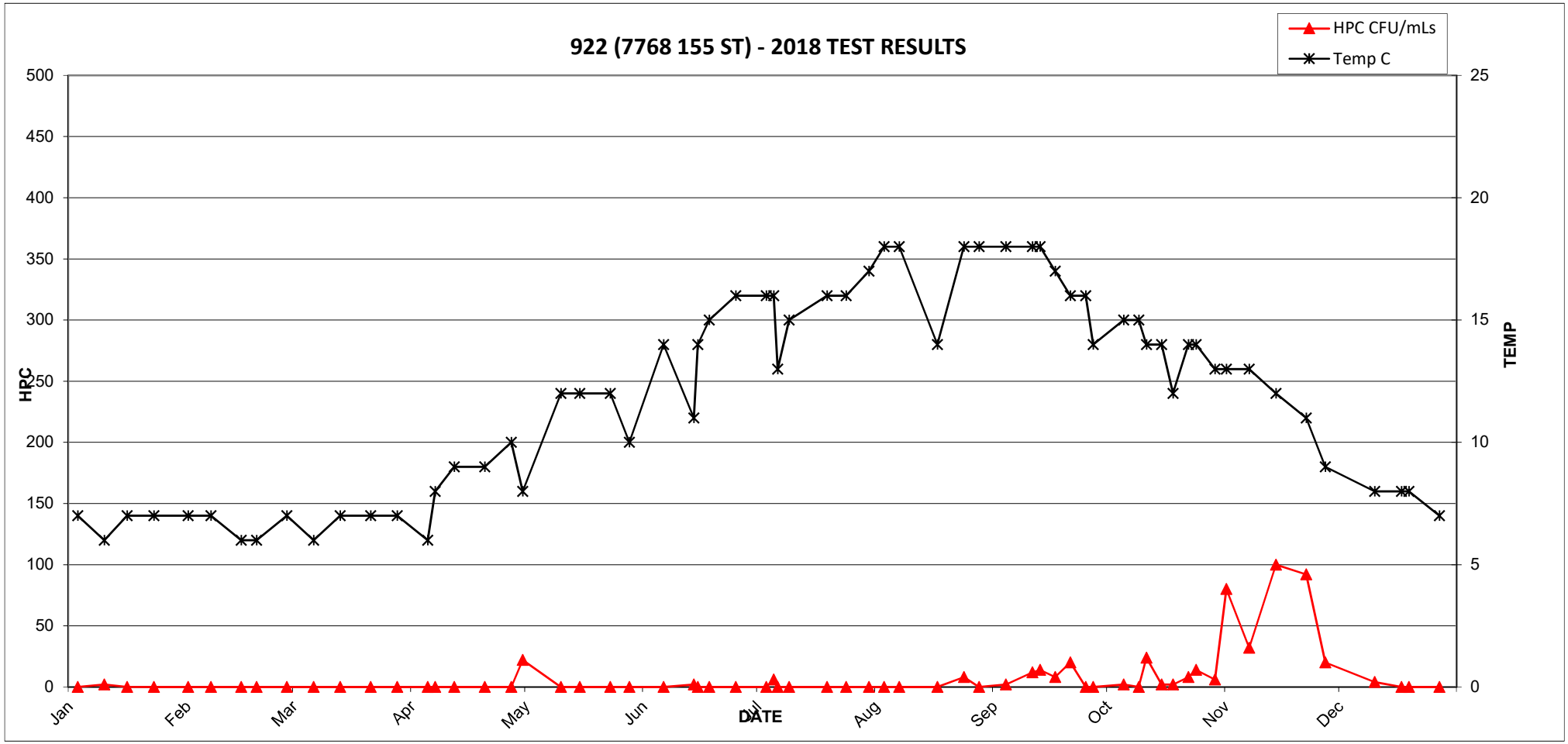
Oct
Nov
Dec

2018 MV Laboratory Report - 922 (7768 155 ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.44	<1	<2	<1	7	0.45
10-Jan	0.27	<1	2	<1	6	0.41
16-Jan	0.23	<1	<2	<1	7	0.41
23-Jan	0.32	<1	<2	<1	7	0.39
01-Feb	0.36	<1	<2	<1	7	0.60
07-Feb	0.21	<1	<2	<1	7	0.38
15-Feb	0.43	<1	<2	<1	6	0.30
19-Feb	0.28	<1	<2	<1	6	0.38
27-Feb	0.56	<1	<2	<1	7	0.41
06-Mar	0.43	<1	<2	<1	6	0.31
13-Mar	0.44	<1	<2	<1	7	0.41
21-Mar	0.33	<1	<2	<1	7	0.36
28-Mar	0.41	<1	<2	<1	7	0.35
05-Apr	0.46	<1	<2	<1	6	0.31
07-Apr	0.38	<1	<2	<1	8	0.27
12-Apr	0.31	<1	<2	<1	9	0.30
20-Apr	0.35	<1	<2	<1	9	0.44
27-Apr	0.25	<1	<2	<1	10	0.40
30-Apr	0.32	<1	22	<1	8	0.26
10-May	0.19	<1	<2	<1	12	0.28
15-May	0.27	<1	<2	<1	12	0.54
23-May	0.28	<1	<2	<1	12	0.44
28-May	0.29	<1	<2	<1	10	0.30
06-Jun	0.35	<1	<2	<1	14	0.30
14-Jun	0.15	<1	2	<1	11	0.24
15-Jun	0.26	<1	<2	<1	14	0.31
18-Jun	0.37	<1	<2	<1	15	0.35
25-Jun	0.42	<1	<2	<1	16	0.21
03-Jul	0.31	<1	<2	<1	16	0.21
05-Jul	0.48	<1	6	<1	16	0.33
06-Jul	0.59	<1	<2	<1	13	2.60
09-Jul	0.46	<1	<2	<1	15	0.20
19-Jul	0.55	<1	<2	<1	16	0.28
24-Jul	0.49	<1	<2	<1	16	0.29
30-Jul	0.36	<1	<2	<1	17	0.47
03-Aug	0.41	<1	<2	<1	18	0.21
07-Aug	0.28	<1	<2	<1	18	0.24
17-Aug	0.31	<1	<2	<1	14	0.96
24-Aug	0.34	<1	8	<1	18	0.32
28-Aug	0.28	<1	<2	<1	18	0.37
04-Sep	0.25	<1	2	<1	18	0.25
11-Sep	0.23	<1	12	<1	18	0.26
13-Sep	0.29	<1	14	<1	18	0.24
17-Sep	0.22	<1	8	<1	17	0.27
21-Sep	0.28	<1	20	<1	16	0.30
25-Sep	0.21	<1	LA	<1	16	0.59
27-Sep	0.24	<1	<2	<1	14	0.63
05-Oct	0.18	<1	2	<1	15	0.43
09-Oct	0.10	<1	<2	<1	15	0.21
11-Oct	0.14	<1	24	<1	14	0.35
15-Oct	0.17	<1	2	<1	14	0.38
18-Oct	0.36	<1	2	<1	12	0.32
22-Oct	0.18	<1	8	<1	14	0.33
24-Oct	0.21	<1	14	<1	14	0.28


922 (7768 155 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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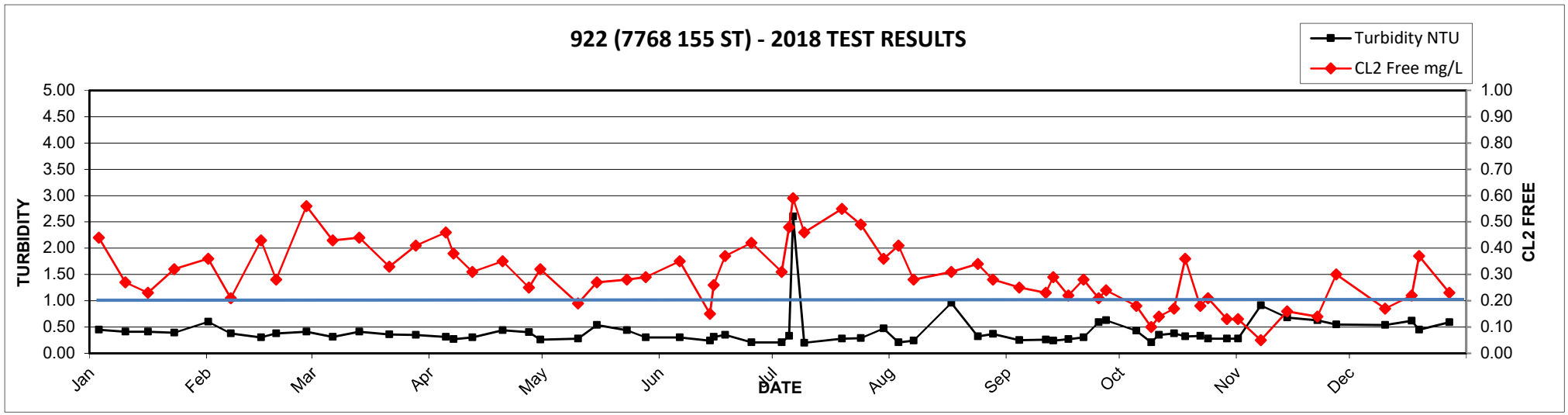
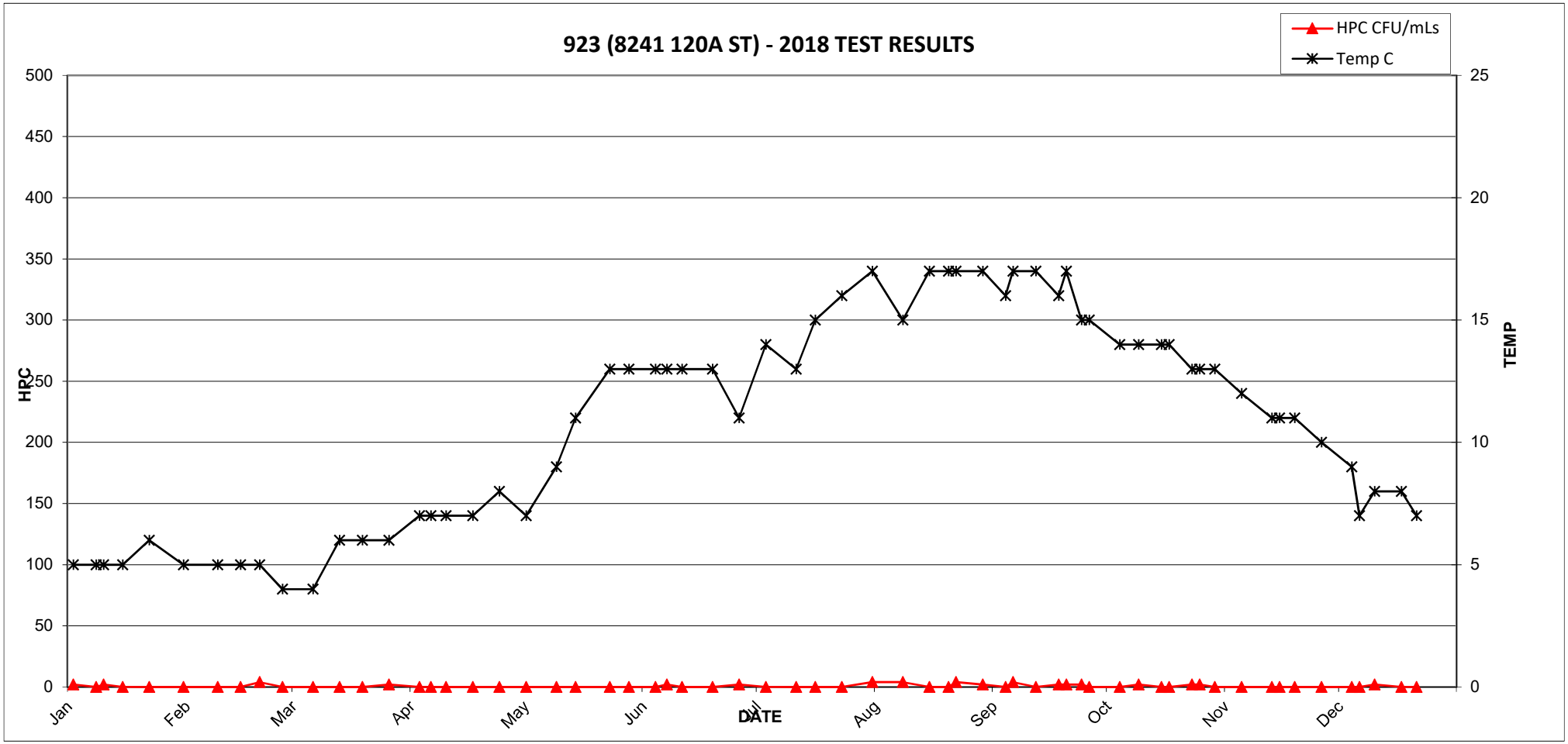
Nov
Dec


922 (7768 155 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 923 (8241 120A ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.78	<1	2	<1	5	0.48
08-Jan	0.71	<1	<2	<1	5	0.51
10-Jan	0.82	<1	2	<1	5	0.45
15-Jan	0.75	<1	<2	<1	5	0.43
22-Jan	0.70	<1	<2	<1	6	0.46
31-Jan	0.81	<1	<2	<1	5	0.54
09-Feb	0.81	<1	<2	<1	5	0.39
15-Feb	0.91	<1	<2	<1	5	0.37
20-Feb	0.98	<1	4	<1	5	0.47
26-Feb	0.84	<1	<2	<1	4	0.34
06-Mar	0.93	<1	<2	<1	4	0.31
13-Mar	0.85	<1	<2	<1	6	0.50
19-Mar	0.67	<1	<2	<1	6	0.72
26-Mar	0.81	<1	2	<1	6	0.37
03-Apr	0.54	<1	<2	<1	7	0.34
06-Apr	0.62	<1	<2	<1	7	0.37
10-Apr	0.57	<1	<2	<1	7	0.31
17-Apr	0.53	<1	<2	<1	7	0.20
24-Apr	0.57	<1	<2	<1	8	0.25
01-May	0.65	<1	<2	<1	7	0.25
09-May	0.66	<1	<2	<1	9	0.16
14-May	0.55	<1	<2	<1	11	0.28
23-May	0.49	<1	<2	<1	13	0.21
28-May	0.50	<1	<2	<1	13	0.28
04-Jun	0.45	<1	<2	<1	13	0.19
07-Jun	0.46	<1	2	<1	13	0.18
11-Jun	0.42	<1	<2	<1	13	0.21
19-Jun	0.53	<1	<2	<1	13	0.15
26-Jun	0.62	<1	2	<1	11	0.15
03-Jul	0.57	<1	<2	<1	14	0.22
11-Jul	0.61	<1	<2	<1	13	0.19
16-Jul	0.65	<1	<2	<1	15	0.19
23-Jul	0.64	<1	<2	<1	16	0.17
31-Jul	0.47	<1	4	<1	17	0.25
08-Aug	0.51	<1	4	<1	15	0.27
15-Aug	0.39	<1	<2	<1	17	0.23
20-Aug	0.42	<1	<2	<1	17	0.27
22-Aug	0.51	<1	4	<1	17	0.33
29-Aug	0.51	<1	2	<1	17	0.21
04-Sep	0.52	<1	<2	<1	16	0.26
06-Sep	0.59	<1	4	<1	17	0.30
12-Sep	0.56	<1	<2	<1	17	0.31
18-Sep	0.41	<1	2	<1	16	0.31
20-Sep	0.38	<1	2	<1	17	0.27
24-Sep	0.33	<1	2	<1	15	0.30
26-Sep	0.51	<1	<2	<1	15	0.25
04-Oct	0.40	<1	<2	<1	14	0.29
09-Oct	0.36	<1	2	<1	14	0.26
15-Oct	0.32	<1	<2	<1	14	0.32
17-Oct	0.21	<1	<2	<1	14	0.38
23-Oct	0.36	<1	2	<1	13	0.29
25-Oct	0.29	<1	2	<1	13	0.32
29-Oct	0.31	<1	<2	<1	13	0.26
05-Nov	0.39	<1	<2	<1	12	0.58
13-Nov	0.42	<1	<2	<1	11	0.72


923 (8241 120A ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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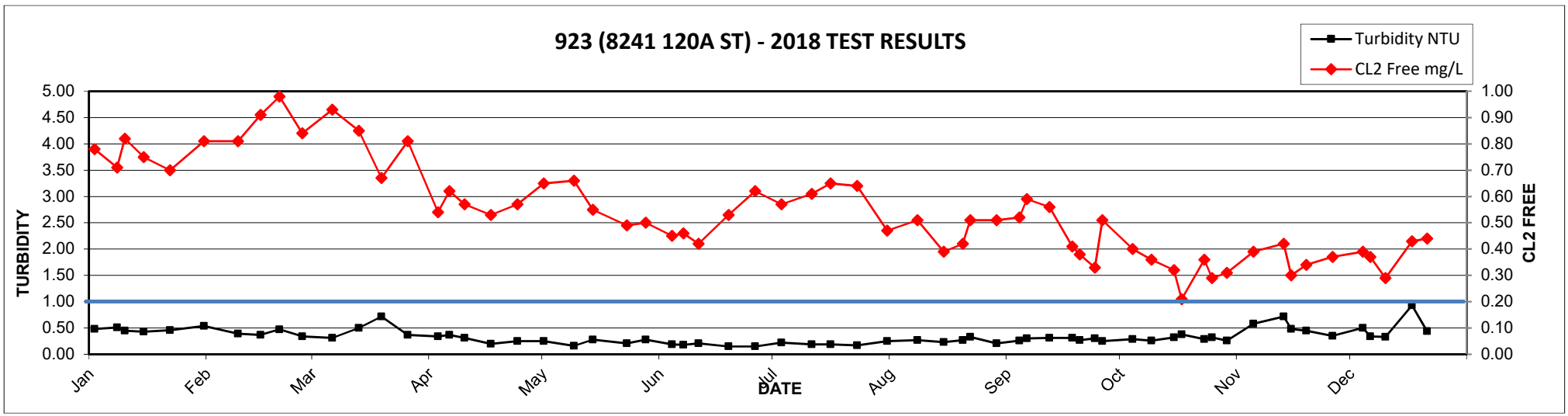
923 (8241 120A ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
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May
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Jul
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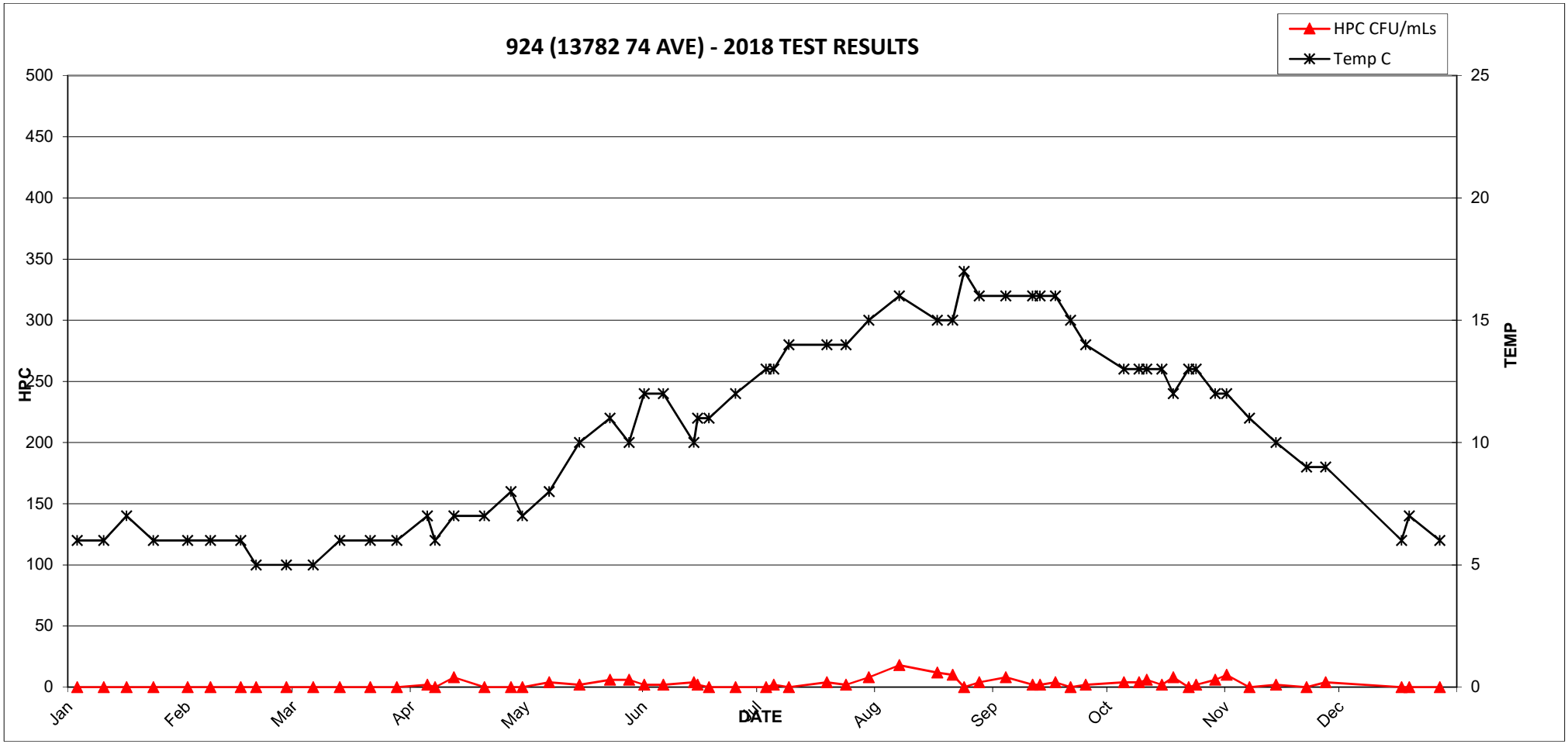
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 924 (13782 74 AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.80	<1	<2	<1	6	0.54
10-Jan	0.64	<1	<2	<1	6	0.60
16-Jan	0.77	<1	<2	<1	7	0.44
23-Jan	0.66	<1	<2	<1	6	0.53
01-Feb	0.85	<1	<2	<1	6	0.86
07-Feb	0.61	<1	<2	<1	6	0.57
15-Feb	0.64	<1	<2	<1	6	0.31
19-Feb	0.65	<1	<2	<1	5	0.51
27-Feb	1.00	<1	<2	<1	5	0.79
06-Mar	0.95	<1	<2	<1	5	0.45
13-Mar	0.82	<1	<2	<1	6	0.65
21-Mar	0.73	<1	<2	<1	6	0.49
28-Mar	0.57	<1	<2	<1	6	0.42
05-Apr	0.80	<1	2	<1	7	0.58
07-Apr	0.57	<1	<2	<1	6	0.20
12-Apr	0.57	<1	8	<1	7	0.31
20-Apr	0.54	<1	<2	<1	7	0.37
27-Apr	0.54	<1	<2	<1	8	0.30
30-Apr	0.57	<1	<2	<1	7	0.23
07-May	0.43	<1	4	<1	8	0.16
15-May	0.49	<1	2	<1	10	0.40
23-May	0.67	<1	6	<1	11	0.17
28-May	0.63	<1	6	<1	10	0.26
01-Jun	0.50	<1	2	<1	12	0.35
06-Jun	0.60	<1	2	<1	12	0.22
14-Jun	0.58	<1	4	<1	10	0.14
15-Jun	0.56	<1	2	<1	11	0.27
18-Jun	0.68	<1	<2	<1	11	0.27
25-Jun	0.53	<1	<2	<1	12	0.18
03-Jul	0.36	<1	<2	<1	13	0.16
05-Jul	0.48	<1	2	<1	13	0.16
09-Jul	0.54	<1	<2	<1	14	0.13
19-Jul	0.64	<1	4	<1	14	0.26
24-Jul	0.66	<1	2	<1	14	0.26
30-Jul	0.50	<1	8	<1	15	0.31
07-Aug	0.53	<1	18	<1	16	0.19
17-Aug	0.65	<1	12	<1	15	0.46
21-Aug	0.61	<1	10	<1	15	0.40
24-Aug	0.69	<1	<2	<1	17	0.24
28-Aug	0.59	<1	4	<1	16	0.26
04-Sep	0.55	<1	8	<1	16	0.29
11-Sep	0.68	<1	2	<1	16	0.25
13-Sep	0.69	<1	2	<1	16	0.25
17-Sep	0.71	<1	4	<1	16	0.26
21-Sep	0.57	<1	<2	<1	15	0.29
25-Sep	0.54	<1	2	<1	14	0.43
05-Oct	0.55	<1	4	<1	13	0.48
09-Oct	0.56	<1	4	<1	13	0.14
11-Oct	0.47	<1	6	<1	13	0.36
15-Oct	0.51	<1	2	<1	13	0.27
18-Oct	0.60	<1	8	<1	12	0.27


924 (13782 74 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
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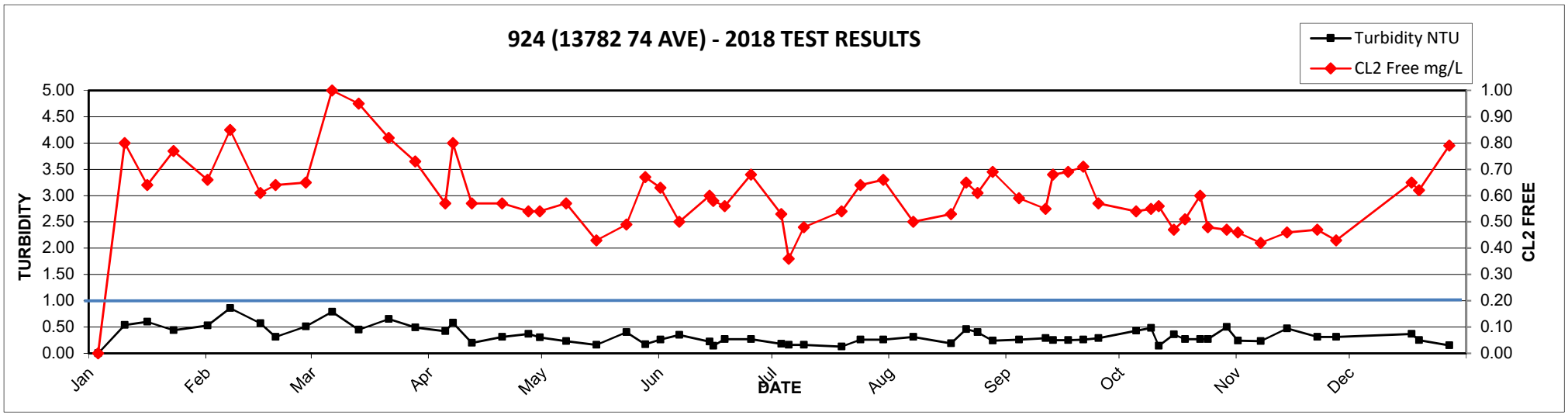
924 (13782 74 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
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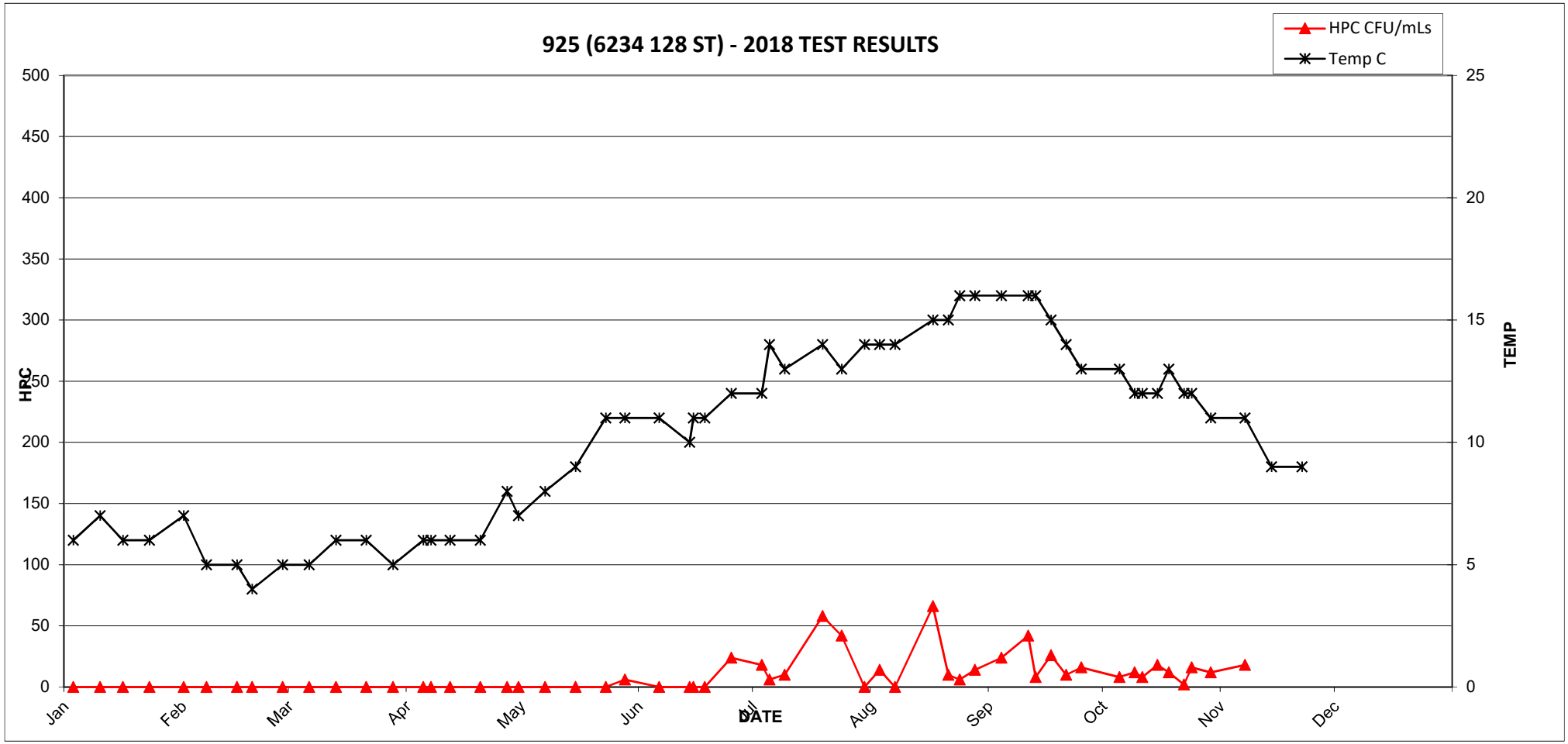
2018 MV Laboratory Report - 925 (6234 128 ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.79	<1	<2	<1	6	0.44
10-Jan	0.58	<1	<2	<1	7	0.13
16-Jan	0.66	<1	<2	<1	6	0.17
23-Jan	0.61	<1	<2	<1	6	0.12
01-Feb	0.50	<1	<2	<1	7	0.15
07-Feb	0.51	<1	<2	<1	5	0.17
15-Feb	0.70	<1	<2	<1	5	0.12
19-Feb	0.54	<1	<2	<1	4	0.15
27-Feb	0.77	<1	<2	<1	5	0.66
06-Mar	0.79	<1	<2	<1	5	0.12
13-Mar	0.75	<1	<2	<1	6	0.54
21-Mar	0.50	<1	<2	<1	6	2.50
28-Mar	0.65	<1	<2	<1	5	0.24
05-Apr	0.76	<1	<2	<1	6	0.42
07-Apr	0.64	<1	<2	<1	6	0.25
12-Apr	0.58	<1	<2	<1	6	0.24
20-Apr	0.64	<1	<2	<1	6	0.50
27-Apr	0.55	<1	<2	<1	8	0.25
30-Apr	0.65	<1	<2	<1	7	0.22
07-May	0.67	<1	<2	<1	8	0.22
15-May	0.56	<1	LA	<1	9	0.50
23-May	0.62	<1	<2	<1	11	0.27
28-May	0.48	<1	6	<1	11	0.24
06-Jun	0.58	<1	<2	<1	11	0.17
14-Jun	0.49	<1	<2	<1	10	0.13
15-Jun	0.45	<1	<2	<1	11	0.20
18-Jun	0.33	<1	<2	<1	11	0.29
25-Jun	0.56	<1	24	<1	12	0.21
03-Jul	0.45	<1	18	<1	12	0.20
05-Jul	0.65	<1	6	<1	14	0.27
09-Jul	0.72	<1	10	<1	13	0.18
19-Jul	0.69	<1	58	<1	14	0.22
24-Jul	0.63	<1	42	<1	13	0.23
30-Jul	0.62	<1	LA	<1	14	0.36
03-Aug	0.70	<1	14	<1	14	0.19
07-Aug	0.54	<1	<2	<1	14	0.20
17-Aug	0.59	<1	66	<1	15	0.40
21-Aug	0.56	<1	10	<1	15	0.37
24-Aug	0.42	<1	6	<1	16	0.21
28-Aug	0.59	<1	14	<1	16	0.59
04-Sep	0.67	<1	24	<1	16	0.30
11-Sep	0.64	<1	42	<1	16	0.29
13-Sep	0.73	<1	8	<1	16	0.24
17-Sep	0.61	<1	26	<1	15	0.27
21-Sep	0.59	<1	10	<1	14	0.33
25-Sep	0.48	<1	16	<1	13	0.40
05-Oct	0.60	<1	8	<1	13	0.55
09-Oct	0.46	<1	12	<1	12	0.41
11-Oct	0.47	<1	8	<1	12	0.41
15-Oct	0.49	<1	18	<1	12	0.65
18-Oct	0.61	<1	12	<1	13	0.29
22-Oct	0.53	<1	2	<1	12	0.25
24-Oct	0.55	<1	16	<1	12	0.32
29-Oct	0.47	<1	12	<1	11	0.23
07-Nov	0.41	<1	18	<1	11	0.37
14-Nov-18	0.51	<1	6	<1	9	0.39
22-Nov	0.47	<1	<2	<1	9	0.33


925 (6234 128 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
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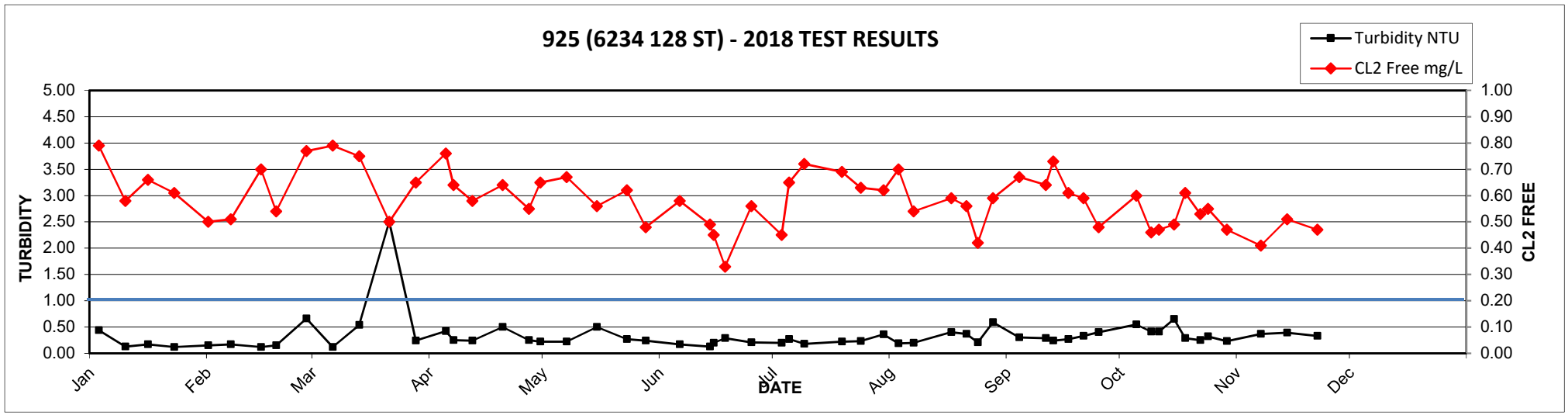
925 (6234 128 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
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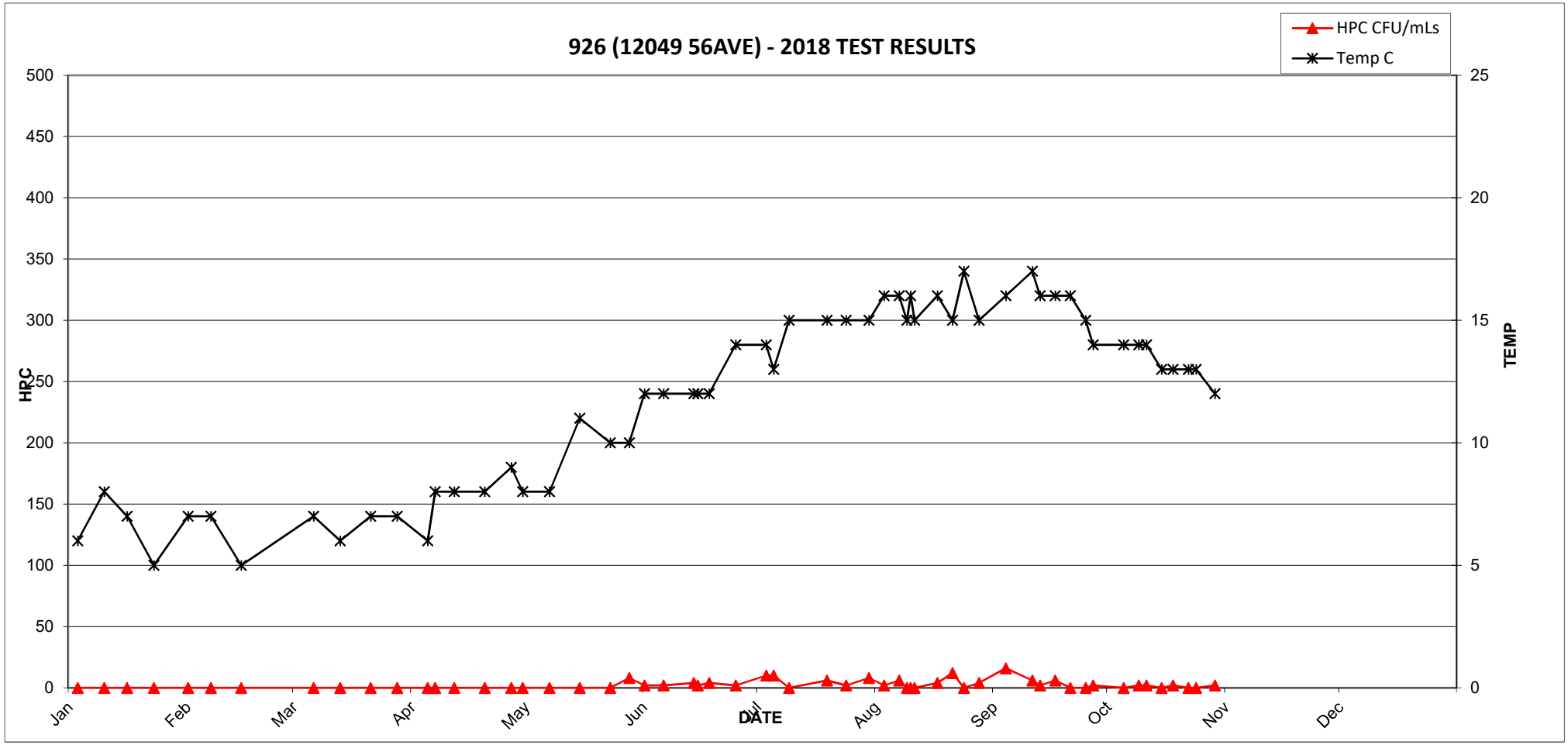
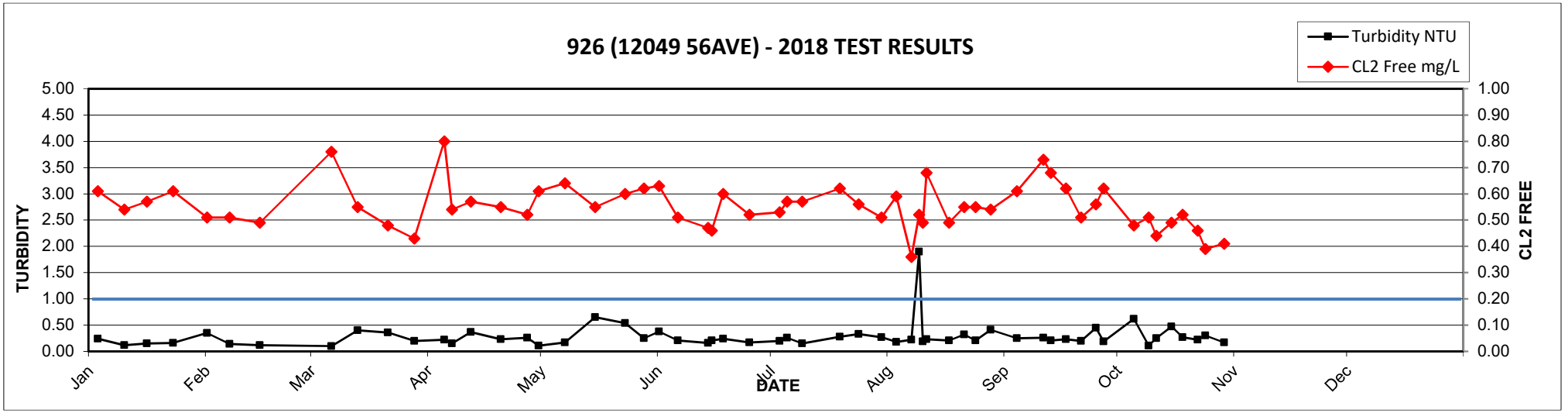
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 926 (12049 56AVE)

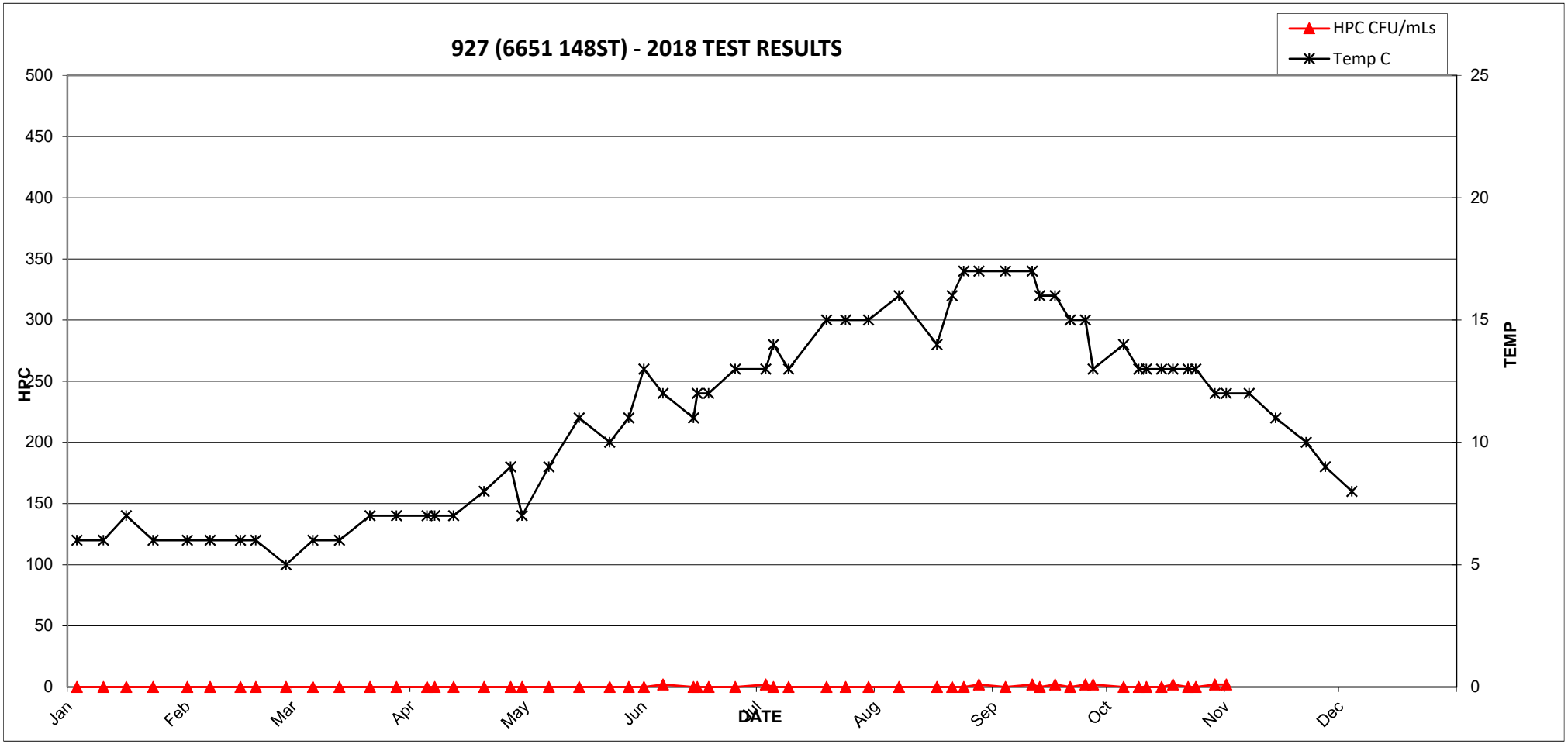
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.61	<1	<2	<1	6	0.24
10-Jan	0.54	<1	<2	<1	8	0.12
16-Jan	0.57	<1	<2	<1	7	0.15
23-Jan	0.61	<1	<2	<1	5	0.16
01-Feb	0.51	<1	<2	<1	7	0.35
07-Feb	0.51	<1	<2	<1	7	0.14
15-Feb	0.49	<1	<2	<1	5	0.12
06-Mar	0.76	<1	<2	<1	7	0.10
13-Mar	0.55	<1	<2	<1	6	0.40
21-Mar	0.48	<1	<2	<1	7	0.36
28-Mar	0.43	<1	<2	<1	7	0.20
05-Apr	0.80	<1	<2	<1	6	0.22
07-Apr	0.54	<1	<2	<1	8	0.15
12-Apr	0.57	<1	<2	<1	8	0.37
20-Apr	0.55	<1	<2	<1	8	0.23
27-Apr	0.52	<1	<2	<1	9	0.26
30-Apr	0.61	<1	<2	<1	8	0.11
07-May	0.64	<1	<2	<1	8	0.17
15-May	0.55	<1	<2	<1	11	0.65
23-May	0.60	<1	<2	<1	10	0.54
28-May	0.62	<1	8	<1	10	0.25
01-Jun	0.63	<1	2	<1	12	0.38
06-Jun	0.51	<1	2	<1	12	0.21
14-Jun	0.47	<1	4	<1	12	0.16
15-Jun	0.46	<1	2	<1	12	0.21
18-Jun	0.60	<1	4	<1	12	0.24
25-Jun	0.52	<1	2	<1	14	0.17
03-Jul	0.53	<1	10	<1	14	0.20
05-Jul	0.57	<1	10	<1	13	0.26
09-Jul	0.57	<1	<2	<1	15	0.15
19-Jul	0.62	<1	6	<1	15	0.28
24-Jul	0.56	<1	2	<1	15	0.33
30-Jul	0.51	<1	8	<1	15	0.27
03-Aug	0.59	<1	2	<1	16	0.18
07-Aug	0.36	<1	6	1	16	0.22
09-Aug	0.52	<1	<2	<1	15	1.90
11-Aug	0.68	<1	<2	<1	15	0.23
10-Aug	0.49	<1	<2	<1	16	0.19
17-Aug	0.49	<1	4	<1	16	0.21
21-Aug	0.55	<1	12	<1	15	0.32
24-Aug	0.55	<1	<2	<1	17	0.21
28-Aug	0.54	<1	4	<1	15	0.41
04-Sep	0.61	<1	16	<1	16	0.25
11-Sep	0.73	<1	6	<1	17	0.26
13-Sep	0.68	<1	2	<1	16	0.21
17-Sep	0.62	<1	6	<1	16	0.23
21-Sep	0.51	<1	<2	<1	16	0.20
25-Sep	0.56	<1	<2	<1	15	0.45
27-Sep	0.62	<1	2	<1	14	0.19
05-Oct	0.48	<1	<2	<1	14	0.62
09-Oct	0.51	<1	2	<1	14	0.11
11-Oct	0.44	<1	2	<1	14	0.25
15-Oct	0.49	<1	<2	<1	13	0.47
18-Oct	0.52	<1	2	<1	13	0.27


926 (12049 56AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


926 (12049 56AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 927 (6651 148 ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.46	<1	<2	<1	6	0.17
10-Jan	0.54	<1	<2	<1	6	0.13
16-Jan	0.52	<1	<2	<1	7	0.12
23-Jan	0.53	<1	<2	<1	6	0.12
01-Feb	0.44	<1	<2	<1	6	0.15
07-Feb	0.53	<1	<2	<1	6	0.16
15-Feb	0.75	<1	<2	<1	6	0.09
19-Feb	0.48	<1	<2	<1	6	0.11
27-Feb	0.88	<1	<2	<1	5	0.23
06-Mar	0.69	<1	<2	<1	6	0.12
13-Mar	0.57	<1	<2	<1	6	0.46
21-Mar	0.51	<1	<2	<1	7	0.47
28-Mar	0.43	<1	<2	<1	7	0.23
05-Apr	0.59	<1	<2	<1	7	0.35
07-Apr	0.70	<1	<2	<1	7	0.19
12-Apr	0.53	<1	<2	<1	7	0.19
20-Apr	0.49	<1	<2	<1	8	0.23
27-Apr	0.47	<1	<2	<1	9	0.30
30-Apr	0.60	<1	<2	<1	7	0.32
07-May	0.70	<1	<2	<1	9	0.21
15-May	0.49	<1	<2	<1	11	0.40
23-May	0.54	<1	<2	<1	10	0.35
28-May	0.56	<1	<2	<1	11	0.18
01-Jun	0.52	<1	<2	<1	13	0.61
06-Jun	0.58	<1	2	<1	12	0.29
14-Jun	0.65	<1	<2	<1	11	0.14
15-Jun	0.54	<1	<2	<1	12	0.23
18-Jun	0.61	<1	<2	<1	12	0.34
25-Jun	0.54	<1	<2	<1	13	0.18
03-Jul	0.51	<1	2	<1	13	0.22
05-Jul	0.69	<1	<2	<1	14	0.30
09-Jul	0.71	<1	<2	<1	13	0.14
19-Jul	0.58	<1	<2	<1	15	0.17
24-Jul	0.54	<1	<2	<1	15	0.23
30-Jul	0.52	<1	<2	<1	15	0.35
07-Aug	0.47	<1	<2	<1	16	0.23
17-Aug	0.54	<1	<2	<1	14	0.25
21-Aug	0.50	<1	<2	<1	16	0.44
24-Aug	0.55	<1	<2	<1	17	0.21
28-Aug	0.49	<1	2	<1	17	0.24
04-Sep	0.63	<1	<2	<1	17	0.35
11-Sep	0.71	<1	2	<1	17	0.28
13-Sep	0.73	<1	<2	<1	16	0.27
17-Sep	0.65	<1	2	<1	16	0.27
21-Sep	0.58	<1	<2	<1	15	0.25
25-Sep	0.59	<1	2	<1	15	0.29
27-Sep	0.66	<1	2	<1	13	0.53
05-Oct	0.56	<1	<2	<1	14	0.33
09-Oct	0.42	<1	<2	<1	13	0.14


927 (6651 148ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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May
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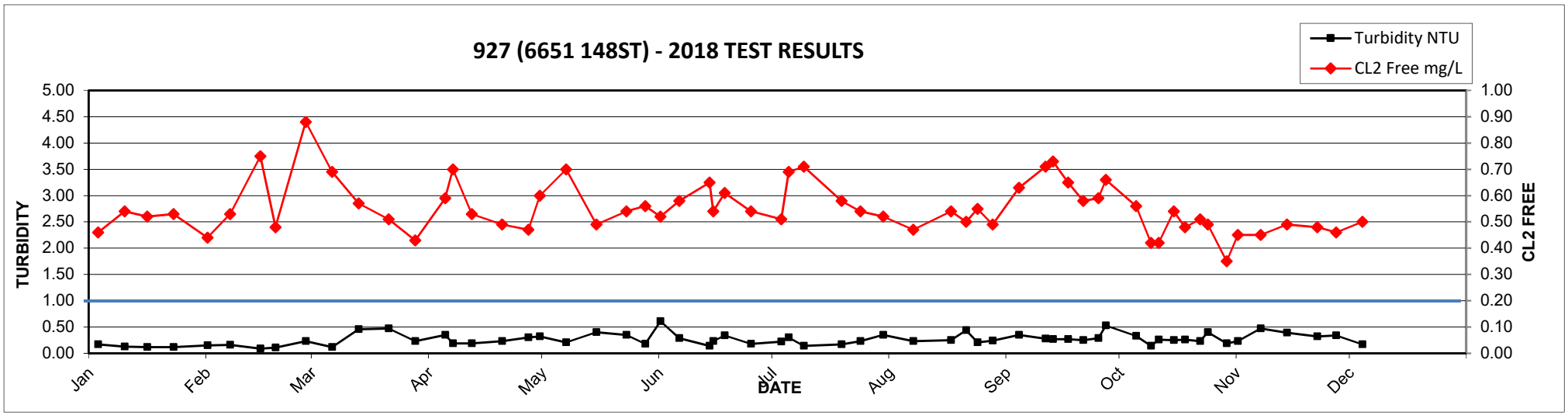
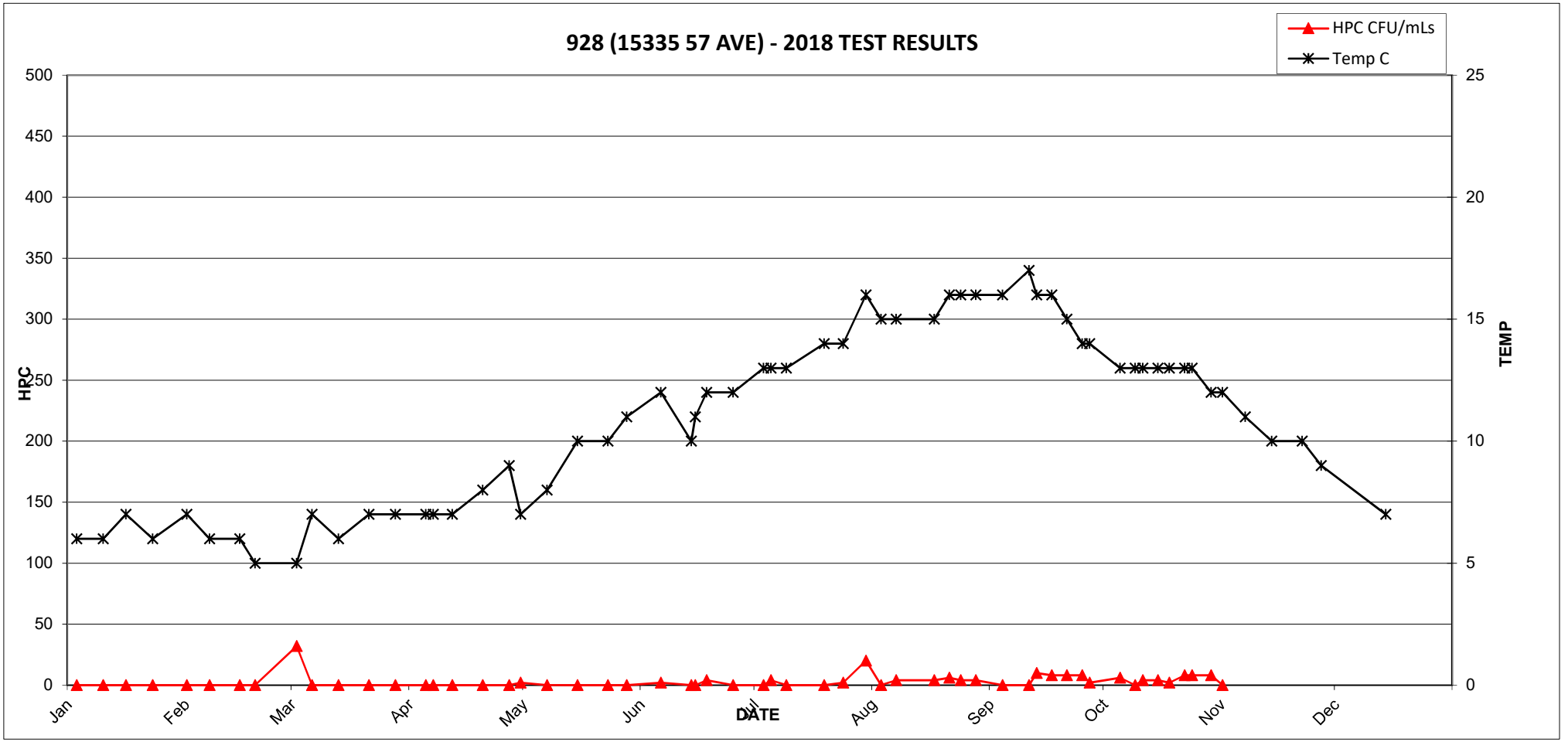
Aug
Sep
Oct
Nov
Dec


927 (6651 148ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 928 (15335 57 AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.68	<1	<2	<1	6	0.20
10-Jan	0.57	<1	<2	<1	6	0.23
16-Jan	0.64	<1	<2	<1	7	0.13
23-Jan	0.55	<1	<2	<1	6	0.15
01-Feb	0.55	<1	<2	<1	7	0.26
07-Feb	0.55	<1	<2	<1	6	0.23
15-Feb	0.75	<1	<2	<1	6	0.11
19-Feb	0.55	<1	<2	<1	5	0.28
02-Mar	0.65	<1	32	<1	5	0.25
06-Mar	0.86	<1	<2	<1	7	0.16
13-Mar	0.63	<1	<2	<1	6	0.45
21-Mar	0.56	<1	<2	<1	7	0.40
28-Mar	0.53	<1	<2	<1	7	0.20
05-Apr	0.74	<1	<2	<1	7	0.46
07-Apr	0.68	<1	<2	<1	7	0.20
12-Apr	0.60	<1	<2	<1	7	0.34
20-Apr	0.49	<1	<2	<1	8	0.38
27-Apr	0.44	<1	<2	<1	9	0.28
30-Apr	0.66	<1	2	<1	7	0.29
07-May	0.69	<1	<2	<1	8	0.17
15-May	0.58	<1	<2	<1	10	0.28
23-May	0.57	<1	<2	<1	10	0.32
28-May	0.57	<1	<2	<1	11	0.26
06-Jun	0.60	<1	2	<1	12	0.20
14-Jun	0.68	<1	<2	<1	10	0.16
15-Jun	0.57	<1	<2	<1	11	0.24
18-Jun	0.55	<1	4	<1	12	0.33
25-Jun	0.51	<1	<2	<1	12	0.18
03-Jul	0.45	<1	<2	<1	13	0.22
05-Jul	0.60	<1	4	<1	13	0.29
09-Jul	0.60	<1	<2	<1	13	0.17
19-Jul	0.68	<1	<2	<1	14	0.25
24-Jul	0.64	<1	2	<1	14	0.23
30-Jul	0.57	<1	20	<1	16	0.46
03-Aug	0.68	<1	<2	<1	15	0.20
07-Aug	0.44	<1	4	<1	15	0.22
17-Aug	0.65	<1	4	<1	15	0.29
21-Aug	0.57	<1	6	<1	16	0.33
24-Aug	0.61	<1	4	<1	16	0.23
28-Aug	0.54	<1	4	<1	16	0.49
04-Sep	0.66	<1	<2	<1	16	0.31
11-Sep	0.61	<1	LA	<1	17	0.27
13-Sep	0.73	<1	10	<1	16	0.25
17-Sep	0.66	<1	8	<1	16	0.24
21-Sep	0.60	<1	8	<1	15	0.29
25-Sep	0.59	<1	8	<1	14	0.46
27-Sep	0.73	<1	2	<1	14	0.95
05-Oct	0.58	<1	6	<1	13	0.21
09-Oct	0.48	<1	<2	<1	13	0.17
11-Oct	0.40	<1	4	<1	13	0.36
15-Oct	0.55	<1	4	<1	13	0.27
18-Oct	0.65	<1	2	<1	13	0.29
22-Oct	0.52	<1	8	<1	13	0.70
24-Oct	0.57	<1	8	<1	13	0.33


928 (15335 57 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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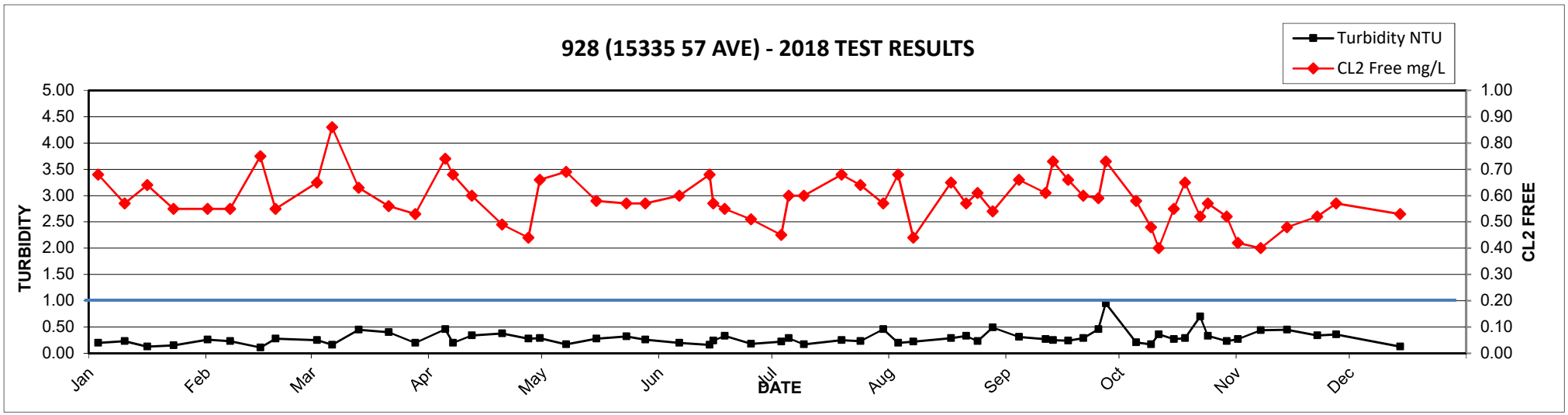
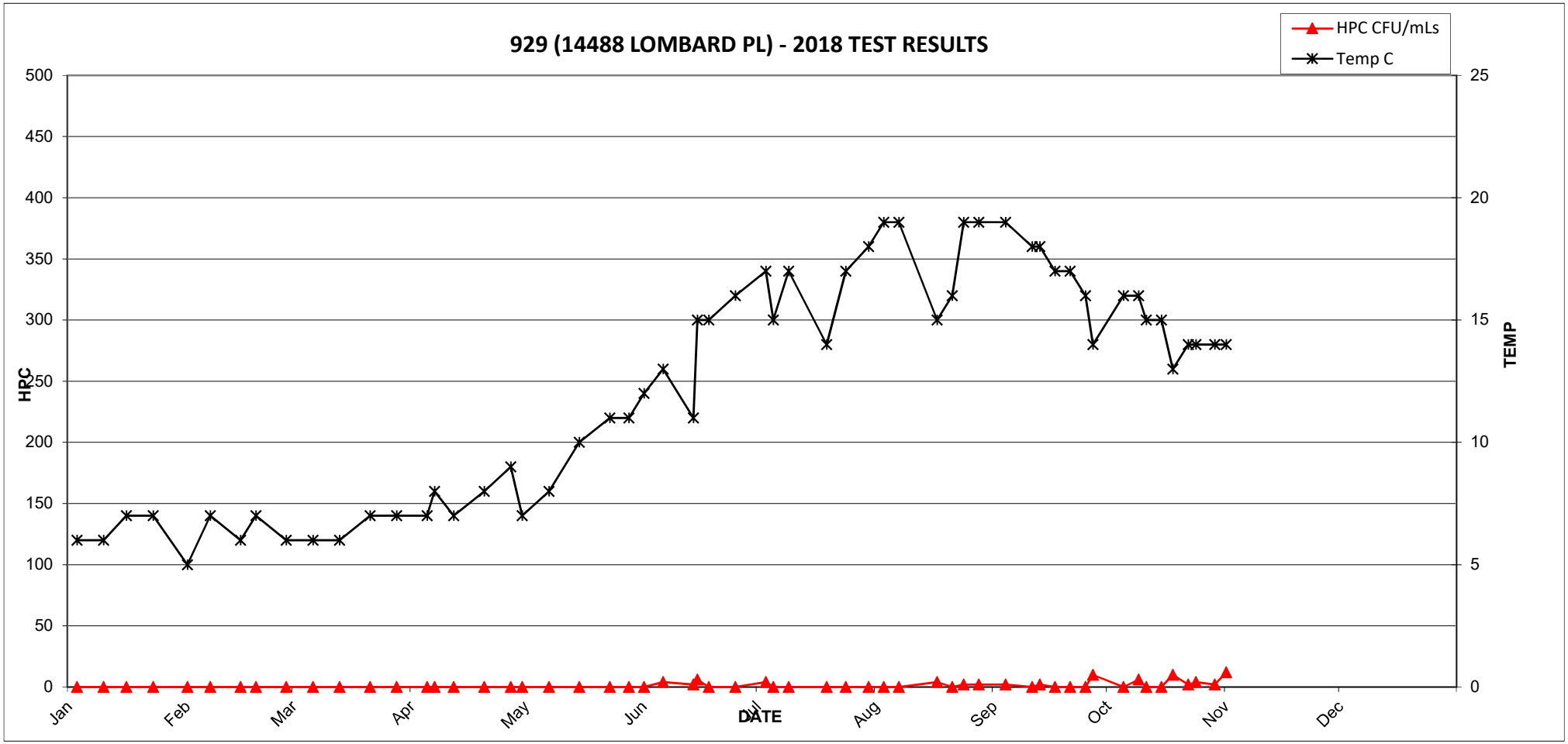
Nov
Dec


928 (15335 57 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 929 (14488 LOMBARD PL)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.65	<1	<2	<1	6	0.21
10-Jan	0.45	<1	<2	<1	6	0.21
16-Jan	0.61	<1	<2	<1	7	0.16
23-Jan	0.60	<1	<2	<1	7	0.17
01-Feb	0.50	<1	<2	<1	5	0.17
07-Feb	0.50	<1	<2	<1	7	0.79
15-Feb	0.60	<1	<2	<1	6	0.10
19-Feb	0.47	<1	<2	<1	7	0.52
27-Feb	0.81	<1	<2	<1	6	0.29
06-Mar	0.89	<1	<2	<1	6	0.19
13-Mar	0.52	<1	<2	<1	6	0.51
21-Mar	0.47	<1	<2	<1	7	0.38
28-Mar	0.48	<1	<2	<1	7	0.17
05-Apr	0.68	<1	<2	<1	7	0.44
07-Apr	0.60	<1	<2	<1	8	0.19
12-Apr	0.57	<1	<2	<1	7	0.19
20-Apr	0.56	<1	<2	<1	8	0.24
27-Apr	0.54	<1	<2	<1	9	0.28
30-Apr	0.64	<1	<2	<1	7	0.15
07-May	0.68	<1	<2	<1	8	0.18
15-May	0.56	<1	<2	<1	10	0.31
23-May	0.49	<1	<2	<1	11	0.31
28-May	0.51	<1	<2	<1	11	0.20
01-Jun	0.59	<1	<2	<1	12	0.26
06-Jun	0.59	<1	4	<1	13	0.22
14-Jun	0.38	<1	2	<1	11	0.20
15-Jun	0.38	<1	6	<1	15	0.16
18-Jun	0.62	<1	<2	<1	15	0.35
25-Jun	0.31	<1	<2	<1	16	0.13
03-Jul	0.26	<1	4	<1	17	0.26
05-Jul	0.54	<1	<2	<1	15	0.19
09-Jul	0.38	<1	<2	<1	17	0.11
19-Jul	0.68	<1	<2	<1	14	0.28
24-Jul	0.37	<1	<2	<1	17	0.25
30-Jul	0.41	<1	<2	<1	18	0.25
03-Aug	0.26	<1	<2	<1	19	0.15
07-Aug	0.14	<1	<2	<1	19	0.17
17-Aug	0.22	<1	4	<1	15	0.18
21-Aug	0.25	<1	<2	<1	16	0.19
24-Aug	0.37	<1	2	<1	19	0.22
28-Aug	0.24	<1	2	<1	19	0.26
04-Sep	0.16	<1	2	<1	19	0.2
11-Sep	0.16	<1	<2	<1	18	0.24
13-Sep	0.12	<1	2	<1	18	0.22
17-Sep	0.13	<1	<2	<1	17	0.23
21-Sep	0.11	<1	<2	<1	17	0.20
25-Sep	0.14	<1	<2	<1	16	0.20
27-Sep	0.13	<1	10	<1	14	0.17
05-Oct	0.07	<1	<2	<1	16	0.16
09-Oct	0.06	<1	6	<1	16	0.14
11-Oct	0.19	<1	<2	<1	15	0.21
15-Oct	0.06	<1	<2	<1	15	0.44
18-Oct	0.17	<1	10	<1	13	0.29
22-Oct	0.05	<1	2	<1	14	0.23
24-Oct	0.07	<1	4	<1	14	0.24
29-Oct	0.04	<1	2	<1	14	0.18


929 (14488 LOMBARD PL) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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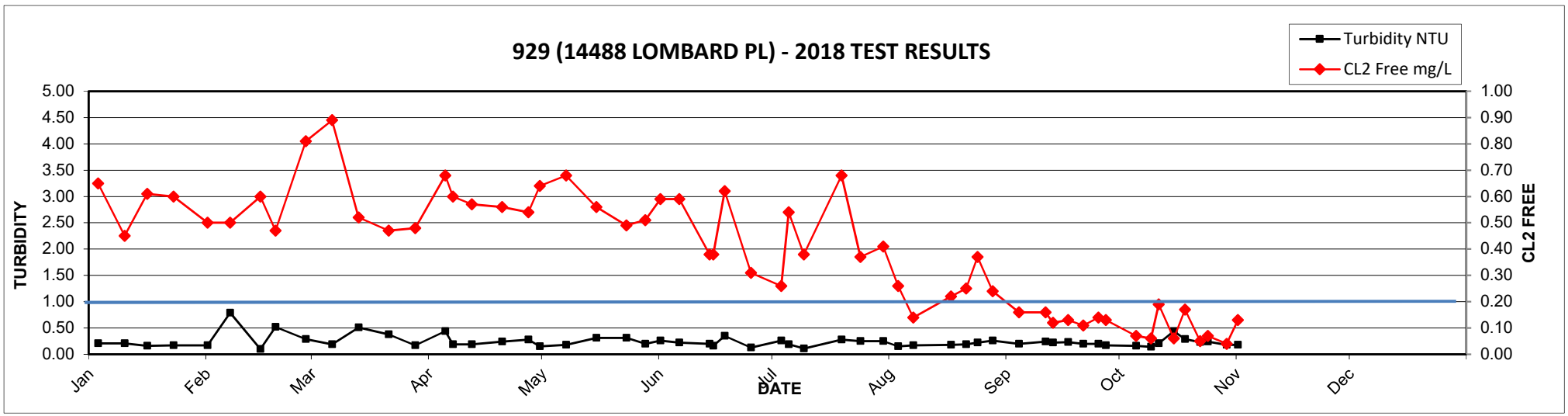
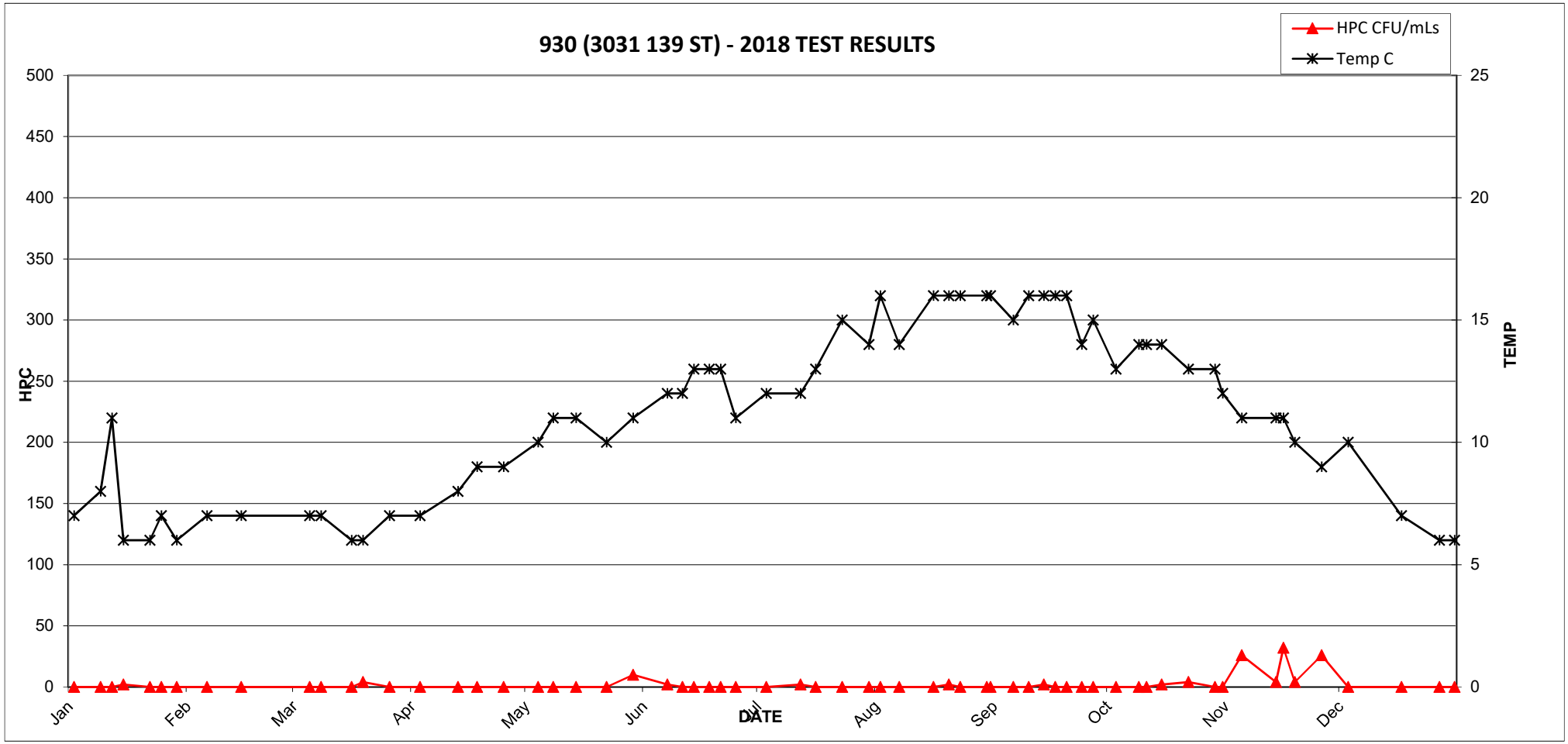
Nov
Dec


929 (14488 LOMBARD PL) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 930 (3031 139 ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.42	<1	<2	<1	7	0.47
09-Jan	0.30	<1	<2	<1	8	0.35
12-Jan	0.41	<1	<2	<1	11	0.41
15-Jan	0.28	<1	2	<1	6	0.45
22-Jan	0.31	<1	<2	<1	6	0.37
25-Jan	0.38	<1	<2	<1	7	0.31
29-Jan	0.23	<1	<2	<1	6	0.31
06-Feb	0.37	<1	<2	<1	7	0.40
15-Feb	0.25	<1	<2	<1	7	0.40
05-Mar	0.60	<1	<2	<1	7	0.29
08-Mar	0.50	<1	<2	<1	7	0.33
16-Mar	0.48	<1	<2	<1	6	0.35
19-Mar	0.44	<1	4	<1	6	0.48
26-Mar	0.42	<1	<2	<1	7	0.31
03-Apr	0.44	<1	<2	<1	7	0.36
13-Apr	0.40	<1	<2	<1	8	0.27
18-Apr	0.37	<1	<2	<1	9	0.33
25-Apr	0.51	<1	<2	<1	9	0.28
04-May	0.40	<1	<2	<1	10	0.24
08-May	0.54	<1	<2	<1	11	0.28
14-May	0.56	<1	<2	<1	11	0.33
22-May	0.73	<1	<2	<1	10	0.26
29-May	0.52	<1	10	<1	11	0.28
07-Jun	0.56	<1	2	<1	12	0.39
11-Jun	0.49	<1	<2	<1	12	0.22
14-Jun	0.59	<1	<2	<1	13	0.25
18-Jun	0.67	<1	<2	<1	13	0.21
21-Jun	0.61	<1	<2	<1	13	0.45
25-Jun	0.74	<1	<2	<1	11	0.25
03-Jul	0.64	<1	<2	<1	12	0.21
12-Jul	0.56	<1	2	<1	12	0.23
16-Jul	0.56	<1	<2	<1	13	0.22
23-Jul	0.67	<1	<2	<1	15	0.22
30-Jul	0.59	<1	<2	<1	14	0.32
02-Aug	0.53	<1	<2	<1	16	0.21
07-Aug	0.62	<1	<2	<1	14	0.29
16-Aug	0.69	<1	<2	<1	16	0.31
20-Aug	0.53	<1	2	<1	16	0.27
23-Aug	0.75	<1	<2	<1	16	0.26
30-Aug	0.71	<1	<2	<1	16	0.21
31-Aug	0.65	<1	<2	<1	16	0.33
06-Sep	0.98	<1	<2	<1	15	0.24
10-Sep	0.66	<1	<2	<1	16	0.29
14-Sep	0.57	<1	2	<1	16	0.28
17-Sep	0.53	<1	<2	<1	16	0.21
20-Sep	0.58	<1	<2	<1	16	0.28
24-Sep	0.40	<1	<2	<1	14	0.24
27-Sep	0.31	<1	<2	<1	15	0.66
03-Oct	0.35	<1	<2	<1	13	0.25
09-Oct	0.17	<1	<2	<1	14	0.24
11-Oct	0.21	<1	<2	<1	14	0.30
15-Oct	0.31	<1	2	<1	14	0.43
22-Oct	0.20	<1	4	<1	13	0.21
29-Oct	0.31	<1	<2	<1	13	0.27
31-Oct	0.12	<1	<2	<1	12	0.20
05-Nov	0.20	<1	26	<1	11	0.21
14-Nov-18	0.3	<1	4	<1	11	0.6
16-Nov-18	0.12	<1	32	<1	11	0.53
19-Nov-18	0.18	<1	4	<1	10	0.49
26-Nov	0.23	<1	26	<1	9	0.50
03-Dec	0.04	<1	<2	<1	10	0.46
17-Dec	0.38	<1	NA	<1	7	0.81


930 (3031 139 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
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Aug
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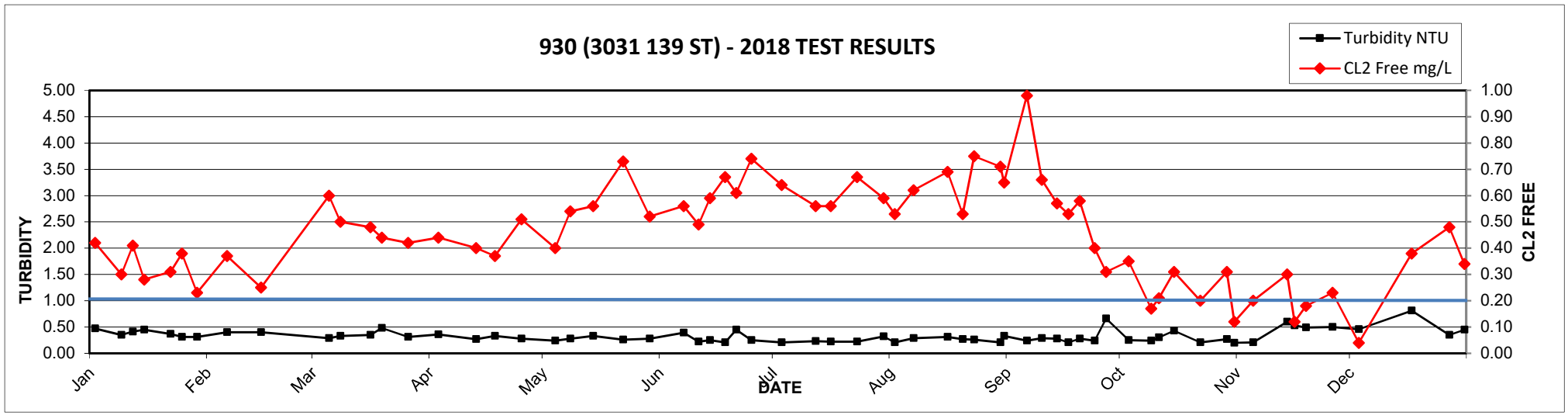
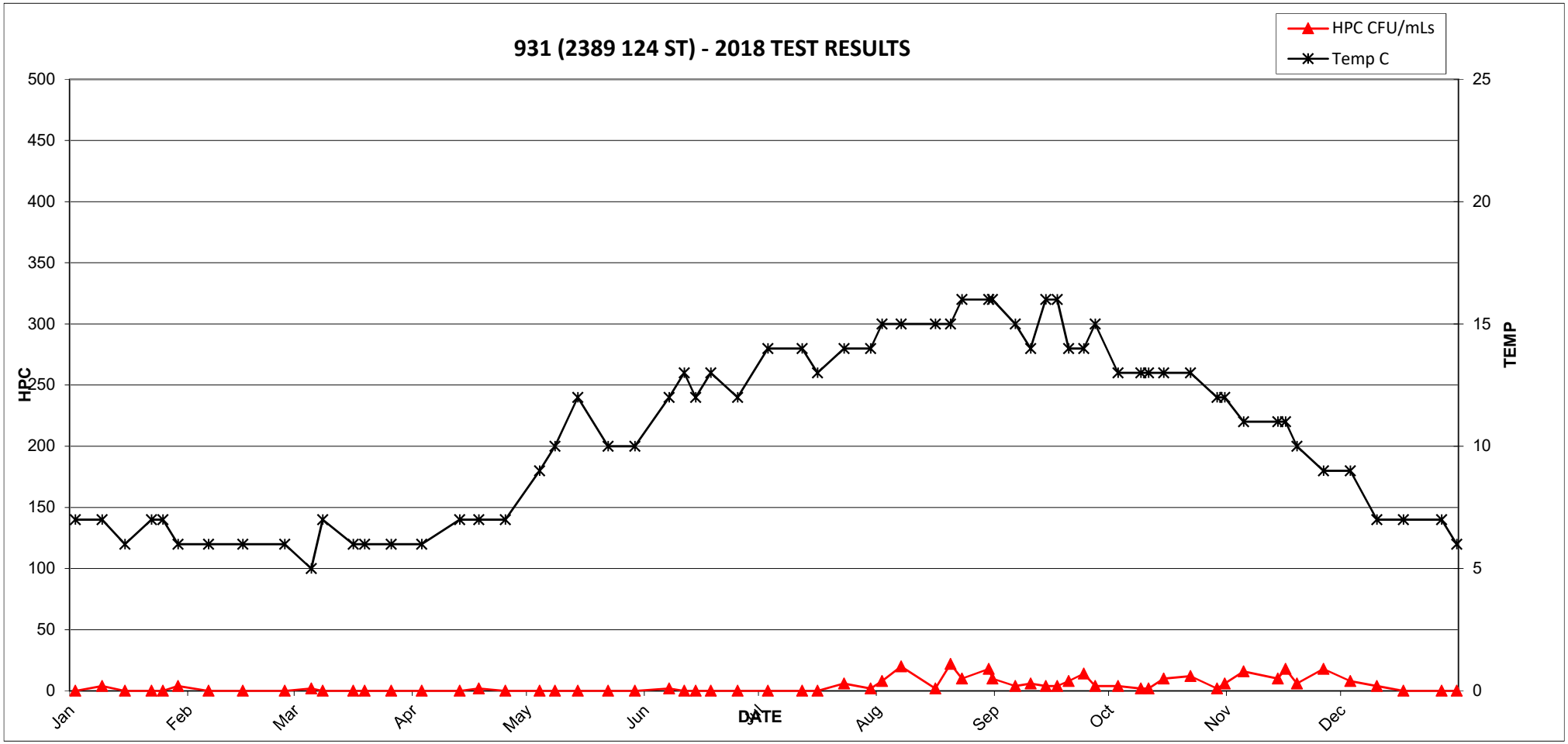
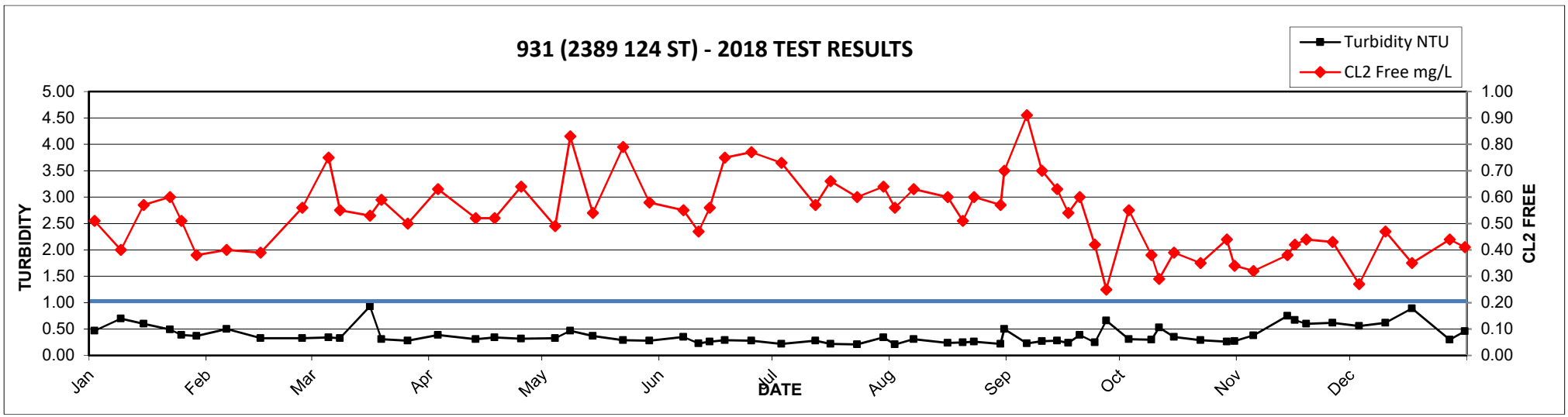
Nov
Dec


930 (3031 139 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 931 (2389 124 ST)

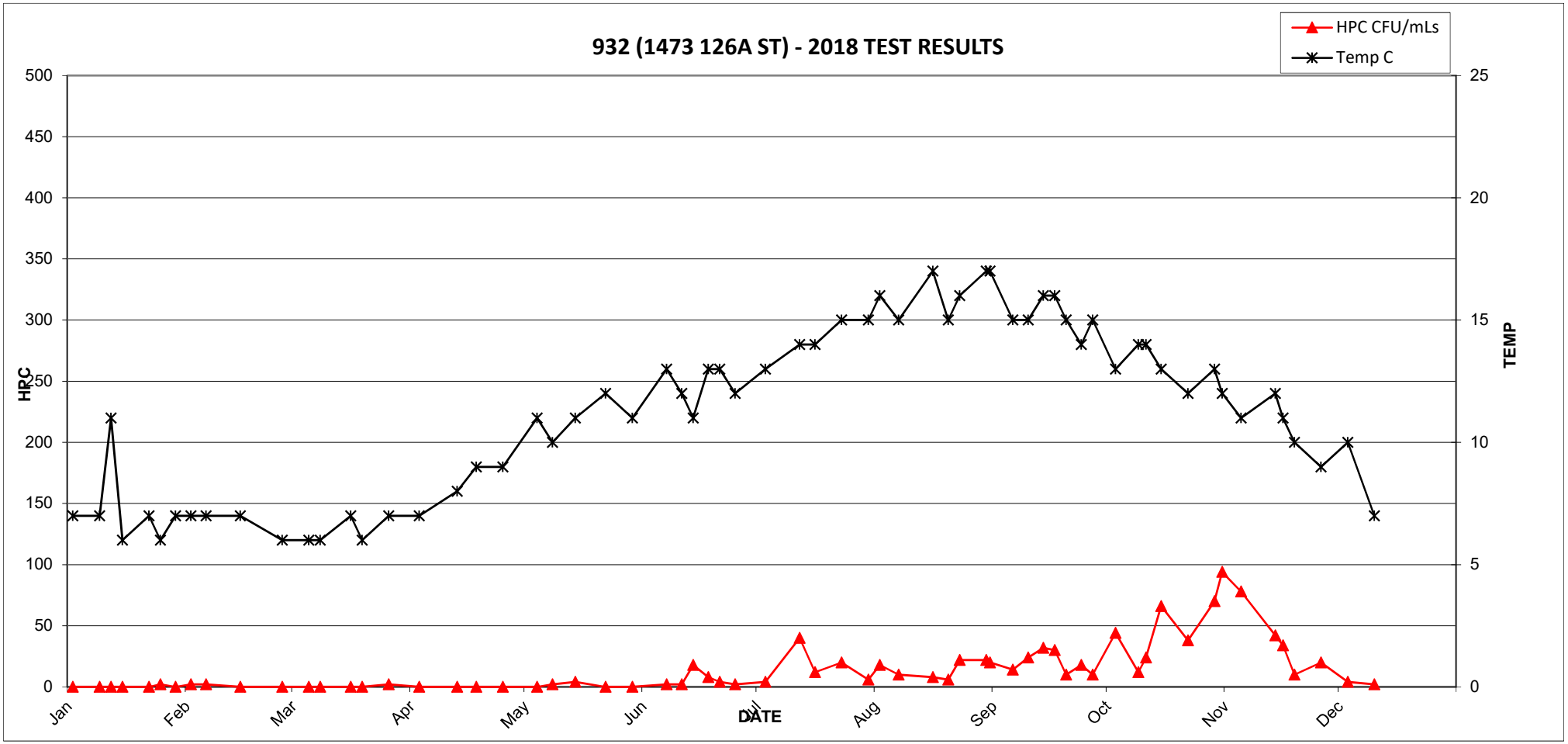
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.51	<1	<2	<1	7	0.47
09-Jan	0.40	<1	4	<1	7	0.70
15-Jan	0.57	<1	<2	<1	6	0.60
22-Jan	0.60	<1	<2	<1	7	0.49
25-Jan	0.51	<1	<2	<1	7	0.39
29-Jan	0.38	<1	4	<1	6	0.37
06-Feb	0.40	<1	<2	<1	6	0.50
15-Feb	0.39	<1	<2	<1	6	0.33
26-Feb	0.56	<1	<2	<1	6	0.33
05-Mar	0.75	<1	2	<1	5	0.34
08-Mar	0.55	<1	<2	<1	7	0.33
16-Mar	0.53	<1	<2	<1	6	0.93
19-Mar	0.59	<1	<2	<1	6	0.31
26-Mar	0.50	<1	<2	<1	6	0.28
03-Apr	0.63	<1	<2	<1	6	0.39
13-Apr	0.52	<1	<2	<1	7	0.31
18-Apr	0.52	<1	2	<1	7	0.34
25-Apr	0.64	<1	<2	<1	7	0.32
04-May	0.49	<1	<2	<1	9	0.33
08-May	0.83	<1	<2	<1	10	0.47
14-May	0.54	<1	<2	<1	12	0.37
22-May	0.79	<1	<2	<1	10	0.29
29-May	0.58	<1	<2	<1	10	0.28
07-Jun	0.55	<1	2	<1	12	0.35
11-Jun	0.47	<1	<2	<1	13	0.23
14-Jun	0.56	<1	<2	<1	12	0.26
18-Jun	0.75	<1	<2	<1	13	0.29
25-Jun	0.77	<1	<2	<1	12	0.28
03-Jul	0.73	<1	<2	<1	14	0.22
12-Jul	0.57	<1	<2	<1	14	0.28
16-Jul	0.66	<1	<2	<1	13	0.22
23-Jul	0.60	<1	6	<1	14	0.21
30-Jul	0.64	<1	2	<1	14	0.34
02-Aug	0.56	<1	8	<1	15	0.21
07-Aug	0.63	<1	20	<1	15	0.31
16-Aug	0.60	<1	2	<1	15	0.24
20-Aug	0.51	<1	22	<1	15	0.25
23-Aug	0.60	<1	10	<1	16	0.26
30-Aug	0.57	<1	18	<1	16	0.22
31-Aug	0.70	<1	10	<1	16	0.50
06-Sep	0.91	<1	4	<1	15	0.23
10-Sep	0.70	<1	6	<1	14	0.27
14-Sep	0.63	<1	4	<1	16	0.28
17-Sep	0.54	<1	4	<1	16	0.24
20-Sep	0.60	<1	8	<1	14	0.39
24-Sep	0.42	<1	14	<1	14	0.25
27-Sep	0.25	<1	4	<1	15	0.66
03-Oct	0.55	<1	4	<1	13	0.31
09-Oct	0.38	<1	2	<1	13	0.30
11-Oct	0.29	<1	2	<1	13	0.53
15-Oct	0.39	<1	10	<1	13	0.35
22-Oct	0.35	<1	12	<1	13	0.29
29-Oct	0.44	<1	2	<1	12	0.26
31-Oct	0.34	<1	6	<1	12	0.27
05-Nov	0.32	<1	16	<1	11	0.38
14-Nov-18	0.38	<1	10	<1	11	0.75
16-Nov-18	0.42	<1	18	<1	11	0.67
19-Nov-18	0.44	<1	6	<1	10	0.6
26-Nov	0.43	<1	18	<1	9	0.62
03-Dec	0.27	<1	8	<1	9	0.56
10-Dec	0.47	<1	4	<1	7	0.62
17-Dec	0.35	<1	NA	<1	7	0.89
27-Dec	0.44	<1	NA	<1	7	0.30

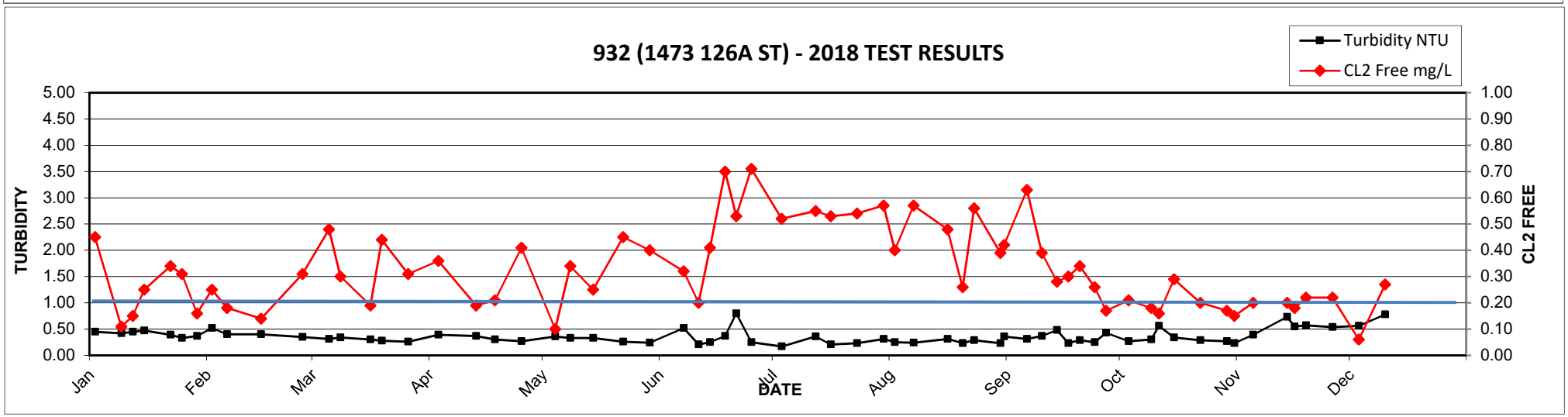

931 (2389 124 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


931 (2389 124 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 932 (1473 126A ST)

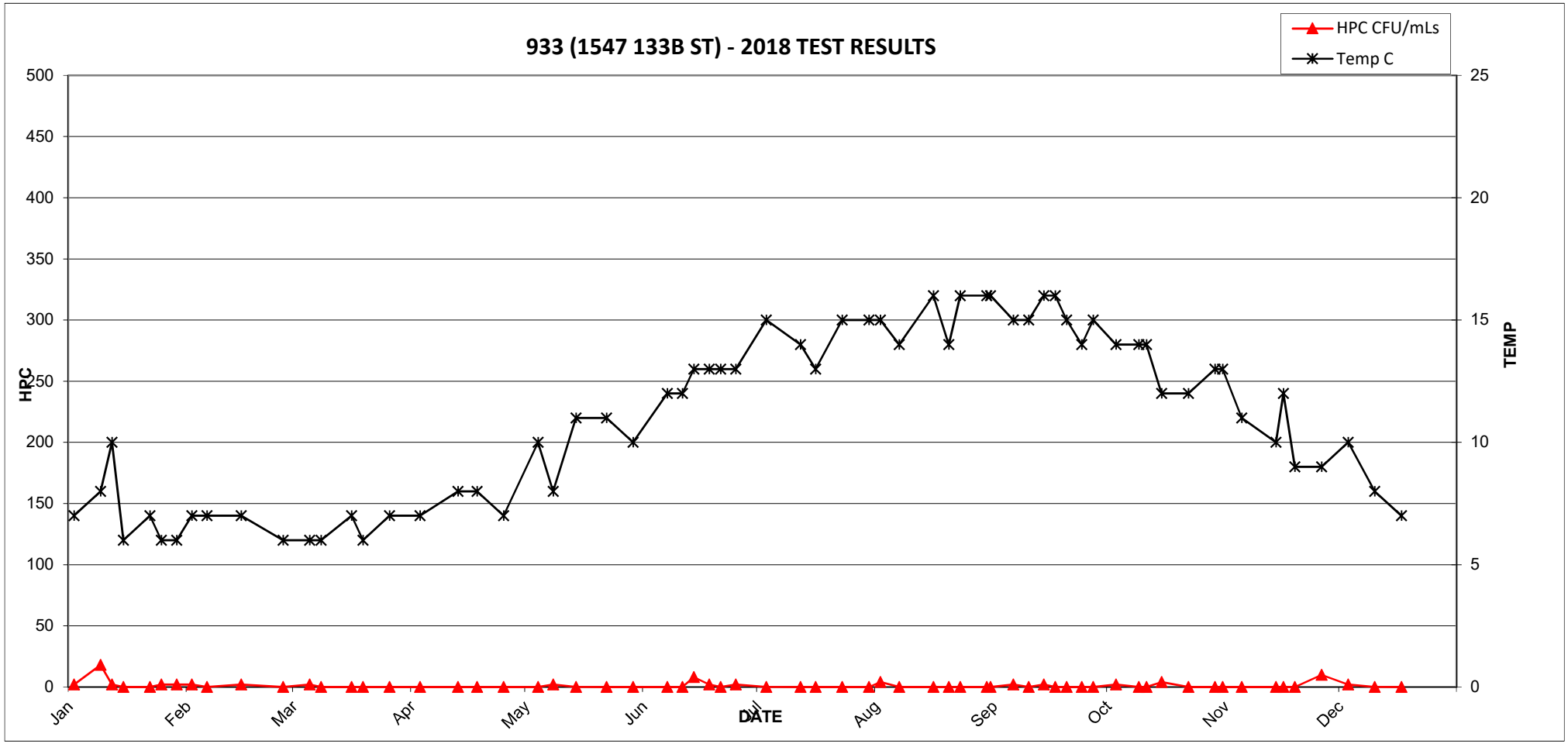
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.45	<1	<2	<1	7	0.45
09-Jan	0.11	<1	<2	<1	7	0.42
12-Jan	0.15	<1	<2	<1	11	0.45
15-Jan	0.25	<1	<2	<1	6	0.47
22-Jan	0.34	<1	<2	<1	7	0.39
25-Jan	0.31	<1	2	<1	6	0.33
29-Jan	0.16	<1	<2	<1	7	0.37
02-Feb	0.25	<1	2	<1	7	0.52
06-Feb	0.18	<1	2	<1	7	0.40
15-Feb	0.14	<1	<2	<1	7	0.40
26-Feb	0.31	<1	<2	<1	6	0.35
05-Mar	0.48	<1	<2	<1	6	0.31
08-Mar	0.30	<1	<2	<1	6	0.34
16-Mar	0.19	<1	<2	<1	7	0.30
19-Mar	0.44	<1	<2	<1	6	0.28
26-Mar	0.31	<1	2	<1	7	0.26
03-Apr	0.36	<1	<2	<1	7	0.39
13-Apr	0.19	<1	<2	<1	8	0.37
18-Apr	0.21	<1	<2	<1	9	0.30
25-Apr	0.41	<1	<2	<1	9	0.27
04-May	0.10	<1	<2	<1	11	0.36
08-May	0.34	<1	2	<1	10	0.33
14-May	0.25	<1	4	<1	11	0.33
22-May	0.45	<1	<2	<1	12	0.26
29-May	0.40	<1	<2	<1	11	0.24
07-Jun	0.32	<1	2	<1	13	0.52
11-Jun	0.20	<1	2	<1	12	0.21
14-Jun	0.41	<1	18	<1	11	0.25
18-Jun	0.70	<1	8	<1	13	0.37
21-Jun	0.53	<1	4	<1	13	0.80
25-Jun	0.71	<1	2	<1	12	0.25
03-Jul	0.52	<1	4	<1	13	0.17
12-Jul	0.55	<1	40	<1	14	0.36
16-Jul	0.53	<1	12	<1	14	0.21
23-Jul	0.54	<1	20	<1	15	0.23
30-Jul	0.57	<1	6	<1	15	0.31
02-Aug	0.40	<1	18	<1	16	0.25
07-Aug	0.57	<1	10	<1	15	0.24
16-Aug	0.48	<1	8	<1	17	0.31
20-Aug	0.26	<1	6	<1	15	0.23
23-Aug	0.56	<1	22	<1	16	0.29
30-Aug	0.39	<1	22	<1	17	0.23
31-Aug	0.42	<1	20	<1	17	0.36
06-Sep	0.63	<1	14	<1	15	0.31
10-Sep	0.39	<1	24	<1	15	0.37
14-Sep	0.28	<1	32	<1	16	0.48
17-Sep	0.30	<1	30	<1	16	0.23
20-Sep	0.34	<1	10	<1	15	0.29
24-Sep	0.26	<1	18	<1	14	0.25
27-Sep	0.17	<1	10	<1	15	0.43
03-Oct	0.21	<1	44	<1	13	0.27
09-Oct	0.18	<1	12	<1	14	0.30
11-Oct	0.16	<1	24	<1	14	0.56
15-Oct	0.29	<1	66	<1	13	0.34
22-Oct	0.20	<1	38	<1	12	0.29
29-Oct	0.17	<1	70	<1	13	0.27
31-Oct	0.15	<1	94	<1	12	0.23

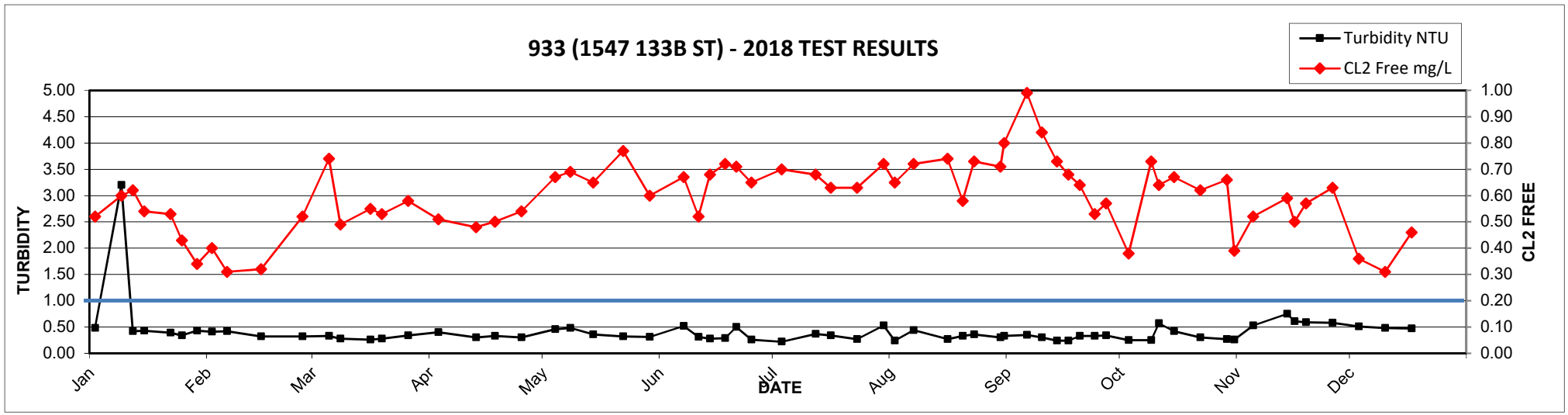

932 (1473 126A ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


932 (1473 126A ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 933 (1547 133B ST)

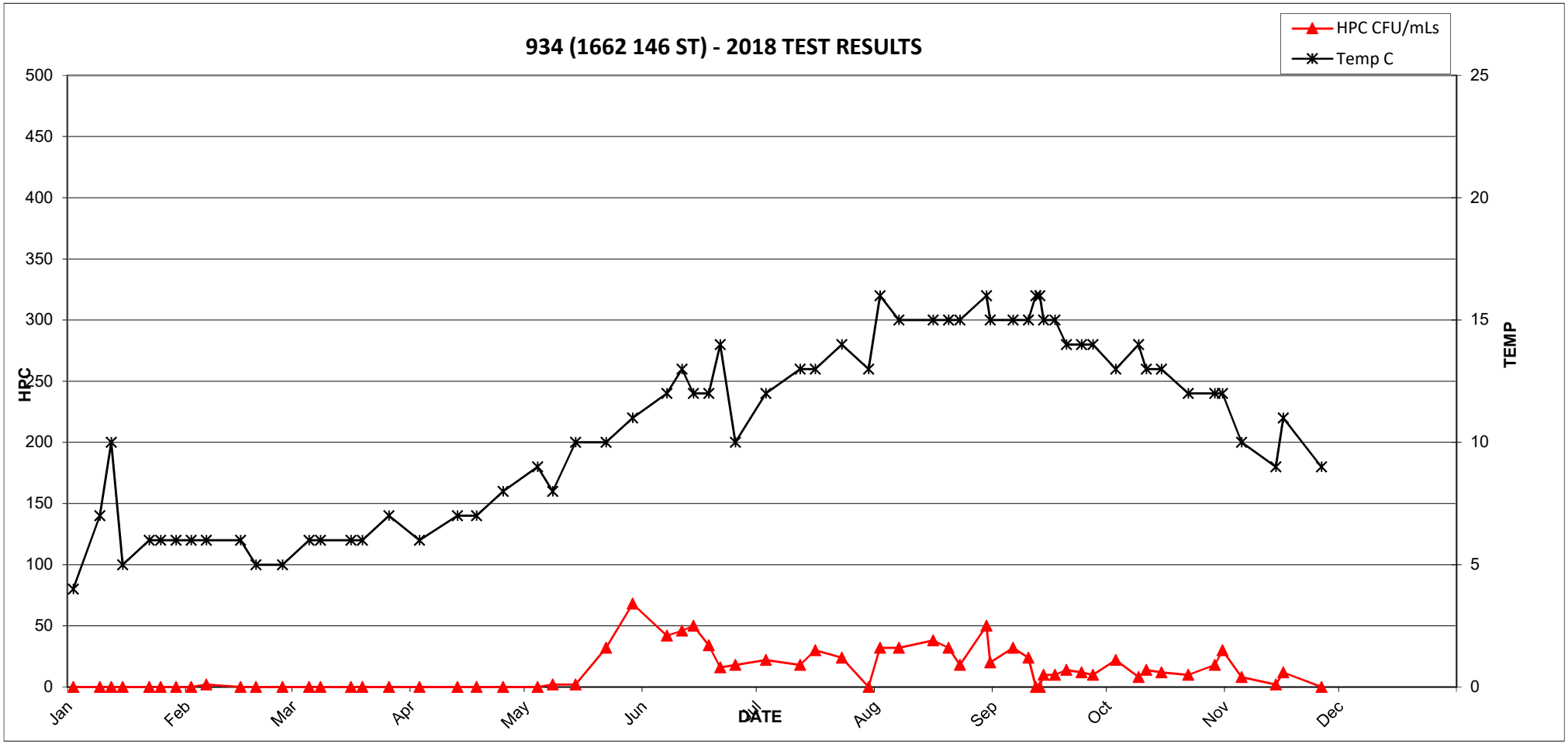
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.52	<1	2	<1	7	0.48
09-Jan	0.60	<1	18	<1	8	3.20
12-Jan	0.62	<1	2	<1	10	0.42
15-Jan	0.54	<1	<2	<1	6	0.43
22-Jan	0.53	<1	<2	<1	7	0.39
25-Jan	0.43	<1	2	<1	6	0.34
29-Jan	0.34	<1	2	<1	6	0.43
02-Feb	0.40	<1	2	<1	7	0.41
06-Feb	0.31	<1	<2	<1	7	0.42
15-Feb	0.32	<1	2	<1	7	0.32
26-Feb	0.52	<1	<2	<1	6	0.32
05-Mar	0.74	<1	2	<1	6	0.33
08-Mar	0.49	<1	<2	<1	6	0.28
16-Mar	0.55	<1	<2	<1	7	0.26
19-Mar	0.53	<1	<2	<1	6	0.28
26-Mar	0.58	<1	<2	<1	7	0.34
03-Apr	0.51	<1	<2	<1	7	0.40
13-Apr	0.48	<1	<2	<1	8	0.30
18-Apr	0.50	<1	<2	<1	8	0.33
25-Apr	0.54	<1	<2	<1	7	0.30
04-May	0.67	<1	<2	<1	10	0.46
08-May	0.69	<1	2	<1	8	0.48
14-May	0.65	<1	<2	<1	11	0.36
22-May	0.77	<1	<2	<1	11	0.32
29-May	0.60	<1	<2	<1	10	0.31
07-Jun	0.67	<1	<2	<1	12	0.52
11-Jun	0.52	<1	<2	<1	12	0.31
14-Jun	0.68	<1	8	<1	13	0.28
18-Jun	0.72	<1	2	<1	13	0.29
21-Jun	0.71	<1	<2	<1	13	0.50
25-Jun	0.65	<1	2	<1	13	0.26
03-Jul	0.70	<1	<2	<1	15	0.22
12-Jul	0.68	<1	<2	<1	14	0.37
16-Jul	0.63	<1	<2	<1	13	0.34
23-Jul	0.63	<1	<2	<1	15	0.27
30-Jul	0.72	<1	<2	<1	15	0.53
02-Aug	0.65	<1	4	<1	15	0.24
07-Aug	0.72	<1	<2	<1	14	0.44
16-Aug	0.74	<1	<2	<1	16	0.27
20-Aug	0.58	<1	<2	<1	14	0.33
23-Aug	0.73	<1	<2	<1	16	0.36
30-Aug	0.71	<1	<2	<1	16	0.30
31-Aug	0.80	<1	<2	<1	16	0.33
06-Sep	0.99	<1	2	<1	15	0.35
10-Sep	0.84	<1	<2	<1	15	0.30
14-Sep	0.73	<1	2	<1	16	0.24
17-Sep	0.68	<1	<2	<1	16	0.24
20-Sep	0.64	<1	<2	<1	15	0.33
24-Sep	0.53	<1	<2	<1	14	0.33
27-Sep	0.57	<1	<2	<1	15	0.34
03-Oct	0.38	<1	2	<1	14	0.25
09-Oct	0.73	<1	<2	<1	14	0.25
11-Oct	0.64	<1	<2	<1	14	0.57
15-Oct	0.67	<1	4	<1	12	0.42
22-Oct	0.62	<1	<2	<1	12	0.30
29-Oct	0.66	<1	<2	<1	13	0.27
31-Oct	0.39	<1	<2	<1	13	0.26
05-Nov	0.52	<1	<2	<1	11	0.53
14-Nov-18	0.59	<1	<2	<1	10	0.75
16-Nov-18	0.5	<1	<2	<1	12	0.61
19-Nov-18	0.57	<1	<2	<1	9	0.59
26-Nov	0.63	<1	10	<1	9	0.58
03-Dec	0.36	<1	2	<1	10	0.51
10-Dec	0.31	<1	<2	<1	8	0.48

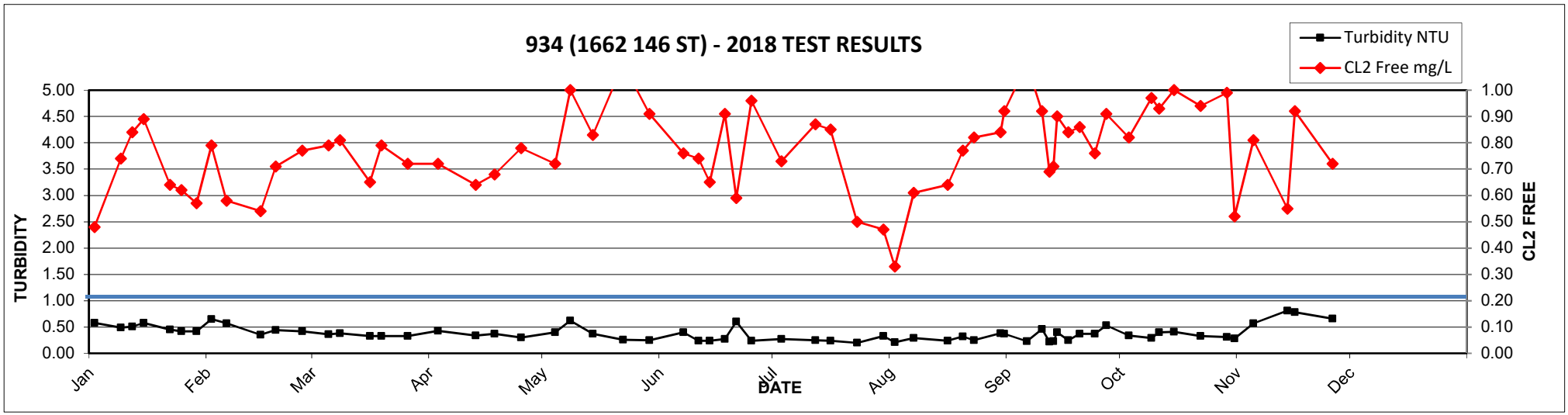

933 (1547 133B ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


933 (1547 133B ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 934 (1662 146 ST)

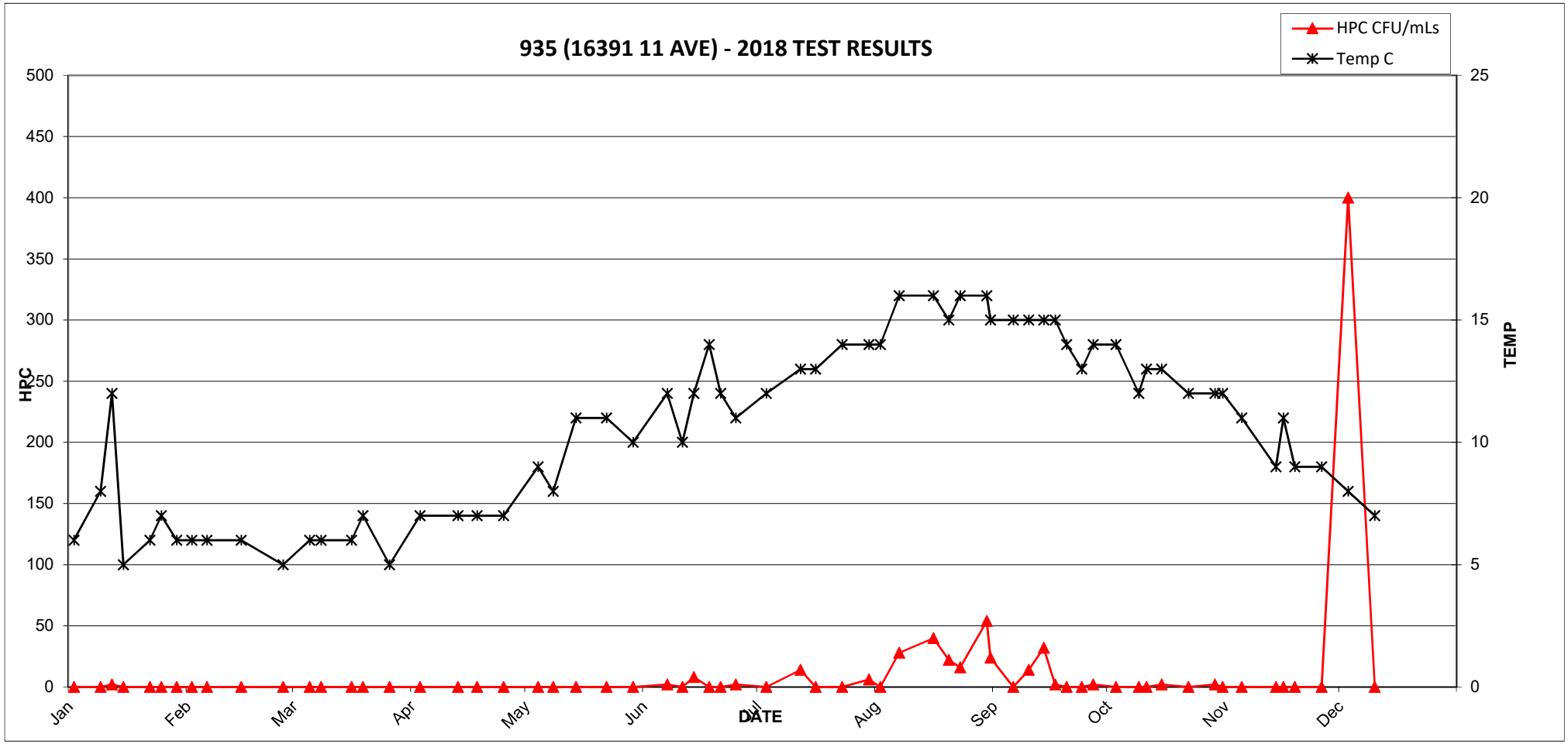
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.48	<1	<2	<1	4	0.58
09-Jan	0.74	<1	<2	<1	7	0.49
12-Jan	0.84	<1	<2	<1	10	0.51
15-Jan	0.89	<1	<2	<1	5	0.58
22-Jan	0.64	<1	<2	<1	6	0.45
25-Jan	0.62	<1	<2	<1	6	0.42
29-Jan	0.57	<1	<2	<1	6	0.42
02-Feb	0.79	<1	<2	<1	6	0.65
06-Feb	0.58	<1	2	<1	6	0.57
15-Feb	0.54	<1	<2	<1	6	0.35
19-Feb	0.71	<1	<2	<1	5	0.44
26-Feb	0.77	<1	<2	<1	5	0.42
05-Mar	0.79	<1	<2	<1	6	0.36
08-Mar	0.81	<1	<2	<1	6	0.38
16-Mar	0.65	<1	<2	<1	6	0.33
19-Mar	0.79	<1	<2	<1	6	0.33
26-Mar	0.72	<1	<2	<1	7	0.33
03-Apr	0.72	<1	<2	<1	6	0.43
13-Apr	0.64	<1	<2	<1	7	0.34
18-Apr	0.68	<1	<2	<1	7	0.37
25-Apr	0.78	<1	<2	<1	8	0.30
04-May	0.72	<1	<2	<1	9	0.40
08-May	1.00	<1	2	<1	8	0.62
14-May	0.83	<1	2	<1	10	0.37
22-May	1.10	<1	32	<1	10	0.26
29-May	0.91	<1	68	<1	11	0.25
07-Jun	0.76	<1	42	<1	12	0.40
11-Jun	0.74	<1	46	<1	13	0.24
14-Jun	0.65	<1	50	<1	12	0.24
18-Jun	0.91	<1	34	<1	12	0.27
21-Jun	0.59	<1	16	<1	14	0.60
25-Jun	0.96	<1	18	<1	10	0.24
03-Jul	0.73	<1	22	<1	12	0.27
12-Jul	0.87	<1	18	<1	13	0.25
16-Jul	0.85	<1	30	<1	13	0.24
23-Jul	0.50	<1	24	<1	14	0.20
30-Jul	0.47	<1	LA	<1	13	0.33
02-Aug	0.33	<1	32	<1	16	0.21
07-Aug	0.61	<1	32	<1	15	0.29
16-Aug	0.64	<1	38	<1	15	0.24
20-Aug	0.77	<1	32	<1	15	0.32
23-Aug	0.82	<1	18	<1	15	0.25
30-Aug	0.84	<1	50	<1	16	0.38
31-Aug	0.92	<1	20	<1	15	0.37
06-Sep	1.10	<1	32	<1	15	0.23
10-Sep	0.92	<1	24	1	15	0.46
12-Sep	0.69	<1	<2	<1	16	0.22
13-Sep	0.71	<1	<2	<1	16	0.23
14-Sep	0.90	<1	10	<1	15	0.40
17-Sep	0.84	<1	10	<1	15	0.25
20-Sep	0.86	<1	14	<1	14	0.37
24-Sep	0.76	<1	12	<1	14	0.37
27-Sep	0.91	<1	10	<1	14	0.53
03-Oct	0.82	<1	22	<1	13	0.34
09-Oct	0.97	<1	8	<1	14	0.29
11-Oct	0.93	<1	14	<1	13	0.40
15-Oct	1.00	<1	12	<1	13	0.41
22-Oct	0.94	<1	10	<1	12	0.33
29-Oct	0.99	<1	18	<1	12	0.31
31-Oct	0.52	<1	30	<1	12	0.28
05-Nov	0.81	<1	8	<1	10	0.57
14-Nov-18	0.55	<1	2	<1	9	0.81
16-Nov-18	0.92	<1	12	<1	11	0.78
26-Nov	0.72	<1	<2	<1	9	0.66

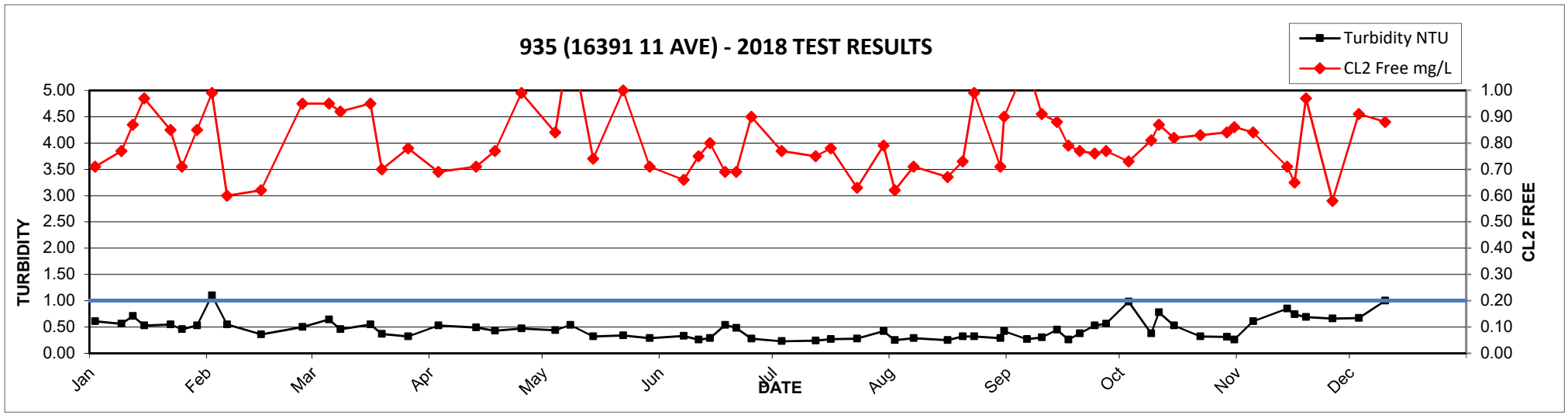

934 (1662 146 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


934 (1662 146 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 935 (16391 11 AVE)

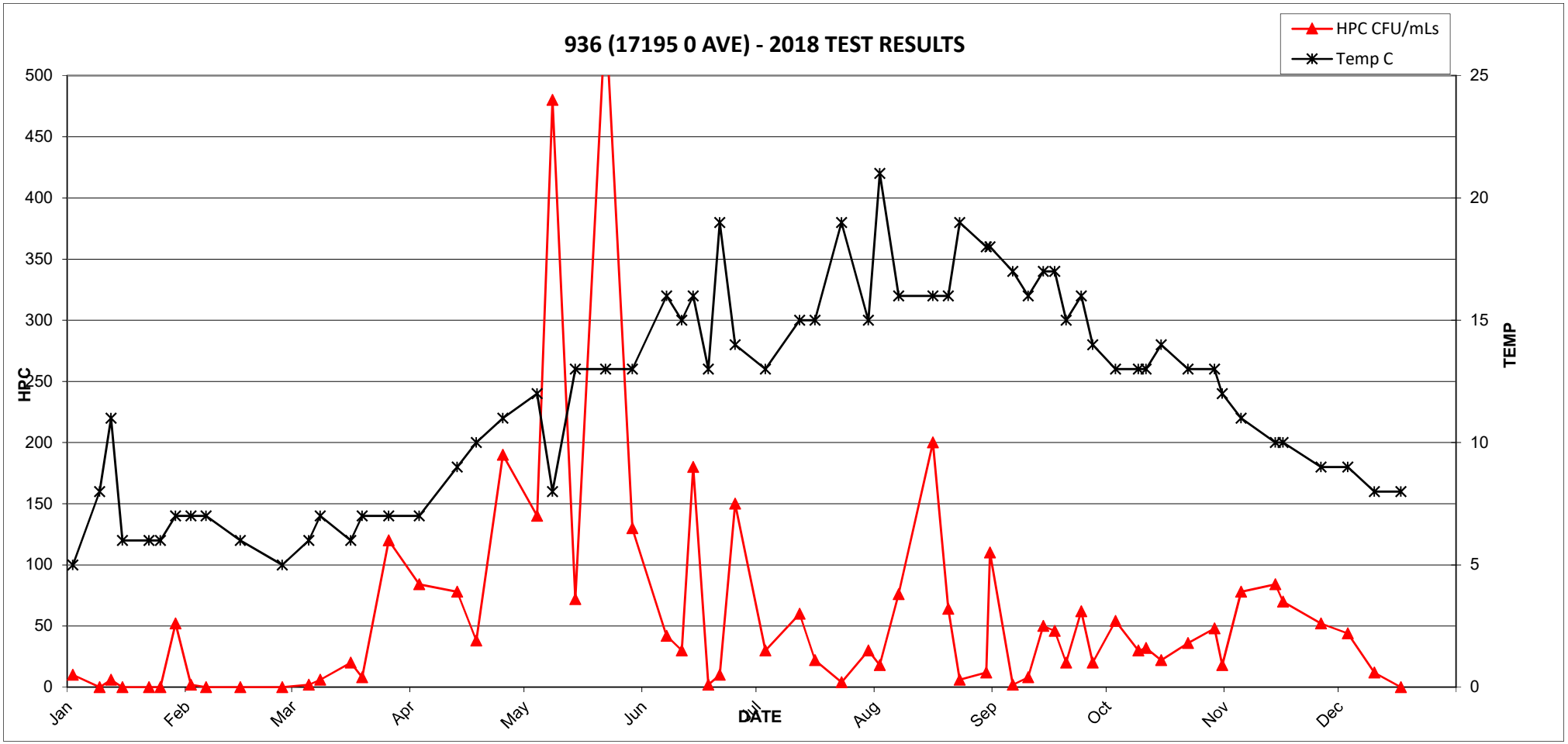
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.71	<1	<2	<1	6	0.61
09-Jan	0.77	<1	<2	<1	8	0.56
12-Jan	0.87	<1	2	<1	12	0.71
15-Jan	0.97	<1	<2	<1	5	0.53
22-Jan	0.85	<1	<2	<1	6	0.55
25-Jan	0.71	<1	<2	<1	7	0.46
29-Jan	0.85	<1	<2	<1	6	0.53
02-Feb	0.99	<1	<2	<1	6	1.10
06-Feb	0.60	<1	<2	<1	6	0.55
15-Feb	0.62	<1	<2	<1	6	0.36
26-Feb	0.95	<1	<2	<1	5	0.50
05-Mar	0.95	<1	<2	<1	6	0.64
08-Mar	0.92	<1	<2	<1	6	0.46
16-Mar	0.95	<1	<2	<1	6	0.55
19-Mar	0.70	<1	<2	<1	7	0.37
26-Mar	0.78	<1	<2	<1	5	0.32
03-Apr	0.69	<1	<2	<1	7	0.53
13-Apr	0.71	<1	<2	<1	7	0.49
18-Apr	0.77	<1	<2	<1	7	0.43
25-Apr	0.99	<1	<2	<1	7	0.47
04-May	0.84	<1	<2	<1	9	0.44
08-May	1.20	<1	<2	<1	8	0.54
14-May	0.74	<1	<2	<1	11	0.32
22-May	1.00	<1	<2	<1	11	0.34
29-May	0.71	<1	<2	<1	10	0.29
07-Jun	0.66	<1	2	<1	12	0.33
11-Jun	0.75	<1	<2	<1	10	0.26
14-Jun	0.80	<1	8	<1	12	0.29
18-Jun	0.69	<1	<2	<1	14	0.54
21-Jun	0.69	<1	<2	<1	12	0.48
25-Jun	0.90	<1	2	<1	11	0.28
03-Jul	0.77	<1	<2	<1	12	0.23
12-Jul	0.75	<1	14	<1	13	0.24
16-Jul	0.78	<1	<2	<1	13	0.27
23-Jul	0.63	<1	<2	<1	14	0.28
30-Jul	0.79	<1	6	<1	14	0.42
02-Aug	0.62	<1	<2	<1	14	0.25
07-Aug	0.71	<1	28	<1	16	0.29
16-Aug	0.67	<1	40	<1	16	0.25
20-Aug	0.73	<1	22	<1	15	0.32
23-Aug	0.99	<1	16	<1	16	0.32
30-Aug	0.71	<1	54	<1	16	0.29
31-Aug	0.90	<1	24	<1	15	0.42
06-Sep	1.10	<1	<2	<1	15	0.27
10-Sep	0.91	<1	14	<1	15	0.30
14-Sep	0.88	<1	32	<1	15	0.45
17-Sep	0.79	<1	2	<1	15	0.26
20-Sep	0.77	<1	<2	<1	14	0.38
24-Sep	0.76	<1	<2	<1	13	0.53
27-Sep	0.77	<1	2	<1	14	0.56
03-Oct	0.73	<1	<2	<1	14	0.98
09-Oct	0.81	<1	<2	<1	12	0.38
11-Oct	0.87	<1	<2	<1	13	0.78
15-Oct	0.82	<1	2	<1	13	0.53
22-Oct	0.83	<1	<2	<1	12	0.32
29-Oct	0.84	<1	2	<1	12	0.31
31-Oct	0.86	<1	<2	<1	12	0.26
05-Nov	0.84	<1	<2	<1	11	0.61
14-Nov-18	0.71	<1	<2	<1	9	0.85
16-Nov-18	0.65	<1	<2	<1	11	0.74
19-Nov-18	0.97	<1	<2	<1	9	0.69
26-Nov	0.58	<1	<2	<1	9	0.66
03-Dec	0.91	<1	400	<1	8	0.67
10-Dec	0.88	<1	<2	<1	7	1.00

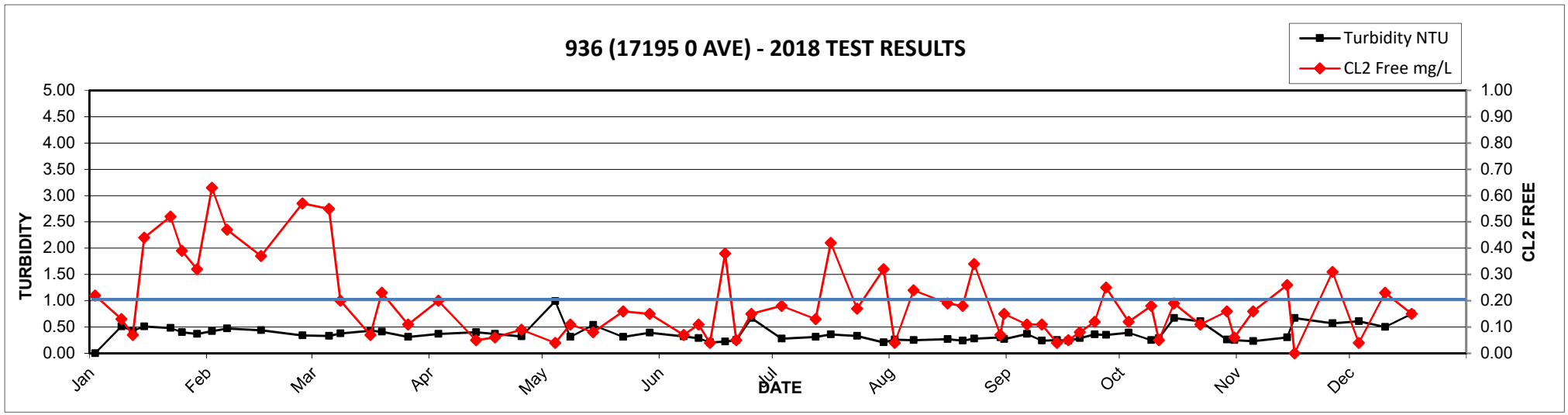

935 (16391 11 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


935 (16391 11 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 936 (17195 0 AVE)

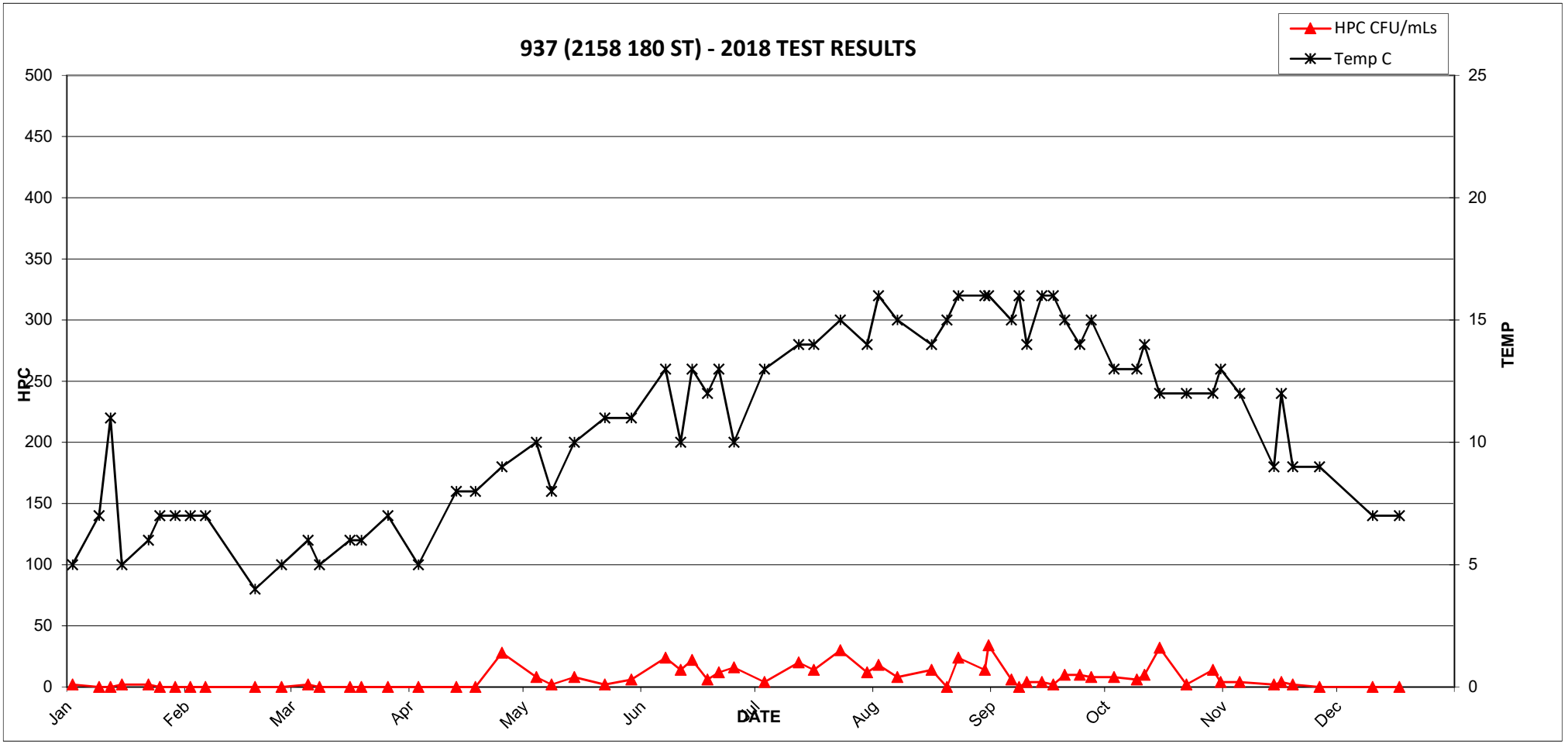
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.22	<1	10	<1	5	0.51
09-Jan	0.13	<1	<2	<1	8	0.43
12-Jan	0.07	<1	6	<1	11	0.51
15-Jan	0.44	<1	<2	<1	6	0.48
22-Jan	0.52	<1	<2	<1	6	0.40
25-Jan	0.39	<1	<2	<1	6	0.37
29-Jan	0.32	<1	52	<1	7	0.42
02-Feb	0.63	<1	2	<1	7	0.47
06-Feb	0.47	<1	<2	<1	7	0.44
15-Feb	0.37	<1	<2	<1	6	0.34
26-Feb	0.57	<1	<2	<1	5	0.33
05-Mar	0.55	<1	2	<1	6	0.38
08-Mar	0.20	<1	6	<1	7	0.43
16-Mar	0.07	<1	20	<1	6	0.41
19-Mar	0.23	<1	8	<1	7	0.31
26-Mar	0.11	<1	120	<1	7	0.37
03-Apr	0.20	<1	84	<1	7	0.40
13-Apr	0.05	<1	78	<1	9	0.37
18-Apr	0.06	<1	38	<1	10	0.32
25-Apr	0.09	<1	190	<1	11	0.99
04-May	0.04	<1	140	<1	12	0.31
08-May	0.11	<1	480	<1	8	0.54
14-May	0.08	<1	72	<1	13	0.31
22-May	0.16	<1	550	<1	13	0.39
29-May	0.15	<1	130	<1	13	0.32
07-Jun	0.07	<1	42	<1	16	0.29
11-Jun	0.11	<1	30	<1	15	0.21
14-Jun	0.04	<1	180	<1	16	0.22
18-Jun	0.38	<1	2	<1	13	0.25
21-Jun	0.05	<1	10	<1	19	0.67
25-Jun	0.15	<1	150	<1	14	0.28
03-Jul	0.18	<1	30	<1	13	0.31
12-Jul	0.13	<1	60	<1	15	0.36
16-Jul	0.42	<1	22	<1	15	0.33
23-Jul	0.17	<1	4	<1	19	0.21
30-Jul	0.32	<1	30	<1	15	0.26
02-Aug	0.04	<1	18	<1	21	0.25
07-Aug	0.24	<1	76	<1	16	0.27
16-Aug	0.19	<1	200	<1	16	0.24
20-Aug	0.18	<1	64	<1	16	0.28
23-Aug	0.34	<1	6	<1	19	0.30
30-Aug	0.07	<1	12	<1	18	0.27
31-Aug	0.15	<1	110	<1	18	0.37
06-Sep	0.11	<1	2	<1	17	0.24
10-Sep	0.11	<1	8	<1	16	0.25
14-Sep	0.04	<1	50	<1	17	0.24
17-Sep	0.05	<1	46	<1	17	0.29
20-Sep	0.08	<1	20	<1	15	0.36
24-Sep	0.12	<1	62	<1	16	0.35
27-Sep	0.25	<1	20	<1	14	0.39
03-Oct	0.12	<1	54	<1	13	0.25
09-Oct	0.18	<1	30	<1	13	0.29
11-Oct	0.05	<1	32	<1	13	0.67
15-Oct	0.19	<1	22	<1	14	0.61
22-Oct	0.11	<1	36	<1	13	0.26
29-Oct	0.16	<1	48	<1	13	0.25

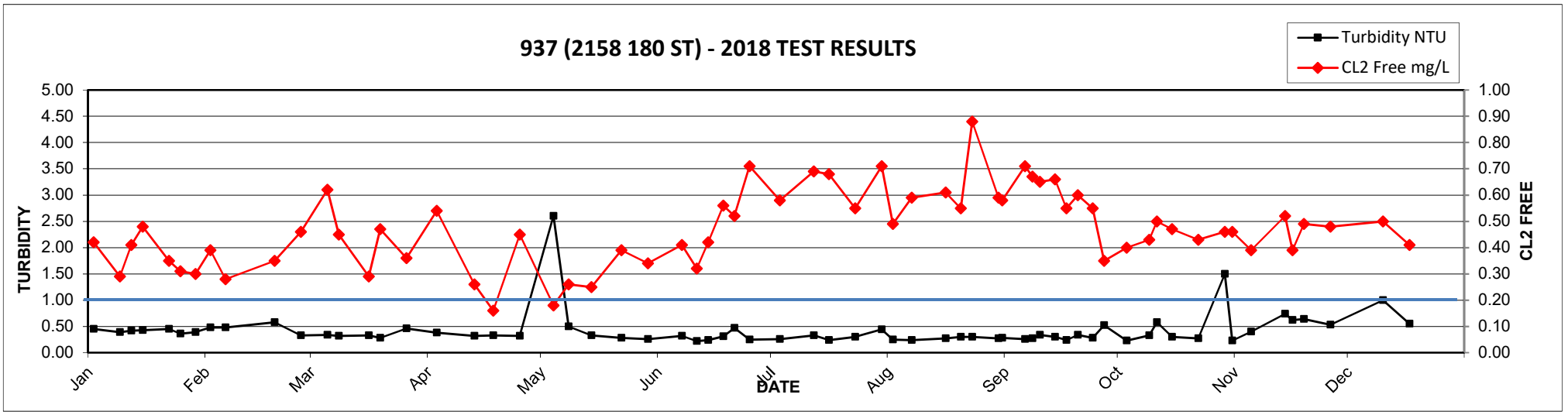

936 (17195 0 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


936 (17195 0 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 937 (2158 180 ST)

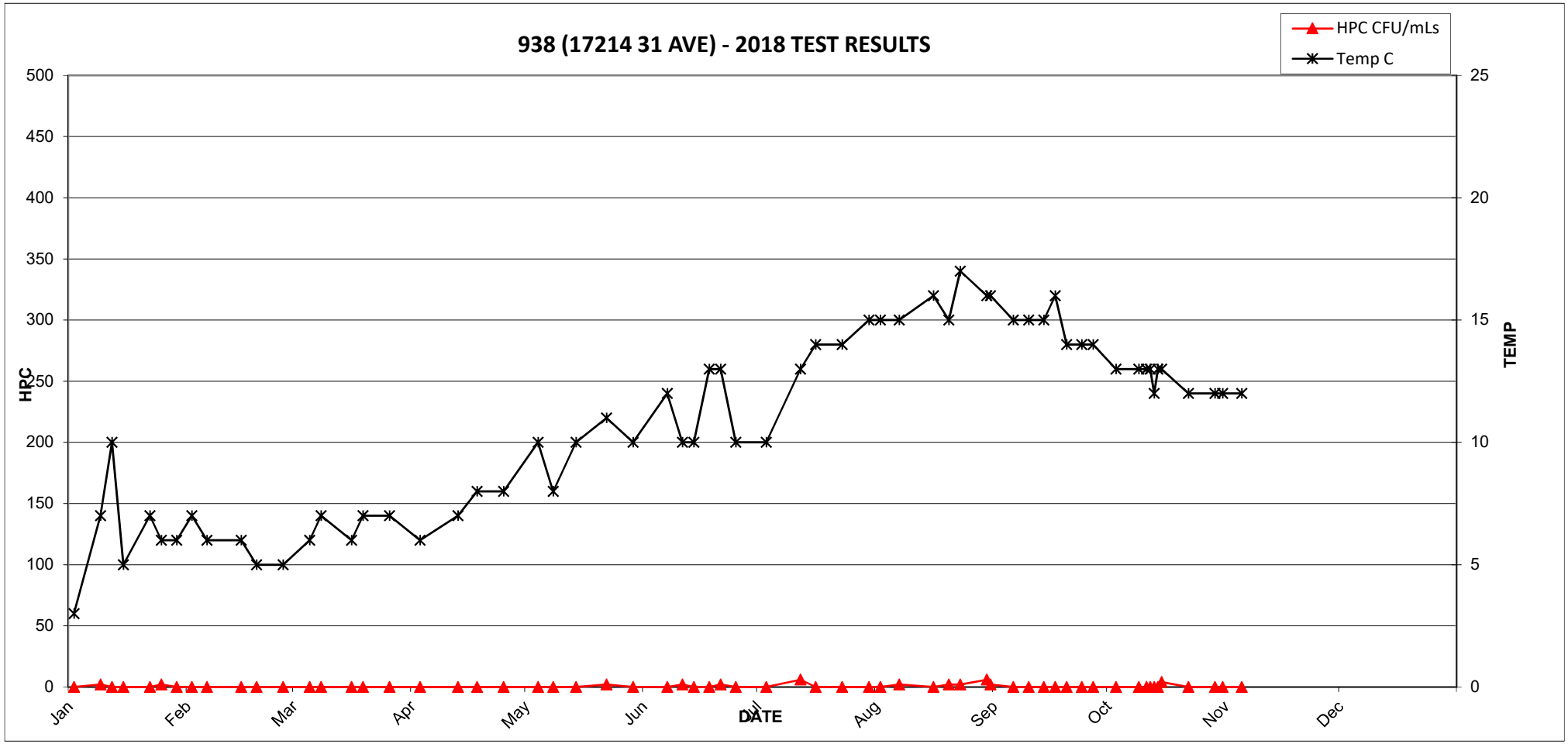
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.42	<1	2	<1	5	0.45
09-Jan	0.29	<1	<2	<1	7	0.39
12-Jan	0.41	<1	<2	<1	11	0.42
15-Jan	0.48	<1	2	<1	5	0.43
22-Jan	0.35	<1	2	<1	6	0.45
25-Jan	0.31	<1	<2	<1	7	0.36
29-Jan	0.30	<1	<2	<1	7	0.39
02-Feb	0.39	<1	<2	<1	7	0.48
06-Feb	0.28	<1	<2	<1	7	0.48
19-Feb	0.35	<1	<2	<1	4	0.58
26-Feb	0.46	<1	<2	<1	5	0.33
05-Mar	0.62	<1	2	<1	6	0.34
08-Mar	0.45	<1	<2	<1	5	0.32
16-Mar	0.29	<1	<2	<1	6	0.33
19-Mar	0.47	<1	<2	<1	6	0.28
26-Mar	0.36	<1	<2	<1	7	0.46
03-Apr	0.54	<1	<2	<1	5	0.38
13-Apr	0.26	<1	<2	<1	8	0.32
18-Apr	0.16	<1	<2	<1	8	0.33
25-Apr	0.45	<1	28	<1	9	0.32
04-May	0.18	<1	8	<1	10	2.60
08-May	0.26	<1	2	<1	8	0.50
14-May	0.25	<1	8	<1	10	0.33
22-May	0.39	<1	2	<1	11	0.28
29-May	0.34	<1	6	<1	11	0.26
07-Jun	0.41	<1	24	<1	13	0.32
11-Jun	0.32	<1	14	<1	10	0.22
14-Jun	0.42	<1	22	<1	13	0.24
18-Jun	0.56	<1	6	<1	12	0.31
21-Jun	0.52	<1	12	<1	13	0.47
25-Jun	0.71	<1	16	<1	10	0.25
03-Jul	0.58	<1	4	<1	13	0.26
12-Jul	0.69	<1	20	<1	14	0.33
16-Jul	0.68	<1	14	<1	14	0.24
23-Jul	0.55	<1	30	<1	15	0.30
30-Jul	0.71	<1	12	<1	14	0.44
02-Aug	0.49	<1	18	<1	16	0.25
07-Aug	0.59	<1	8	<1	15	0.24
16-Aug	0.61	<1	14	<1	14	0.27
20-Aug	0.55	<1	<2	<1	15	0.30
23-Aug	0.88	<1	24	<1	16	0.30
30-Aug	0.59	<1	14	<1	16	0.27
31-Aug	0.58	<1	34	<1	16	0.28
06-Sep	0.71	<1	6	<1	15	0.26
08-Sep	0.67	<1	<2	<1	16	0.27
10-Sep	0.65	<1	4	<1	14	0.34
14-Sep	0.66	<1	4	<1	16	0.30
17-Sep	0.55	<1	2	<1	16	0.24
20-Sep	0.60	<1	10	<1	15	0.34
24-Sep	0.55	<1	10	<1	14	0.28
27-Sep	0.35	<1	8	<1	15	0.52
03-Oct	0.40	<1	8	<1	13	0.23
09-Oct	0.43	<1	6	<1	13	0.33
11-Oct	0.50	<1	10	<1	14	0.58
15-Oct	0.47	<1	32	<1	12	0.30
22-Oct	0.43	<1	2	<1	12	0.27
29-Oct	0.46	<1	14	<1	12	1.50
31-Oct	0.46	<1	4	<1	13	0.23
05-Nov	0.39	<1	4	<1	12	0.40
14-Nov-18	0.52	<1	2	<1	9	0.74
16-Nov-18	0.39	<1	4	<1	12	0.62
19-Nov-18	0.49	<1	2	<1	9	0.64
26-Nov	0.48	<1	<2	<1	9	0.53
10-Dec	0.50	<1	<2	<1	7	1.00

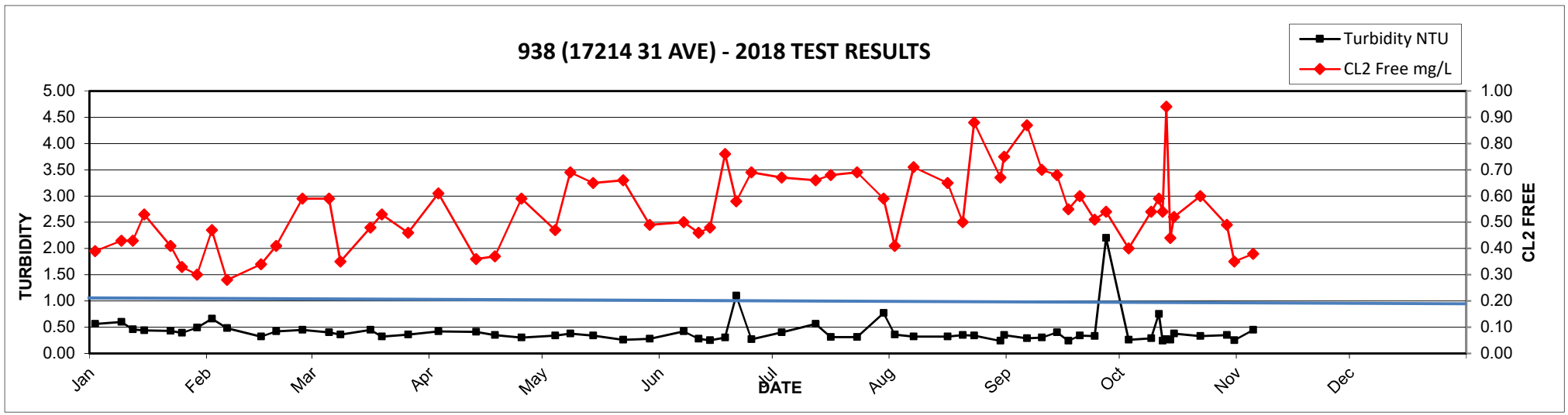

937 (2158 180 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


937 (2158 180 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 938 (17214 31 AVE)

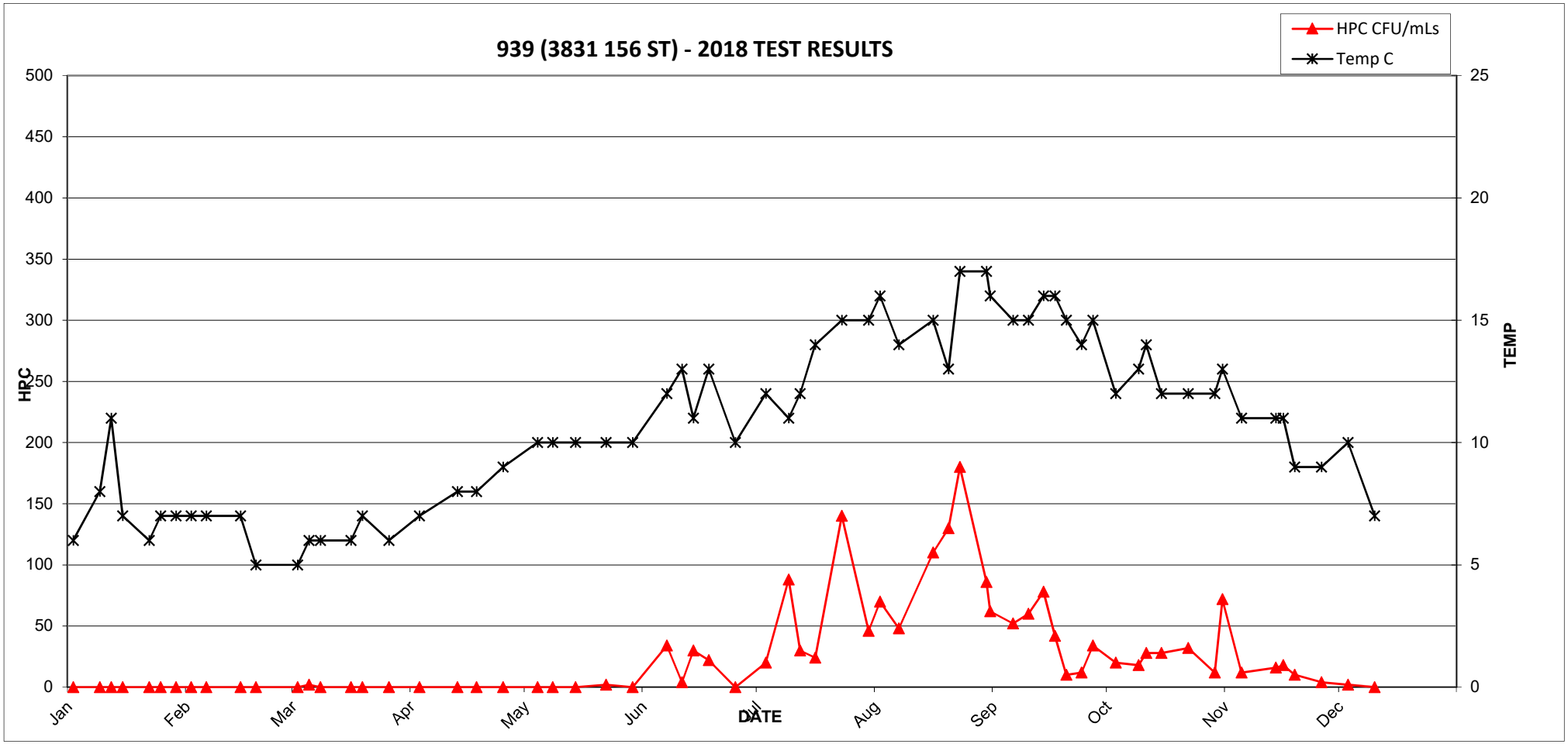
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.39	<1	<2	<1	3	0.56
09-Jan	0.43	<1	2	<1	7	0.60
12-Jan	0.43	<1	<2	<1	10	0.46
15-Jan	0.53	<1	<2	<1	5	0.44
22-Jan	0.41	<1	<2	<1	7	0.43
25-Jan	0.33	<1	2	<1	6	0.39
29-Jan	0.30	<1	<2	<1	6	0.49
02-Feb	0.47	<1	<2	<1	7	0.66
06-Feb	0.28	<1	<2	<1	6	0.48
15-Feb	0.34	<1	<2	<1	6	0.32
19-Feb	0.41	<1	<2	<1	5	0.42
26-Feb	0.59	<1	<2	<1	5	0.45
05-Mar	0.59	<1	<2	<1	6	0.40
08-Mar	0.35	<1	<2	<1	7	0.36
16-Mar	0.48	<1	<2	<1	6	0.45
19-Mar	0.53	<1	<2	<1	7	0.32
26-Mar	0.46	<1	<2	<1	7	0.36
03-Apr	0.61	<1	<2	<1	6	0.42
13-Apr	0.36	<1	<2	<1	7	0.41
18-Apr	0.37	<1	<2	<1	8	0.35
25-Apr	0.59	<1	<2	<1	8	0.30
04-May	0.47	<1	<2	<1	10	0.34
08-May	0.69	<1	<2	<1	8	0.38
14-May	0.65	<1	<2	<1	10	0.34
22-May	0.66	<1	2	<1	11	0.26
29-May	0.49	<1	<2	<1	10	0.28
07-Jun	0.50	<1	<2	<1	12	0.42
11-Jun	0.46	<1	2	<1	10	0.28
14-Jun	0.48	<1	<2	<1	10	0.25
18-Jun	0.76	<1	<2	<1	13	0.30
21-Jun	0.58	<1	2	<1	13	1.10
25-Jun	0.69	<1	<2	<1	10	0.27
03-Jul	0.67	<1	<2	<1	10	0.40
12-Jul	0.66	<1	6	<1	13	0.56
16-Jul	0.68	<1	<2	<1	14	0.31
23-Jul	0.69	<1	<2	<1	14	0.31
30-Jul	0.59	<1	<2	<1	15	0.77
02-Aug	0.41	<1	<2	<1	15	0.36
07-Aug	0.71	<1	2	<1	15	0.32
16-Aug	0.65	<1	<2	<1	16	0.32
20-Aug	0.50	<1	2	<1	15	0.35
23-Aug	0.88	<1	2	<1	17	0.34
30-Aug	0.67	<1	6	<1	16	0.24
31-Aug	0.75	<1	2	<1	16	0.35
06-Sep	0.87	<1	<2	<1	15	0.29
10-Sep	0.70	<1	<2	<1	15	0.30
14-Sep	0.68	<1	<2	<1	15	0.40
17-Sep	0.55	<1	<2	<1	16	0.24
20-Sep	0.60	<1	<2	<1	14	0.34
24-Sep	0.51	<1	<2	<1	14	0.33
27-Sep	0.54	<1	<2	<1	14	2.20
03-Oct	0.40	<1	<2	<1	13	0.26
09-Oct	0.54	<1	<2	<1	13	0.29
11-Oct	0.59	<1	<2	1	13	0.75
12-Oct	0.54	<1	<2	<1	13	0.24
13-Oct	0.94	<1	<2	<1	12	0.27
14-Oct	0.44	<1	<2	<1	13	0.26
15-Oct	0.52	<1	4	<1	13	0.38
22-Oct	0.60	<1	<2	<1	12	0.33
29-Oct	0.49	<1	<2	<1	12	0.35

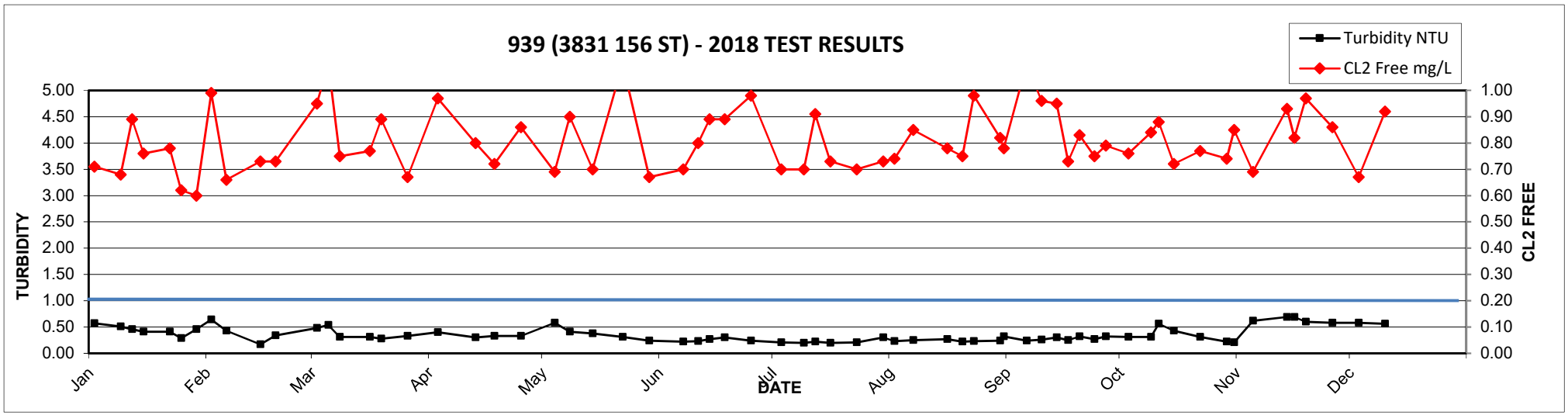

938 (17214 31 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
0
50
100
150
200
250
300
350
400
450
500
0
5
10
15
20
25
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


938 (17214 31 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0.70
0.80
0.90
1.00
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 939 (3831 156 ST)

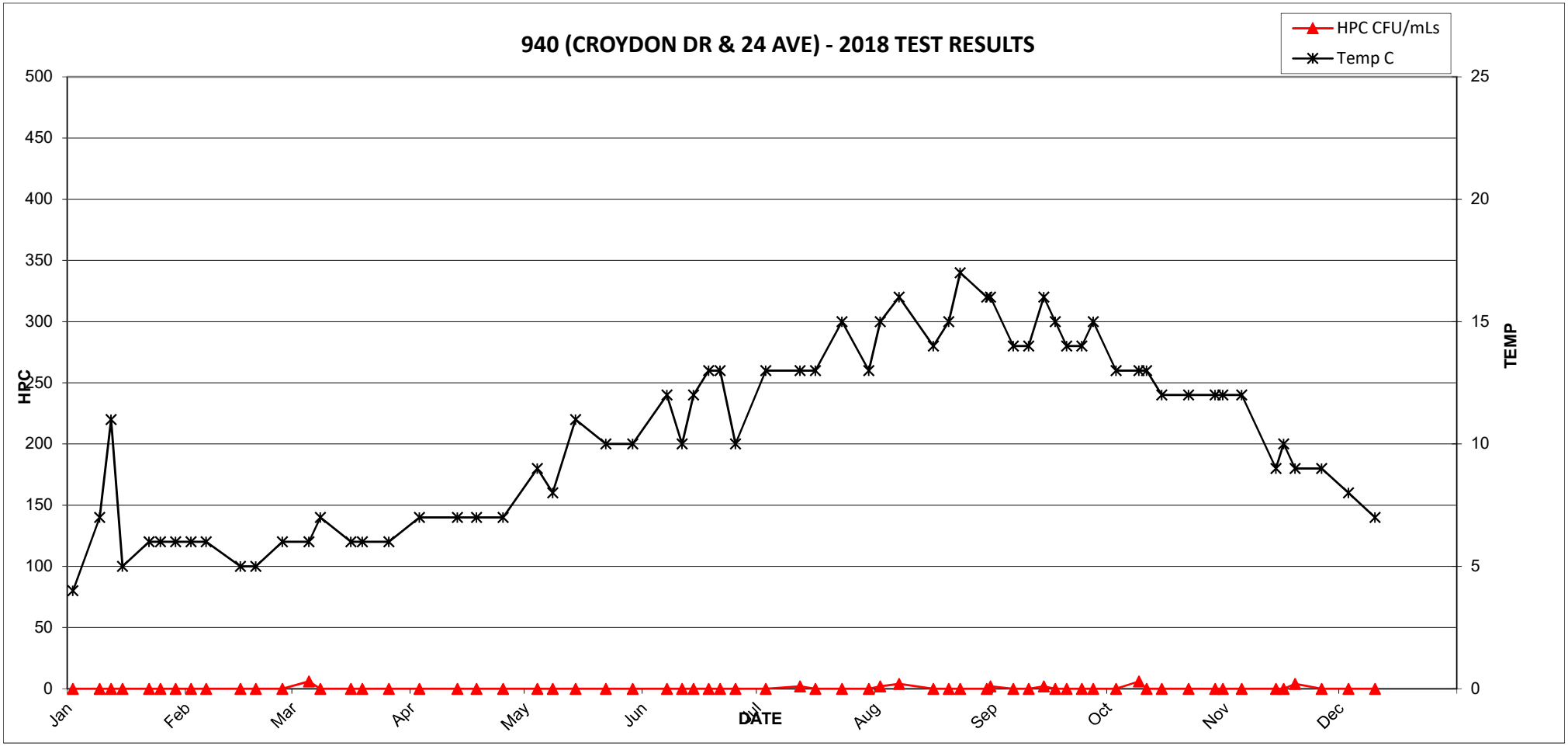
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.71	<1	<2	<1	6	0.57
09-Jan	0.68	<1	<2	<1	8	0.51
12-Jan	0.89	<1	<2	<1	11	0.46
15-Jan	0.76	<1	<2	<1	7	0.41
22-Jan	0.78	<1	<2	<1	6	0.41
25-Jan	0.62	<1	<2	<1	7	0.29
29-Jan	0.60	<1	<2	<1	7	0.46
02-Feb	0.99	<1	<2	<1	7	0.64
06-Feb	0.66	<1	<2	<1	7	0.43
15-Feb	0.73	<1	<2	<1	7	0.17
19-Feb	0.73	<1	<2	<1	5	0.34
02-Mar	0.95	<1	<2	<1	5	0.48
05-Mar	1.10	<1	2	<1	6	0.54
08-Mar	0.75	<1	<2	<1	6	0.31
16-Mar	0.77	<1	<2	<1	6	0.31
19-Mar	0.89	<1	<2	<1	7	0.28
26-Mar	0.67	<1	<2	<1	6	0.33
03-Apr	0.97	<1	<2	<1	7	0.40
13-Apr	0.80	<1	<2	<1	8	0.30
18-Apr	0.72	<1	<2	<1	8	0.33
25-Apr	0.86	<1	<2	<1	9	0.33
04-May	0.69	<1	<2	<1	10	0.58
08-May	0.90	<1	<2	<1	10	0.41
14-May	0.70	<1	<2	<1	10	0.38
22-May	1.10	<1	2	<1	10	0.31
29-May	0.67	<1	<2	<1	10	0.24
07-Jun	0.70	<1	34	<1	12	0.22
11-Jun	0.80	<1	4	<1	13	0.23
14-Jun	0.89	<1	30	<1	11	0.27
18-Jun	0.89	<1	22	<1	13	0.30
25-Jun	0.98	<1	<2	<1	10	0.24
03-Jul	0.70	<1	20	<1	12	0.21
09-Jul	0.70	<1	88	<1	11	0.20
12-Jul	0.91	<1	30	<1	12	0.22
16-Jul	0.73	<1	24	<1	14	0.20
23-Jul	0.70	<1	140	<1	15	0.21
30-Jul	0.73	<1	46	<1	15	0.30
02-Aug	0.74	<1	70	<1	16	0.23
07-Aug	0.85	<1	48	<1	14	0.25
16-Aug	0.78	<1	110	<1	15	0.27
20-Aug	0.75	<1	130	<1	13	0.22
23-Aug	0.98	<1	180	<1	17	0.23
30-Aug	0.82	<1	86	<1	17	0.24
31-Aug	0.78	<1	62	<1	16	0.32
06-Sep	1.10	<1	52	<1	15	0.24
10-Sep	0.96	<1	60	<1	15	0.26
14-Sep	0.95	<1	78	<1	16	0.30
17-Sep	0.73	<1	42	<1	16	0.25
20-Sep	0.83	<1	10	<1	15	0.32
24-Sep	0.75	<1	12	<1	14	0.27
27-Sep	0.79	<1	34	<1	15	0.32
03-Oct	0.76	<1	20	<1	12	0.31
09-Oct	0.84	<1	18	<1	13	0.31
11-Oct	0.88	<1	28	<1	14	0.56
15-Oct	0.72	<1	28	<1	12	0.43
22-Oct	0.77	<1	32	<1	12	0.31
29-Oct	0.74	<1	12	<1	12	0.22
31-Oct	0.85	<1	72	<1	13	0.21

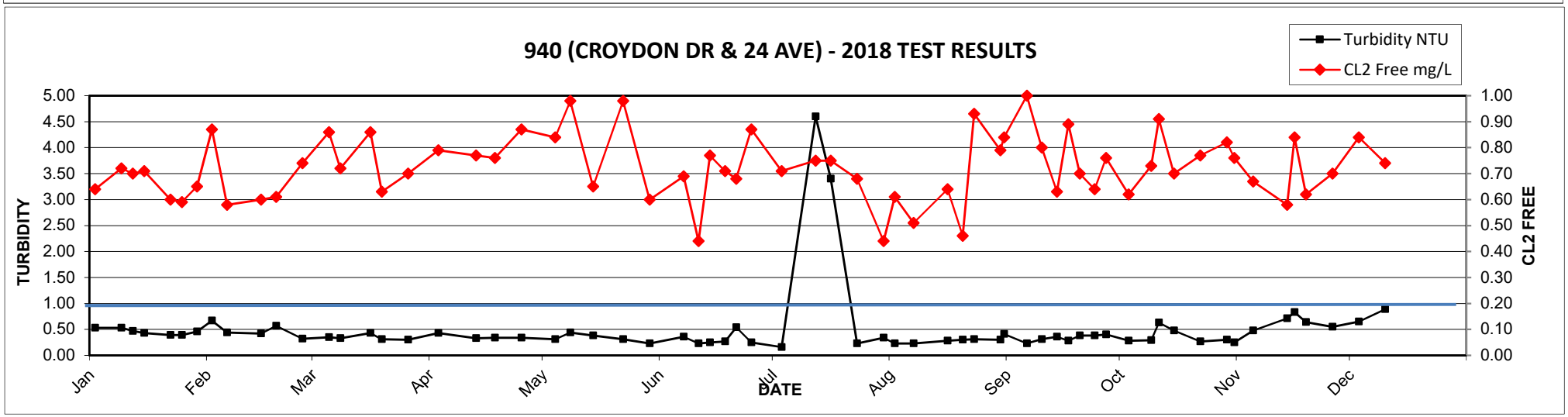

939 (3831 156 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


939 (3831 156 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 940 (CROYDON DR & 24 AVE)

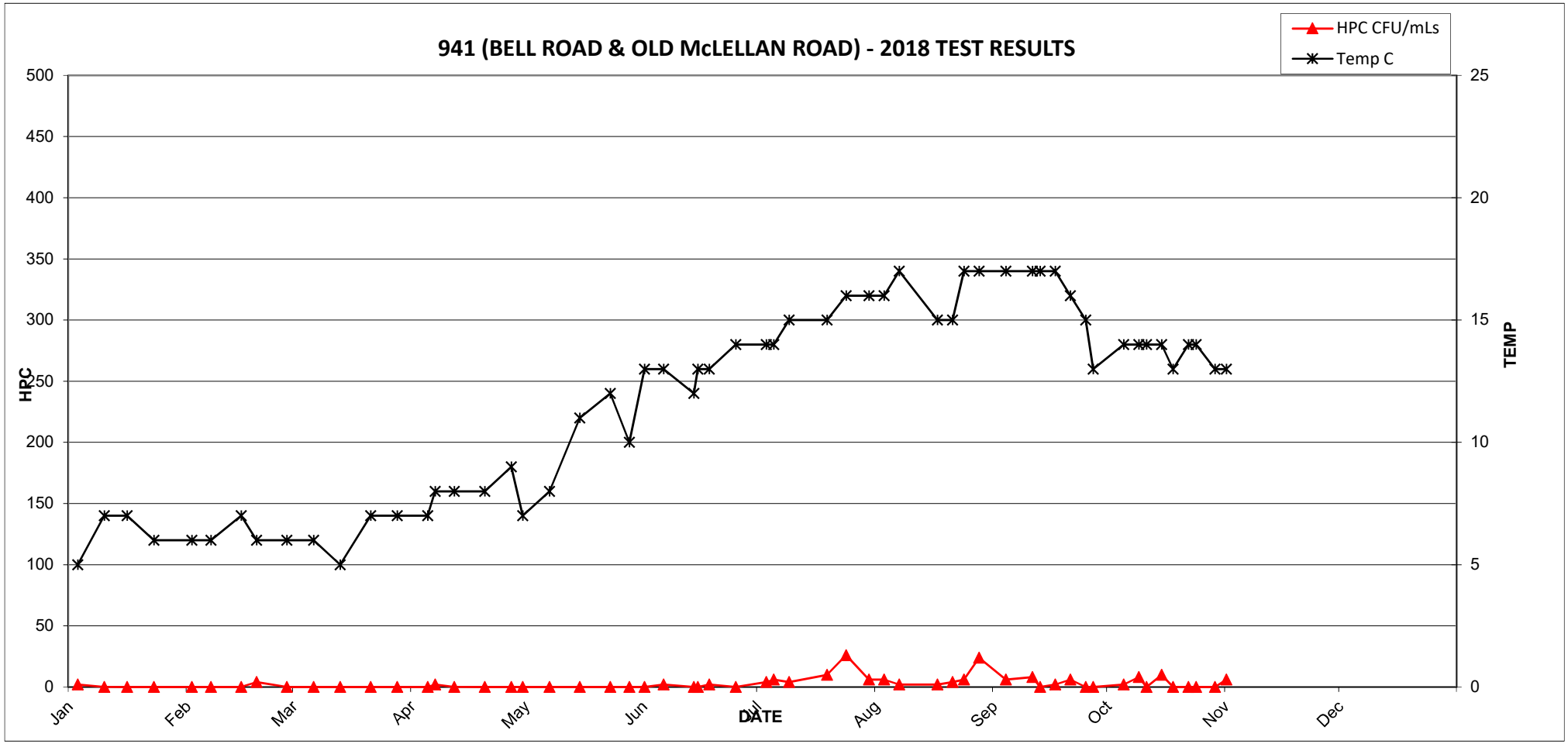
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.64	<1	<2	<1	4	0.53
09-Jan	0.72	<1	<2	<1	7	0.53
12-Jan	0.70	<1	<2	<1	11	0.47
15-Jan	0.71	<1	<2	<1	5	0.43
22-Jan	0.60	<1	<2	<1	6	0.39
25-Jan	0.59	<1	<2	<1	6	0.39
29-Jan	0.65	<1	<2	<1	6	0.46
02-Feb	0.87	<1	<2	<1	6	0.67
06-Feb	0.58	<1	<2	<1	6	0.44
15-Feb	0.60	<1	<2	<1	5	0.42
19-Feb	0.61	<1	<2	<1	5	0.57
26-Feb	0.74	<1	<2	<1	6	0.32
05-Mar	0.86	<1	6	<1	6	0.35
08-Mar	0.72	<1	<2	<1	7	0.33
16-Mar	0.86	<1	<2	<1	6	0.43
19-Mar	0.63	<1	<2	<1	6	0.31
26-Mar	0.70	<1	<2	<1	6	0.30
03-Apr	0.79	<1	<2	<1	7	0.43
13-Apr	0.77	<1	<2	<1	7	0.33
18-Apr	0.76	<1	<2	<1	7	0.34
25-Apr	0.87	<1	<2	<1	7	0.34
04-May	0.84	<1	<2	<1	9	0.31
08-May	0.98	<1	<2	<1	8	0.44
14-May	0.65	<1	<2	<1	11	0.38
22-May	0.98	<1	<2	<1	10	0.31
29-May	0.60	<1	<2	<1	10	0.23
07-Jun	0.69	<1	<2	<1	12	0.36
11-Jun	0.44	<1	<2	<1	10	0.23
14-Jun	0.77	<1	<2	<1	12	0.25
18-Jun	0.71	<1	<2	<1	13	0.27
21-Jun	0.68	<1	<2	<1	13	0.54
25-Jun	0.87	<1	<2	<1	10	0.25
03-Jul	0.71	<1	<2	<1	13	0.16
12-Jul	0.75	<1	2	<1	13	4.60
16-Jul	0.75	<1	<2	<1	13	3.40
23-Jul	0.68	<1	<2	<1	15	0.23
30-Jul	0.44	<1	<2	<1	13	0.34
02-Aug	0.61	<1	2	<1	15	0.23
07-Aug	0.51	<1	4	<1	16	0.23
16-Aug	0.64	<1	<2	<1	14	0.28
20-Aug	0.46	<1	<2	<1	15	0.30
23-Aug	0.93	<1	<2	<1	17	0.31
30-Aug	0.79	<1	<2	<1	16	0.30
31-Aug	0.84	<1	2	<1	16	0.41
06-Sep	1.00	<1	<2	<1	14	0.23
10-Sep	0.80	<1	<2	<1	14	0.31
14-Sep	0.63	<1	2	<1	16	0.36
17-Sep	0.89	<1	<2	<1	15	0.28
20-Sep	0.70	<1	<2	<1	14	0.38
24-Sep	0.64	<1	<2	<1	14	0.38
27-Sep	0.76	<1	<2	<1	15	0.40
03-Oct	0.62	<1	<2	<1	13	0.28
09-Oct	0.73	<1	6	<1	13	0.29
11-Oct	0.91	<1	<2	<1	13	0.63
15-Oct	0.70	<1	<2	<1	12	0.48
22-Oct	0.77	<1	<2	<1	12	0.27
29-Oct	0.82	<1	<2	<1	12	0.30
31-Oct	0.76	<1	<2	<1	12	0.25
05-Nov	0.67	<1	<2	<1	12	0.48
14-Nov-18	0.58	<1	<2	<1	9	0.71
16-Nov-18	0.84	<1	<2	<1	10	0.83
19-Nov-18	0.62	<1	4	<1	9	0.64
26-Nov	0.70	<1	<2	<1	9	0.55

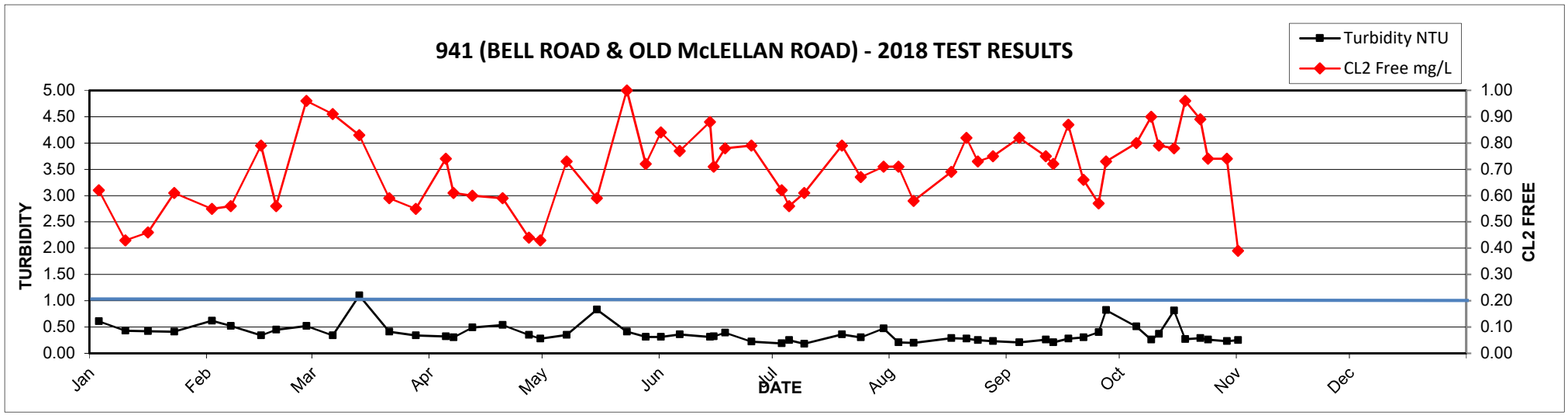

940 (CROYDON DR & 24 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


940 (CROYDON DR & 24 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 941 (BELL ROAD & OLD McLELLAN ROAD)

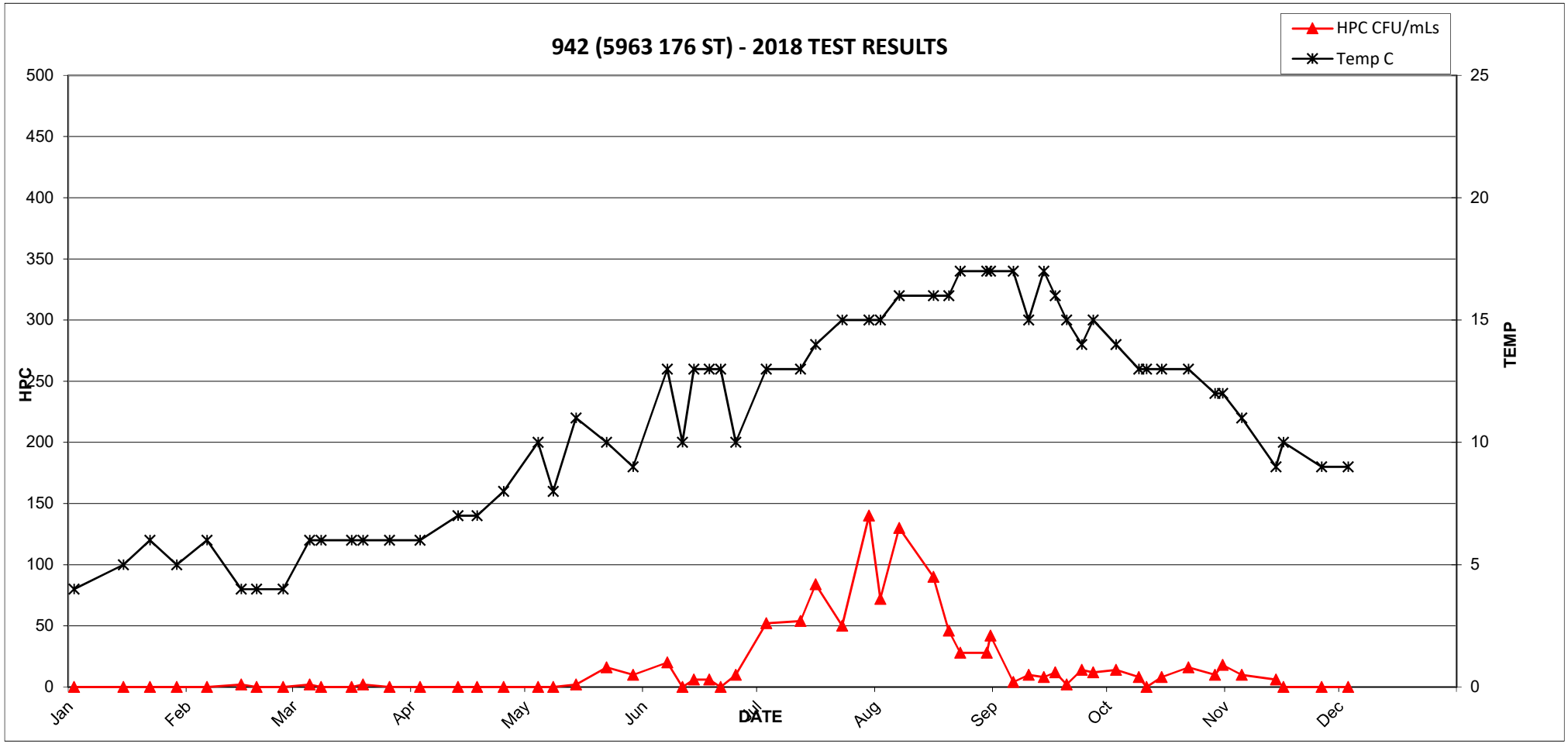
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.62	<1	2	<1	5	0.61
10-Jan	0.43	<1	<2	<1	7	0.43
16-Jan	0.46	<1	<2	<1	7	0.42
23-Jan	0.61	<1	<2	<1	6	0.41
02-Feb	0.55	<1	<2	<1	6	0.62
07-Feb	0.56	<1	<2	<1	6	0.52
15-Feb	0.79	<1	<2	<1	7	0.34
19-Feb	0.56	<1	4	<1	6	0.45
27-Feb	0.96	<1	<2	<1	6	0.52
06-Mar	0.91	<1	<2	<1	6	0.34
13-Mar	0.83	<1	<2	<1	5	1.10
21-Mar	0.59	<1	<2	<1	7	0.41
28-Mar	0.55	<1	<2	<1	7	0.34
05-Apr	0.74	<1	<2	<1	7	0.32
07-Apr	0.61	<1	2	<1	8	0.30
12-Apr	0.60	<1	<2	<1	8	0.49
20-Apr	0.59	<1	<2	<1	8	0.54
27-Apr	0.44	<1	<2	<1	9	0.35
30-Apr	0.43	<1	<2	<1	7	0.28
07-May	0.73	<1	<2	<1	8	0.35
15-May	0.59	<1	<2	<1	11	0.83
23-May	1.00	<1	<2	<1	12	0.41
28-May	0.72	<1	<2	<1	10	0.31
01-Jun	0.84	<1	<2	<1	13	0.31
06-Jun	0.77	<1	2	<1	13	0.36
14-Jun	0.88	<1	<2	<1	12	0.31
15-Jun	0.71	<1	<2	<1	13	0.32
18-Jun	0.78	<1	2	<1	13	0.39
25-Jun	0.79	<1	<2	<1	14	0.22
03-Jul	0.62	<1	4	<1	14	0.19
05-Jul	0.56	<1	6	<1	14	0.25
09-Jul	0.61	<1	4	<1	15	0.18
19-Jul	0.79	<1	10	<1	15	0.36
24-Jul	0.67	<1	26	<1	16	0.30
30-Jul	0.71	<1	6	<1	16	0.47
03-Aug	0.71	<1	6	<1	16	0.21
07-Aug	0.58	<1	2	<1	17	0.20
17-Aug	0.69	<1	2	<1	15	0.29
21-Aug	0.82	<1	4	<1	15	0.28
24-Aug	0.73	<1	6	<1	17	0.25
28-Aug	0.75	<1	24	<1	17	0.23
04-Sep	0.82	<1	6	<1	17	0.21
11-Sep	0.75	<1	8	<1	17	0.26
13-Sep	0.72	<1	<2	<1	17	0.21
17-Sep	0.87	<1	2	<1	17	0.28
21-Sep	0.66	<1	6	<1	16	0.30
25-Sep	0.57	<1	<2	<1	15	0.40
27-Sep	0.73	<1	<2	<1	13	0.82
05-Oct	0.80	<1	2	<1	14	0.51
09-Oct	0.90	<1	8	<1	14	0.26
11-Oct	0.79	<1	<2	<1	14	0.37
15-Oct	0.78	<1	10	<1	14	0.81
18-Oct	0.96	<1	<2	<1	13	0.27
22-Oct	0.89	<1	<2	<1	14	0.29
24-Oct	0.74	<1	<2	<1	14	0.26
29-Oct	0.74	<1	<2	<1	13	0.23
01-Nov	0.39	<1	6	<1	13	0.25
07-Nov	0.60	<1	<2	<1	12	0.99

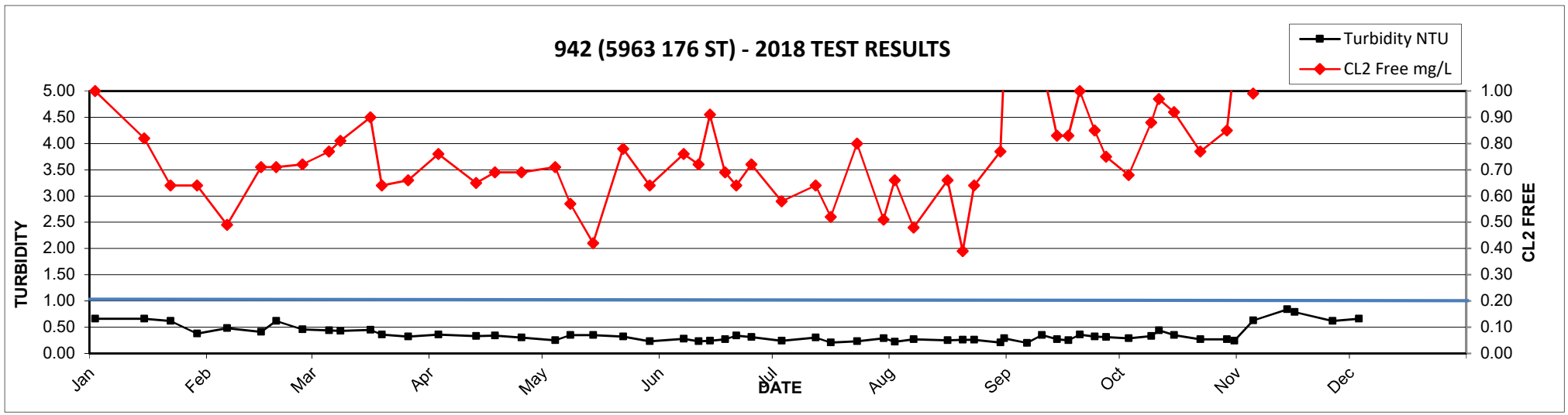

941 (BELL ROAD & OLD McLELLAN ROAD) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


941 (BELL ROAD & OLD McLELLAN ROAD) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 942 (5963 176 ST)

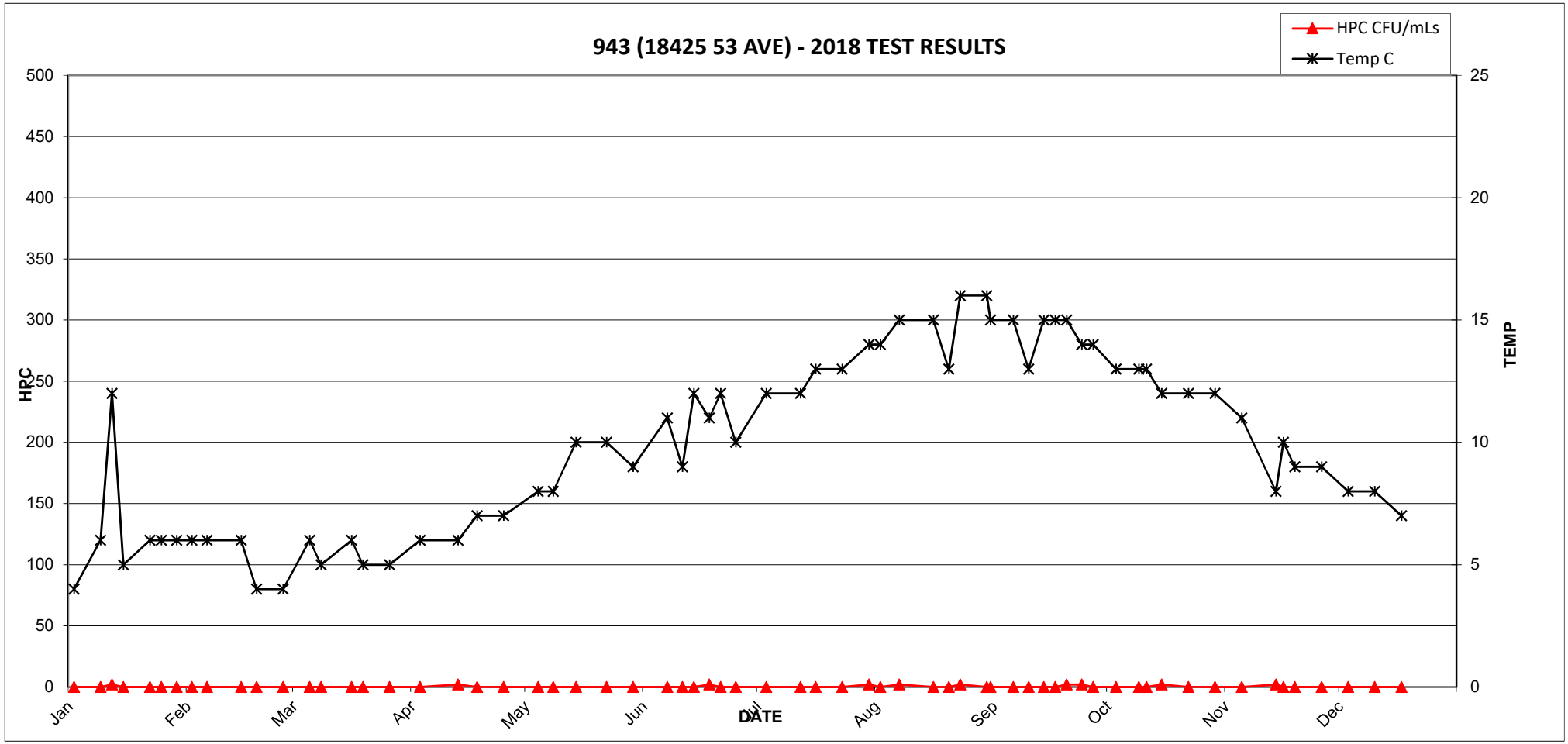
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	1.00	<1	<2	<1	4	0.66
15-Jan	0.82	<1	<2	<1	5	0.66
22-Jan	0.64	<1	<2	<1	6	0.62
29-Jan	0.64	<1	<2	<1	5	0.38
06-Feb	0.49	<1	<2	<1	6	0.48
15-Feb	0.71	<1	2	<1	4	0.41
19-Feb	0.71	<1	<2	<1	4	0.62
26-Feb	0.72	<1	<2	<1	4	0.46
05-Mar	0.77	<1	2	<1	6	0.44
08-Mar	0.81	<1	<2	<1	6	0.43
16-Mar	0.90	<1	<2	<1	6	0.45
19-Mar	0.64	<1	2	<1	6	0.36
26-Mar	0.66	<1	<2	<1	6	0.32
03-Apr	0.76	<1	<2	<1	6	0.36
13-Apr	0.65	<1	<2	<1	7	0.33
18-Apr	0.69	<1	<2	<1	7	0.34
25-Apr	0.69	<1	<2	<1	8	0.30
04-May	0.71	<1	<2	<1	10	0.25
08-May	0.57	<1	<2	<1	8	0.35
14-May	0.42	<1	2	<1	11	0.35
22-May	0.78	<1	16	<1	10	0.32
29-May	0.64	<1	10	<1	9	0.23
07-Jun	0.76	<1	20	<1	13	0.28
11-Jun	0.72	<1	<2	<1	10	0.23
14-Jun	0.91	<1	6	<1	13	0.24
18-Jun	0.69	<1	6	<1	13	0.27
21-Jun	0.64	<1	<2	<1	13	0.34
25-Jun	0.72	<1	10	<1	10	0.31
03-Jul	0.58	<1	52	<1	13	0.24
12-Jul	0.64	<1	54	<1	13	0.30
16-Jul	0.52	<1	84	<1	14	0.21
23-Jul	0.80	<1	50	<1	15	0.23
30-Jul	0.51	<1	140	<1	15	0.29
02-Aug	0.66	<1	72	<1	15	0.22
07-Aug	0.48	<1	130	<1	16	0.27
16-Aug	0.66	<1	90	<1	16	0.25
20-Aug	0.39	<1	46	<1	16	0.26
23-Aug	0.64	<1	28	<1	17	0.26
30-Aug	0.77	<1	28	<1	17	0.21
31-Aug	1.10	<1	42	<1	17	0.29
06-Sep	1.20	<1	4	<1	17	0.20
10-Sep	1.10	<1	10	<1	15	0.35
14-Sep	0.83	<1	8	<1	17	0.27
17-Sep	0.83	<1	12	<1	16	0.25
20-Sep	1.00	<1	2	<1	15	0.36
24-Sep	0.85	<1	14	<1	14	0.32
27-Sep	0.75	<1	12	<1	15	0.31
03-Oct	0.68	<1	14	<1	14	0.29
09-Oct	0.88	<1	8	<1	13	0.33
11-Oct	0.97	<1	<2	<1	13	0.44
15-Oct	0.92	<1	8	<1	13	0.35
22-Oct	0.77	<1	16	<1	13	0.27
29-Oct	0.85	<1	10	<1	12	0.27
31-Oct	1.10	<1	18	<1	12	0.24
05-Nov	0.99	<1	10	<1	11	0.63
14-Nov-18	1.2	<1	6	<1	9	0.84
16-Nov-18	1.3	<1	<2	<1	10	0.79
26-Nov	1.10	<1	<2	<1	9	0.62
03-Dec	1.10	<1	<2	<1	9	0.66

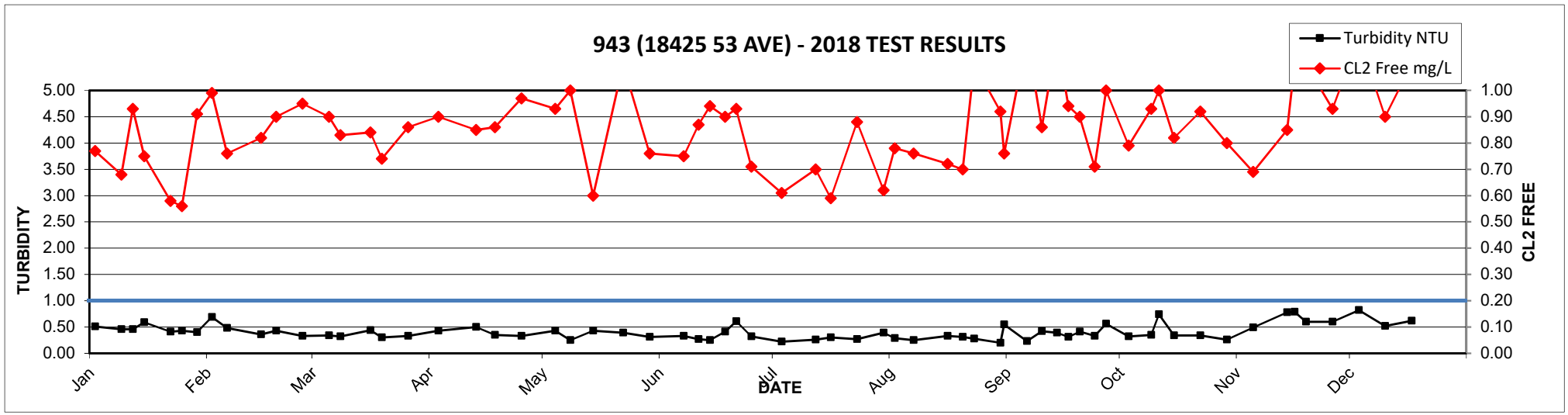

942 (5963 176 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


942 (5963 176 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 943 (18425 53 AVE)

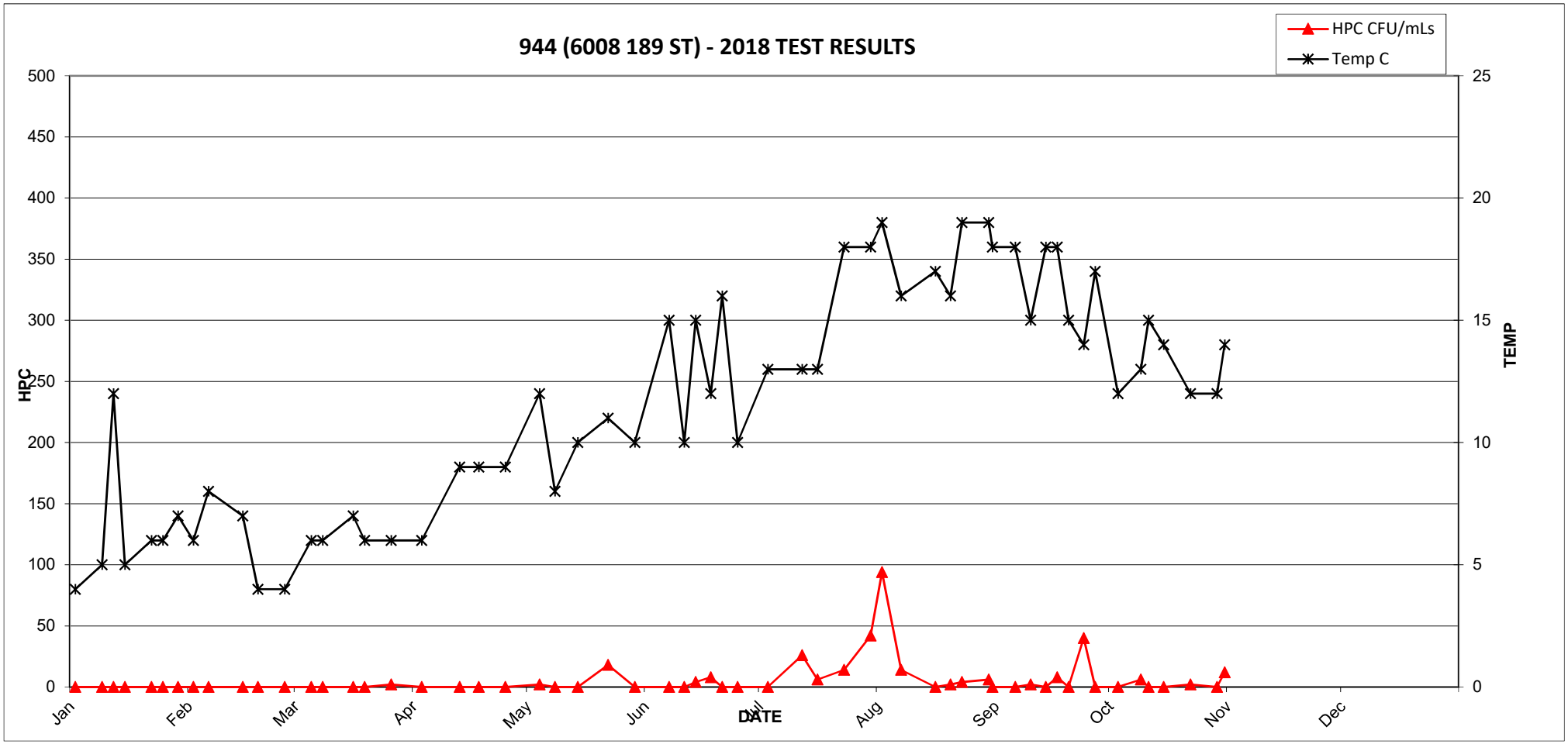
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.77	<1	<2	<1	4	0.51
09-Jan	0.68	<1	<2	<1	6	0.46
12-Jan	0.93	<1	2	<1	12	0.46
15-Jan	0.75	<1	<2	<1	5	0.59
22-Jan	0.58	<1	<2	<1	6	0.41
25-Jan	0.56	<1	<2	<1	6	0.43
29-Jan	0.91	<1	<2	<1	6	0.40
02-Feb	0.99	<1	<2	<1	6	0.69
06-Feb	0.76	<1	<2	<1	6	0.48
15-Feb	0.82	<1	<2	<1	6	0.36
19-Feb	0.90	<1	<2	<1	4	0.43
26-Feb	0.95	<1	<2	<1	4	0.33
05-Mar	0.90	<1	<2	<1	6	0.34
08-Mar	0.83	<1	<2	<1	5	0.32
16-Mar	0.84	<1	<2	<1	6	0.44
19-Mar	0.74	<1	<2	<1	5	0.30
26-Mar	0.86	<1	<2	<1	5	0.33
03-Apr	0.90	<1	<2	<1	6	0.43
13-Apr	0.85	<1	2	<1	6	0.50
18-Apr	0.86	<1	<2	<1	7	0.35
25-Apr	0.97	<1	<2	<1	7	0.33
04-May	0.93	<1	<2	<1	8	0.43
08-May	1.00	<1	<2	<1	8	0.25
14-May	0.60	<1	<2	<1	10	0.43
22-May	1.10	<1	<2	<1	10	0.39
29-May	0.76	<1	<2	<1	9	0.31
07-Jun	0.75	<1	<2	<1	11	0.33
11-Jun	0.87	<1	<2	<1	9	0.27
14-Jun	0.94	<1	<2	<1	12	0.25
18-Jun	0.90	<1	2	<1	11	0.41
21-Jun	0.93	<1	<2	<1	12	0.61
25-Jun	0.71	<1	<2	<1	10	0.32
03-Jul	0.61	<1	<2	<1	12	0.22
12-Jul	0.70	<1	<2	<1	12	0.26
16-Jul	0.59	<1	<2	<1	13	0.30
23-Jul	0.88	<1	<2	<1	13	0.27
30-Jul	0.62	<1	2	<1	14	0.39
02-Aug	0.78	<1	<2	<1	14	0.29
07-Aug	0.76	<1	2	<1	15	0.25
16-Aug	0.72	<1	<2	<1	15	0.33
20-Aug	0.70	<1	<2	<1	13	0.31
23-Aug	1.10	<1	2	<1	16	0.28
30-Aug	0.92	<1	<2	<1	16	0.20
31-Aug	0.76	<1	<2	<1	15	0.55
06-Sep	1.20	<1	<2	<1	15	0.23
10-Sep	0.86	<1	<2	<1	13	0.42
14-Sep	1.20	<1	<2	<1	15	0.39
17-Sep	0.94	<1	<2	<1	15	0.31
20-Sep	0.90	<1	2	<1	15	0.41
24-Sep	0.71	<1	2	<1	14	0.33
27-Sep	1.00	<1	<2	<1	14	0.56
03-Oct	0.79	<1	<2	<1	13	0.32
09-Oct	0.93	<1	<2	<1	13	0.35
11-Oct	1.00	<1	<2	<1	13	0.74
15-Oct	0.82	<1	2	<1	12	0.34
22-Oct	0.92	<1	<2	<1	12	0.34
29-Oct	0.80	<1	<2	<1	12	0.26
05-Nov	0.69	<1	<2	<1	11	0.49
14-Nov-18	0.85	<1	2	<1	8	0.78
16-Nov-18	1.1	<1	<2	<1	10	0.79
19-Nov-18	1.1	<1	<2	<1	9	0.6
26-Nov	0.93	<1	<2	<1	9	0.60
03-Dec	1.20	<1	<2	<1	8	0.82
10-Dec	0.90	<1	<2	<1	8	0.52
17-Dec	1.10	<1	NA	<1	7	0.62


943 (18425 53 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


943 (18425 53 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 944 (6008 189 ST)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.51	<1	<2	<1	4	0.52
09-Jan	0.56	<1	<2	<1	5	0.45
12-Jan	0.46	<1	<2	<1	12	0.40
15-Jan	0.67	<1	<2	<1	5	0.52
22-Jan	0.64	<1	<2	<1	6	0.39
25-Jan	0.55	<1	<2	<1	6	0.39
29-Jan	0.38	<1	<2	<1	7	0.34
02-Feb	0.52	<1	<2	<1	6	0.51
06-Feb	0.29	<1	<2	<1	8	0.41
15-Feb	0.48	<1	<2	<1	7	0.30
19-Feb	0.67	<1	<2	<1	4	0.46
26-Feb	0.71	<1	<2	<1	4	0.31
05-Mar	0.72	<1	<2	<1	6	0.35
08-Mar	0.56	<1	<2	<1	6	0.32
16-Mar	0.59	<1	<2	<1	7	0.35
19-Mar	0.60	<1	<2	<1	6	0.33
26-Mar	0.64	<1	2	<1	6	0.27
03-Apr	0.65	<1	<2	<1	6	0.35
13-Apr	0.37	<1	<2	<1	9	0.33
18-Apr	0.45	<1	<2	<1	9	0.29
25-Apr	0.53	<1	<2	<1	9	0.36
04-May	0.56	<1	2	<1	12	0.30
08-May	0.69	<1	<2	<1	8	0.28
14-May	0.45	<1	<2	<1	10	0.31
22-May	0.60	<1	18	<1	11	0.24
29-May	0.45	<1	<2	<1	10	0.24
07-Jun	0.29	<1	<2	<1	15	0.29
11-Jun	0.44	<1	<2	<1	10	0.22
14-Jun	0.67	<1	4	<1	15	0.24
18-Jun	0.66	<1	8	<1	12	0.27
21-Jun	0.65	<1	<2	<1	16	0.52
25-Jun	0.53	<1	<2	<1	10	0.24
03-Jul	0.57	<1	<2	<1	13	0.18
12-Jul	0.61	<1	26	<1	13	0.32
16-Jul	0.56	<1	6	<1	13	0.30
23-Jul	0.47	<1	14	<1	18	0.24
30-Jul	0.29	<1	42	<1	18	0.37
02-Aug	0.32	<1	94	<1	19	0.18
07-Aug	0.46	<1	14	<1	16	0.21
16-Aug	0.57	<1	<2	<1	17	0.27
20-Aug	0.50	<1	2	<1	16	0.26
23-Aug	0.67	<1	4	<1	19	0.32
30-Aug	0.53	<1	6	<1	19	0.22
31-Aug	0.52	<1	<2	<1	18	0.36
06-Sep	0.61	<1	<2	<1	18	0.24
10-Sep	0.60	<1	2	<1	15	0.24
14-Sep	0.59	<1	<2	<1	18	0.26
17-Sep	0.24	<1	8	<1	18	0.23
20-Sep	0.57	<1	<2	<1	15	0.28
24-Sep	0.43	<1	40	<1	14	0.27
27-Sep	0.51	<1	<2	<1	17	0.34
03-Oct	0.29	<1	<2	<1	12	0.22
09-Oct	0.54	<1	6	<1	13	0.29
11-Oct	0.54	<1	<2	<1	15	0.56
15-Oct	0.60	<1	<2	<1	14	0.29
22-Oct	0.48	<1	2	<1	12	0.25
29-Oct	0.57	<1	<2	<1	12	0.36
31-Oct	0.57	<1	12	<1	14	0.27
05-Nov	0.42	<1	<2	<1	13	0.45
14-Nov-18	0.46	<1	<2	<1	10	0.69
16-Nov-18	0.39	<1	<2	<1	12	0.64
19-Nov-18	0.5	<1	<2	<1	11	0.57
26-Nov	0.41	<1	<2	<1	9	0.49
03-Dec	0.43	<1	<2	<1	10	0.58
10-Dec	0.53	<1	<2	<1	7	0.47


944 (6008 189 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
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May
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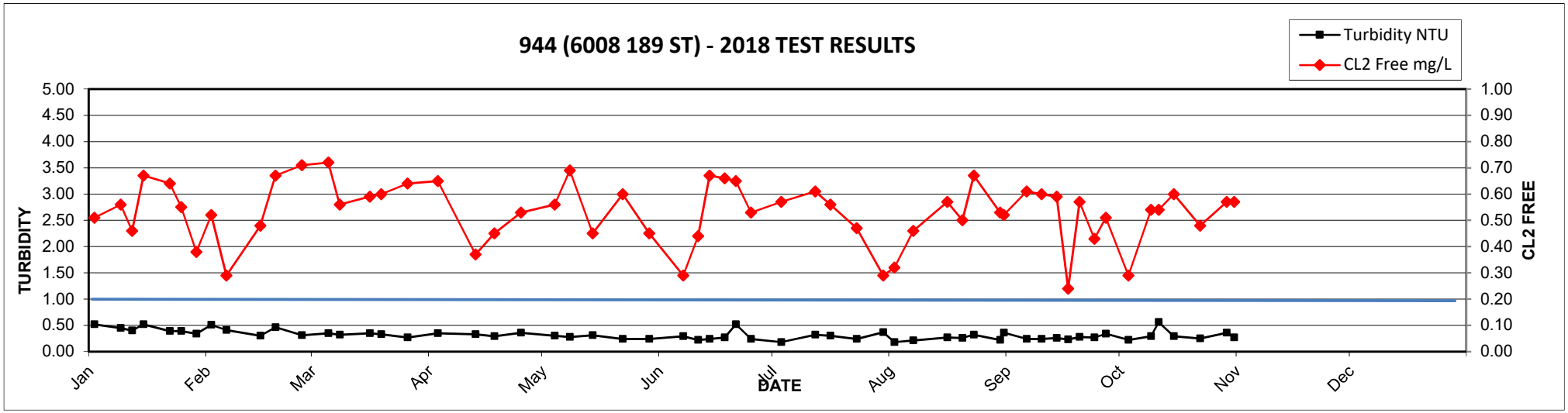
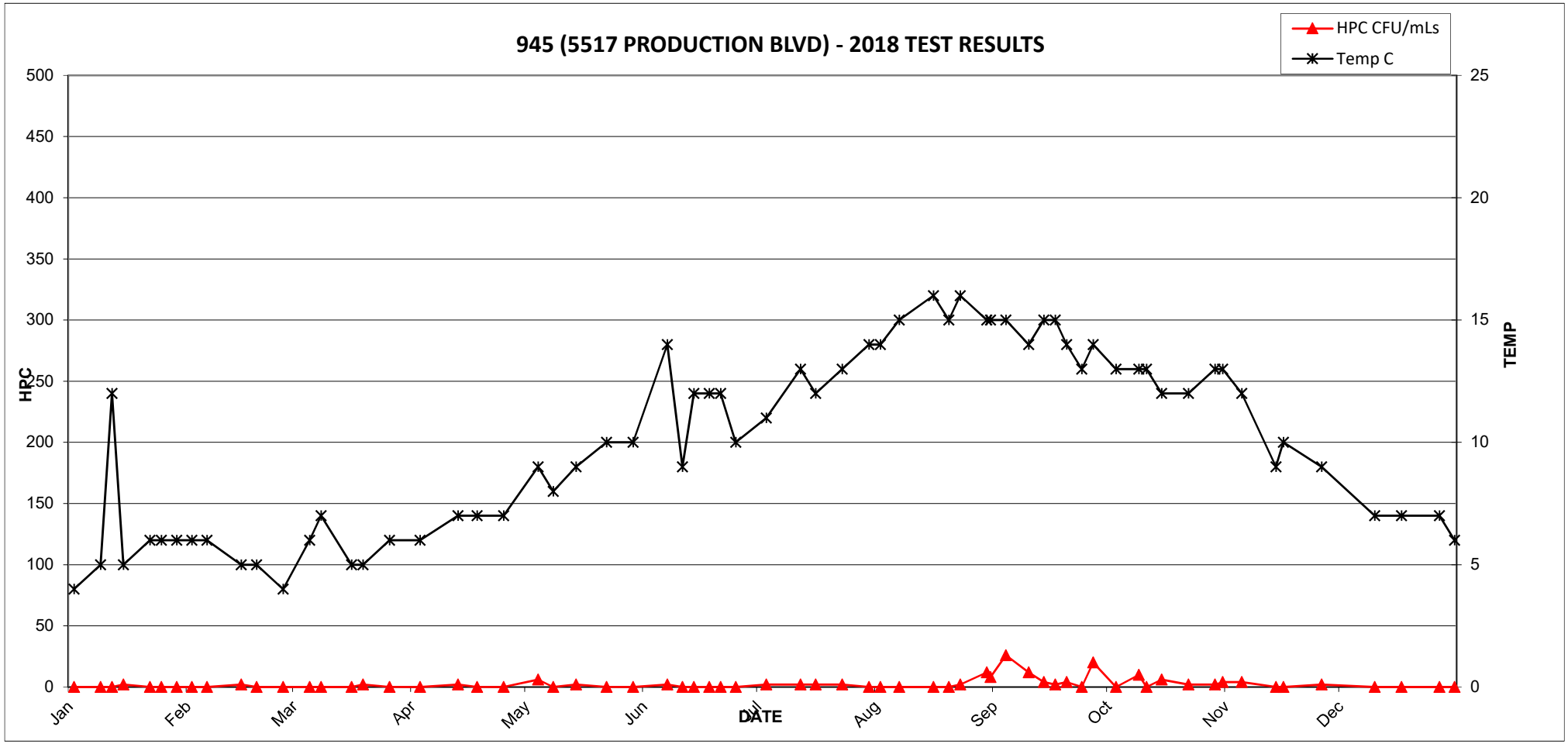
Aug
Sep
Oct
Nov
Dec


944 (6008 189 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 945 (5517 PRODUCTION BLVD)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.88	<1	<2	<1	4	0.49
09-Jan	0.87	<1	<2	<1	5	0.52
12-Jan	0.90	<1	<2	<1	12	0.46
15-Jan	0.73	<1	2	<1	5	0.48
22-Jan	0.78	<1	<2	<1	6	0.43
25-Jan	1.10	<1	<2	<1	6	0.41
29-Jan	0.87	<1	<2	<1	6	0.38
02-Feb	1.30	<1	<2	<1	6	0.66
06-Feb	0.84	<1	<2	<1	6	0.45
15-Feb	0.98	<1	2	<1	5	0.45
19-Feb	0.92	<1	<2	<1	5	0.50
26-Feb	0.95	<1	<2	<1	4	0.35
05-Mar	0.97	<1	<2	<1	6	0.33
08-Mar	1.00	<1	<2	<1	7	0.52
16-Mar	0.82	<1	<2	<1	5	0.46
19-Mar	0.96	<1	2	<1	5	0.34
26-Mar	1.00	<1	<2	<1	6	0.43
03-Apr	0.92	<1	<2	<1	6	0.44
13-Apr	1.10	<1	2	<1	7	0.50
18-Apr	0.95	<1	<2	<1	7	0.43
25-Apr	1.00	<1	<2	<1	7	0.34
04-May	1.00	<1	6	<1	9	0.36
08-May	1.20	<1	<2	<1	8	0.41
14-May	0.72	<1	2	<1	9	0.48
22-May	1.20	<1	<2	<1	10	0.28
29-May	0.81	<1	<2	<1	10	0.30
07-Jun	0.82	<1	2	<1	14	0.35
11-Jun	0.91	<1	<2	<1	9	0.21
14-Jun	0.99	<1	<2	<1	12	0.27
18-Jun	0.93	<1	<2	<1	12	0.30
21-Jun	0.89	<1	<2	<1	12	0.47
25-Jun	0.90	<1	<2	<1	10	0.32
03-Jul	0.74	<1	2	<1	11	0.30
12-Jul	0.78	<1	2	<1	13	0.24
16-Jul	0.85	<1	2	<1	12	0.38
23-Jul	0.87	<1	2	<1	13	0.27
30-Jul	0.65	<1	<2	<1	14	0.34
02-Aug	0.70	<1	<2	<1	14	0.25
07-Aug	0.86	<1	<2	<1	15	0.24
16-Aug	0.80	<1	<2	<1	16	0.28
20-Aug	0.91	<1	<2	<1	15	0.45
23-Aug	1.20	<1	2	<1	16	0.29
30-Aug	0.98	<1	12	<1	15	0.24
31-Aug	1.10	<1	8	<1	15	0.52
04-Sep	0.92	<1	26	<1	15	0.39
10-Sep	1.10	<1	12	<1	14	0.33
14-Sep	1.20	<1	4	<1	15	0.39
17-Sep	0.98	<1	2	<1	15	0.32
20-Sep	1.10	<1	4	<1	14	0.39
24-Sep	0.90	<1	<2	<1	13	0.35
27-Sep	1.10	<1	20	<1	14	0.62
03-Oct	0.99	<1	<2	<1	13	0.32
09-Oct	1.10	<1	10	<1	13	0.36
11-Oct	1.10	<1	<2	<1	13	0.39
15-Oct	1.10	<1	6	<1	12	0.48
22-Oct	1.10	<1	2	<1	12	0.30
29-Oct	1.10	<1	2	<1	13	0.33
31-Oct	0.81	<1	4	<1	13	0.27
05-Nov	0.98	<1	4	<1	12	0.74
14-Nov-18	1.1	<1	<2	<1	9	0.78
16-Nov-18	1.1	<1	<2	<1	10	0.81
26-Nov	1.30	<1	2	<1	9	0.67


945 (5517 PRODUCTION BLVD) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
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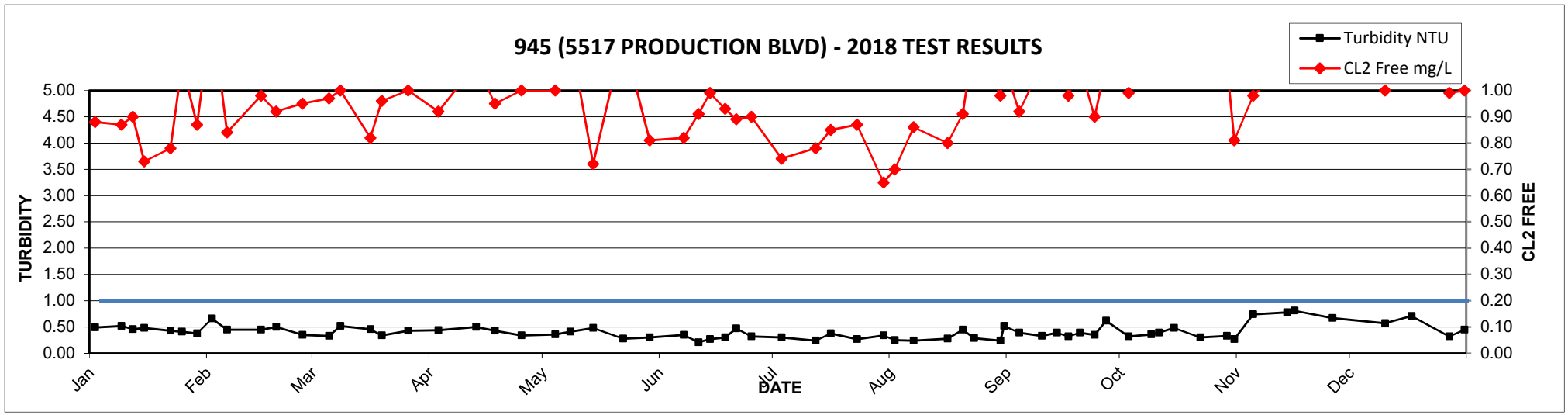
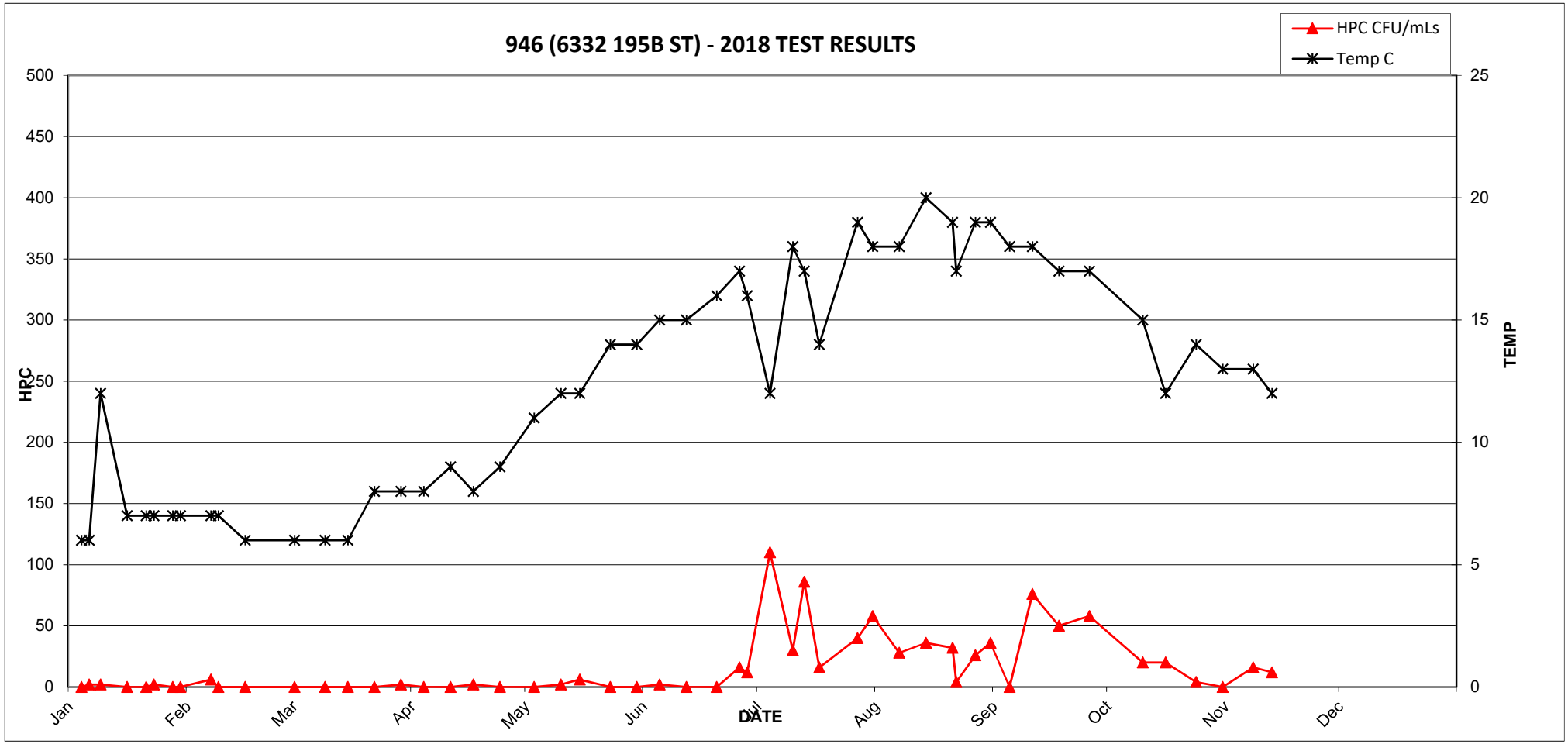
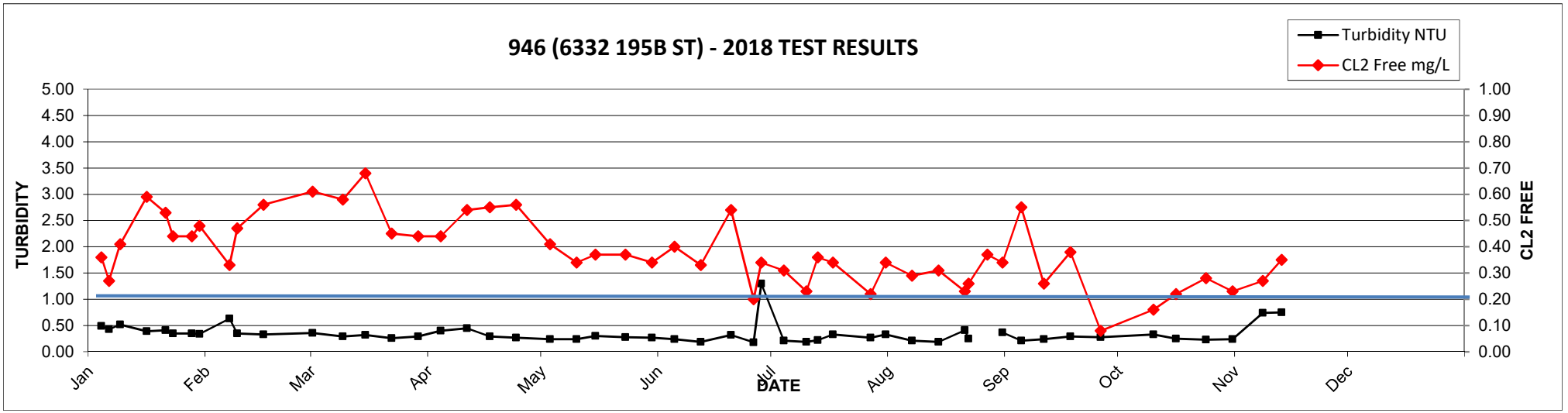
Jul
Aug
Sep
Oct
Nov
Dec


945 (5517 PRODUCTION BLVD) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 946 (6332 195B ST)

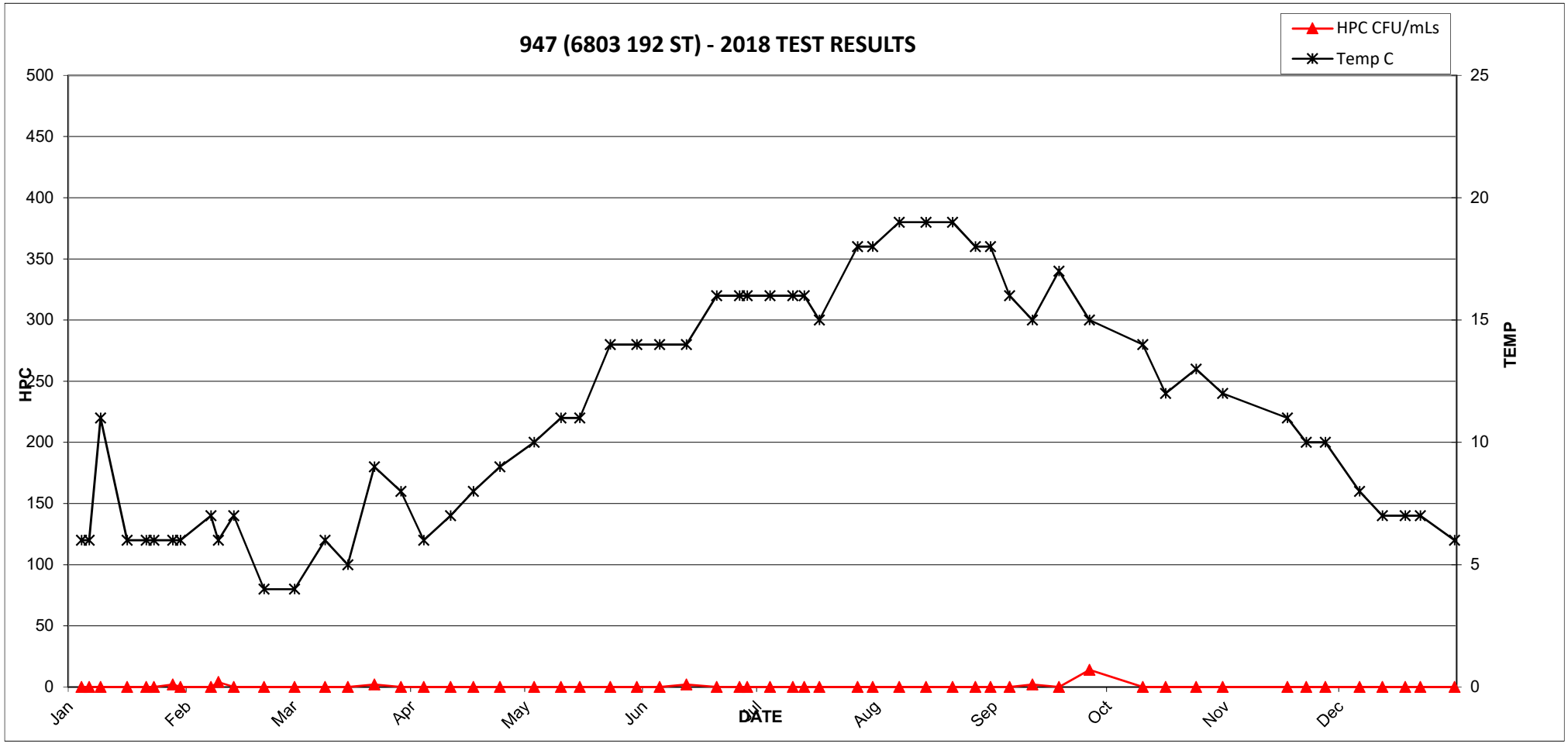
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.36	<1	<2	<1	6	0.49
06-Jan	0.27	<1	2	<1	6	0.43
09-Jan	0.41	<1	2	<1	12	0.52
16-Jan	0.59	<1	<2	<1	7	0.39
21-Jan	0.53	<1	<2	<1	7	0.41
23-Jan	0.44	<1	2	<1	7	0.35
28-Jan	0.44	<1	<2	<1	7	0.35
30-Jan	0.48	<1	<2	<1	7	0.34
07-Feb	0.33	<1	6	<1	7	0.63
09-Feb	0.47	<1	<2	<1	7	0.35
16-Feb	0.56	<1	<2	<1	6	0.33
01-Mar	0.61	<1	<2	<1	6	0.36
09-Mar	0.58	<1	<2	<1	6	0.29
15-Mar	0.68	<1	<2	<1	6	0.32
22-Mar	0.45	<1	<2	<1	8	0.26
29-Mar	0.44	<1	2	<1	8	0.29
04-Apr	0.44	<1	<2	<1	8	0.40
11-Apr	0.54	<1	<2	<1	9	0.45
17-Apr	0.55	<1	2	<1	8	0.29
24-Apr	0.56	<1	<2	<1	9	0.27
03-May	0.41	<1	<2	<1	11	0.24
10-May	0.34	<1	2	<1	12	0.24
15-May	0.37	<1	6	<1	12	0.30
23-May	0.37	<1	<2	<1	14	0.28
30-May	0.34	<1	<2	<1	14	0.27
05-Jun	0.40	<1	2	<1	15	0.24
12-Jun	0.33	<1	<2	<1	15	0.19
20-Jun	0.54	<1	<2	<1	16	0.32
26-Jun	0.20	<1	16	<1	17	0.18
28-Jun	0.34	<1	12	<1	16	1.30
04-Jul	0.31	<1	110	<1	12	0.21
10-Jul	0.23	<1	30	<1	18	0.19
13-Jul	0.36	<1	86	<1	17	0.22
17-Jul	0.34	<1	16	<1	14	0.33
27-Jul	0.22	<1	40	<1	19	0.27
31-Jul	0.34	<1	58	<1	18	0.33
07-Aug	0.29	<1	28	<1	18	0.21
14-Aug	0.31	<1	36	<1	20	0.19
21-Aug	0.23	<1	32	<1	19	0.41
22-Aug	0.26	<1	4	<1	17	0.25
27-Aug	0.37	<1	26	<1	19	
31-Aug	0.34	<1	36	<1	19	0.37
05-Sep	0.55	<1	<2	<1	18	0.21
11-Sep	0.26	<1	76	<1	18	0.24
18-Sep	0.38	<1	50	<1	17	0.29
26-Sep	0.08	<1	58	<1	17	0.28
10-Oct	0.16	<1	20	<1	15	0.33
16-Oct	0.22	<1	20	<1	12	0.25
24-Oct	0.28	<1	4	<1	14	0.23
31-Oct	0.23	<1	<2	<1	13	0.24
08-Nov	0.27	<1	16	<1	13	0.74
13-Nov	0.35	<1	12	<1	12	0.75
22-Nov	0.21	<1	14	<1	11	0.61
27-Nov	0.15	<1	4	<1	11	0.54
12-Dec	0.18	<1	<2	<1	9	0.42

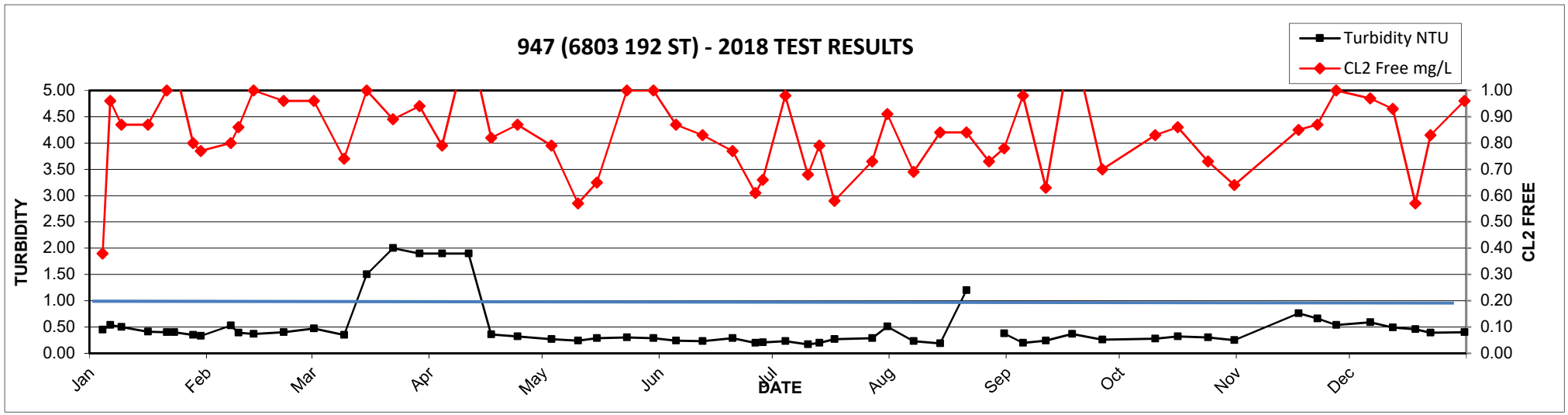

946 (6332 195B ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


946 (6332 195B ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 947 (6803 192 ST)

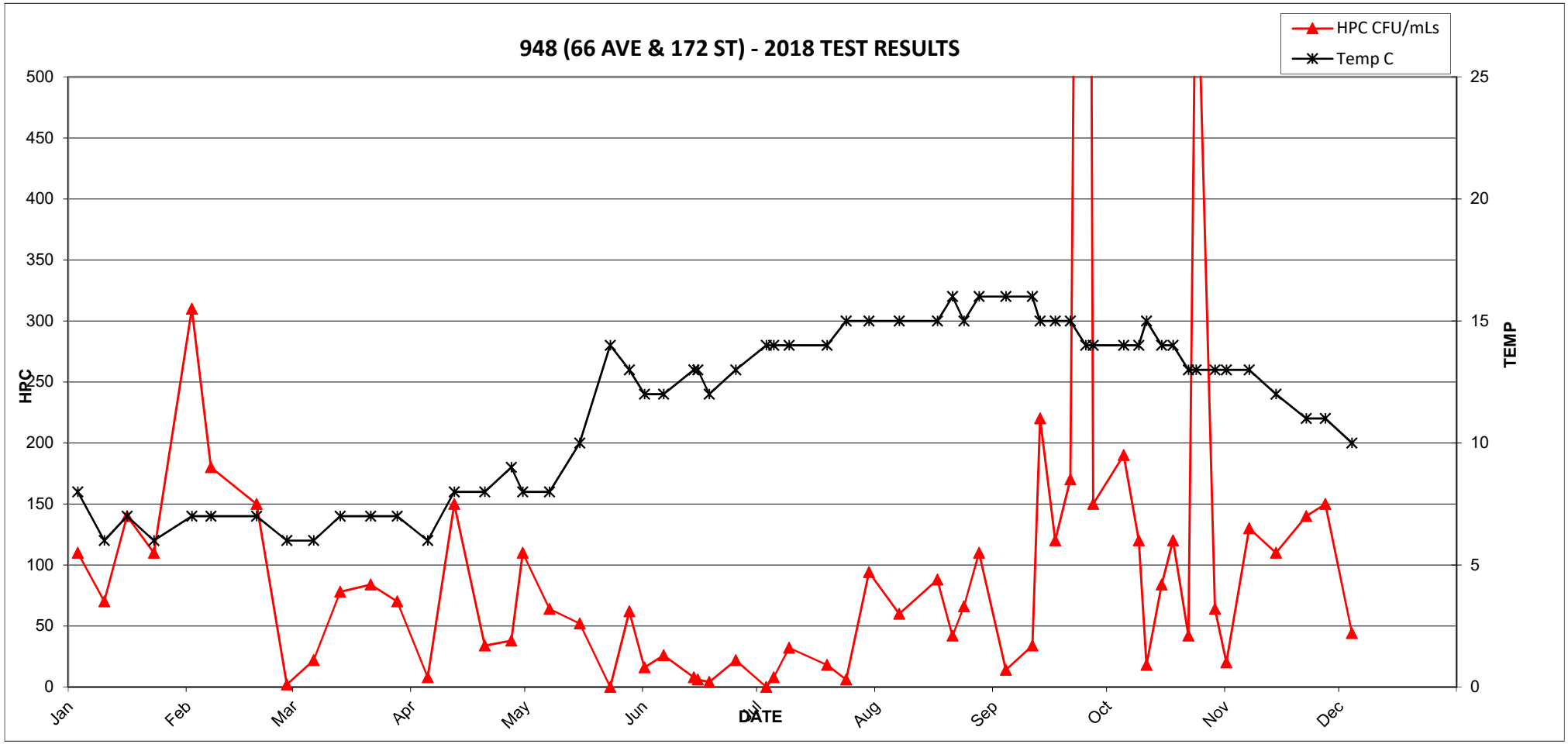
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.38	<1	<2	<1	6	0.45
06-Jan	0.96	<1	<2	<1	6	0.54
09-Jan	0.87	<1	<2	<1	11	0.50
16-Jan	0.87	<1	<2	<1	6	0.41
21-Jan	1.00	<1	<2	<1	6	0.40
23-Jan	1.10	<1	<2	<1	6	0.40
28-Jan	0.80	<1	2	<1	6	0.35
30-Jan	0.77	<1	<2	<1	6	0.33
07-Feb	0.80	<1	<2	<1	7	0.53
09-Feb	0.86	<1	4	<1	6	0.39
13-Feb	1.00	<1	<2	<1	7	0.37
21-Feb	0.96	<1	<2	<1	4	0.40
01-Mar	0.96	<1	<2	<1	4	0.47
09-Mar	0.74	<1	<2	<1	6	0.35
15-Mar	1.00	<1	<2	<1	5	1.50
22-Mar	0.89	<1	2	<1	9	2.00
29-Mar	0.94	<1	<2	<1	8	1.90
04-Apr	0.79	<1	<2	<1	6	1.90
11-Apr	1.20	<1	<2	<1	7	1.90
17-Apr	0.82	<1	<2	<1	8	0.36
24-Apr	0.87	<1	<2	<1	9	0.32
03-May	0.79	<1	<2	<1	10	0.27
10-May	0.57	<1	<2	<1	11	0.24
15-May	0.65	<1	<2	<1	11	0.29
23-May	1.00	<1	<2	<1	14	0.30
30-May	1.00	<1	<2	<1	14	0.29
05-Jun	0.87	<1	<2	<1	14	0.24
12-Jun	0.83	<1	2	<1	14	0.23
20-Jun	0.77	<1	<2	<1	16	0.29
26-Jun	0.61	<1	<2	<1	16	0.20
28-Jun	0.66	<1	<2	<1	16	0.21
04-Jul	0.98	<1	<2	<1	16	0.23
10-Jul	0.68	<1	<2	<1	16	0.17
13-Jul	0.79	<1	<2	<1	16	0.20
17-Jul	0.58	<1	<2	<1	15	0.27
27-Jul	0.73	<1	<2	<1	18	0.29
31-Jul	0.91	<1	<2	<1	18	0.51
07-Aug	0.69	<1	<2	<1	19	0.23
14-Aug	0.84	<1	<2	<1	19	0.19
21-Aug	0.84	<1	<2	<1	19	1.20
27-Aug	0.73	<1	<2	<1	18	
31-Aug	0.78	<1	<2	<1	18	0.38
05-Sep	0.98	<1	<2	<1	16	0.20
11-Sep	0.63	<1	2	<1	15	0.24
18-Sep	1.20	<1	<2	<1	17	0.37
26-Sep	0.70	<1	14	<1	15	0.26
10-Oct	0.83	<1	<2	<1	14	0.28
16-Oct	0.86	<1	<2	<1	12	0.32
24-Oct	0.73	<1	<2	<1	13	0.30
31-Oct	0.64	<1	<2	<1	12	0.25
17-Nov-18	0.85	<1	<2	<1	11	0.76
22-Nov	0.87	<1	<2	<1	10	0.66
27-Nov	1.00	<1	<2	<1	10	0.54
06-Dec	0.97	<1	<2	<1	8	0.59
12-Dec	0.93	<1	<2	<1	7	0.49
18-Dec	0.57	<1	NA	<1	7	0.46
22-Dec	0.83	<1	NA	<1	7	0.39
31-Dec	0.96	<1	NA	<1	6	0.40

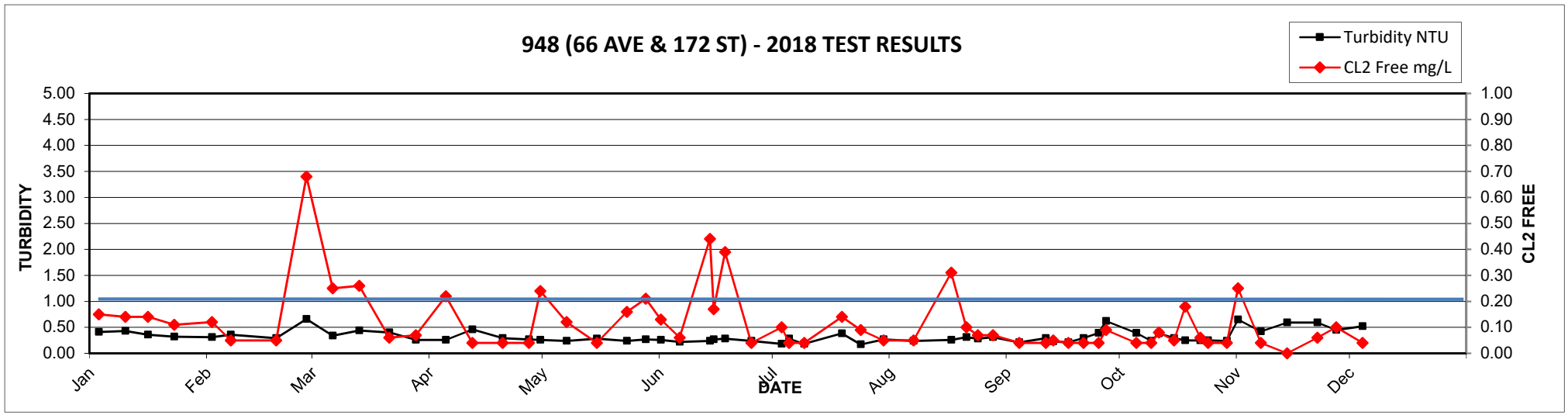

947 (6803 192 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


947 (6803 192 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 948 (66 AVE & 172 ST)

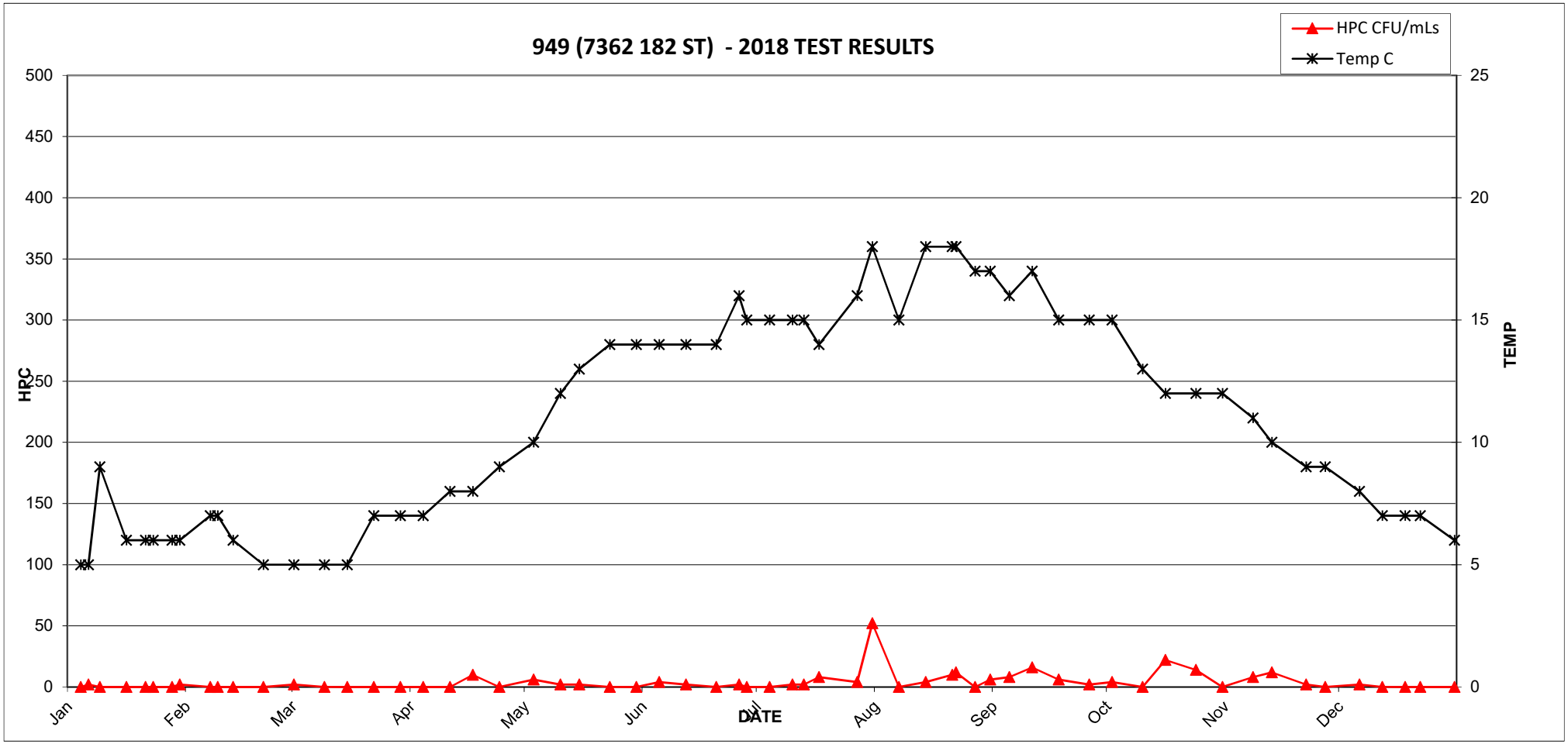
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
03-Jan	0.15	<1	110	<1	8	0.41
10-Jan	0.14	<1	70	<1	6	0.43
16-Jan	0.14	<1	140	<1	7	0.36
23-Jan	0.11	<1	110	<1	6	0.32
02-Feb	0.12	<1	310	<1	7	0.31
07-Feb	0.05	<1	180	<1	7	0.36
19-Feb	0.05	<1	150	<1	7	0.29
27-Feb	0.68	<1	2	<1	6	0.66
06-Mar	0.25	<1	22	<1	6	0.34
13-Mar	0.26	<1	78	<1	7	0.44
21-Mar	0.06	<1	84	<1	7	0.40
28-Mar	0.07	<1	70	<1	7	0.26
05-Apr	0.22	<1	8	<1	6	0.26
12-Apr	0.04	<1	150	<1	8	0.46
20-Apr	0.04	<1	34	<1	8	0.29
27-Apr	0.04	<1	38	<1	9	0.27
30-Apr	0.24	<1	110	<1	8	0.26
07-May	0.12	<1	64	<1	8	0.24
15-May	0.04	<1	52	<1	10	0.28
23-May	0.16	<1	<2	<1	14	0.24
28-May	0.21	<1	62	<1	13	0.27
01-Jun	0.13	<1	16	<1	12	0.26
06-Jun	0.06	<1	26	<1	12	0.22
14-Jun	0.44	<1	8	<1	13	0.24
15-Jun	0.17	<1	6	<1	13	0.27
18-Jun	0.39	<1	4	<1	12	0.28
25-Jun	0.04	<1	22	<1	13	0.24
03-Jul	0.10	<1	<2	<1	14	0.18
05-Jul	0.04	<1	8	<1	14	0.28
09-Jul	0.04	<1	32	<1	14	0.18
19-Jul	0.14	<1	18	<1	14	0.38
24-Jul	0.09	<1	6	<1	15	0.17
30-Jul	0.05	<1	94	<1	15	0.27
07-Aug	0.05	<1	60	<1	15	0.24
17-Aug	0.31	<1	88	<1	15	0.26
21-Aug	0.10	<1	42	<1	16	0.31
24-Aug	0.07	<1	66	<1	15	0.28
28-Aug	0.07	<1	110	<1	16	0.31
04-Sep	0.04	<1	14	<1	16	0.21
11-Sep	0.04	<1	34	<1	16	0.29
13-Sep	0.05	<1	220	<1	15	0.23
17-Sep	0.04	<1	120	<1	15	0.21
21-Sep	0.04	<1	170	<1	15	0.29
25-Sep	0.04	<1	1800	<1	14	0.39
27-Sep	0.09	<1	150	<1	14	0.62
05-Oct	0.04	<1	190	<1	14	0.39
09-Oct	0.04	<1	120	<1	14	0.24
11-Oct	0.08	<1	18	<1	15	0.38
15-Oct	0.05	<1	84	<1	14	0.29
18-Oct	0.18	<1	120	<1	14	0.25
22-Oct	0.06	<1	42	<1	13	0.25
24-Oct	0.04	<1	640	<1	13	0.25
29-Oct	0.04	<1	64	<1	13	0.24
01-Nov	0.25	<1	20	<1	13	0.65
07-Nov	0.04	<1	130	<1	13	0.42
14-Nov-18	<0.04	<1	110	<1	12	0.59
22-Nov	0.06	<1	140	<1	11	0.59
27-Nov	0.10	<1	150	<1	11	0.45
04-Dec	0.04	<1	44	<1	10	0.52
07-Dec	0.04	<1	64	<1	10	0.46
10-Dec	0.06	<1	94	<1	10	0.38
17-Dec	0.05	<1	NA	<1	9	0.60

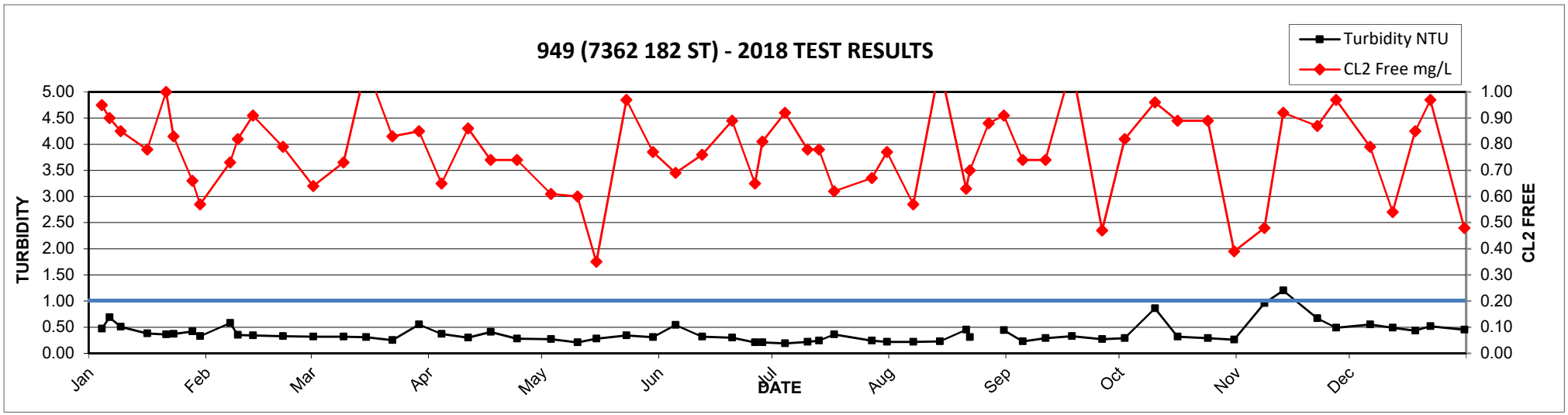

948 (66 AVE & 172 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HRC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


948 (66 AVE & 172 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 949 (7362 182 ST)

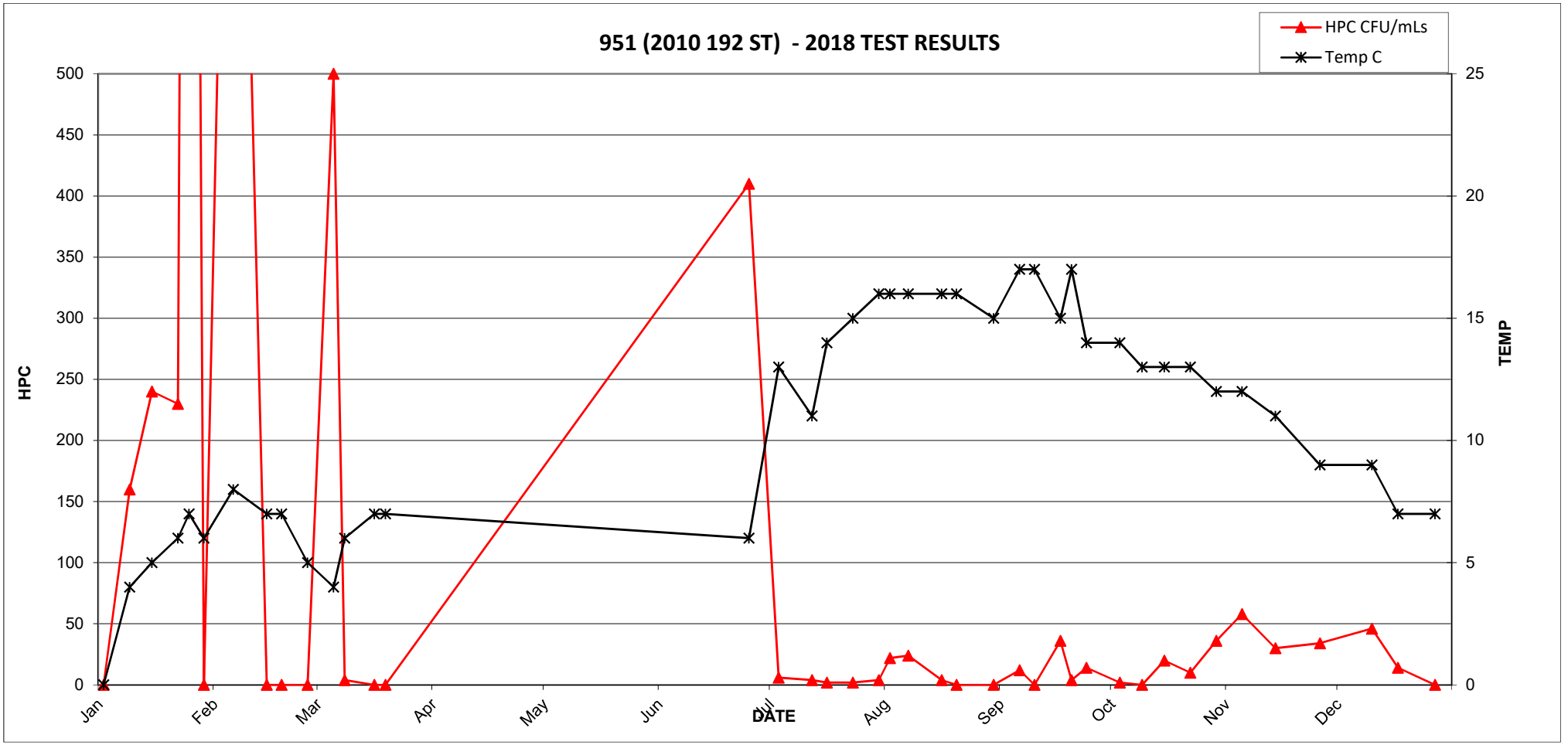
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
04-Jan	0.95	<1	<2	<1	5	0.47
06-Jan	0.90	<1	2	<1	5	0.69
09-Jan	0.85	<1	<2	<1	9	0.51
16-Jan	0.78	<1	<2	<1	6	0.38
21-Jan	1.00	<1	<2	<1	6	0.36
23-Jan	0.83	<1	<2	<1	6	0.37
28-Jan	0.66	<1	<2	<1	6	0.42
30-Jan	0.57	<1	2	<1	6	0.33
07-Feb	0.73	<1	<2	<1	7	0.58
09-Feb	0.82	<1	<2	<1	7	0.35
13-Feb	0.91	<1	<2	<1	6	0.34
21-Feb	0.79	<1	<2	<1	5	0.33
01-Mar	0.64	<1	2	<1	5	0.32
09-Mar	0.73	<1	<2	<1	5	0.32
15-Mar	1.10	<1	<2	<1	5	0.31
22-Mar	0.83	<1	<2	<1	7	0.25
29-Mar	0.85	<1	<2	<1	7	0.55
04-Apr	0.65	<1	<2	<1	7	0.37
11-Apr	0.86	<1	<2	<1	8	0.30
17-Apr	0.74	<1	10	<1	8	0.41
24-Apr	0.74	<1	<2	<1	9	0.28
03-May	0.61	<1	6	<1	10	0.27
10-May	0.60	<1	2	<1	12	0.21
15-May	0.35	<1	2	<1	13	0.28
23-May	0.97	<1	<2	<1	14	0.34
30-May	0.77	<1	<2	<1	14	0.31
05-Jun	0.69	<1	4	<1	14	0.54
12-Jun	0.76	<1	2	<1	14	0.32
20-Jun	0.89	<1	<2	<1	14	0.30
26-Jun	0.65	<1	2	<1	16	0.21
28-Jun	0.81	<1	<2	<1	15	0.21
04-Jul	0.92	<1	<2	<1	15	0.19
10-Jul	0.78	<1	2	<1	15	0.22
13-Jul	0.78	<1	2	<1	15	0.24
17-Jul	0.62	<1	8	<1	14	0.36
27-Jul	0.67	<1	4	<1	16	0.24
31-Jul	0.77	<1	52	<1	18	0.22
07-Aug	0.57	<1	<2	<1	15	0.22
14-Aug	1.10	<1	4	<1	18	0.23
21-Aug	0.63	<1	10	<1	18	0.45
22-Aug	0.70	<1	12	<1	18	0.31
27-Aug	0.88	<1	<2	<1	17	
31-Aug	0.91	<1	6	<1	17	0.44
05-Sep	0.74	<1	8	<1	16	0.23
11-Sep	0.74	<1	16	<1	17	0.29
18-Sep	1.10	<1	6	<1	15	0.33
26-Sep	0.47	<1	2	<1	15	0.27
02-Oct	0.82	<1	4	<1	15	0.29
10-Oct	0.96	<1	<2	<1	13	0.86
16-Oct	0.89	<1	22	<1	12	0.32
24-Oct	0.89	<1	14	<1	12	0.29
31-Oct	0.39	<1	<2	<1	12	0.26
08-Nov	0.48	<1	8	<1	11	0.96
13-Nov	0.92	<1	12	<1	10	1.20
22-Nov	0.87	<1	2	<1	9	0.67
27-Nov	0.97	<1	<2	<1	9	0.49
06-Dec	0.79	<1	2	<1	8	0.55
12-Dec	0.54	<1	<2	<1	7	0.49
18-Dec	0.85	<1	NA	<1	7	0.43
22-Dec	0.97	<1	NA	<1	7	0.52
31-Dec	0.48	<1	NA	<1	6	0.45

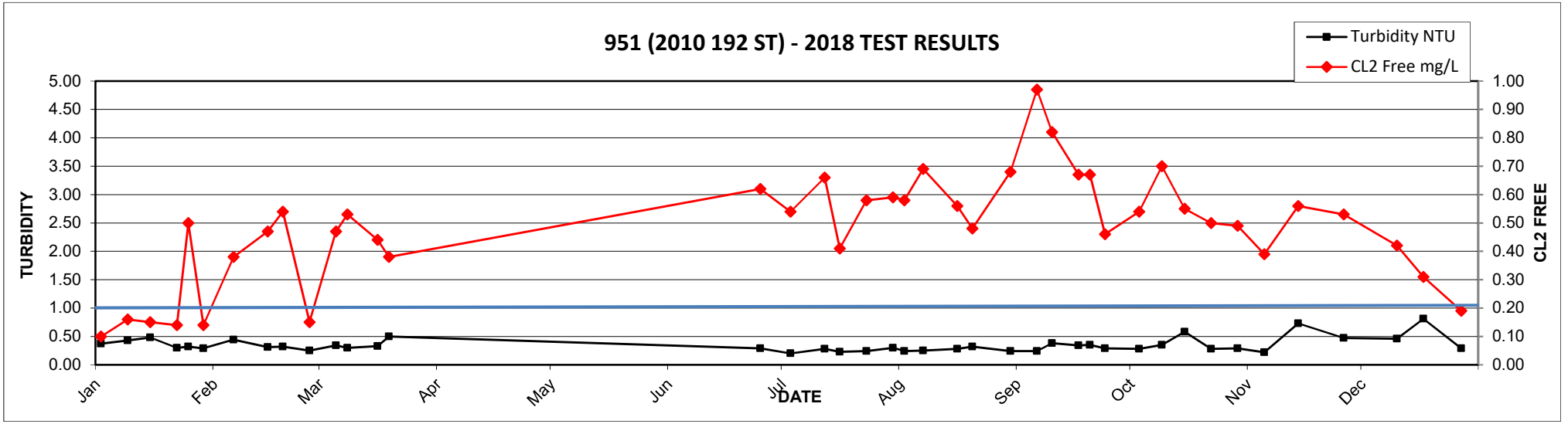

949 (7362 182 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


949 (7362 182 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 951 (2010 192 ST)

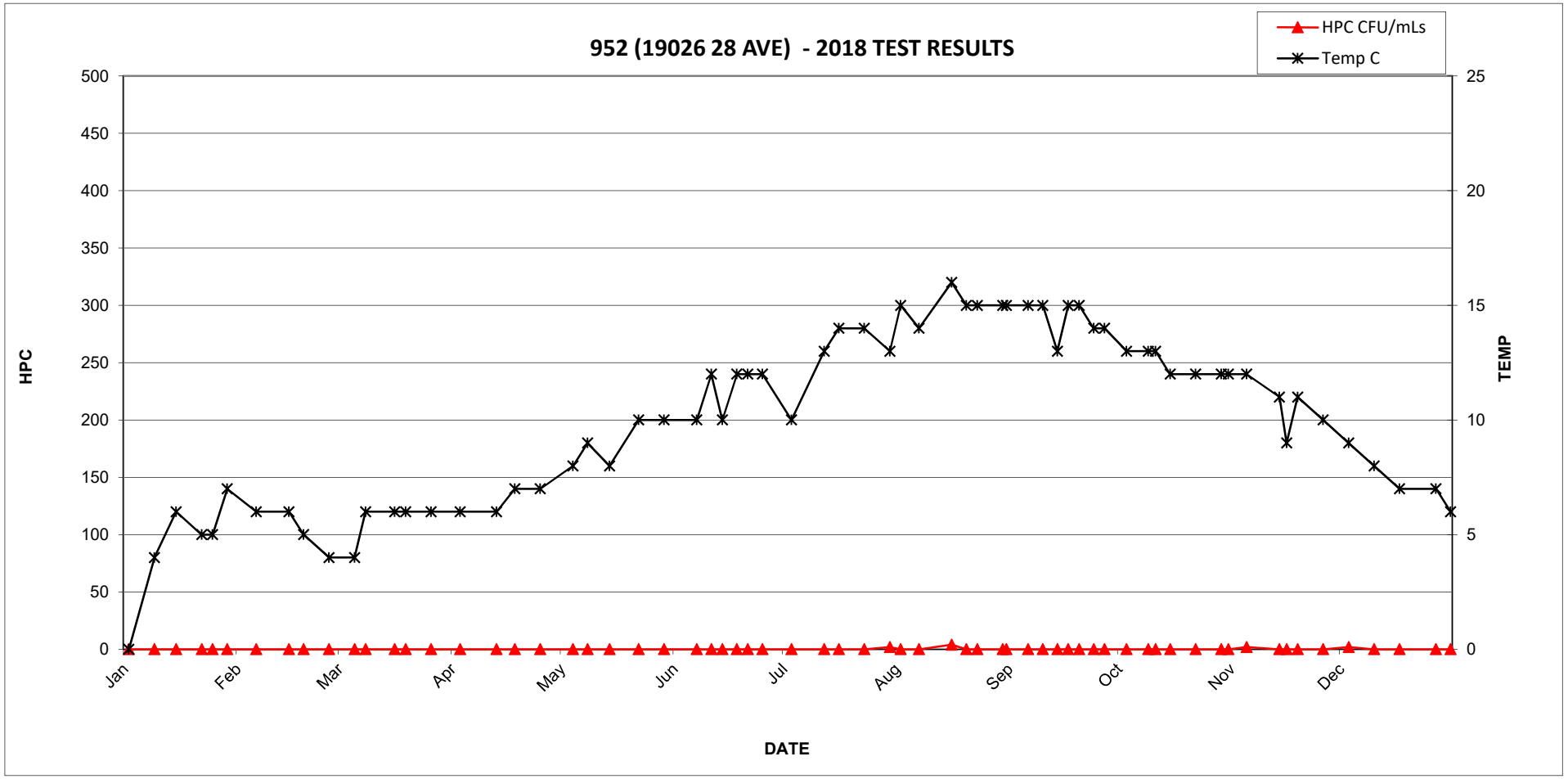
Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.10	<1	160	<1	4	0.37
09-Jan	0.16	<1	240	<1	5	0.43
15-Jan	0.15	<1	230	<1	6	0.48
22-Jan	0.14	<1	2100	<1	7	0.30
25-Jan	0.50	<1	<2	<1	6	0.32
29-Jan	0.14	<1	1100	<1	8	0.29
06-Feb	0.38	<1	<2	<1	7	0.44
15-Feb	0.47	<1	<2	<1	7	0.31
19-Feb	0.54	<1	<2	<1	5	0.32
26-Feb	0.15	<1	500	<1	4	0.25
05-Mar	0.47	<1	4	<1	6	0.34
08-Mar	0.53	<1	<2	<1	7	0.30
16-Mar	0.44	<1	<2	<1	7	0.33
19-Mar	0.38	<1	410	<1	6	0.50
25-Jun	0.62	<1	6	<1	13	0.29
03-Jul	0.54	<1	4	<1	11	0.20
12-Jul	0.66	<1	2	<1	14	0.28
16-Jul	0.41	<1	2	<1	15	0.23
23-Jul	0.58	<1	4	<1	16	0.24
30-Jul	0.59	<1	22	<1	16	0.30
02-Aug	0.58	<1	24	<1	16	0.24
07-Aug	0.69	<1	4	<1	16	0.25
16-Aug	0.56	<1	<2	<1	16	0.28
20-Aug	0.48	<1	<2	<1	15	0.32
30-Aug	0.68	<1	12	<1	17	0.24
06-Sep	0.97	<1	<2	<1	17	0.24
10-Sep	0.82	<1	36	<1	15	0.38
17-Sep	0.67	<1	4	<1	17	0.34
20-Sep	0.67	<1	14	<1	14	0.35
24-Sep	0.46	<1	2	<1	14	0.29
03-Oct	0.54	<1	<2	<1	13	0.28
09-Oct	0.70	<1	20	<1	13	0.35
15-Oct	0.55	<1	10	<1	13	0.58
22-Oct	0.50	<1	36	<1	12	0.28
29-Oct	0.49	<1	58	<1	12	0.29
05-Nov	0.39	<1	30	<1	11	0.22
14-Nov-18	0.56	<1	34	<1	9	0.73
26-Nov	0.53	<1	46	<1	9	0.47
10-Dec	0.42	<1	14	<1	7	0.46
17-Dec	0.31	<1	NA	<1	7	0.81
27-Dec	0.19	<1	NA	<1	6	0.29


951 (2010 192 ST) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


951 (2010 192 ST) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

2018 MV Laboratory Report - 952 (19026 28 AVE)

Date Collected	CL2 Free mg/L	Ecoli MF/100mLs	HPC CFU/mLs	Tcoli MF/100mLs	Temp C	Turbidity NTU
02-Jan	0.62	<1	<2	<1	4	0.51
09-Jan	0.71	<1	<2	<1	6	0.48
15-Jan	0.77	<1	<2	<1	5	0.41
22-Jan	0.73	<1	<2	<1	5	0.39
25-Jan	0.73	<1	<2	<1	7	0.39
29-Jan	0.62	<1	<2	<1	6	0.35
06-Feb	0.60	<1	<2	<1	6	0.52
15-Feb	0.73	<1	<2	<1	5	0.71
19-Feb	0.72	<1	<2	<1	4	0.38
26-Feb	0.81	<1	<2	<1	4	0.31
05-Mar	0.90	<1	<2	<1	6	0.33
08-Mar	0.83	<1	<2	<1	6	0.35
16-Mar	1.10	<1	<2	<1	6	0.40
19-Mar	0.66	<1	<2	<1	6	0.27
26-Mar	0.81	<1	<2	<1	6	0.31
03-Apr	0.93	<1	<2	<1	6	0.38
13-Apr	1.00	<1	<2	<1	7	0.39
18-Apr	0.95	<1	<2	<1	7	0.39
25-Apr	0.98	<1	<2	<1	8	0.32
04-May	0.89	<1	<2	<1	9	0.54
08-May	1.00	<1	<2	<1	8	0.38
14-May	0.86	<1	<2	<1	10	0.45
22-May	1.00	<1	<2	<1	10	0.37
29-May	0.72	<1	<2	<1	10	0.25
07-Jun	0.89	<1	<2	<1	12	0.41
11-Jun	0.69	<1	<2	<1	10	0.25
14-Jun	0.96	<1	<2	<1	12	0.26
18-Jun	0.74	<1	<2	<1	12	0.34
21-Jun	0.77	<1	<2	<1	12	0.54
25-Jun	1.00	<1	<2	<1	10	0.29
03-Jul	0.80	<1	<2	<1	13	0.25
12-Jul	0.74	<1	<2	<1	14	0.26
16-Jul	0.55	<1	<2	<1	14	0.39
23-Jul	0.86	<1	2	<1	13	0.25
30-Jul	0.85	<1	<2	<1	15	0.47
02-Aug	0.77	<1	<2	<1	14	0.29
07-Aug	0.77	<1	4	<1	16	0.26
16-Aug	0.69	<1	<2	<1	15	0.22
20-Aug	0.61	<1	<2	<1	15	0.34
23-Aug	1.20	<1	<2	<1	15	0.31
30-Aug	0.93	<1	<2	<1	15	0.26
31-Aug	1.10	<1	<2	<1	15	0.49
06-Sep	1.10	<1	<2	<1	15	0.25
10-Sep	1.10	<1	<2	<1	13	0.31
14-Sep	1.00	<1	<2	<1	15	0.38
17-Sep	0.94	<1	<2	<1	15	0.28
20-Sep	0.90	<1	<2	<1	14	0.42
24-Sep	0.86	<1	<2	<1	14	0.37
27-Sep	1.00	<1	<2	<1	13	0.52
03-Oct	0.95	<1	<2	<1	13	0.38
09-Oct	0.83	<1	<2	<1	13	0.32
11-Oct	0.94	<1	<2	<1	12	0.40
15-Oct	0.91	<1	<2	<1	12	0.34
22-Oct	0.95	<1	<2	<1	12	0.28
29-Oct	0.84	<1	<2	<1	12	0.30
31-Oct	0.89	<1	2	<1	12	0.28
05-Nov	0.68	<1	<2	<1	11	0.70
14-Nov-18	0.89	<1	<2	<1	9	0.66
16-Nov-18	1	<1	<2	<1	11	0.85
19-Nov-18	0.62	<1	<2	<1	10	0.62
26-Nov	0.77	<1	2	<1	9	0.47
03-Dec	0.86	<1	<2	<1	8	0.71
10-Dec	0.82	<1	<2	<1	7	0.50
17-Dec	0.88	<1	NA	<1	7	0.56
27-Dec	0.54	<1	NA	<1	6	0.30


952 (19026 28 AVE) - 2018 TEST RESULTS
HPC CFU/mLs
Temp C
HPC
TEMP
DATE
Jan
Feb
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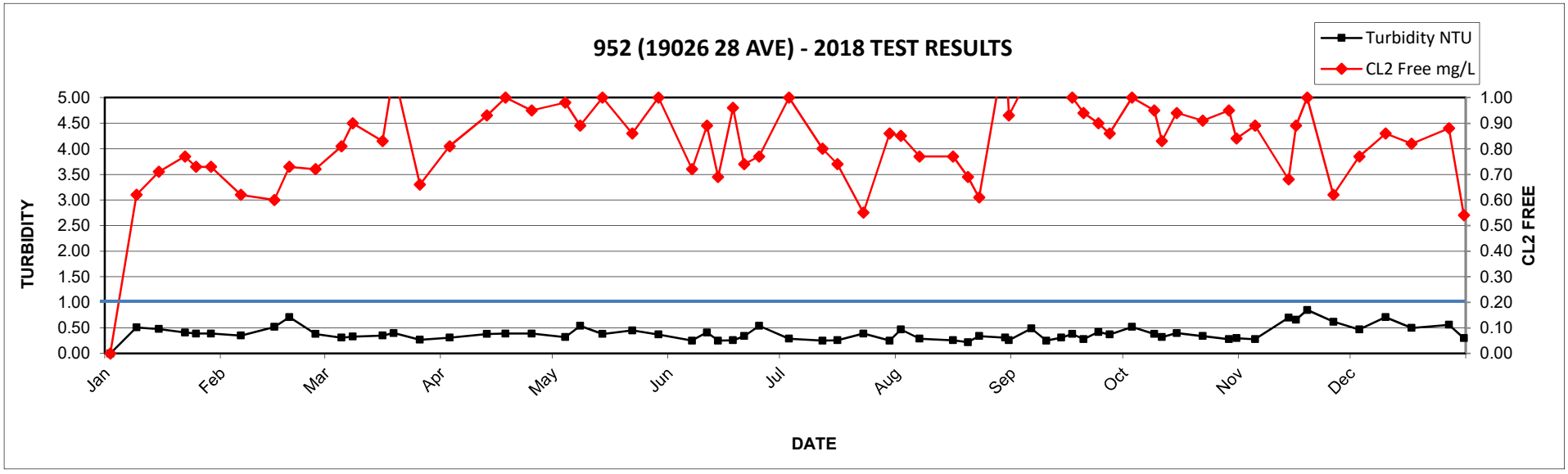
Dec


952 (19026 28 AVE) - 2018 TEST RESULTS
Turbidity NTU
CL2 Free mg/L
TURBIDITY
CL2 FREE
DATE
Jan
Feb
Mar
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May
Jun
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Sep
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APPENDIX B

Water Quality Monitoring and Reporting Plan for Metro Vancouver and Member Municipalities

Water Quality Monitoring and Reporting Plan For Metro Vancouver and Member Municipalities

Updated: September, 2008

Table of Contents

Appendices

1. Introduction

1.1 Background

The Water Quality Monitoring and Reporting Plan (WQMRP) was originally developed under the BC Safe Drinking Water Regulation (BCSDWR) which was promulgated under the Health Act in 1992. In short, the BCSDWR required suppliers of drinking water (purveyors) in BC to hold an Operating Permit which, in effect, confirmed that the Medical Health Officer for the area in question had approved of the public water supply and the purveyor's plans for assuring potability, monitoring, reporting and notification in the case of emergency or other unusual circumstances. The BCSDWR was replaced in 2003 with the BC Drinking Water Protection Regulation (BCDWPR) under the Drinking Water Protection Act (DWPA) which was promulgated in 2001. This update builds on the original WQMRP which was published in May of 2000 as a result of joint efforts between Metro Vancouver, Metro Vancouver Municipalities, and the Region's Medical Health Officers. All parties mentioned above have been involved in the update of the plan.

The Drinking Water Protection Act places a number of responsibilities on water suppliers. Sections relevant to this plan are shown in the table below:

Table 1. Water Supplier Responsibilities Under the Drinking Water Protection Act

Section of Act	Requirement	Relevance
8	Operating Permits and Requirements For Water Systems	Places monitoring and reporting responsibilities on water suppliers.
10	Emergency Response and Contingency Plans	Places requirement for emergency response and contingency plans on water suppliers.
11	Water Monitoring Requirements	Outlines water monitoring and associated responsibilities for water suppliers.
12	Notice if Immediate Reporting Standard Not Met	Outlines immediate reporting responsibilities for laboratories and water suppliers.
13	Water Supplier Must Report Threats to Drinking Water	Places notification responsibilities on water suppliers for situations where the water might not be potable.
15	Publication of Other Information	Places reporting responsibilities on water suppliers.

Even though this document describes a monitoring and reporting plan for Metro Vancouver and its member municipalities using Metro Vancouver water sources, it can also be used as a template for monitoring and reporting on separate water supplies that exist within some municipalities. Many of the monitoring initiatives described in this plan are already in place. Hence, it is written for the most part in the present tense.

1.2 Quality Control

All analyses should be conducted by a laboratory that is approved by the Provincial Health Officer for bacteriological analyses and is certified by the Canadian Association for Environmental Analytical Laboratories (CAEAL) or an equivalent certification program for the other tests performed. It is recognized that certification may not be available for all parameters.

With the exception of *Giardia* and *Cryptosporidium*, all of the microbiological analyses discussed in this report are performed at the GVRD laboratory except for those for the City of Vancouver which are performed at the Provincial Health laboratory (BCCDC laboratory). The Provincial Health Officer has approved both laboratories for the analysis of drinking water samples.

For water from Metro Vancouver sources (Capilano, Seymour, Coquitlam) many of the chemical and physical analyses are performed by Metro Vancouver laboratory. Metro Vancouver laboratory is a member and is accredited by CAEAL. Metro Vancouver laboratory is accredited (or certified) for many of the available parameters offered by CAEAL including general parameters, metals, trihalomethanes (THMs) and total coliforms. Metro Vancouver laboratory also performs analyses for haloacetic acids (HAAs). CAEAL does not offer certification for HAAs or for radioisotopes.

Analyses for organic chemical contaminants (herbicides, pesticides, etc.) and uranium and radioactivity as shown in the Guidelines for Canadian Drinking Water Quality are performed by contract laboratories. The contract laboratories are accredited and the scope of accreditation includes the following parameters: BTEX, PAHs, THMs and specific pesticides. Metro Vancouver uses the Wisconsin State Laboratory of Hygiene, at the University of Wisconsin Center for Health Sciences, for radioactivity analyses. The US Environmental Protection Agency has certified this laboratory for radioactivity related analyses.

CAEAL certification and accreditation are valuable but they are no substitute for critical review of laboratory results (including review of Quality Control/Quality Assurance procedures and results) by the agency responsible for reporting the results. Metro Vancouver reviews all laboratory results (including results from Metro Vancouver laboratory and contract laboratories) for QA/QC and municipalities should do the same for results not reviewed for QA/QC by Metro Vancouver.

Samples should be collected and shipped in accordance with the most recent edition (21st edition now available) of Standard Methods For The Examination of Water and Wastewater (APHA, AWWA,WEF).

2. Definitions

BCDWPR	British Columbia Drinking Water Protection Regulation
BCSDWR	British Columbia Safe Drinking Water Regulation
CAEAL	Canadian Association for Environmental Analytical Laboratories
Distribution System (D)	Municipally owned and operated water mains and reservoirs
DWO	Drinking Water Officer
DWPA	Drinking Water Protection Act
DWPR	Drinking Water Protection Regulation
E. coli	*Escherichia coli* is a member of the coliform group, part of the family Enterobacteriaceae, and is described as a facultative anaerobic, Gram-negative, non-spore forming, rod-shaped bacterium that possesses the enzyme β-glucuronidase.
GCDWQ	Guidelines For Canadian Drinking Water Quality
HPC	Heterotrophic Plate Count
LCOC	Lake City Operations Centre (GVRD)
Primary Disinfection	Initial disinfection of the water as it enters the water transmission system
SCADA	Supervisory Control and Data Acquisition (system)
Source Water (S)	Untreated water as it enters the GVRD water supply intakes.
Total Coliform	Gram-negative, non-spore forming, rod-shaped bacterium that develops a red colony with a metallic (golden) sheen within 24 hours at 35 ºC on an endo-type medium containing lactose.
Transmission System (T)	Large diameter water mains and water reservoirs operated by the GVRD.
WQMRP	Water Quality Monitoring and Reporting Plan

3. Source (Untreated) Water Quality Monitoring

Metro Vancouver monitors both the microbiological and chemical characteristics of the three major water sources, Capilano, Seymour and Coquitlam. Where a municipality uses a water source other than that from Metro Vancouver (i.e. from Capilano, Seymour or Coquitlam), it is the responsibility of the municipality to monitor the source water. Every effort is made to carry out the various monitoring programs according to the frequencies discussed below, however, it should be recognized that occasionally a scheduled sample may be missed due to equipment failure or inclement weather conditions.

3.1 Microbiological Monitoring

3.1.1 Bacteria

An important consideration in the type and degree of treatment required for a water supply is the bacteriological quality of the source water. In order to assist this assessment process in Metro Vancouver, and to maintain an ongoing record of source water quality, samples of untreated water are collected at the water supply intakes daily and analyzed for *E. coli.*

3.1.2 *Giardia* and *Cryptosporidium*

Metro Vancouver routinely monitors the source waters at the water supply intakes for *Giardia* and *Cryptosporidium*. One sample is taken at each intake every week. Analysis is carried out at the Enhanced Water Testing Laboratory, University of British Columbia.

3.2 Chemical and Physical Monitoring

3.2.1 Turbidity

Since elevated turbidity levels in water may interfere with disinfection, it is important that a water utility monitors the turbidity of the source water on a regular basis. Samples are collected daily from all three sources and analyzed for turbidity in the laboratory. These readings constitute Metro Vancouver's official turbidity readings, which are made available to the public daily. In addition, Metro Vancouver has in-line turbidity monitors at all water supply intakes. Results from these monitors are transmitted via SCADA to LCOC where appropriate action (changes in the operation of the water system) can be taken should a turbidity problem develop.

3.2.2 General Chemical and Physical Quality

The chemical and physical characteristics of each water supply (before treatment) are tested on a routine basis according to the frequencies shown in Table 2. Monitoring is used to demonstrate compliance with the GCDWQ, provide up-to-date background information on water quality and to assess long term changes. Some water quality characteristics, such as iron, ammonia and organic carbon, are monitored more frequently by Metro Vancouver depending on operational requirements and other needs. Samples for source water analysis are collected just up-stream of chlorination in the chlorination plants.

Table 2. Physical and Chemical Testing of Metro Vancouver Source Waters (S)

Parameter	Frequency
Aldicarb	Annually
Aldrin + Dieldrin	Annually
Antimony	Semi-annually
Aluminum (Tot. & Diss.)	Semi-annually
Arsenic	Semi-annually
Atrazine + Metabolites	Annually
Azinphos-Methyl	Annually
Barium	Semi-annually
Bendiocarb	Annually
Benzene	Annually
Benzo(α)pyrene	Semi-annually
Boron	Semi-annually
Bromide	Quarterly
Bromoxynil	Annually
Cadmium	Semi-annually
Carbaryl	Annually
Carbofuran	Annually
Carbon Tetrachloride	Annually
Chloride	Annually
Chlorpyrifos	Annually
Chromium	Semi-annually
Colour	Weekly
Copper	Semi-annually
Cyanazine	Annually
Cyanide	Annually
Diazinon	Annually
Dicamba	Annually
Dichlorobenzene, 1,2-	Annually
Dichlorobenzene, 1,4-	Annually
Dichloroethane, 1,2-	Annually
Dichloroethylene, 1,1-	Annually
Dichloromethane	Annually
Dichlorophenol, 2,4-	Annually
Dichlorophenoxyacetic Acid 2,4 (2,4-D)	Annually
Diclofop-Methyl	Annually
Dimethoate	Annually
Dinoseb	Annually
Diquat	Annually
Diuron	Annually
Ethylbenzene	Annually
Fluoride	Annually

Parameter	Frequency
Glyphosate	Annually
Iron	Semi-annually
Lead	Semi-annually
Malathion	Annually
Manganese	Semi-annually
Mercury	Semi-annually
Methoxychlor	Annually
Metolachlor	Annually
Metribuzin	Annually
Monochlorobenzene	Annually
Nitrate	Semi-annually
Nitrilotriacetic Acid (NTA)	Annually
Odour	Complaint Basis
Paraquat (As Dichloride)	Annually
Parathion	Annually
Pentachlorophenol	Annually
pH	Weekly
Phorate	Annually
Picloram	Annually
Radionuclides (Gross Alpha And Beta)	Annually
Selenium	Annually
Simazine	Annually
Sodium	Semi-annually
Sulphate	Semi-annually
Sulphide (as H_2S)	N/A *
Taste	Complaint Basis
Temperature	Quarterly
Terbufos	Annually
Tetrachloroethylene	Annually
Tetrachlorophenol, 2,3,4,6-	Annually
Toluene	Annually
Total Diss. Solids (TDS)	Semi-annually
Trichloroethylene	Annually
Trichlorophenol, 2,4,6-	Annually
Trifluralin	Annually
Turbidity	Daily
Uranium	Annually
Vinyl Chloride	Annually
Xylenes (Total)	Annually
Zinc	Semi-annually

* Sulphide (as H_2S) not monitored on surface water supplies; should be monitored on well water.

4. Transmission/Distribution System Monitoring – Treated Water

4.1 Bacteriology Sampling Stations – Type, Location and Number

Dedicated sampling stations connected directly to the water main are preferred (over convenience stations in public buildings) for a number of reasons including consistency of results and accessibility. If the sample is not constantly running the sample line should be of suitable size to allow water from the main to reach the sample tap after a brief period of flushing.

4.1.1 Metro Vancouver Transmission Mains and Reservoirs

Each day, Metro Vancouver collects a sample from each water supply at a location downstream of disinfection and upstream of the first customer. Metro Vancouver also collects samples weekly from sites at or just before the last connection on all supply mains as well as at other sites of interest including sites just after river crossings. Samples are also collected weekly from all Metro Vancouver treated water reservoirs.

4.1.2 Municipal Distribution Mains

Municipal sampling locations for monitoring the bacteriological quality of the delivered water are distributed as follows:

- 10% source water - ***this refers to water entering the municipal distribution grid from Metro Vancouver transmission mains.*** Samples taken from Metro Vancouver transmission mains in the area can be used to meet this requirement as well as samples from the municipal distribution system just downstream of the connection to Metro Vancouver transmission main.
- 40% medium flow.
- 40% low flow.
- 10% dead ends, unlooped lines, stagnant areas.

The number of samples per municipality, as recommended by the Guidelines for Canadian Drinking Water Quality, is based on population (Table 3). Samples collected from all sites in Metro Vancouver transmission system and reservoirs are analyzed for total coliform bacteria. Samples from municipal distribution systems are analyzed for total coliform and *E. coli* bacteria. All samples analyzed in Metro Vancouver laboratory are also tested for the presence of Heterotrophic Plate Count bacteria on R2A media, with a 5 day incubation at 28 °C. This test is used to monitor the system for the early warning signs of regrowth.

Metro Vancouver sampling locations are shown in Appendix 1. Sampling locations in the municipal distribution systems are shown in Appendix 2.

Table 3. Bacteriology Monitoring – Municipal Samples

City	Population (2004)	Number of Sample Sites	Minimum Number of Samples per Month as Required by Schedule B of the DWPR
Burnaby	209,328	57	111
Coquitlam	126,434	28	103
Delta	101,125	26	100
Langley City	24,980	13	25
Langley Township	93,650	22	99
Maple Ridge	72,937	12	73
New Westminster	60,123	10	60
North Vancouver City	48,619	15	49
North Vancouver District	86,359	34	86
Pitt Meadows	16,267	7	16
Port Coquitlam	58,070	10	58
Port Moody	27,466	6	27
Richmond	176,438	25	108
Surrey	401,839	49	130
Vancouver	578,112	48	148
West Vancouver	44,545	17	45
Total	**2,126,292**	**379**	**1238**

This monitoring program provides a representative picture of drinking water quality in Metro Vancouver water system and within municipal mains. It does not provide a definite picture of drinking water quality within buildings, where water quality can change significantly due to pipe materials, standing times, temperature, and other factors. It can be assumed that samples taken within buildings will be of different quality than those taken from sites on municipal mains.

4.2 Chemical and Physical Parameters

4.2.1 Metro Vancouver Transmission Mains

Table 4 lists the chemical and physical testing program proposed for Metro Vancouver transmission mains. Sampling for the effects of water main lining associated problems will require expanding the sampling for the associated parameters (eg. BTEX) into affected municipal distribution systems as is described in the table.

Table 4. Chemical/Physical Monitoring in Metro Vancouver Transmission System

Parameter	Location	Frequency
Benzo(α)pyrene	Metro Vancouver mains with history of coal tar related problems and a representative number of affected municipal distribution mains.	Semi-annually
Bromate	Metro Vancouver mains downstream of ozonation.	Quarterly
Chloride	Metro Vancouver System. Primary chlorination evaluation stations and downstream of the secondary disinfection stations.	Semi-annually
Ethylbenzene	Metro Vancouver mains with history of epoxy lining related problems and a representative number of affected municipal distribution mains.	As required
Haloacetic acids	Metro Vancouver Sites – end of transmission system.	Quarterly
Odour	Any or all sites.	Complaint Basis
pH	Metro Vancouver Sites – before and after corrosion control.	Semi-annually
Sodium	Metro Vancouver Sites – after corrosion control and secondary disinfection.	Semi-annually
Taste	Any or all sites.	Complaint Basis
Temperature	Metro Vancouver Sites – primary disinfection evaluation stations.	Quarterly
Toluene	Metro Vancouver mains with history of epoxy lining related problems and a representative number of affected municipal distribution mains.	As required
Total Dissolved Solids	Metro Vancouver Sites – pre and post corrosion control.	Semi-annually
Trihalomethanes	Metro Vancouver Sites – end of transmission system.	Quarterly
Turbidity	Metro Vancouver Sites – after treatment.	Collected with bacteriological samples
Xylenes	Metro Vancouver mains with history of epoxy lining related problems and a representative number of affected municipal distribution mains.	As required

4.2.2 Municipal Distribution Mains

The proposed monitoring program for chemical and physical characteristics of the water in municipal distribution mains is shown in Table 5. Except where otherwise noted, approximately 10% of the sample sites in each municipal system will be sampled for the following parameters at the frequency shown. The sample sites for this testing will be selected with regard to local conditions including factors such as water source, pipe materials, location of water treatment facilities, etc.

Table 5. Chemical/Physical Monitoring in Municipal Distribution Systems

Parameter	Location	Frequency
Free Chlorine Residual	All	Tests run when bacteriological samples are taken
Copper	Municipal Distribution System **	Semi-annually
Haloacetic acids	Municipal Sites – cross section, representative of all three sources. Minimum of one per municipality.	Quarterly
Iron	Representative municipal sites – unlined iron and steel mains.	Semi-annually
Lead	Municipal Distribution System **	Semi-annually
Odour	Any or all sites.	Complaint Basis *
pH	Municipal Sites – cross section, representative of all three sources. Minimum of one per municipality.	Semi-annually
Taste	Any or all sites.	Complaint Basis *
Temperature	Representative municipal sites.	Quarterly
Trihalomethanes	Municipal Sites – cross section, representative of all sources, minimum of three per municipality.	Quarterly
Turbidity	Municipal Sites – all.	Collected with bacteriological samples
Vinyl Chloride	Municipal sites where PVC pipe is used in the distribution system – minimum of one per potentially affected system.	Semi-annually
Zinc	Municipal Distribution System **	Semi-annually

* If a complaint comes to Metro Vancouver, Metro Vancouver will bring it to the attention of the relevant municipality.

** The GCDWQ stipulate that samples for metals analysis should be from a flushed location. This provides rationale to sample for metals in the distribution system as opposed to locations in buildings.

5. Reporting

Section 15 (b) of the DWPA requires a water supplier to report on monitoring results. As well, in accordance with Sec. 11 of the DWPR, each purveyor, municipal and Metro Vancouver, must make an annual written report to the consumers and to its Medical Health Officer by the end of June. The annual report will include the quality of the water with respect to all microbiological and chemical standards. This report must also include the purveyor's plan (including time lines) for addressing any standards that are not met. Reporting is summarized in Table 6.

Table 6. Reports

Title	Report Content	Target Audience	Frequency
Metro Vancouver Routine Municipal Reports	Municipal distribution system microbiological analyses and related parameters (chlorine, turbidity, temperature, HPC).*	Municipalities** Health Regions	Batch basis. In general once per week.
Metro Vancouver Monthly Reports	Metro Vancouver transmission mains microbiological analyses and related parameters (chlorine, turbidity, temperature, HPC). Information is used to supplement municipal monitoring data.	Health Regions	Monthly
GVRD (GVWD) Annual Water Quality Report	Metro Vancouver source water microbiological, chemical and physical quality, Metro Vancouver treated water quality, municipal water quality. Summary presentation of all monitoring information.	Health Regions Metro Vancouver Board Municipal Councils General Public	Annually (Public Report by the end of June)
Municipal Annual Water Quality Reports	Municipal distribution system water quality, microbiological and related parameters (see Table 5). Summary presentation of all source water chemistry and distribution system water monitoring information.	Health Regions Municipal Councils General Public	Annually (Public Report by the end of June)

* Reports from Metro Vancouver lab for samples from municipalities using Metro Vancouver lab.

** Preliminary reports are provided verbally or by electronic mail immediately if Metro Vancouver laboratory suspects a problem at a particular sample site. Written reports are sent out by Metro Vancouver lab only after data have been certified. Results not meeting standards will be highlighted in written reports where possible.

The WQMRP has been accepted by both Vancouver Coastal Health and the Fraser Health Authority. The WQMRP is intended to fully meet the requirements of the DWPA and the DWPR however it is acknowledged that there may be circumstances that the water supplier's MHO, DWO (or DWO delegate) may place additional requirements in accordance with the provisions of the DWPA.

6. Emergency Response

6.1 Notification Requirements

Public health should be notified in the situations shown in Table 7.

Table 7. Notification for Unusual Situations Affecting Water Potability

Situation	Notifying Agency	Agency Notified	Time Frame For Notification
Metro Vancouver *E. Coli* Positive Sample	Metro Vancouver	Metro Vancouver MHO Municipality(ies) [1]	Immediate
Municipal *E. Coli* Positive Sample	Laboratory [2] Municipality [3]	MHO (or delegate)	Immediate
Chemical Contamination - Metro Vancouver	Metro Vancouver	Metro Vancouver MHO Municipality(ies) [1]	Immediate
Chemical Contamination - Municipality	Municipality	MHO (or delegate)	Immediate
Turbidity > 5 NTU	Metro Vancouver	Metro Vancouver MHO Municipality(ies) [1]	Immediate
Disinfection Failure – Source Water (Primary Disinfection)	Metro Vancouver	Metro Vancouver MHO Municipality(ies) [1]	Immediate (As per DWPA)
Disinfection Failure – Rechlorination (Secondary Disinfection)	Metro Vancouver	Metro Vancouver MHO Municipality(ies) [1]	Immediate, in any situation in which the BCDWPR or the GCDWQ may not be met.
Loss of Pressure Due to High Demand	Municipality	MHO (or delegate) Metro Vancouver	Immediate
Line Break [4] – Municipality	Municipality	MHO (or delegate)	As required by Health Regions
Line Break [4] – Metro Vancouver	Metro Vancouver	Municipality(ies)	As required by Municipalities
Line Break [5] – Municipality	Municipality	MHO (or delegate)	Immediate
Line Break [5] – Metro Vancouver	Metro Vancouver	Metro Vancouver MHO Municipality(ies) [1]	Immediate

1. Affected municipality(ies) to notify local public health contact.
2. Laboratory to immediately notify the MHO, DWO (or delegates) and the water supplier as per section 12 (1) of the DWPA.
3. Municipality to immediately notify the MHO, DWO (or delegates) as per section 12 (2) of the DWPA.
4. With no suspected contamination.
5. With suspected contamination.

6.2 Response Plans

Emergency situations with Metro Vancouver and municipal water supplies have been divided into four main areas of response as follows:

- An *E. coli* positive sample (in either Metro Vancouver water system or in a municipal water system).
- Loss of disinfection.
- A turbidity event.
- Loss of Metro Vancouver and municipal water system integrity (potential contamination).

A response protocol for each situation is provided in Appendix 3.

In addition, under Sec. 10 of the DWPA, each municipality is required to have its own emergency response plan to cover specific emergencies.

A Contingency Plan for Water Quality is provided in Appendix 4 for those situations where a boil water advisory may be required.

6.3 Major Emergency Situations

Major natural disasters such as earthquakes would require the implementation of the emergency response plans that have been or are being developed by Metro Vancouver and each of the member municipalities. Documentation of these plans is beyond the scope of this document.

APPENDIX C

B.C. Drinking Water Protection Regulation

Guidelines for Canadian Drinking Water Quality – Summary Table

B.C. Reg. 200/2003
O.C. 508/2003

Deposited I'•1ay 16, 2003

Drinking Water Pi•otection Act

DRINKING WATER **PROTECTION REGULATION**

Note: Check the Cumulative Regulation Bulletin 2015 and 2016
for any non-consolidated amendments to this regulation that may be in effect.

[includes amendments up to B.C. Reg 41/2016, February 29, 2016]

Link to Point in Time

Contents

Definitions

1 Inthis regulaGon:

"Act" means the *Drinking Water Protection Act;*

"building system" means a system, within a building, to which the British Columbia Plumbing Code applies, that receives water from a water supply system operating under a valid operating permit under the Act;

"connection" means the line from the water main to a dwelling, campsite or premises;

"decal" means an adhesive label that is issued and affixed to an operating permit at the time fees under this regulation are paid or remitted;

"fiscal year" means the period from April 1 in one year to March 31 in the next year;

"small system" means a water supply system that serves up to 500 individuals during any 24 hour period;

"system within a system" means a water supply system that, in the opinion of a drinking water officer or issuing official,

(a) redistributes water from a water supply system operating under a valid operating permit under the Act, and

(b) does not require further treatment processes, additional infrastructure or ongoing maintenance to prevent a drinking water health hazard.

[en. B.C. Reg. 352/2005, s. 1; am. B.C. Regs. 5/2007, App. 1, s. 1; 363/2008, s. 1; 87/2011, s. 1.]

Standards for potable water

2 The prescribed water quality standards for potable water are set out in Schedule A.

Domestic water system

3 The following are excluded from the definition of "domestic water system" in the Act:

(a) equipment, works and facilities constructed, operated or maintained

(i) under a licence, as defined in the *Water Sustainability Act,* for conservation, power or storage purposes,

(ii) under a permit issued under the *Water Sustainability Act,*

(iii) for bottled water production or distribution, or

(iv) for drinking water dispensing machines;

(b) a reservoir relating to a licence or permit referred to in paragraph (a);

(c) a building system;

(d) a system within a system.

[en. B.C. Reg. 352/2005, s. 2; am. B.C. Regs. 363/2008, s. 2; 87/2011, s. 2; 41/2016, s. 9 (a).]

Exemptions

3.1 The following are exempt from section 6 of the Act:

(a) a small system, if

(i) each recipient of the water from the small system has a point of entry or point of use treatment system that makes the water potable, and

(ii) the water supplier ensures that the location of non-potable water discharge and non-potable water piping are identified by markings that are permanent, distinct and easily recognized;

(b) a water supply system, including a small system, if

(i) the system does not provide water for human consumption or food preparation purposes,

(ii) the system is not connected to a water supply system that provides water for human consumption or food preparation purposes, and

(iii) the water supplier ensures that the location of non-potable water discharge and non-potable water piping are identified by markings that are permanent, distinct and easily recognized.

[en. B.C. Reg. 122/2013.]

Prescribed water supply systems

4 (1) All water supply systems are prescribed for the purposes of sections 8, 10, 11 and 22 (1) (b) of the Act.

(2) All water supply systems, except small systems, are prescribed for the purposes of section 9 of the Act.

[en. B.C. Reg. 352/2005, s. 4.]

Treatment

5 (1) In this section:

"surface water" means water from a source which is open to the atmosphere and includes streams, lakes, rivers, creeks and springs.

(2) For the purposes of section 6 (b) of the Act, drinking water from a water supply system must be disinfected by a water supplier if the water originates from

(a) surface water, or

(b) groundwater that, in the opinion of a drinking water officer, is at risk of containing pathogens.

[am. B.C. Regs. 352/ 2005, s. 5; 41/20 16, s. 9 (b) and (c).]

Construction permits

6 (1) The following individuals are authorized to issue construction permits:

(a) a drinking water officer who is a professional engineer, or who is working under the direction of a professional engineer;

(b) a professional engineer who has been approved by a drinking water officer.

(2) An issuing official under subsection (1) may issue a construction permit to a person after receiving an application in a form satisfactory to the issuing official.

(3) A person does not require a construction permit

(a) if the person is undertaking emergency repairs to a water supply system,

(b) for a water supply system that is a tank truck or a vehicle water tank, or

(c) for a small system, provided that an issuing official waives the requirement for a construction permit.

(4) A valid and subsisting construction permit that was issued under section 2 of the Safe Drinking Water Regulation, B.C. Reg. 230/92, before the repeal of that regulation is deemed to be a construction permit issued

under this regulation and remains valid until its expiration date unless earlier surrendered, suspended or cancelled.

[am. B.C. Reg. 352/2005, s. 6.]

Operating permits and fees

7 (1) A drinking water officer may issue an operating permit to a water supplier after receiving

(a) an application for an operating permit in a form satisfactory to the drinking water officer, and

(b) the fee set out in Schedule C.

(2) An operating permit in force on March 31 of a year expires on March 31 of that year.

(3) Despite subsection (2), an operating permit issued for a period of less than 12 months expires on the date specified on the approved application.

(4) A drinking water officer may renew an operating permit if

(a) the operating permit was in force anytime during the 12 months prior to the renewal in respect of the same water supply system, and

(b) the fee set out in Schedule C is paid before the effective date of the renewal.

(5) Approval is given for the remission of a fee paid under this section if

(a) the water supplier applies for the remission, and

(b) the fee is for a month of the fiscal year for which the water supplier was not required to have the operating permit to which the fee applies.

(6) A valid and subsisting operating permit that was issued under section 4 of the Safe Drinking Water Regulation, B.C. Reg. 230/92, before the repeal of that regulation is deemed to be an operating permit issued under this regulation and remains valid until its expiration date unless earlier surrendered, suspended or cancelled.

[en. B.C. Reg. 5/2007, App. 1, s. 2.]

Decals

7.1 (1) If, in accordance with section 7, an operating permit is issued or renewed, a drinking water officer must issue a decal to the water supplier to cover the period for which the fee is paid.

(2) If an operating permit does not bear a decal or if that decal does not cover the current date, then the operating permit is not valid.

[en. B.C. Reg. 5/2007, App. 1, s. 2.]

Permits and decals not transferable

7 .2 An operating permit or a decal is not transferable.

[en. B.C. Reg. 5/2007, App. 1, s. 2.]

Temporary facilities

7 .3 Despite sections 7 and 7.1, if an operating permit is issued for no more than 14 days during a fiscal year, then

(a) approval is given for a reduction in the applicable fee so that the water supplier is not required to pay the fee set out in the Schedule, and

(b) the operating permit is not required to bear a decal to be valid.

[en. B.C. Reg. 5/2007, App. :t, s. 2.]

Water monitoring analysis

8 (1) A water supplier must transport water samples to a laboratory in accordance with the procedures established by a drinking water officer.

(2) For the purpose of section 11 (1) of the Act, a water supplier must monitor for total coliform bacteria and, effective April 1, 2006, *Escherichia coli,* at the frequencies set out in Schedule B of this regulation.

(3) Despite subsection (2), a drinking water officer may establish different sampling frequencies for a water supplier.

(4) A laboratory carrying out monitoring analyses for the parameters referred to in subsection (2) must be approved in writing by the Provincial health officer.

(5) If requested to do so by a drinking water officer, a laboratory must provide to the drinking water officer, the water supplier, or both, a report

(a) listing all water samples sent by the water supplier to the laboratory, and

(b) describing, for all samples analyzed, the results of any monitoring analyses for total coliform bacteria and *Escherichia co/i.*

[am. B.C. Reg. 352/2005, s. 7.]

Immediate reporting standard

9 (1) Subject to subsection (2), immediate reporting is required under section 12 of the Act if the water quality standards in Schedule A are not met for the fecal coliform bacteria or *Escherichia coli* parameters.

(2) Immediate reporting is not required if a water sample that failed to meet the immediate reporting standard

(a) was collected from a location in the water supply system before the water is treated for the removal or inactivation of pathogens,

(b) is not used for domestic purposes, or

(c) is water for which a public advisory to boil for drinking water has been issued.

Public notification

10 If water provided by a domestic water system is not or may not be potable water, the owner of a public premises that is served by the domestic water system must do both of the following:

(a) notify the public that the water is not potable water by posting a sign at every sink or drinking water fountain accessible to the public;

(b) if normal business practices provide an opportunity, verbally advise any person who may use the domestic water system for a domestic purpose that the water is not potable water.

Time limits for publication

11 For the purposes of section 15 (b) of the Act, a water supplier must prepare and make public, within 6 months of the end of the calendar year, an annual report of the results of the monitoring required by this regulation, its operating permit or the drinking water officer.

Qualification standards for persons operating water supply systems

12 (1) In this section, "Environmental Operators Certification Program" means the program of classification and certification for water supply system operators established in British Columbia by the Environmental Operators Certification Program Society.

(2) Subject to subsections (3) and (6), a person is qualified to operate, maintain or repair a water supply system if the person is certified by the Environmental Operators Certification Program for that class of system as classified under the Environmental Operators Certification Program.

(3) Subsection (2) applies to water supply systems classified as level 1 or level 2, and effective January 1, 2006, water supply systems classified as level 3.

(4) Despite section 4 (2) of this regulation, an operating permit may require a person to be certified to operate, maintain or repair a small system.

(5) Despite subsection (3), an operating permit may establish a later date on which subsection (2) applies to a water supply system.

(6) Subsection (2) does not apply to a person with specialist knowledge immediately relevant to maintenance or repair of a water supply system provided the maintenance or repair is conducted following procedures approved by a person certified by the Environmental Operators Certification Program.

[en. B.C. Reg. 352/ 200s, s. 8.]

Emergency response and contingency plan

13 (1) In this section, "public health inspector" means a public health inspector as defined in the *Health Act.*

(2) A water supplier must include the following in an emergency response and contingency plan:

(a) the names and telephone numbers of

(i) the management personnel for the water supply system,

(ii) the drinking water officer, medical health officer and public health inspector, and

(iii) other agencies and officials specified by the drinking water officer;

(b) the persons referred to in paragraph (a) to be contacted in each type of emergency or abnormal operational circumstance;

(c) the steps to follow in the event of an emergency or abnormal operational circumstance;

(d) protocols to follow respecting public notice if an immediate reporting standard is not met.

(3) A water supplier must

(a) make the emergency response and contingency plan accessible to the staff of the water supplier, and

(b) provide a copy of the emergency response and contingency plan to the drinking water officer.

(4) A water supplier must make a summary of the emergency response and contingency plan accessible to the users served by its water supply system.

(5) A water supplier must not include in the summary referred to in subsection (4) any information that may reasonably pose a risk to the water supply system.

Well floodproofing

14 For the purpose of section 16 of the Act, the following persons must floodproof their wells in the manner described in section 63 (a) and (b) of the Groundwater Protection Regulation:

(a) the owner or operator of a well that provides or may provide drinking water and that is identified in an assessment as being at risk of flooding;

(b) the owner of a well completed after October 31, 2005 that is for the purpose of supplying a water supply system.

[en. B.C. Reg. 300/2004; am. B.C. Reg. 41/2016, s. 9 (d).]

Assessment response plan

15 For the purposes of section 22 (3) of the Act, an assessment response plan must include provisions to identify, eliminate and prevent cross connections with non-potable water sources.

Schedule A

Water Quality Standards for Potable Water

(sections 2 and 9)

Parameter:	Standard:
Fecal coliform bacteria	No detectable fecal coliform bacteria per 100 ml
Escherichia coli	No detectable *Escherichia coli* per 100 ml
Total coliform bacteria	
(a) 1 sample in a 30 day period	No detectable total coliform bacteria per 100 ml
(b) more than 1 sample in a 30 day period	At least 90% of samples have no detectable total coliform bacteria per 100 ml and no sample has more than 10 total coliform bacteria per 100 ml

Schedule B

Frequency of Monitoring Samples for Prescribed Water Supply Systems

(section 8)

Population Served by the Prescribed Water Supply System:	Number of Samples Per Month:
less than 5 000	4
5 000 to 90 000	1 per 1 000 of population
more than 90 000	90 plus 1 per 10 000 of population in excess of 90 000

Schedule C

[en. B.C. Reg. 5/2007, App. 1, s. 3.]

Operating Permit Fees

(section 7)

1 The operating permit fee for a fiscal year is:

(a) for 1 - 14 connections	no charge
(b) for 15 - 300 connections	$150
(c) for 301 - 10 000 connections	$250
(d) for 10 001 - 20 000 connections	$500
(e) for more than 20 000 connections	$1 000

2 If an operating permit is issued for a period of less than 12 months, the fee is calculated using the following formula:

$$\frac{n \times z}{12}$$

where

n is the number of calendar months of the fiscal year in which the permit will apply, and

z is the applicable fee under section 1.

[Provisions relevant to the enactment of this regulation: *Drinking Water Protection Act,* S.B.C. 2001, c. 9, sections 48 and 49]

B.C Drinking Water Protection Regulation

Guidelines for Canadian Drinking Water Quality

Guidelines for Canadian Drinking Water Quality
Summary Table

Prepared by the

Federal-Provincial-Territorial Committee on Drinking Water

of the

Federal-Provincial-Territorial Committee on Health and the Environment

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Other documents for the Guidelines for Canadian Drinking Water Quality can be found on the following web page:
www.healthcanada.gc.ca/waterquality

Table of Contents

Introduction

The Guidelines for Canadian Drinking Water Quality are established by the Federal-Provincial-Territorial Committee on Drinking Water (CDW) and published by Health Canada. This summary table is updated regularly and published on Health Canada's website (www.healthcanada.gc.ca/waterquality). It supersedes all previous electronic and printed versions, including the 6th edition of the Guidelines for Canadian Drinking Water Quality (1996).

Each guideline was established based on current, published scientific research related to health effects, aesthetic effects, and operational considerations. Health-based guidelines are established on the basis of comprehensive review of the known health effects associated with each contaminant, on exposure levels and on the availability of treatment and analytical technologies. Aesthetic effects (e.g., taste, odour) are taken into account when these play a role in determining whether consumers will consider the water drinkable. Operational considerations are factored in when the presence of a substance may interfere with or impair a treatment process or technology (e.g., turbidity interfering with chlorination or UV disinfection) or adversely affect drinking water infrastructure (e.g., corrosion of pipes).

The Federal-Provincial-Territorial Committee on Drinking Water establishes the *Guidelines for Canadian Drinking Water Quality* specifically for contaminants that meet all of the following criteria:

1. Exposure to the contaminant could lead to adverse health effects in humans;
2. The contaminant is frequently detected or could be expected to be found in a large number of drinking water supplies throughout Canada; and
3. The contaminant is detected, or could be expected to be detected, in drinking water at a level that is of possible human health significance.

If a contaminant of interest does not meet all these criteria, CDW may choose not to establish a numerical guideline or develop a Guideline Technical Document. In that case, a Guidance Document may be developed.

Older guidelines are systematically reviewed in order to assess the need to update them; in the tables, guidelines that have been reaffirmed include both the original approval and reaffirmation year indicated after the name of the parameter.

Science-based documents published as part of the Guidelines for Canadian Drinking Water Quality (i.e., Guideline Technical Documents, Guidance Documents) are developed through a documented process which includes a literature review, internal and external peer-reviews, public consultations and Federal-Provincial-Territorial approval processes. For more information on specific guidelines, please refer to the guideline technical document or guidance document for the parameter of concern, available on the Health Canada website (www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index-eng.php).

Membership of the Federal-Provincial-Territorial Committee on Drinking Water

Jurisdictional representatives

Alberta	Department of Environment and Parks	Dr. Donald Reid
British Columbia	Ministry of Health	Mr. David Fishwick
Manitoba	Manitoba Sustainable Development	Ms. Kim Philip
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Tables

Table 1. Microbiological Parameters

In general, the highest priority guidelines are those dealing with microbiological contaminants, such as bacteria, protozoa and viruses. As a result of challenges with routine analysis of harmful microorganisms that could potentially be present in inadequately treated drinking water, the microbiological guidelines focus on indicators (*E.coli*, total coliforms) and treatment goals. The use of a multi-barrier approach that includes source water protection, adequate treatment, including disinfection, and a well maintained distribution system can reduce microorganisms to levels that have not been associated with illness, as well as meet the guidelines outlined below.

Parameter (approval)	Guideline	Common sources	Health considerations	Applying the guideline
Enteric protozoa: *Giardia* and *Cryptosporidium* (2012)	Treatment goal: Minimum 3 log removal and/or inactivation of cysts and oocysts	Human and animal faeces	*Giardia* and *Cryptosporidium* are commonly associated with gastrointestinal upset (nausea, vomiting, diarrhoea). Less common health effects vary. *Giardia* infections may include prolonged gastrointestinal upset, malaise and malabsorption. *Cryptosporidium* infections, in immunocompromised individuals, can occur outside the gastrointestinal tract including in the lungs, middle ear, and pancreas.	Monitoring for *Cryptosporidium* and *Giardia* in source waters will provide valuable information for a risk-based assessment of treatment requirements. Depending on the source water quality, a greater log removal and/or inactivation may be required.
Enteric viruses (2011)	Treatment goal: Minimum 4 log reduction (removal and/or inactivation) of enteric viruses	Human faeces	Commonly associated with gastrointestinal upset (nausea, vomiting, diarrhoea); less common health effects can include respiratory symptoms, central nervous system infections, liver infections and muscular syndromes.	Routine monitoring for viruses is not practical; characterize source water to determine if greater than a 4 log removal or inactivation is necessary.
Escherichia coli (*E. coli*) (2012)	MAC: None detectable per 100 mL	Human and animal faeces	The presence of *E. coli* indicates recent faecal contamination and the potential presence of microorganisms capable of causing gastrointestinal illnesses; pathogens in human and animal faeces pose the most immediate danger to public health.	*E. coli* is used as an indicator of the microbiological safety of drinking water; if detected, enteric pathogens may also be present. *E. coli* monitoring should be used, in conjunction with other indicators, as part of a multi-barrier approach to producing drinking water of an acceptable quality.

Parameter (approval)	Guideline	Common sources	Health considerations	Applying the guideline
Total coliforms (2012)	MAC of none detectable/100 mL in water leaving a treatment plant and in non-disinfected groundwater leaving the well	Human and animal faeces; naturally occurring in water, soil and vegetation	Total coliforms are not used as indicators of potential health effects from pathogenic microorganisms; they are used as a tool to determine how well the drinking water treatment system is operating and to indicate water quality changes in the distribution system. Detection of total coliforms from consecutive samples from the same site or from more than 10% of the samples collected in a given sampling period should be investigated.	Total coliforms should be monitored in the distribution system because they are used to indicate changes in water quality. In water leaving a treatment plant, total coliforms should be measured in conjunction with other indicators to assess water quality; the presence of total coliforms indicates a serious breach in treatment. In a distribution and storage system, detection of total coliforms can indicate regrowth of the bacteria in biofilms or intrusion of untreated water. In non-disinfected groundwater, the presence of total coliforms may indicate that the system is vulnerable to contamination, or it may be a sign of bacterial regrowth.
Turbidity (2012)	Treatment limits for individual filters or units: - Conventional and direct filtration: ≤ 0.3 NTU[1] - slow sand and diatomaceous earth filtration: ≤ 1.0 NTU[2] - membrane filtration: ≤ 0.1 NTU[3]	Naturally occurring particles: *Inorganic*: clays, silts, metal precipitates *Organic*: decomposed plant & animal debris, microorganisms	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	Guidelines apply to individual filter turbidity for systems using surface water or groundwater under the direct influence of surface water. The decision to exempt a waterworks from filtration should be made by the appropriate authority based on site-specific considerations, including historical and ongoing monitoring data. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less. For systems that use groundwater, turbidity should generally be below 1.0 NTU.

[1] in at least 95% of measurements either per filter cycle or per month; never to exceed 1.0 NTU.
[2] in at least 95% of measurements either per filter cycle or per month; never to exceed 3.0 NTU.
[3] in at least 99% of measurements per operational filter period or per month. Measurements greater than 0.1 NTU for a period greater than 15 minutes from an individual membrane unit should immediately trigger an investigation of the membrane unit integrity.

Table 2. Chemical and Physical Parameters

Guidelines for chemical and physical parameters are:

1. health based and listed as maximum acceptable concentrations (MAC);
2. based on aesthetic considerations and listed as aesthetic objectives (AO); or
3. established based on operational considerations and listed as operational guidance values (OG).

In general, the highest priority guidelines are those dealing with microbiological contaminants. Any measure taken to reduce concentrations of chemical contaminants should not compromise the effectiveness of disinfection.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
T	Aluminum (1998)		OG: < 0.1 (conventional treatment); < 0.2 (other treatment types)	Aluminum salts used as coagulants in drinking water treatment; naturally occurring	There is no consistent, convincing evidence that aluminum in drinking water causes adverse health effects in humans.	The operational guideline applies to treatment plants using aluminum-based coagulants; it does not apply to naturally occurring aluminum found in groundwater. For treatment plants using aluminum-based coagulants, monthly samples should be taken of the water leaving the plant; the OGs are based on a running annual average of monthly samples.
I	Ammonia (2013)	None required		Naturally occurring; released from agricultural or industrial wastes; added as part of chloramination for drinking water disinfection	Levels of ammonia, either naturally present in the source water or added as part of a disinfection strategy, can affect water quality in the distribution system (e.g., nitrification) and should be monitored.	Guideline value not necessary as it is produced in the body and efficiently metabolized in healthy people; no adverse effects at levels found in drinking water. To help prevent nitrification, limit excess free ammonia entering the distribution system to below 0.1 mg/L, and preferably below 0.05 mg/L, measured as nitrogen. Nitrification can lead to the formation of nitrite/nitrate, decreased chloramine residual and increased bacterial count.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
I	Antimony (1997)	0.006		Naturally occurring (erosion); soil runoff; industrial effluents; leaching from plumbing materials and solder	**Health basis of MAC:** Microscopic changes in organs and tissues (thymus, kidney, liver, spleen, thyroid)	MAC takes into consideration analytical achievability; plumbing should be thoroughly flushed before water is used for consumption.
I	Arsenic (2006)	0.010 ALARA		Naturally occurring (erosion and weathering of soils, minerals, ores); releases from mining; industrial effluent	**Health basis of MAC:** Cancer (lung, bladder, liver, skin) (classified as human carcinogen) **Other:** Skin, vascular and neurological effects (numbness and tingling of extremities)	MAC based on treatment achievability; elevated levels associated with certain groundwaters; levels should be kept as low as reasonably achievable.
I	Asbestos (1989, 2005)	None required		Naturally occurring (erosion of asbestos minerals and ores); decay of asbestos-cement pipes		Guideline value not necessary; no evidence of adverse health effects from exposure through drinking water.
P	Atrazine (1993)	0.005		Leaching and/or runoff from agricultural use	**Health basis of MAC:** Developmental effects (reduced body weight of offspring) **Other:** Potential increased risk of ovarian cancer or lymphomas (classified as possible carcinogen)	MAC applies to sum of atrazine and its *N*-dealkylated metabolites - diethylatrazine, deisopropylatrazine, hydroxyatrazine, diaminochlorotriazine; Persistent in source waters.
P	Azinphos-methyl (1989, 2005)	0.02		Leaching and/or runoff from agricultural use	**Health basis of MAC:** Neurological effects (plasma cholinesterase)	All uses were phased out by 2012.
I	Barium (1990)	1.0		Naturally occurring; releases or spills from industrial uses	**Health basis of MAC:** Increases in blood pressure, cardiovascular disease	
O	Benzene (2009)	0.005		Releases or spills from industrial uses	**Health basis of MAC:** Bone marrow (red and white blood cell) changes and cancer (classified as human carcinogen) **Other:** Blood system and immunological responses	MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing.
O	Benzo[*a*]pyrene (2016)	0.000 04		Leaching from liners in water distribution systems	**Health basis of MAC:** Stomach tumours (classified as human carcinogen)	

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
I	Boron (1990)	5		Naturally occurring; leaching or runoff from industrial use	**Health basis of MAC:** Reproductive effects (testicular atrophy, spermatogenesis) **Other:** Limited evidence of reduced sexual function in men	MAC based on treatment achievability.
DBP	Bromate (1998)	0.01		By-product of drinking water disinfection with ozone; possible contaminant in hypochlorite solution	**Health basis of MAC:** Renal cell tumours (classified as probable carcinogen)	MAC based on analytical and treatment achievability.
P	Bromoxynil (1987, 2005)	0.005		Leaching or runoff from agricultural use	**Health basis of MAC:** Reduced liver to body weight ratios	
I	Cadmium (1986, 2005)	0.005		Leaching from galvanized pipes, solders or black polyethylene pipes; industrial and municipal waste	**Health basis of MAC:** Kidney damage and softening of bone	
I	Calcium (1987, 2005)	None required		Naturally occurring (erosion and weathering of soils, minerals, ores)		Guideline value not necessary, as there is no evidence of adverse health effects from calcium in drinking water; calcium contributes to hardness.
P	Carbaryl (1991, 2005)	0.09		Leaching or runoff from agricultural use	**Health basis of MAC:** Decreased kidney function (may be rapidly reversible after exposure ceases)	
P	Carbofuran (1991, 2005)	0.09		Leaching or runoff from agricultural use	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition) and growth suppression	
O	Carbon tetrachloride (2010)	0.002		Industrial effluents and leaching from hazardous waste sites	**Health basis of MAC:** Liver toxicity **Other:** Kidney damage; liver tumours (classified as probable carcinogen)	MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing.
D	Chloramines (1995)	3.0		Monochloramine is used as a secondary disinfectant; formed in presence of both chlorine and ammonia	**Health basis of MAC:** Reduced body weight gain **Other:** immunotoxicity effects	MAC is for total chloramines based on health effects associated with monochloramine and analytical achievability.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
DBP	Chlorate (2008)	1		By-product of drinking water disinfection with chlorine dioxide; possible contaminant in hypochlorite solution	**Health basis of MAC:** Thyroid gland effects (colloid depletion)	As chlorate is difficult to remove once formed, its formation should be controlled by respecting the maximum feed dose of 1.2 mg/L of chlorine dioxide and managing /monitoring formation in hypochlorite solutions.
I	Chloride (1979, 2005)		AO: ≤ 250	Naturally occurring (seawater intrusion); dissolved salt deposits, highway salt, industrial effluents, oil well operations, sewage, irrigation drainage, refuse leachates		Based on taste and potential for corrosion in the distribution system.
D	Chlorine (2009)	None required		Used as drinking water disinfectant	Guideline value not necessary due to low toxicity at concentrations found in drinking water	Free chlorine concentrations in most Canadian drinking water distribution systems range from 0.04 to 2.0 mg/L.
D	Chlorine dioxide (2008)	None required		Used as drinking water disinfectant (primary disinfection only)	A guideline for chlorine dioxide is not required because of its rapid reduction to chlorite in drinking water	A maximum feed dose of 1.2 mg/L of chlorine dioxide should not be exceeded to control the formation of chlorite and chlorate.
DBP	Chlorite (2008)	1		By-product of drinking water disinfection with chlorine dioxide	**Health basis of MAC:** Neurobehavioural effects (lowered auditory startle amplitude, decreased exploratory activity), decreased absolute brain weight, altered liver weights	Chlorite formation should be controlled by respecting the maximum feed dose of 1.2 mg/L of chlorine dioxide and managing /monitoring formation in hypochlorite solutions.
P	Chlorpyrifos (1986)	0.09		Leaching and/or runoff from agricultural or other uses	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition)	Not expected to leach significantly into groundwater.
I	Chromium (1986)	0.05		Naturally occurring (erosion of minerals); releases or spills from industrial uses	**Health basis of MAC:** Enlarged liver, irritation of the skin, respiratory and gastrointestinal tracts from chromium (VI) **Other:** Chromium (III) is an essential element	MAC is protective of health effects from chromium (VI).

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
T	Colour (1979, 2005)		AO: ≤ 15 TCU	Naturally occurring organic substances, metals; industrial wastes		May interfere with disinfection; removal is important to ensure effective treatment.
I	Copper (1992)		AO: ≤ 1.0	Naturally occurring; leaching from copper piping	Copper is an essential element in human metabolism. Adverse health effects occur at levels much higher than the aesthetic objective	Based on taste, staining of laundry and plumbing fixtures; plumbing should be thoroughly flushed before water is used for consumption.
I	Cyanide (1991)	0.2		Industrial and mining effluents; release from organic compounds	**Health basis of MAC:** No clinical or other changes at the highest dose tested	Health effects from cyanide are acute; at low levels of exposure, it can be detoxified to a certain extent in the human body.
O	Cyanobacterial toxins—Microcystin-LR (2002)	0.0015		Naturally occurring (released from blooms of blue-green algae)	**Health basis of MAC:** Liver effects (enzyme inhibitor) **Other:** Classified as possible carcinogen	MAC is protective of total microcystins; avoid algaecides like copper sulphate, as they may cause toxin release into water.
P	Diazinon (1986, 2005)	0.02		Runoff from agricultural or other uses	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition)	Not expected to leach significantly into groundwater.
P	Dicamba (1987, 2005)	0.12		Leaching or runoff from agricultural or other uses	**Health basis of MAC:** Liver effects (vacuolization, necrosis, fatty deposits and liver weight changes)	Readily leaches into groundwater.
O	1,2-Dichlorobenzene[2] (1987)	0.2	AO: ≤ 0.003	Releases or spills from industrial effluents	**Health basis of MAC:** Increased blood cholesterol, protein and glucose levels	AO based on odour; levels above the AO would render drinking water unpalatable.
O	1,4-Dichlorobenzene[2] (1987)	0.005	AO: ≤ 0.001	Releases or spills from industrial effluents; use of urinal deodorants	**Health basis of MAC:** Benign liver tumours and adrenal gland tumours (classified as probable carcinogen)	AO based on odour; levels above the AO would render drinking water unpalatable.
O	1,2-Dichloroethane (2014)	0.005		Releases or spills from industrial effluents; leachate from waste disposal	**Health basis of MAC:** Cancer of the mammary gland (classified as probable carcinogen)	The MAC is protective of both cancer and non-cancer effects and takes into consideration all exposures from drinking water, which include ingestion as well as inhalation and dermal absorption during showering and bathing.
O	1,1-Dichloroethylene (1994)	0.014		Releases or spills from industrial effluents	**Health basis of MAC:** Liver effects (fatty changes)	

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
O	Dichloromethane (2011)	0.05		Industrial and municipal wastewater discharges	**Health basis of MAC:** Liver effects (liver foci and areas of cellular alteration). **Other:** Classified as probable carcinogen	The MAC is protective of both cancer and non-cancer effects and takes into consideration all exposures from drinking water, which include ingestion as well as inhalation and dermal absorption during showering and bathing.
O	2,4-Dichlorophenol (1987, 2005)	0.9	AO: ≤ 0.0003	By-product of drinking water disinfection with chlorine; releases from industrial effluents	**Health basis of MAC:** Liver effects (cellular changes)	AO based on odour; levels above the AO would render drinking water unpalatable.
P	2,4-Dichlorophenoxy acetic acid (2,4-D) (1991)	0.1		Leaching and/or runoff from use as a weed controller; releases from industrial effluents	**Health basis of MAC:** Kidney effects (tubular cell pigmentation)	
P	Diclofop-methyl (1987, 2005)	0.009		Leaching and/or runoff from use as a weed controller; added directly to water to control aquatic weeds	**Health basis of MAC:** Liver effects (enlargement and enzyme changes)	Low potential for groundwater contamination.
P	Dimethoate (1986, 2005)	0.02		Leaching and/or runoff from residential, agricultural and forestry use	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition)	
P	Diquat (1986, 2005)	0.07		Leaching and/or runoff from agricultural use; added directly to water to control aquatic weeds	**Health basis of MAC:** Cataract formation	Unlikely to leach into groundwater.
P	Diuron (1987, 2005)	0.15		Leaching and/or runoff from use in controlling vegetation	**Health basis of MAC:** Weight loss, increased liver weight and blood effects	High potential to leach into groundwater.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
O	Ethylbenzene (2014)	0.14	AO: 0.0016	Emissions, effluents or spills from petroleum and chemical industries	**Health basis of MAC:** Effects on the liver and pituitary gland. **Other:** Tumour formation at various sites in animals, including kidney, lung, liver and testes.	MAC is protective of both cancer and non-cancer health effects. MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing. AO is based on odour threshold.
I	Fluoride (2010)	1.5		Naturally occurring (rock and soil erosion); may be added to promote dental health	**Health basis of MAC:** Moderate dental fluorosis (based on cosmetic effect, not health)	Beneficial in preventing dental caries.
DBP	Formaldehyde (1997)	None required		By-product of disinfection with ozone; releases from industrial effluents		Guideline value not necessary, as levels in drinking water are below the level at which adverse health effects may occur.
P	Glyphosate (1987, 2005)	0.28		Leaching and/or runoff from various uses in weed control	**Health basis of MAC:** Reduced body weight gain	Not expected to migrate to groundwater
DBP	Haloacetic acids – Total (HAAs)[3] (2008)	0.08 ALARA		By-product of drinking water disinfection with chlorine	**Health basis of MAC:** Liver cancer (DCA); DCA is classified as probably carcinogenic to humans **Other:** Other organ cancers (DCA, DBA, TCA); liver and other organ effects (body, kidney and testes weights) (MCA)	Refers to the total of monochloroacetic acid (MCA), dichloroacetic acid (DCA), trichloroacetic acid (TCA), monobromoacetic acid (MBA) and dibromoacetic acid (DBA); MAC is based on ability to achieve HAA levels in distribution systems without compromising disinfection; precursor removal limits formation.
T	Hardness (1979)	None required		Naturally occurring (sedimentary rock erosion and seepage, runoff from soils); levels generally higher in groundwater	Although hardness may have significant aesthetic effects, a guideline has not been established because public acceptance of hardness may vary considerably according to the local conditions; major contributors to hardness (calcium and magnesium) are not of direct public health concern	Hardness levels between 80 and 100 mg/L (as $CaCO_3$) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
I	Iron (1978, 2005)		AO: ≤ 0.3	Naturally occurring (erosion and weathering of rocks and minerals); acidic mine water drainage, landfill leachates, sewage effluents and iron-related industries		Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.
I	Lead (1992)	0.010		Leaching from plumbing (pipes, solder, brass fittings and lead service lines)	**Health basis of MAC:** Biochemical and neurobehavioural effects (intellectual development, behaviour) in infants and young children (under 6 years) **Other:** Anaemia, central nervous system effects; in pregnant women, can affect the unborn child; in infants and children under 6 years, can affect intellectual development, behaviour, size and hearing; classified as probably carcinogenic to humans	Because the MAC is based on chronic effects, it is intended to apply to average concentrations in water consumed for extended periods. Exposure to lead should nevertheless be kept to a minimum; plumbing should be thoroughly flushed before water is used for consumption; most significant contribution is generally from lead service line entering the building.
I	Magnesium (1978)	None required		Naturally occurring (erosion and weathering of rocks and minerals)		Guideline value not necessary, as there is no evidence of adverse health effects from magnesium in drinking water.
P	Malathion (1986, 2005)	0.19		Leaching and/or runoff from agricultural and other uses	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition)	Not expected to leach into groundwater.
I	Manganese (1987)		AO: ≤ 0.05	Naturally occurring (erosion and weathering of rocks and minerals)		Based on taste and staining of laundry and plumbing fixtures.
I	Mercury (1986)	0.001		Releases or spills from industrial effluents; waste disposal; irrigation or drainage of areas where agricultural pesticides are used	**Health basis of MAC:** Irreversible neurological symptoms	Applies to all forms of mercury; mercury generally not found in drinking water, as it binds to sediments and soil.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
P	2-Methyl-4-chlorophenoxyacetic acid (MCPA) (2010)	0.1		Leaching and/or runoff from agricultural and other uses	**Health basis of MAC:** Kidney effects (increased absolute and relative weights, urinary bilirubin, crystals and pH) **Other:** Systemic, liver, testicular, reproductive/developmental and nervous system effects	Can potentially leach into groundwater.
O	Methyl tertiary-butyl ether (MTBE) (2006)		AO: ≤ 0.015	Spills from gasoline refineries, filling stations and gasoline-powered boats; seepage into groundwater from leaking storage tanks	There exist too many uncertainties and limitations in the MTBE database to develop a health based guideline.	AO based on odour; levels above the AO would render water unpalatable; as the AO is lower than levels associated with potential toxicological effects, it is considered protective of human health.
P	Metolachlor (1986)	0.05		Leaching and/or runoff from agricultural or other uses	**Health basis of MAC:** Liver lesions and nasal cavity tumours	Readily binds to organic matter in soil; little leaching expected in soils with high organic and clay content
P	Metribuzin (1986, 2005)	0.08		Leaching and/or runoff from agricultural use	**Health basis of MAC:** Liver effects (increased incidence and severity of mucopolysaccharide droplets)	Leaching into groundwater depends on the organic matter content of the soil.
O	Monochlorobenzene (1987)	0.08	AO: ≤ 0.03	Releases or spills from industrial effluents	**Health basis of MAC:** Reduced survival and body weight gain	AO based on odour threshold.
I	Nitrate (2013)	45 as nitrate; 10 as nitrate-nitrogen		Naturally occurring; leaching or runoff from agricultural fertilizer use, manure and domestic sewage; may be produced from excess ammonia or nitirification in the distribution system	**Health basis of MAC:** Methaemoglobinaemia (blue baby syndrome) and effects on thyroid gland function in bottle-fed infants **Other:** Classified as possible carcinogen under conditions that result in endogenous nitrosation	Systems using chloramine disinfection or that have naturally occurring ammonia should monitor the level of nitrate in the distribution system. Homeowners with a well should test concentration of nitrate in their water supply.
I	Nitrilotriacetic acid (NTA) (1990)	0.4		Sewage contamination	**Health basis of MAC:** Kidney effects (nephritis and nephrosis) **Other:** Classified as possible carcinogen	

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
I	Nitrite (2013)	3 as nitrite; 1 as nitrite-nitrogen		Naturally occurring; leaching or runoff from agricultural fertilizer use, manure and domestic sewage; may be produced from excess ammonia or nitirification in the distribution system	**Health basis of MAC:** Methaemoglobinaemia (blue baby syndrome) in bottle-fed infants less than 6 months of age **Other:** Classified as possible carcinogen under conditions that result in endogenous nitrosation	Systems using chloramine disinfection or that have naturally occurring ammonia should monitor the level of nitrite in the distribution system. Homeowners with a well should test concentration of nitrite in their water supply.
DBP	*N*-Nitroso dimethylamine (NDMA) (2010)	0.000 04		By-product of drinking water disinfection with chlorine or chloramines; industrial and sewage treatment plant effluents	**Health basis of MAC:** Liver cancer (classified as probable carcinogen)	MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing.; levels should be kept low by preventing formation during treatment.
A	Odour (1979, 2005)		Inoffensive	Biological or industrial sources		Important to provide drinking water with no offensive odour, as consumers may seek alternative sources that are less safe.
P	Paraquat (1986, 2005)	0.01 as paraquat dichloride; 0.007 as paraquat ion		Leaching and/or runoff from agricultural and other uses; added directly to water to control aquatic weeds	**Health basis of MAC:** Various effects on body weight, spleen, testes, liver, lungs, kidney, thyroid, heart and adrenal gland	Entry into drinking water unlikely from crop applications (clay binding); however, may persist in water for several days if directly applied to water.
O	Pentachlorophenol (1987, 2005)	0.06	AO: ≤ 0.03	By-product of drinking water disinfection with chlorine; industrial effluents	**Health basis of MAC:** Reduced body weight, changes in clinical parameters, histological changes in kidney and liver, reproductive effects (decreased neonatal survival and growth)	AO based on odour; levels above the AO would render drinking water unpalatable.
T	pH (2015)		7.0–10.5[4]	Not applicable		The control of pH is important to maximize treatment effectiveness, control corrosion and reduce leaching from distribution system and plumbing components.
P	Phorate (1986, 2005)	0.002		Leaching and/or runoff from agricultural and other uses	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition)	Some potential to leach into groundwater.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
P	Picloram (1988, 2005)	0.19		Leaching and/or runoff from agricultural and other uses	**Health basis of MAC:** Changes in body and liver weights and clinical chemistry parameters **Other:** Kidney effects (liver to body weight ratios and histopathology)	Significant potential to leach into groundwater.
I	Selenium (2014)	0.05		Naturally occurring (erosion and weathering of rocks and soils)and release from coal ash from coal-fired power plants and mining, refining of copper and other metals.	**Health basis of MAC:** chronic selenosis symptoms in humans following exposure to high levels **Other:** Hair loss, tooth decay, weakened nails and nervous system disturbances at extremely high levels of exposure	Selenium is an essential nutrient. Most exposure is from food; little information on toxicity of selenium from drinking water. Selenium can be found in non-leaded brass alloy where it is added to replace lead.
I	Silver (1986, 2005)	None required		Naturally occurring (erosion and weathering of rocks and soils)		Guideline value not required as drinking water contributes negligibly to an individual's daily intake.
P	Simazine (1986)	0.01		Leaching and/or runoff from agricultural and other uses	**Health basis of MAC:** Body weight changes and effects on serum and thyroid gland	Extent of leaching decreases with increasing organic matter and clay content.
I	Sodium (1979)		AO: ≤ 200	Naturally occurring (erosion and weathering of salt deposits and contact with igneous rock, seawater intrusion); sewage and industrial effluents; sodium-based water softeners		Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.
I	Sulphate (1994)		AO: ≤ 500	Industrial wastes	High levels (above 500 mg/L) can cause physiological effects such as diarrhoea or dehydration	Based on taste; it is recommended that health authorities be notified of drinking water sources containing sulphate concentrations above 500 mg/L.
I	Sulphide (1992)		AO: ≤ 0.05	Can occur in the distribution system from the reduction of sulphates by sulphate-reducing bacteria; industrial wastes		Based on taste and odour; levels above the AO would render water unpalatable.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
A	Taste (1979, 2005)		Inoffensive	Biological or industrial sources		Important to provide drinking water with no offensive taste, as consumers may seek alternative sources that are less safe.
T	Temperature (1979, 2005)		AO: ≤ 15°C	Not applicable		Temperature indirectly affects health and aesthetics through impacts on disinfection, corrosion control and formation of biofilms in the distribution system.
P	Terbufos (1987, 2005)	0.001		Leaching and/or runoff from agricultural and other uses	**Health basis of MAC:** Nervous system effects (cholinesterase inhibition)	Based on analytical achievability.
O	Tetrachloroethylene (2015)	0.01		Spill or other point source of contamination	**Health basis of MAC:** Neurological effects (colour confusion) in humans **Other:** Classified as probably carcinogenic to humans, based on sufficient evidence in experimental animals and limited evidence in humans	Primarily a concern in groundwater, as it volatilizes easily from surface water; MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing.
O	2,3,4,6-Tetrachlorophenol (1986, 2005)	0.1	AO: ≤ 0.001	By-product of drinking water disinfection with chlorine; industrial effluents and use of pesticides	**Health basis of MAC:** Developmental effects (embryotoxicity)	AO based on odour; levels above the AO would render drinking water unpalatable.
O	Toluene (2014)	0.06	AO: 0.024	Emissions, effluents or spills from petroleum and chemical industries	**Health basis of MAC:** Adverse neurological effects, including vibration thresholds, colour discrimination, auditory thresholds, attention, memory and psychomotor functions **Other:** Insufficient information to determine whether toluene is carcinogenic to humans.	MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing. AO is based on odour threshold.
A	Total dissolved solids (TDS) (1991)		AO: ≤ 500	Naturally occurring; sewage, urban and agricultural runoff, industrial wastewater		Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
O	Trichloroethylene (2005)	0.005		Industrial effluents and spills from improper disposal	**Health basis of MAC:** Developmental effects (heart malformations) **Other:** Classified as probable carcinogen	MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing.
O	2,4,6-Trichlorophenol (1987, 2005)	0.005	AO: ≤ 0.002	By-product of drinking water disinfection with chlorine; industrial effluents and spills	**Health basis of MAC:** Liver cancer (classified as probable carcinogen)	AO based on odour; levels above the AO would render drinking water unpalatable.
P	Trifluralin (1989, 2005)	0.045		Runoff from agricultural uses	**Health basis of MAC:** Changes in liver and spleen weights and in serum chemistry	Unlikely to leach into groundwater.
DBP	Trihalomethanes[3] (THMs) (2006)	0.1		By-product of drinking water disinfection with chlorine; industrial effluents	**Health basis of MAC:** Liver effects (fatty cysts) (chloroform classified as possible carcinogen) **Other:** Kidney and colorectal cancers	Refers to the total of chlorodibromomethane, chloroform, bromodichloromethane and bromoform; MAC based on health effects of chloroform. MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing. Utilities should make every effort to maintain concentrations as low as reasonably achievable without compromising the effectiveness of disinfection. Recommended strategy is precursor removal. The separate MAC for BDCM was rescinded in April 2009.
I	Uranium (1999)	0.02		Naturally occurring (erosion and weathering of rocks and soils); mill tailings; emissions from nuclear industry and combustion of coal and other fuels; phosphate fertilizers	**Health basis of MAC:** Kidney effects (various lesions); may be rapidly reversible after exposure ceases	Based on treatment achievability; MAC based on chemical effects, as uranium is only weakly radioactive; uranium is rapidly eliminated from the body.

Type[1]	Parameter (approval, reaffirmation)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
O	Vinyl chloride (2013)	0.002 ALARA		Industrial effluents; degradation product from organic solvents in groundwater; leaching from polyvinyl chloride pipes	**Health basis of MAC:** Liver cancer (classified as human carcinogen) **Other:** Raynaud's disease, effects on bone, circulatory system, thyroid, spleen, central nervous system	Based on analytical achievability. MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing. Leaching from polyvinyl chloride pipe is not expected to be significant.
O	Xylenes (total) (2014)	0.09	AO: 0.02	Emissions, effluents or spills from petroleum and chemical industries	**Health basis of MAC:** Adverse neuromuscular effects **Other:** Insufficient information to determine whether xylenes are carcinogenic to humans.	MAC takes into consideration all exposures from drinking water, which include ingestion, as well as inhalation and dermal absorption during showering and bathing. AO is based on odour threshold.
I	Zinc (1979, 2005)		AO: ≤ 5.0	Naturally occurring; industrial and domestic emissions; leaching may occur from galvanized pipes, hot water tanks and brass fittings		AO based on taste; water with zinc levels above the AO tends to be opalescent and develops a greasy film when boiled; plumbing should be thoroughly flushed before water is consumed.

[1] Parameter types: A – Acceptability; D – Disinfectant; DBP – Disinfection by-product; P – Pesticide; I – Inorganic chemical; O – Organic chemical; T – Treatment related parameter.
[2] In cases where total dichlorobenzenes are measured and concentrations exceed the most stringent value (0.005 mg/L), the concentrations of the individual isomers should be established.
[3] Expressed as a locational running annual average of quarterly samples.
[4] No units.

Table 3. Radiological Parameters

Guidelines for radiological parameters focus on routine operational conditions of existing and new water supplies and do not apply in the event of contamination during an emergency involving a large release of radionuclides into the environment. MACs have been established for the most commonly detected natural and artificial radionuclides in Canadian drinking water sources, using internationally accepted equations and principles and based solely on health considerations.

The MACs are based on exposure solely to a specific radionuclide. The radiological effects of two or more radionuclides in the same drinking water source are considered to be additive. Thus, the sum of the ratios of the observed concentration to the MAC for each contributing radionuclide should not exceed 1.

Water samples may be initially analysed for the presence of radioactivity using gross alpha and gross beta screening rather than measurements of individual radionuclides. If screening levels are exceeded (0.5 Bq/L for gross alpha and 1.0 Bq/L for gross beta), then concentrations of specific radionuclides should be analysed. A guideline for radon is not deemed necessary and has not been established. Information on radon is presented because of its significance for indoor air quality in certain situations.

Parameter (approval)	MAC (Bq/L)	Common sources	Health basis of MAC	Comments
Cesium-137 (2009)	10	Nuclear weapons fallout and emissions from nuclear reactors	Cancer of the lung, breast, thyroid, bone, digestive organs and skin; leukaemia	
Iodine-131 (2009)	6	Sewage effluent	Cancer of the lung, breast, thyroid, bone, digestive organs and skin; leukaemia	
Lead-210 (2009)	0.2	Naturally occurring (decay product of radon)	Cancer of the lung, breast, thyroid, bone, digestive organs and skin; leukaemia	Corresponds to total lead concentration of 7×10^{-8} µg/L
Radium-226 (2009)	0.5	Naturally occurring	Cancer of the lung, breast, thyroid, bone, digestive organs and skin; leukaemia	
Radon (2009)	None required	Naturally occurring (leaching from radium-bearing rocks and soils; decay product of radium-226)	Health risk from ingestion considered negligible due to high volatility	Mainly a groundwater concern; if concentrations in drinking water exceed 2000 Bq/L actions should be taken to reduce release into indoor air (e.g. proper venting of drinking water supply)
Strontium-90 (2009)	5	Nuclear weapons fallout	Cancer of the lung, breast, thyroid, bone, digestive organs and skin; leukaemia	
Tritium (2009)	7000	Naturally occurring (cosmogenic radiation); releases from nuclear reactors	Cancer of the lung, breast, thyroid, bone, digestive organs and skin; leukaemia	Not removed by drinking water treatment
Uranium (1999)	N/A		MAC based on chemical properties	See information provided in Table 2

Table 4. Guidance Documents

In certain situations, the Federal-Provincial-Territorial Committee on Drinking Water may choose to develop guidance documents for contaminants that do not meet the criteria for guideline development and for specific issues for which operational or management guidance is warranted. These documents are offered as information for drinking water authorities and help provide guidance relating to contaminants, drinking water management issues or emergency situations.

Parameter/subject (approval)	Comments
Chloral hydrate in drinking water (2008)	Exposure levels in Canada far below concentration that would cause health effects; levels above 0.2 mg/L may indicate a concern for health effects and should be investigated.
Controlling corrosion in drinking water distribution systems (2009)	Addresses strategies to deal with leaching of lead from materials in the distribution system; sampling protocols can be used to assess corrosion and the effectiveness of remediation/control measures to reduce lead levels in drinking water; corrective measures are outlined to address lead sources.
Heterotrophic plate count (HPC) (2012)	A useful operational tool for monitoring general bacteriological water quality through the treatment process and in the distribution system. HPC results are not an indicator of water safety and should not be used as an indicator of potential adverse human health effects.
Issuing and rescinding boil water advisories in Canadian drinking water supplies (2015)	Summarizes factors for consideration when responsible authorities issue or rescind boil water advisories. Provides trend information on reasons boil water advisories are issued in Canada.
Issuing and rescinding drinking water avoidance advisories in emergency situations (2009)	Summarizes factors for consideration when responsible authorities issue or rescind drinking water avoidance advisories in emergency situations.
Potassium from water softeners (2008)	Not a concern for general population; those with kidney disease or other conditions, such as heart disease, coronary artery disease, hypertension or diabetes, and those who are taking medications that interfere with normal body potassium handling should avoid the consumption of water treated by water softeners using potassium chloride.
Use of the microbiological drinking water guidelines (2013)	Provides an overview of the microbiological considerations to ensure drinking water quality, integrating key content of the relevant guideline technical documents and guidance documents to illustrate how they fit into the multi-barrier approach.
Waterborne bacterial pathogens (2013)	Originate from human or animal faeces or may be naturally occurring in the environment. Commonly associated with gastrointestinal upset (nausea, vomiting, diarrhoea); some pathogens may infect wounds, lungs, skin, eyes, central nervous system or liver. Document provides information on these pathogens and treatment options, and recommends using the multi-barrier approach to reduce their levels.

Table 5. Withdrawn Guidelines

The Federal-Provincial-Territorial Committee on Drinking Water has established a science-based process to systematically review older guidelines and withdraw those that are no longer required. Guidelines are withdrawn for parameters that are no longer found in Canadian drinking water supplies at levels that could pose a risk to human health, including pesticides that are no longer registered for use in Canada and for mixtures of contaminants that are addressed individually.

Parameter	Type
Aldicarb	Pesticide
Aldrin + dieldrin	Pesticide
Bendiocarb	Pesticide
Cyanazine	Pesticide
Dinoseb	Pesticide
Gasoline and its organic constituents	Organic chemical
Methoxychlor	Pesticide
Parathion	Pesticide

Acronyms

A	acceptability (parameter type)
ALARA	as low as reasonably achievable
AO	aesthetic objective
CDW	Committee on Drinking Water (FPT)
D	disinfectant (parameter type)
DBP	disinfectant by-product (parameter type)
HPC	heterotrophic plate count
I	inorganic chemical (parameter type)
MAC	maximum acceptable concentration
NTU	nephelometric turbidity units
O	organic chemical (parameter type)
OG	operational guidance value
P	pesticide (parameter type)
T	treatment-related (parameter type)
TCU	true colour units

APPENDIX D

Fraser Health Authority

“Flush” Message

fraserhealth Better health. Best in health care.

June, 2012

Water System Operators

Re: Metals in Drinking Water – "Flush" Message in Annual Reports

Fraser Health has recently revised its metals at the tap "Flush" message and we are asking all water systems to please include the following health message with your next annual reports to your users.

Anytime the water in a particular faucet has not been used for six hours or longer, "flush" your cold-water pipes by running the water until you notice a change in temperature. (This could take as little as five to thirty seconds if there has been recent heavy water use such as showering or toilet flushing. Otherwise, it could take two minutes or longer.) The more time water has been sitting in your home's pipes, the more lead it may contain.

Use only water from the cold-tap for drinking, cooking, and especially making baby formula. Hot water is likely to contain higher levels of lead.

The two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply.

Conserving water is still important. Rather than just running the water down the drain you could use the water for things such as watering your plants.

If you have any questions, please contact our Drinking Water Program at 604-870-7900 or 1-866-749-7900.

Sincerely,

Marc Zubel
Manager, Drinking Water Program
Health Protection