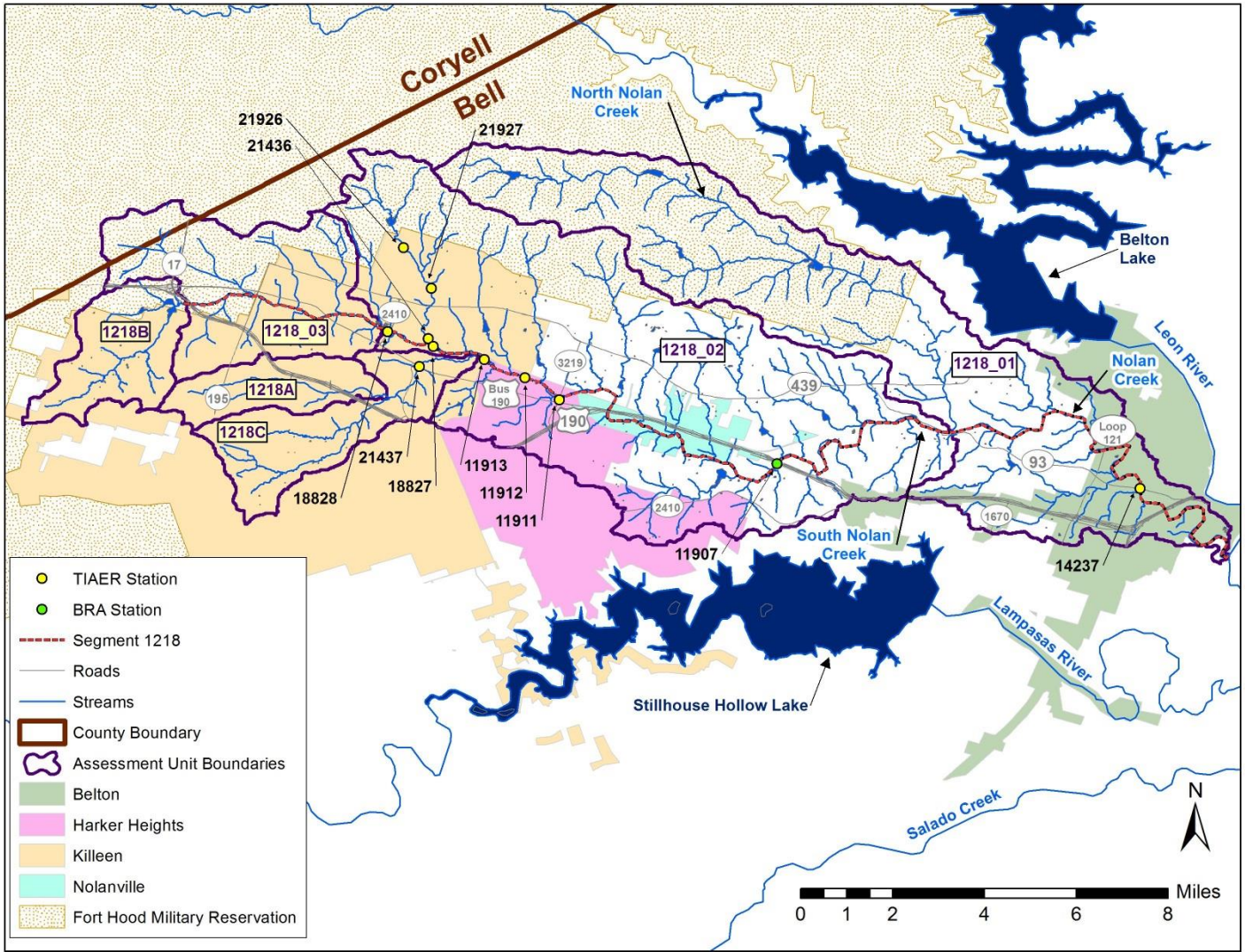


## Monitoring Update – Nolan Creek/South Nolan Creek Watershed



### Nolan Creek/South Nolan Creek Monitoring Data Update

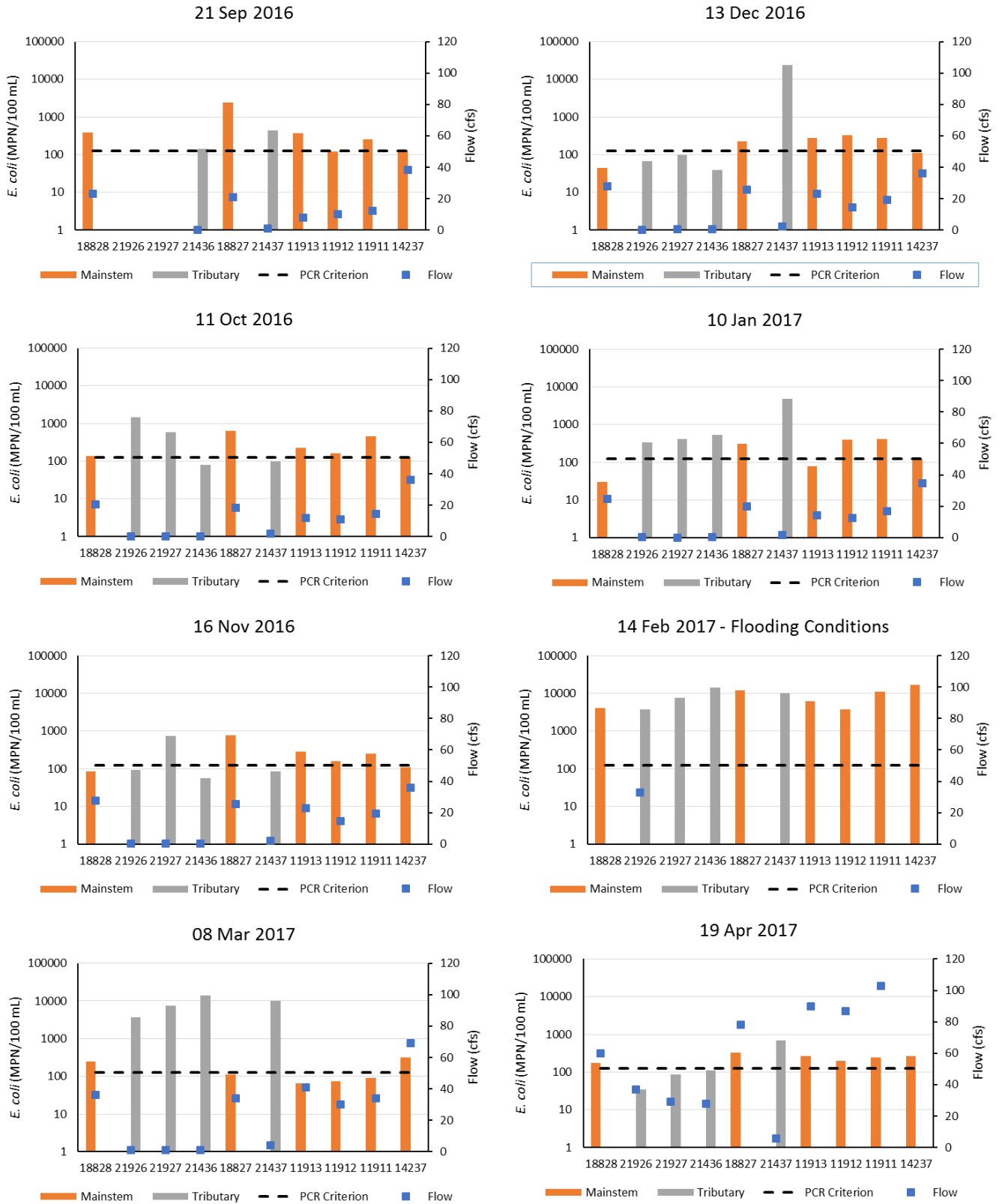
TCEQ ID	Site Description	Latitude	Longitude
18828	South Nolan Creek at 38 <sup>th</sup> St in Killeen	31.108091	-97.702156
21926	Long Branch at Tripp Trail in Killeen	31.134587	-97.697216
21927	Long Branch at Lake Road in Killeen	31.121760	-97.688445
21436	Long Branch just upstream of crossing of South Nolan Creek at Twin Creek Dr in Killeen	31.105946	-97.689364
18827	South Nolan Creek at Twin Creek Dr in Killeen	31.103470	-97.687851
21437	Little Nolan Creek off US 190 in Killeen	31.097143	-97.692268
11913	South Nolan Creek at Roy Reynolds Road in Killeen	31.099382	-97.671748
11912	South Nolan Creek at Amy Lane in Harker Heights	31.093611	-97.658890
11911	South Nolan Creek at FM 3219 in Harker Heights	31.086666	-97.648056
11907	Nolan Creek at US 190 downstream of Nolanville	31.066560	-97.579500
14237	Nolan Creek at SH 93 in Belton (Yettie Polk Park)	31.058743	-97.464989



# Monthly Routine Grab Data – Preliminary Results for Bacteria & Flow

## Sep 2016 – Apr 2017

Stations presented in most upstream to downstream order from left to right.

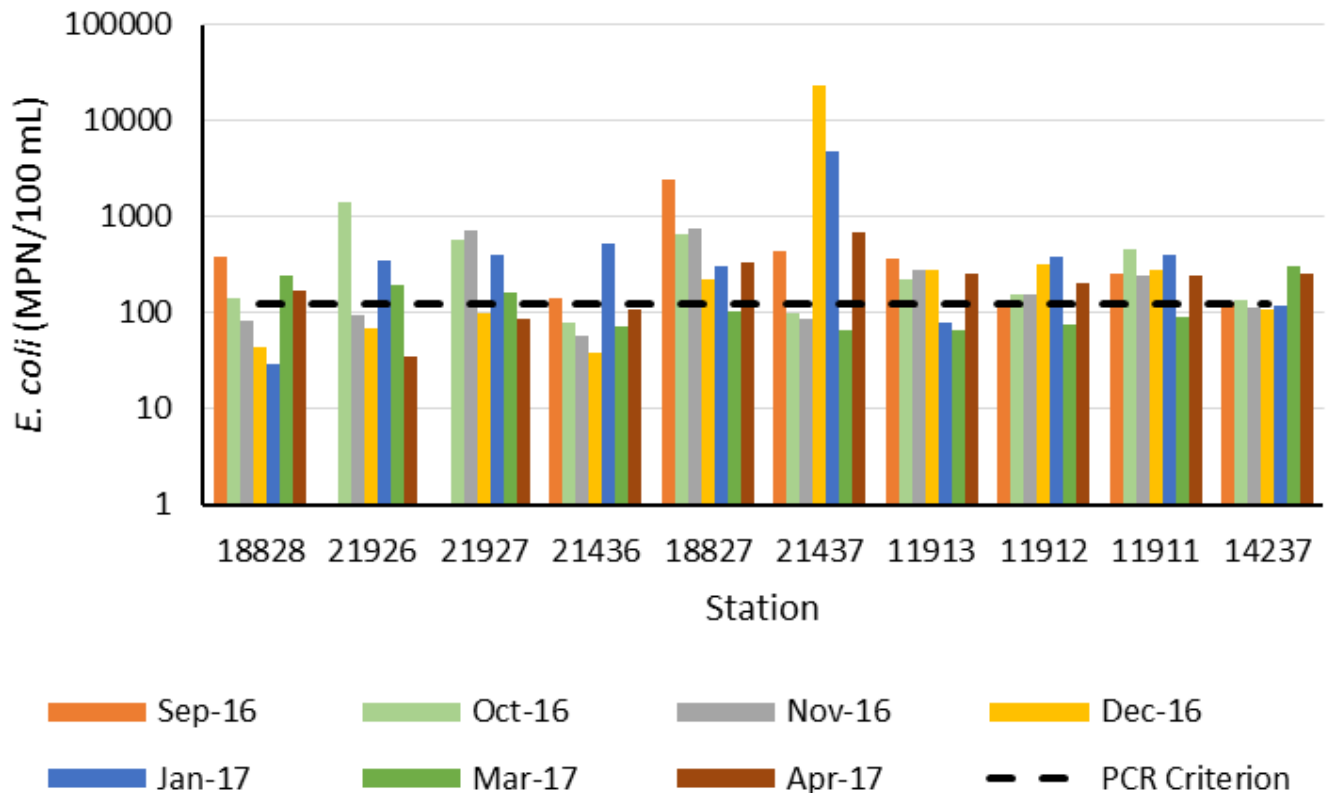


Note: Feb. 14, 2017 Nolan Creek/South Nolan Creek was in flood conditions, thus, flow could only safely be measured at 1 of the 10 stations. Also, high flows on April 19, 2017 prevented flow measurements at station 14237.

Additional notes: Decreasing flows often noted between mainstem stations 18828 and 11912, then increases.

- Bell County WCID 1 Main Plant discharges into South Nolan Creek just above station 18828. Permitted discharge 18 MGD (27.9 cfs); average discharge 11.5 MGD (May 2013-Jun2015) or 17.8 cfs.
- City of Harker Heights WWTF discharges between stations 11912 & 11911. Permitted discharge 3 MGD (4.6 cfs); average discharge 1.9 MGD (2.9 cfs).
- Between stations 11911 and 14237, there are two other WWTF that discharge to South Nolan Creek, Bell County WCID Plant #3 (South Plant; permit 6 MGD; avg. 3 MGD [4.6 cfs]) and Bell County WCID 3 (permit 0.7 MGD; avg. 0.3 MGD [0.5 cfs]). South Nolan Creek also merges with North Nolan Creek prior to station 14237 on Nolan Creek. Much of the increase in flows at station 14237 is associated with flows from North Nolan Creek.

**Monthly values Sep2016 – Apr2017 compared between stations (Feb 2017 values excluded due to flooding conditions)**



**Preliminary Data – Sep2016 – Apr2017**

<b>Station</b>	<b>Brief Station Description</b>	<b>Collection Date</b>	<b>Collection Time</b>	<b>Flow (cfs)</b>	<b>Flow Comment</b>	<b><i>E. coli</i> (MPN/100mL)</b>
18828	38th St Killeen	21-Sep-16	8:46	23		390
18828	38th St Killeen	11-Oct-16	9:19	20		140
18828	38th St Killeen	16-Nov-16	10:08	28		85
18828	38th St Killeen	13-Dec-16	10:53	28		44
18828	38th St Killeen	10-Jan-17	10:31	25		30
18828	38th St Killeen	14-Feb-17	11:17		flood flows	4,100
18828	38th St Killeen	8-Mar-17	10:49	36		250
18828	38th St Killeen	19-Apr-17	9:31	60		172
21926	Long Branch, Tripp Trail	21-Sep-16	8:32	0	dry	
21926	Long Branch, Tripp Trail	11-Oct-16	9:03	<0.10		1,500
21926	Long Branch, Tripp Trail	16-Nov-16	9:54	0.26		93
21926	Long Branch, Tripp Trail	13-Dec-16	10:39	0.26		68
21926	Long Branch, Tripp Trail	10-Jan-17	10:17	0.33		340
21926	Long Branch, Tripp Trail	14-Feb-17	11:02	33		3,700
21926	Long Branch, Tripp Trail	8-Mar-17	10:32	0.84		190
21926	Long Branch, Tripp Trail	19-Apr-17	9:18	37		35
21927	Long Branch, Lake Rd	21-Sep-16	8:30	0	no flow	
21927	Long Branch, Lake Rd	11-Oct-16	8:48	<0.10		580
21927	Long Branch, Lake Rd	16-Nov-16	9:43	0.41		730
21927	Long Branch, Lake Rd	13-Dec-16	10:26	0.41		99
21927	Long Branch, Lake Rd	10-Jan-17	10:06	0.12		410
21927	Long Branch, Lake Rd	14-Feb-17	10:47		flood flows	7,500
21927	Long Branch, Lake Rd	8-Mar-17	10:20	1.1		160
21927	Long Branch, Lake Rd	19-Apr-17	9:05	29		86
21436	Long Branch nr Twin Ck Rd	21-Sep-16	8:27	0.1		140
21436	Long Branch nr Twin Ck Rd	11-Oct-16	8:32	0.10		80
21436	Long Branch nr Twin Ck Rd	16-Nov-16	9:30	0.55		57
21436	Long Branch nr Twin Ck Rd	13-Dec-16	10:13	0.55		39
21436	Long Branch nr Twin Ck Rd	10-Jan-17	9:53	0.40		520
21436	Long Branch nr Twin Ck Rd	14-Feb-17	10:31		flood flows	14,000
21436	Long Branch nr Twin Ck Rd	8-Mar-17	10:05	0.9		73
21436	Long Branch nr Twin Ck Rd	19-Apr-17	8:50	28		110
18827	Twin Ck Rd Killeen	21-Sep-16	8:16	21		2,400
18827	Twin Ck Rd Killeen	11-Oct-16	8:19	19		650
18827	Twin Ck Rd Killeen	16-Nov-16	9:23	26		770
18827	Twin Ck Rd Killeen	13-Dec-16	10:04	26		230
18827	Twin Ck Rd Killeen	10-Jan-17	9:43	20		310
18827	Twin Ck Rd Killeen	14-Feb-17	10:15		flood flows	12,000
18827	Twin Ck Rd Killeen	8-Mar-17	9:49	34		110
18827	Twin Ck Rd Killeen	19-Apr-17	8:38	78		330

**Preliminary Data – Sep2016 – Apr2017 (continued)**

<b>Station</b>	<b>Brief Station Description</b>	<b>Collection Date</b>	<b>Collection Time</b>	<b>Flow (cfs)</b>	<b>Flow Comment</b>	<b><i>E. coli</i> (MPN/100mL)</b>
21437	Little Nolan US 190 Killeen	21-Sep-16	8:04	1.0		440
21437	Little Nolan US 190 Killeen	11-Oct-16	8:06	1.7		99
21437	Little Nolan US 190 Killeen	16-Nov-16	9:12	2.2		86
21437	Little Nolan US 190 Killeen	13-Dec-16	9:52	2.2		24,000
21437	Little Nolan US 190 Killeen	10-Jan-17	9:32	1.5		4,900
21437	Little Nolan US 190 Killeen	14-Feb-17	10:00		flood flows	10,000
21437	Little Nolan US 190 Killeen	8-Mar-17	9:38	4.1		66
21437	Little Nolan US 190 Killeen	19-Apr-17	8:27	5.9		690
11913	Roy Reynolds Rd Killeen	21-Sep-16	7:51	7.9		370
11913	Roy Reynolds Rd Killeen	11-Oct-16	7:51	12		230
11913	Roy Reynolds Rd Killeen	16-Nov-16	8:59	23		280
11913	Roy Reynolds Rd Killeen	13-Dec-16	9:40	23		280
11913	Roy Reynolds Rd Killeen	10-Jan-17	9:18	14		79
11913	Roy Reynolds Rd Killeen	14-Feb-17	9:44		flood flows	6,300
11913	Roy Reynolds Rd Killeen	8-Mar-17	9:26	41		66
11913	Roy Reynolds Rd Killeen	19-Apr-17	8:13	90		260
11912	Amy Lane Harker Heights	21-Sep-16	7:36	10		120
11912	Amy Lane Harker Heights	11-Oct-16	7:33	11		160
11912	Amy Lane Harker Heights	16-Nov-16	8:45	15		160
11912	Amy Lane Harker Heights	13-Dec-16	9:09	14		330
11912	Amy Lane Harker Heights	10-Jan-17	9:03	13		390
11912	Amy Lane Harker Heights	14-Feb-17	9:24		flood flows	6,800
11912	Amy Lane Harker Heights	8-Mar-17	9:13	30		75
11912	Amy Lane Harker Heights	19-Apr-17	7:52	87		200
11911	FM 3219 Harker Heights	21-Sep-16	7:23	12		260
11911	FM 3219 Harker Heights	11-Oct-16	7:18	15		460
11911	FM 3219 Harker Heights	16-Nov-16	8:32	19		250
11911	FM 3219 Harker Heights	13-Dec-16	8:53	19		280
11911	FM 3219 Harker Heights	10-Jan-17	8:48	17		410
11911	FM 3219 Harker Heights	14-Feb-17	9:04		flood flows	11,000
11911	FM 3219 Harker Heights	8-Mar-17	9:01	34		91
11911	FM 3219 Harker Heights	19-Apr-17	7:43	103		240
14237	Yettie Polk Park, Belton	21-Sep-16	6:56	38		130
14237	Yettie Polk Park, Belton	11-Oct-16	6:48	36		130
14237	Yettie Polk Park, Belton	16-Nov-16	8:04	36		110
14237	Yettie Polk Park, Belton	13-Dec-16	8:26	36		110
14237	Yettie Polk Park, Belton	10-Jan-17	8:22	35		120
14237	Yettie Polk Park, Belton	14-Feb-17	8:35		flood flows	17,000
14237	Yettie Polk Park, Belton	8-Mar-17	8:36	69		310
14237	Yettie Polk Park, Belton	19-Apr-17	7:15		Too Deep to Measure	260

## Comparison of *E. coli* Concentrations over Time

