

ITD District 1  
2011 Monitoring Data

District 1 MS4 WQ Results				Concentration													
MS4 Outlet	Date	Flow (cfs)	Temp	TSS (mg/L)	Total Nitrogen	Nitrate	Nitrite	TKN	TP	T. Lead	T. Zinc	hardness	Cl	Mg	Ca	PCBs	
Below Sherman IC	11/6/2008	NA	NA	10	2.51	1.8	ND	0.62	0.061	ND	ND	112	17	11.1	26.4	ND	
	7/1/2009	NA	NA	3	1.59	0.8	ND	0.57	0.126	ND	ND	NA	19	8.6	26.4	ND	
	12/22/2009	NA	NA	96	2.37	1.4	ND	1.01	0.23	ND	0.071	77.6	21	18.3	7.75	ND	
	3/26/2010	NA	NA	19	0.76	ND	ND	0.4	0.07	ND	0.025	40.6	9.2	3.82	9.98	ND	
	6/9/2010	6.92	13 c	15	0.63	ND	ND	0.29	0.067	ND	0.017	30	NA	2.68	7.6	ND	
	10/29/2010	1.66	7 c	85	2.11	1.2	ND	0.86	0.17	0.012	0.046	90.6	NA	8.76	21.8	ND	
	4/11/2011	8.75	12 c	13	0.59	ND	ND	0.27	0.066	ND	0.019	30.3	NA	2.81	7.51	ND	
	6/13/2011	2.19	14 c	16	0.38	ND	ND	0.38	0.0686	ND	ND	36.3	NA	3.34	8.96	ND	
	11/22/2011	13.65	38 f	47	0.51	ND	ND	0.51	0.155	ND	0.039	10.4	NA	1.09	2.35	ND	
	1/30/2012	8.87	5 c	40	0.945	0.51	ND	0.435	0.132	ND	0.02	28.3	NA	2.78	6.68	NA	
	Average		4.88		32.125	1.3675	1.3	#DIV/0!	0.55	0.107325	0.012	0.0356	59.62857	16.55	7.42625	14.55	#DIV/0!
	Median		4.555		15.5	1.175	1.3	#NUM!	0.485	0.0693	0.012	0.025	40.6	18	6.21	9.47	#NUM!
	Maximum		8.75		96	2.51	1.8	0	1.01	0.23	0.012	0.071	112	21	18.3	26.4	0
Minimum		1.66		3	0.38	0.8	0	0.27	0.061	0.012	0.017	30	9.2	2.68	7.51	0	
Above Sherman IC	Date	Flow (cfs)		TSS (mg/L)	Total Nitrogen	Nitrate	Nitrite	TKN	TP	T. Lead	T. Zinc	hardness	Cl	Mg	Ca	PCBs	
	6/9/2010	2.44	16 c	13	0.46	ND	ND	0.21	0.05	ND	0.013	24.3	NA	2.13	6.22	ND	
	10/29/2010	2.71	9 c	52	1.49	0.6	ND	0.82	0.182	ND	0.06	32.4	NA	2.21	9.32	ND	
	4/11/2011	4.93	14 c	17	0.53	ND	ND	0.26	0.065	ND	0.025	22.5	NA	1.97	5.75	ND	
	6/13/2011	1.03	14 c	14	0.54	ND	ND	0.54	0.072	ND	0.021	32.3	NA	2.31	9.08	ND	
	1/30/2012	2.97	5 c	20	0.271	ND	ND	0.271	0.056	ND	0.017	19.1	NA	1.74	4.75	ND	
	Average		2.7775		24	0.755	0.6	#DIV/0!	0.4575	0.09225	#DIV/0!	0.02975	27.875	#DIV/0!	2.155	7.5925	#DIV/0!
	Median		2.575		15.5	0.535	0.6	#NUM!	0.4	0.0685	#NUM!	0.023	28.3	#NUM!	2.17	7.65	#NUM!
	Maximum		4.93		52	1.49	0.6	0	0.82	0.182	0	0.06	32.4	0	2.31	9.32	0
	Minimum		1.03		13	0.46	0.6	0	0.21	0.05	0	0.013	22.5	0	1.97	5.75	0
French Gulch Above ITD MS4	Date	Flow (cfs)		TSS (mg/L)	Total Nitrogen	Nitrate	Nitrite	TKN	TP	T. Lead	T. Zinc	hardness	Cl	Mg	Ca	PCBs	
	6/9/2010	3.33	12 c	19	0.63	ND	ND	0.22	0.068	ND	ND	49.8	NA	4.81	12	ND	
	10/29/2010	0.09	8 c	47	1.46	0.6	ND	0.73	0.153	ND	0.06	40.5	NA	3.12	11.1	ND	
	4/11/2011	NA		8	0.478	ND	ND	0.17	0.067	ND	ND	40.4	NA	3.78	9.93	ND	
	6/13/2011	0.59	13 c	2	0.17	ND	ND	0.17	0.0517	ND	ND	57.5	NA	5.33	14.1	ND	
	Average		1.33666667		19	0.6845	0.6	#DIV/0!	0.3225	0.084925	#DIV/0!	0.06	47.05	#DIV/0!	4.26	11.7825	#DIV/0!
	Median		0.59		13.5	0.554	0.6	#NUM!	0.195	0.0675	#NUM!	0.06	45.15	#NUM!	4.295	11.55	#NUM!
	Maximum		3.33		47	1.46	0.6	0	0.73	0.153	0	0.06	57.5	0	5.33	14.1	0
	Minimum		0.09		2	0.17	0.6	0	0.17	0.0517	0	0.06	40.4	0	3.12	9.93	0
	15th Street IC	Date	Flow (cfs)		TSS (mg/L)	Total Nitrogen	Nitrate	Nitrite	TKN	TP	T. Lead	T. Zinc	hardness	Cl	Mg	Ca	PCBs
6/9/2010		0.11	17 c	11	0.45	ND	ND	0.15	ND	ND	0.032	15.4	NA	0.71	4.98	ND	
10/29/2010		0.62	8 c	44	1.75	0.6	ND	1.02	0.14	ND	0.108	37.1	NA	2.2	11.2	ND	
4/11/2011		NA		31	0.83	ND	ND	0.43	0.078	ND	0.065	21	NA	1.24	6.36	ND	
6/13/2011		0.13	15 c	83	1.4	ND	ND	1.4	0.189	0.011	0.13	33.3	NA	2.11	9.82	ND	
1/30/2011		0.65	5 c	16	0.094	ND	ND	0.094	0.054	ND	0.026	9.99	NA	0.712	2.81	NA	
Average			0.28666667		42.25	1.1075	0.6	#DIV/0!	0.75	0.135667	0.011	0.08375	26.7	#DIV/0!	1.565	8.09	#DIV/0!
Median			0.13		37.5	1.115	0.6	#NUM!	0.725	0.14	0.011	0.0865	27.15	#NUM!	1.675	8.09	#NUM!
Maximum		0.62		83	1.75	0.6	0	1.4	0.189	0.011	0.13	37.1	0	2.2	11.2	0	
Minimum		0.11		11	0.45	0.6	0	0.15	0.078	0.011	0.032	15.4	0	0.71	4.98	0	
15th Street (City)	Date	Flow (cfs)	TEMP	TSS (mg/L)	Total Nitrogen	Nitrate	Nitrite	TKN	TP	T. Lead	T. Zinc	hardness	Cl	Mg	Ca	PCBs	
	1/30/2011	1.38	5 c	24	0.38	ND	ND	0.38	0.068	ND	0.011	30	NA	2.99	7.03	NA	

## ITD D1 MS4 Flow Records

Below Sherman IC



Sample Date 6/9/2010  
 Device Marsh MacBr  
 Total Flow (cf) 6.92  
 Avg. Velocity 0.49  
 Max. Velocity 0.72  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
RWE	2.7	0.15				
	3.00	0.40	1.3	0.27	0.52	0.14
	3.50	0.50	1.70	0.22	0.85	0.19
	4.00	0.50	1.80	0.62	0.90	0.56
	4.50	0.50	1.80	0.49	0.90	0.44
	5.00	0.50	1.90	0.68	0.95	0.65
	5.50	0.50	1.80	0.72	0.90	0.65
	6.00	0.50	1.90	0.66	0.95	0.63
	6.50	0.50	1.90	0.70	0.95	0.67
	7.00	0.50	1.90	0.70	0.95	0.67
	7.50	0.50	1.90	0.47	0.95	0.45
	8.00	0.50	1.80	0.48	0.90	0.43
	8.50	0.50	1.80	0.42	0.90	0.38
	9.00	0.50	1.80	0.48	0.90	0.43
	9.50	0.50	1.60	0.16	0.80	0.13
	10.00	0.50	1.50	0.42	0.75	0.32
	10.50	0.35	1.50	0.41	0.52	0.22
LWE	10.7	0.10				

Above Sherman IC



Sample Date 6/9/2010  
 Device Marsh MacBr  
 Total Flow (cf) 2.44  
 Avg. Velocity 0.35  
 Max. Velocity 0.75  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
RWE	1.5	0.25				
	2.00	0.50	1.1	0.17	0.55	0.09
	2.50	0.50	1.30	0.34	0.65	0.22
	3.00	0.50	1.40	0.38	0.70	0.27
	3.50	0.50	1.50	0.30	0.75	0.23
	4.00	0.50	1.40	0.26	0.70	0.18
	4.50	0.50	1.30	0.19	0.65	0.12
	5.00	0.50	1.30	0.30	0.65	0.20
	5.50	0.50	1.20	0.30	0.60	0.18
	6.00	0.50	1.10	0.30	0.55	0.17
	6.50	0.75	1.00	0.75	0.75	0.56
	7.50	0.75	0.50	0.60	0.38	0.23
LWE	8.00	0.25				

French Gulch above ITD MS4

Sample Date 6/9/2010  
 Device Marsh MacBr  
 Total Flow (cf) 3.33  
 Avg. Velocity 0.61  
 Max. Velocity 0.69  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading

15th Street IC

Sample Date 6/9/2010  
 Device Marsh MacBr  
 Total Flow (cf) 0.11  
 Avg. Velocity 0.36  
 Max. Velocity 0.80  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading

Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
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LWE	0.8	0.60			
	2.00	0.85	0.9	0.6	0.77
	2.50	0.50	0.90	0.64	0.45
	3.00	0.50	1.00	0.64	0.50
	3.50	0.50	1.10	0.60	0.55
	4.00	0.50	1.30	0.60	0.65
	4.50	0.50	1.40	0.64	0.70
	5.00	0.50	1.20	0.69	0.60
	5.50	0.50	1.20	0.54	0.60
	6.00	0.60	1.20	0.50	0.72
RWE	6.70	0.35			

Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
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LWE	1.8	0.10			
	2.00	0.30	0.15	0.2	0.05
	2.40	0.30	0.20	0.27	0.06
	2.60	0.20	0.20	0.50	0.04
	2.80	0.20	0.20	0.80	0.04
	3.00	0.20	0.20	0.30	0.04
	3.20	0.20	0.20	0.28	0.04
	3.40	0.25	0.20	0.15	0.05
RWE	3.7	0.15			

Below Sherman IC



Sample Date 10/29/2010

Device Marsh MacBr

Total Flow (cf): 1.66

Avg. Velocity 0.23

Max. Velocity 0.35

Stage NT

Crew member W. Brown M Hartz C.White

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
RWE	1.00					
	1.40	0.40	0.60	0.30	0.24	0.07
	1.70	0.30	0.60	0.29	0.18	0.05
	2.00	0.30	0.60	0.31	0.18	0.06
	2.30	0.30	0.60	0.29	0.18	0.05
	2.60	0.30	0.70	0.26	0.21	0.05
	2.90	0.30	0.70	0.12	0.21	0.03
	3.20	0.30	0.70	0.13	0.21	0.03
	3.50	0.30	1.20	0.07	0.36	0.03
	3.80	0.30	1.20	0.03	0.36	0.01
	4.10	0.30	1.30	0.14	0.39	0.05
	4.40	0.30	1.20	0.22	0.36	0.08
	4.70	0.30	1.30	0.16	0.39	0.06
	5.00	0.30	1.30	0.35	0.39	0.14
	5.30	0.30	1.30	0.33	0.39	0.13
	5.60	0.30	1.30	0.30	0.39	0.12
	5.90	0.30	1.20	0.28	0.36	0.10
	6.20	0.30	1.20	0.33	0.36	0.12
	6.50	0.30	1.20	0.30	0.36	0.11
	6.80	0.30	1.10	0.17	0.33	0.06
	7.10	0.30	1.00	0.10	0.30	0.03
	7.40	0.30	0.90	0.06	0.27	0.02
	7.70	0.30	0.90	0.10	0.27	0.03
	8.00	0.30	0.80	0.20	0.24	0.05
	8.30	0.30	0.80	0.23	0.24	0.06
	8.60	0.30	0.80	0.24	0.24	0.06
	8.90	0.40	0.70	0.30	0.28	0.08

LWE 9

Above Sherman IC



Sample Date 10/29/2010

Device Marsh MacBr

Total Flow (cf): 2.71

Avg. Velocity 0.56

Max. Velocity 0.92

Stage NT

Crew member W. Brown M Hartz C. White

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	1.5					
	1.80	0.30	0.3	0.04	0.09	0.00
	2.10	0.30	0.40	0.20	0.12	0.02
	2.40	0.30	0.50	0.10	0.15	0.02
	2.70	0.30	0.60	0.24	0.18	0.04
	3.00	0.30	0.70	0.41	0.21	0.09
	3.30	0.30	0.80	0.47	0.24	0.11
	3.60	0.30	0.80	0.66	0.24	0.16
	3.90	0.30	1.00	0.74	0.30	0.22
	4.20	0.30	1.10	0.76	0.33	0.25
	4.50	0.30	1.10	0.83	0.33	0.27
	4.80	0.30	1.00	0.92	0.30	0.28
	5.10	0.30	1.00	0.91	0.30	0.27
	5.40	0.30	1.10	0.81	0.33	0.27
	5.70	0.30	1.00	0.76	0.30	0.23
	6.00	0.30	0.90	0.64	0.27	0.17
	6.30	0.30	0.90	0.52	0.27	0.14
	6.6	0.30	0.70	0.42	0.21	0.09
	6.90	0.30	0.50	0.42	0.15	0.06
	7.20	0.30	0.40	0.07	0.12	0.01
REW	7.50					

French Gulch above ITD MS4



Sample Date 10/29/2010  
 Device Marsh MacBr  
 Total Flow (cf) 0.68  
 Avg. Velocity 0.03  
 Max. Velocity 0.06  
 Stage NT  
 Crew member W. Brown M Hartz C.White  
 Method wading



15th Street IC



Sample Date 10/29/2010  
 Device Marsh MacBr  
 Total Flow (cf) 0.62  
 Avg. Velocity 0.74  
 Max. Velocity 1.44  
 Stage NT  
 Crew member W. Brown M Hartz C.white  
 Method wading



RWE

Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
0.8					
1.5	0.25	0.80	0.01	0.20	0.002
2.00	0.50	0.90	0.05	0.45	0.02
2.50	0.50	0.10	0.02	0.05	0.001
3.00	0.50	0.90	0.01	0.45	0.005
3.50	0.50	0.70	0.04	0.35	0.01
4.00	0.50	0.60	0.06	0.30	0.02
4.50	0.50	0.60	0.03	0.30	0.01
5.00	0.50	0.60	0.03	0.30	0.01
5.50	0.50	0.50	0.03	0.25	0.01

LEW

Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
1					
1.30	0.30	0.40	0.09	0.12	0.01
1.60	0.30	0.40	0.60	0.12	0.07
1.90	0.25	0.40	1.44	0.10	0.14
2.10	0.30	0.40	1.38	0.12	0.17
2.50	0.35	0.40	1.40	0.14	0.20
2.80	0.30	0.40	0.09	0.12	0.01
3.10	0.30	0.30	0.20	0.09	0.02
3.40					

LWE 5.90 Hydrograph began to rise at the time of sampling. Smell of hydrocarbon detected in runoff.  
 Backwater (tail water) was present at station 2 which affected flow measurements. FG flow appeared to be lagging.

Below Sherman IC



Sample Date 4/11/2011

Device Marsh MacBr

Total Flow (cf: 8.75

Avg. Velocity 0.75

Max. Velocity 1.00

Stage NT

Crew member C. While M Hartz

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	0.7					
	0.9	0.25	1.40	0.59	0.35	0.21
	1.20	0.30	1.40	0.72	0.42	0.30
	1.50	0.30	1.40	0.79	0.42	0.33
	1.80	0.30	1.40	0.56	0.42	0.24
	2.10	0.30	1.40	0.17	0.42	0.07
	2.40	0.30	1.40	0.53	0.42	0.22
	2.70	0.30	1.50	0.45	0.45	0.20
	3.00	0.30	1.60	0.51	0.48	0.24
	3.30	0.30	1.80	0.72	0.54	0.39
	3.60	0.30	1.80	0.73	0.54	0.39
	3.90	0.30	1.80	0.71	0.54	0.38
	4.20	0.30	1.80	0.75	0.54	0.41
	4.50	0.30	1.60	0.80	0.48	0.38
	4.80	0.30	1.80	0.80	0.54	0.43
	5.10	0.30	1.70	0.82	0.51	0.42
	5.40	0.30	1.70	0.85	0.51	0.43
	5.70	0.30	1.60	0.90	0.48	0.43
	6.00	0.30	1.50	0.92	0.45	0.41
	6.30	0.30	1.50	0.97	0.45	0.44
	6.60	0.30	1.40	1.00	0.42	0.42
	6.90	0.30	1.30	0.92	0.39	0.36
	7.20	0.35	1.40	0.92	0.49	0.45
	7.60	0.35	1.30	0.88	0.46	0.40
	7.90	0.30	1.30	0.72	0.39	0.28
	8.20	0.30	1.10	0.97	0.33	0.32
	8.50	0.25	1.10	0.67	0.28	0.18

REW

8.70

Above Sherman IC



Sample Date 4/11/2011

Device Marsh MacBr

Total Flow (cf: 4.93

Avg. Velocity 0.66

Max. Velocity 0.90

Stage NT

Crew member C. While M Hartz

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	0.9					
	1.5	0.55	0.4	0	0.22	0.00
	2.00	0.50	0.7	0.25	0.35	0.09
	2.50	0.50	1.00	0.60	0.50	0.30
	3.00	0.50	1.10	0.80	0.55	0.44
	3.50	0.50	1.30	0.84	0.65	0.55
	4.00	0.50	1.40	0.82	0.70	0.57
	4.50	0.50	1.40	0.88	0.70	0.62
	5.00	0.50	1.20	0.90	0.60	0.54
	5.50	0.50	1.50	0.73	0.75	0.55
	6.00	0.50	1.40	0.84	0.70	0.59
	6.50	0.50	1.20	0.79	0.60	0.47
	7.00	0.50	1.00	0.43	0.50	0.22
	7.50	0.50	0.50	0.02	0.25	0.01

REW

8.00



Below Sherman IC



Sample Date 6/13/2011

Device Marsh MacBr

Total Flow (cf) 2.19

Avg. Velocity 0.40

Max. Velocity 0.56

Stage NT

Crew member W. Brown M Hartz

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	1.2					
	1.5	0.40	0.74	0.14	0.30	0.04
	2	0.50	0.7	0.45	0.35	0.16
	2.50	0.50	0.70	0.28	0.35	0.10
	3.00	0.50	0.70	0.34	0.35	0.12
	3.50	0.50	0.80	0.39	0.40	0.16
	4.00	0.50	0.95	0.38	0.48	0.18
	4.50	0.50	1.00	0.36	0.50	0.18
	5.00	0.50	0.90	0.41	0.45	0.18
	5.50	0.50	0.95	0.41	0.48	0.19
	6.00	0.50	0.90	0.45	0.45	0.20
	6.50	0.50	0.80	0.23	0.40	0.09
	7.00	0.50	0.64	0.52	0.32	0.17
	7.50	0.50	0.55	0.46	0.28	0.13
	8.00	0.50	0.50	0.56	0.25	0.14
	8.50	0.50	0.40	0.45	0.20	0.09
	9.00	0.40	0.40	0.38	0.16	0.06
REW	9.30					

Above Sherman IC



Sample Date

Device Marsh MacBr Below remediated site

Total Flow (cf) 1.03

Avg. Velocity 0.24

Max. Velocity 0.41

Stage NT

Crew member W. Brown M Hartz

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	2.9					
	3	0.30	0.2	0.04	0.06	0.0024
	3.50	0.50	0.45	0.01	0.23	0.0023
	4.00	0.50	0.55	0.13	0.28	0.04
	4.50	0.50	0.80	0.31	0.40	0.12
	5.00	0.50	0.80	0.35	0.40	0.14
	5.50	0.50	0.80	0.36	0.40	0.14
	6.00	0.50	0.85	0.35	0.43	0.15
	6.50	0.50	0.80	0.36	0.40	0.14
	7.00	0.50	0.90	0.41	0.45	0.18
	7.50	0.50	0.60	0.34	0.30	0.10
	8.00	0.75	0.40	0.02	0.30	0.01
REW	9.00					



French Gulch above Sherman IC



Sample Date 6/13/2011  
 Device Marsh MacBr  
 Total Flow (cf) 0.59  
 Avg. Velocity 0.12  
 Max. Velocity 0.20  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	2					
	2.2	0.25	0.4	0	0.10	0.00
	2.50	0.40	0.5	0.03	0.20	0.01
	3.00	0.50	0.90	0.04	0.45	0.02
	3.50	0.50	1.20	0.15	0.60	0.09
	4.00	0.50	1.20	0.19	0.60	0.11
	4.50	0.50	1.10	0.20	0.55	0.11
	5.00	0.50	1.10	0.20	0.55	0.11
	5.50	0.50	1.10	0.16	0.55	0.09
	6.00	0.50	0.80	0.11	0.40	0.04
	6.50	0.70	0.70	0.02	0.49	0.01
REW	7.40					

15th Street IC



Sample Date 6/13/2011  
 Device Marsh MacBr Below remediated site  
 Total Flow (cf) 0.13  
 Avg. Velocity 0.10  
 Max. Velocity 0.23  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
REW	1.3					
	1.4	0.50	0.5	0.09	0.25	0.02
	2.30	0.80	0.6	0.04	0.48	0.02
	3.00	0.60	0.40	0.23	0.24	0.06
	3.50	0.50	0.45	0.01	0.23	0.00
	4.00	0.75	0.40	0.11	0.30	0.03
LEW	5.00					

15th Steet (City)



Sample Date 6/13/2011  
 Device Marsh MacBr  
 Total Flow (cf) 1.19  
 Avg. Velocity 3.95  
 Max. Velocity 3.95  
 Stage NT  
 Crew member W. Brown M Hartz C. While  
 Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
		1.50	0.4	3.95	0.30	1.19

This discharge is location below the 15th St.  
 IC where the City of CdA discharges stormwater into the I-90 system from 15th St.

Below Sherman IC



Sample Date 11/22/2011

Device Marsh MacBr

Total Flow (cf) 13.65

Avg. Velocity 0.59

Max. Velocity 0.76

Stage NT

Crew member W. Brown M Hartz C.White

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	1.00					
	1.30	0.30	2.90	0.30	0.87	0.26
	1.80	0.50	2.90	0.44	1.45	0.64
	2.30	0.50	2.90	0.48	1.45	0.70
	2.80	0.50	2.90	0.55	1.45	0.80
	3.30	0.50	3.00	0.54	1.50	0.81
	3.80	0.50	3.10	0.56	1.55	0.87
	4.30	0.50	3.10	0.61	1.55	0.95
	4.80	0.50	3.10	0.55	1.55	0.85
	5.30	0.50	3.20	0.66	1.60	1.06
	5.80	0.50	3.00	0.65	1.50	0.98
	6.30	0.50	3.00	0.70	1.50	1.05
	6.80	0.50	3.00	0.71	1.50	1.07
	7.30	0.50	3.00	0.70	1.50	1.05
	7.80	0.50	2.30	0.70	1.15	0.81
	8.30	0.90	2.60	0.76	2.34	1.78
REW	9.20					

Below Sherman IC



Sample Date 1/30/2012

Device Marsh MacBr

Total Flow (cf) 8.87

Avg. Velocity 0.67

Max. Velocity 0.87

Stage NT

Crew member W. Brown M Hartz

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	1.70					
	2.00	0.30	1.80	0.44	0.54	0.24
	3.00	1.00	1.80	0.48	1.80	0.86
	4.00	1.00	1.80	0.51	1.80	0.92
	5.00	1.00	2.10	0.73	2.10	1.53
	6.00	1.00	2.10	0.83	2.10	1.74
	7.00	1.00	2.10	0.83	2.10	1.74
	8.00	1.00	2.10	0.87	2.10	1.83
REW	9.00					

Above Sherman IC



Sample Date 1/30/2012

Device Marsh MacBr

Total Flow (cf) 2.97

Avg. Velocity 0.60

Max. Velocity 0.83

Stage NT

Crew member W. Brown M Hartz

Method wading



	Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
LEW	2.50					
	3.50	1.00	1.80	0.44	1.80	0.79
	4.00	0.50	1.80	0.48	0.90	0.43
	4.50	0.50	1.80	0.51	0.90	0.46
	5.00	0.50	2.10	0.73	1.05	0.77
	5.50	0.30	2.10	0.83	0.63	0.52
REW	5.80					

French Gulch above ITD MS4



Sample Date 1/30/2012  
 Device Marsh MacBr  
 Total Flow (cf) 0.00  
 Avg. Velocity #DIV/0!  
 Max. Velocity 0.00  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
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NA

15th Street IC



Sample Date 1/30/2012  
 Device Marsh MacBr  
 Total Flow (cf) 0.65  
 Avg. Velocity 1.16  
 Max. Velocity 2.37  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
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LEW	0.80				
	1.20	0.30	0.30	0.13	0.09
	1.80	0.55	0.30	0.10	0.17
	2.30	0.50	0.30	2.37	0.15
	2.80	0.50	0.20	1.78	0.10
	3.30	0.30	0.20	1.40	0.06
REW	3.60				

15th Street (City)



Sample Date 1/30/2012  
 Device Marsh MacBr  
 Total Flow (cf) 1.38  
 Avg. Velocity 0.48  
 Max. Velocity 0.51  
 Stage NT  
 Crew member W. Brown M Hartz  
 Method wading



Initial Pt.	Width (ft)	Depth (ft)	Vel. (fps)	Area (sq. ft.)	Discharge (cfs)
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LEW	1.00				
	1.50	0.50	1.80	0.44	0.90
	2.00	0.40	1.80	0.48	0.72
	2.30	0.70	1.80	0.51	1.26
REW	3.00				0.64

### Illicit Discharge Detection and Elimination System - Dry Weather Screening Tracking Log

Inspection Date	Inspectors	Actions Performed	Comments
1-Aug-10	Wally Brown, Mike Hartz	Inspected open ditch portions of the system below interconnection points	The system was completely dry due to lack of precipitation for several days. No noticeable sign of discharge or soil saturation were observed within the ITD MS4 below connection points.
17-Aug-11	Wally Brown, Mike Hartz	Inspected open ditch portions of the system below interconnection points	The system was completely dry due to lack of precipitation for several days. No noticeable sign of discharge or soil saturation were observed within the ITD MS4 below connection points.

ITD District 1  
MS4 Maintenance Log

**ITD D1 MS4 Maintenance Log**

Date	Work Performed	Comments
Apr-10	Broming, catch basin cleanout	All units were maintained and functional
Apr-11	Broming, catch basin cleanout	All units were maintained and functional