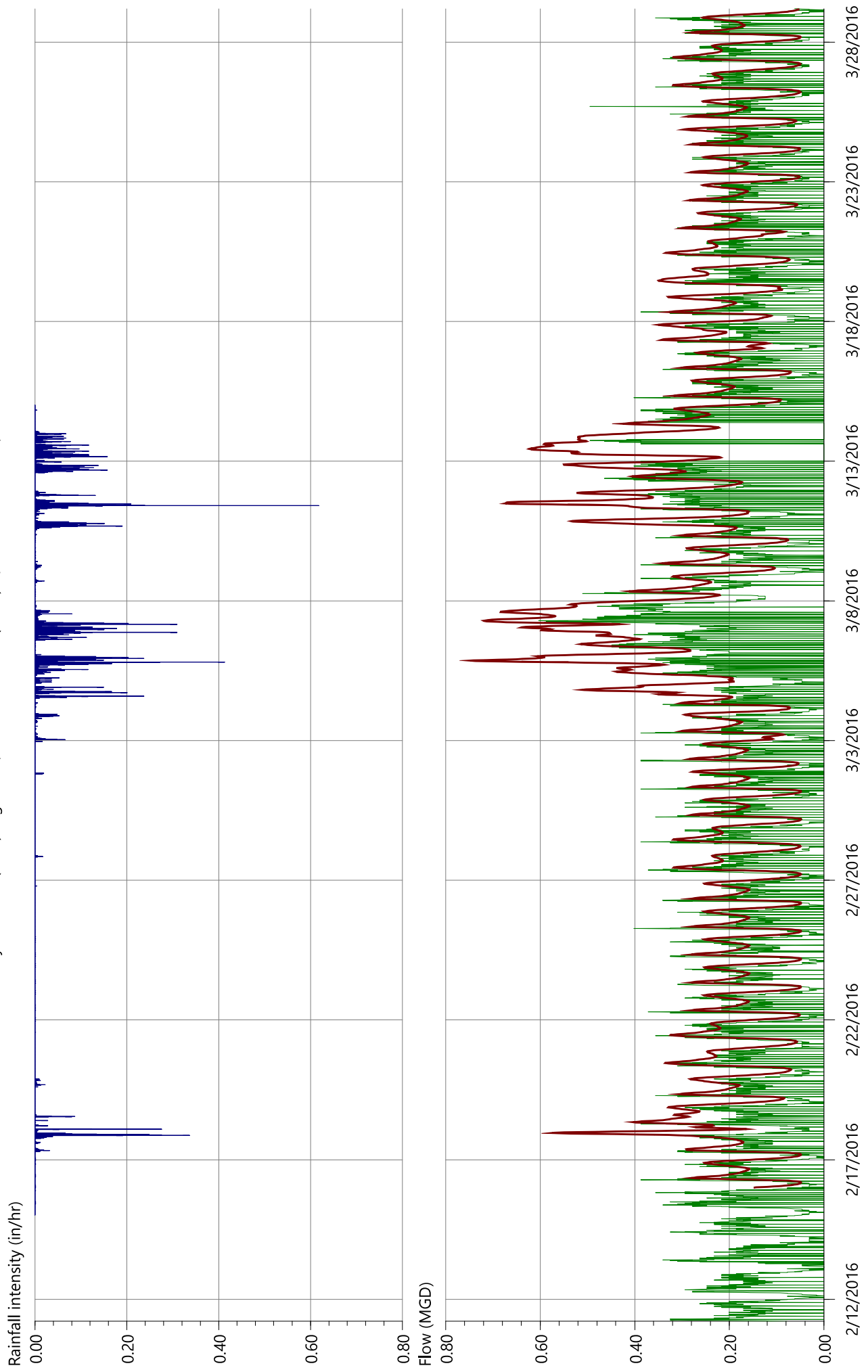
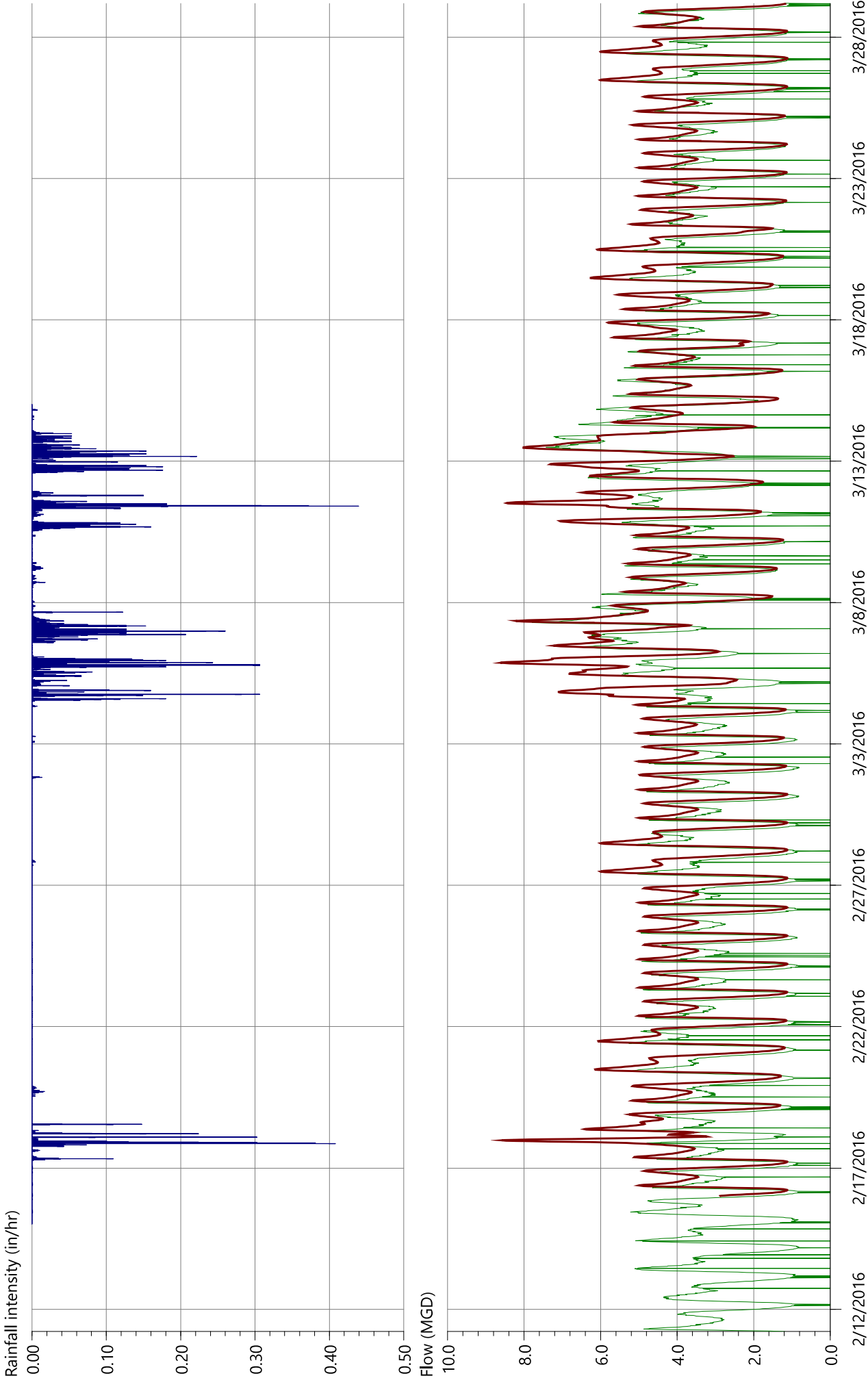




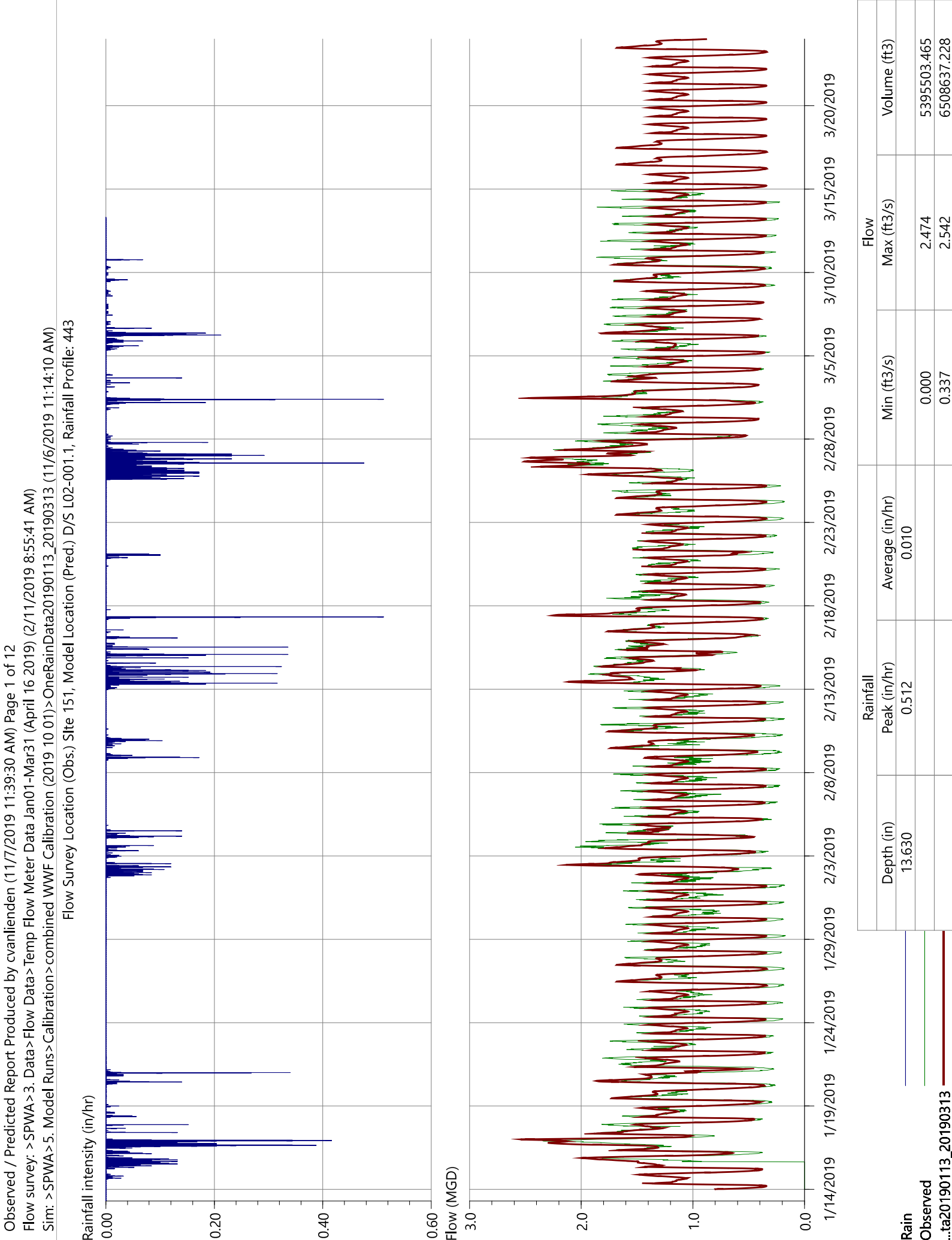
	Rainfall			Flow		Volume (ft3)
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	
Rain	6.502	0.618	0.009			
Observed				0.000	0.603	582182.933
...160315_RGBoundaries				0.048	0.748	847296.033

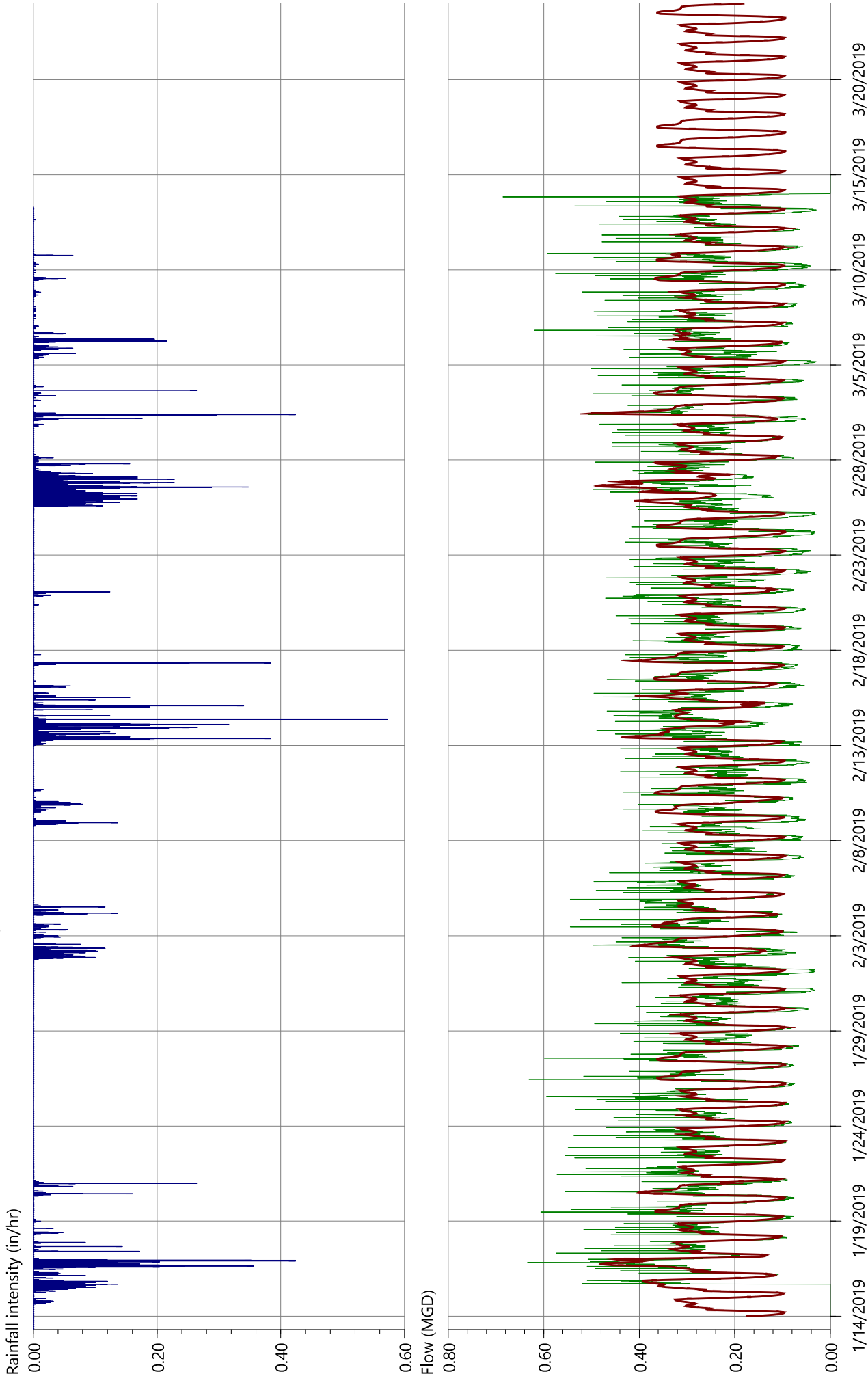


Rain Observed ...160315_RGBoundaries	Rainfall		Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)
	6.973	0.439	0.010	0.000	7.798
				1.119	8.612
					Volume (ft3)
					13146868.221
					14109574.857

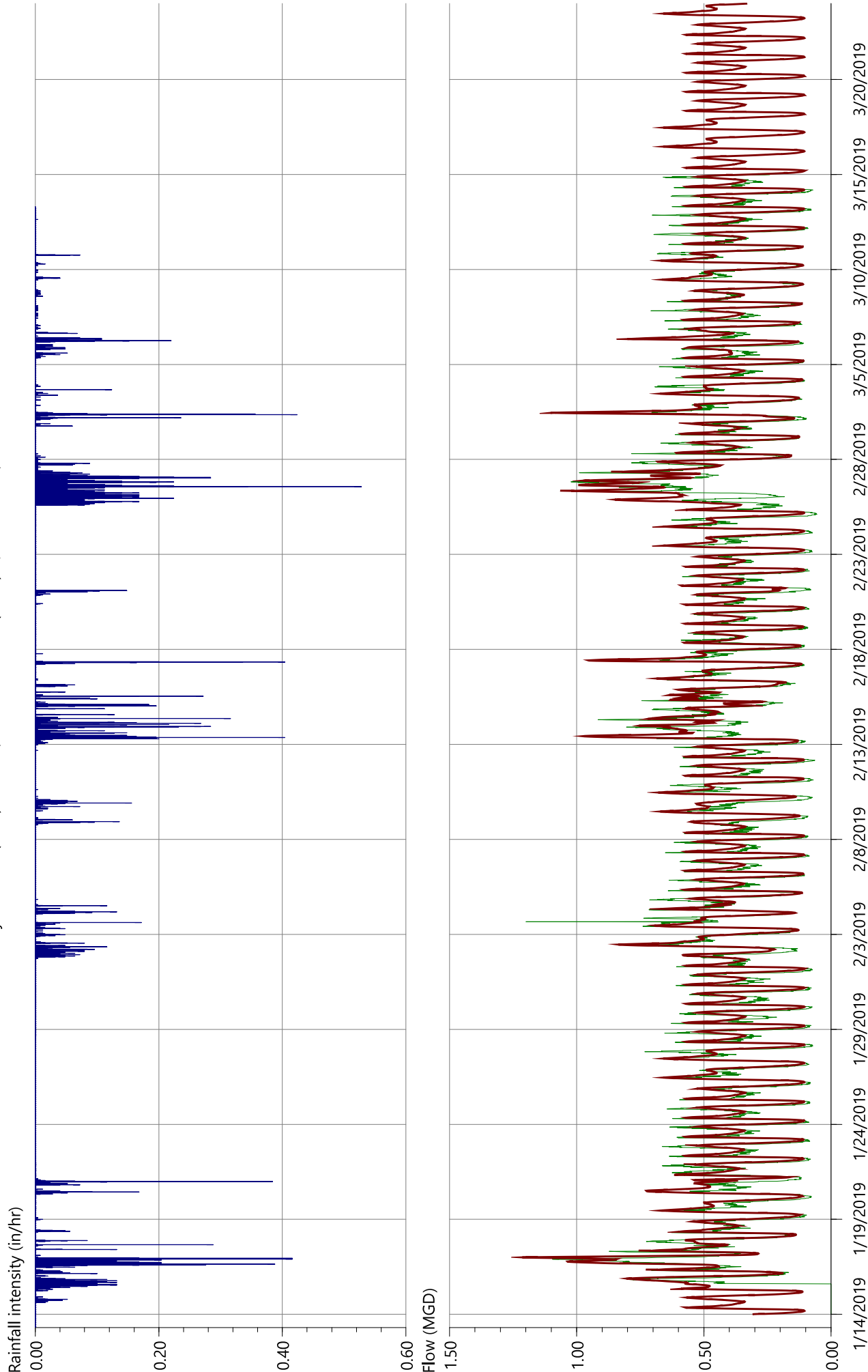


Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
6.280	0.506	0.009			
			0.000	10.738	17143559.755
			1.960	11.958	20629240.945

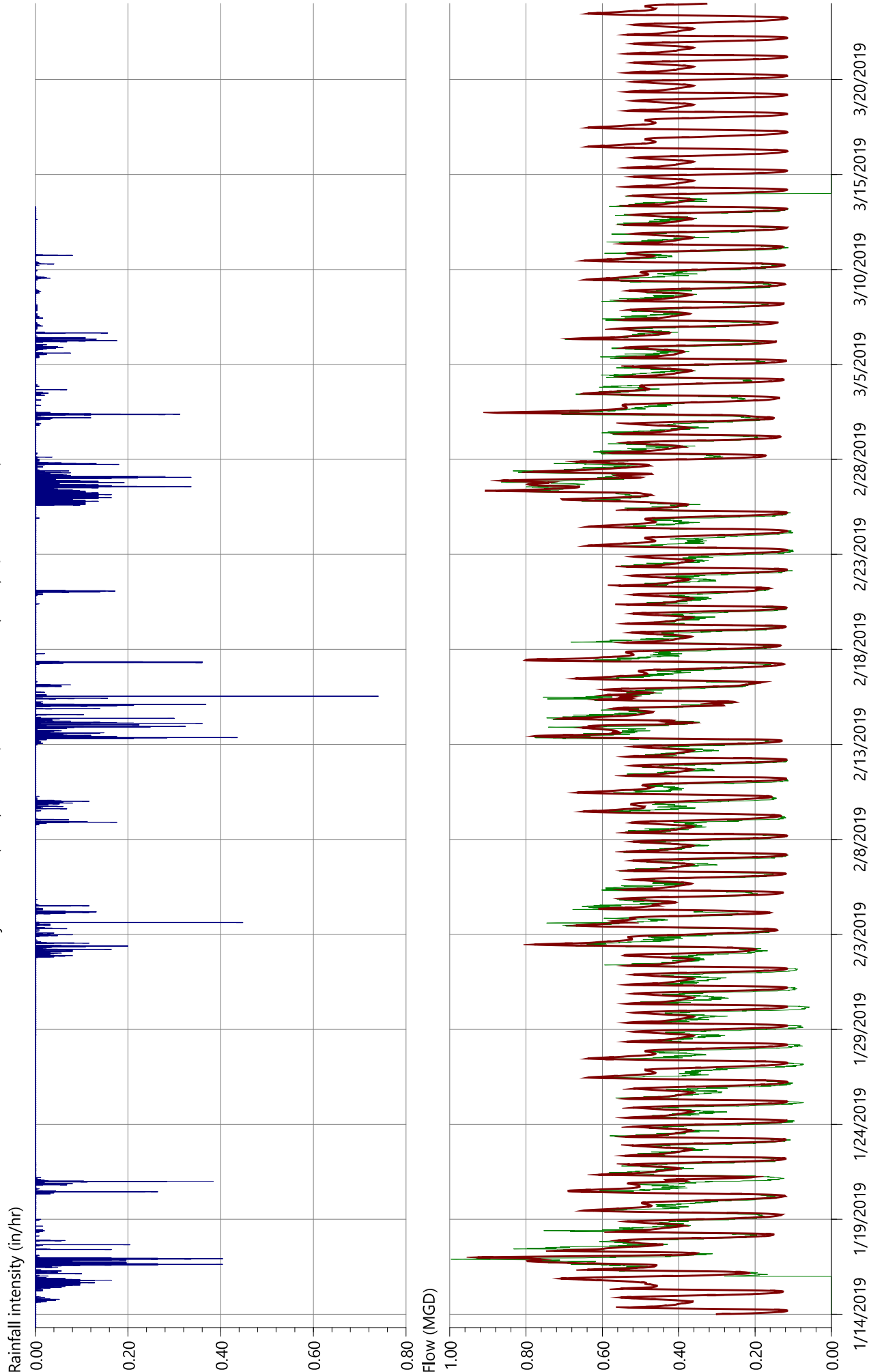




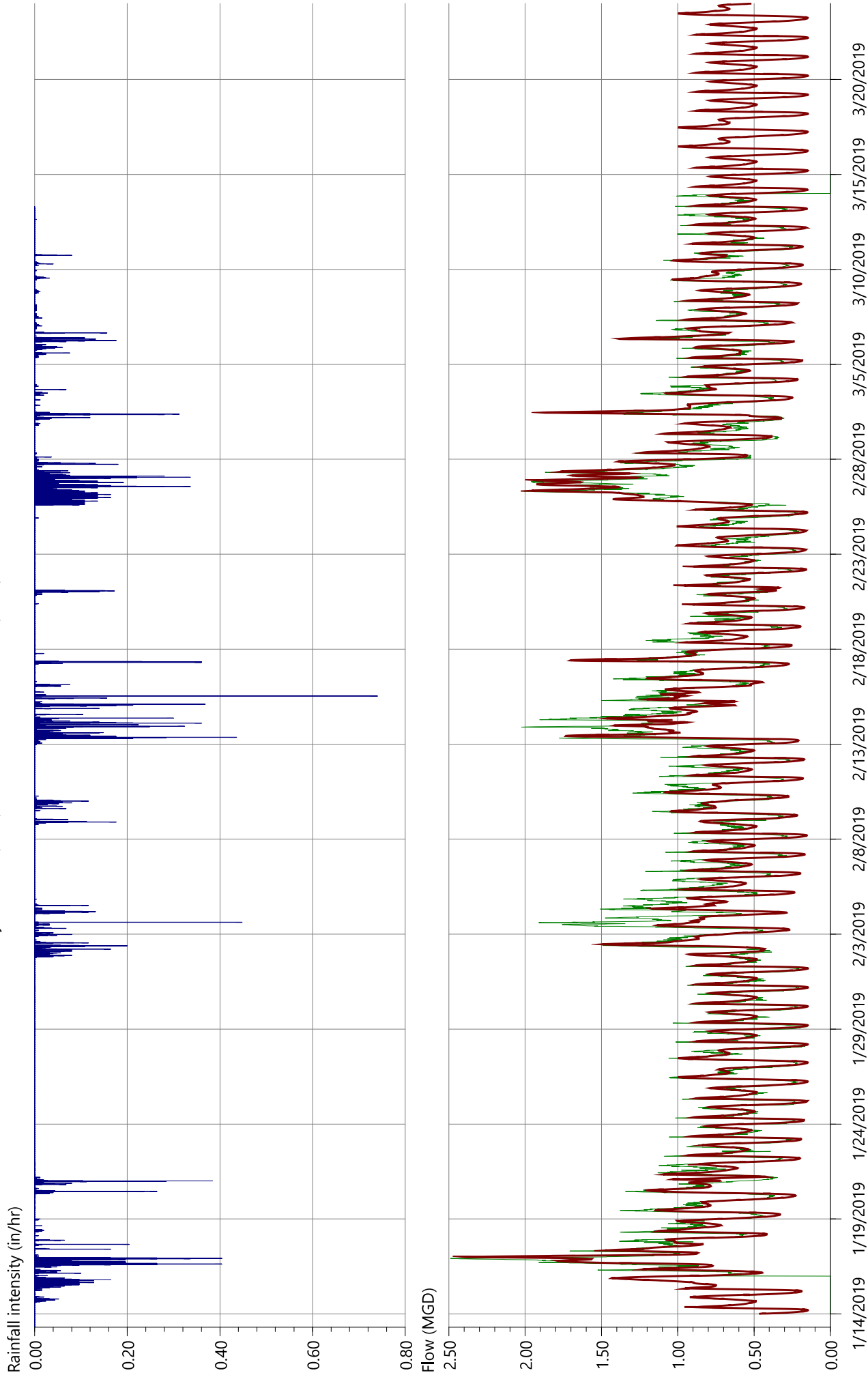
Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
13.411	0.572	0.009	0.000	0.685	1076804.266
			0.094	0.501	1458697.862



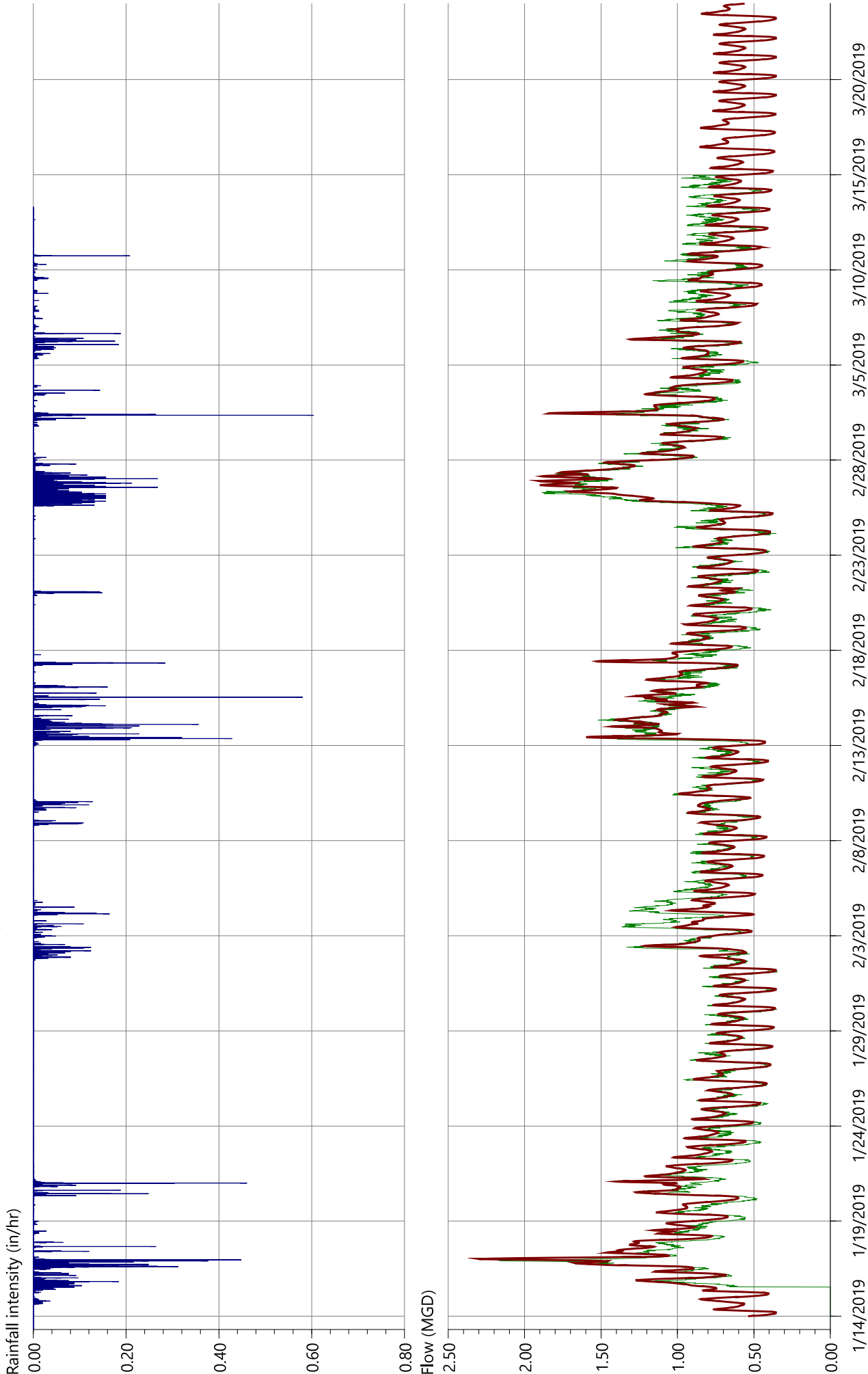
Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
13.898	0.528	0.010			
Observed			0.000	1.199	1862998.190
...ta20190113_20190313			0.105	1.214	2386062.923



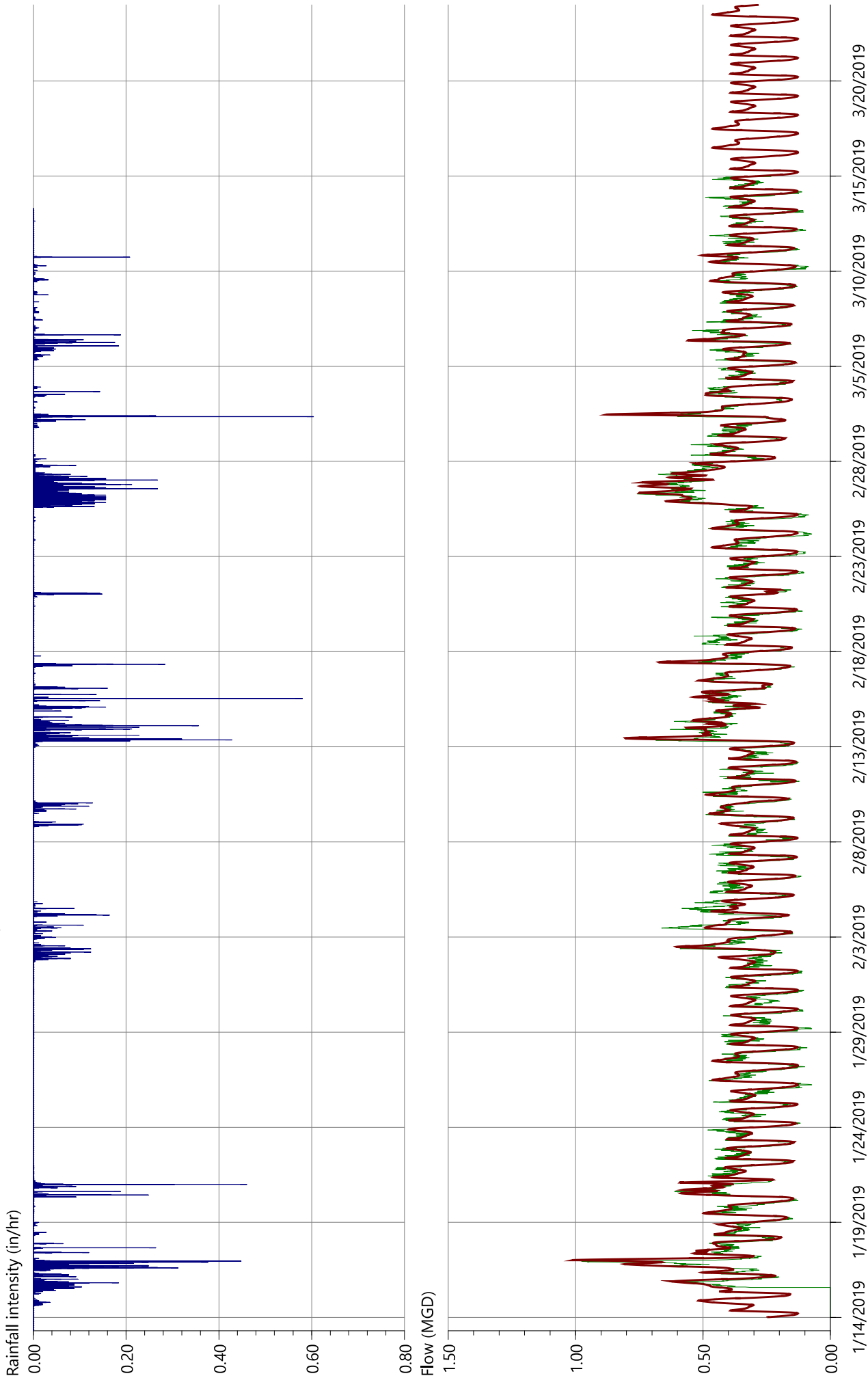
Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
14.389	0.740	0.010			
Observed			0.000	0.996	1886813.424
...ta20190113_20190313			0.115	0.927	2363415.830



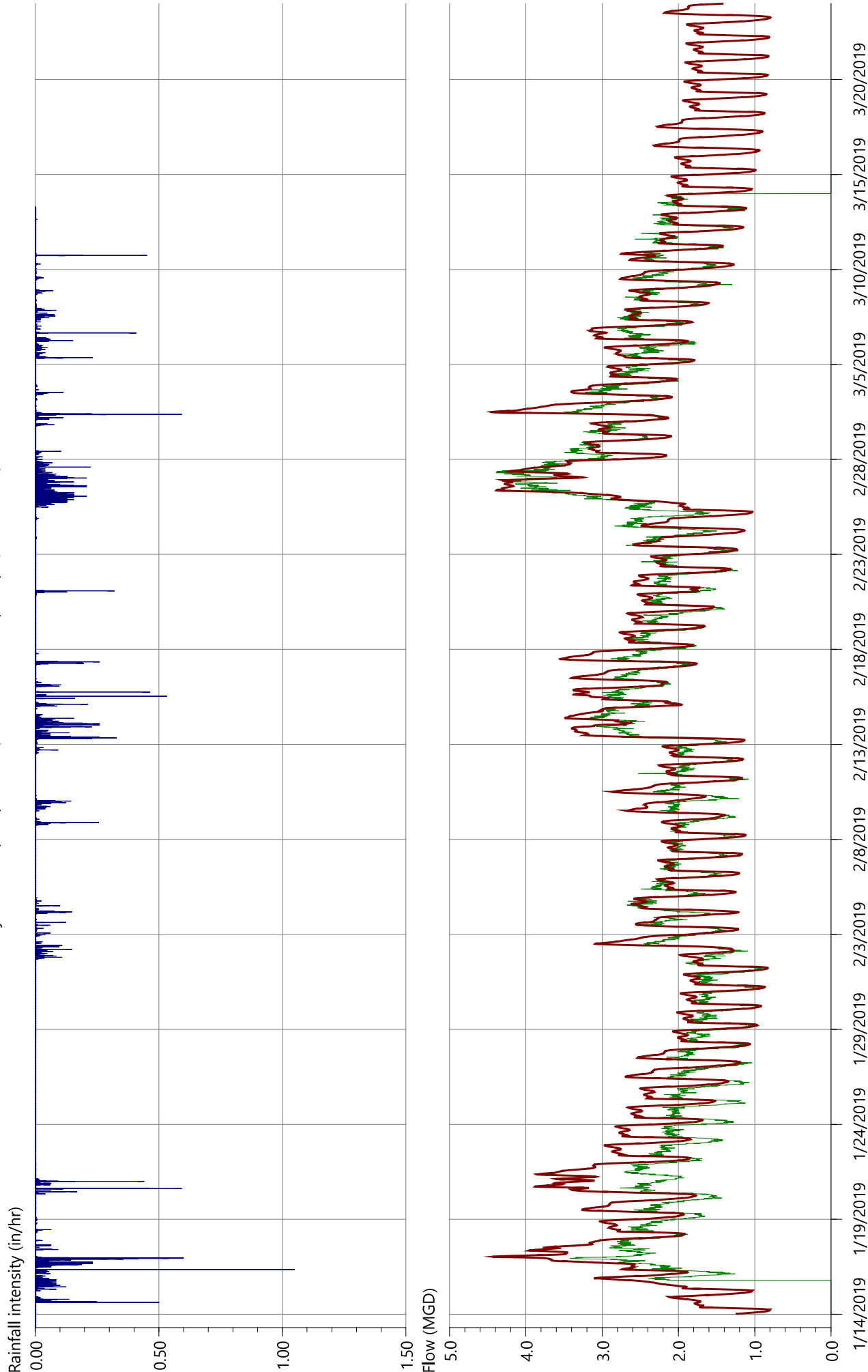
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	14.389	0.740	0.010			
Observed				0.000	2.488	3621783.843
...ta20190113_20190313				0.148	2.402	3981049.716



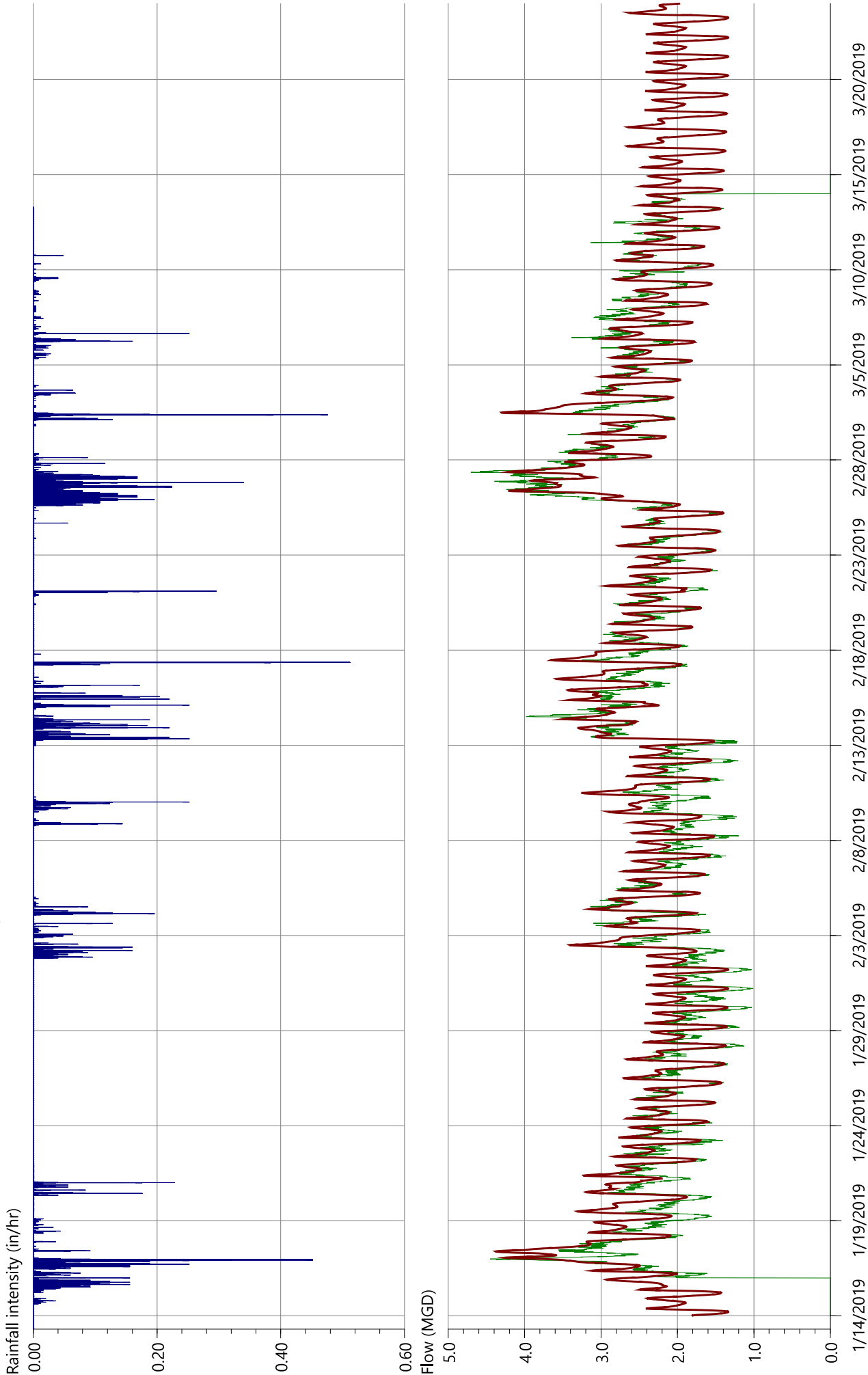
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.556	0.604	0.010			
Observed				0.000	2.172	4141187.489
...ta20190113_20190313				0.354	2.300	4657328.067



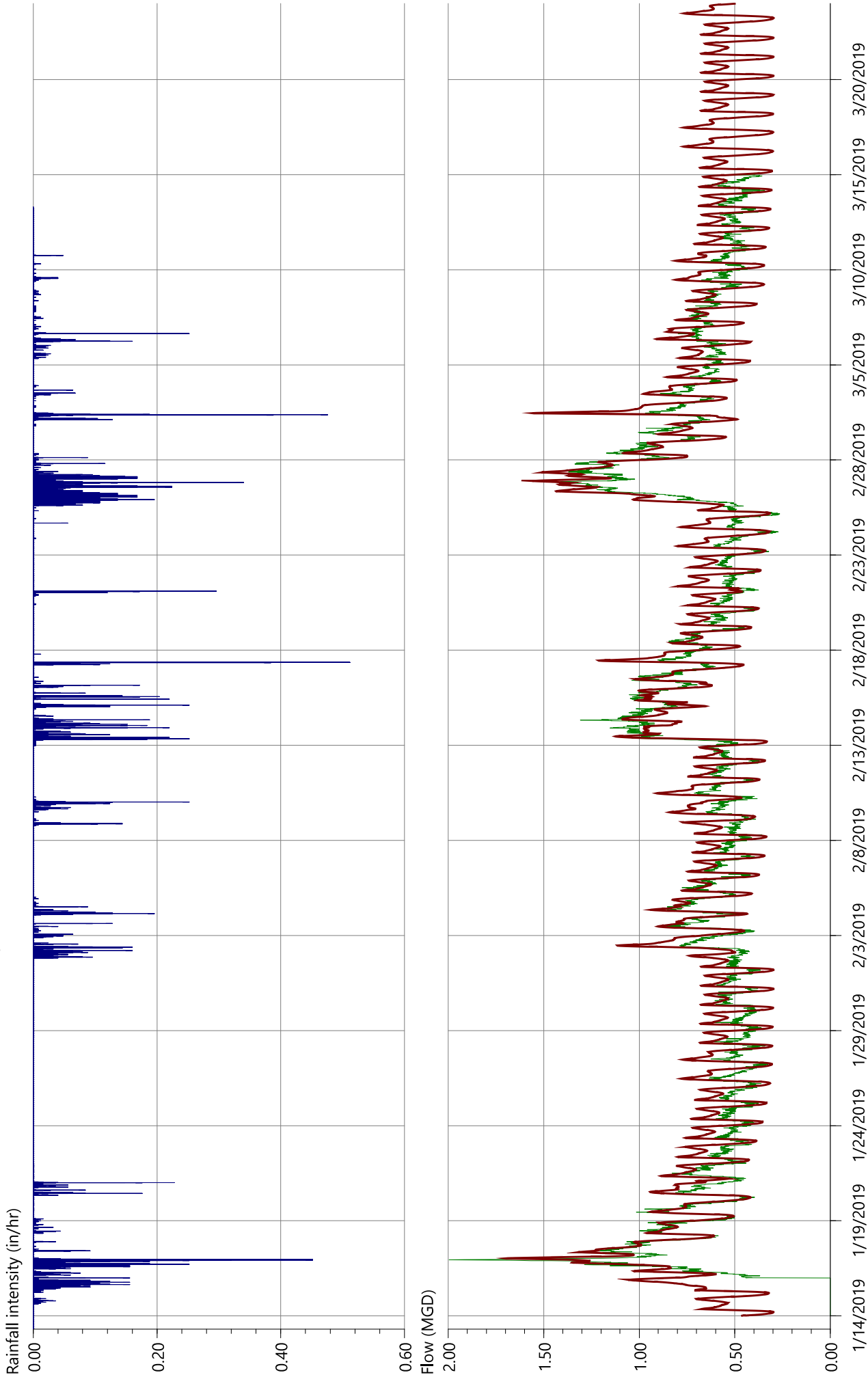
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.556	0.604	0.010			
Observed				0.000	0.976	1682585.005
...ta20190113_20190313				0.127	1.012	1976167.131



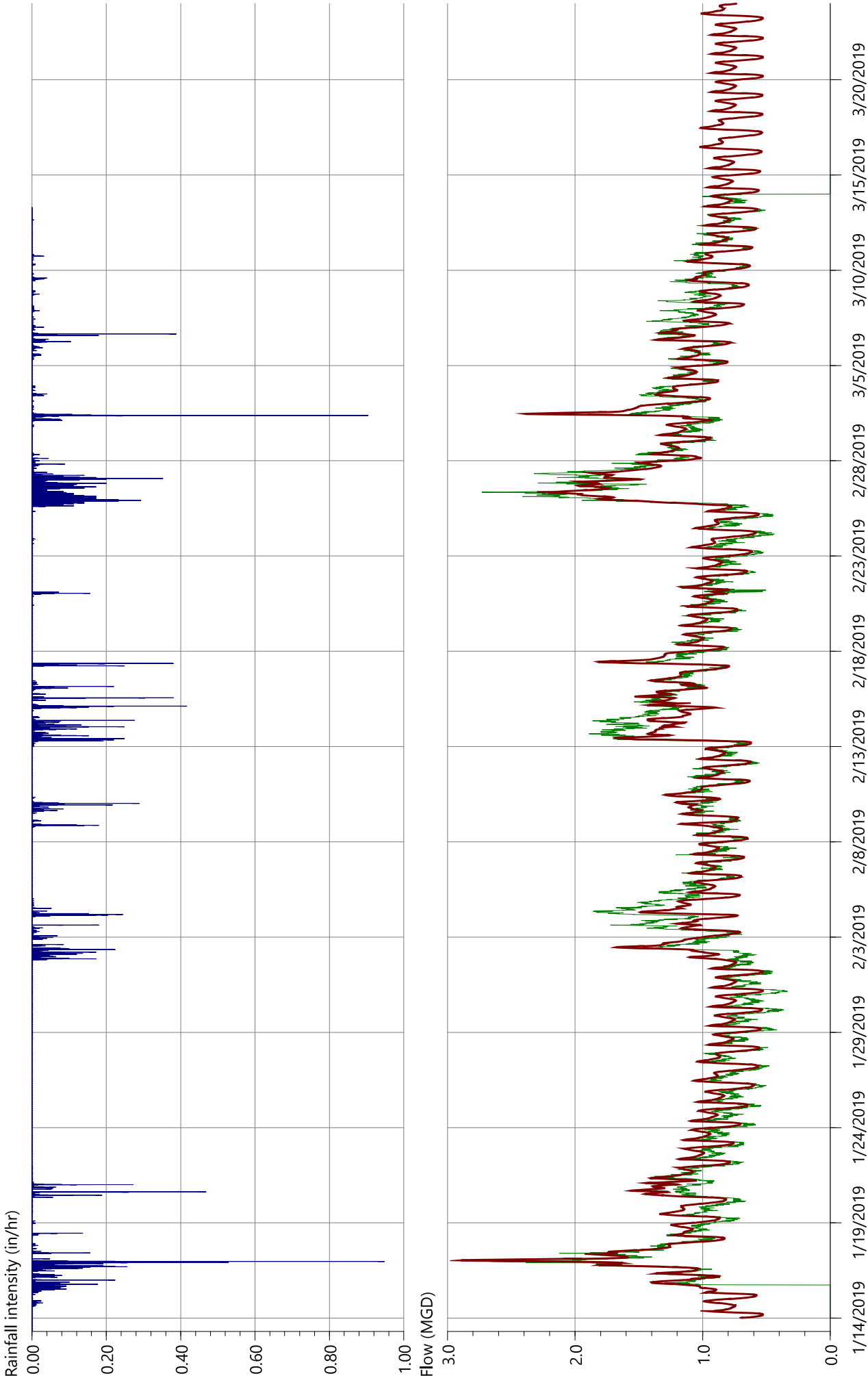
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	14.813	1.048	0.010			
Observed				0.000	4.389	10714291.384
...ta20190113_20190313				0.794	4.452	13146876.273



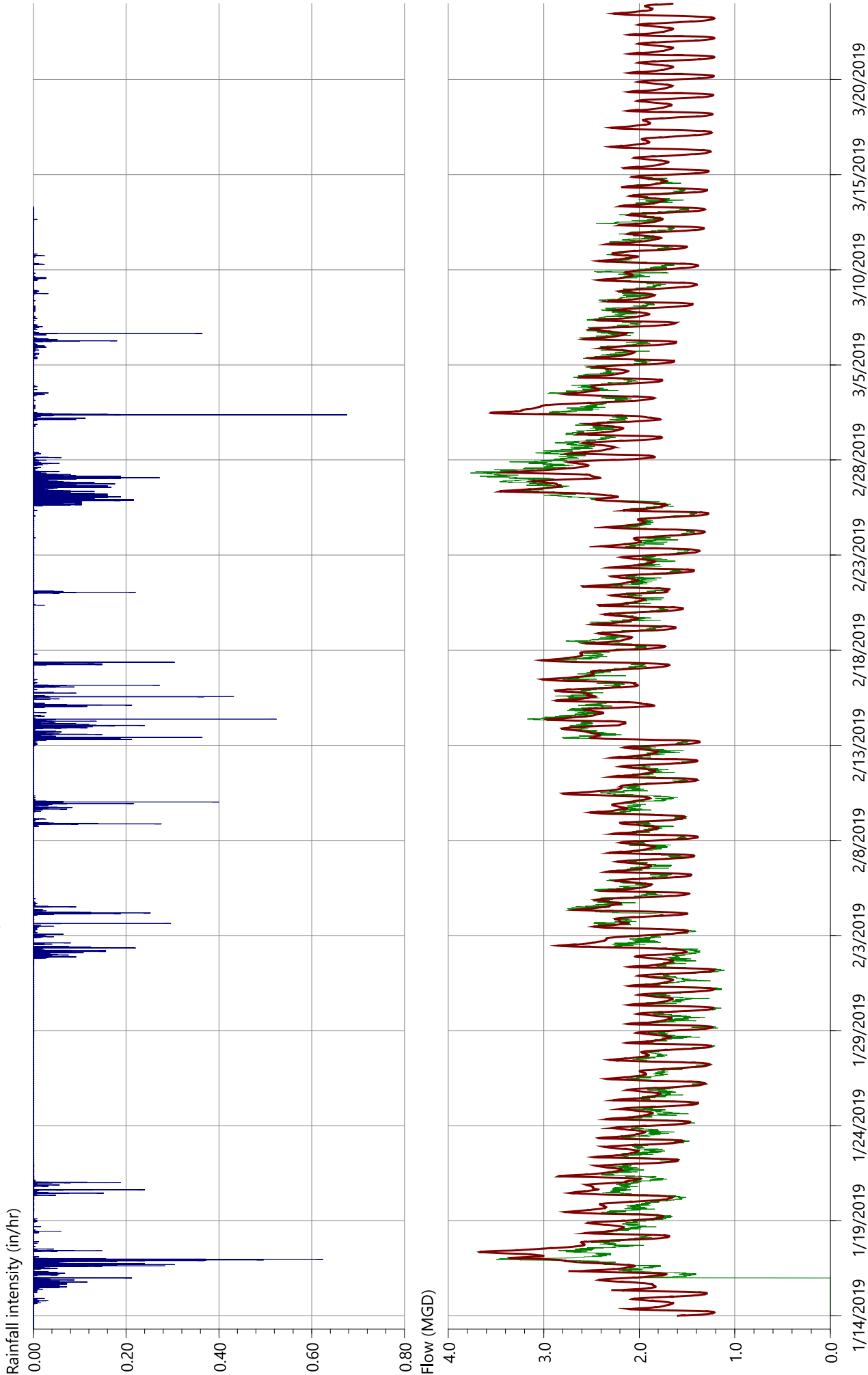
	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Rain	13.176	0.512	0.009			
Observed				0.000	4.702	11317470.919
...ta20190113_20190313				1.335	4.375	13934551.632



Rain	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
Observed	13.176	0.512	0.009	0.000	1.996	3174137.958
...ta20190113_20190313				0.297	1.702	3927509.288

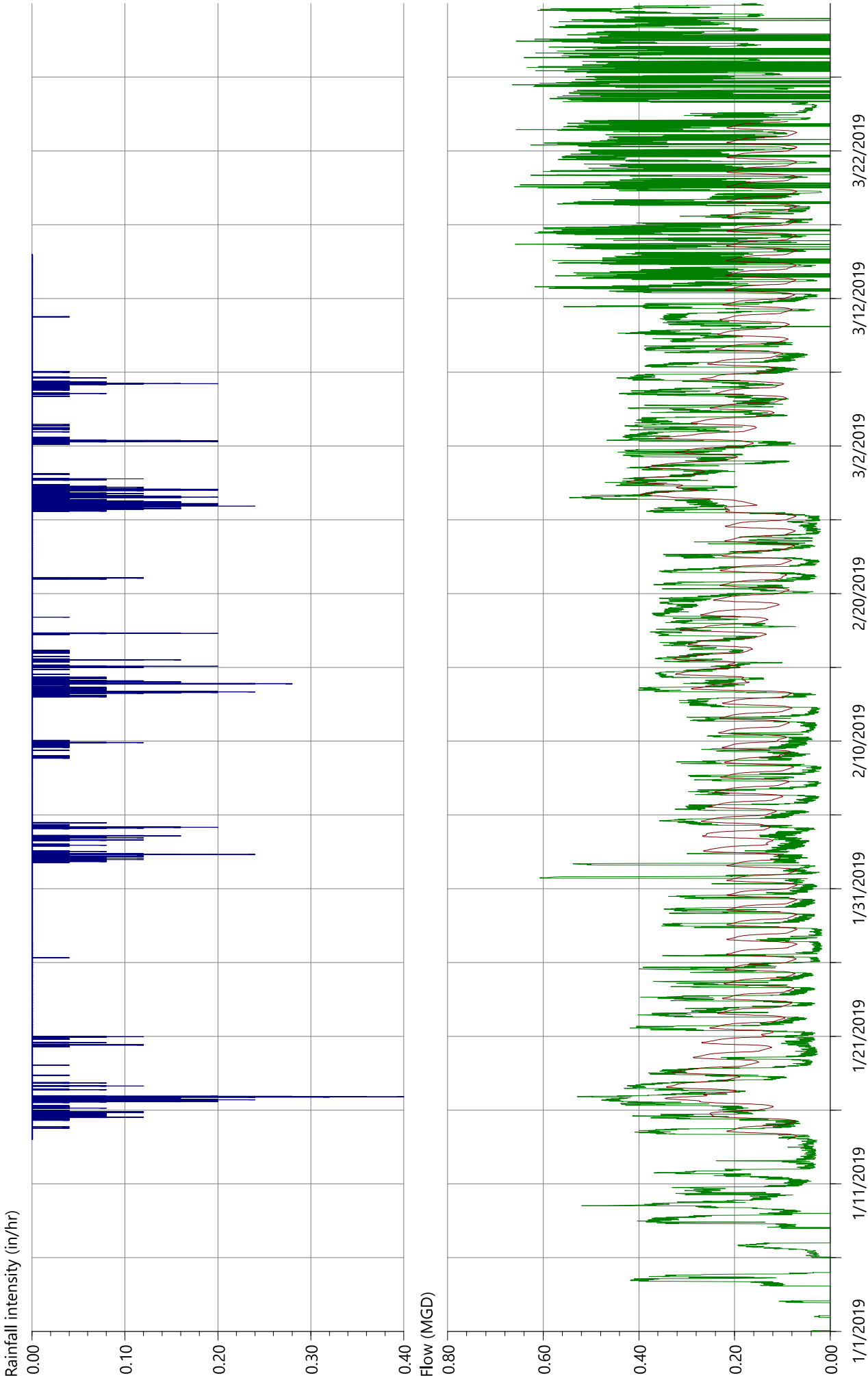


Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
13.733	0.948	0.010			
Observed			0.000	2.731	4995129.055
...ta20190113_20190313			0.528	2.894	5828937.326



	Rainfall			Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft ³ /s)	Max (ft ³ /s)	Volume (ft ³)
Rain	12.949	0.676	0.009			
Observed				0.000	3.767	10312984.650
...ta20190113_20190313				1.214	3.671	12012636.316

Flow Survey Location (Obs.) Cincinnati, Model Location (Pred.) D/S CA4-RSVL28.1, Rainfall Profile: 408

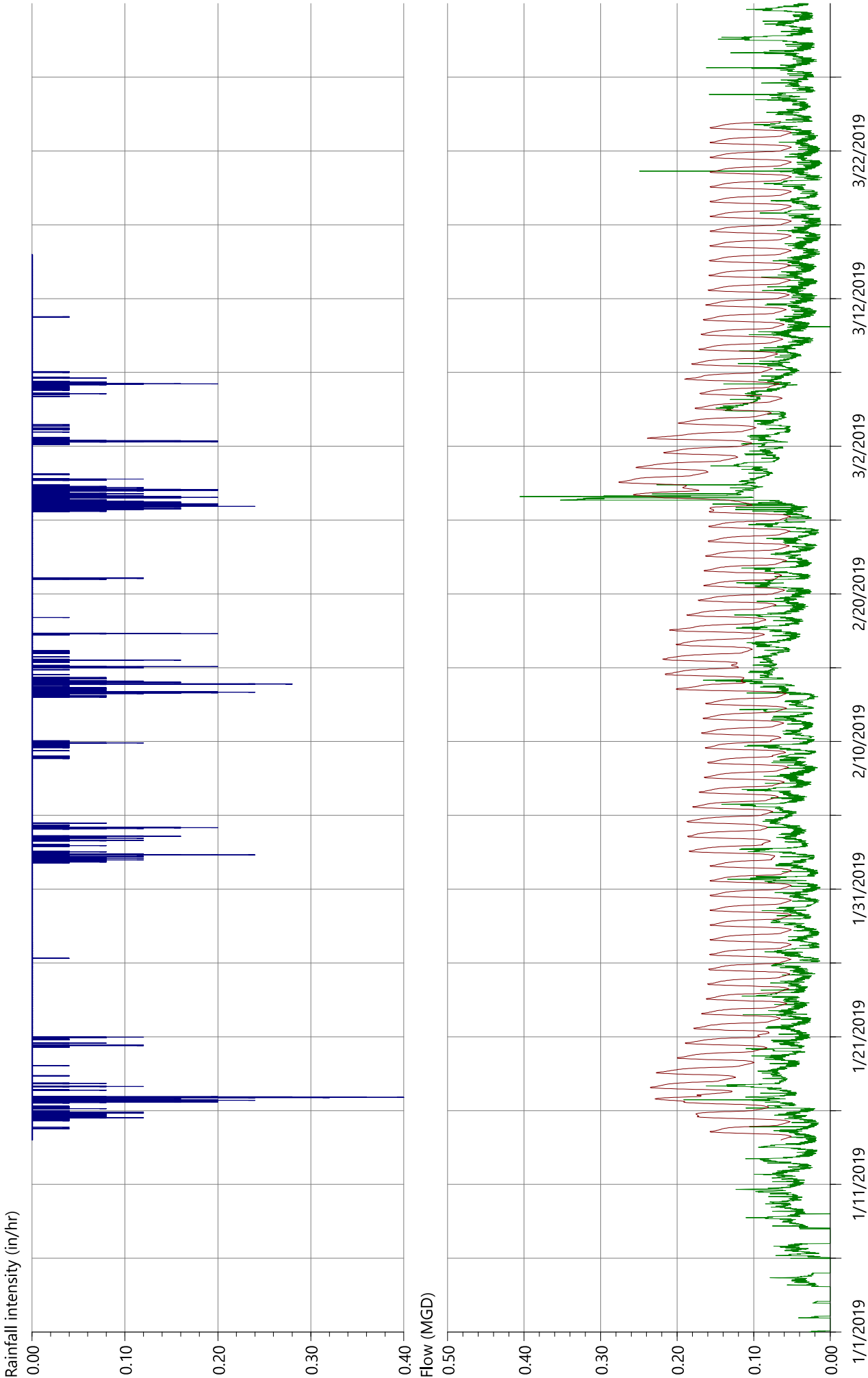


Rain	Rainfall		Flow	
	Depth (in)	Peak (in/hr)	Min (ft3/s)	Max (ft3/s)
Observed	15.530	0.400	0.000	0.665
...0313_*4_RGBoundaries			0.069	0.425
				1464913.927
				1025101.467

Flow survey: > SPWA>3. Data>Flow Data>Permanent Flow Meter Data Jan01-Mar31 (June 05 2019) (6/5/2019 1:51:15 PM)

Sim: > SPWA>5. Model Runs>Calibration>combined WWF Calibration (2019 10 01)_v29>OneRainData20190113_20190313_*4_RGBoundaries (11/6/2019 11:14:10 AM)

Flow Survey Location (Obs.) Industrial, Model Location (Pred.) D/S SMH G03-062.1, Rainfall Profile: 442

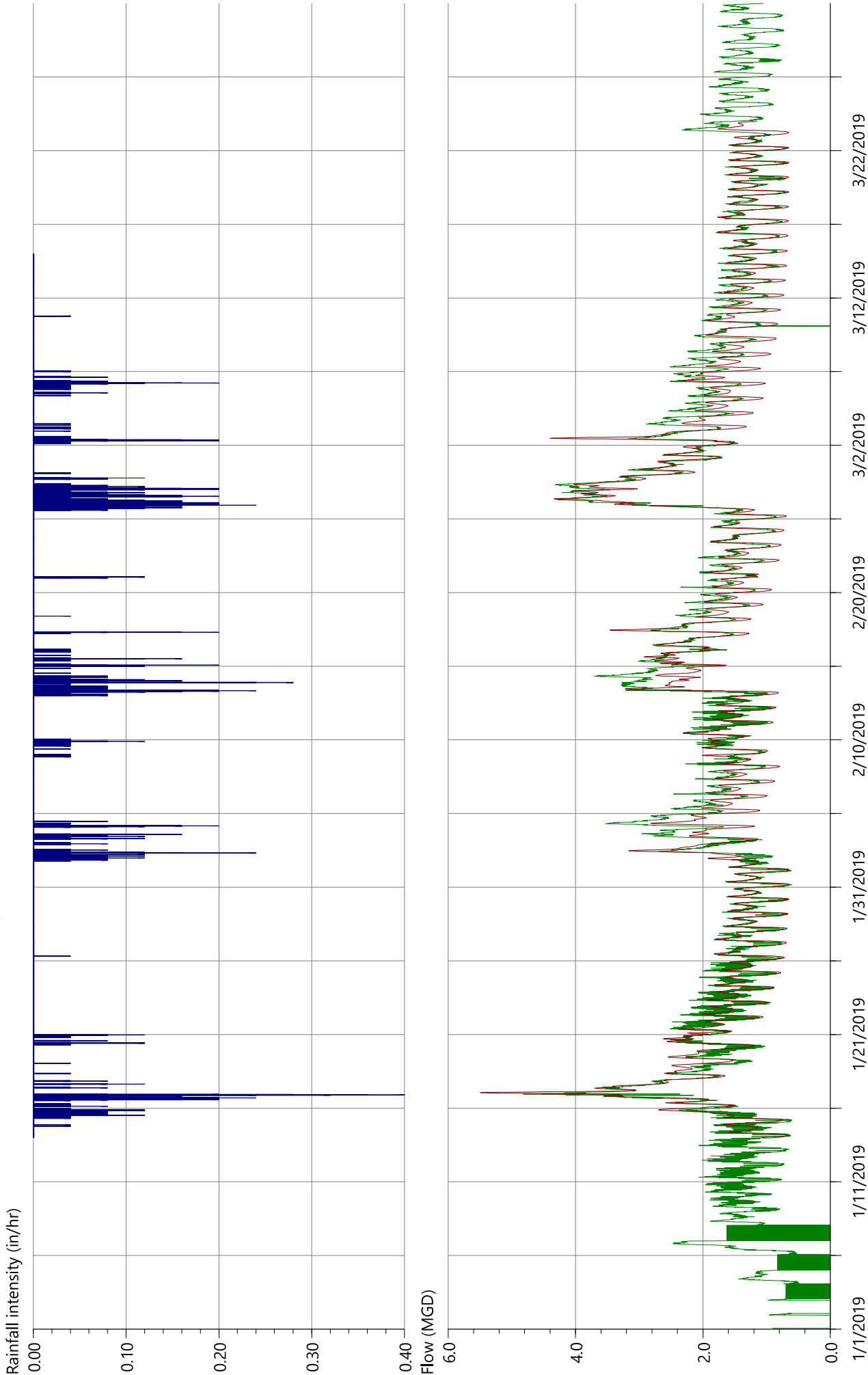


Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
15.530	0.400	0.011			
Observed			0.000	0.405	388057.020
..0313_*4_RGBoundaries			0.051	0.276	712709.520

Flow survey: > SPWA>3. Data>Flow Data>Permanent Flow Meter Data Jan01-Mar31 (June 05 2019) (6/5/2019 1:51:15 PM)

Sim: > SPWA>5. Model Runs>Calibration>combined WWF Calibration (2019 10 01)_v29>OneRainData20190113_20190313_*.4_RGBoundaries (11/6/2019 11:14:10 AM)

Flow Survey Location (Obs.) SMD2, Model Location (Pred.) D/S A10-03.1, Rainfall Profile: 121

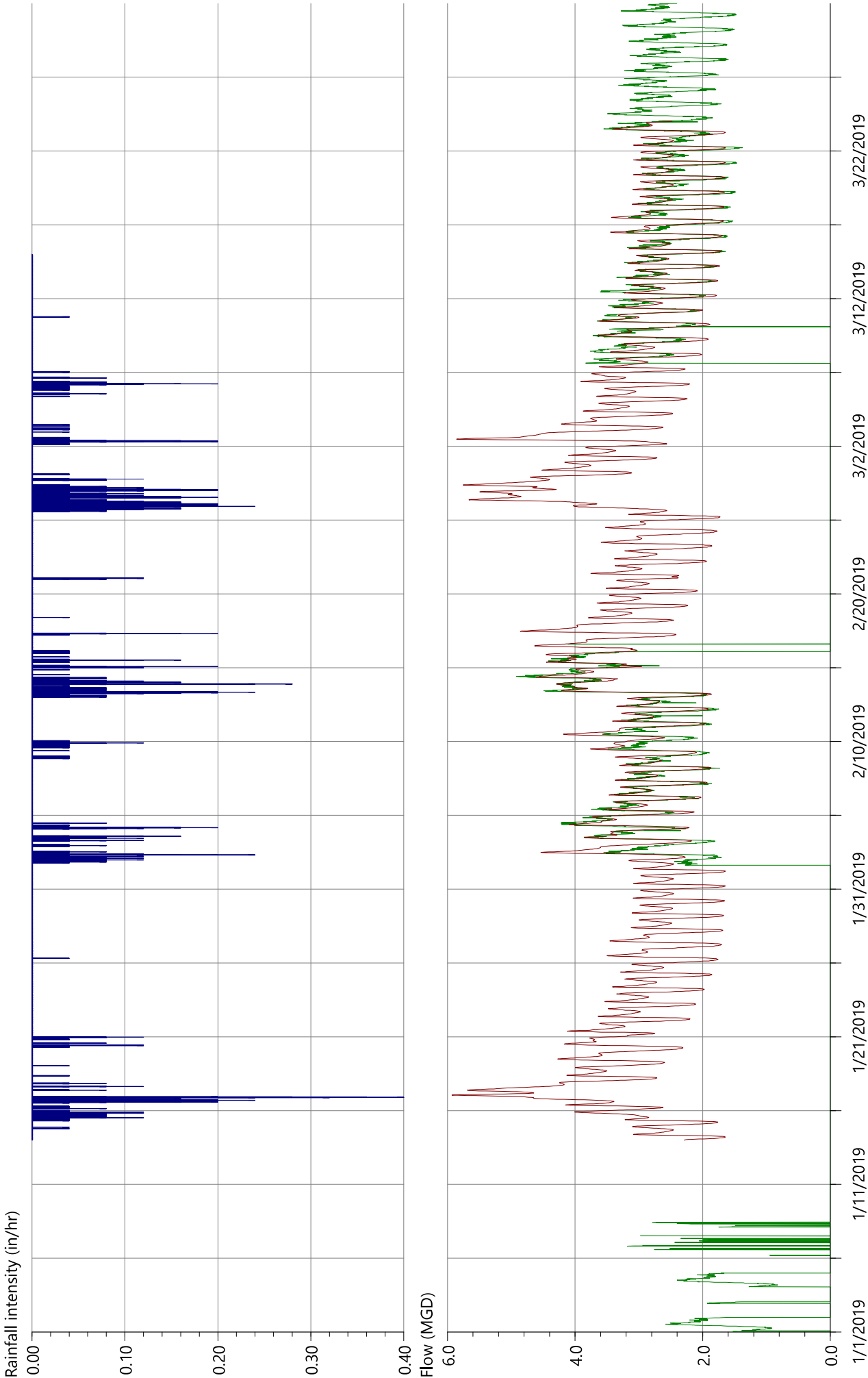


Rain	Rainfall		Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)
Observed	15.530	0.400	0.011	0.000	4.823
...0313_*.4_RGBoundaries				0.651	5.493
					Volume (ft3)
					12344642.590
					9792069.402

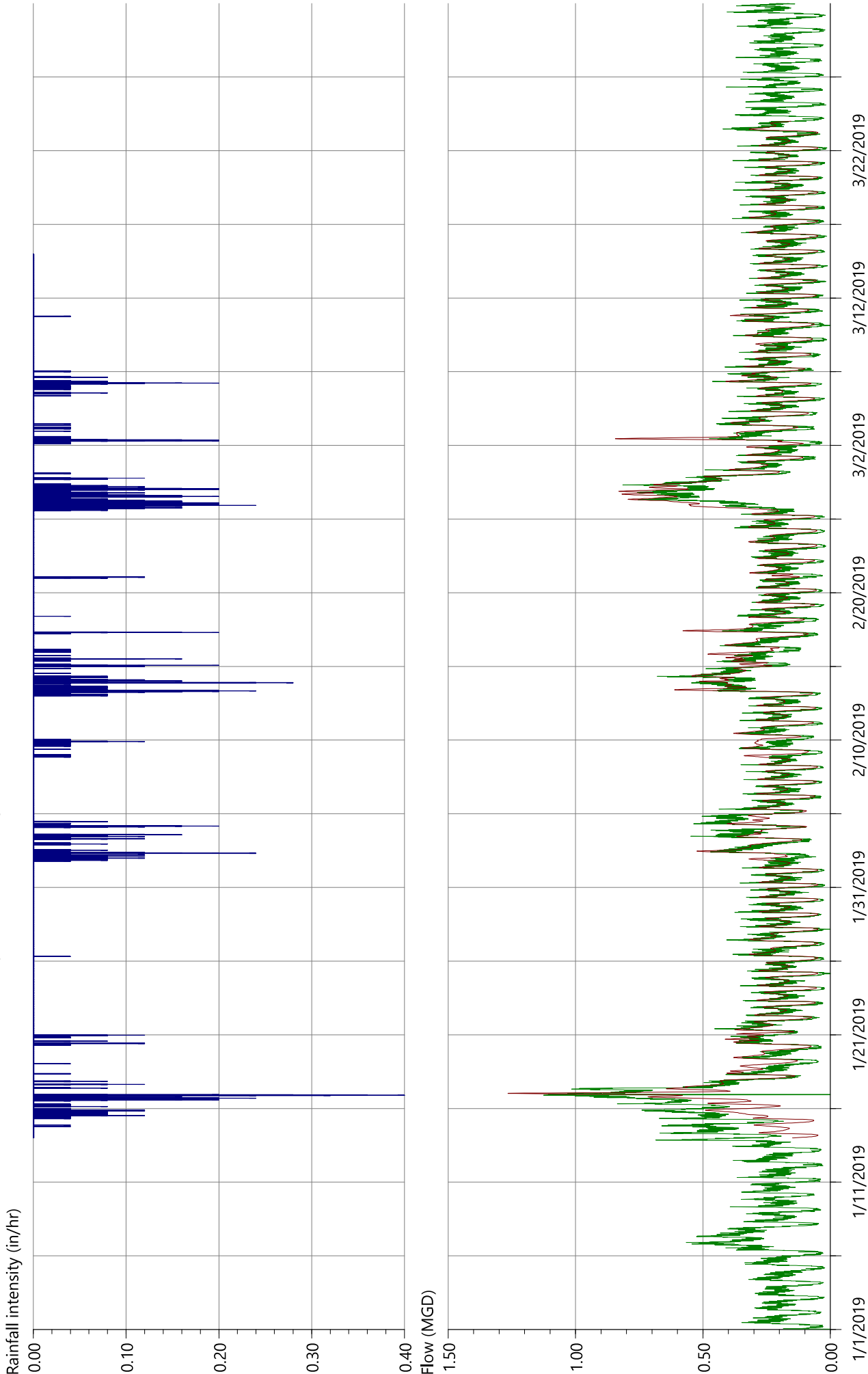
Flow survey: > SPWA>3. Data>Flow Data>Permanent Flow Meter Data Jan01-Mar31 (June 05 2019) (6/5/2019 1:51:15 PM)

Sim: > SPWA>5. Model Runs>Calibration>combined WWF Calibration (2019 10 01)_v29>OneRainData20190113_20190313_*.4_RGBoundaries (11/6/2019 11:14:10 AM)

Flow Survey Location (Obs.) Sierra College, Model Location (Pred.) D/S SMH B08-040.1, Rainfall Profile: 186



Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
15.530	0.400	0.011			
Observed			0.000	4.921	9530740.132
...0313_*.4_RGBoundaries			1.644	5.931	18004207.945

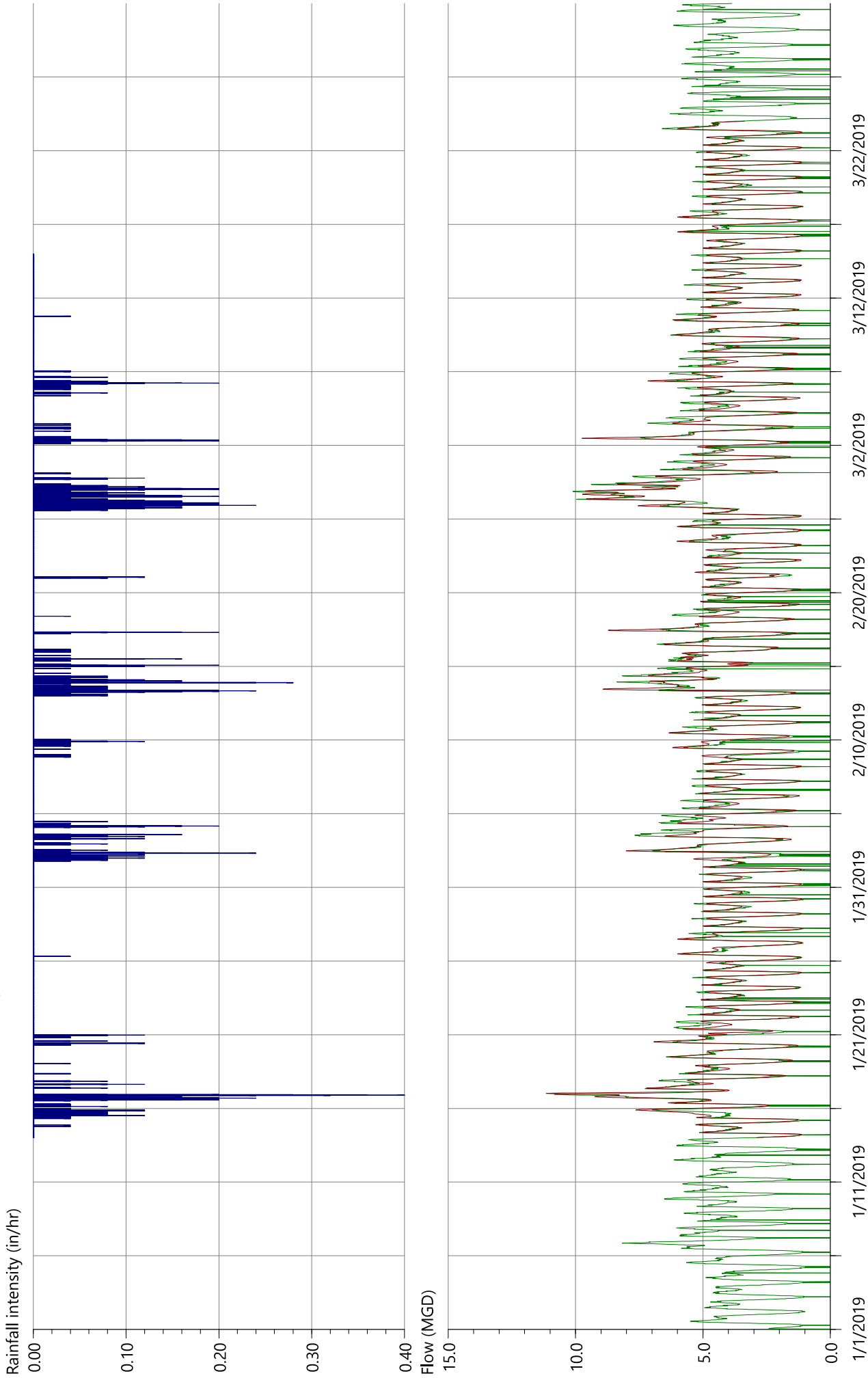


Rain	Rainfall		Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)
	15.530	0.400	0.011		
Observed				0.000	1.126
				0.048	1.266
...0313_*4_RGBoundaries					1614243.848
					1387804.155

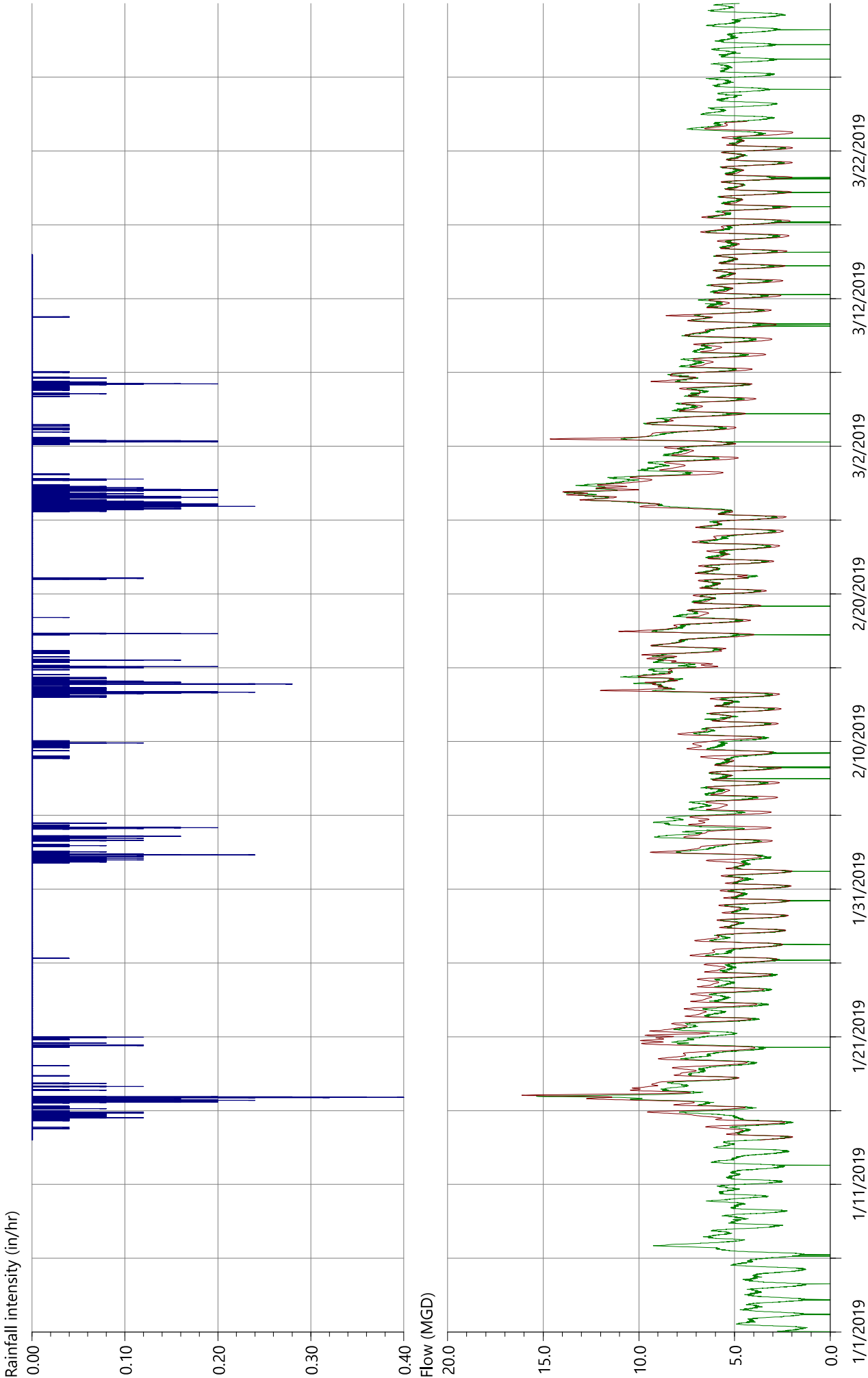
Flow survey: > SPWA>3. Data>Flow Data>Permanent Flow Meter Data Jan01-Mar31 (June 05 2019) (6/5/2019 1:51:15 PM)

Sim: > SPWA>5. Model Runs>Calibration>combined WWF Calibration (2019 10 01)_v29>OneRainData20190113_20190313_#4_RGBoundaries (11/6/2019 11:14:10 AM)

Flow Survey Location (Obs.) Pleasant Grove (SPMUD), Model Location (Pred.) D/S RSVL-001.1, Rainfall Profile: 410



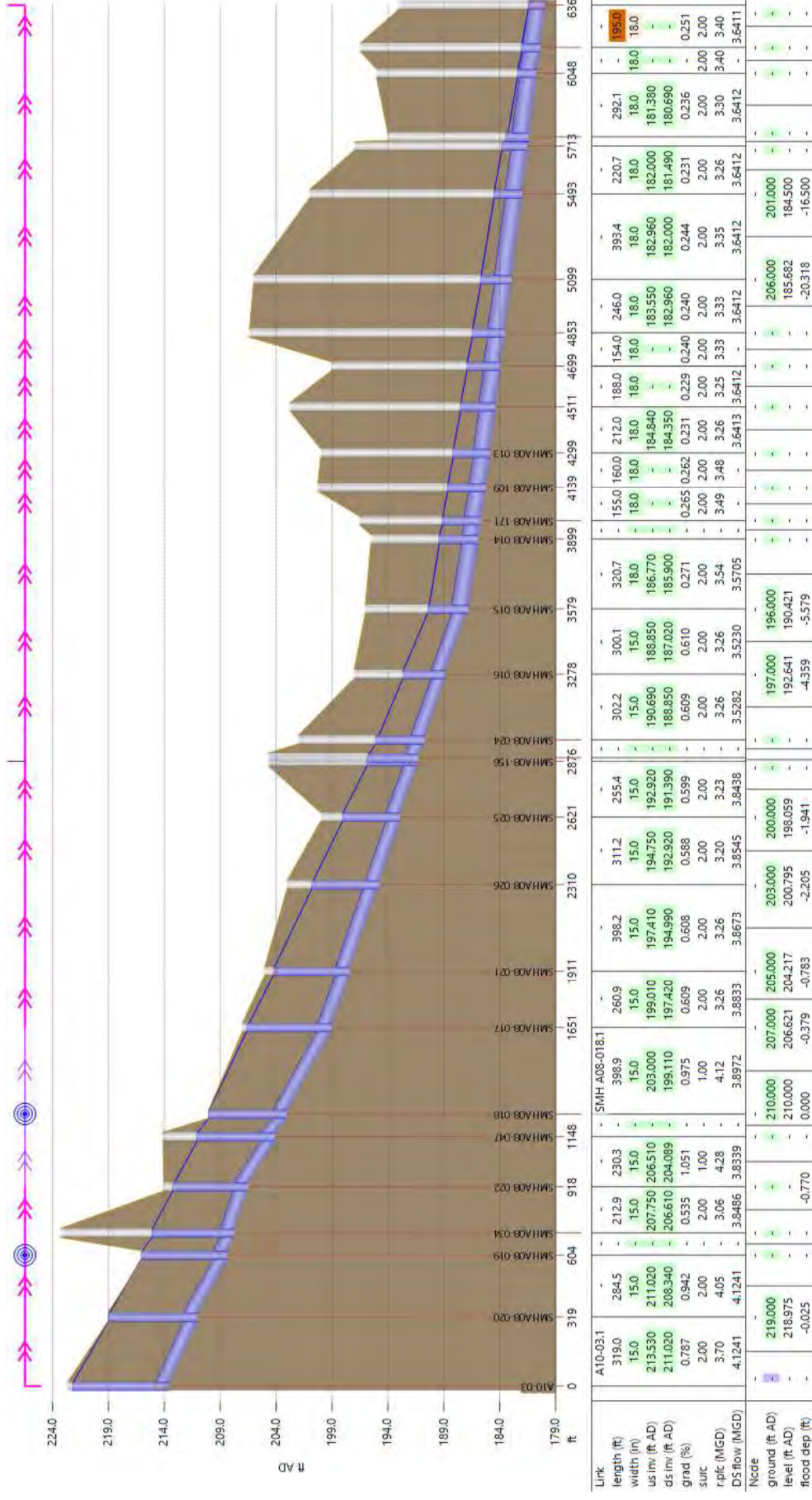
Rainfall			Flow		
Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)	Volume (ft3)
15.530	0.400	0.011			
Observed			0.000	10.836	30336214.148
...0313_#4_RGBoundaries			1.119	11.157	23452688.731

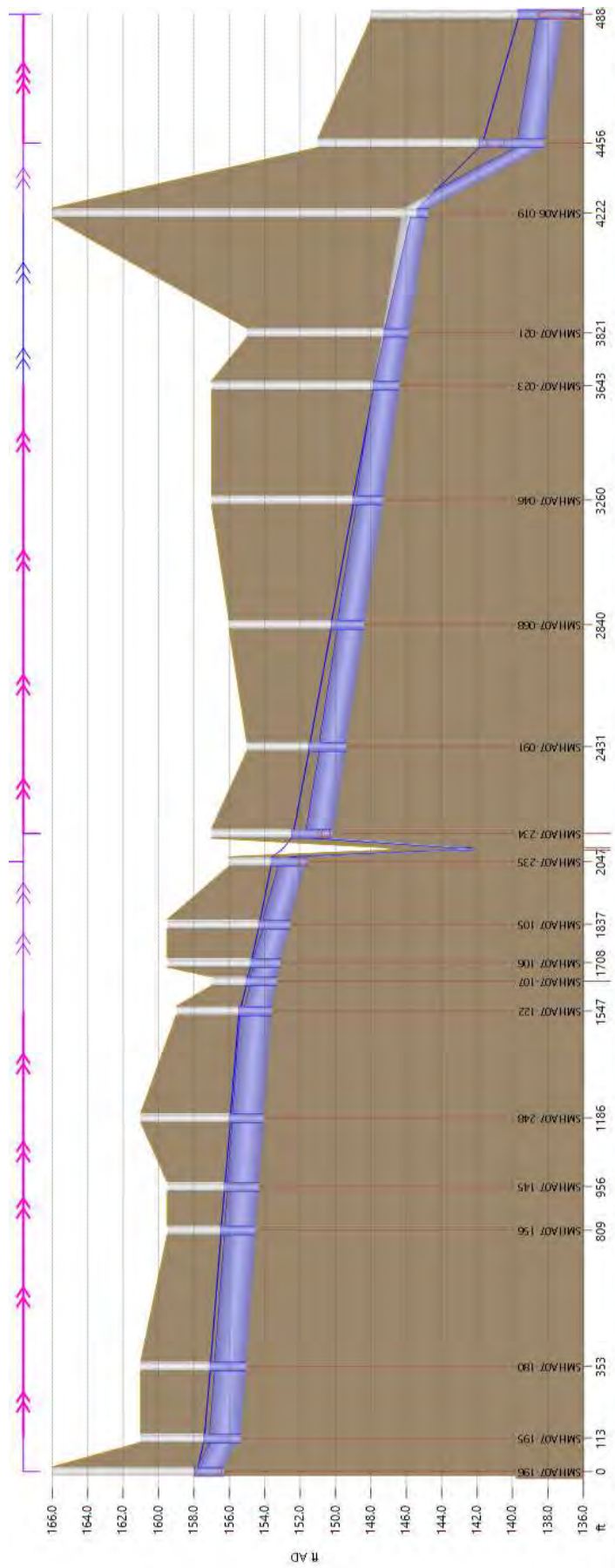


Rain	Rainfall		Flow		
	Depth (in)	Peak (in/hr)	Average (in/hr)	Min (ft3/s)	Max (ft3/s)
Observed	15.530	0.400	0.011	0.000	15.348
...0313_*.4_RGBoundaries				1.944	16.123
					Volume (ft3)
					42982669.853
					35431318.112

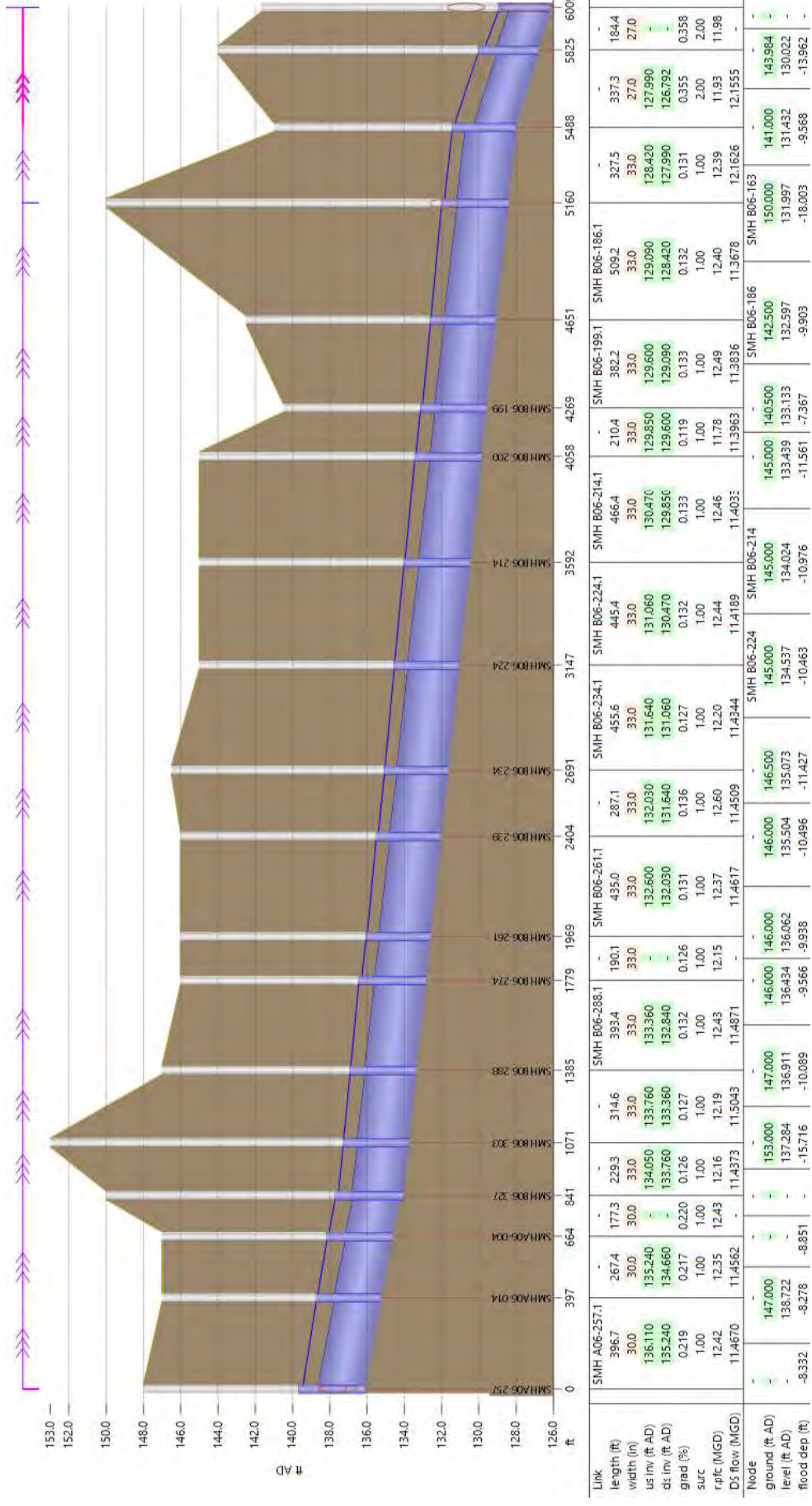
APPENDIX E – MODELED HYDRAULIC PROFILES

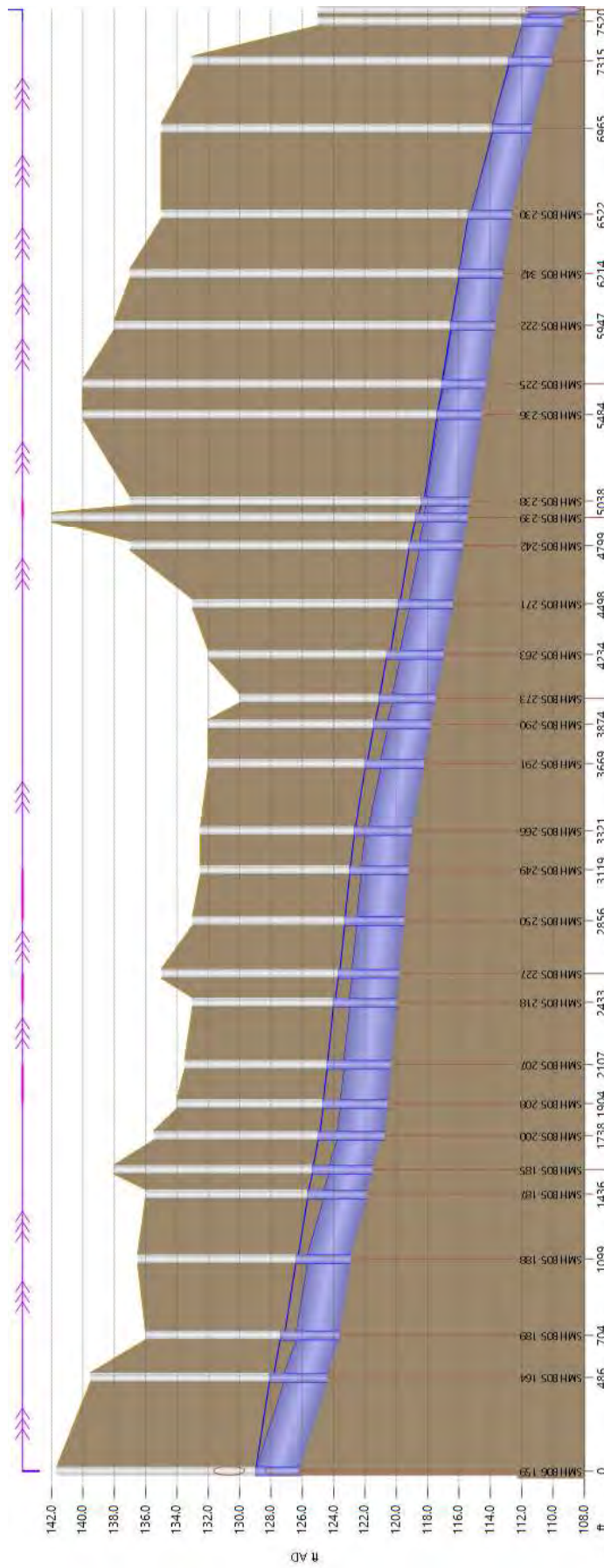
EXISTING LAND USE – AREA A

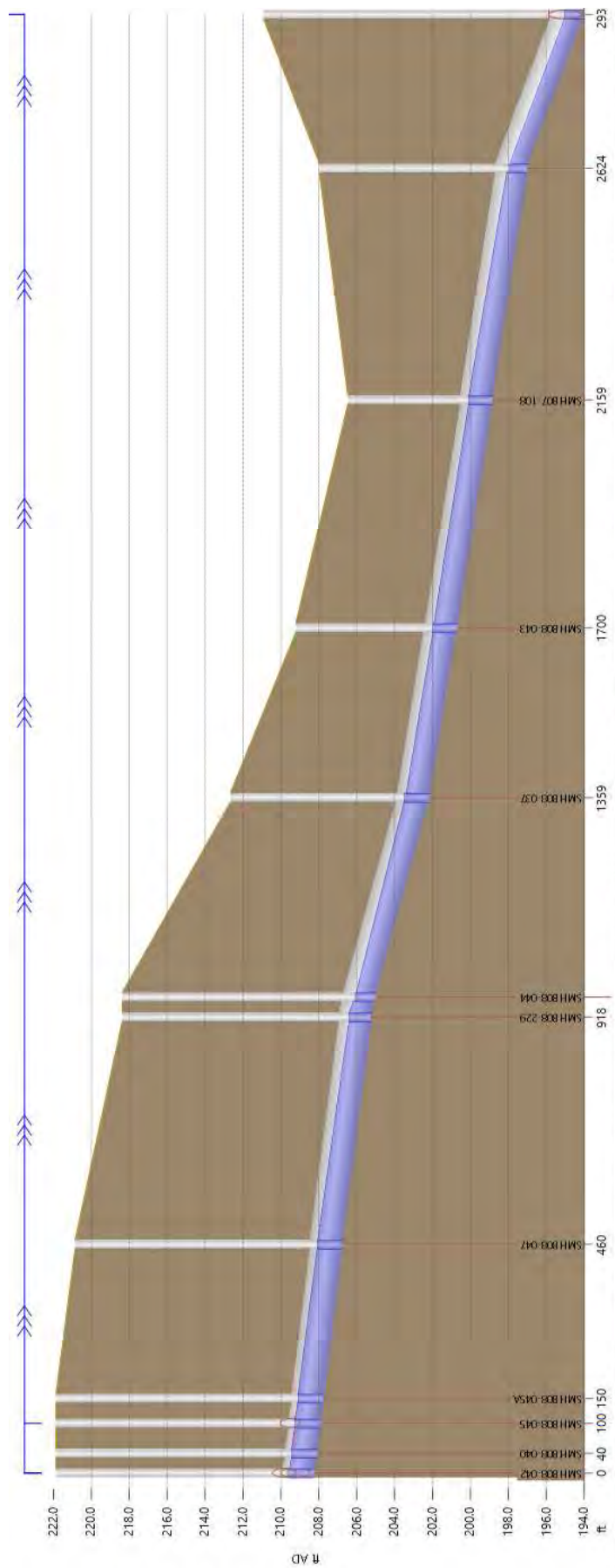
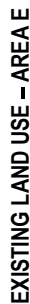


[illegible]

EXISTING LAND USE -- AREA C

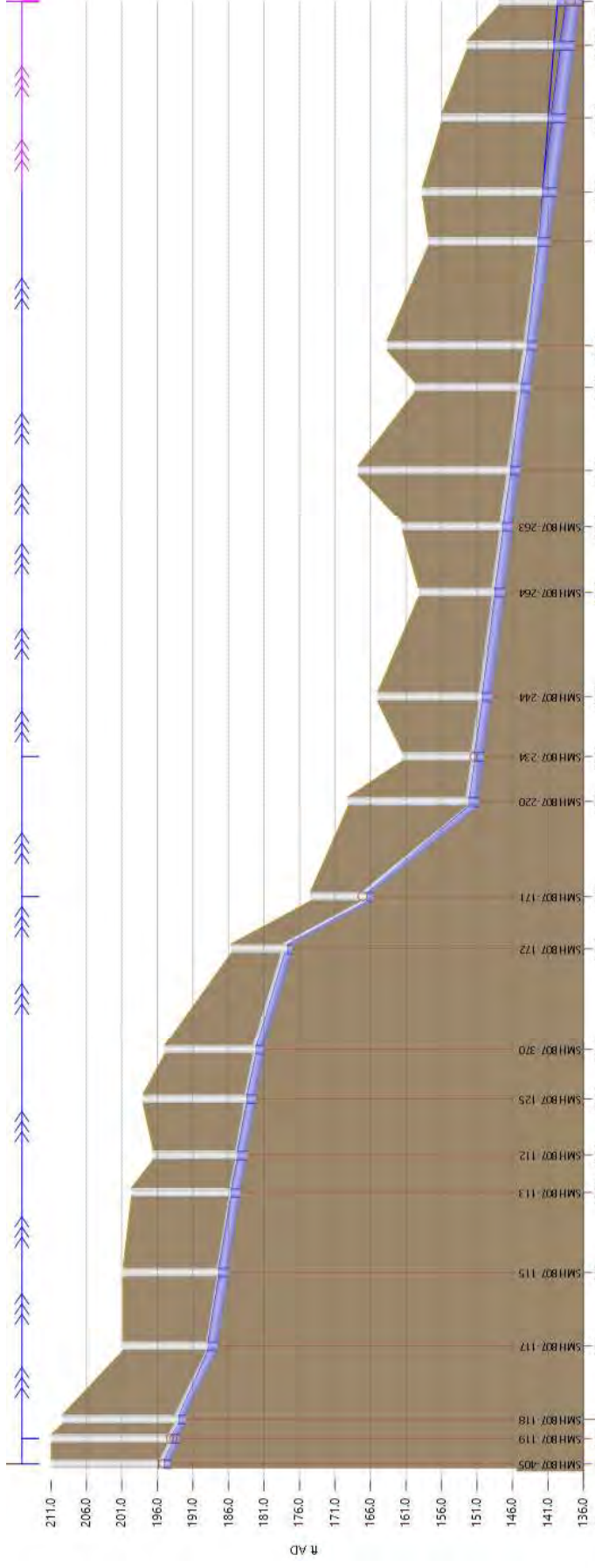


[illegible]



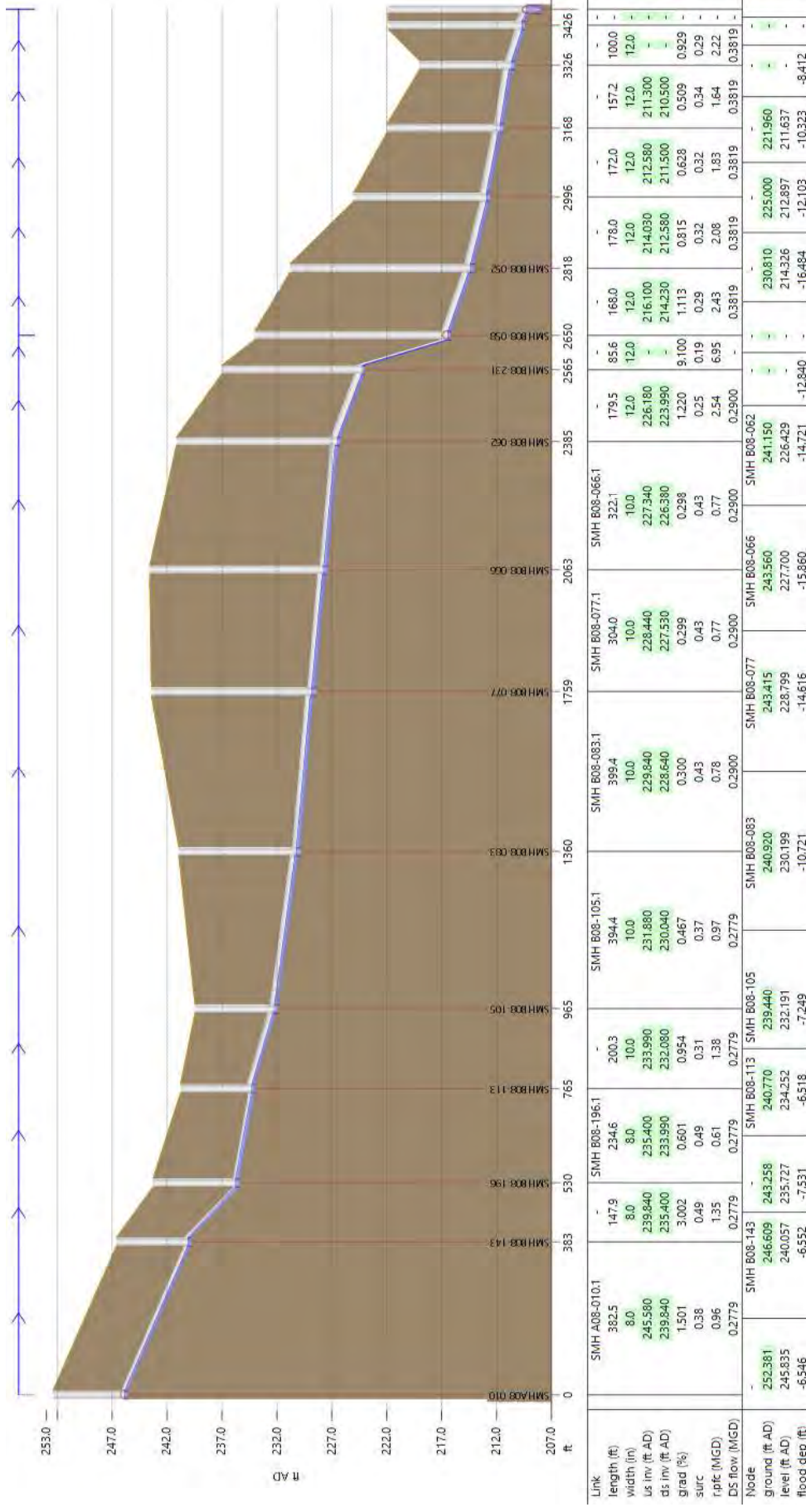
Link	SMH B08-Q45A.1		SMH B08-Q47.1		SMH B08-Q44.1		SMH B08-Q37.1		SMH B08-Q43.1		SMH B07-108.1		SMH B07-107.1	
	-	-	310.0	458.0	-	401.0	341.0	459.2	464.7	308.9				
length (ft)	-	60.0	-	-	-	-	-	-	-	-	-	-	-	
width (in)	-	21.0	-	21.0	-	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	
us inv (ft AD)	-	207.732	-	206.750	-	205.000	202.150	200.680	198.840	197.000	197.000	197.000	197.000	
ds inv (ft AD)	-	206.750	-	205.233	-	202.250	200.780	198.840	197.000	194.107	194.107	194.107	194.107	
grad (%)	-	0.317	-	0.331	-	0.686	0.402	0.401	0.396	0.937	0.937	0.937	0.937	
surc	-	0.78	-	0.76	-	0.73	0.71	0.70	0.71	0.70	0.71	0.70	0.53	
rate (MGD)	-	5.76	-	5.89	-	8.48	6.49	6.48	6.45	9.91	9.91	9.91	9.91	
DS flow (MGD)	-	5.2707	-	5.2707	-	5.3000	5.3032	5.3031	5.3031	5.3031	5.3031	5.3031	5.3031	
Node	SMH B08-Q47		SMH B08-229		SMH B08-Q44		SMH B08-Q37		SMH B08-Q43		SMH B07-108		SMH B07-107	
ground (ft AD)	-	221.854	-	218.361	-	218.361	212.662	209.204	206.463	207.955	206.463	207.955	210.904	
level (ft AD)	-	209.080	-	206.059	-	206.059	203.479	201.956	200.078	197.921	200.078	197.921	195.031	
flood dep (ft)	-	-12.774	-	-11.975	-	-11.975	-9.183	-7.248	-6.385	-10.034	-6.385	-10.034	-15.873	

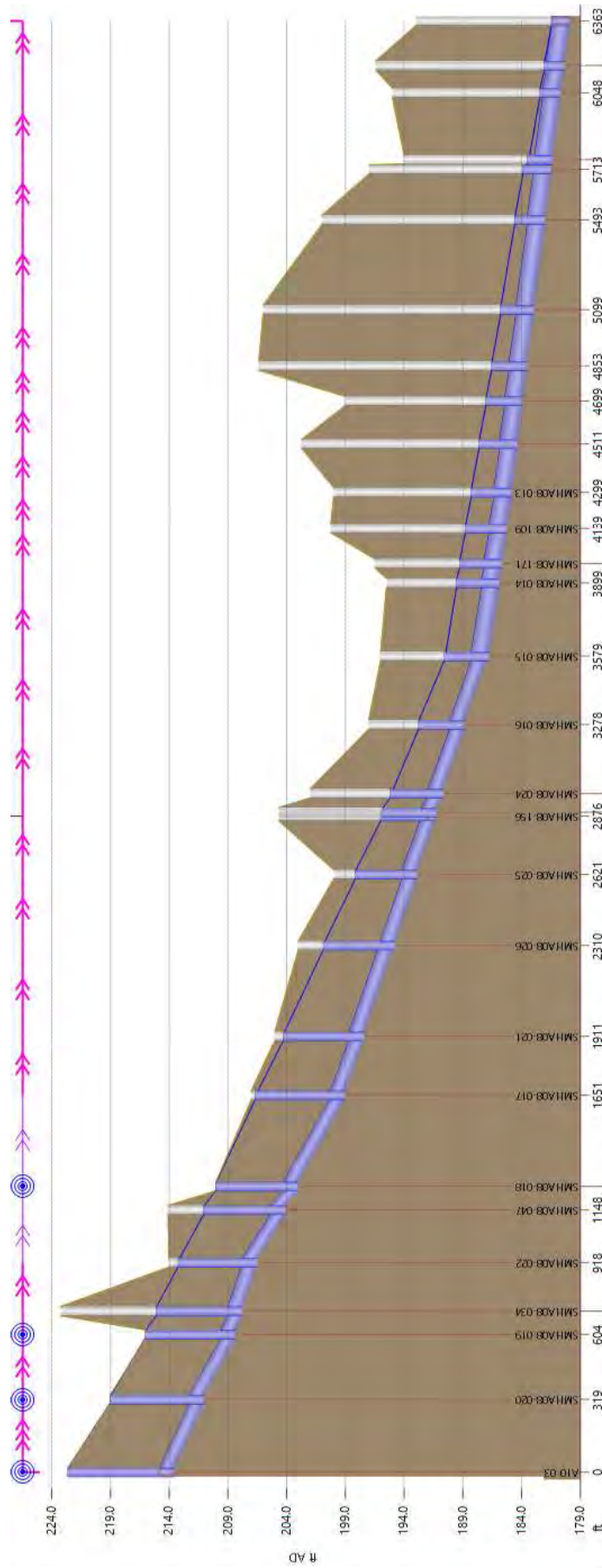
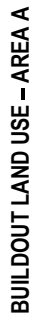
EXISTING LAND USE – AREA F



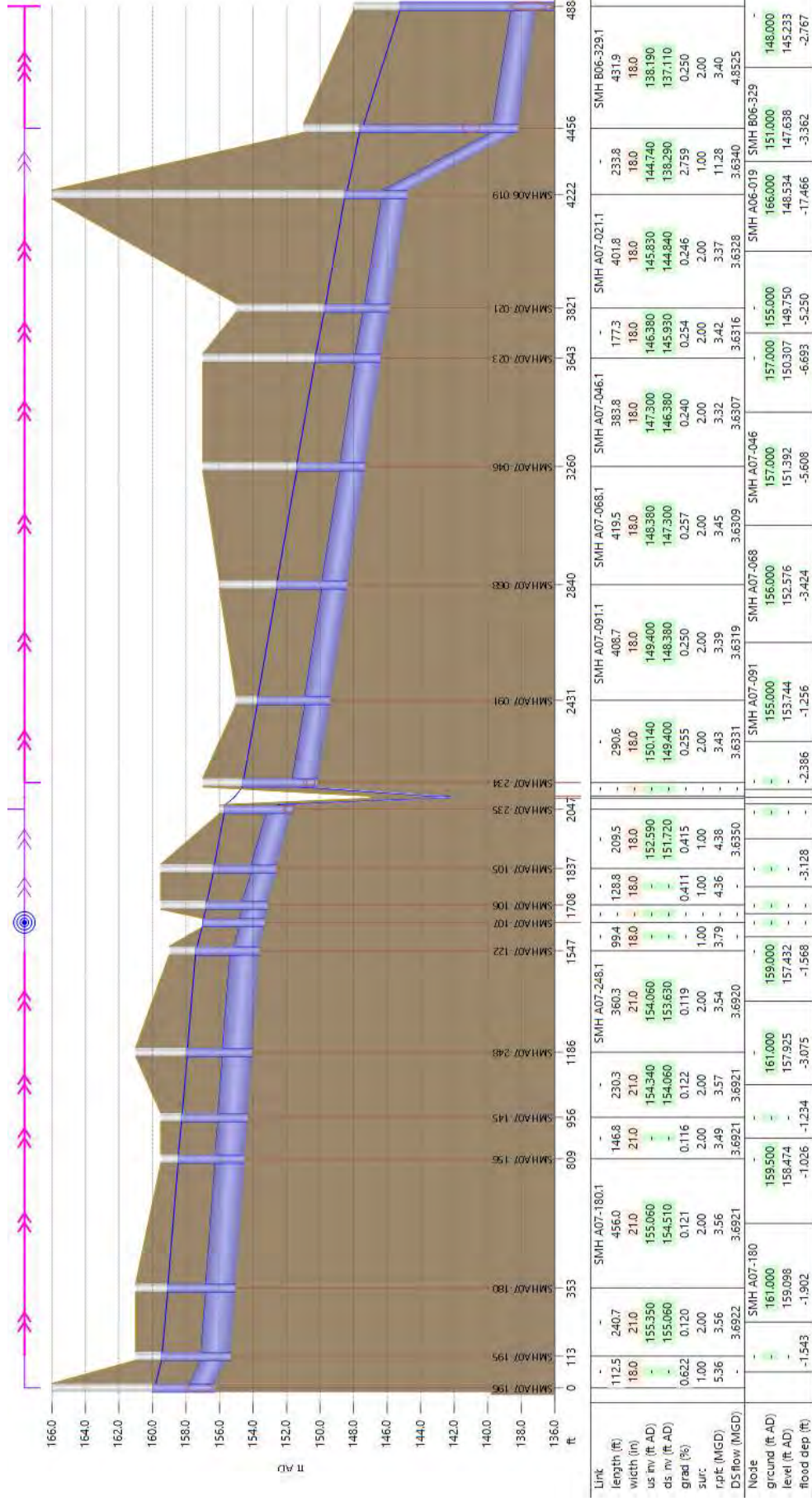
Link	length (ft)	width (in)	us inv (ft AD)	ds inv (ft AD)	grad (%)	surc	rate (MGD)	DS flow (MGD)	Node	ground (ft AD)	level (ft AD)	flood dep (ft)
SMH B07-119	-	-	-	-	-	-	-	-	SMH B07-119	188.866	187.346	-
SMH B07-117	370.0	21.0	192.000	187.500	1.216	0.78	11.30	5.9914	SMH B07-117	200.819	188.866	-11.953
SMH B07-115	403.7	21.0	186.000	184.350	0.409	0.76	6.55	5.9913	SMH B07-115	199.641	185.605	-14.036
SMH B07-113	189.0	21.0	189.000	184.350	0.441	0.74	6.80	6.0622	SMH B07-113	199.641	185.605	-14.036
SMH B07-112	282.5	21.0	183.416	182.070	0.441	0.73	6.80	6.0622	SMH B07-112	189.000	187.346	-11.654
SMH B07-125	249.9	21.0	182.070	180.950	0.448	0.72	6.86	6.0622	SMH B07-125	182.070	180.950	-11.120
SMH B07-300	514.2	21.0	180.950	177.000	0.768	0.61	8.98	6.0814	SMH B07-300	194.953	182.039	-12.914
SMH B07-370.1	262.6	21.0	177.000	165.750	4.284	0.38	21.20	6.0814	SMH B07-370.1	185.616	177.667	-7.949
SMH B07-171	479.1	21.0	165.750	150.740	3.112	0.76	18.07	6.3607	SMH B07-171	174.439	166.399	-8.040
SMH B07-171.1	226.2	24.0	150.740	148.960	0.338	0.66	8.50	6.3607	SMH B07-171.1	169.113	152.061	-17.052
SMH B07-220	300.0	24.0	148.960	147.080	0.338	0.65	8.51	6.5535	SMH B07-220	164.971	150.223	-14.748
SMH B07-244.1	525.4	24.0	147.080	145.950	0.339	0.70	8.51	6.5534	SMH B07-244.1	159.204	148.465	-10.739
SMH B07-264	331.8	24.0	145.950	144.970	0.341	0.68	8.53	6.5534	SMH B07-264	161.443	147.308	-14.135
SMH B07-263	289.9	24.0	144.970	143.460	0.337	0.66	8.49	6.5533	SMH B07-263	167.769	146.245	-21.524
SMH B07-5020	418.2	24.0	143.460	140.670	0.337	0.65	8.50	6.5533	SMH B07-5020	159.712	144.741	-14.971
SMH B07-5438	210.2	24.0	140.670	139.830	0.337	0.65	8.50	6.5533	SMH B07-5438	157.842	142.341	-15.501
SMH B07-5648	249.6	24.0	140.670	139.830	0.337	0.65	8.50	6.5533	SMH B07-5648	158.647	141.774	-16.873
SMH B07-6172	373.1	24.0	139.830	138.470	0.338	1.00	8.50	6.5487	SMH B07-6172	155.955	140.975	-14.980
SMH B07-6795	365.7	24.0	138.470	137.230	0.339	1.00	8.52	6.6404	SMH B07-6795	152.380	140.198	-12.182
SMH B07-7160	365.7	24.0	137.230	136.000	0.337	1.00	8.52	6.6295	SMH B07-7160	152.380	140.198	-12.182

EXISTING LAND USE - AREA G

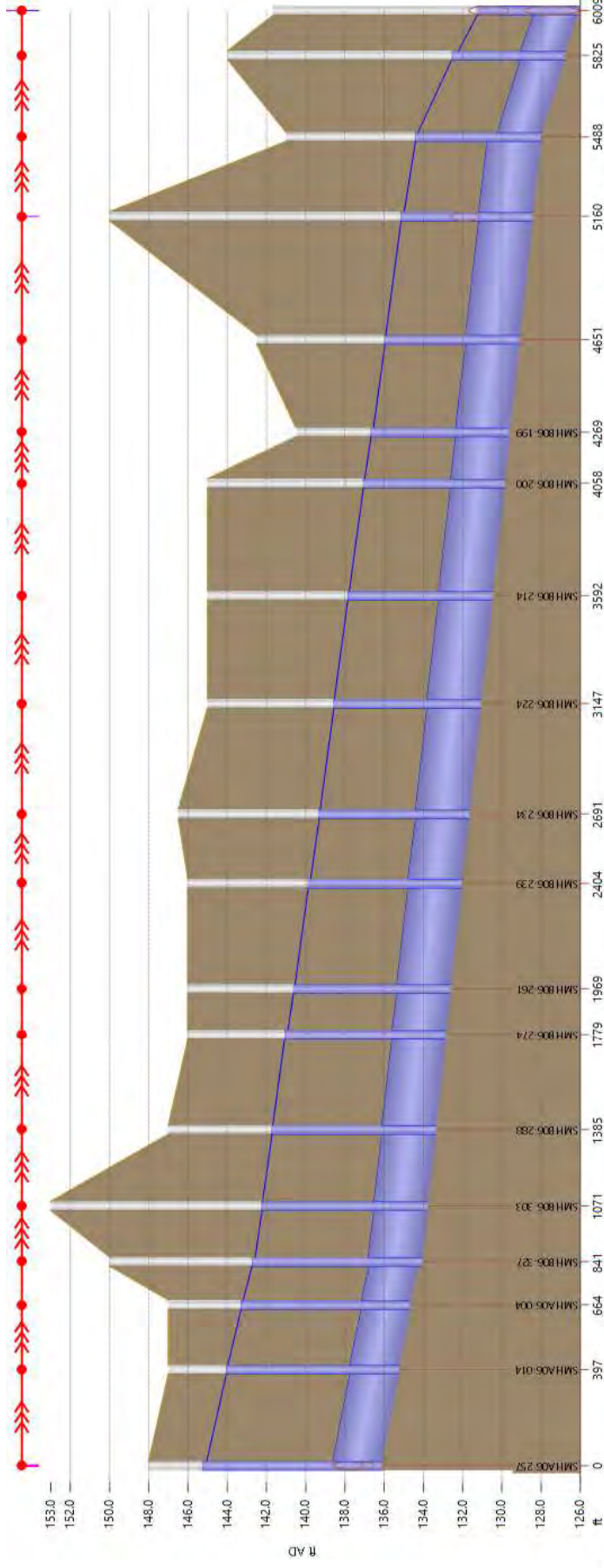


[illegible]

BUILDOUT LAND USE - AREA B

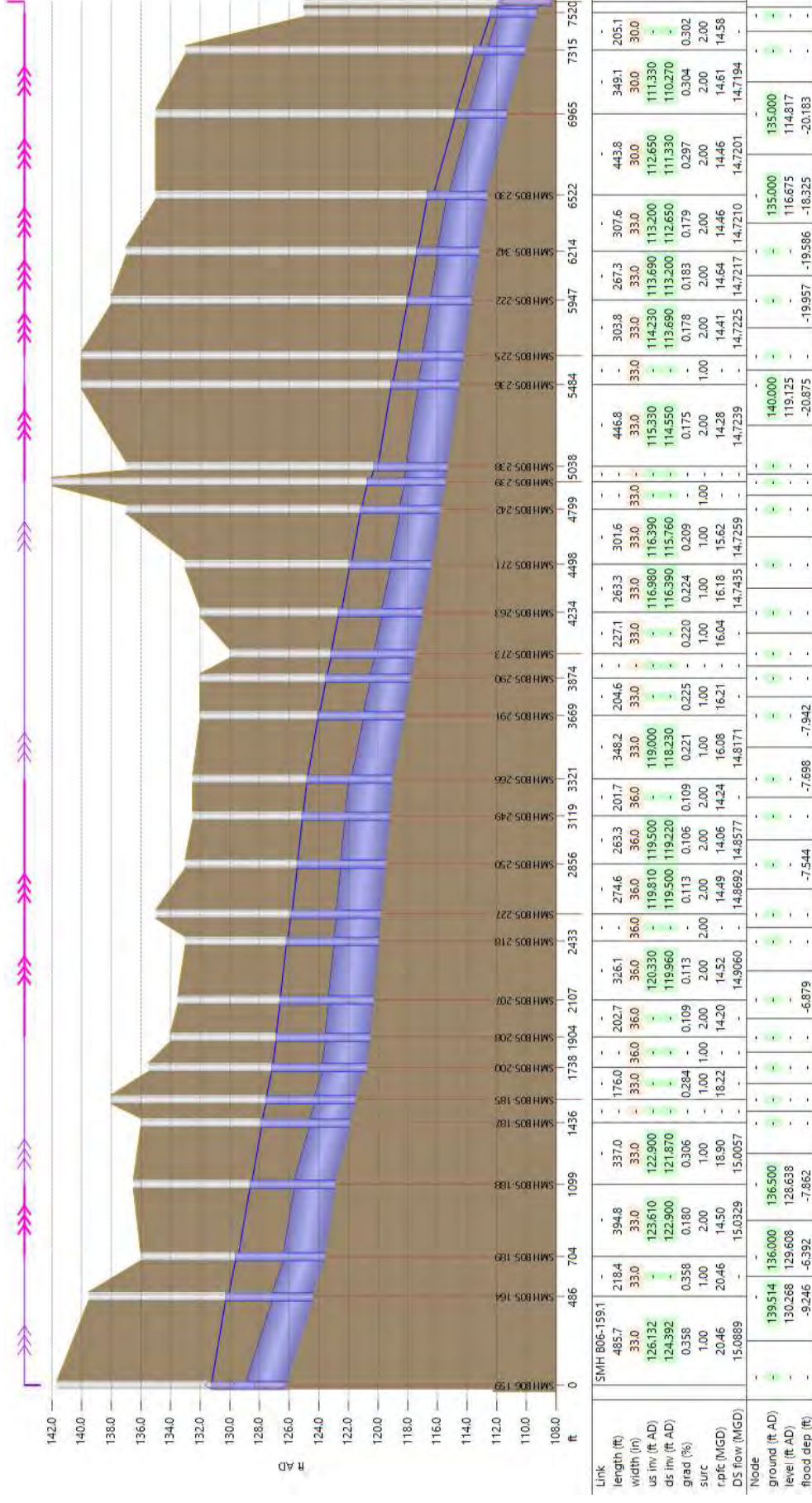


BUILDOUT LAND USE - AREA C

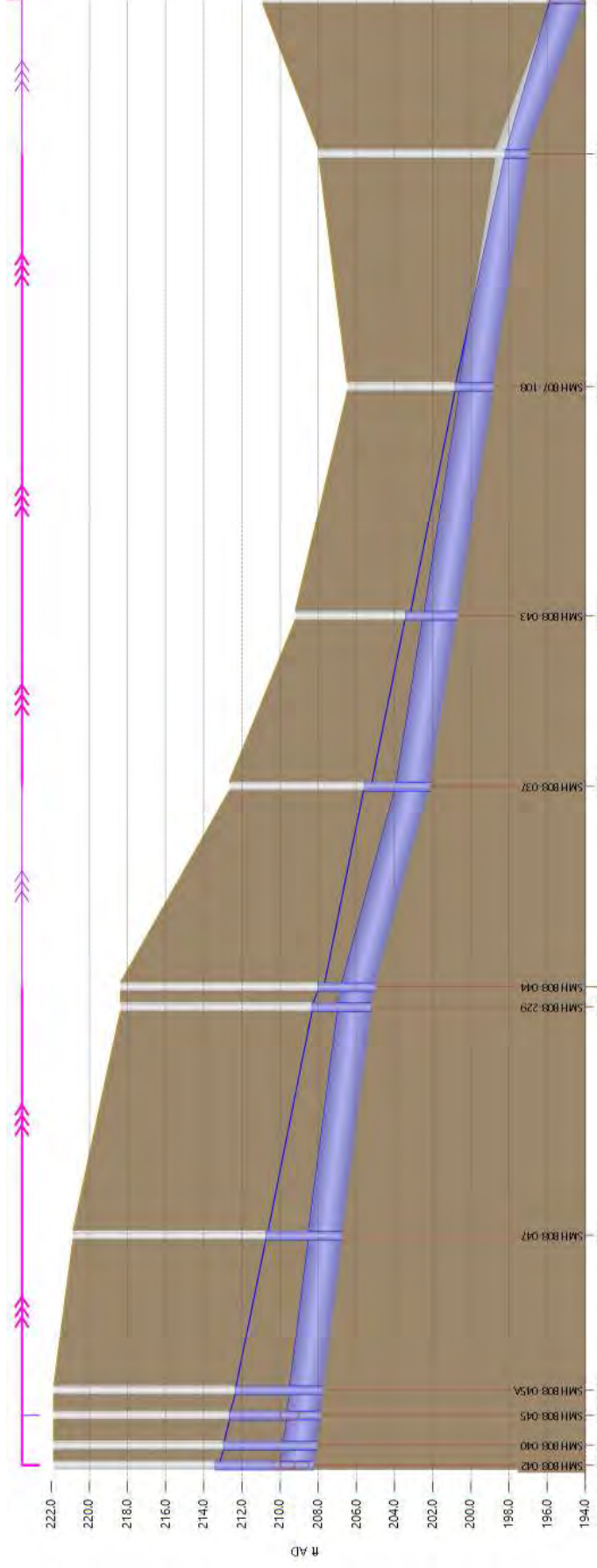


Link	length (ft)	width (in)	us inv (ft AD)	ds inv (ft AD)	grad (%)	surc	r4ftc (MGD)	DS flow (MGD)	Node	ground (ft AD)	level (ft AD)	flood dep (ft)
SMH A06-257.1	396.7	30.0	136.110	135.240	0.219	2.00	12.42	13.2598	SMH A06-257.1	147.000	144.039	-2.961
SMH A06-014	267.4	30.0	135.240	134.660	0.217	2.00	12.35	13.2587	SMH A06-014	147.000	144.039	-2.961
SMH A06-004	177.3	30.0	134.050	133.760	0.220	2.00	12.43	13.2570	SMH A06-004	153.000	142.225	-10.775
SMH B06-307	177.3	30.0	134.050	133.760	0.220	2.00	12.43	13.2570	SMH B06-307	153.000	142.225	-10.775
SMH B06-303	314.6	33.0	133.760	133.360	0.127	2.00	12.19	13.3380	SMH B06-303	147.000	141.711	-5.289
SMH B06-288.1	395.4	33.0	133.360	132.840	0.132	2.00	12.43	13.3370	SMH B06-288.1	146.000	141.059	-4.941
SMH B06-261.1	435.0	33.0	132.840	132.030	0.131	2.00	12.37	13.3354	SMH B06-261.1	146.000	139.861	-6.139
SMH B06-234.1	455.6	33.0	131.640	131.060	0.127	2.00	12.20	13.3340	SMH B06-234.1	146.000	139.304	-6.696
SMH B06-224	445.4	33.0	131.060	130.470	0.132	2.00	12.44	13.3333	SMH B06-224	145.000	138.562	-6.438
SMH B06-214	466.4	33.0	130.470	129.850	0.133	2.00	12.46	13.3327	SMH B06-214	145.000	137.847	-7.153
SMH B06-214.1	466.4	33.0	130.470	129.850	0.133	2.00	12.46	13.3327	SMH B06-214.1	145.000	137.847	-7.153
SMH B06-198.1	382.2	33.0	129.850	129.090	0.133	2.00	12.49	13.3318	SMH B06-198.1	142.500	135.954	-6.546
SMH B06-186.1	509.2	33.0	129.090	128.420	0.132	2.00	12.40	13.3313	SMH B06-186.1	150.000	135.125	-14.875
SMH B06-163	327.5	33.0	128.420	127.990	0.131	2.00	12.39	14.2827	SMH B06-163	141.000	134.398	-6.602
SMH B06-148.4	337.3	27.0	127.990	126.792	0.355	2.00	11.93	14.2828	SMH B06-148.4	143.984	132.519	-11.465
SMH B06-135.1	337.3	27.0	127.990	126.792	0.355	2.00	11.93	14.2828	SMH B06-135.1	143.984	132.519	-11.465

BUILDOUT LAND USE - AREA D

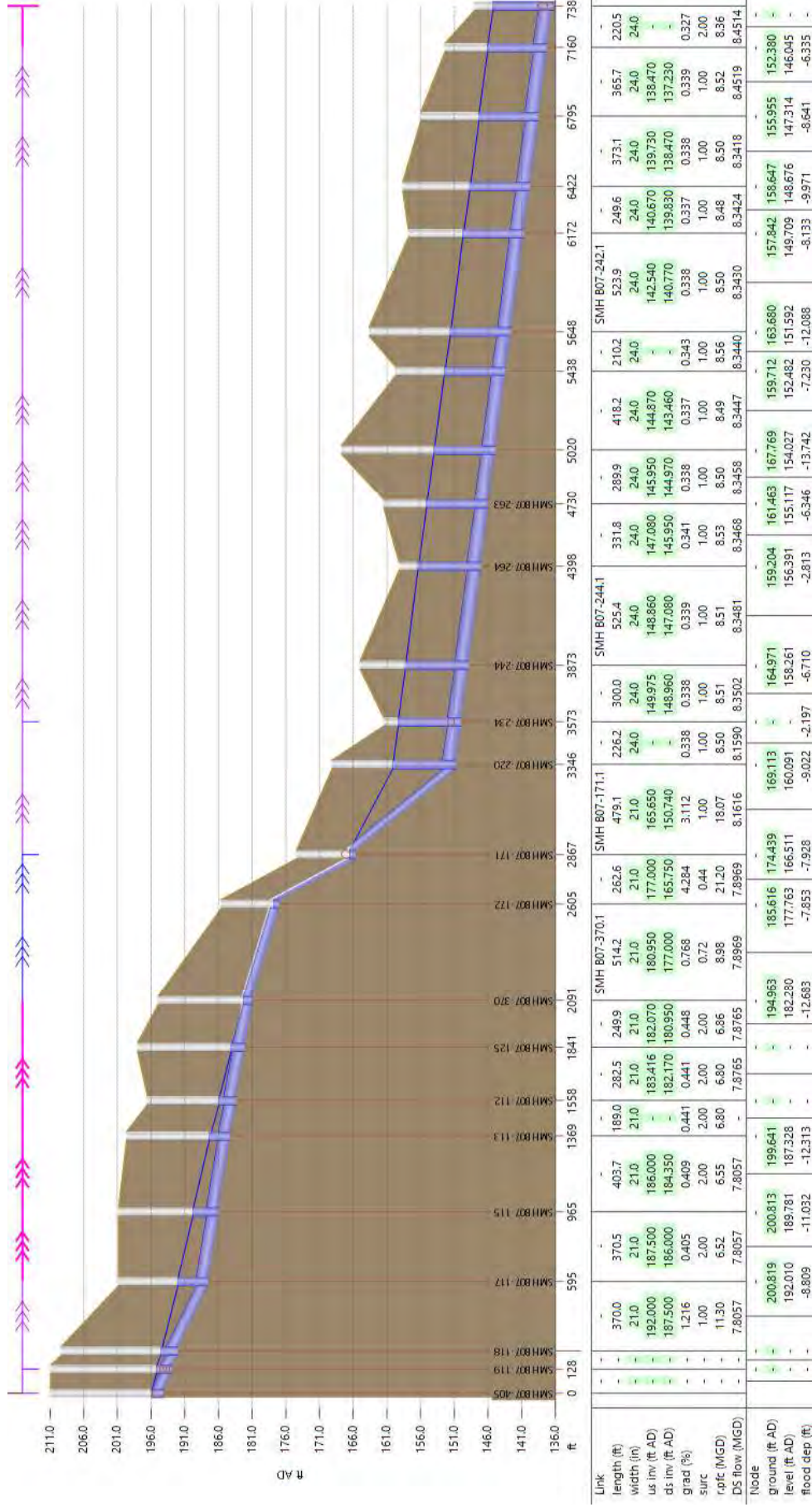


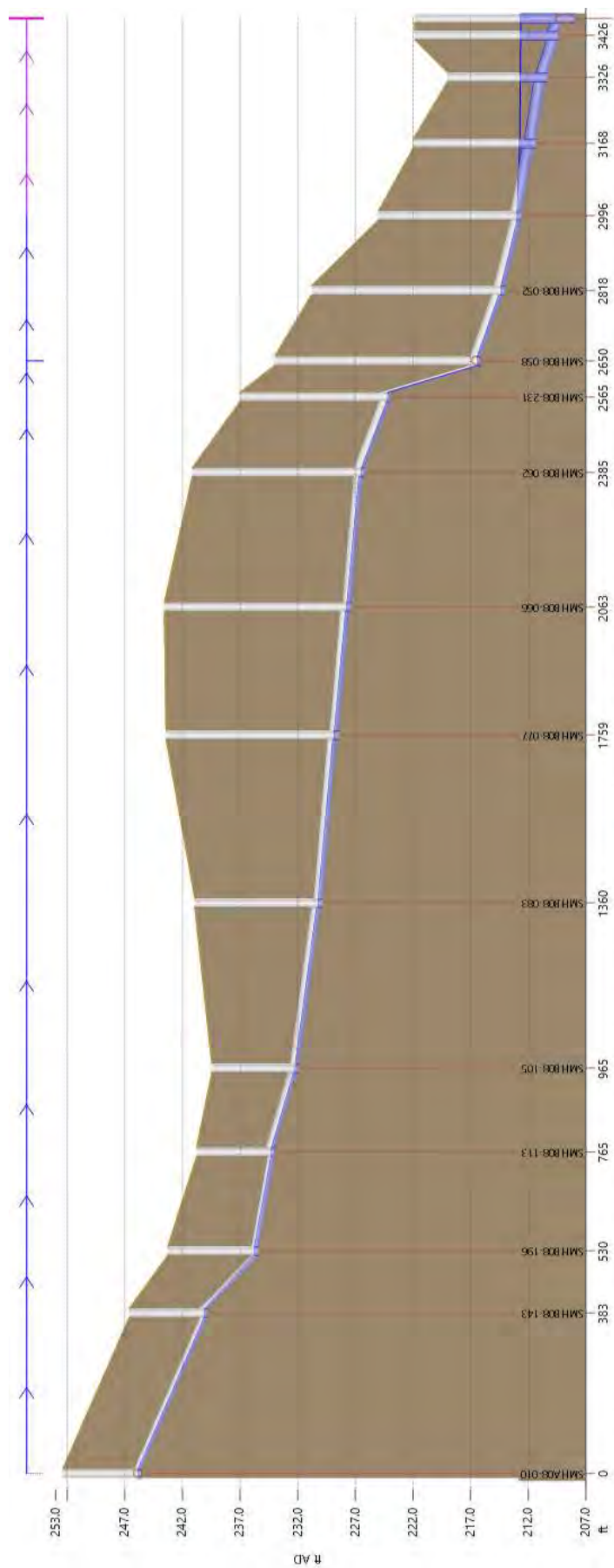
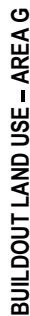
BUILDOUT LAND USE - AREA E



Link	length (ft)	width (in)	us inv (ft AD)	ds inv (ft AD)	grad (%)	surc	rate (MGD)	DS flow (MGD)	Node	ground (ft AD)	level (ft AD)	flood dep (ft)
SMH B08-047	60.0	21.0	207.732	206.750	0.317	2.00	5.76	7.2196	SMH B08-047	220.847	210.734	-10.113
SMH B08-045A.1	310.0	21.0	207.732	206.750	0.317	2.00	5.76	7.2196	SMH B08-045A.1	221.854	212.343	-9.511
SMH B08-047.1	458.0	21.0	206.750	205.233	0.331	2.00	5.89	7.2195	SMH B08-047.1	218.361	208.010	-10.351
SMH B08-229	-	-	-	-	-	-	-	-	SMH B08-229	218.361	208.318	-10.043
SMH B08-044	401.0	21.0	205.000	202.250	0.686	1.00	8.48	7.2509	SMH B08-044	218.361	208.010	-10.351
SMH B08-044.1	341.0	21.0	202.150	200.780	0.402	2.00	6.49	7.2534	SMH B08-044.1	212.662	205.584	-7.078
SMH B08-037.1	459.2	21.0	200.680	198.840	0.401	2.00	6.48	7.2534	SMH B08-037.1	209.204	203.427	-5.777
SMH B08-043.1	464.7	21.0	198.840	197.000	0.396	2.00	6.45	7.2534	SMH B08-043.1	206.463	200.820	-5.643
SMH B07-108	308.9	21.0	197.000	194.107	0.937	1.00	9.91	7.2522	SMH B07-108	207.955	198.192	-9.763
SMH B07-107	210.904	195.893	-15.011	-	-	-	-	-	SMH B07-107	210.904	195.893	-15.011

BUILDOUT LAND USE - AREA F



[illegible]

APPENDIX F – PROPOSED CAPACITY IMPROVEMENT PROJECT DETAILS

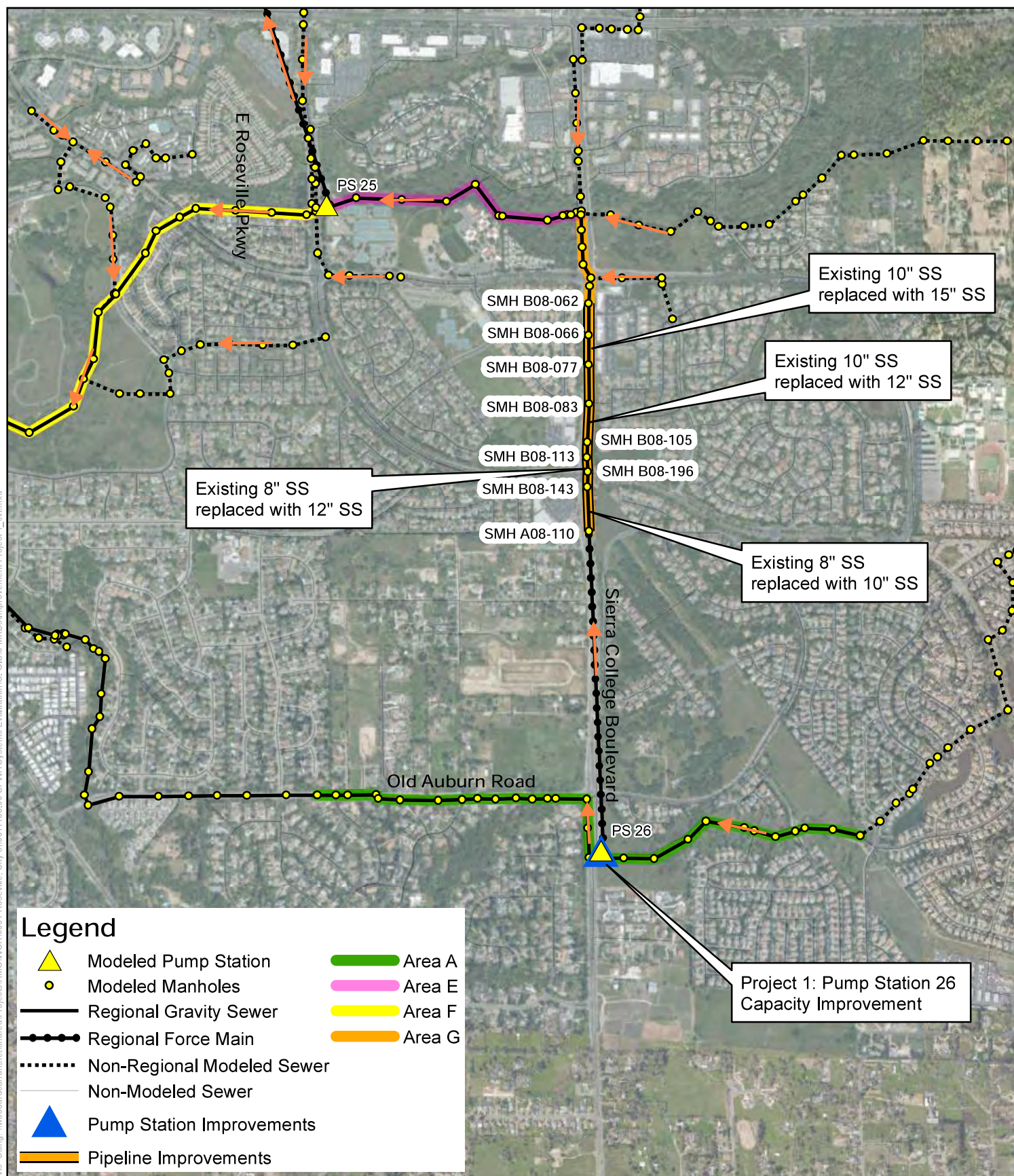
Project 1: Pump Station 26 Capacity Improvement and Sierra College Blvd. Improvement

PROJECT DESCRIPTION

Project ID 1
 Project Name Pump Station 26 Capacity Improvement and Sierra College Blvd. Improvement
 Project Location PS 26 and Sierra College Boulevard
 Description Increased Capacity of PS 26 and sewers on Sierra College Blvd (from 0.43 to 1.6 mgd)
 Estimated Capital Imp. Cost \$1,606,000
 Comments (i) Pipes are listed in order from upstream to downstream
 Assumptions (i) Pipe cost estimates are based on the 20 Cities & SF Average April 2020 ENR CCI of 12115
 (ii) Cost assumes project will be implemented using open-cut construction method

PROJECT COST DETAIL

U/S MH ID	D/S MH ID	Existing Diameter (inches)	New Diameter (inches)	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Construction Method	Unit Cost (\$/LF)	Total Cost (\$)
SMH A08-010	SMH B08-143	8	10	383	1.50	7	Open Cut	\$171	\$ 65,363
SMH B08-143	SMH B08-196	8	10	148	3.00	7	Open Cut	\$171	\$ 25,274
SMH B08-196	SMH B08-113	8	12	235	0.60	7	Open Cut	\$189	\$ 44,236
SMH B08-113	SMH B08-105	10	12	200	0.95	7	Open Cut	\$189	\$ 37,769
SMH B08-105	SMH B08-083	10	12	394	0.47	9	Open Cut	\$189	\$ 74,368
SMH B08-083	SMH B08-077	10	15	399	0.30	13	Open Cut	\$242	\$ 96,492
SMH B08-077	SMH B08-066	10	15	304	0.30	16	Open Cut	\$259	\$ 78,818
SMH B08-066	SMH B08-062	10	15	322	0.30	15	Open Cut	\$259	\$ 83,511
Baseline Pipeline Construction Cost:									\$ 505,831
Sheeting and Shoring for High Groundwater Area									\$ -
Dewatering									\$ -
Bypass Pumping (10% of pipe construction cost)									\$ 50,583
Remove & Replace Factor (5% of pipe construction cost)									\$ 25,292
Major Traffic Control (10% of pipe construction cost)									\$ -
Pipeline Construction Cost Subtotal:									\$ 581,705
Pumps (including 8.25% sales tax)									\$ 164,540
Allowance for new PG&E Service									\$ 20,000
Electrical improvements (new service, new MCC, new cables, soft starts)									\$ 35,000
Installation (25% of raw cost)									\$ 54,885
Piping & Structural Modifications Allowance									\$ 25,000
Contractor Overhead & Profit (20%)									\$ 59,885
Pump Station Construction Cost Subtotal:									\$ 359,310
Construction Subtotal:									\$ 941,015
Mobilization/Demobilization (5% of subtotal)									\$ 47,051
Construction Total:									\$ 988,066
Contingencies (30% of construction subtotal)									\$ 296,420
Total Estimated Construction Cost:									\$ 1,284,486
Engineering, Administration, Legal (25% of construction cost)									\$ 321,121
Estimated Capital Improvement Cost:									\$ 1,606,000



Legend

- | | | | |
|--|----------------------------|--|--------|
| | Modeled Pump Station | | Area A |
| | Modeled Manholes | | Area E |
| | Regional Gravity Sewer | | Area F |
| | Regional Force Main | | Area G |
| | Non-Regional Modeled Sewer | | |
| | Non-Modeled Sewer | | |
| | Pump Station Improvements | | |
| | Pipeline Improvements | | |

Improvement Project 1

South Placer Wastewater Authority
2020 Systems Evaluation

0 750 1,500 3,000 Feet



Project #: 0011183.00
Map Created: June 2020

Project 2: Eureka Road, E Roseville Parkway Improvement

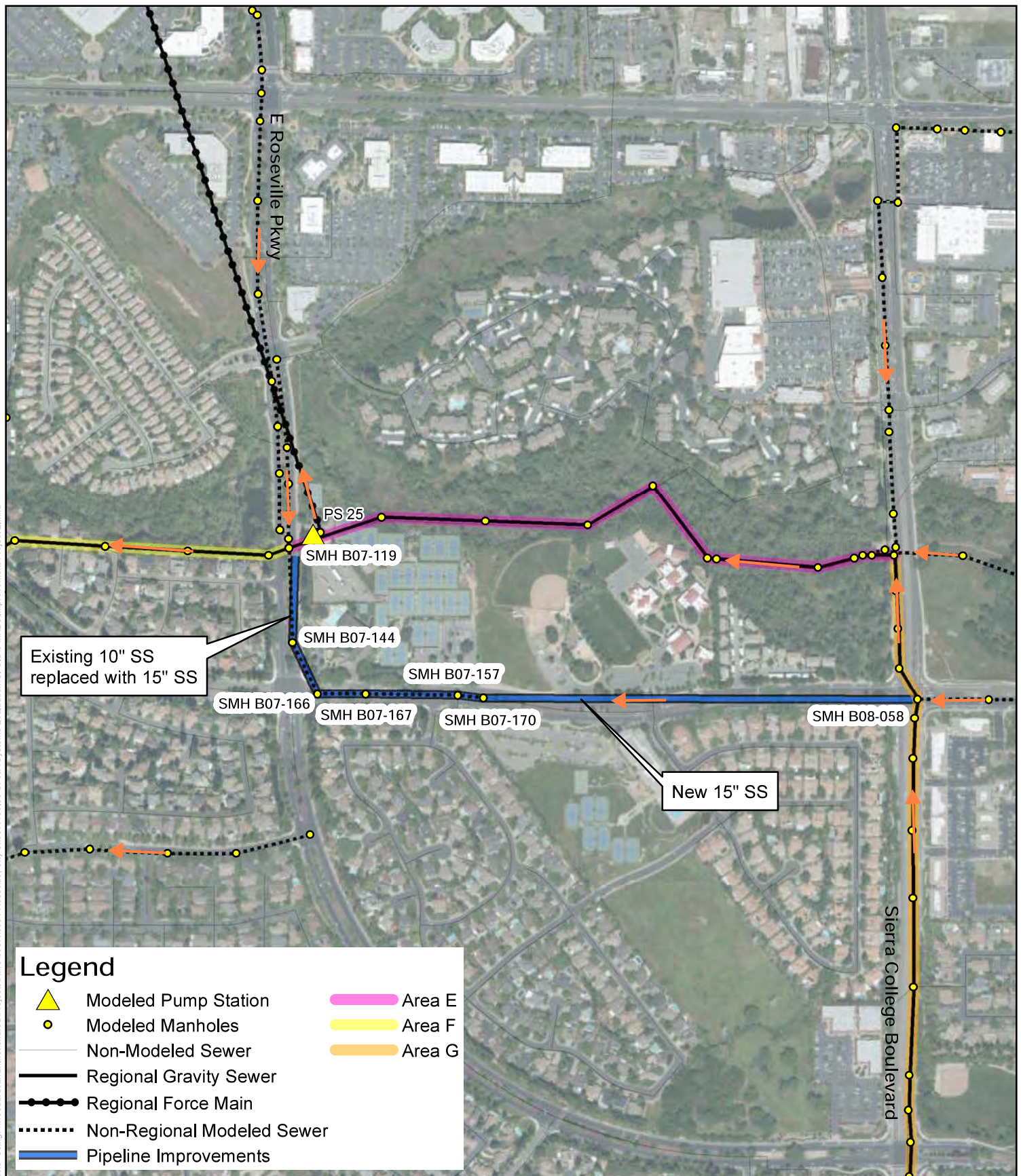
PROJECT DESCRIPTION

Project ID 2
 Project Name Eureka Road, E Roseville Parkway Improvement
 Project Location Eureka Road and E. Roseville Parkway
 Description Redirect flows from PS 26 and Sierra College Blvd. down Eureka Rd via upsizing of approximately 1,310ft, installing approximately 2,740 ft of new 15in pipe and 4 new manholes.
 Estimated Capital Imp. Cost \$1,831,000
 Comments (i) Pipes are listed in order from upstream to downstream
 Assumptions (i) Cost estimates are based on the 20 Cities & SF Average April 2020 ENR CCI of 12115
 (ii) Cost assumes project will be implemented using open-cut construction method

PROJECT COST DETAIL

U/S MH ID	D/S MH ID	Existing Diameter (inches)	New Diameter (inches)	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Construction Method	Unit Cost (\$/LF)	Total Cost (\$)
SMH B08-058	SMH B07-170	new pipe	15	697	0.22	15	Open Cut	\$259	\$ 180,608
SMH B07-170	SMH B07-157	new pipe	15	1942	0.25	13	Open Cut	\$242	\$ 469,198
SMH B07-157	SMH B07-167	10	15	413	0.97	12	Open Cut	\$242	\$ 99,730
SMH B07-167	SMH B07-166	10	15	216	0.50	12	Open Cut	\$242	\$ 52,112
SMH B07-166	SMH B07-144	10	15	255	0.53	11	Open Cut	\$242	\$ 61,630
SMH B07-144	SMH B07-119	10	15	424	0.48	14	Open Cut	\$242	\$ 102,435
Baseline Pipeline Construction Cost:									\$ 965,712
Sheeting and Shoring for High Groundwater Area									\$ -
Dewatering									\$ -
Bypass Pumping (10% of upsized pipe construction cost)									\$ 31,591
Remove & Replace Factor (5% of upsized pipe construction cost)									\$ 15,795
Major Traffic Control (10% of pipe construction cost)									\$ -
Pipeline Construction Cost Subtotal:									\$ 1,013,098
Installation of 4 new manholes									\$ 60,000
Manhole Construction Cost Subtotal:									\$ 60,000
Construction Subtotal:									\$ 1,073,098
Mobilization/Demobilization (5% of subtotal)									\$ 53,655
Construction Total									\$ 1,126,753
Contingencies (30% of construction subtotal)									\$ 338,026
Total Estimated Construction Cost:									\$ 1,464,779
Engineering, Administration, Legal (25% of construction cost)									\$ 366,195
Estimated Capital Improvement Cost:									\$ 1,831,000

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Legend

- | | | | |
|---|----------------------------|---|--------|
|  | Modeled Pump Station |  | Area E |
|  | Modeled Manholes |  | Area F |
|  | Non-Modeled Sewer |  | Area G |
|  | Regional Gravity Sewer | | |
|  | Regional Force Main | | |
|  | Non-Regional Modeled Sewer | | |
|  | Pipeline Improvements | | |

Improvement Project 2

South Placer Wastewater Authority
2020 Systems Evaluation

0 375 750 1,500 Feet



Project #: 0011183.00
Map Created: June 2020

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: Esri

Project 3 Alternative A: Pump Station 25 Improvements

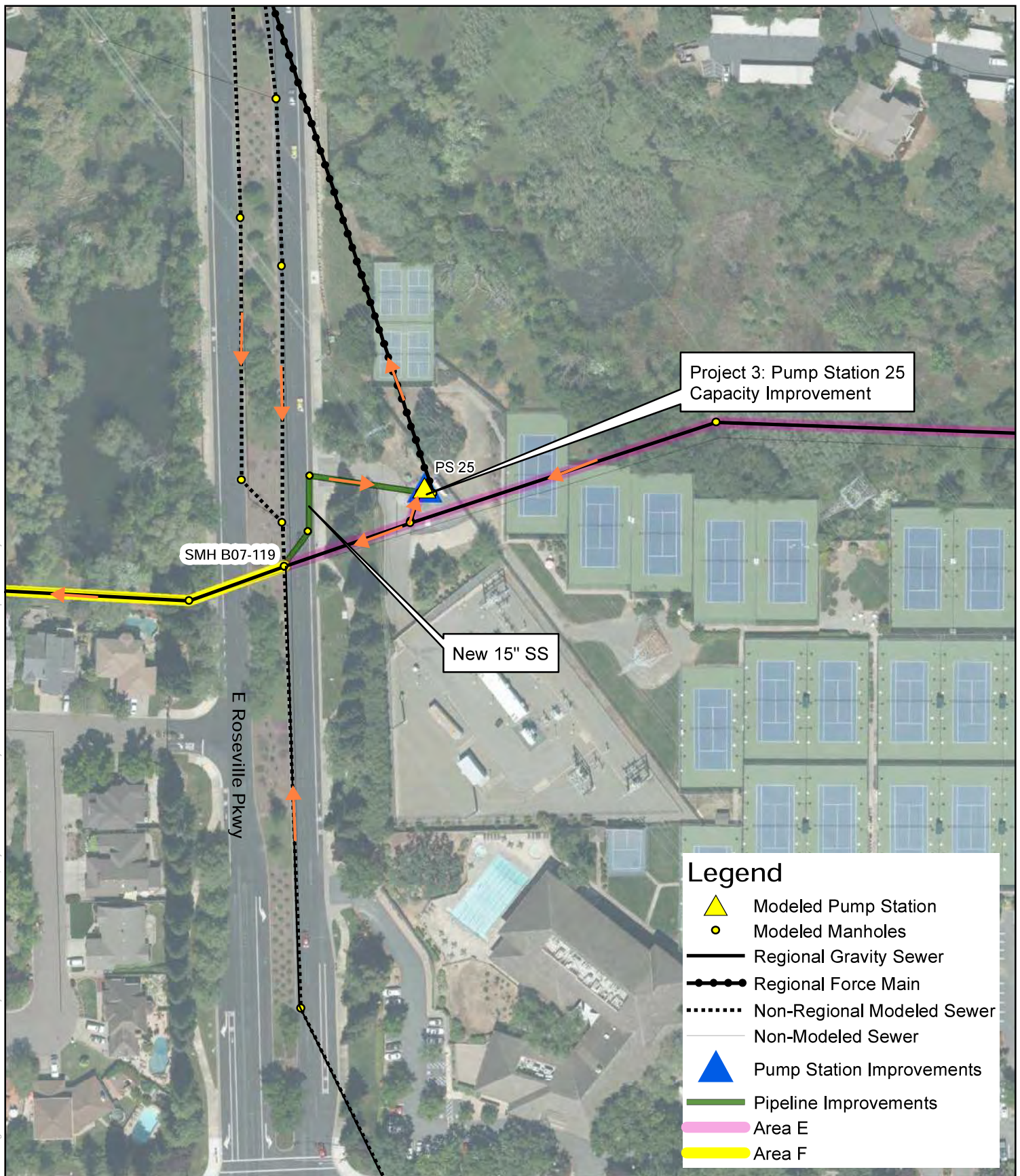
PROJECT DESCRIPTION

Project ID 3 Alternative A
 Project Name Pump Station 25 Improvements
 Project Location PS 25 (pumps)
 Description New weir structure or adjustments to existing structure at PS 25
 Estimated Capital Imp. Cost \$758,000
 Comments (i) Pipes are listed in order from upstream to downstream
 Assumptions (i) Cost estimates are based on the 20 Cities & SF Average April 2020 ENR CCI of 12115
 (ii) Cost assumes project will be implemented using open-cut construction method

PROJECT COST DETAIL

U/S MH ID	D/S MH ID	Existing Diameter (inches)	New Diameter (inches)	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Construction Method	Unit Cost (\$/LF)	Total Cost (\$)
SMH B07-119	SMH B07-119_DU2	new pipe	18	10	2%	17	Open Cut	\$298	\$ 2,982
SMH B07-119_DU2	PS 25 Wetwell	new pipe	15	215	2%	14	Open Cut	\$242	\$ 51,942
Baseline Pipeline Construction Cost:									\$ 54,924
Sheeting and Shoring for High Groundwater Area									\$ -
Dewatering									\$ -
Bypass Pumping (10% of pipe construction cost)									\$ -
Remove & Replace Factor (5% of pipe construction cost)									\$ -
Major Traffic Control (10% of pipe construction cost)									\$ -
Pipeline Construction Cost Subtotal:									\$ 54,924
Installation of 2 new manhole									\$ 30,000
Manhole Construction Cost Subtotal:									\$ 30,000
Pumps (including 8.25% sales tax)									\$ 164,540
Allowance for new PG&E Service									\$ 20,000
Electrical improvements (new service, new MCC, new cables)									\$ 35,000
Installation (25% of raw cost)									\$ 54,885
Piping & Structural Modifications Allowance									\$ 25,000
Contractor Overhead & Profit (20%)									\$ 59,885
Pump Station Construction Cost Subtotal:									\$ 359,310
Construction Subtotal:									\$ 444,234
Mobilization/Demobilization (5% of subtotal)									\$ 22,212
Estimated Construction Cost Subtotal:									\$ 466,446
Contingencies (30% of construction subtotal)									\$ 139,934
Total Estimated Construction Cost:									\$ 606,380
Engineering, Administration, Legal (25% of construction cost)									\$ 151,595
Estimated Capital Improvement Cost:									\$ 758,000

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Project 3: Pump Station 25 Capacity Improvement

New 15" SS

SMH B07-119

E Roseville Pkwy

Legend

- Modeled Pump Station
- Modeled Manholes
- Regional Gravity Sewer
- Regional Force Main
- Non-Regional Modeled Sewer
- Non-Modeled Sewer
- Pump Station Improvements
- Pipeline Improvements
- Area E
- Area F

Improvement Project 3

South Placer Wastewater Authority
2020 Systems Evaluation



Project #: 0011183.00
Map Created: June 2020

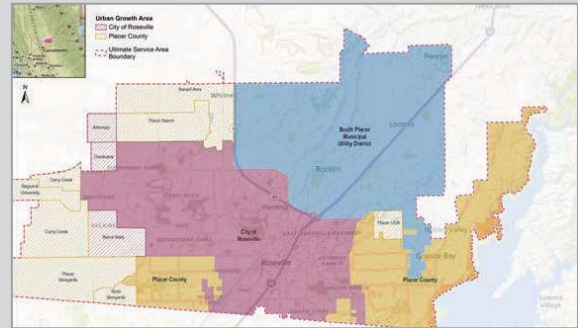
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COMMITMENT & INTEGRITY DRIVE RESULTS



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Sacramento, CA 95811
916-999-8700
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COMMITMENT & INTEGRITY DRIVE RESULTS

Appendix J – 2015 USBR Record of Decision

RECLAMATION

Managing Water in the West

Record of Decision

Central Valley Project Municipal and Industrial Water Shortage Policy

Prepared by

**United States Department of the Interior
Bureau of Reclamation
Mid Pacific Region**



**U.S. Department of the Interior
Bureau of Reclamation
Sacramento, California**

November 2015

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Record of Decision

Central Valley Project Municipal and Industrial Water Shortage Policy

Recommended:


Richard J. Woodley
Regional Resources Manager
Mid-Pacific Region

Date Nov. 4, 2015

Concur:


Anastasia T. Leigh
Regional Environmental Officer
Mid-Pacific Region

Date 11/9/2015

Approved:


David Murillo
Regional Director
Mid-Pacific Region

Date 11/13/15

Summary of Action

The Bureau of Reclamation (Reclamation) prepared the Central Valley Project (CVP) Municipal and Industrial (M&I) Water Shortage Policy (WSP) Environmental Impact Statement (EIS) to evaluate the potential impacts of CVP M&I WSP alternatives. The M&I WSP would be used by Reclamation to: 1) define water shortage terms and conditions for applicable CVP water service contractors, as appropriate; 2) determine the quantity of water made available to CVP water service contractors from the CVP that, together with the M&I water service contractors' drought water conservation measures and other non-CVP water supplies, would assist the M&I water service contractors in their efforts to protect public health and safety (PHS) during severe or continuing droughts; and 3) provide information to CVP water service contractors for their use in water supply planning and development of drought contingency plans. The alternatives evaluated in this EIS utilize different methodologies for allocating available CVP water supplies to CVP water service contractors during a Condition of Shortage¹. This EIS evaluates potential impacts of the M&I WSP over a 20-year period, 2010 through 2030. Reclamation's decision is the adoption of an updated M&I WSP.

Background

In January 1993, following the adoption of the Central Valley Project Improvement Act (CVPIA), many CVP M&I water service contractors expressed concerns regarding future allocations of water supplies provided by the CVP. Reclamation subsequently initiated an effort to develop an M&I WSP that would be incorporated into long-term water service contracts during the contract renewal process implemented under the CVPIA. Involved stakeholders submitted language for the M&I WSP as part of several proposed policies. In September 2001, Reclamation released a Draft M&I WSP. Reclamation initiated the preparation of an Environmental Assessment (EA) which included stakeholder input and consideration and evaluation of alternative policies developed in 1993, 1996-1997, and 2000-2001. The M&I WSP EA was released in October 2005 and a Finding of No Significant Impact was signed in December 2005. The M&I WSP currently being implemented by Reclamation is the 2001 Draft M&I WSP, as amended by Alternative 1B from the 2005 EA. Because the assumptions supporting the 2005 EA became outdated and due to significant changes in the Sacramento-San Joaquin River Delta (Delta) and CVP/State Water Project (SWP) operations, Reclamation decided in 2009 to

¹ "Condition of Shortage" is defined in Reclamation water service contracts as "...a condition respecting the Project during any Year (*March 1 through February of the following year*) such that the Contracting Officer is unable to deliver sufficient water to meet the Contract Total".

undertake the M&I WSP EIS to provide an updated M&I WSP that best recognizes the needs of various segments of the water user community and how those needs could be addressed under Conditions of Shortage.

Decision

Reclamation's decision is to implement Alternative 4, Updated M&I WSP (Preferred Alternative). This alternative comprises the updated M&I WSP developed by Reclamation with stakeholder input received during the M&I WSP stakeholder workshops held between May 2010 and January 2011, with clarifying revisions made to address comments from stakeholders received after Stakeholder Workshop 4 (November 2010) and to address public comments received on the Draft EIS (March 2015). The Updated M&I WSP will apply to the CVP water service contractors noted in Table 1. These water service contractors generally comprise those whose contracts currently reference the M&I WSP and those with a water service contract that is expected to reference the updated policy. These water users are located throughout the Sacramento River Valley, San Joaquin River Valley, Tulare Lake Region, and San Francisco Bay/Central Coast area.

Table 1. Water Service Contractors Subject to the Updated M&I WSP

General Geographical Region	CVP Division	Water Service Contractors	M&I	Ag ¹
North of Delta	Shasta and Trinity River	Bella Vista Water District	X	X
		Centerville Community Services District	X	-
		City of Redding	X	-
		City of Shasta Lake	X	-
		Clear Creek Community Services District	X	X
		Mountain Gate Community Services District	X	-
		Shasta Community Services District	X	-
		Shasta County Water Agency	X	-
		United States (U.S.) Forest Service (Shasta)	X	-
	Sacramento River	4-M Water District	X	X
		Colusa County Water District	X	X
		Corning Water District	X	X
		Cortina Water District	X	X
		County of Colusa	X	X
		County of Colusa (Stonyford)	X	-
		Davis Water District	X	X
		Dunnigan Water District	X	X
		Elk Creek Community Services District	X	-
		Glenn Valley Water District	X	X
		Glide Water District	X	X
		Holthouse Water District	X	X

Central Valley Project Municipal and Industrial Water Shortage Policy
Record of Decision

General Geographical Region	CVP Division	Water Service Contractors	M&I	Ag ¹
North of Delta	Sacramento River	Kanawha Water District	X	X
		Kirkwood Water District	X	X
		La Grande Water District	X	X
		Myers-Marsh Mutual Water Company	X	X
		Orland-Artois Water District	X	X
		Proberta Water District	X	X
		Stony Creek Water District	X	X
		Thomes Creek Water District	X	X
		U.S. Forest Service (Salt Creek)	X	-
		Westside Water District	X	X
		Whitney Construction, Incorporated	X	-
	American River	City of Roseville	X	-
		East Bay Municipal Utility District	X	-
		El Dorado Irrigation District	X	-
		Placer County Water Agency	X	-
		Sacramento County Water Agency	X	-
		Sacramento Municipal Utility District	X	-
		San Juan Water District	X	-
	Delta	Banta-Carbona Irrigation District	X	X
		Byron-Bethany Irrigation District	X	X
		City of Tracy	X	X
		Coelho Family Trust	X	X
		Contra Costa Water District	X	-
		Del Puerto Water District	X	X
		Eagle Field Water District	X	X
		Fresno Slough Water District	X	X
		James Irrigation District	X	X
		Laguna Water District	X	X
		Mercy Springs Water District	X	X
		Oro Loma Water District	X	X
		Pajaro Valley Water Management Agency, Westlands Water District	X	X
		Patterson Irrigation District	X	X
		Reclamation District No. 1606	X	X
		Tranquillity Irrigation District	X	X
		Tranquillity Public Utility District	X	X
		U.S. Department of Veteran Affairs	X	-
		West Side Irrigation District	X	X
		West Stanislaus Irrigation District	X	X
		Westlands Water District Distribution Districts	X	X
South of Delta	West San Joaquin	City of Avenal	X	-
		City of Coalinga	X	-
		City of Huron	X	-
		Pacheco Water District	X	X
		Panoche Water District	X	X
		San Luis Water District	X	X
		State of California	X	-

General Geographical Region	CVP Division	Water Service Contractors	M&I	Ag ¹
South of Delta	West San Joaquin	Westlands Water District	X	X
	San Felipe	San Benito County Water District	X	X
		Santa Clara Valley Water District	X	X
	Cross Valley Canal	County of Fresno	X	X
		County of Tulare	X	X
		Hills Valley Irrigation District (includes Rag Gulch Water District)	X	X
		Kern-Tulare Water District	X	X
		Lower Tule River Irrigation District	-	X
		Pixley Irrigation District	X	X
		Tri-Valley Water District	X	X

Note:

¹ Ag = Agricultural water service contractor

Alternatives Considered

No Action Alternative

The No Action Alternative represents continued implementation of the current Draft M&I WSP. This existing draft policy is currently guiding Reclamation's allocation of CVP water to agricultural and M&I water service contractors during Conditions of Shortage and would continue if none of the action alternatives were selected.

During Conditions of Shortage when the CVP is unable to deliver sufficient water to meet the CVP water service contractors' Contract Total, M&I water service contractors allocations are maintained at 100 percent of their Contract Total as the agricultural water service contractor allocations are reduced to 75 percent of their Contract Total in incremental steps. Then, M&I water service contractor allocations are reduced to 75 percent of their historical use in incremental steps as agricultural water service contractor allocations are reduced to 50 percent of their Contract Total. The M&I water service contractor allocations are maintained at 75 percent of historical use until agricultural water service contractor allocations are reduced in incremental steps to 25 percent of Contract Total. M&I water service contractor allocations are then reduced in incremental steps to 50 percent of historical use until agricultural water service contract allocations are reduced in incremental steps from 25 percent to zero.

In years when the M&I water service contractor allocations are less than 75 percent of historical use, Reclamation would attempt to provide the amount of PHS need unmet by contractors' CVP allocation and other available non-CVP

supplies, up to 75 percent of the historical use, subject to the availability of CVP water supplies. There are some years in which allocations to agricultural water service contractors are at or near zero. In those years, CVP water deliveries for unmet PHS need to M&I water service contractors may not be fully realized. Water made available to M&I water service contractors may be reduced below 75 percent of historical use and below the unmet PHS needs when CVP water is not available.

Action Alternatives

The alternatives that moved forward for more detailed analysis in the EIS were those that responded to the National Environmental Policy Act (NEPA) purpose and need, minimized negative effects, were potentially feasible, and represented a range of reasonable alternatives. As a result of initial alternatives screening, four action alternatives were selected to move forward for analysis in the EIS (in addition to the No Action Alternative). Table 2 presents the alternatives analyzed in the EIS. Analysis of these alternatives will provide the information needed for Reclamation to make a decision.

Table 2. Alternatives Analyzed in the EIS

Alternative Number	Alternative Name	Description
Alternative 1	No Action Alternative	Represents a projection of current conditions to the most reasonable future conditions that could occur during the life of the proposed action without any action alternative being implemented. The No Action Alternative represents continued allocation of water in the same way that Reclamation currently allocates CVP water to agricultural and M&I water service contractors during Conditions of Shortage, consistent with the 2001 Draft M&I WSP, as modified by Alternative 1B of the 2005 EA.
Alternative 2	Equal Agricultural and M&I Allocation	Provides no preference for either agricultural or M&I contractors. M&I and agricultural water service contractors receive equal allocation percentages during a Condition of Shortage.
Alternative 3	Full M&I Allocation Preference	M&I water service contractors receive 100% of their Contract Total until CVP supplies are not available to meet those demands. Agricultural allocations are reduced as needed to maintain 100% allocations to M&I contractors.
Alternative 4	Updated M&I WSP (Preferred Alternative)	Similar to Alternative 1 but modified to update the definition of unconstrained years used in calculating historical use. Attempts to provide unmet PHS need, but without a guarantee. Provides implementation guidelines and procedures.
Alternative 5	M&I Contractor Suggested WSP	Similar to Alternative 4 except attempts to provide a greater quantity of unmet PHS need.

Under Alternative 2, Equal Agricultural and M&I Allocation, M&I water service contractors would receive the same allocation, as a percentage of Contract Total, as the agricultural water service contractors. This means that in years when the CVP water supplies are not adequate to provide water to all water service contractors, agricultural and M&I water service contractor allocations would be reduced by the same percentage. This allocation methodology would provide a larger volume of CVP water to agricultural water service contractors than the No Action Alternative, as there would be no reductions to agricultural contractors to provide a larger volume of CVP water to M&I water service contractors. Deliveries to both north of the Delta and south of Delta M&I contractors would be lower than under the No Action Alternative in order to provide an equal allocation to agricultural water service contractors.

Under Alternative 3, Full M&I Allocation Preference, M&I water service contractors would receive a higher allocation as compared to the No Action Alternative and other action alternatives. Under this alternative, Reclamation would attempt to provide a 100 percent allocation to M&I water service contractors during a Condition of Shortage, to the extent that adequate CVP water supplies are available. This would be achieved by reducing allocations to agricultural water service contractors as needed to maximize the frequency of 100 percent allocations to the M&I water service contractors. This allocation methodology would provide the lowest volume of CVP water to agricultural water service contractors compared to the No Action and other action alternatives. Alternative 3 would have no provisions for unmet PHS needs that would be made available by Reclamation from CVP water supplies.

Alternative 4, Updated M&I WSP, is similar to the No Action Alternative. This alternative comprises the M&I WSP developed by Reclamation with stakeholder input received during the M&I WSP stakeholder workshops held between May 2010 and January 2011, with clarifying revisions made to address comments from stakeholders received after Stakeholder Workshop 4 and to address public comments received on the Draft EIS. Reclamation used this feedback to identify elements of the 2001 Draft M&I WSP (represented in the No Action Alternative) that could be improved. The major modifications made to the 2001 Draft M&I WSP that are reflected in the Updated M&I WSP include the following:

- Reclamation deleted the reference to 1996 M&I Water Rate book.
- At the M&I water service contractors' request, Reclamation modified the method that would be used to adjust an M&I water service contractor's historical use.
- Reclamation expanded the definitions of the key terms and also defined terms not previously defined, to provide greater clarity on the intent and requirements of the M&I WSP's key terms and conditions.

- Term and Condition 1 was revised to remove the sentence stating that Reclamation intended contractors to use their non-CVP supplies first and rely on CVP water as a supplemental supply. Instead, Reclamation expects water service contractors, at their discretion, to use CVP water in conjunction with their other non-CVP supplies to meet demand during all years, including years where a Condition of Shortage exists.
- Clarified M&I allocation for contracts with both irrigation and M&I use which do not set forth individual Contract Totals for each use.

Alternative 5, M&I Contractor Suggested WSP, is similar to Alternative 4, Updated M&I WSP. This alternative was developed and recommended by several M&I water service contractors who participated in the M&I WSP workshops held between May 2010 and January 2011. Alternative 5 attempts to provide an increased quantity of CVP water allocated to M&I water service contractors to supply the unmet portion of the PHS needs during a Condition of Shortage. This would be achieved by increasing the upper limit for consideration of additional allocations to assist in meeting unmet PHS need from an initial allocation of 75 percent of historical use (under Alternative 4) to an initial allocation of 95 percent of historical use (under Alternative 5).

Environmentally Preferable Alternative

Section 1505.2(b) of NEPA requires that, in cases where an EIS has been prepared, the Record of Decision must identify all alternatives that were considered, specifying the alternative or alternatives which were considered to be environmentally preferable. The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources (Council on Environmental Quality 40 Most Asked Questions number 6(a)). It is implicit in NEPA that the environmentally preferable alternative must be reasonable and feasible to implement.

In choosing the environmentally preferable alternative, Reclamation considered impacts to all resources. On balance, Alternative 1, No Action Alternative, and Alternative 4, Updated M&I WSP, would have the least environmental effects associated with implementing a CVP M&I WSP during a Condition of Shortage. Alternative 4 would have no environmental impacts compared to the No Action Alternative. Alternatives 2 and 3 have greater environmental effects to water quality, groundwater resources, air quality, geology and soils, and agricultural resources than Alternative 4. Alternative 5 would have small but greater effects to groundwater resources and air quality compared to Alternative 4.

Basis of Decision

Reclamation's decision to move forward is based on how the alternatives meet the project's purpose and need and the magnitude of environmental effects.

While the alternatives would affect different resources in different ways,

Alternative 4 provides Reclamation with the greatest degree of flexibility to address CVP water service contractors' needs during Conditions of Shortage while recognizing that CVP deliveries are subject to the amount of CVP water available and cannot be guaranteed, and provides clarity to the terms, conditions, and procedures of the CVP M&I WSP. Additionally, Alternative 4 has no environmental effects compared to the No Action Alternative; therefore, no mitigation measures are necessary.

Purpose and Need

The purpose of updating the 2001 Draft M&I WSP, as amended, is to provide detailed, clear, and objective guidelines for the allocation of available CVP water supplies to CVP water service contractors during a Condition of Shortage. The update to the M&I WSP is needed by water managers and CVP water service contractors to help them better plan for and manage available CVP water supplies, and to better integrate the use of CVP water with the use of other available non-CVP water supplies. The update to the M&I WSP is also needed to clarify certain terms and conditions with regard to the applicability and implementation process of the M&I WSP.

The updated M&I WSP would be used by Reclamation to:

- Define water shortage terms and conditions for applicable CVP water service contracts, as appropriate;
- Determine the quantity of water made available to CVP water service contractors from the CVP, that together with the M&I water service contractors' drought water conservation measures and other non-CVP water supplies, would assist the M&I water service contractors in their efforts to protect PHS during severe or continuing droughts; and
- Provide information to CVP water service contractors for their use in water supply planning and development of drought contingency plans.

All action alternatives meet the purpose and need, but the No Action Alternative does not meet the purpose and need.

Environmental Issues Evaluated

During March 2011, public scoping sessions on the development of the CVP M&I WSP EIS were held in Sacramento, Willows, Fresno, and Oakland, California. Key issues raised during the public scoping process that are applicable for inclusion in the EIS are listed below.

- The final M&I WSP should be a single document that clearly states how Reclamation interprets and implements the M&I WSP.
- Any additional water provided to M&I water service contractors is viewed as water “taken” from agricultural contractors.
- M&I water service contractors would like a guaranteed quantity of CVP water to meet PHS needs and do not want their use of non-CVP supplies to count against their deliveries of CVP water in Conditions of Shortage.
- The analysis should use an appropriate baseline given ongoing regulatory issues regarding CVP/SWP operations.
- The effects analysis should include a cumulative impact discussion in the context of other reasonably foreseeable past, present, and future actions potentially affecting the allocation of CVP water, including the Bay Delta Conservation Plan.
- The EIS should analyze the impacts to water service contractors who have limited access to alternative water supplies and to “mixed use” contractors.
- The M&I WSP EIS should specifically state the agencies that are and are not affected by the policy, and state that the M&I WSP will apply equally to all M&I contractors, including the American River Division contractors.
- Certain American River Division contractors (City of Roseville, Placer County Water Agency, Sacramento Municipal Utility District, and San Juan Water District) disagree with Reclamation’s interpretation of Term 14 of State Water Resources Control Board Decision 893 and believe it should provide them with additional supply reliability beyond what the M&I WSP provides in their water service contracts.

The alternatives were evaluated to address issues raised and potential impacts to the range of environmental and socioeconomic resources relevant to NEPA. The action alternatives have the potential to result in impacts to several resources, including surface water, water quality, groundwater, geology and soils, air quality, greenhouse gases (GHGs) and climate change, agricultural

resources, socioeconomics, and power². The differences between the action alternatives for these impacts include:

- *Surface Water:* Alternative 2 would increase CVP deliveries to agricultural water service contractors and decrease CVP deliveries to M&I water service contractors, compared to the No Action Alternative. Alternative 3 would decrease CVP deliveries to agricultural water service contractors and increase CVP deliveries to M&I water service contractors, compared to the No Action Alternative. Alternatives 4 and 5 would have no change in CVP deliveries compared to the No Action Alternative. PHS needs would be met for the Sacramento River Division under all alternatives. The American River, Delta, and San Felipe Divisions would have unmet PHS needs under Alternative 2. There would be unmet PHS needs for the Shasta/Trinity River and West San Joaquin Divisions under Alternatives 2, 3, and 4. The Cross Valley Canal Unit would have unmet PHS needs under all alternatives.

There are only relatively small to no changes to Shasta and Trinity lakes storages, upper Sacramento River flows, and Lake Oroville storage as a result of action alternatives, which do not result in substantial impacts. The effects of changes to other reservoirs' storage and rivers' flows are addressed under other appropriate resource areas (e.g., water quality, recreation, flood hydrology, water quality, etc.).

- *Water Quality:* Changes in CVP deliveries could affect the salinity and bromide concentrations in the Delta Division. Alternative 5 would have only very minimal changes in reservoir or river flows compared to the No Action Alternative that would not affect salinity and bromide concentrations. Alternatives 2 and 3 would cause an increase in electrical conductivity which could affect water quality in the Delta Division.
- *Groundwater:* A reduction in CVP deliveries to agricultural water service contractors could cause these contractors to supplement their surface water supplies through increased groundwater pumping. Alternative 2 would reduce agricultural groundwater pumping in all regions due to increases in CVP deliveries to agricultural water service contractors, while Alternative 3 would increase agricultural groundwater pumping in all regions due to decreases in CVP deliveries to agricultural contractors. M&I water service contractors may need to make use of all their available groundwater supplies under Alternative 2 in order to meet PHS needs in certain years. Alternatives 4 and 5 would have little to no change in groundwater pumping by CVP water service contractors compared to the No Action Alternative.

² It was determined that no impacts or only minor impacts would occur to aquatic resources, terrestrial resources, environmental justice, cultural resources, Indian sacred sites, recreation, flood hydrology, and visual resources.

Increased pumping caused by change in deliveries to supplement supply shortages may cause groundwater level declines that could lead to land subsidence. Alternative 2 would cause a net increase in pumping that could potentially increase land subsidence in the San Francisco Bay/Central Coast region. Alternative 3 would cause a net increase in pumping that could potentially increase land subsidence in the Sacramento Valley, San Joaquin Valley, and Tulare Lake regions.

- *Geology and Soils:* Under Alternative 3, reduced CVP deliveries to agricultural water service contractors could indirectly lead to wind erosion if agricultural water service contractors implement crop idling to manage their water supplies.
- *Air Quality:* Increases in CVP deliveries to agricultural water service contractors under Alternative 2 would result in decreased pollutant emissions from reduced groundwater pumping. Decreases in CVP deliveries to agricultural water service contractors under Alternative 3 would result in increased pollutant emissions due to increased groundwater pumping. Under Alternative 3, the general conformity *de minimis* threshold would be exceeded in the San Joaquin Valley Air Basin. Alternatives 4 and 5 would have little to no changes compared to the No Action Alternative.
- *GHGs and Climate Change:* Changes in CVP deliveries to agricultural water service contractors would decrease GHG emissions under Alternative 2 and increase GHG emissions under Alternatives 3 and 5. Alternative 4 would have no change compared to the No Action Alternative.
- *Agricultural Resources:* Alternative 3 would reduce agricultural acreage primarily in the Tulare Lake Region, but minimally to other regions in the study area.
- *Socioeconomics:* Changes in CVP deliveries for CVP water service contractors would have differing effects for agricultural and M&I water service contractors in Alternatives 2 and 3. Generally, effects would be positive for agricultural water service contractors under Alternative 2 and negative under Alternative 3, while the opposite would be true for M&I water service contractors. Alternatives 4 and 5 would have no change compared to the No Action Alternative.
- *Power:* Changes in CVP deliveries may cause changes in power generation from hydroelectric power generation facilities by changing reservoir releases or by changing reservoir storage, as represented by changes in reservoir elevations. Alternative 2 and 3 would experience minimal reductions to the amount of power generated at the Folsom and Nimbus power plants and slight fluctuations in the amount of

power generated at San Luis Reservoir. Alternatives 4 and 5 would have no change compared to the No Action Alternative.

- *Indian Trust Assets:* Under Alternatives 2 and 3, the magnitudes of groundwater level fluctuations are very small compared to overall groundwater supplies and would not be substantial enough to create a noticeable change to water supply at existing wells near Indian Trust Asset sites. Therefore, Alternatives 2 and 3 would not interfere with the exercise of federally-reserved water rights and/or reduce the health of tribal members by decreasing water supplies. Alternatives 4 and 5 would have no change compared to the No Action Alternative, and would not result in impacts to Indian Trust Assets.

Section 7 of the Federal Endangered Species Act (ESA)

Reclamation coordinated with the U.S. Fish & Wildlife Service during development of the Draft EIS regarding the impact analysis on special status species and environmental commitments. Reclamation further coordinated with National Oceanic and Atmospheric Administration National Marine Fisheries Service in preparing the Final EIS. A full consultation under Section 7 of the ESA with U.S. Fish & Wildlife Service or National Oceanic and Atmospheric Administration National Marine Fisheries Service was determined not to be needed for this action because the potential impacts are within the range of impacts already observed under current operations of the CVP and are covered by the Biological Opinions on the Coordinated Long-Term Operations of the CVP and SWP.

Section 106 Compliance

Reclamation is responsible for complying with Section 106 of the National Historic Preservation Act. Alternative 4 would not result in the disturbance of land or require any construction activities; therefore, there are no impacts to cultural resources. Under Section 106 of the National Historic Preservation Act, Alternative 4 is the type of activity that does not have the potential to affect historic properties and there are no further obligations under Section 106 [36 Code of Federal Regulations Sec. 800.3(a)(1)].

Comments Received on the Final EIS

Reclamation's Notice of Availability of the Final EIS was published in the Federal Register on September 10, 2015, and the Environmental Protection Agency's Notice of Availability was published on September 18, 2015. The EIS was posted on Reclamation's website, and copies were distributed to those who requested a copy. A press release was released on September 10, 2015, and was sent to participants in public meetings and commenters on the Draft EIS.

Reclamation received comments from three entities after release of Final EIS. The commenters were: Somach Simmons & Dunn for Glenn-Colusa Irrigation District (Kelley Taber); East Bay Municipal Utility District (Michael Tognolini); and Santa Clara Valley Water District (Cindy Kao). These comments either reiterated comments previously provided during the public comment period, or supported Reclamation's choice of the Preferred Alternative. Reclamation had adequately addressed the previous comments in the Final EIS. The comments consisted of the following:

- Glenn-Colusa Irrigation District (GCID) did not agree that their comments on the Draft EIS were adequately addressed in Appendix I of the Final EIS. GCID was concerned that the M&I WSP's definition of PHS is too broad and would allow a greater amount of water than necessary for domestic use and essential public services to be included in the calculation, thereby overestimating system demands during Conditions of Shortage and influencing the allocation of water within the CVP system. Additionally, GCID was concerned that implementation of the M&I WSP could affect water supply reliability under their Settlement Contract. As described in the Final EIS, the determination of any additional CVP water supplied to M&I water service contractors during a Condition of Shortage to assist in meeting PHS needs would take into account a contractor's estimated PHS demand, as well as their non-CVP supplies available in that year, and, most importantly, the availability of CVP water in that year. Reclamation would closely review the data provided by an M&I water service contractor so that CVP water provided for PHS needs is estimated in accordance with California criteria and used appropriately during a Condition of Shortage. The Final EIS also states in Appendix B that Reclamation does not have discretion to determine water supply allocations to Sacramento River Settlement Contractors, San Joaquin River Exchange Contractors, certain named State Wildlife Areas and National Wildlife Refuges, and the privately owned/managed wetlands comprising the Grassland Resources Conservation District as identified under the CVPIA Section 3406(d). Water supply allocations for these water service contractors are determined annually based on the forecasted full natural inflow to Shasta Lake. CalSim II simulates

water supply allocations to these water service contractors based on inflow to Shasta Lake.

- East Bay Municipal Utility District (EBMUD) supports Reclamation's selection of Alternative 4 as the Preferred Alternative for the M&I WSP. However, EBMUD requested that their contractual historic use of 133,000 acre-feet (AF), per their Long Term Renewal Contract, be noted in the M&I WSP as an exception to the methodology used for calculating historical use. Reclamation, when applying the M&I WSP to EBMUD, would use EBMUD's contractual historic use of 133,000 AF as the basis for making adjustments for population growth, extraordinary water conservation measures, and use of non-CVP water supplies. But, Reclamation believes it inappropriate to specifically state or call out such an exception in the M&I WSP.
- Santa Clara Valley Water District (SCVWD) supports Reclamation's selection of Alternative 4 as the Preferred Alternative for the M&I WSP. SCVWD believes an adopted M&I WSP is critically important for water supply reliability in support of the communities and businesses in its service area.

Appendix K – Water Shortage Contingency Plan



DRAFT WATER SHORTAGE CONTINGENCY PLAN



City of Roseville Draft Water Shortage Contingency Plan

May 2021



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Table of Contents

Water Shortage Contingency Plan.....	1
1.1 Water Supply Reliability Analysis.....	1
1.1.1 Constraints on Water Supply	1
1.1.2 Drought Risk Assessment.....	2
1.1.3 Seismic Risk Analysis	4
1.2 Legal Authorities	4
1.3 Standard Water Shortage Levels	5
1.4 Annual Water Supply and Demand Assessment Procedures	5
1.5 Supply Augmentation and Operational Changes.....	12
1.6 Compliance and Enforcement	12
1.7 Financial Consequences	13
1.8 Plan Adoption, Submittal, and Availability	14

Tables

WSCP Table 1 Available Surface Water Supply Under Differing Hydrologic Conditions.....	2
WSCP Table 2 Near-Term Five-Year Drought Risk Assessment.....	3
WSCP Table 3 Long-Term Single and Five-Year Drought Risk Assessment	3
WSCP Table 4 Relation Between Standard Water Shortage Levels and Existing Stages.....	5
WSCP Table 5 Water Supply and Demand Assessment Procedure.....	5
WSCP Table 6 Demand Reduction Actions to be Implemented at Each Shortage Level	8
WSCP Table 7 Supply Augmentation During Stage 3 Droughts and Higher	12

Exhibits

- Exhibit A – City of Roseville 2016 Multi-Hazard Mitigation Plan
- Exhibit B – City of Roseville Municipal Code 14.09
- Exhibit C – Adoption Resolution