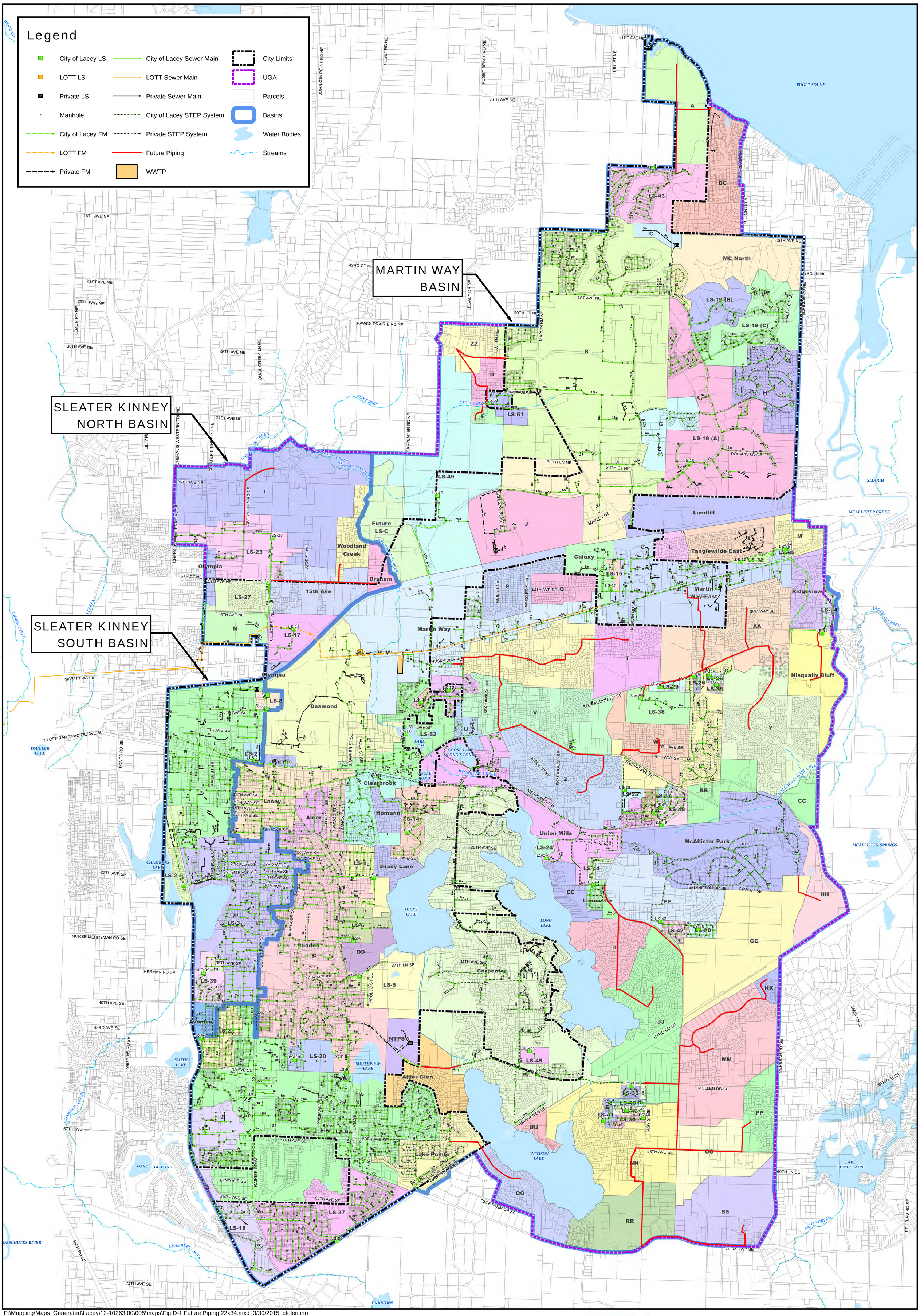
# Appendix D

# Model Output




P:\Mapping\Maps_Generated\Lacey\12-10263.00\005\maps\Fig D-1 Future Piping 22x34.mxd 3/30/2015 ctolentino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GIS Data: City of Lacey 2012

This map is a geographic representation based on information available. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.

N W E S

0 0.25 0.5 Miles

# FUTURE PIPING

## WASTEWATER COMPREHENSIVE PLAN UPDATE

City of Lacey
April 2015

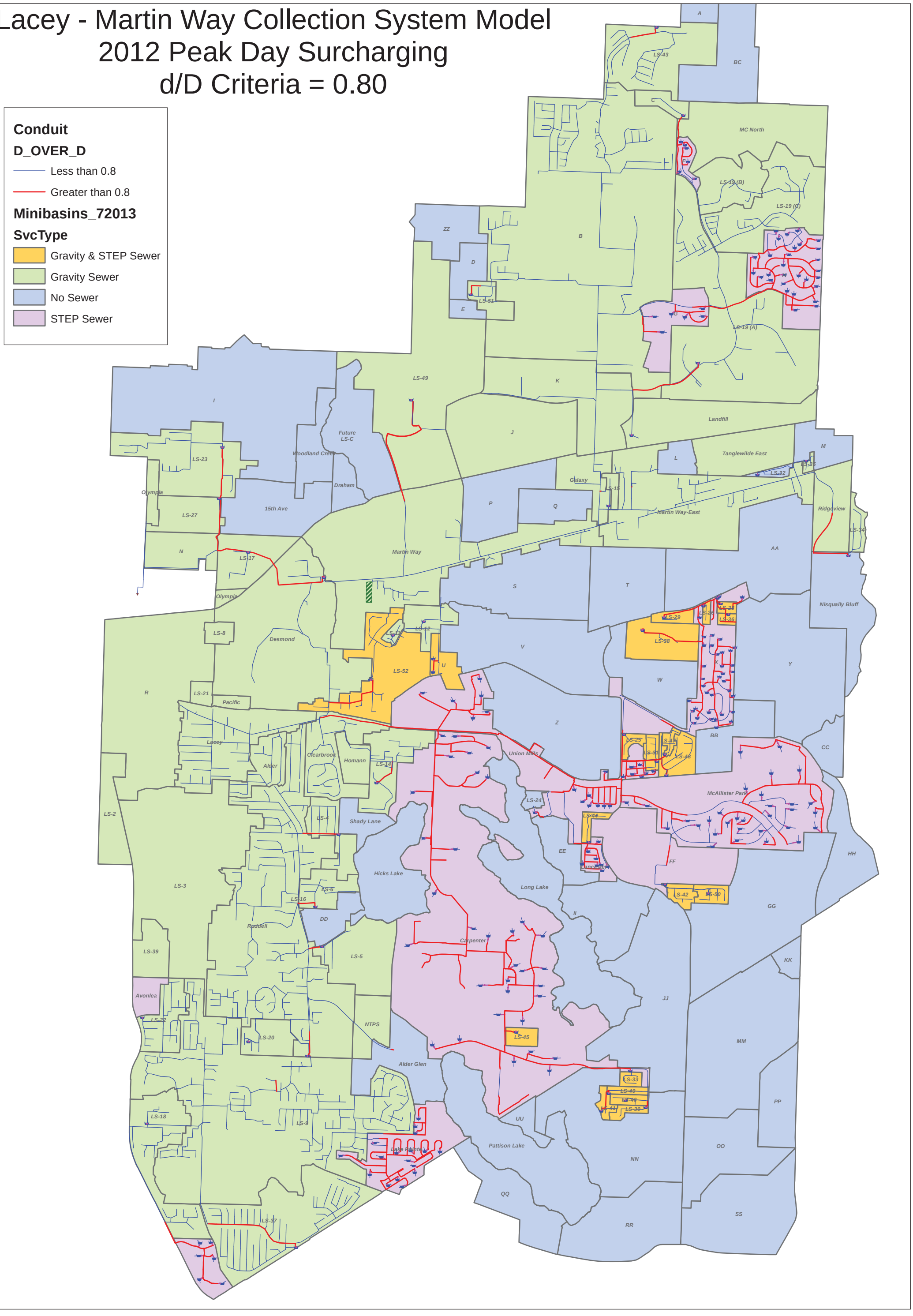
Figure

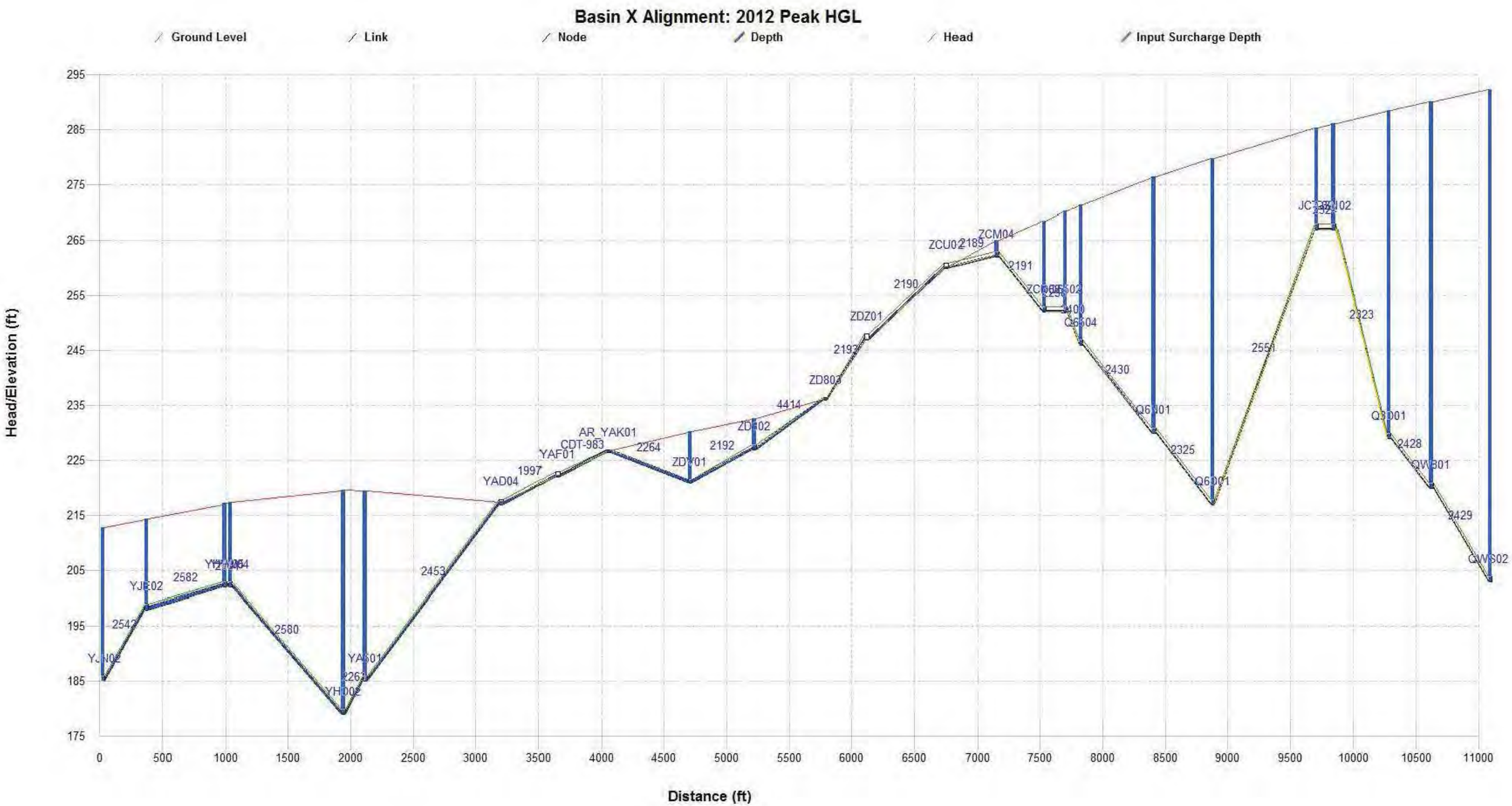
D-1

# 2012 MODEL RESULTS

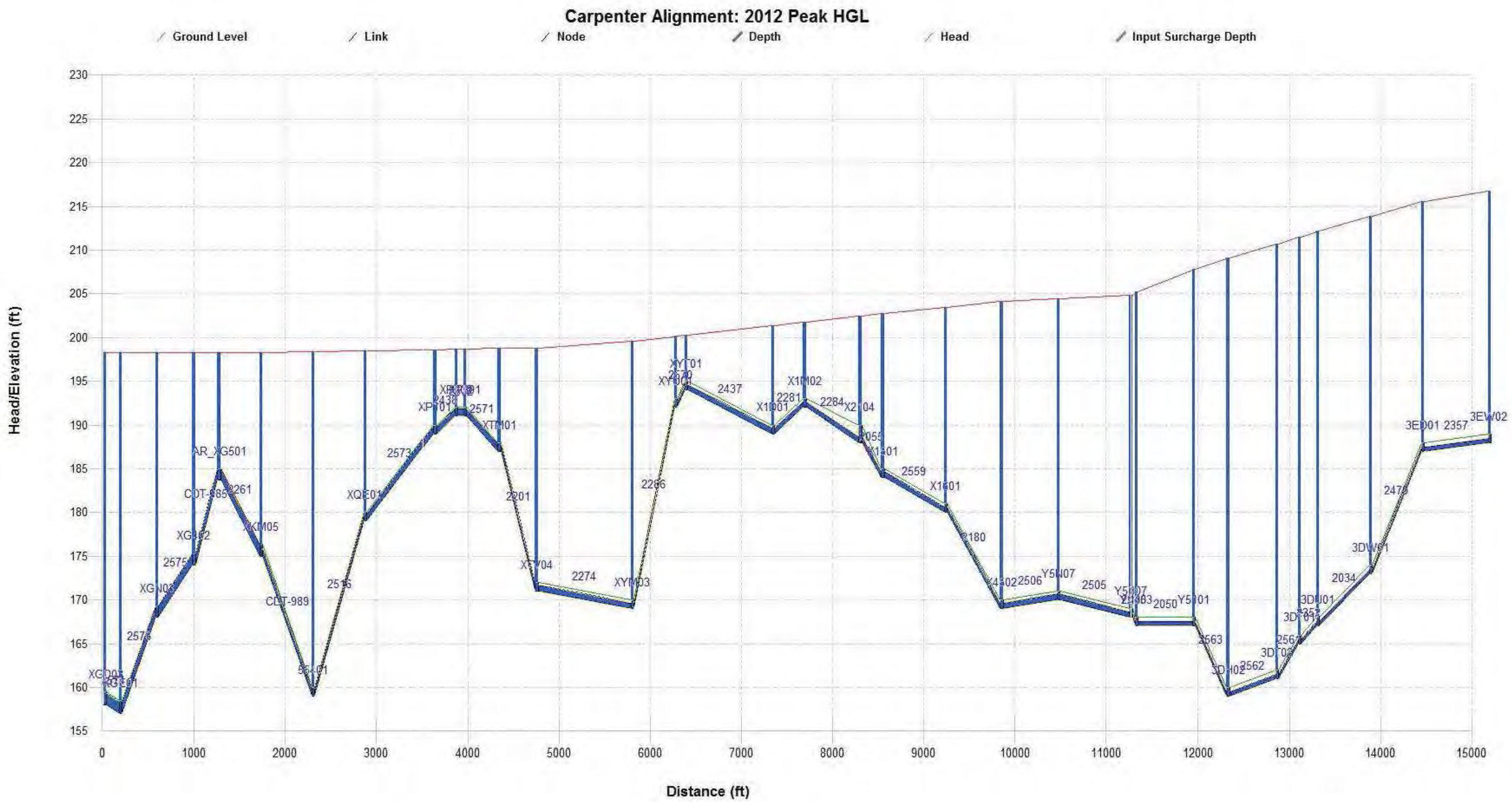
## MARTIN WAY BASIN

# Lacey - Martin Way Collection System Model
## 2012 Peak Day Surcharging
## d/D Criteria = 0.80

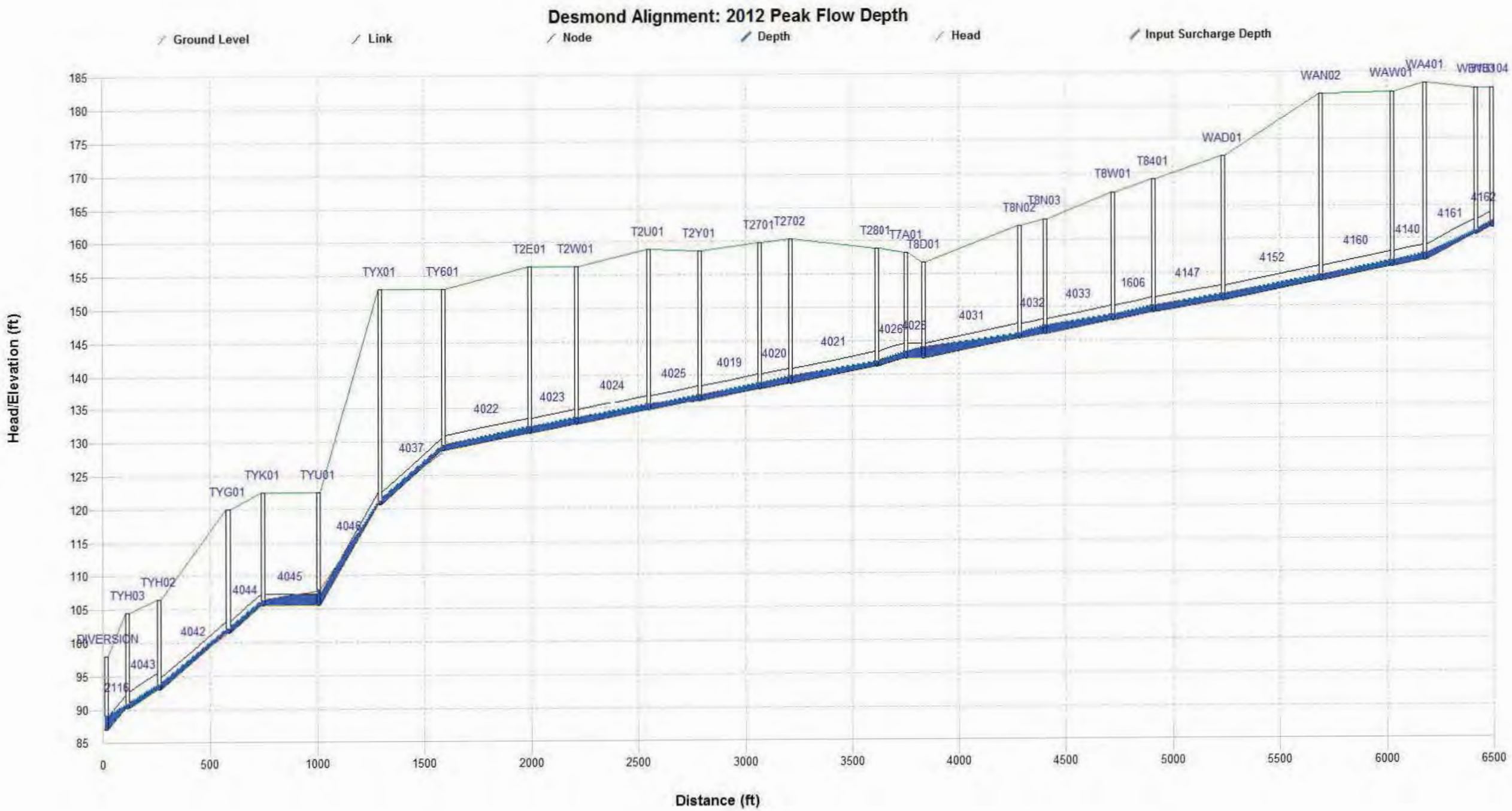


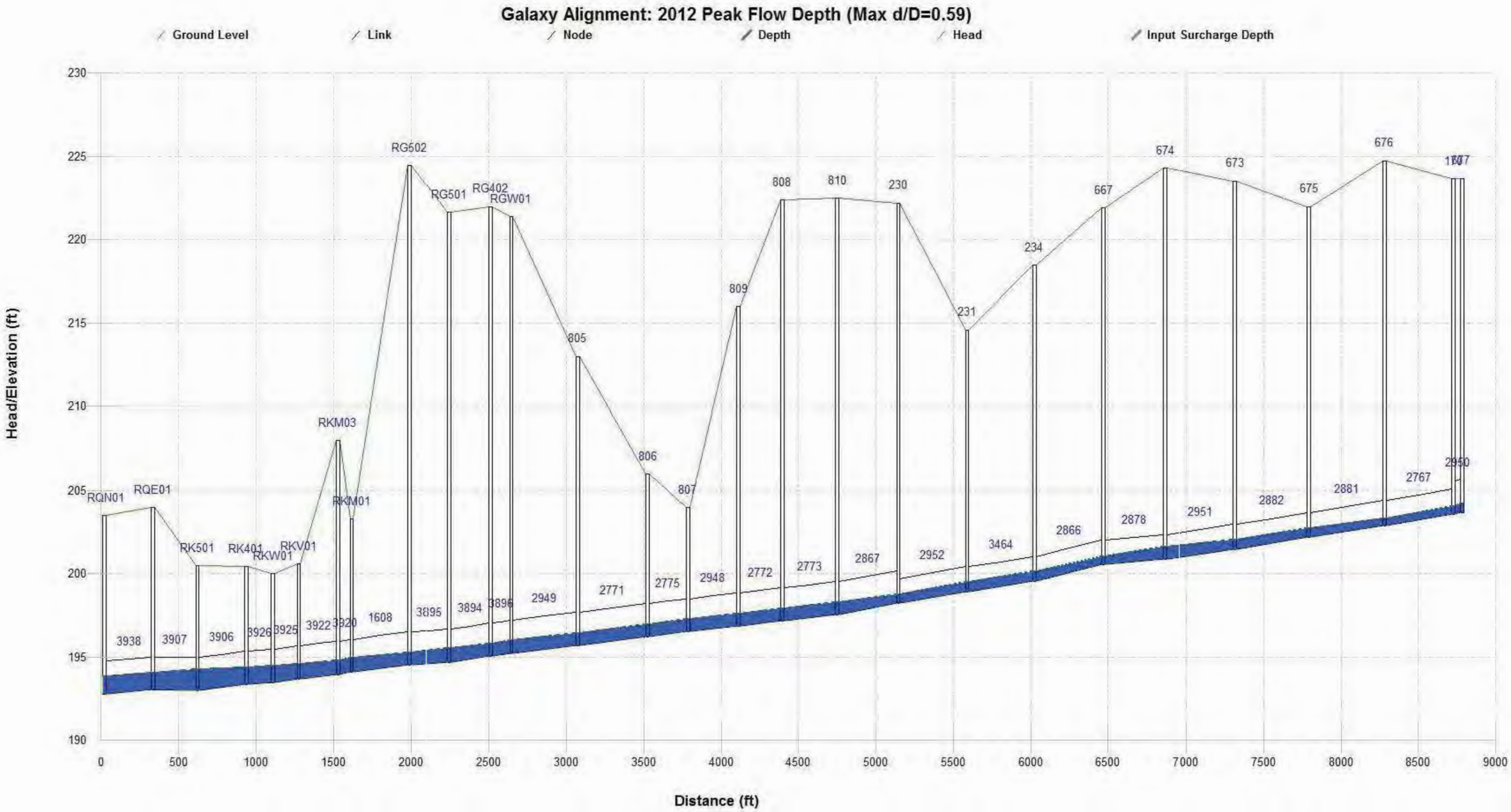


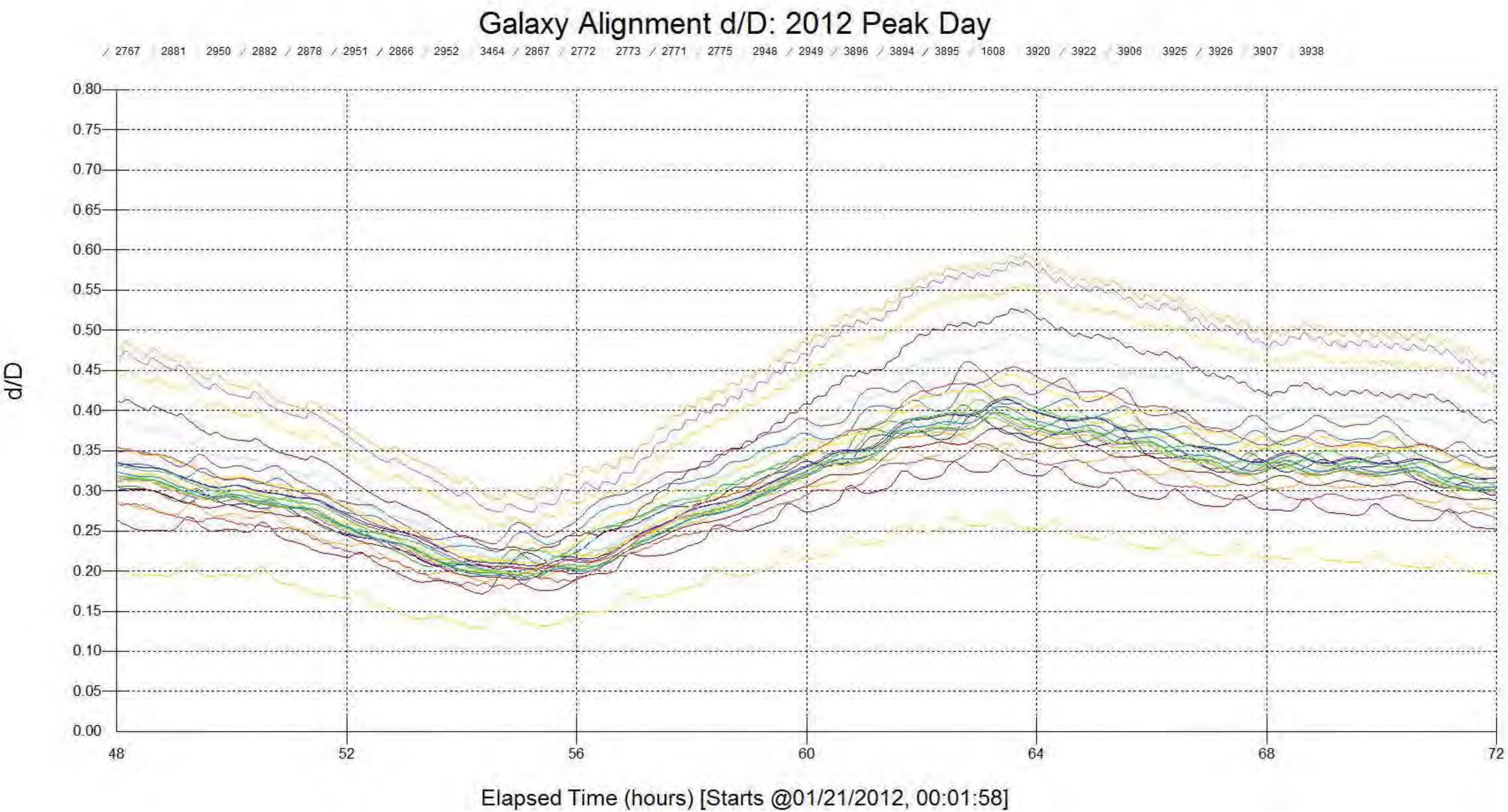
Basin X Alignment: 2012 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
295
285
275
265
255
245
235
225
215
205
195
185
175
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000
10500
11000
YJN02
2542
YJE02
2582
2580
YAD04
1997
YAF01
CDT-983
AR_YAK01
2264
2192
ZDZ01
2193
ZD803
4414
2190
ZCU02
2189
ZCM04
2191
2430
2325
2551
2323
2428
2429

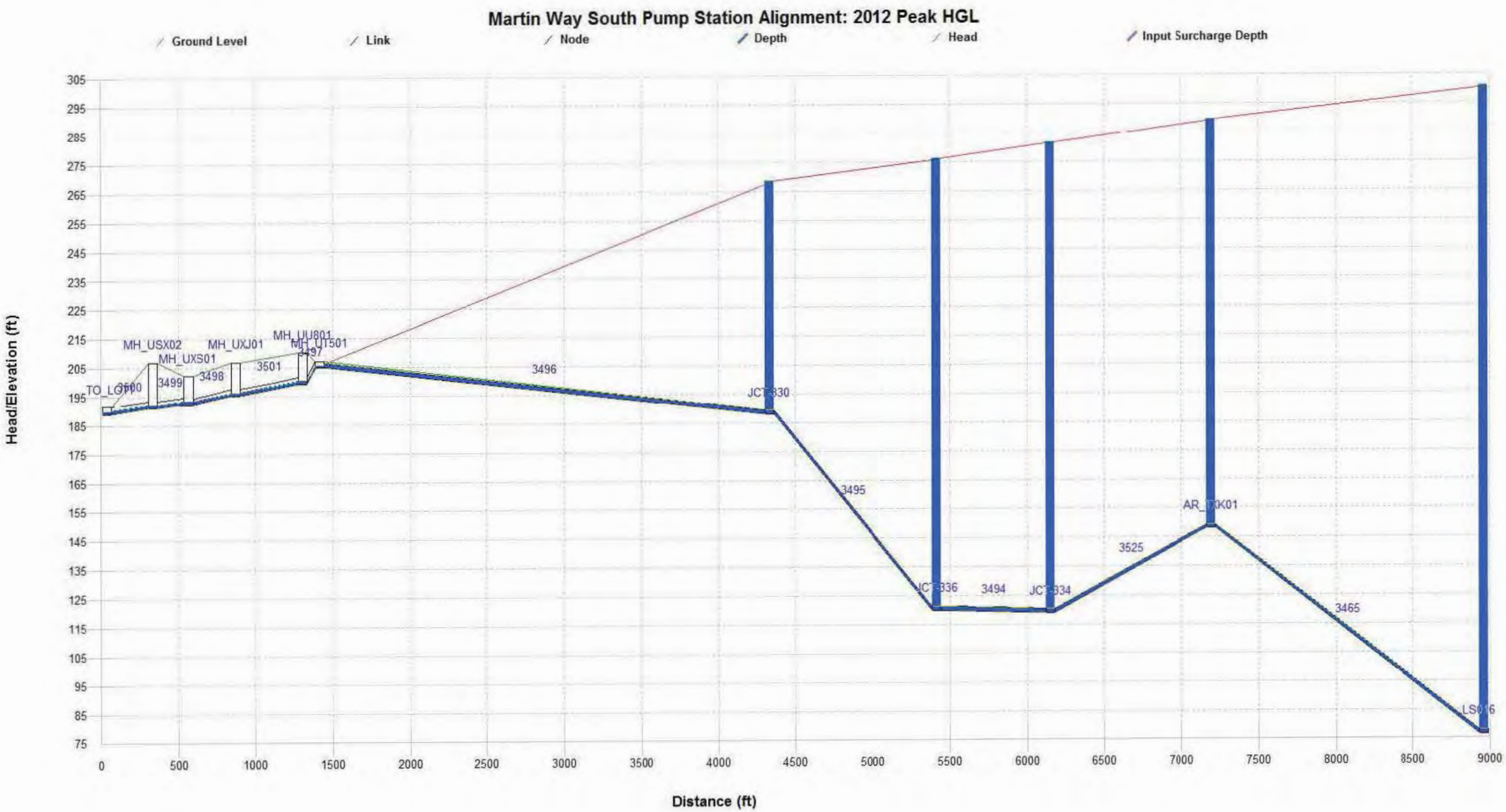


Carpenter Alignment: 2012 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

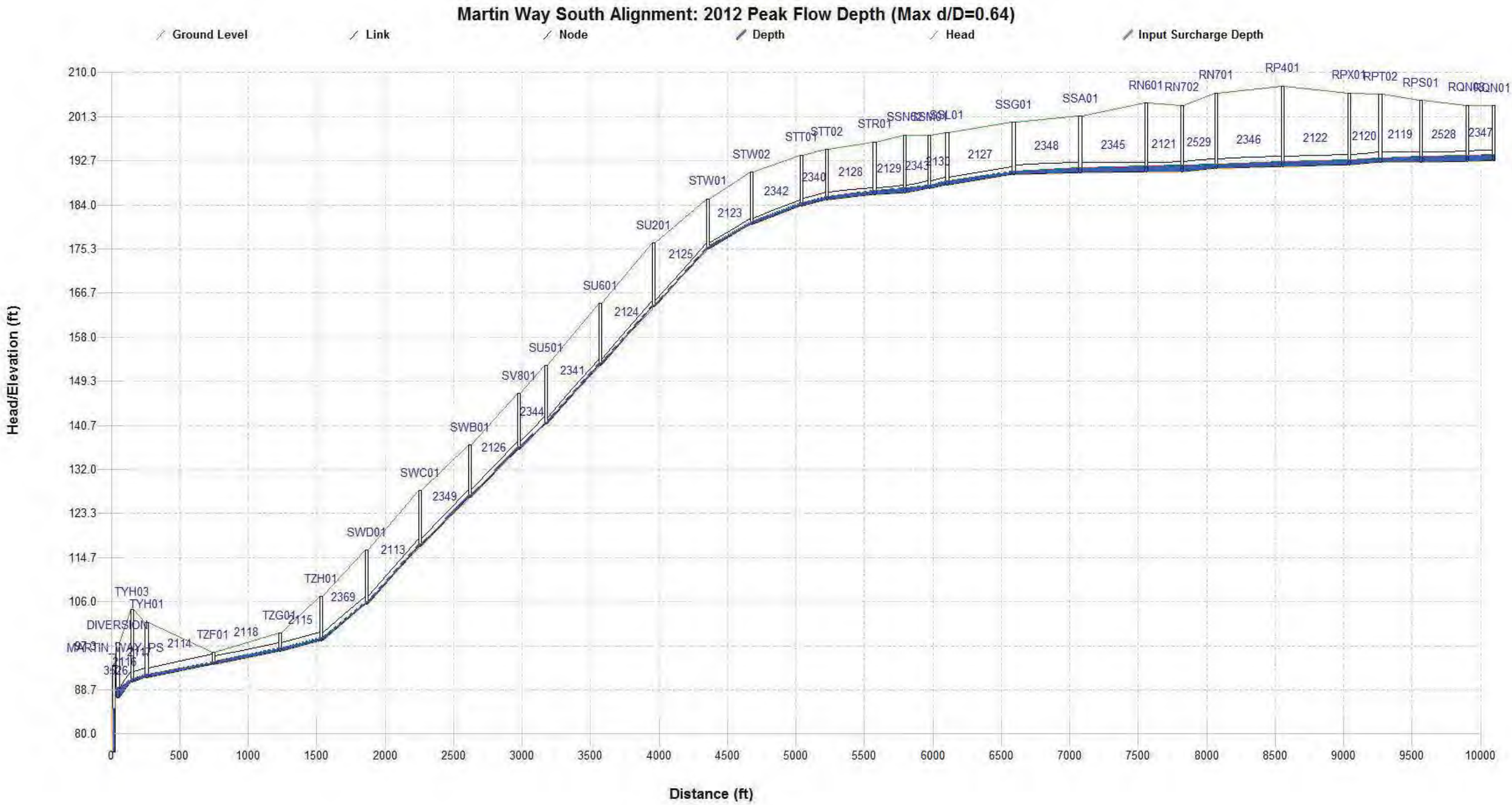

Desmond Alignment: 2012 Peak Flow Depth
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
TYX01
TY601
T2E01
T2W01
T2U01
T2Y01
T2701
T2702
T2801
T7A01
T8D01
T8N02
T8N03
T8W01
T8401
WAD01
WAN02
WAW01
WA401
TYG01
TYK01
TYU01
TYH03
TYH02
DIVERSION
4037
4046
4045
4044
4042
4043
2116
4022
4023
4024
4025
4019
4020
4021
4026
4025
4031
4032
4033
1606
4147
4152
4160
4140
4161
4162


Galaxy Alignment: 2012 Peak Flow Depth (Max d/D=0.59)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
RQN01
RQE01
RK501
RK401
RKW01
RKV01
RKM03
RKM01
RG502
RG501
RG402
RGW01
805
806
807
808
809
810
230
231
234
667
674
673
675
676
3938
3907
3906
3926
3925
3922
3920
1608
3895
3894
3896
2949
2771
2775
2948
2772
2773
2867
2952
3464
2866
2878
2951
2882
2881
2767
2950


Galaxy Alignment d/D: 2012 Peak Day
2767 2881 2950 2882 2878 2951 2866 2952 3464 2867 2772 2773 2771 2775 2948 2949 3896 3894 3895 1608 3920 3922 3906 3925 3926 3907 3938
d/D
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
48
52
56
60
64
68
72
Elapsed Time (hours) [Starts @01/21/2012, 00:01:58]

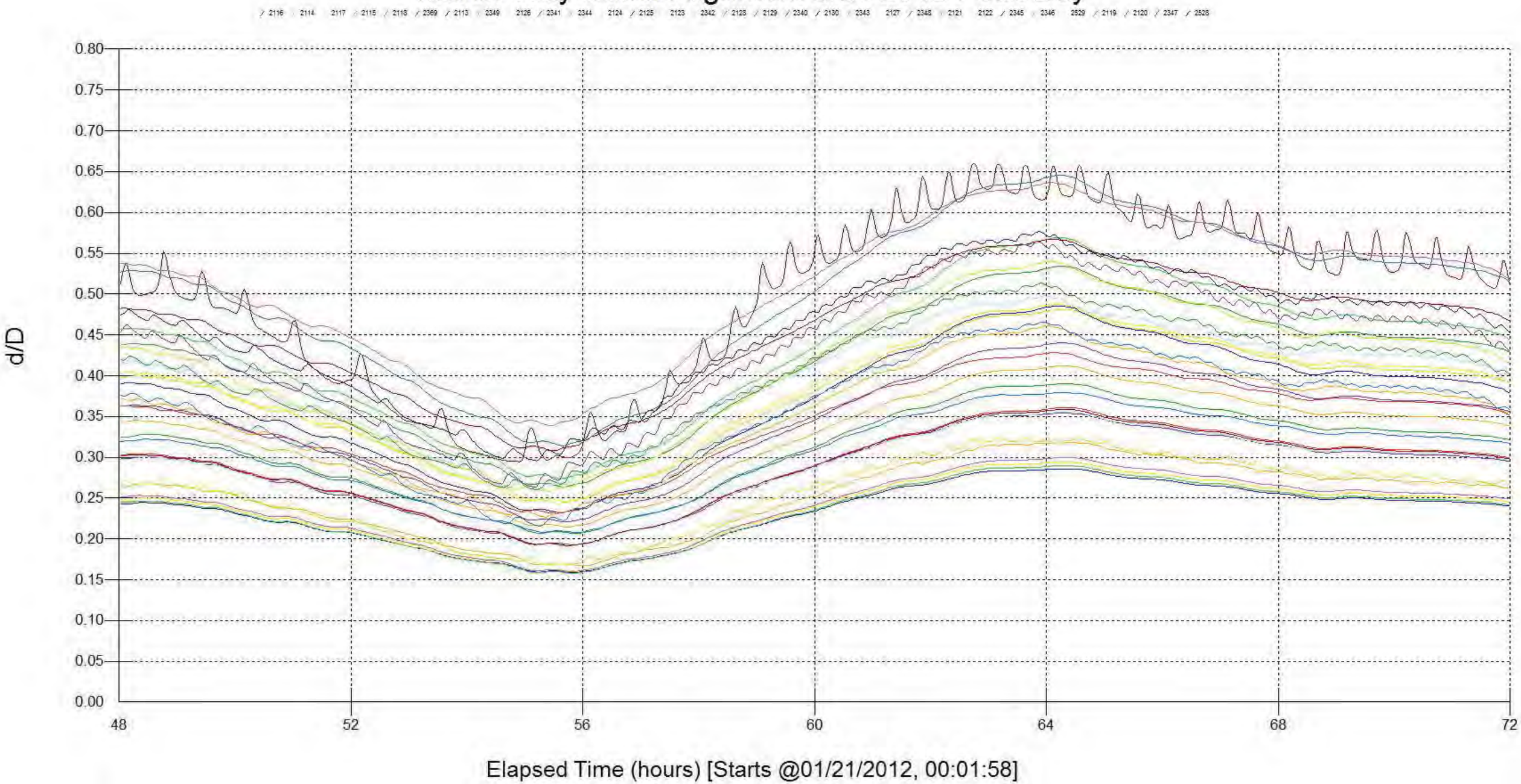


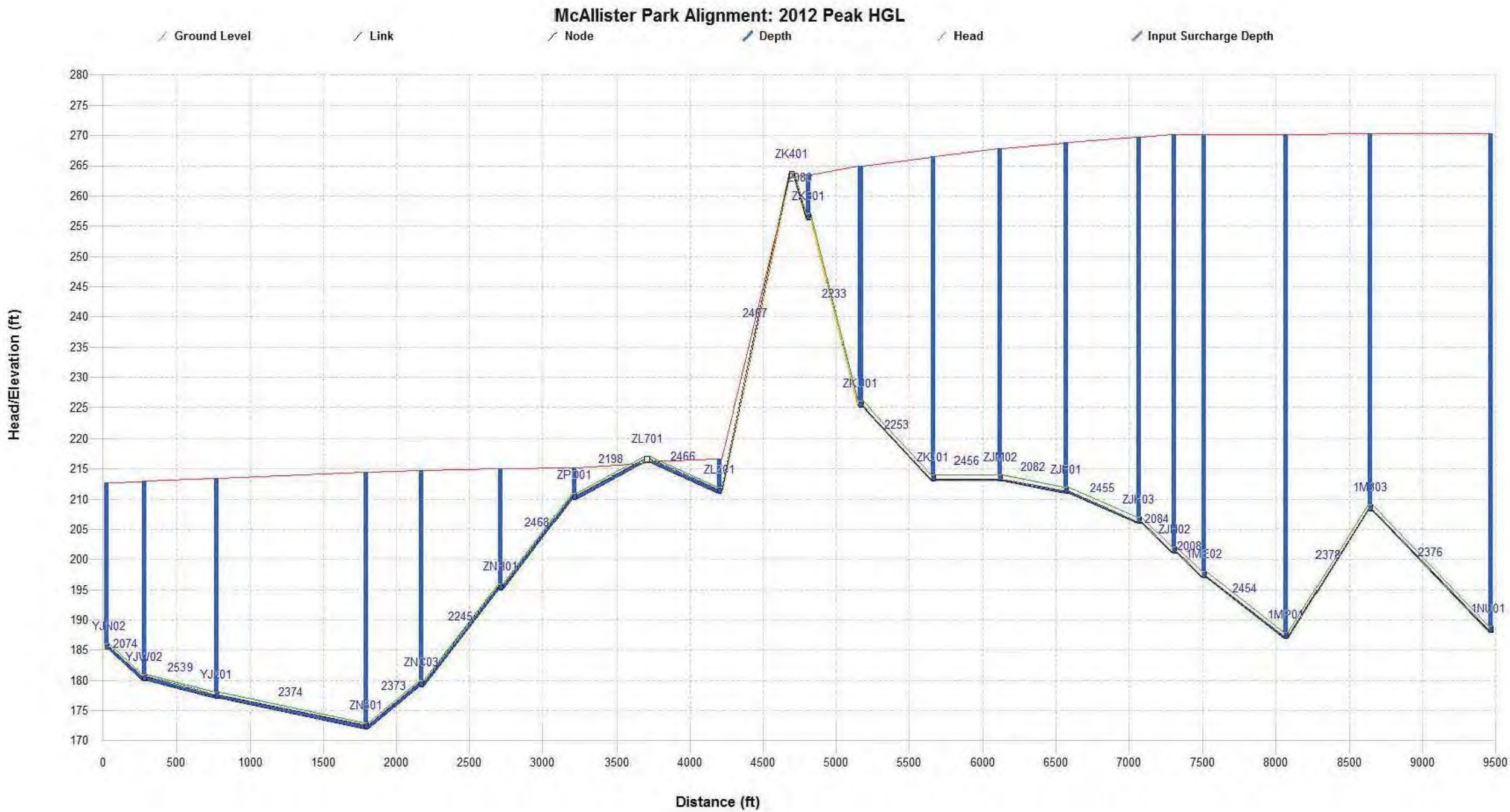
Martin Way South Pump Station Alignment: 2012 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
MH_USX02
MH_UXS01
MH_UXJ01
MH_UU801
MH_UT501
3499
3498
3501
3497
3496
3495
3494
3525
3465



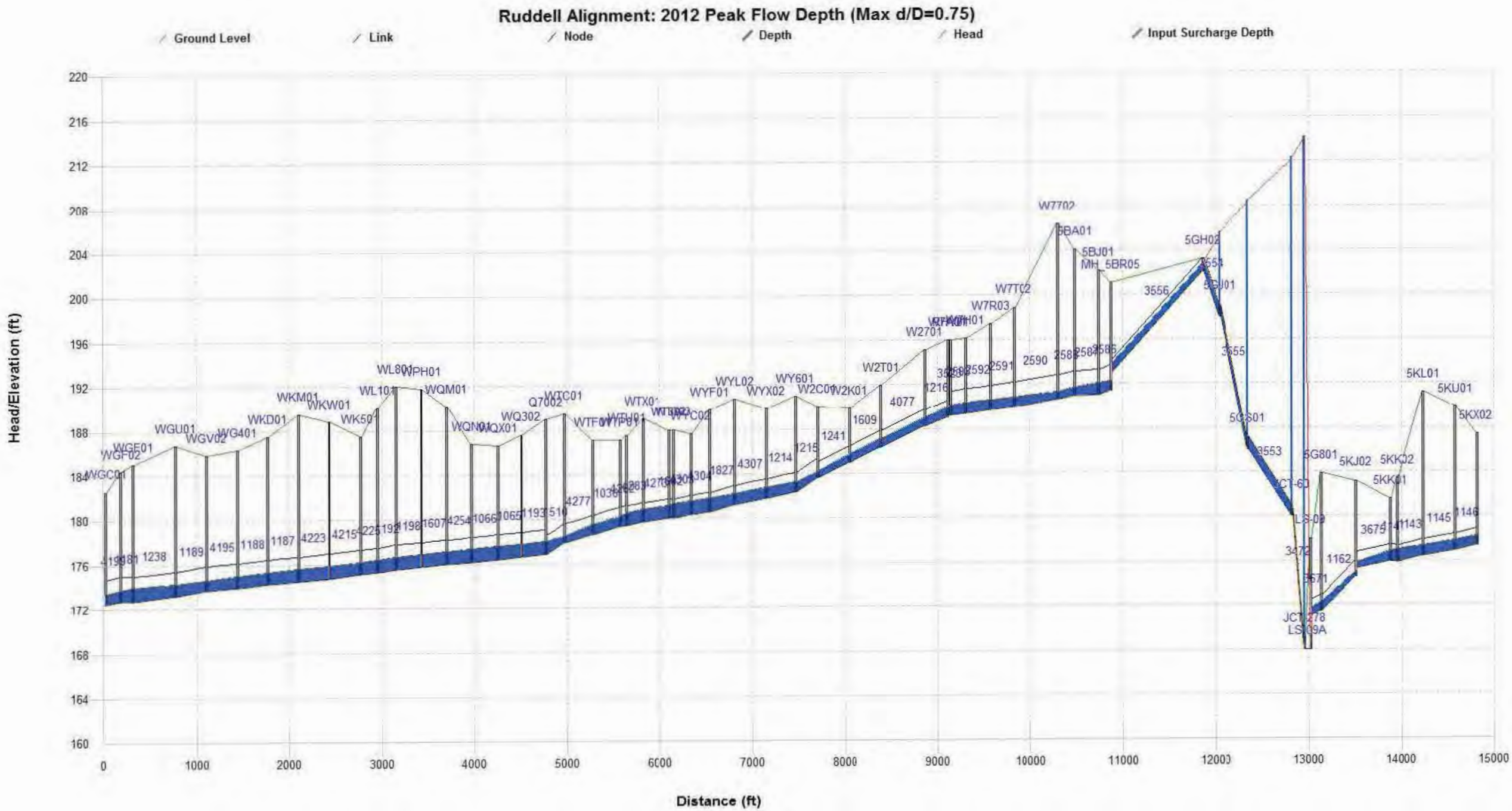
Martin Way South Alignment: 2012 Peak Flow Depth (Max d/D=0.64)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
210.0
201.3
192.7
184.0
175.3
166.7
158.0
149.3
140.7
132.0
123.3
114.7
106.0
88.7
80.0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000
TYH03
TYH01
DIVERSION
MARTIN_WAY_PS
TZF01
2114
2118
TZG01
2115
TZH01
2369
SWD01
2113
SWC01
2349
SWB01
2126
SV801
2344
SU501
2341
SU601
2124
SU201
2125
STW01
2123
STW02
2342
STT01
2340
STT02
2128
STR01
2129
2127
SSG01
2348
SSA01
2345
RN601
2121
RN702
2529
RN701
2346
RP401
2122
RPX01
2120
RPT02
2119
RPS01
2528
2347

# Martin Way South Alignment d/D: 2012 Peak Day

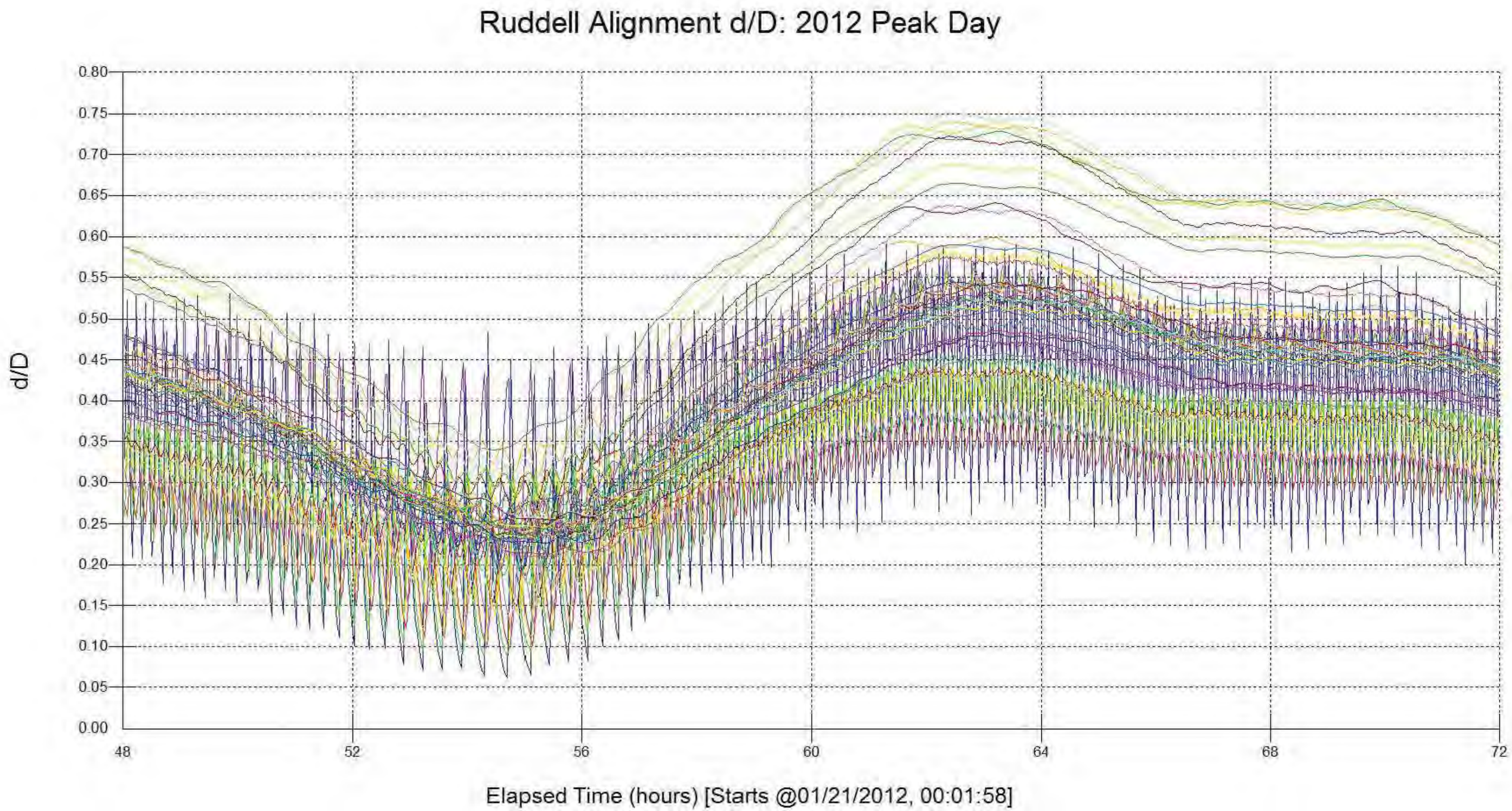




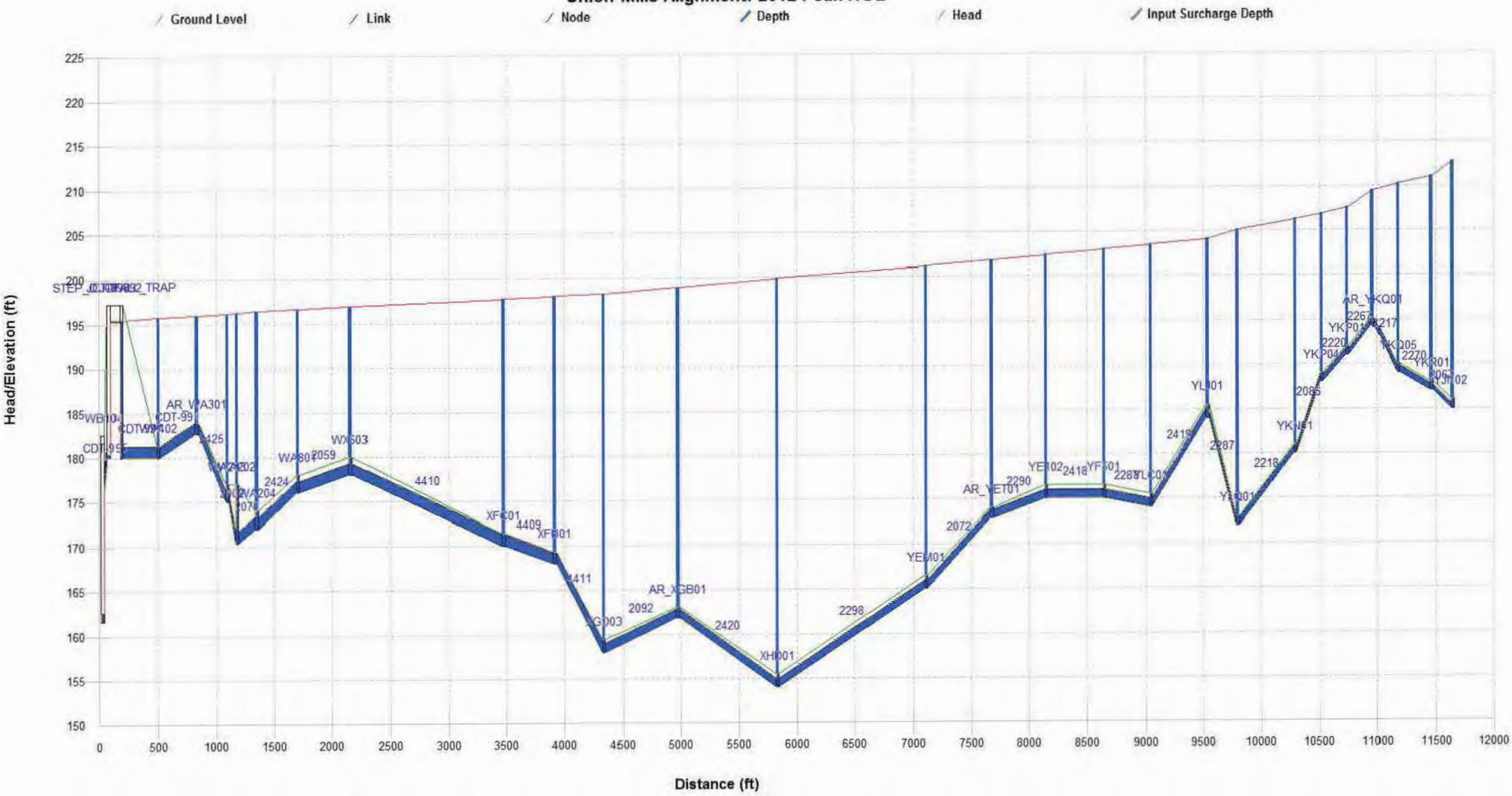
McAllister Park Alignment: 2012 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
ZK401
2233
2253
2456
2082
2455
2084
2454
2378
2376
ZL701
2466
2198
2468
2245
2373
2374
2539
2074
YJW02
YJW01
ZNC03
ZNH01
ZPD01
ZJH02
ZJH03
1MP01
1NU01

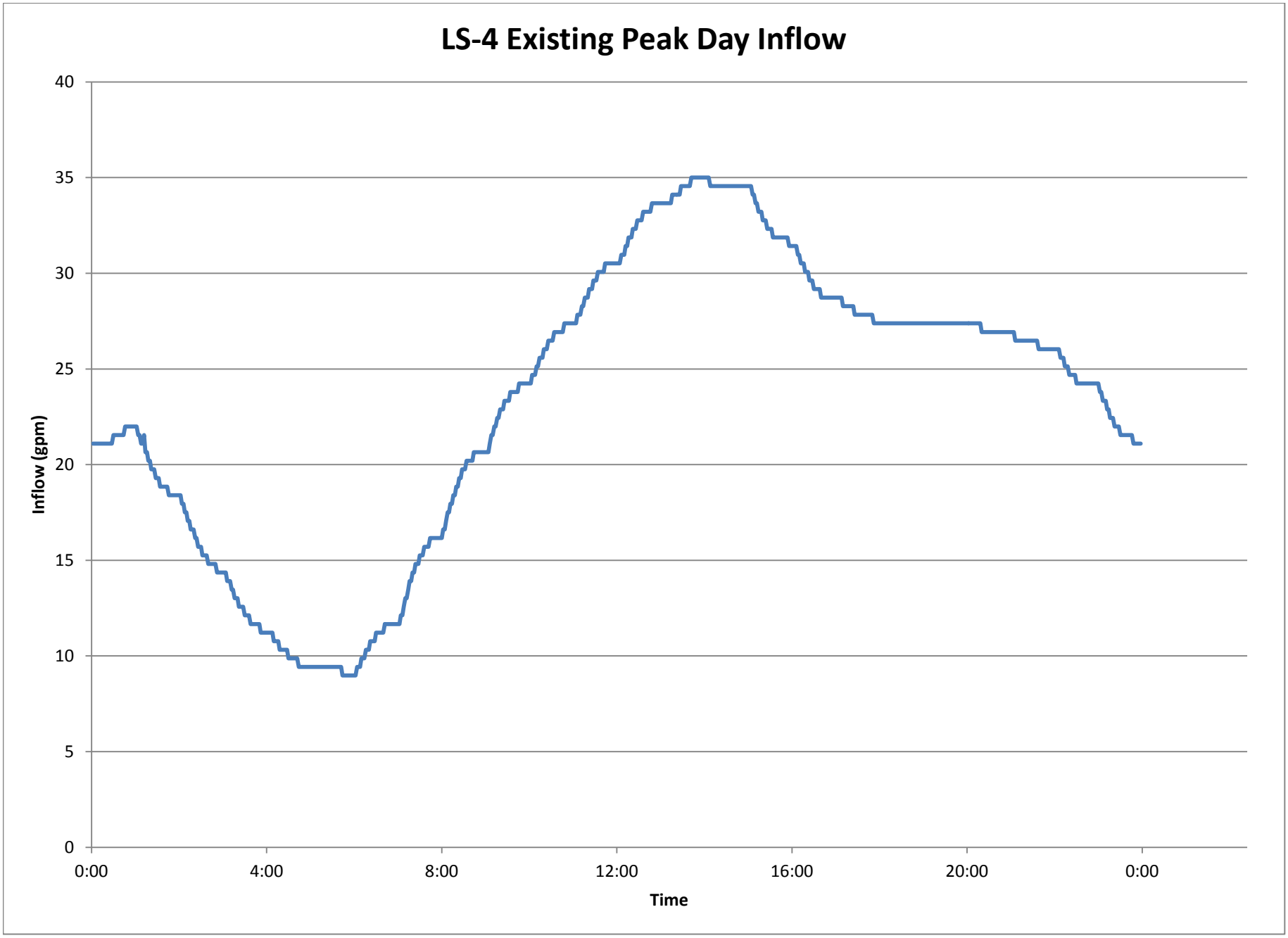


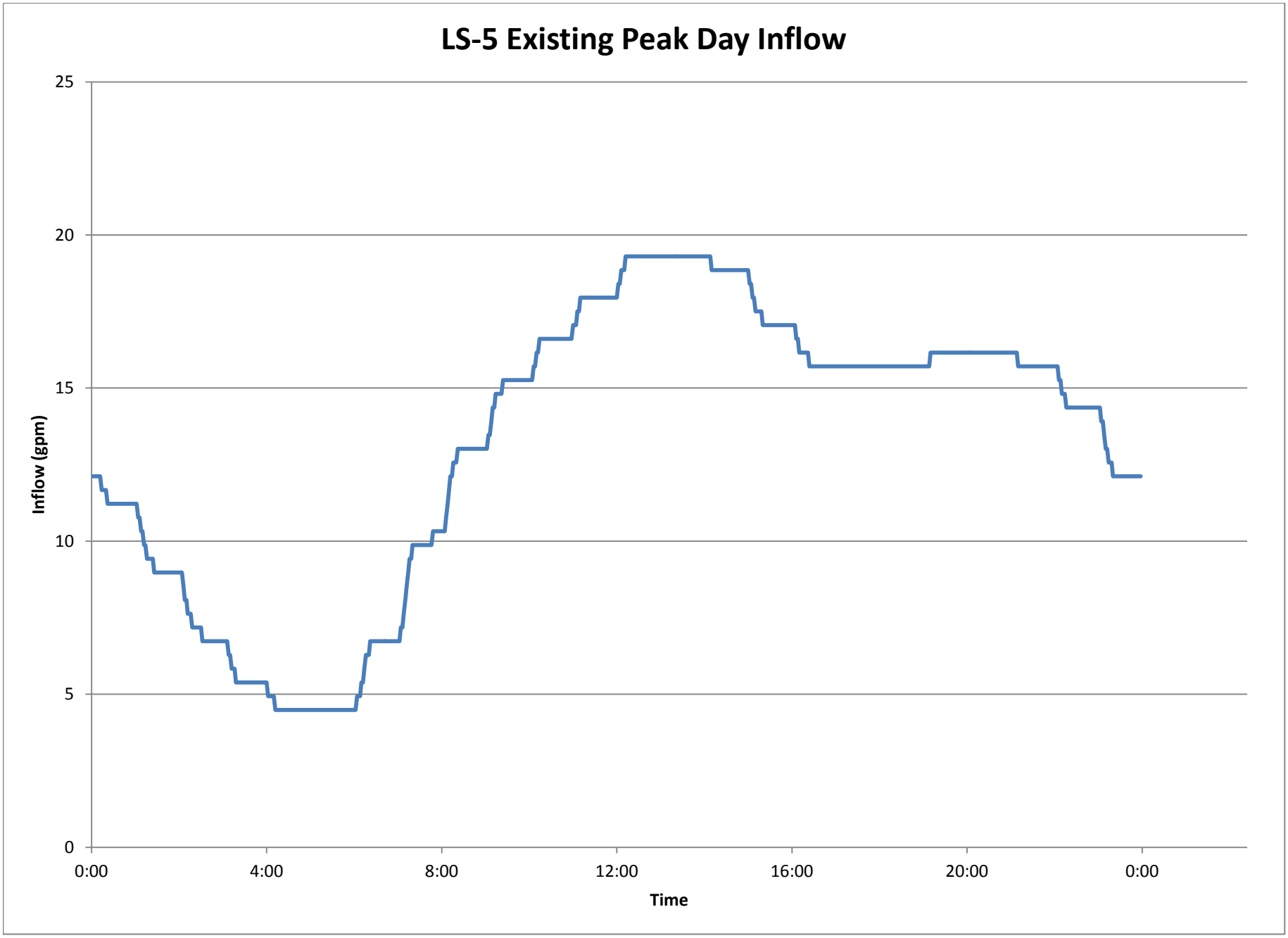
Ruddell Alignment: 2012 Peak Flow Depth (Max d/D=0.75)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

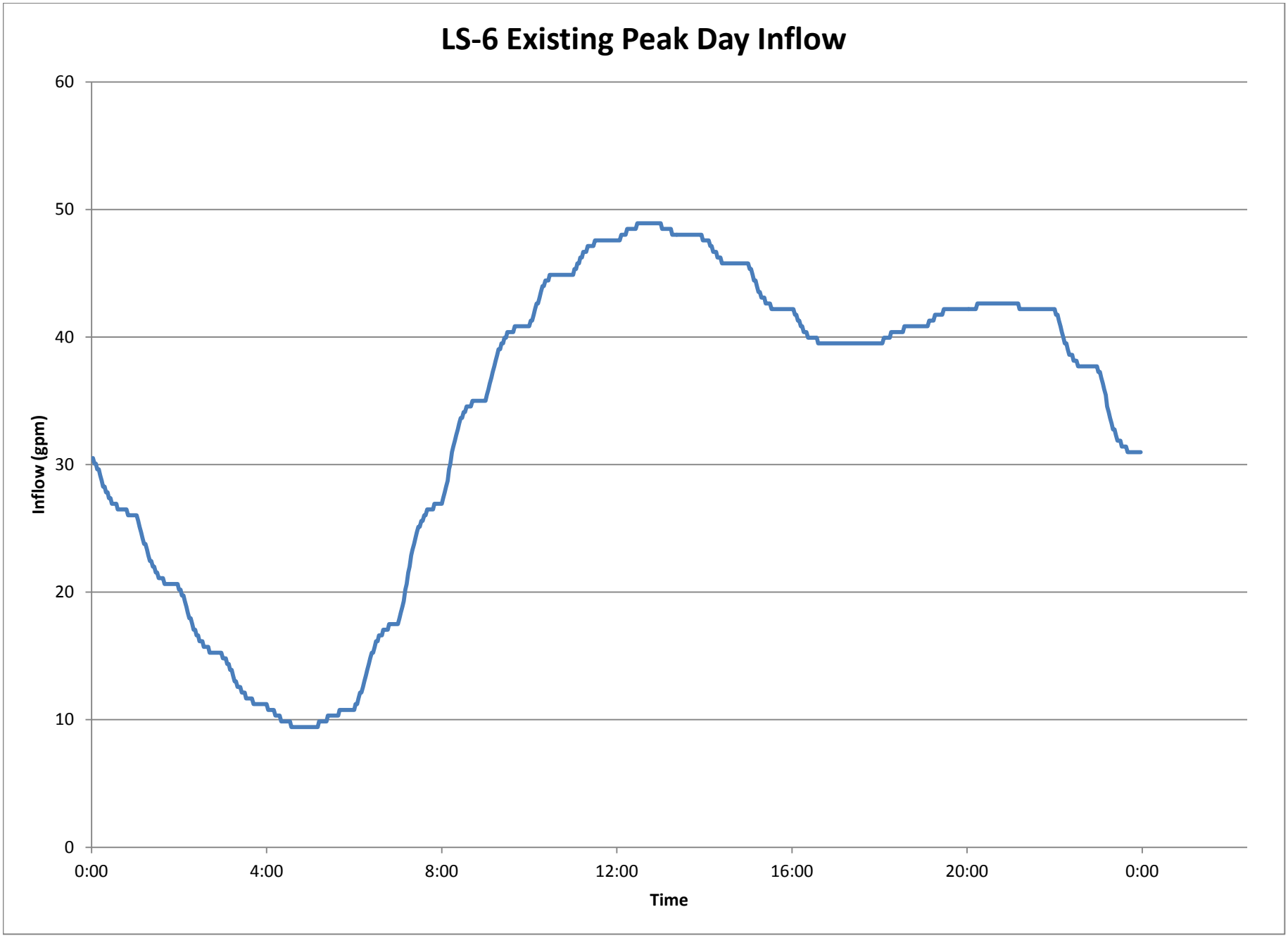

Ruddell Alignment d/D: 2012 Peak Day
d/D
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
48
52
56
60
64
68
72
Elapsed Time (hours) [Starts @01/21/2012, 00:01:58]

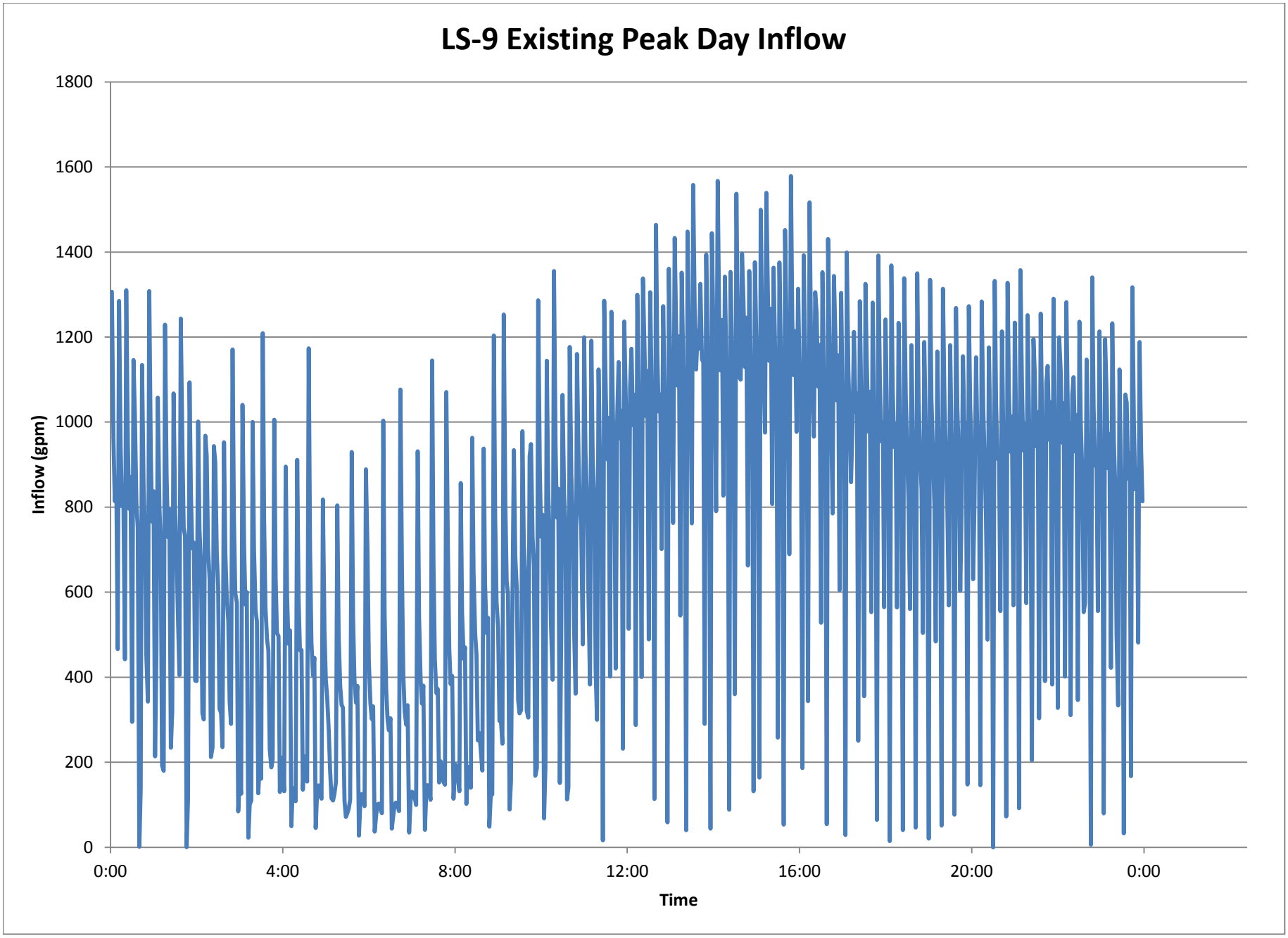
# Union Mills Alignment: 2012 Peak HGL

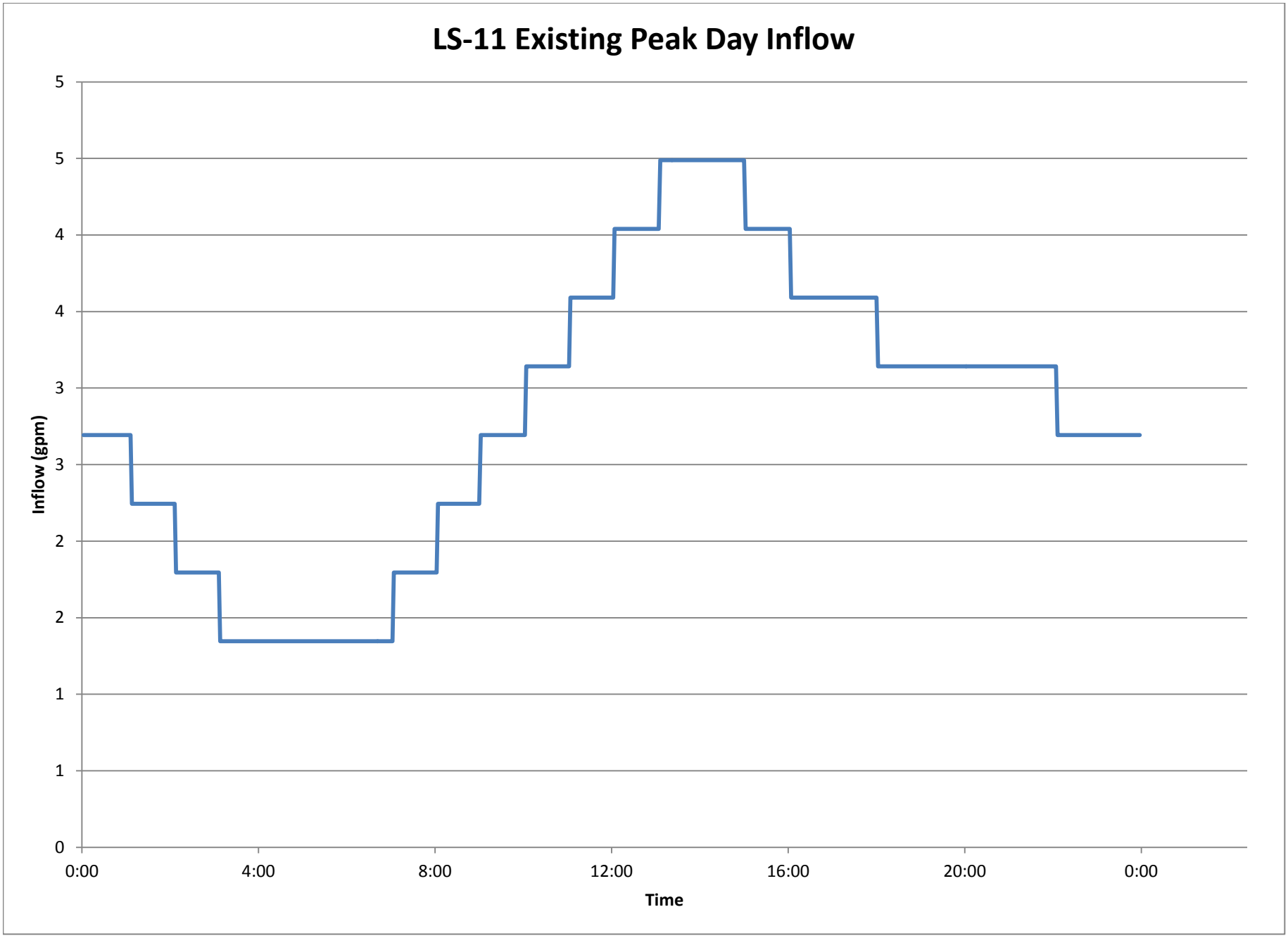


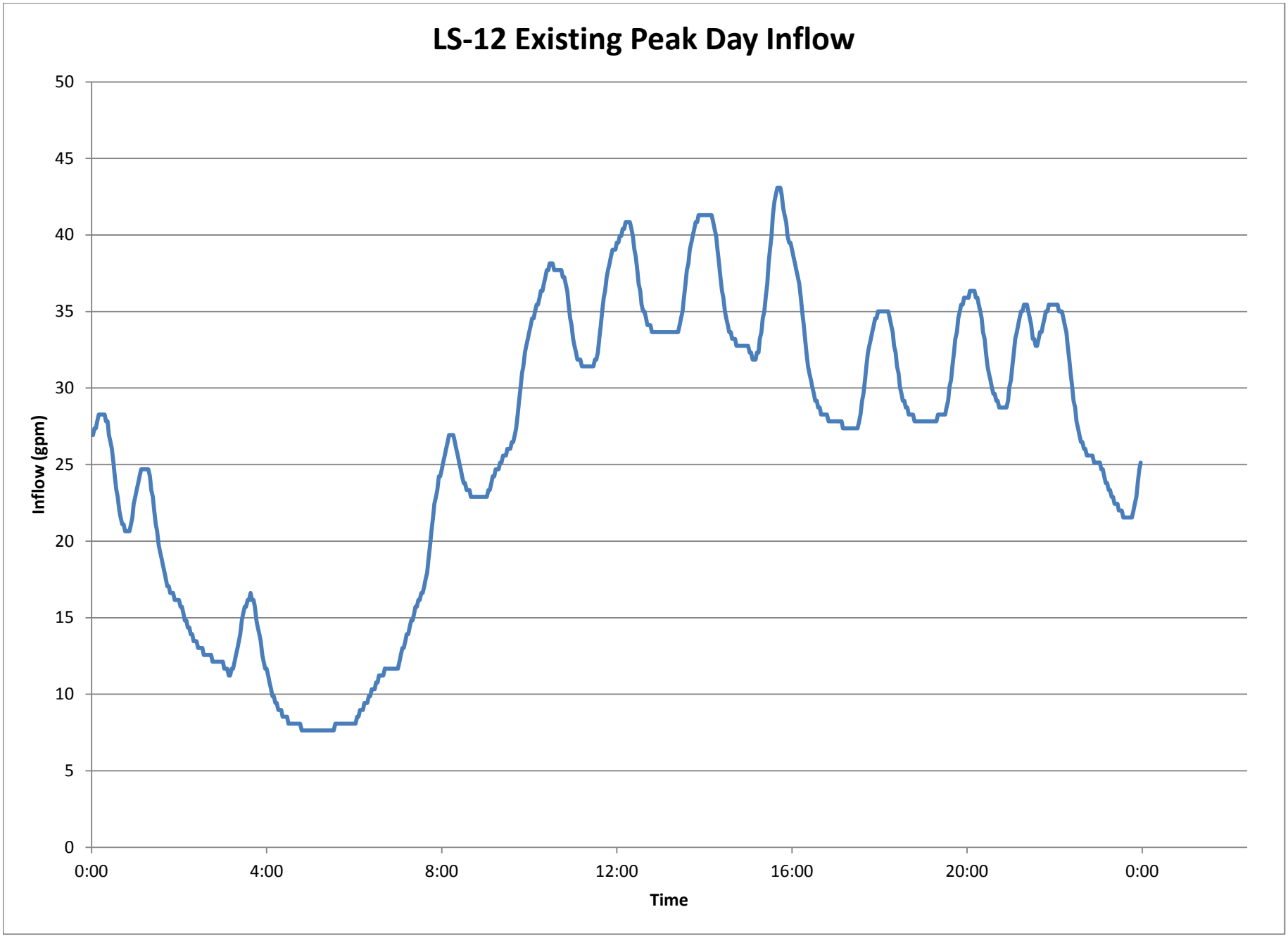

LS-4 Existing Peak Day Inflow
Inflow (gpm)
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

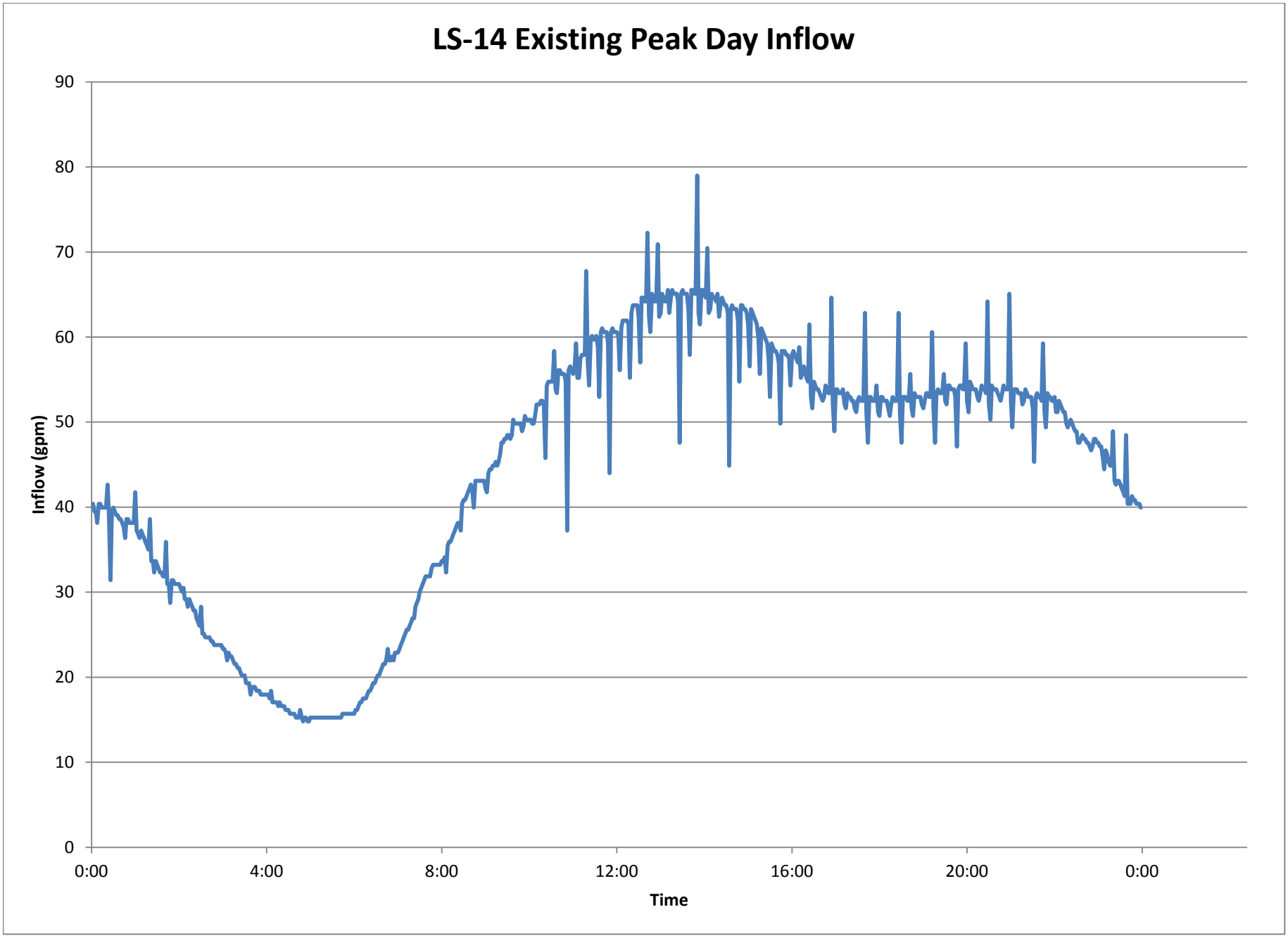

LS-5 Existing Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

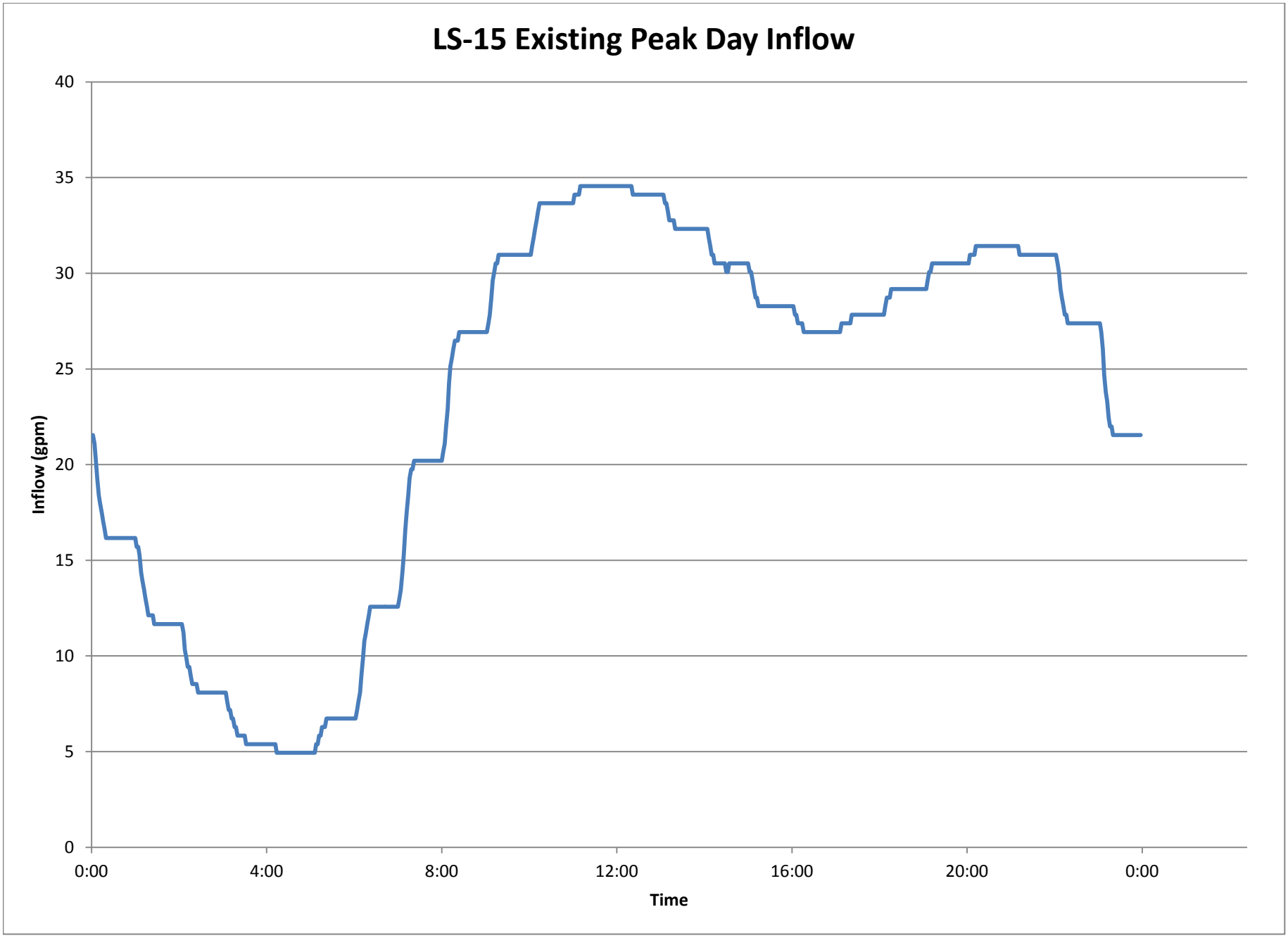

LS-6 Existing Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

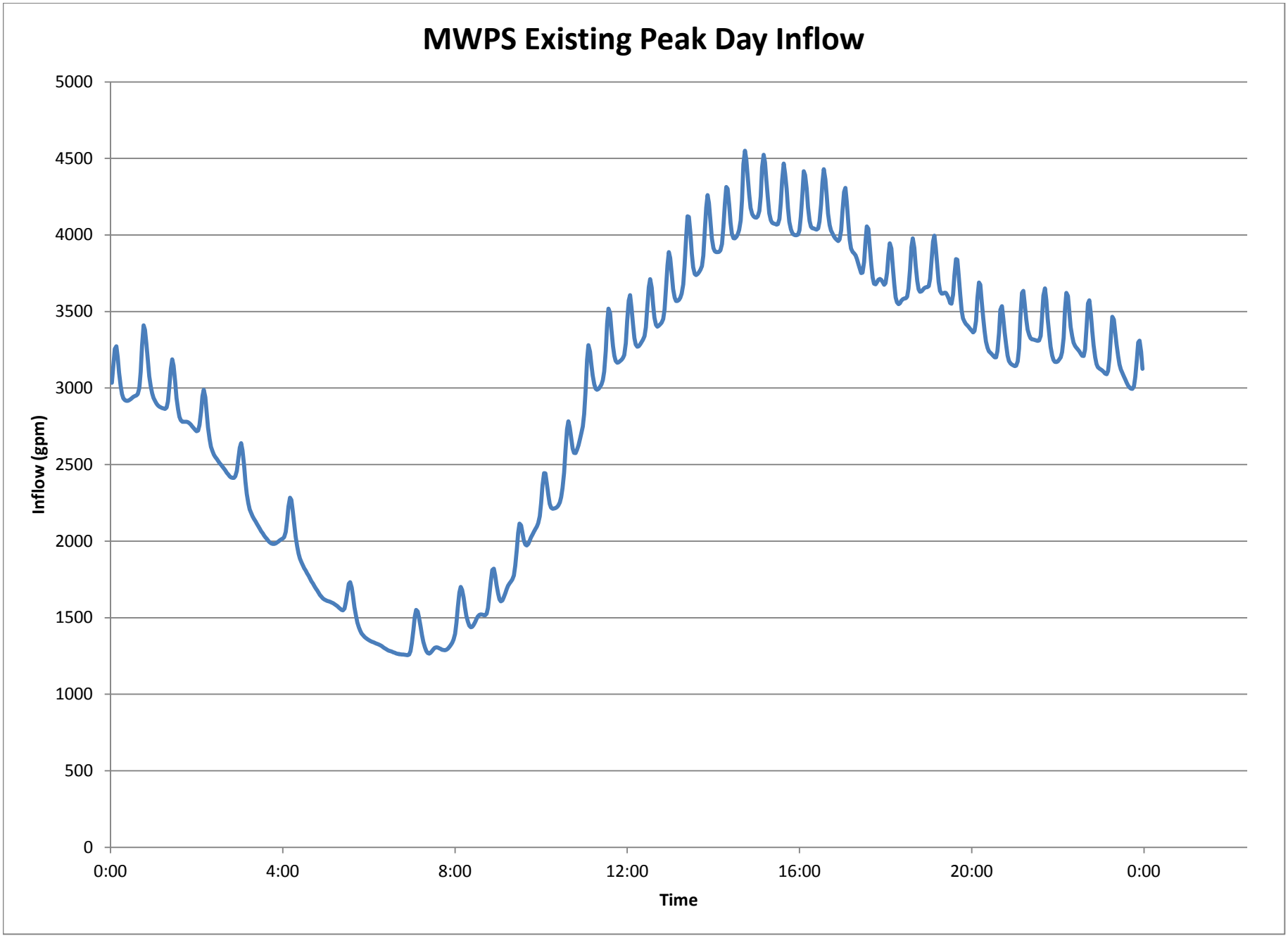

LS-9 Existing Peak Day Inflow
Inflow (gpm)
1800
1600
1400
1200
1000
800
600
400
200
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

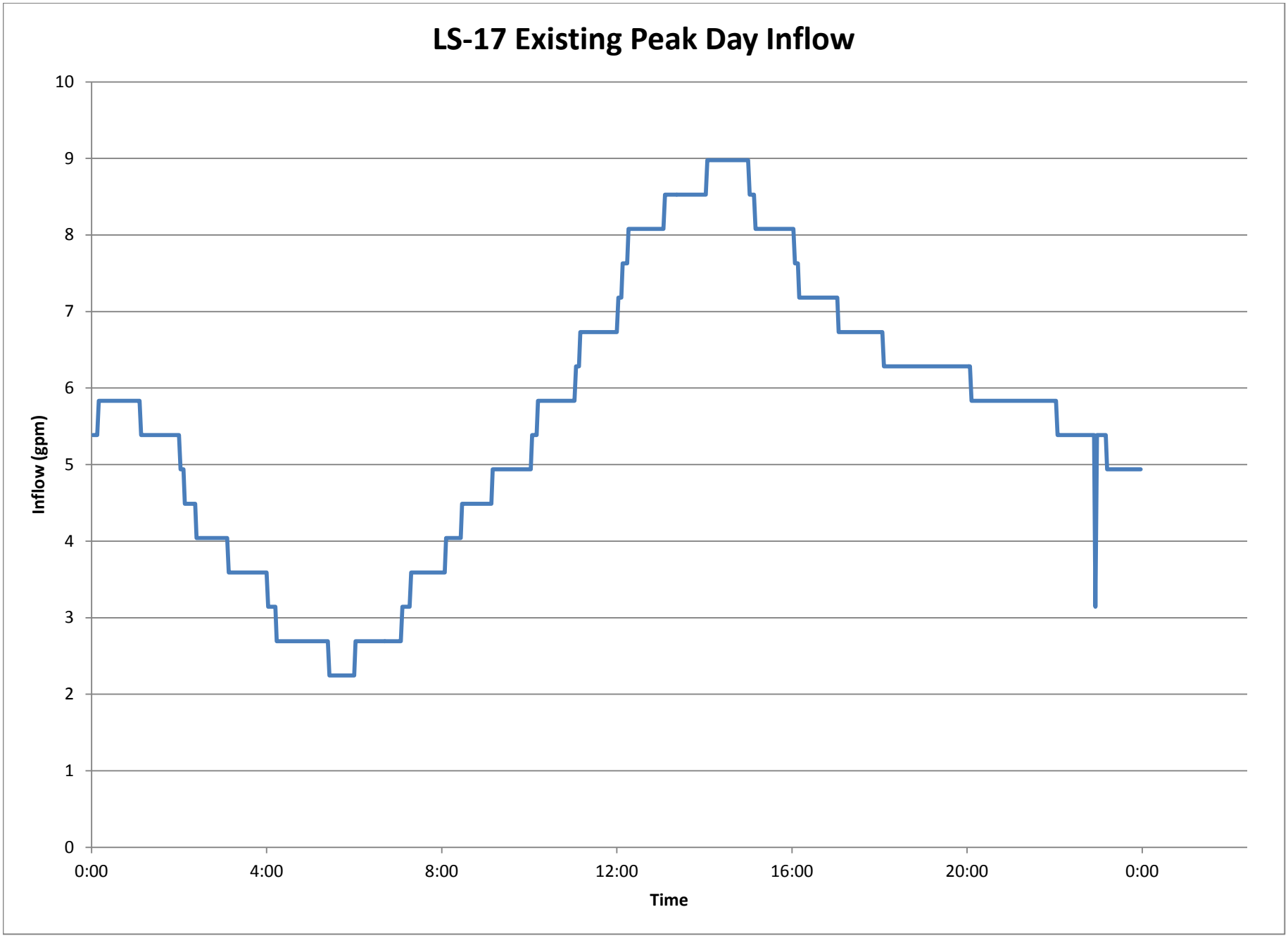

LS-11 Existing Peak Day Inflow
Inflow (gpm)
5
5
4
4
3
3
2
2
1
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

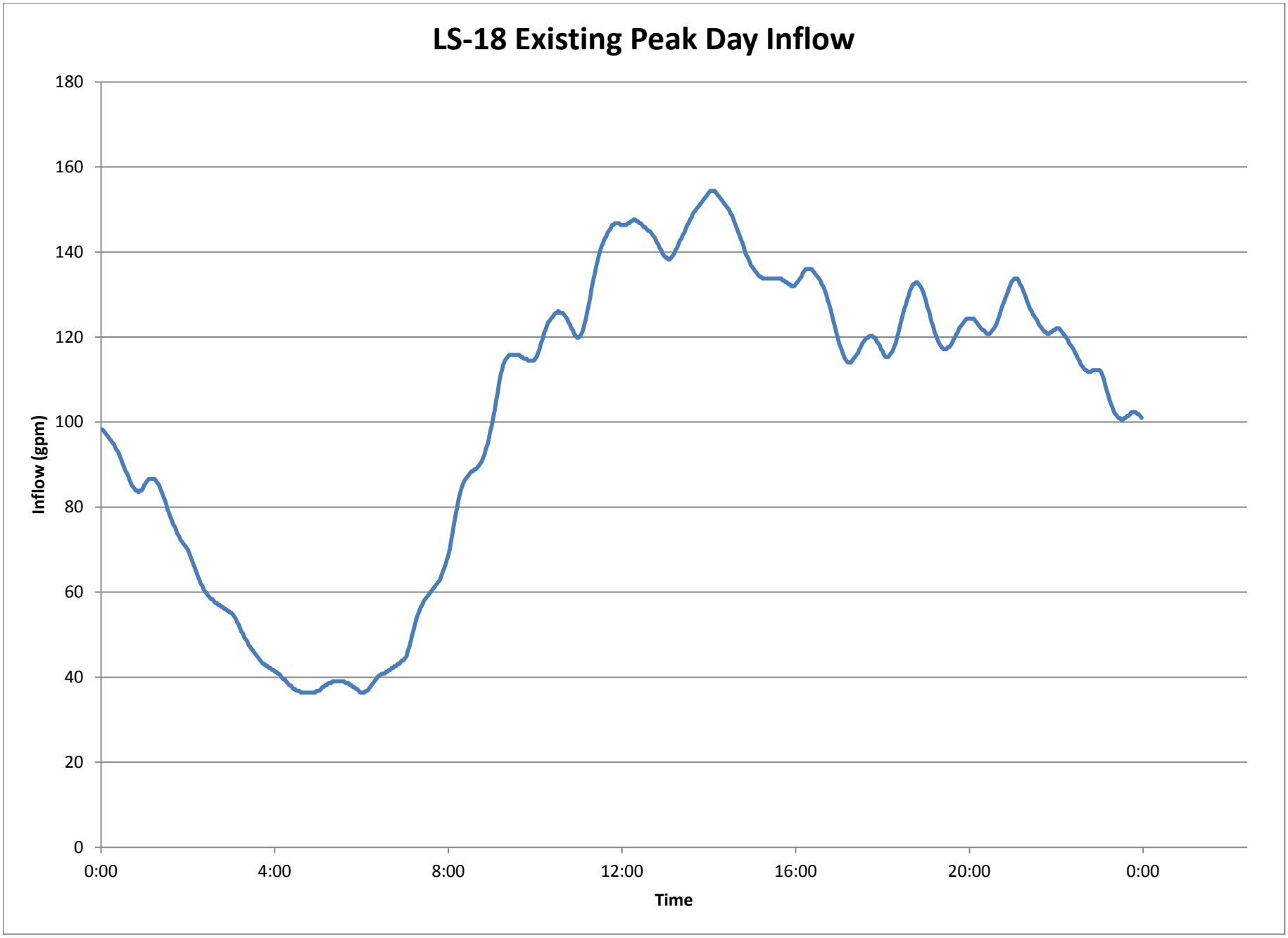

LS-12 Existing Peak Day Inflow
Inflow (gpm)
50
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

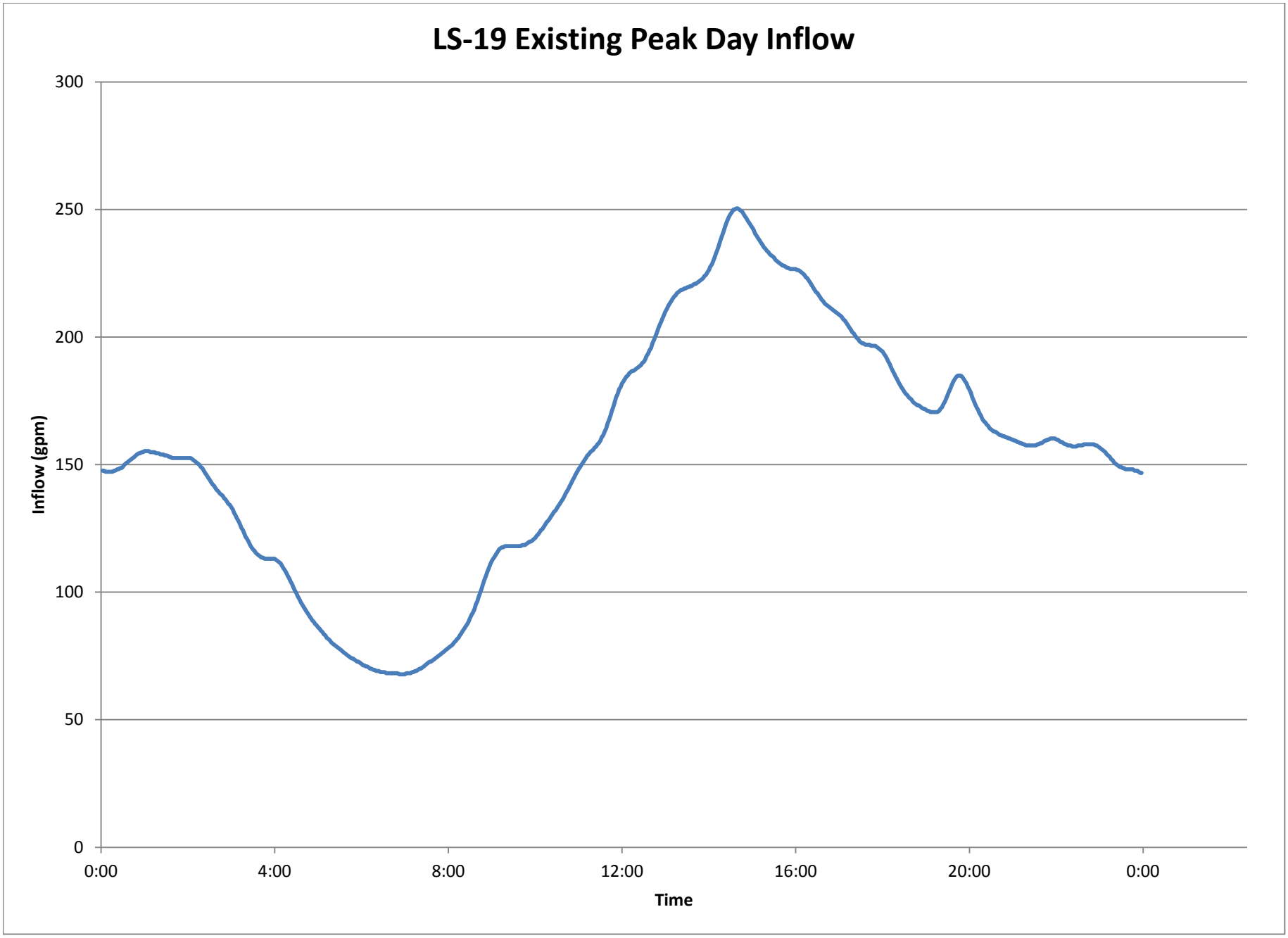

LS-14 Existing Peak Day Inflow
Inflow (gpm)
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

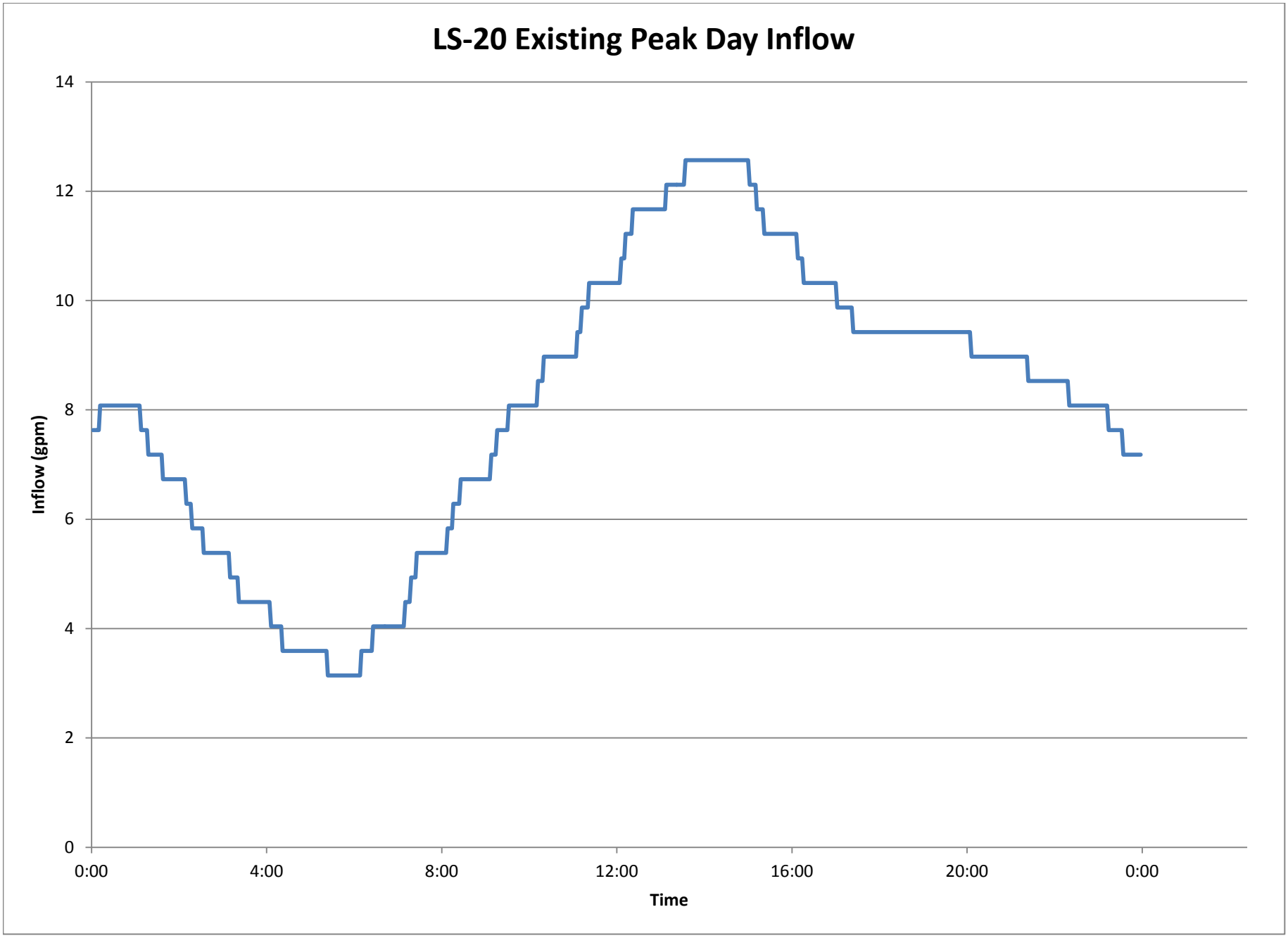

LS-15 Existing Peak Day Inflow
Inflow (gpm)
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

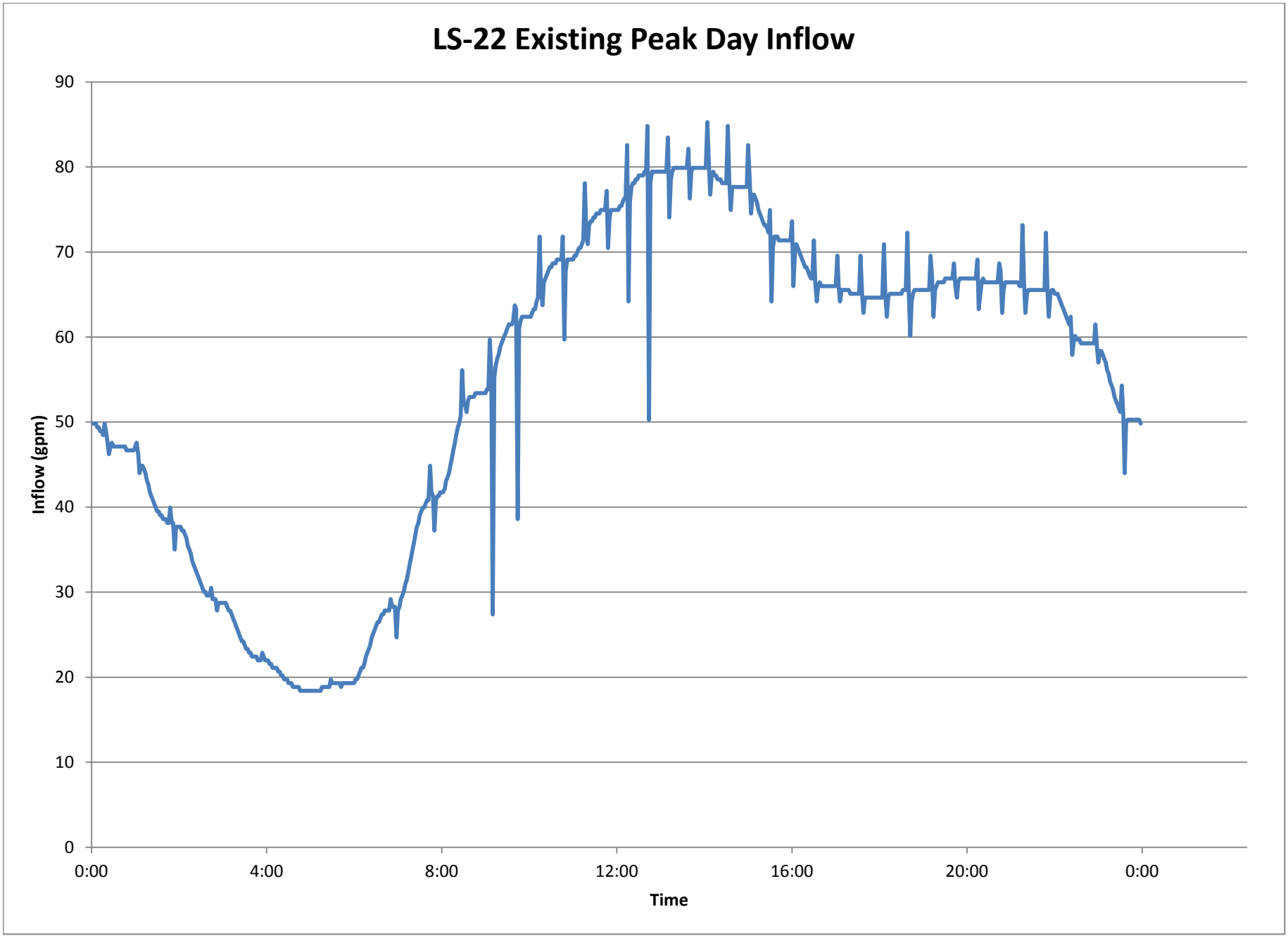

MWPS Existing Peak Day Inflow
Inflow (gpm)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

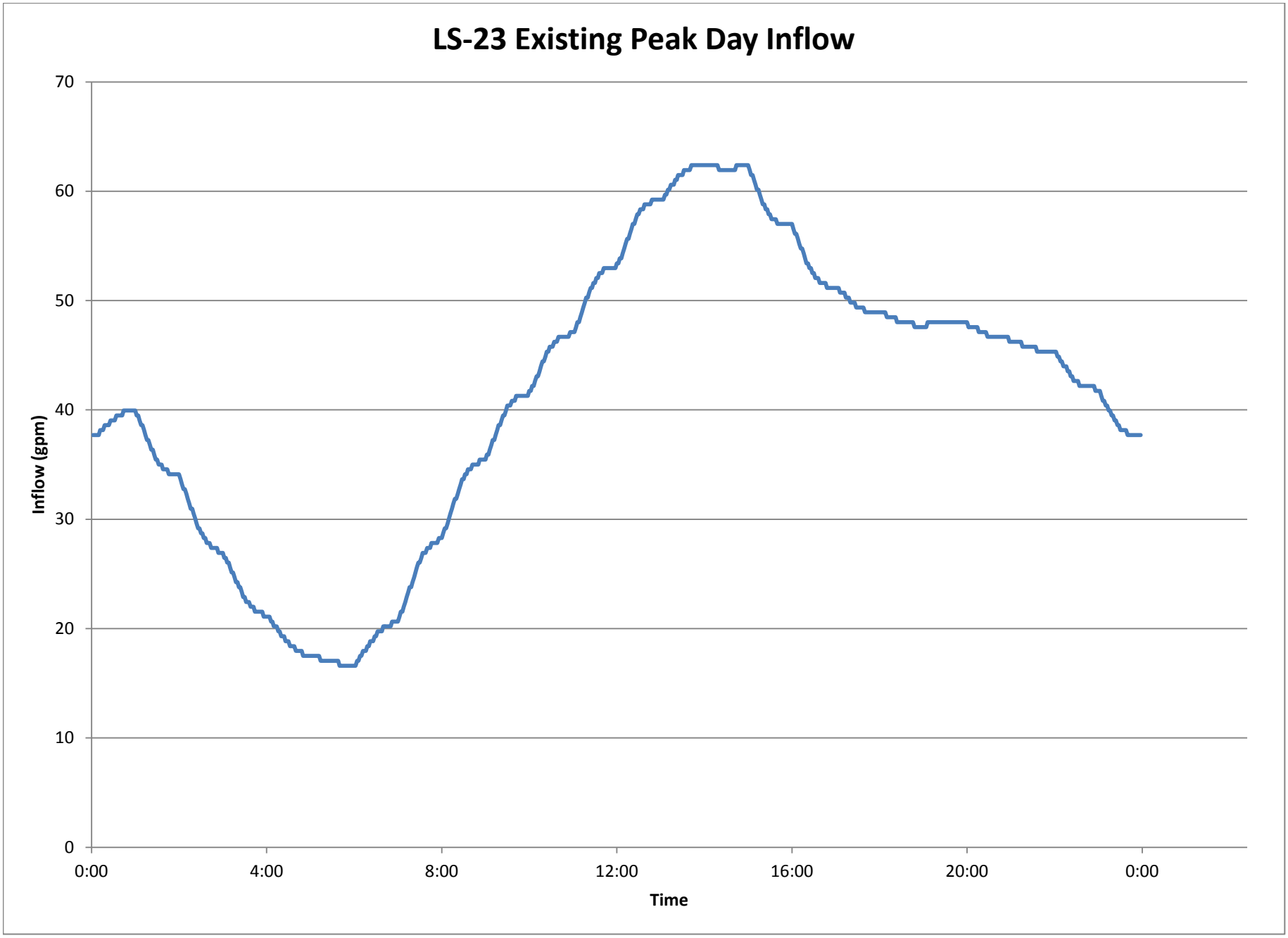

LS-17 Existing Peak Day Inflow
Inflow (gpm)
10
9
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

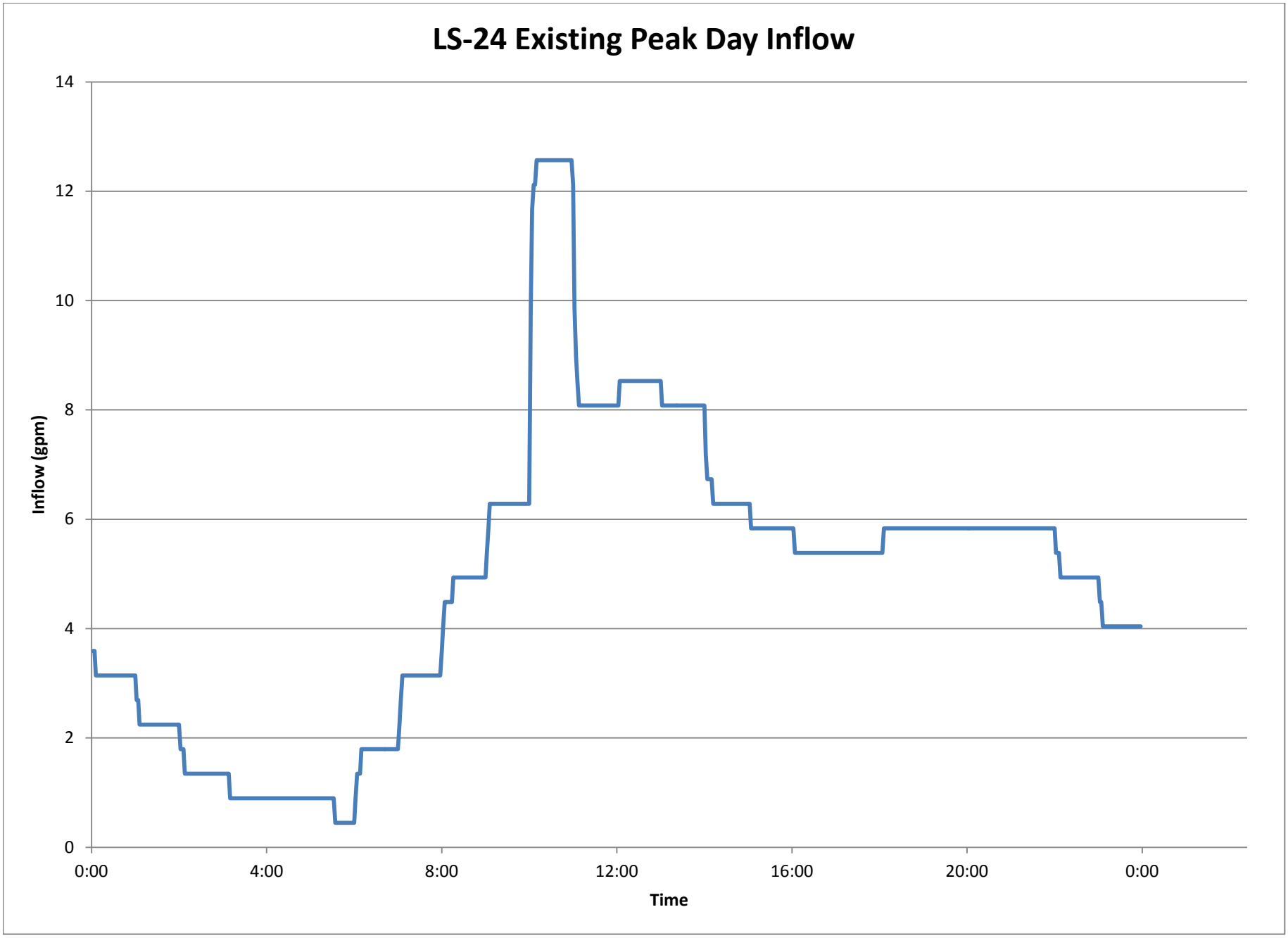

LS-18 Existing Peak Day Inflow
Inflow (gpm)
180
160
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

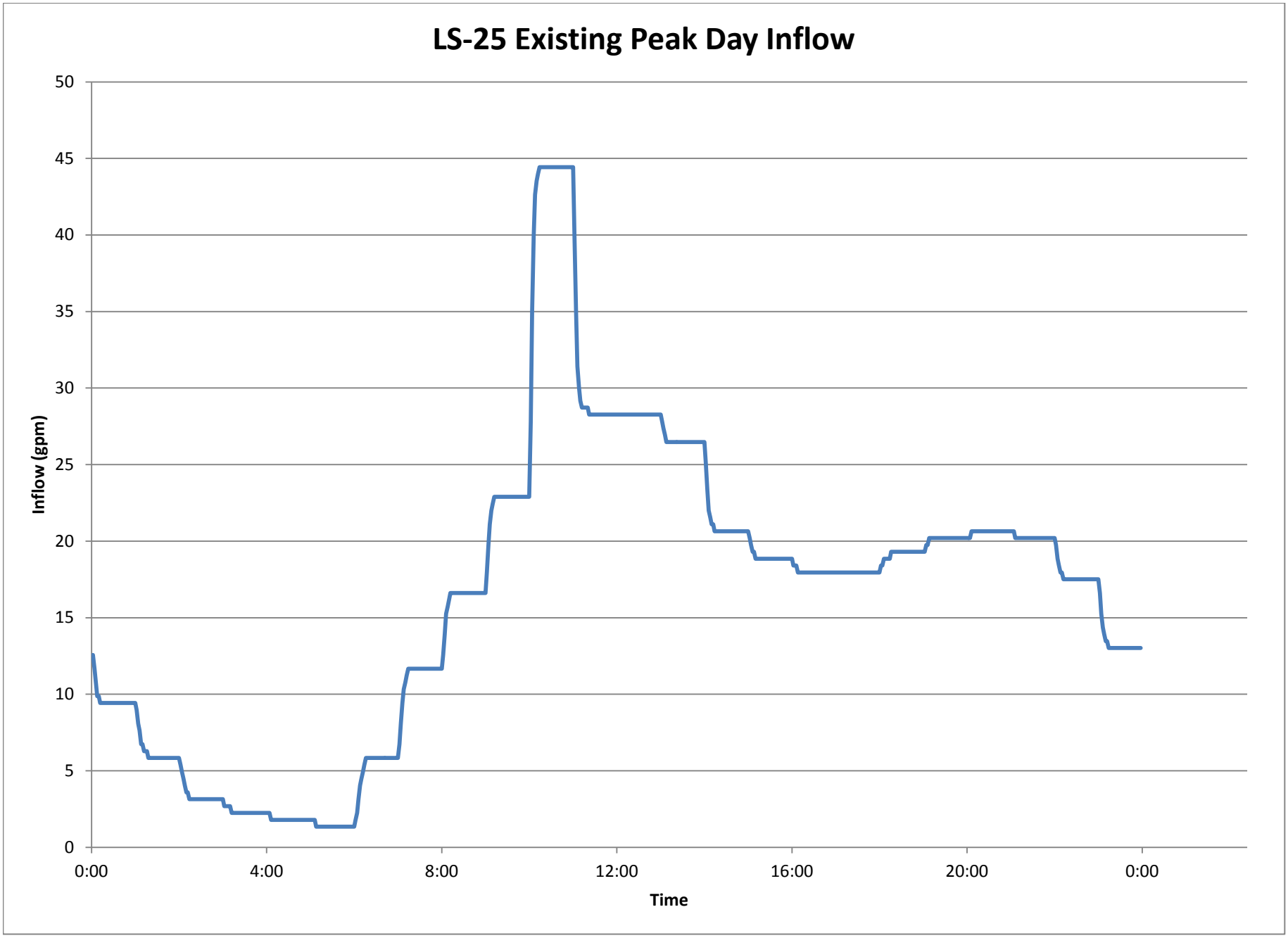

LS-19 Existing Peak Day Inflow
300
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

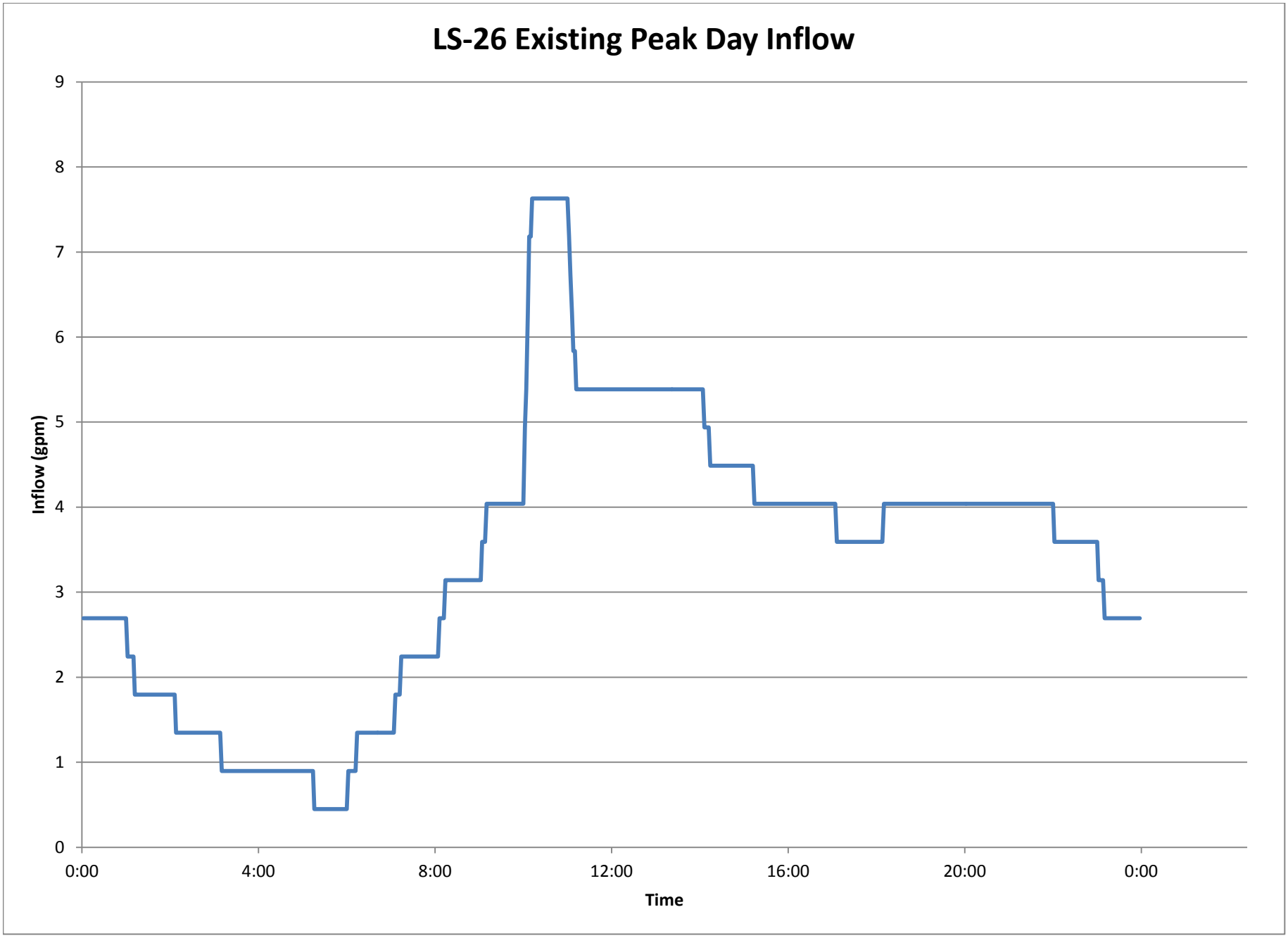

LS-20 Existing Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

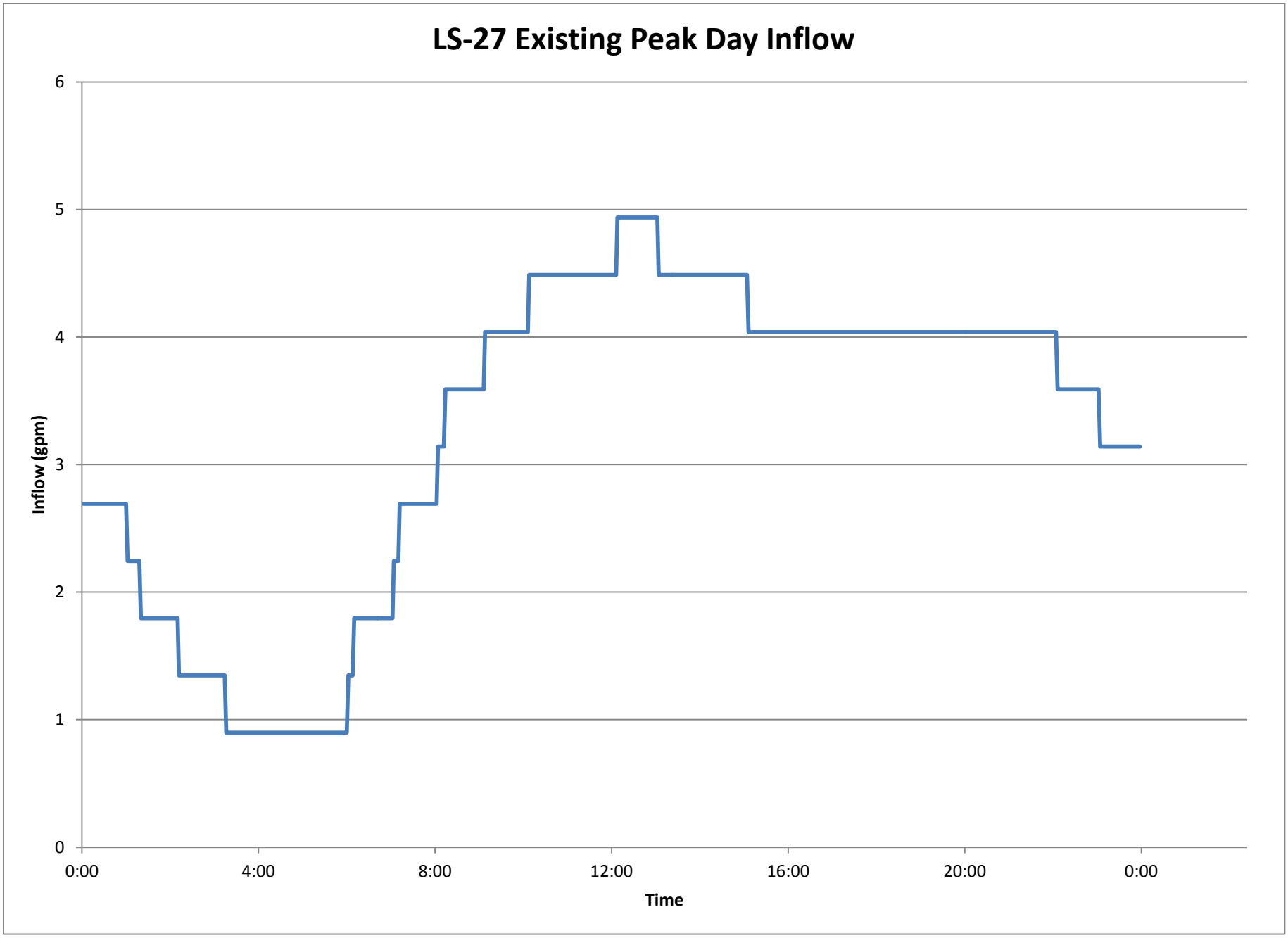

LS-22 Existing Peak Day Inflow
Inflow (gpm)
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

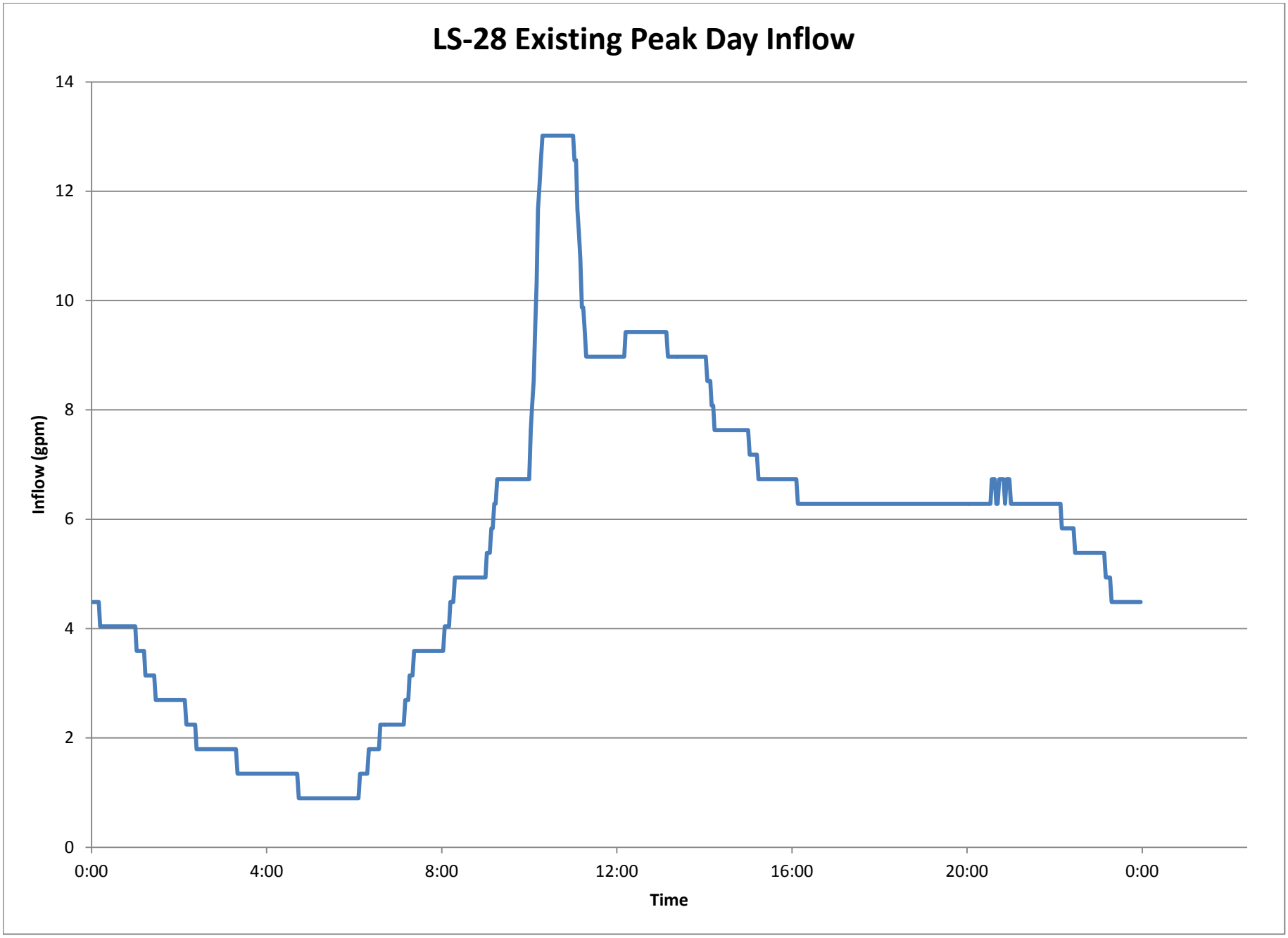

LS-23 Existing Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

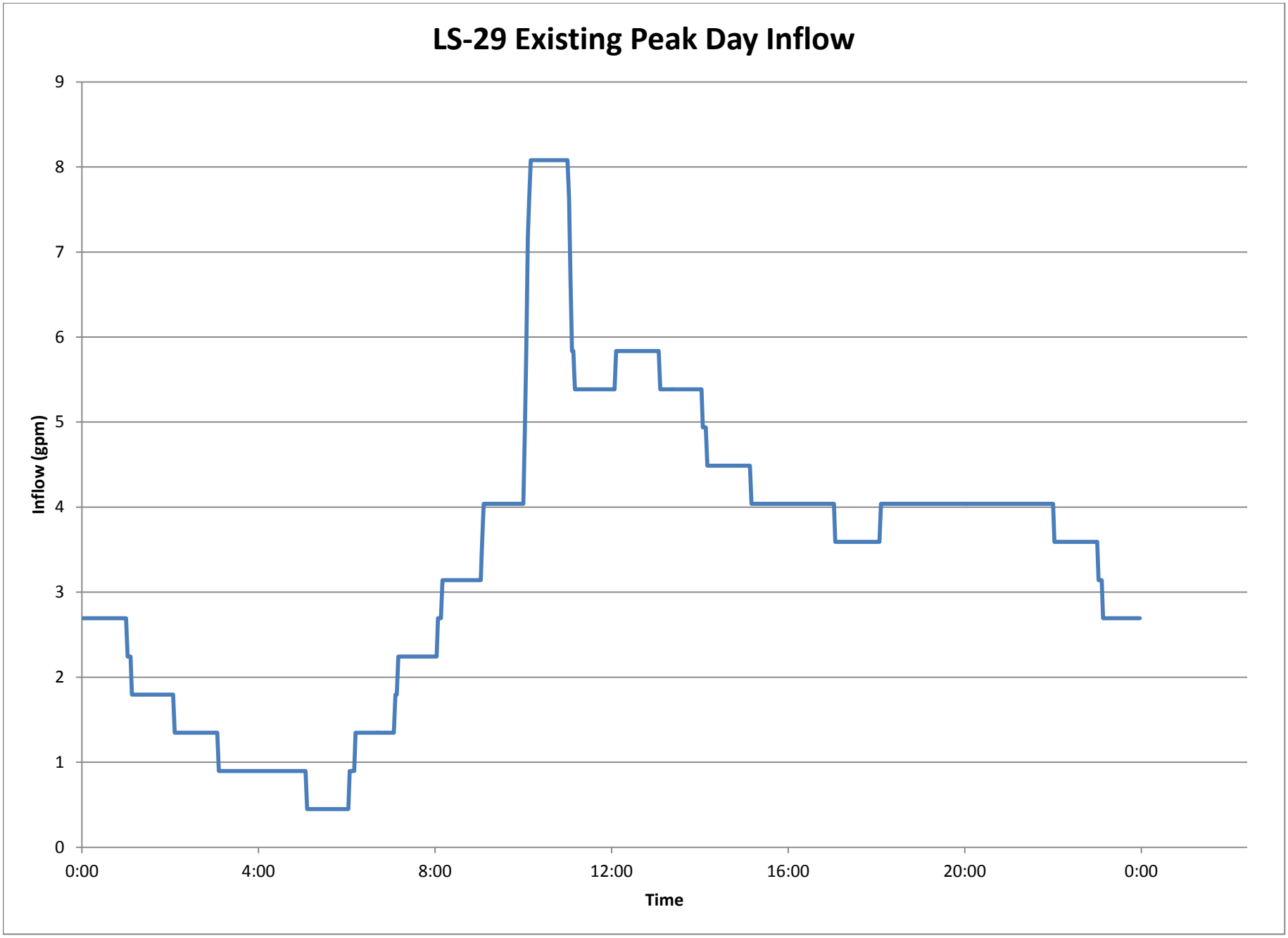

LS-24 Existing Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

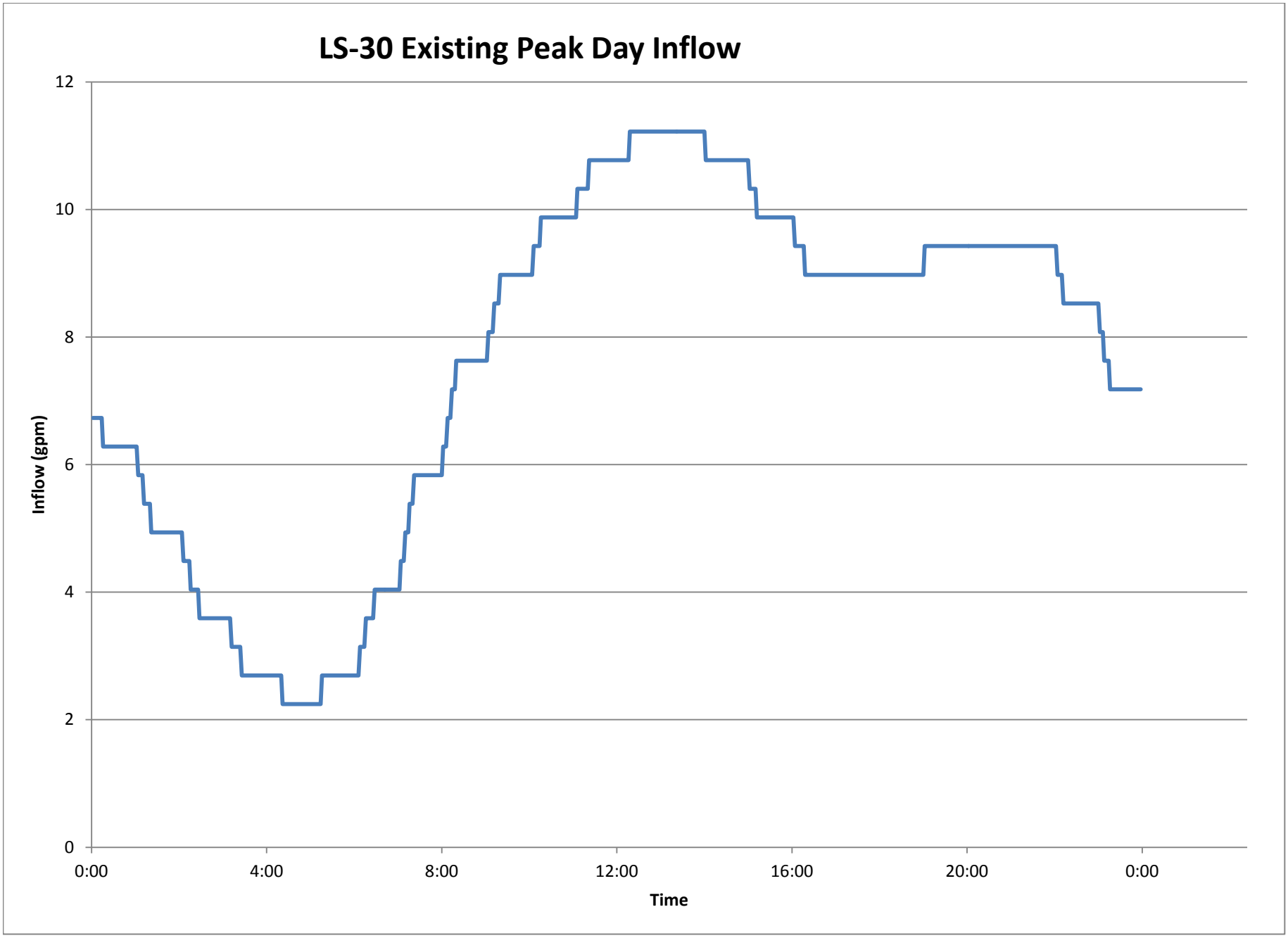

LS-25 Existing Peak Day Inflow
Inflow (gpm)
50
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

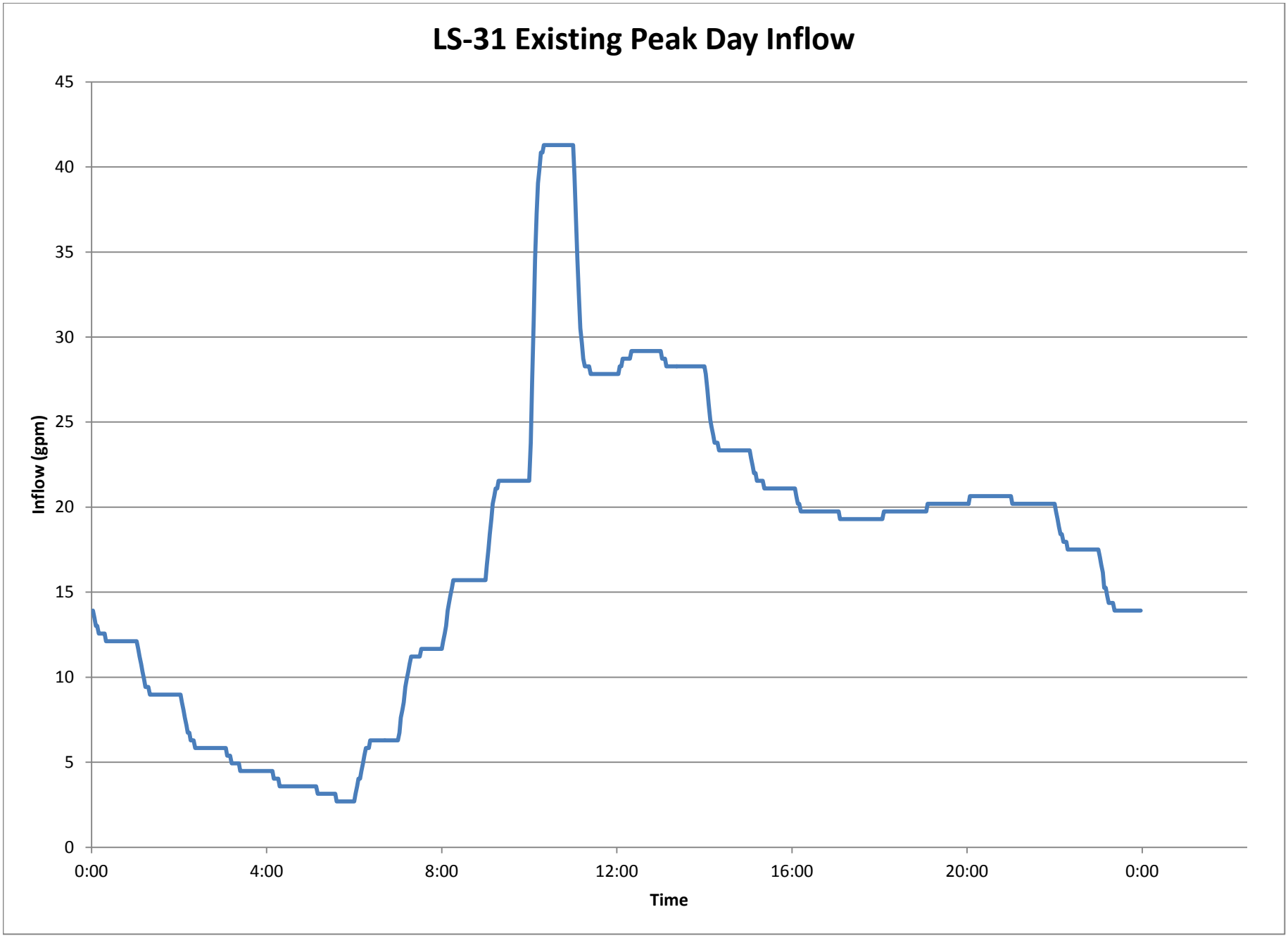

LS-26 Existing Peak Day Inflow
Inflow (gpm)
9
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

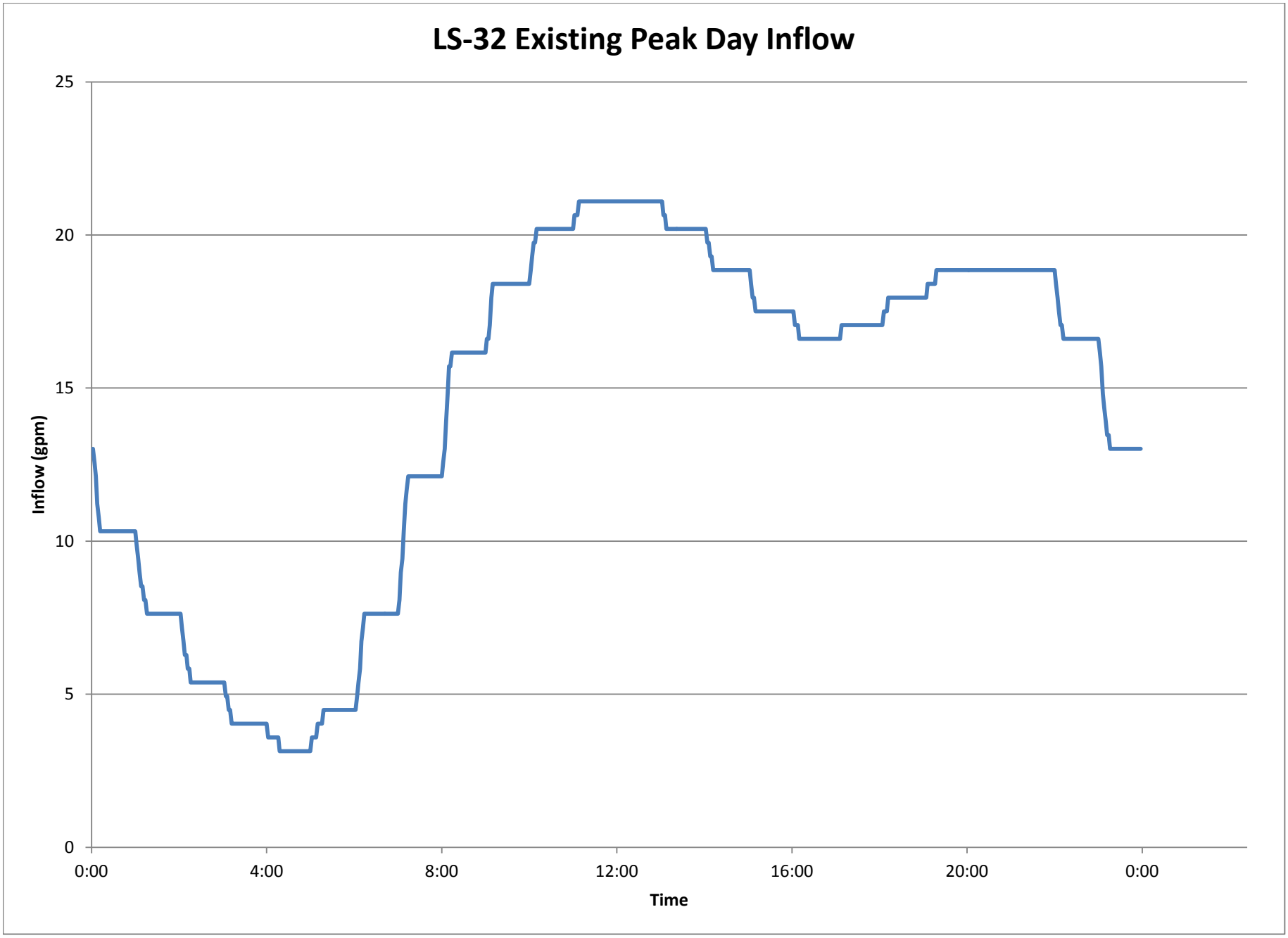

LS-27 Existing Peak Day Inflow
Inflow (gpm)
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

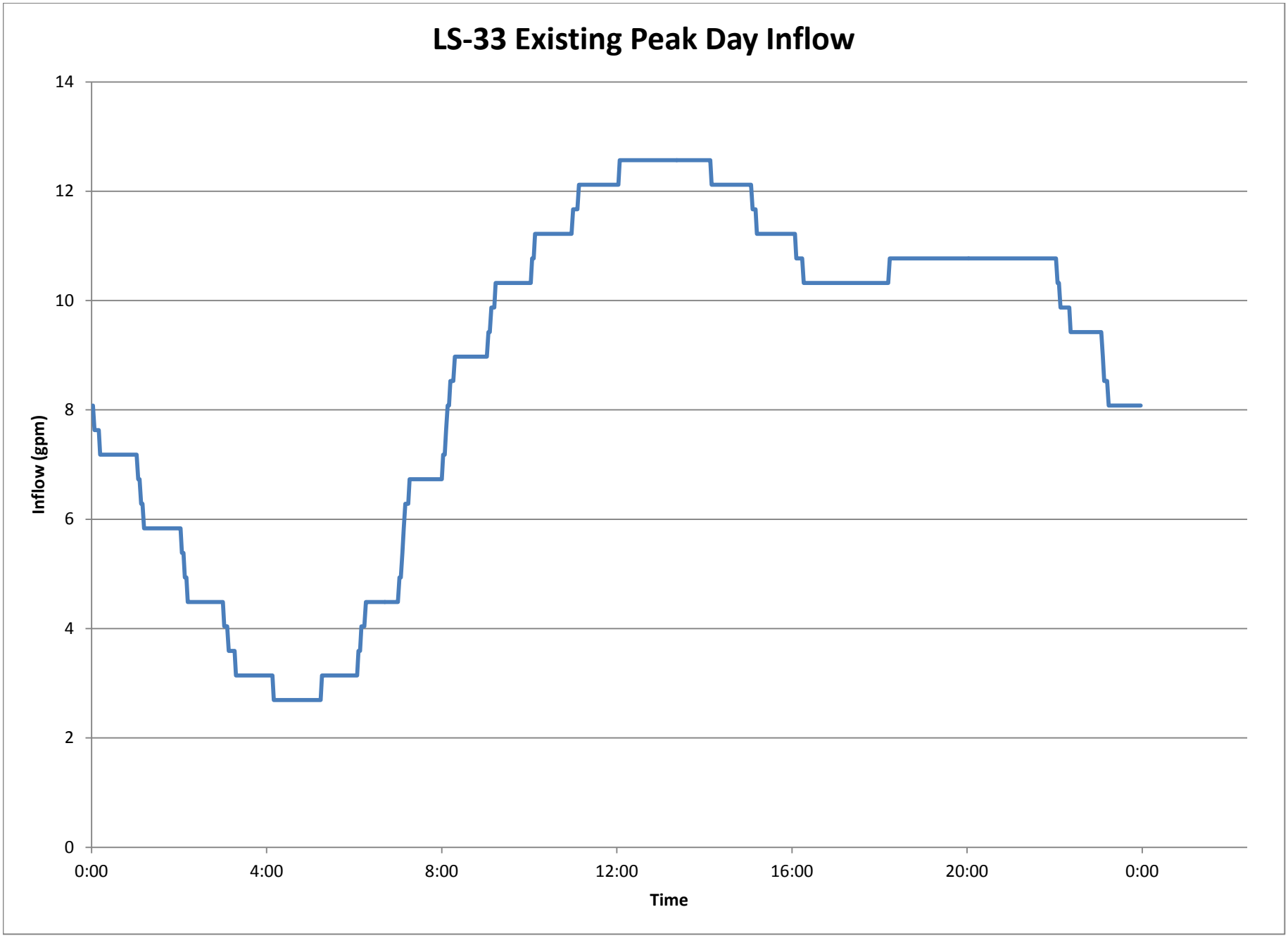

LS-28 Existing Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

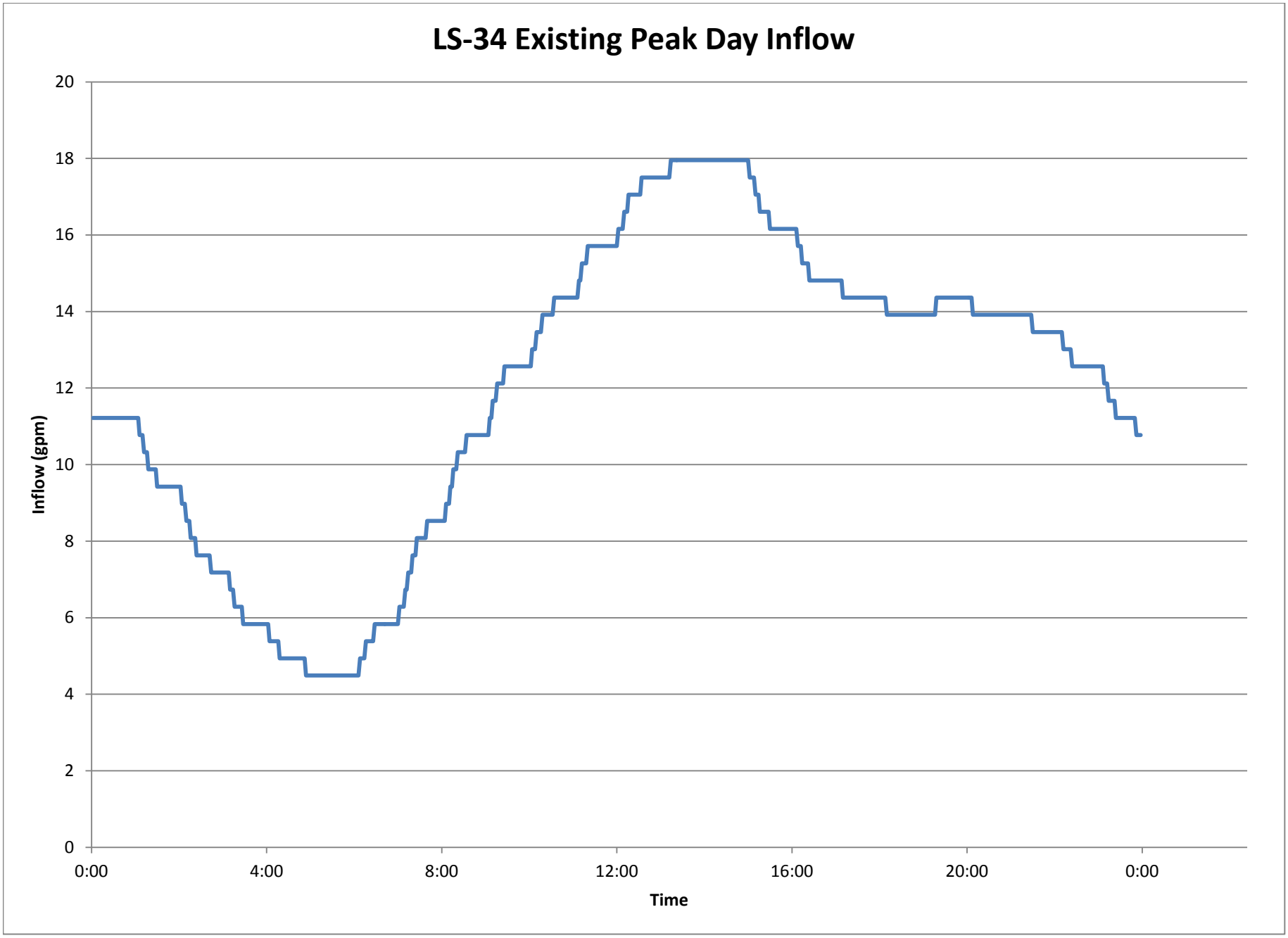

LS-29 Existing Peak Day Inflow
Inflow (gpm)
9
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

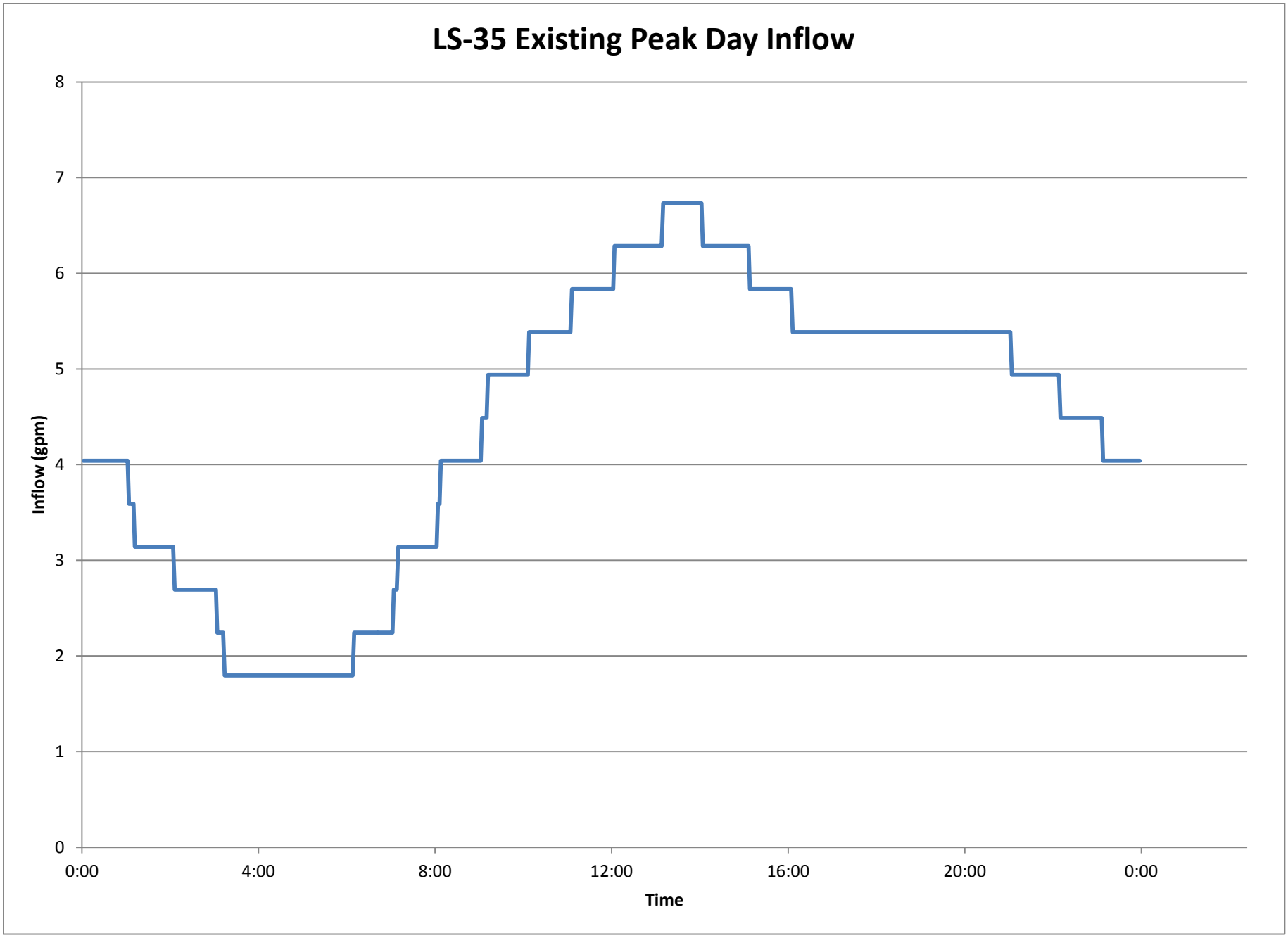

LS-30 Existing Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

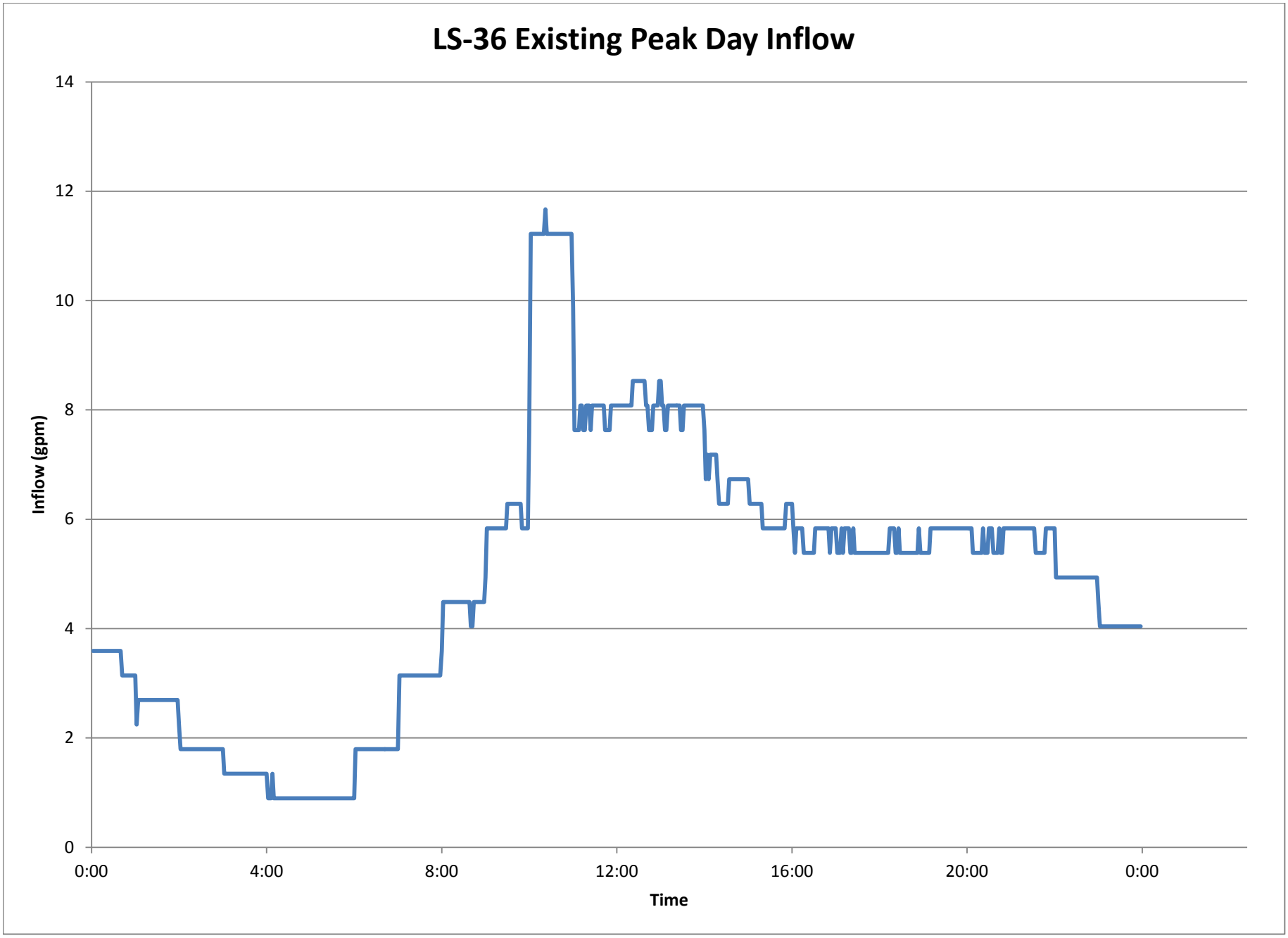

LS-31 Existing Peak Day Inflow
Inflow (gpm)
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

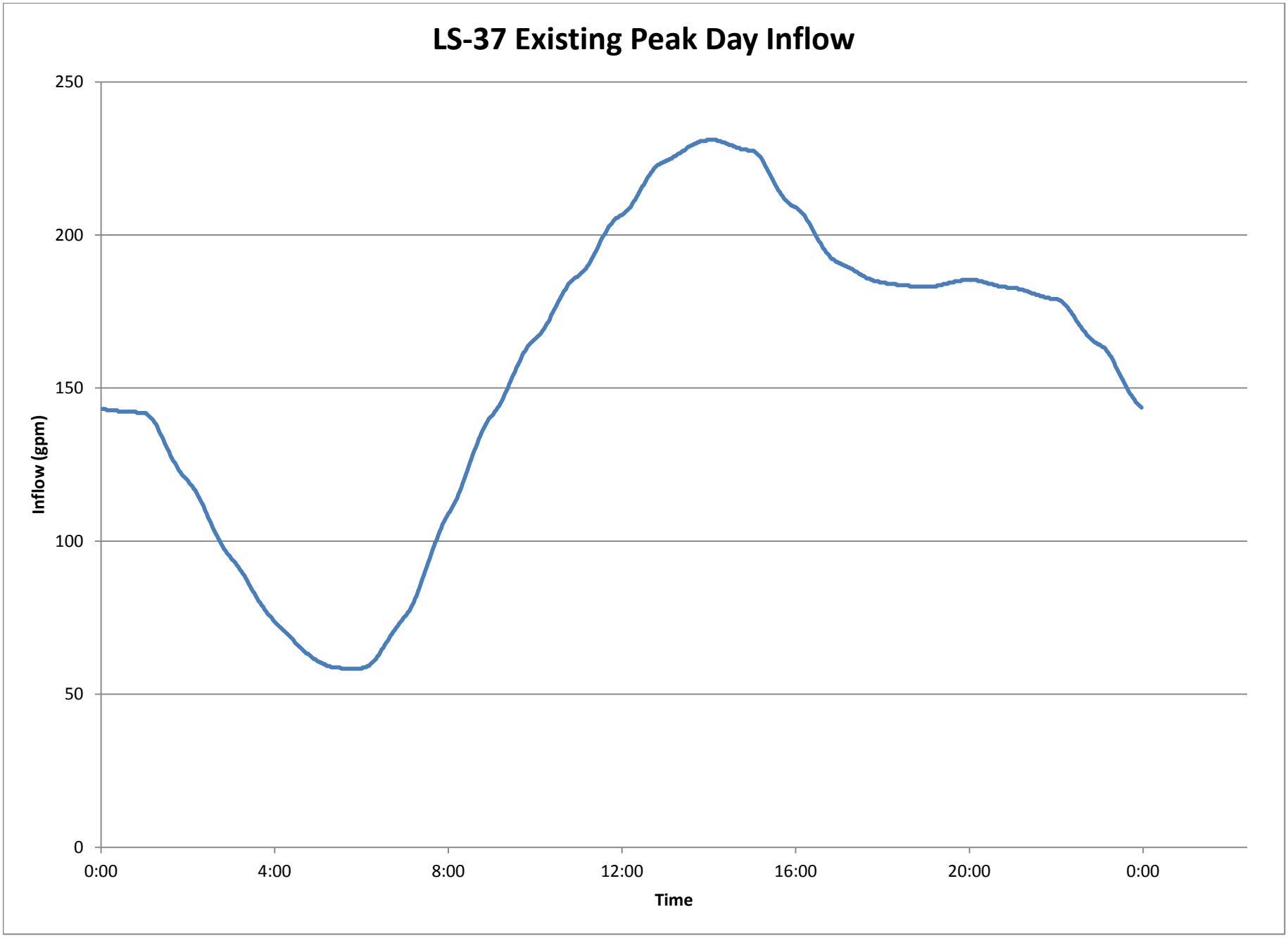

LS-32 Existing Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

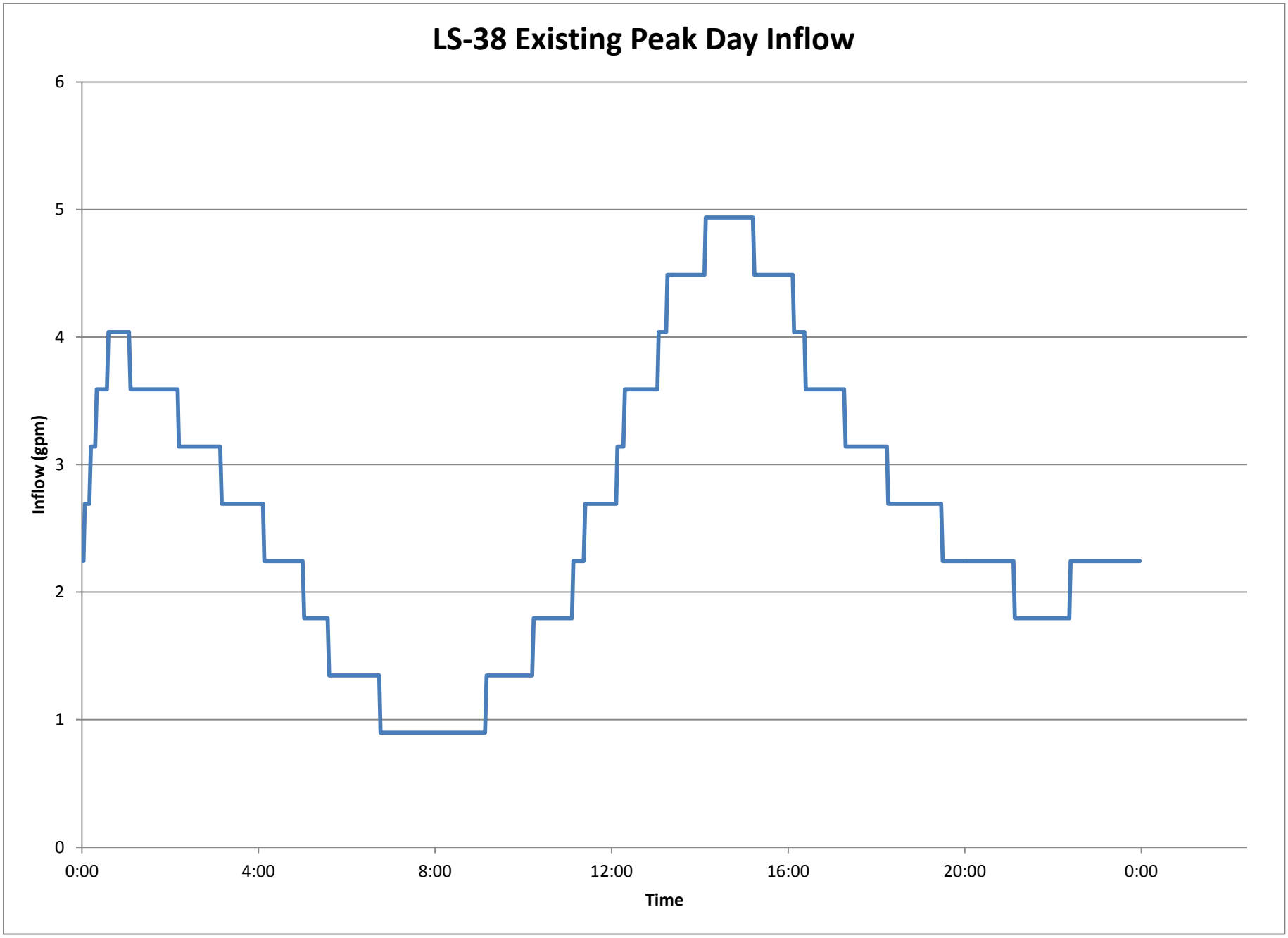

LS-33 Existing Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

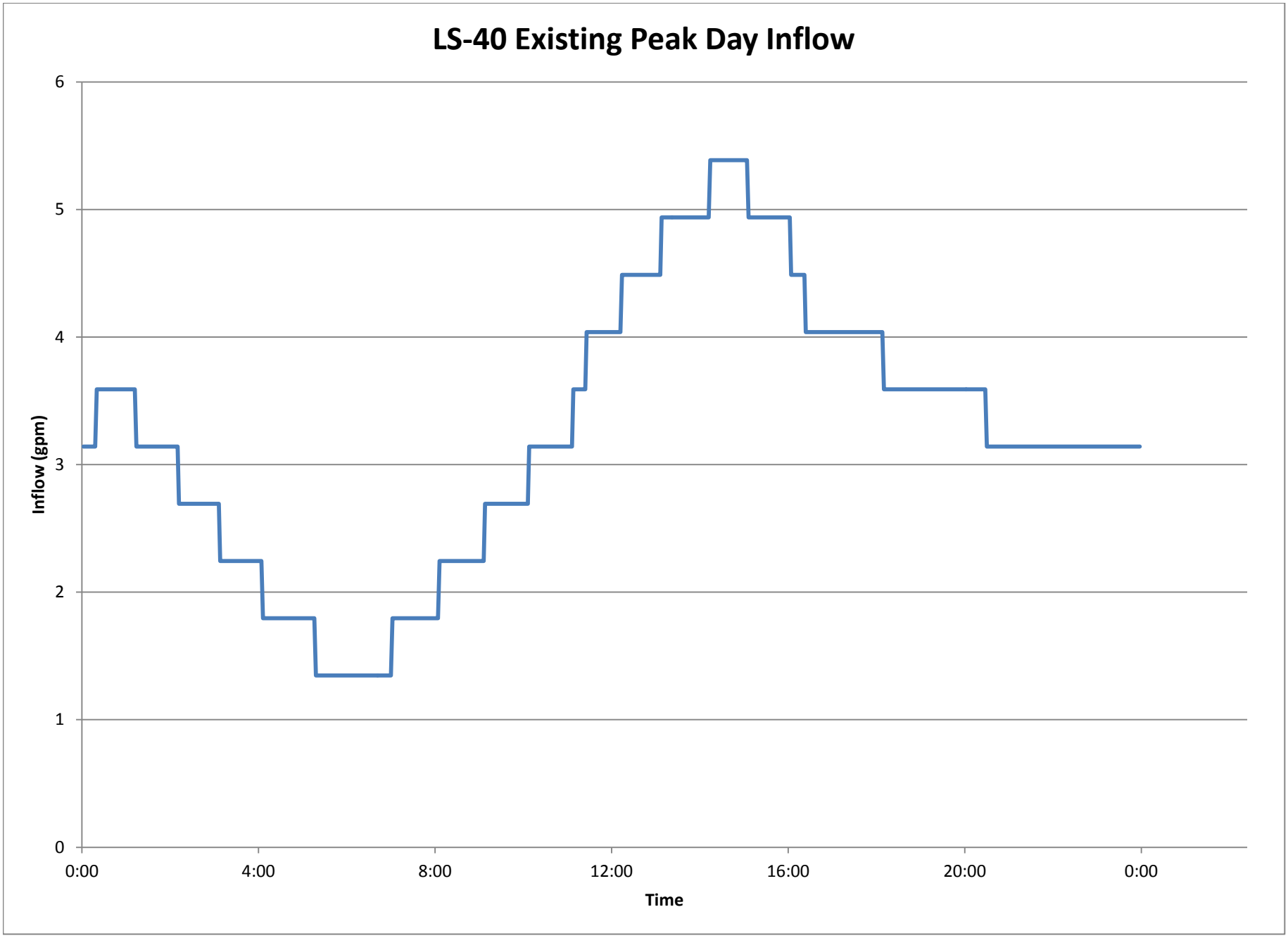

LS-34 Existing Peak Day Inflow
Inflow (gpm)
20
18
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

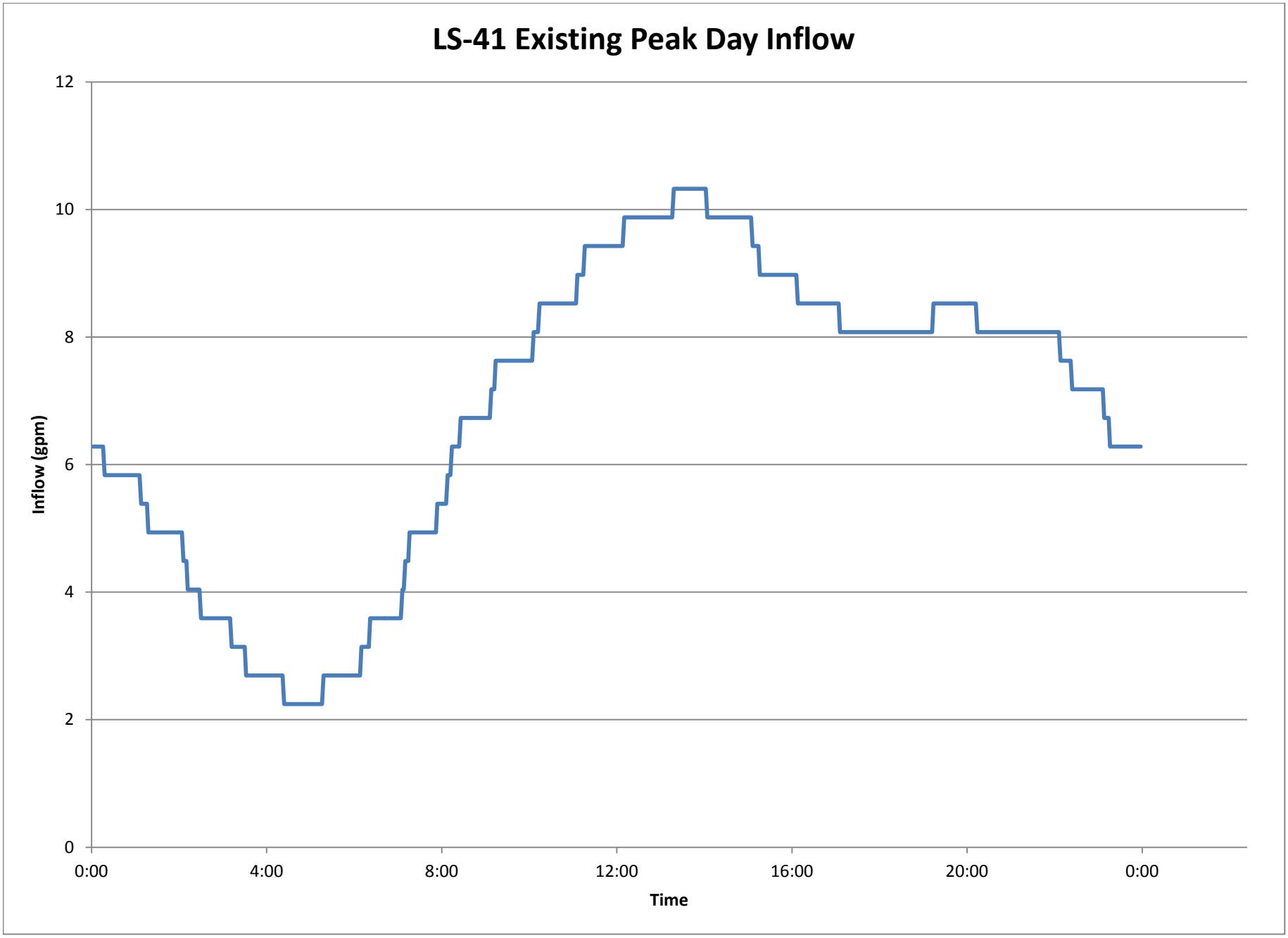

LS-35 Existing Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

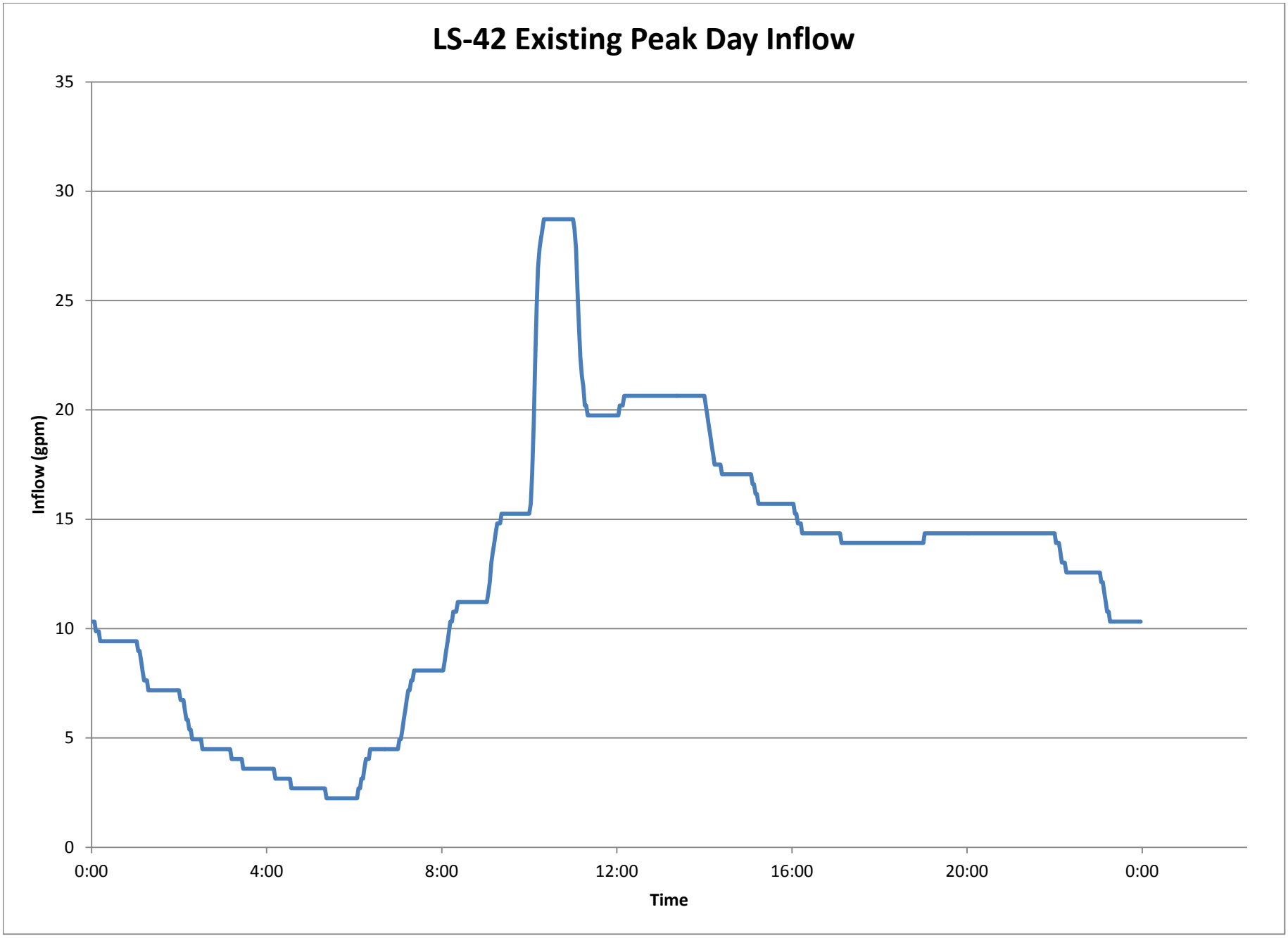

LS-36 Existing Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

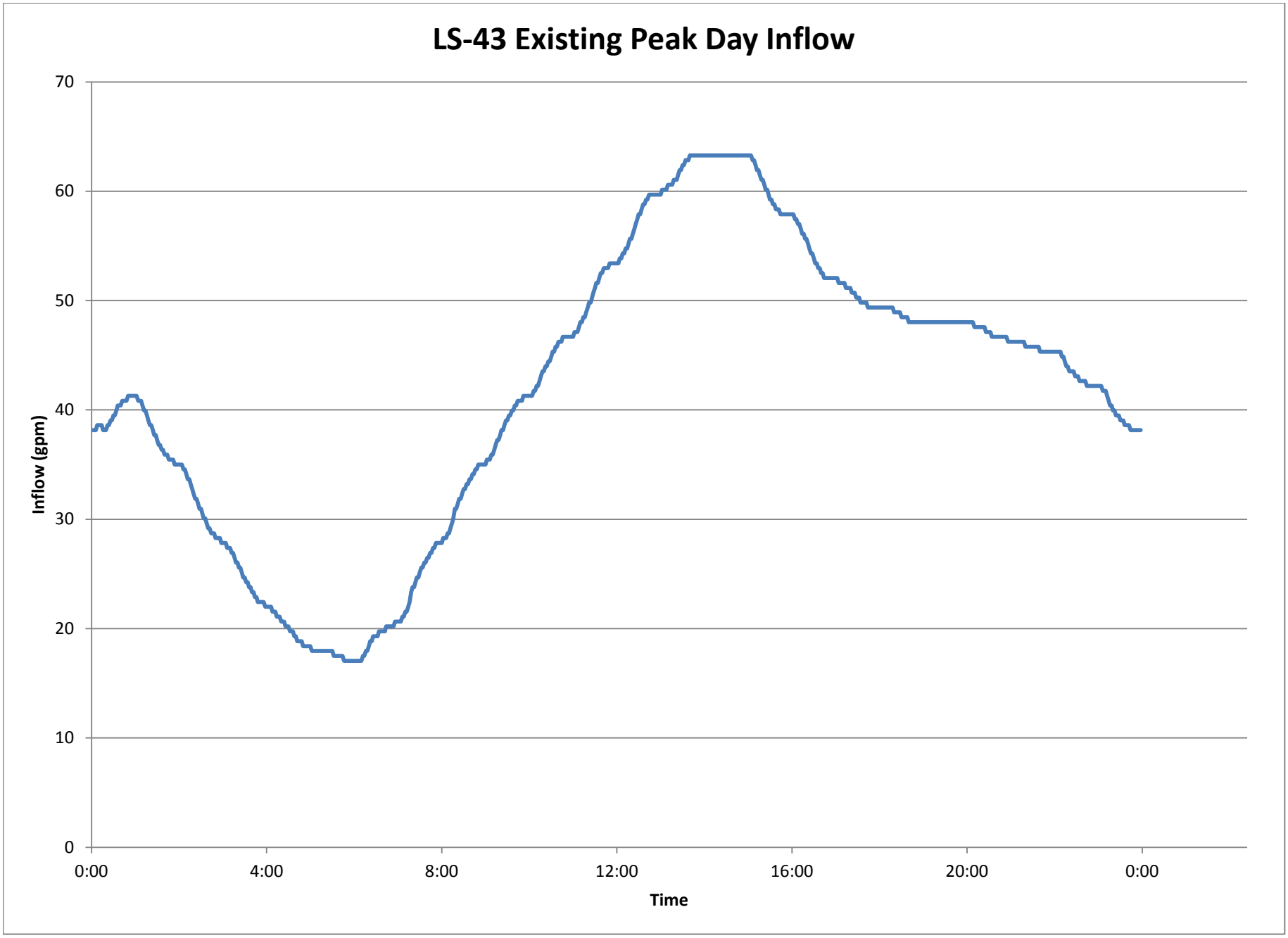

LS-37 Existing Peak Day Inflow
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

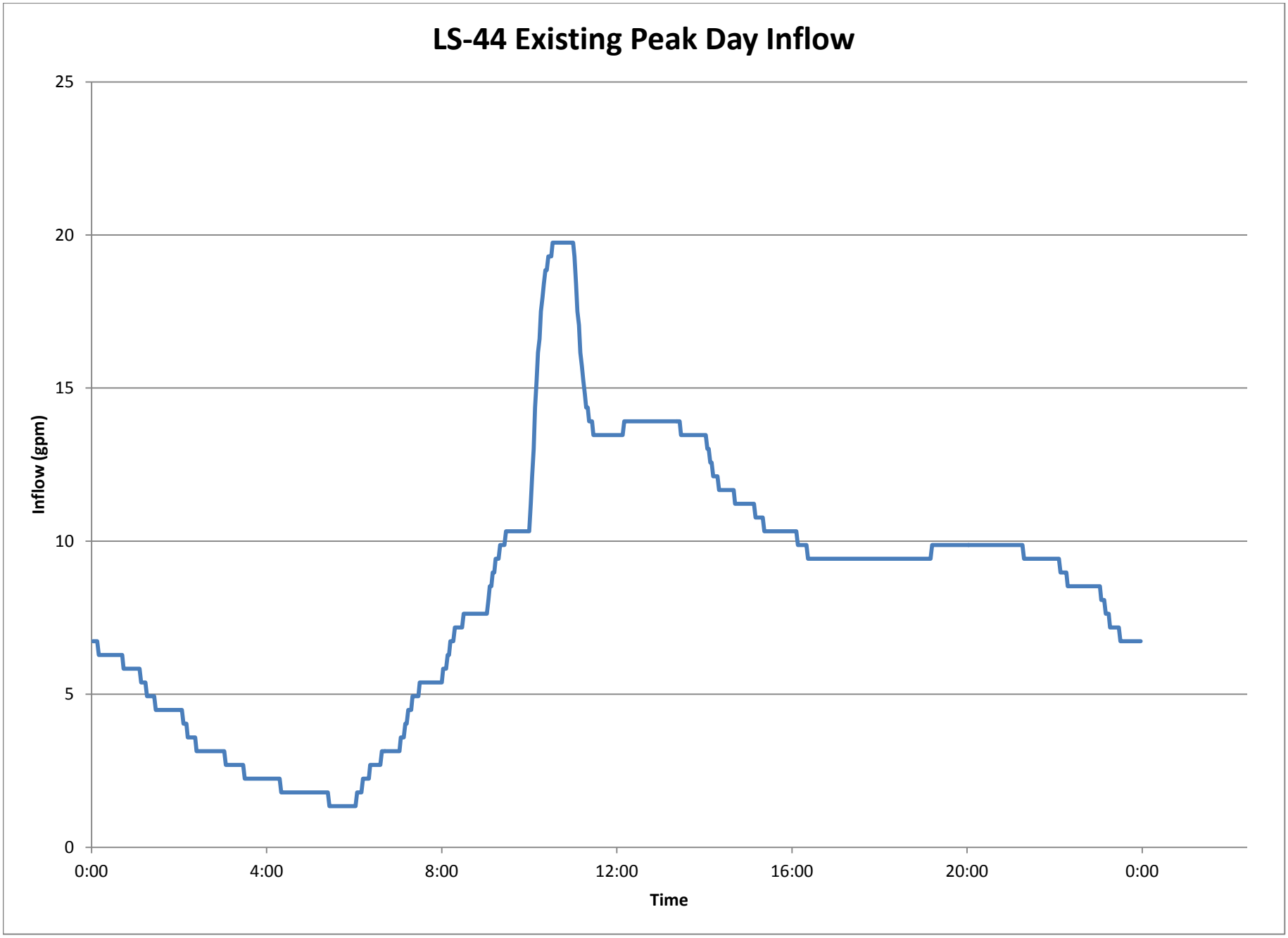

LS-38 Existing Peak Day Inflow
Inflow (gpm)
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

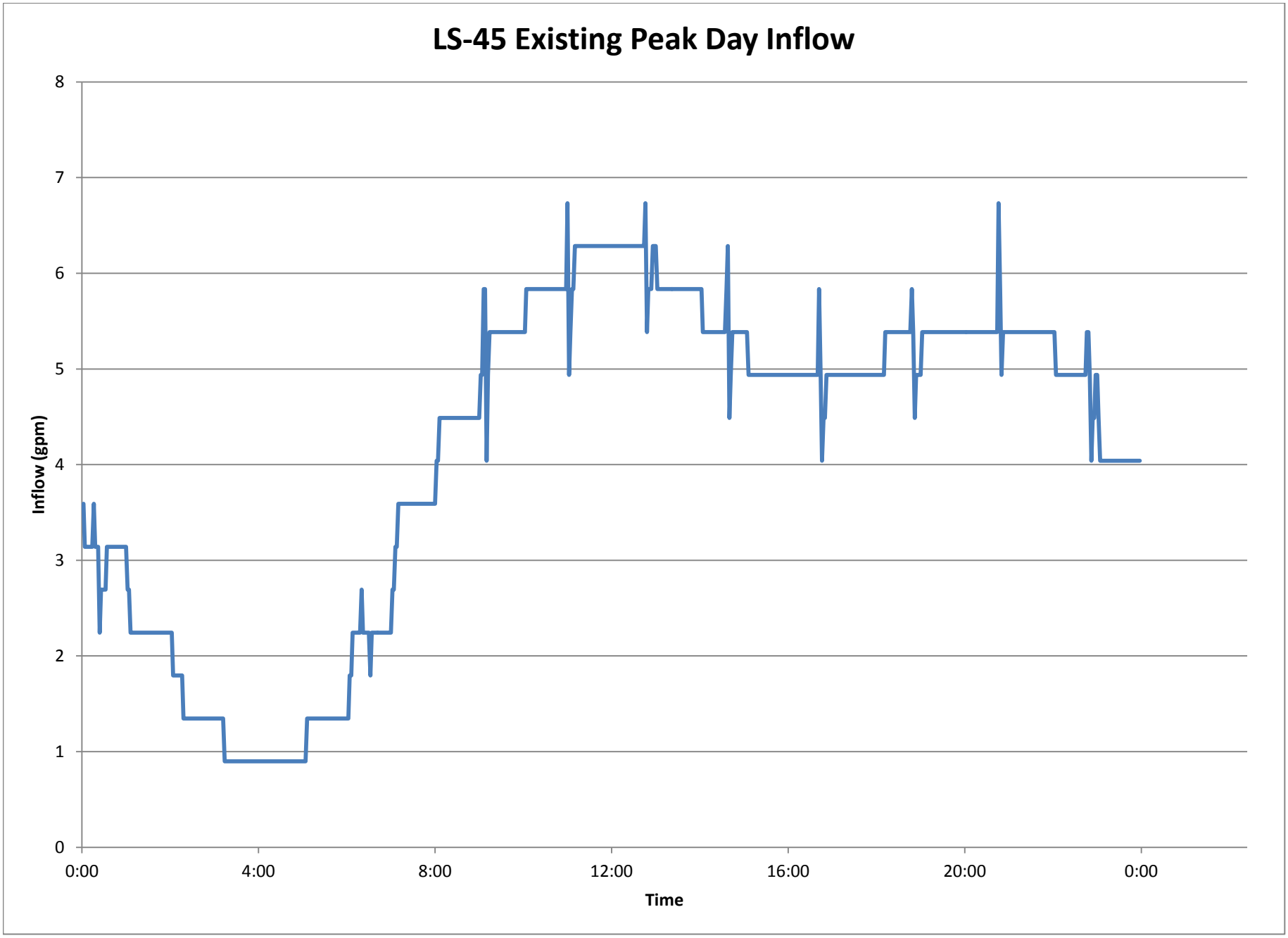

LS-40 Existing Peak Day Inflow
Inflow (gpm)
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

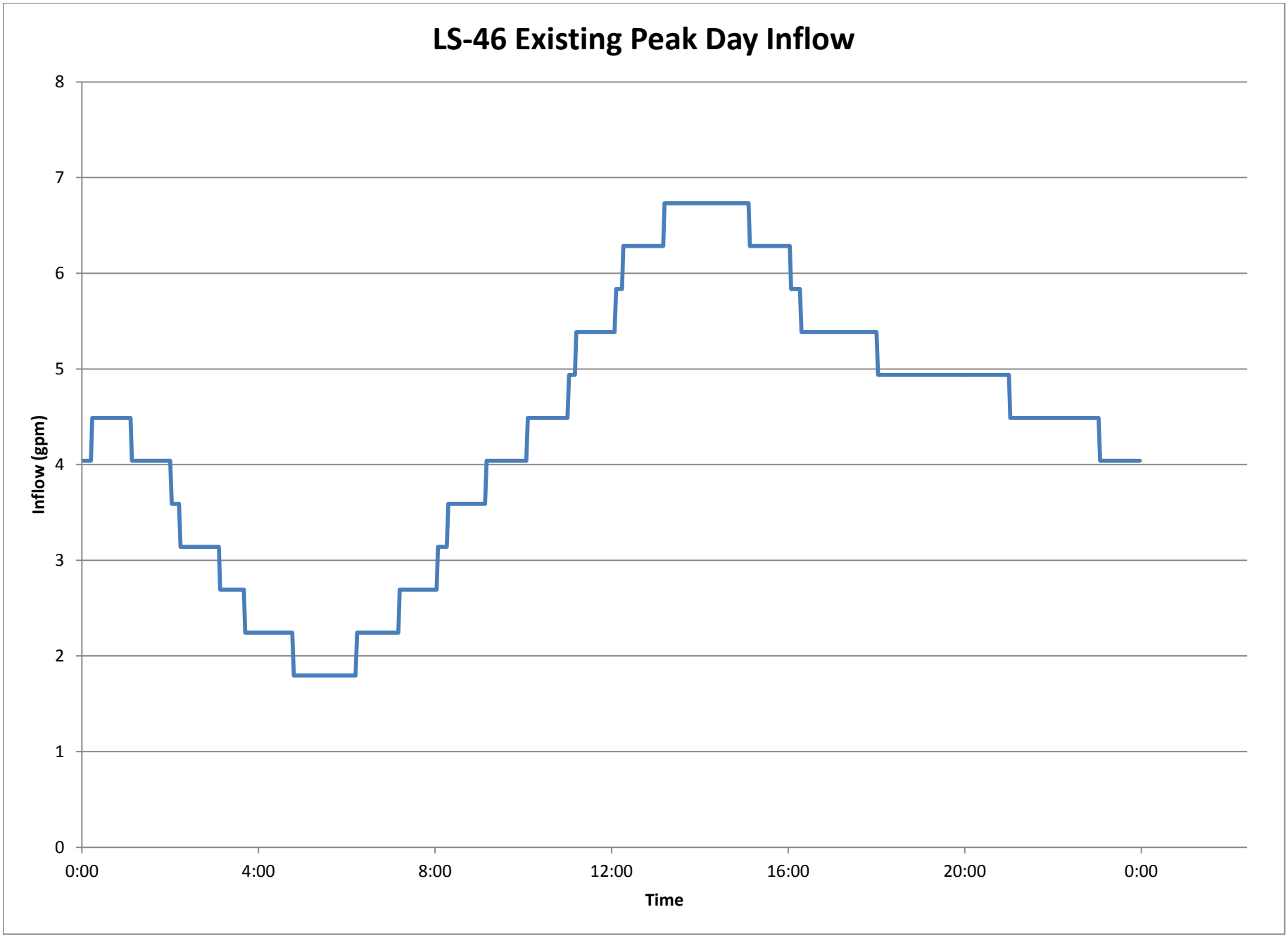

LS-41 Existing Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

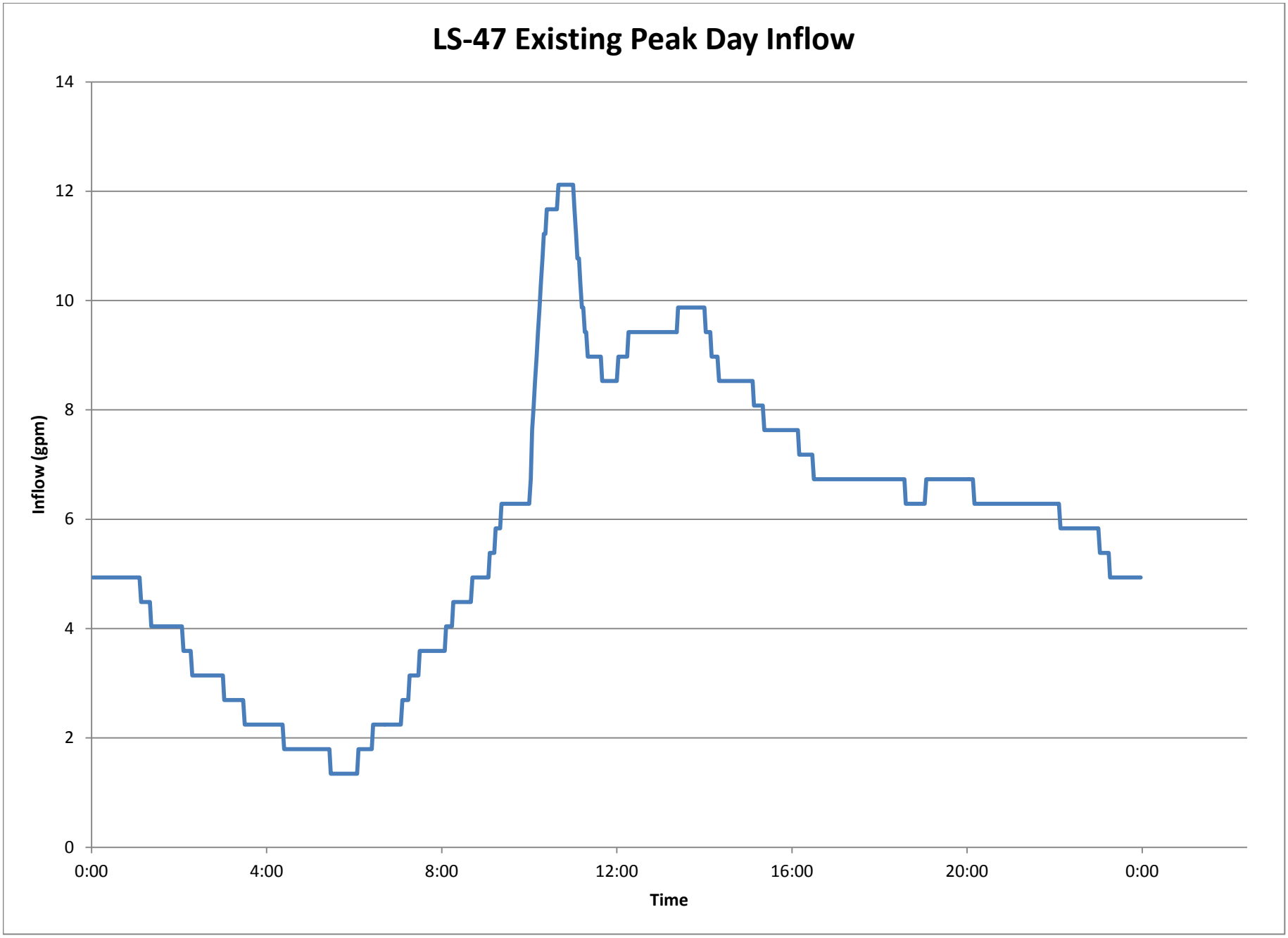

LS-42 Existing Peak Day Inflow
Inflow (gpm)
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

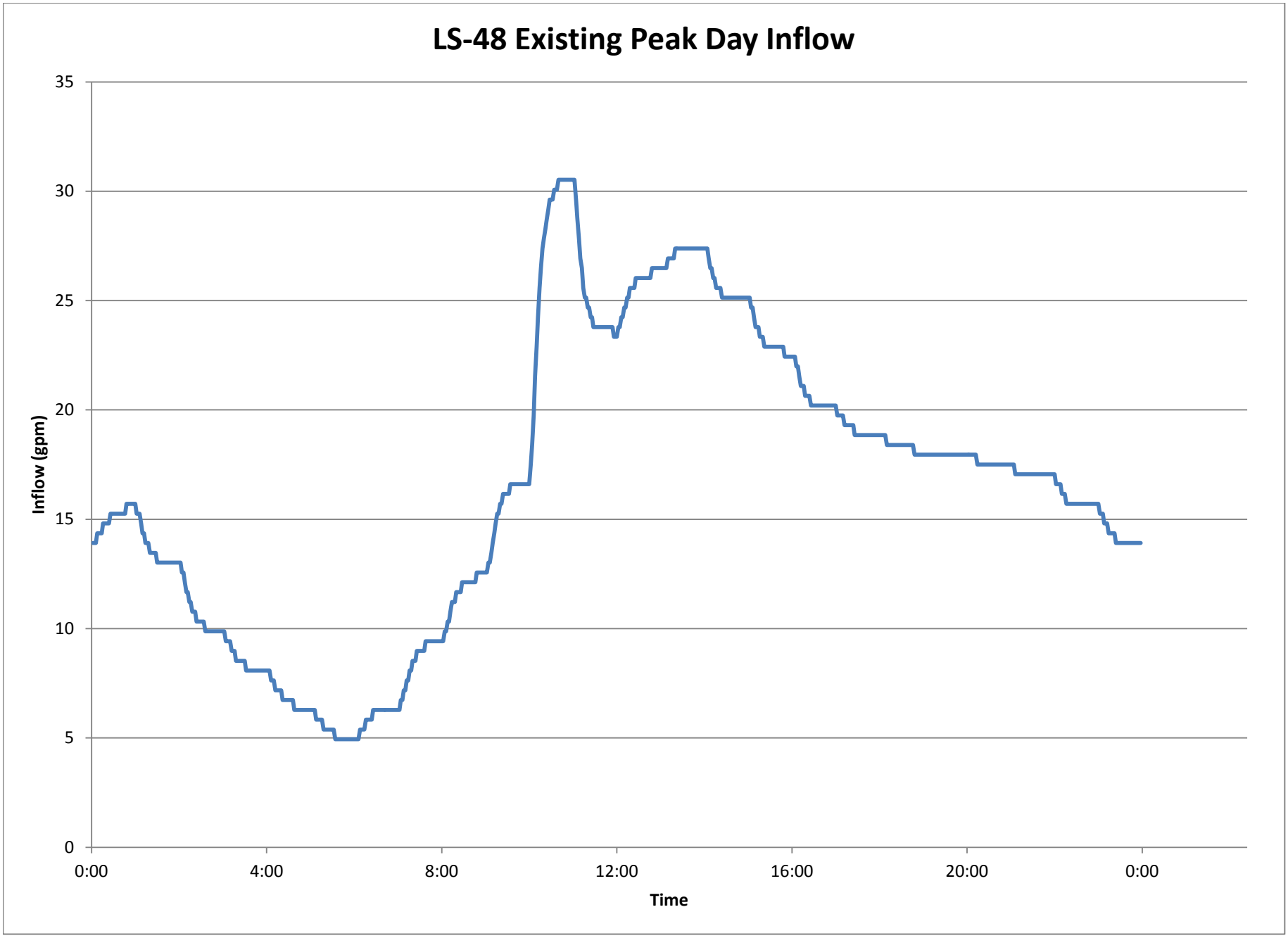

LS-43 Existing Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

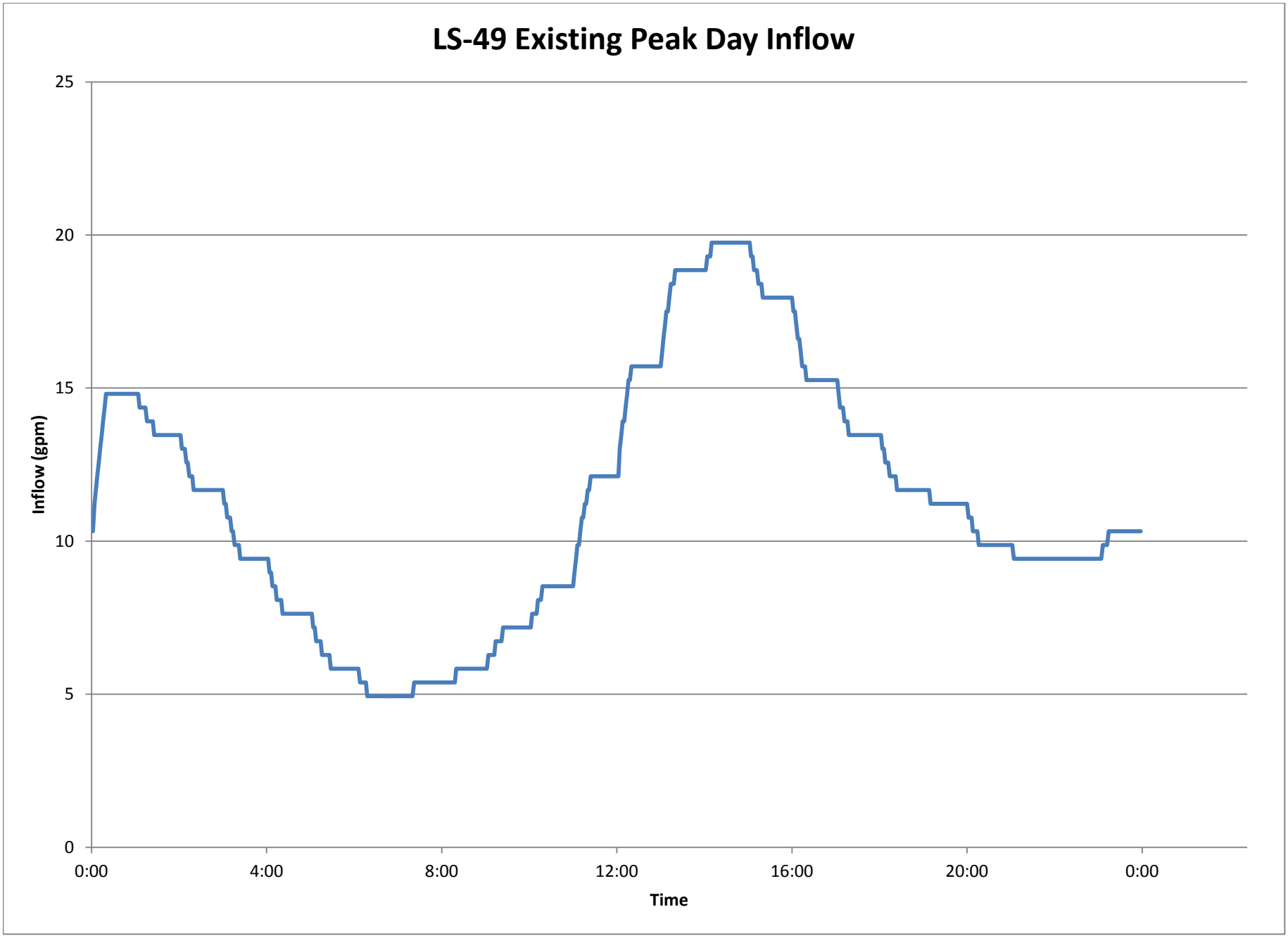

LS-44 Existing Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

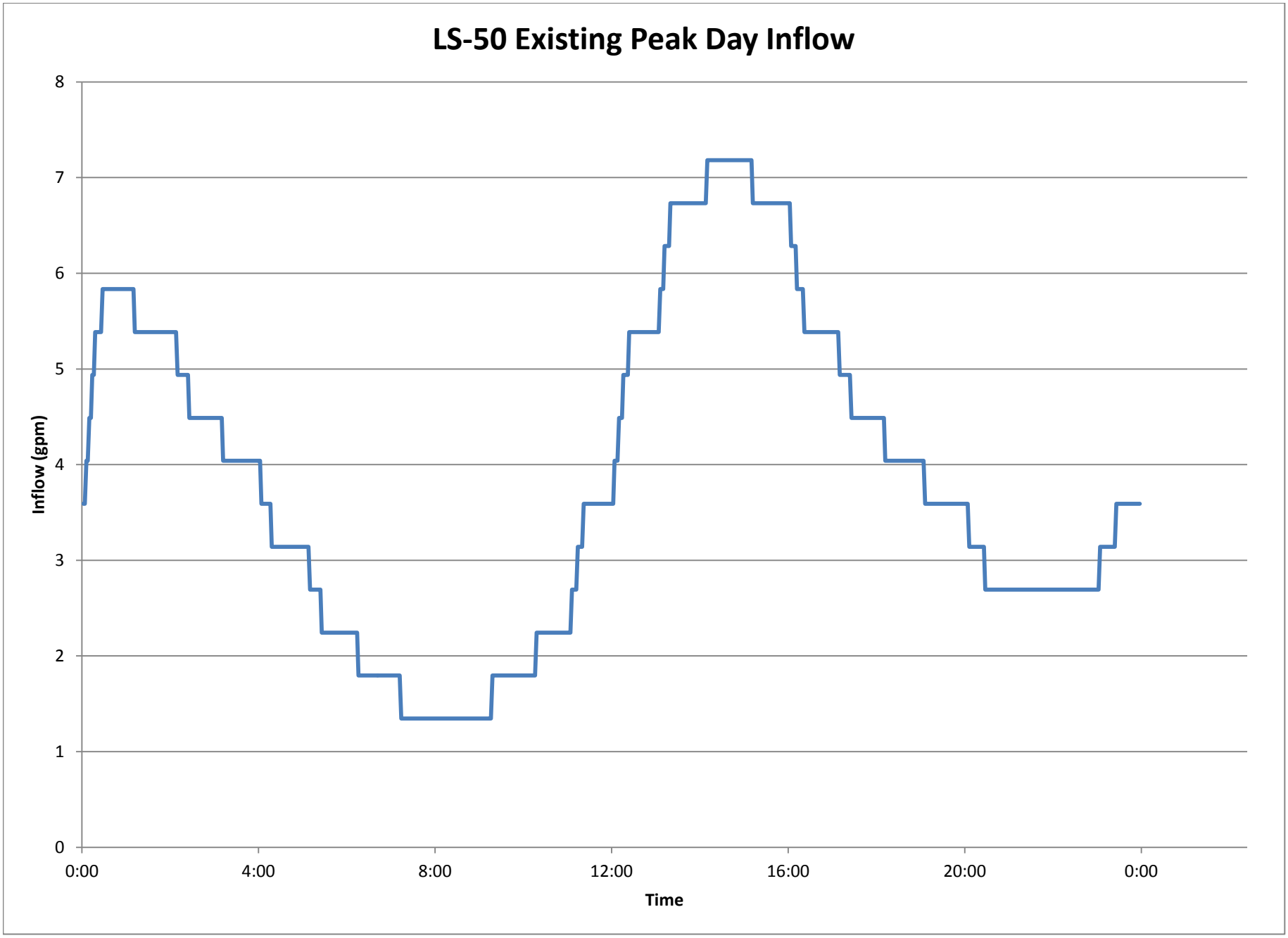

LS-45 Existing Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

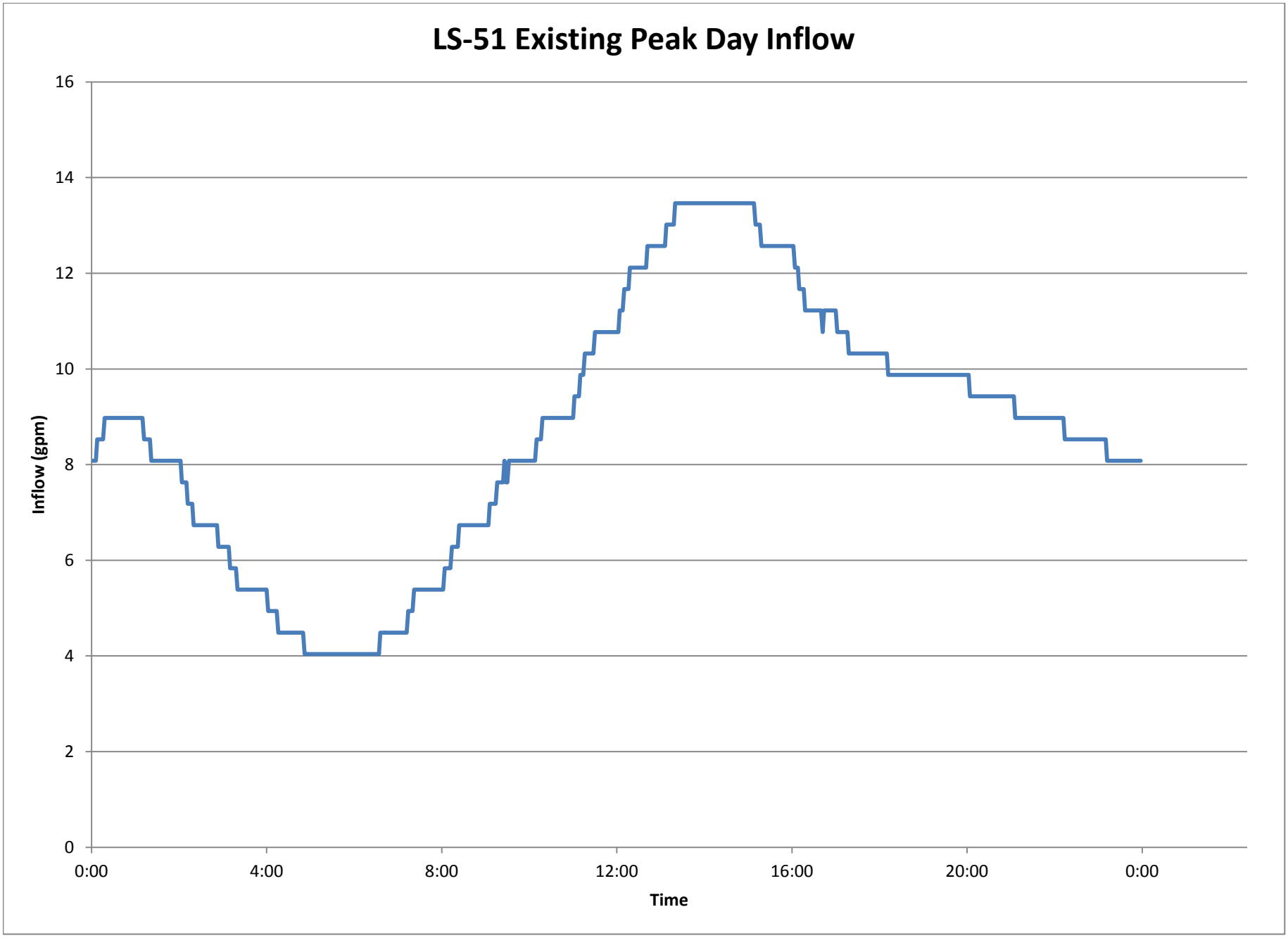

LS-46 Existing Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

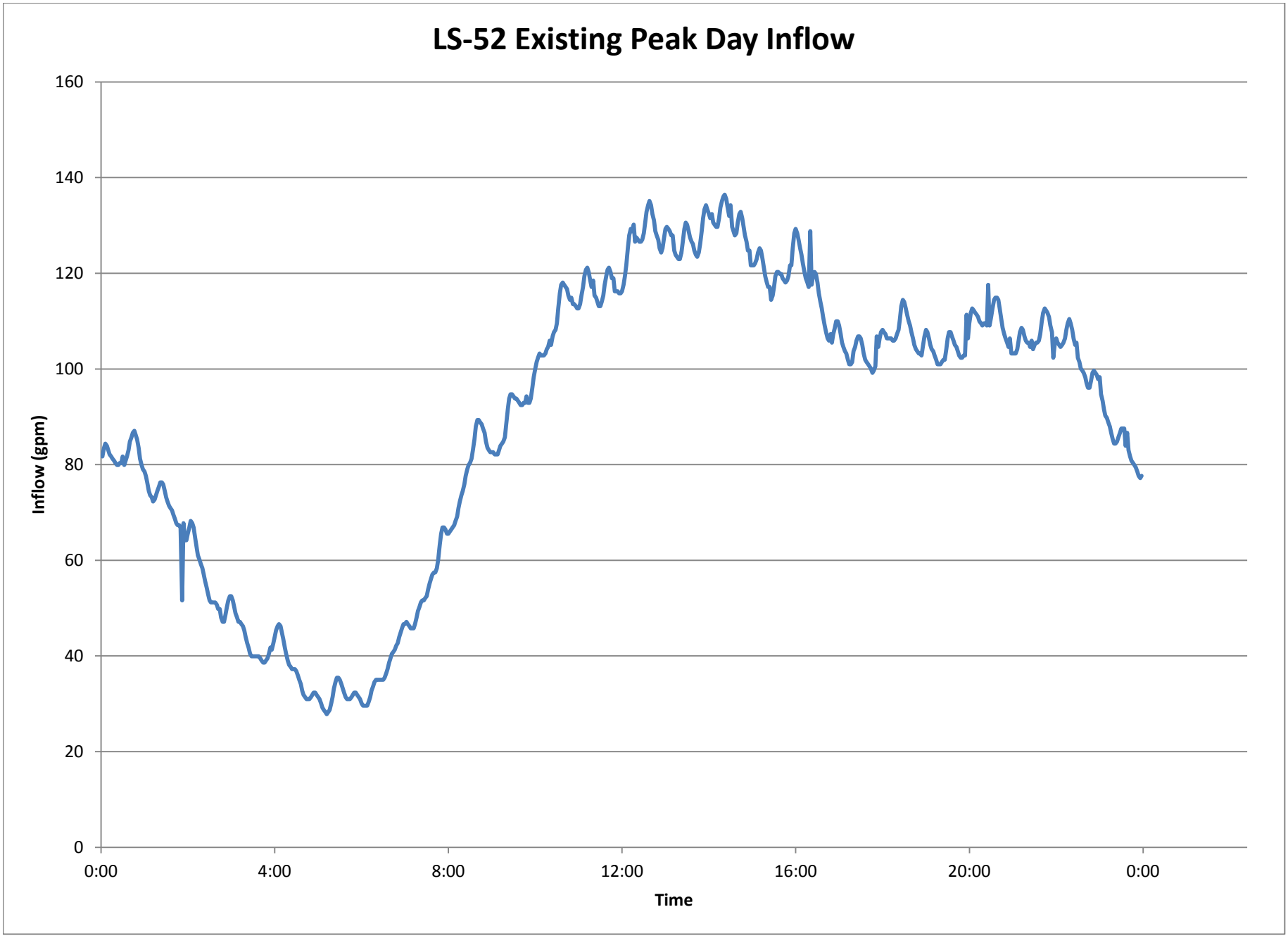

LS-47 Existing Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

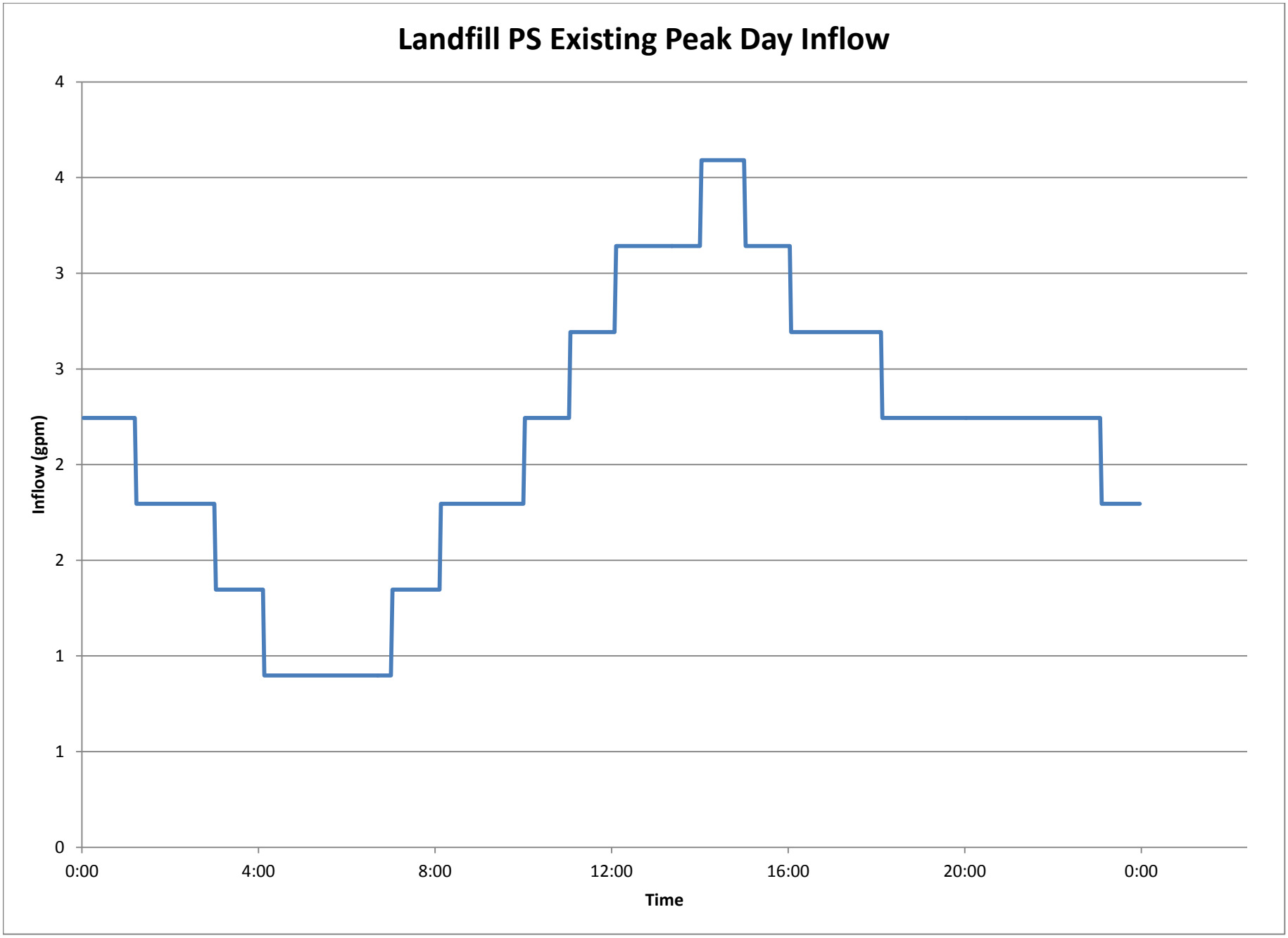

LS-48 Existing Peak Day Inflow
Inflow (gpm)
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

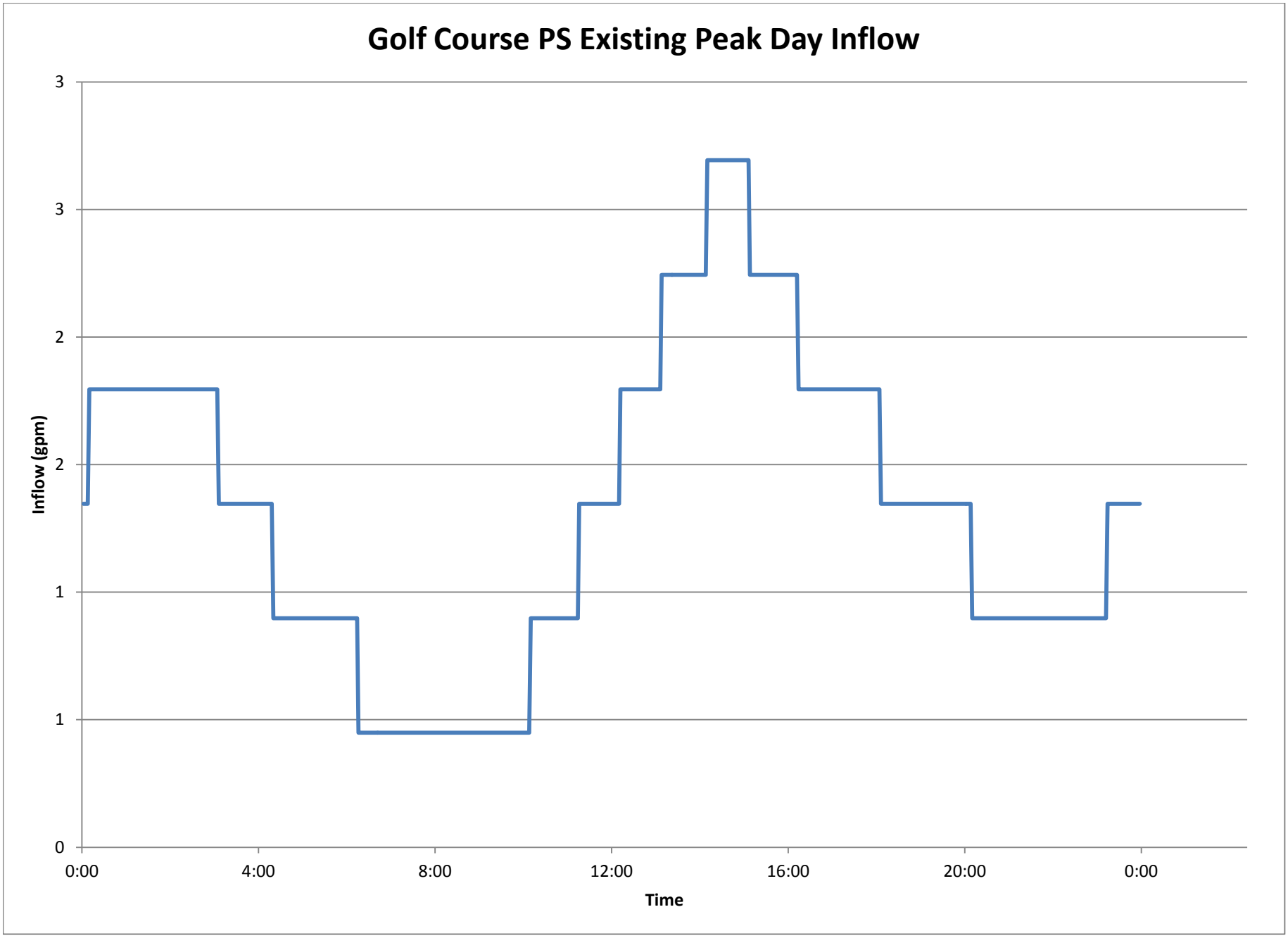

LS-49 Existing Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

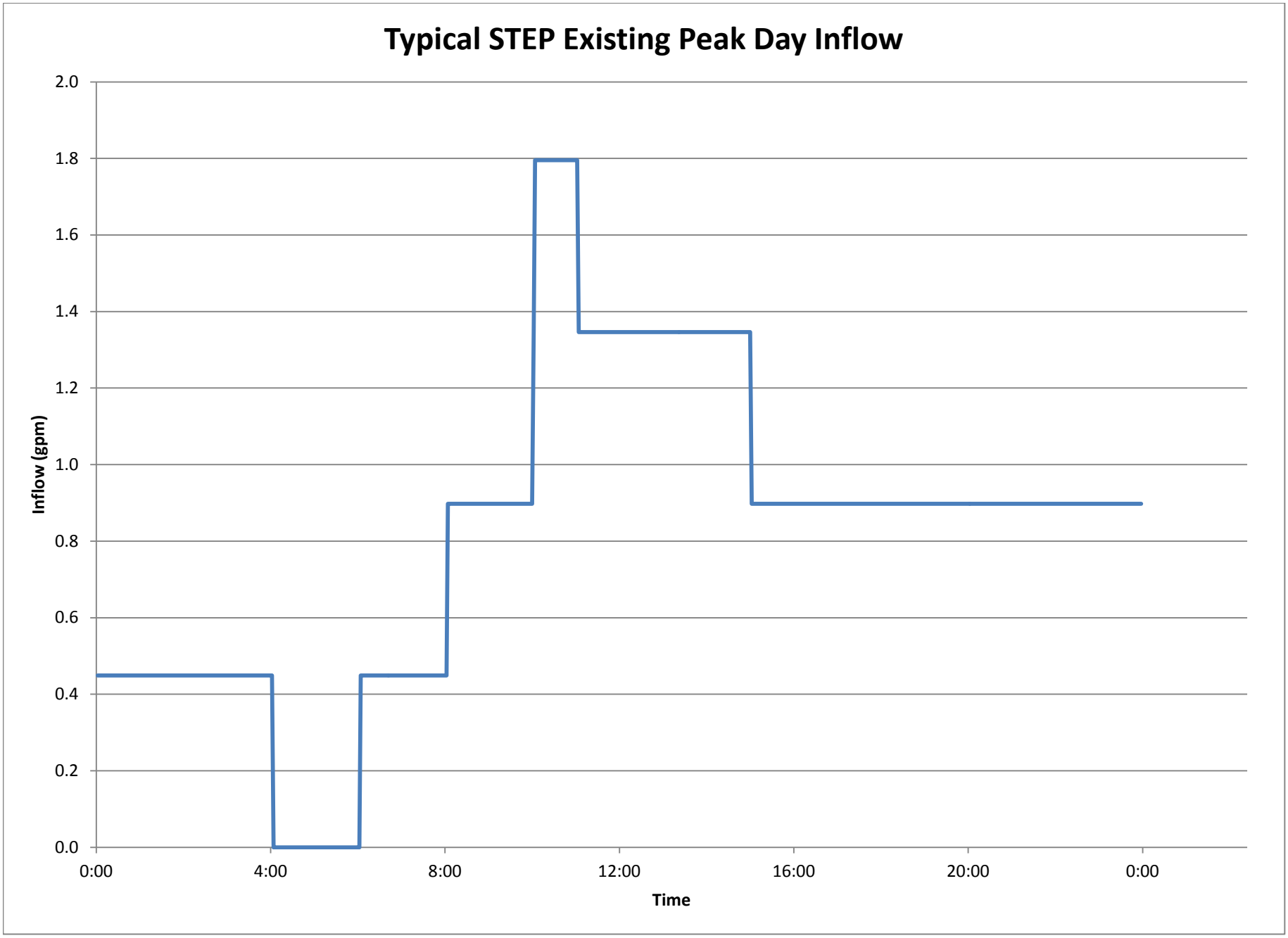

LS-50 Existing Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-51 Existing Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-52 Existing Peak Day Inflow
160
140
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Landfill PS Existing Peak Day Inflow
Inflow (gpm)
4
4
3
3
2
2
1
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

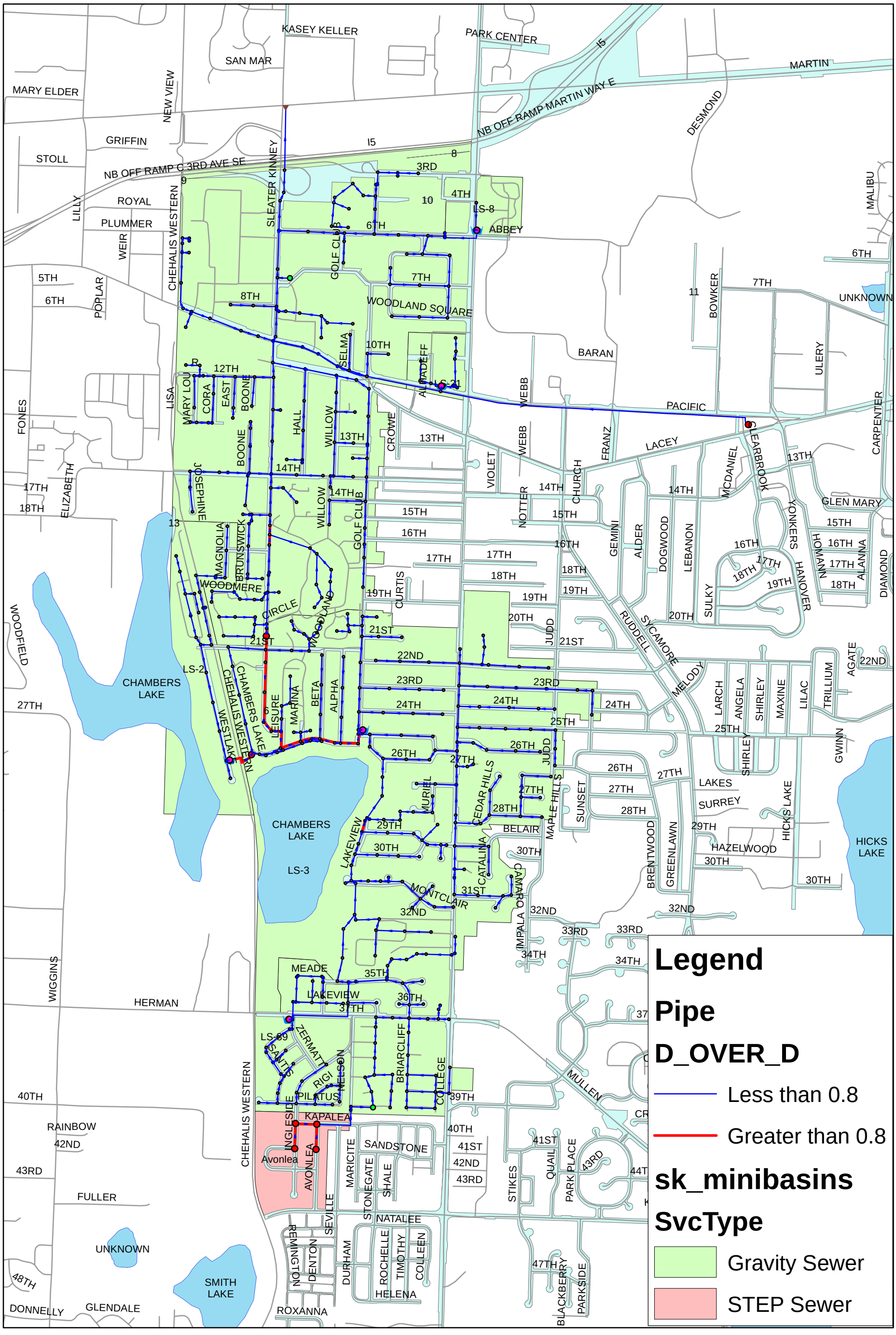

Golf Course PS Existing Peak Day Inflow
Inflow (gpm)
3
3
2
2
1
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Typical STEP Existing Peak Day Inflow
Inflow (gpm)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# 2012 MODEL RESULTS

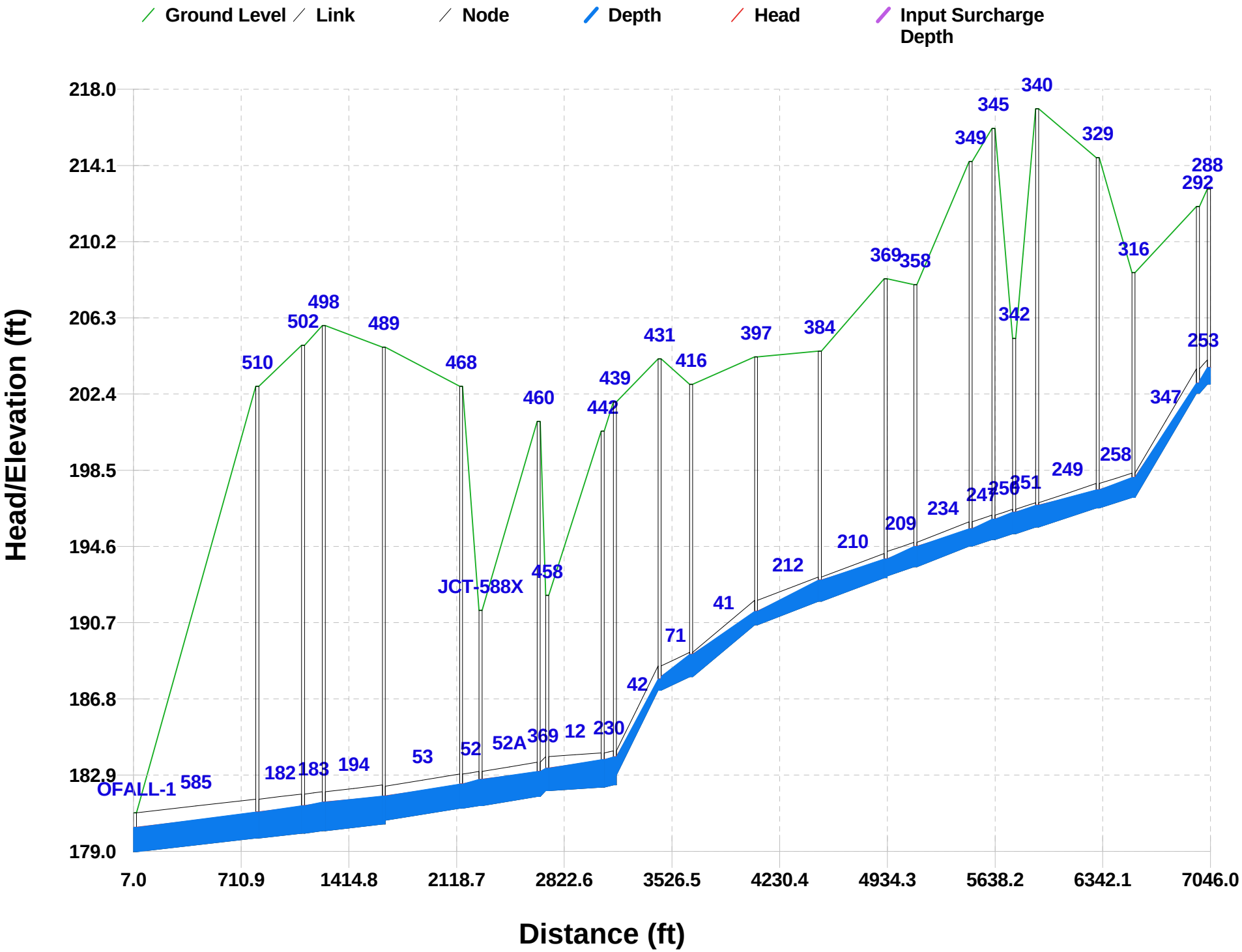
## SLEATER KINNEY BASIN

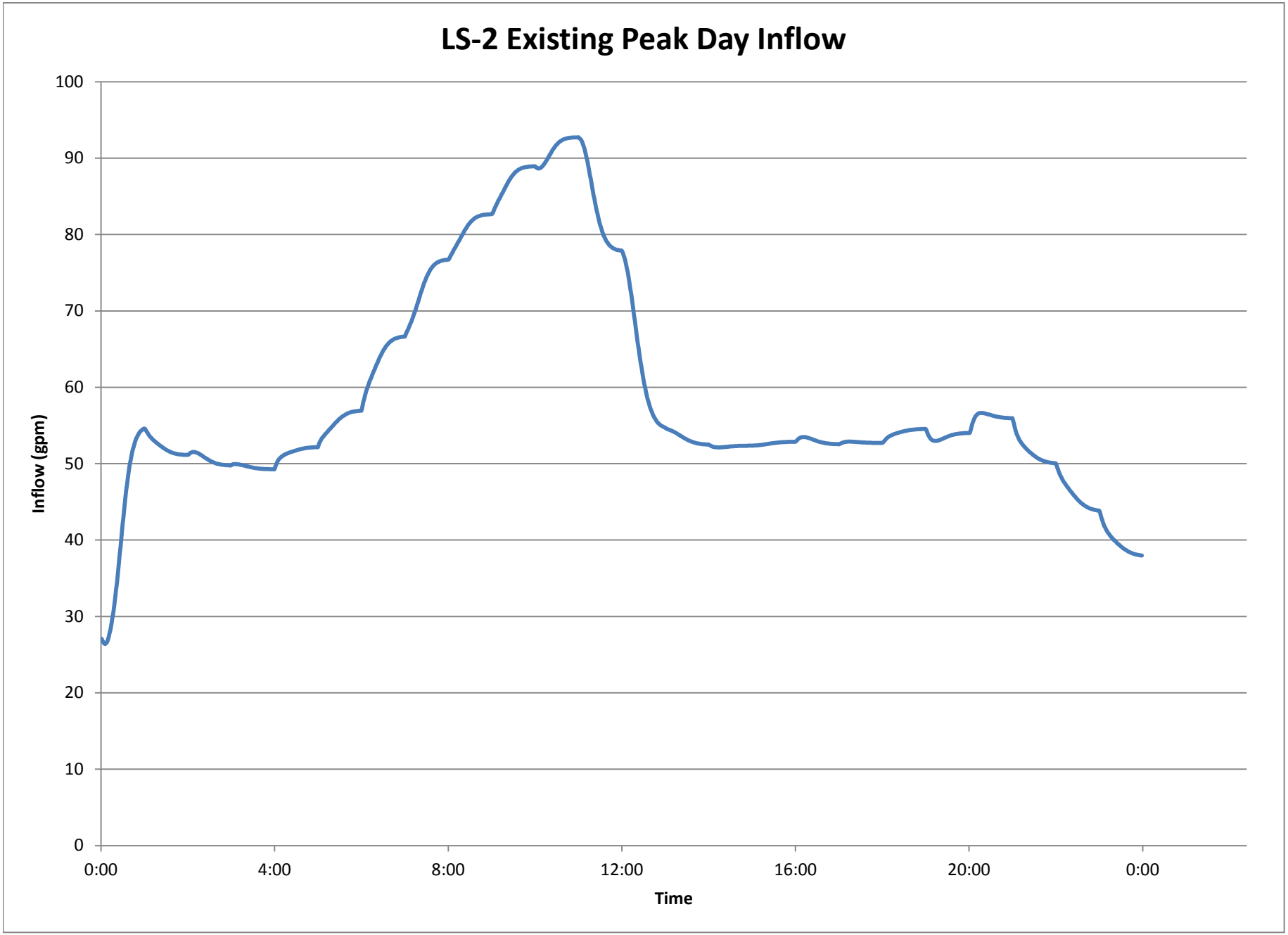
# Lacey - Sleater Kinney Collection System Model
# 2012 Peak Day Surcharging
# d/D Criteria = 0.80

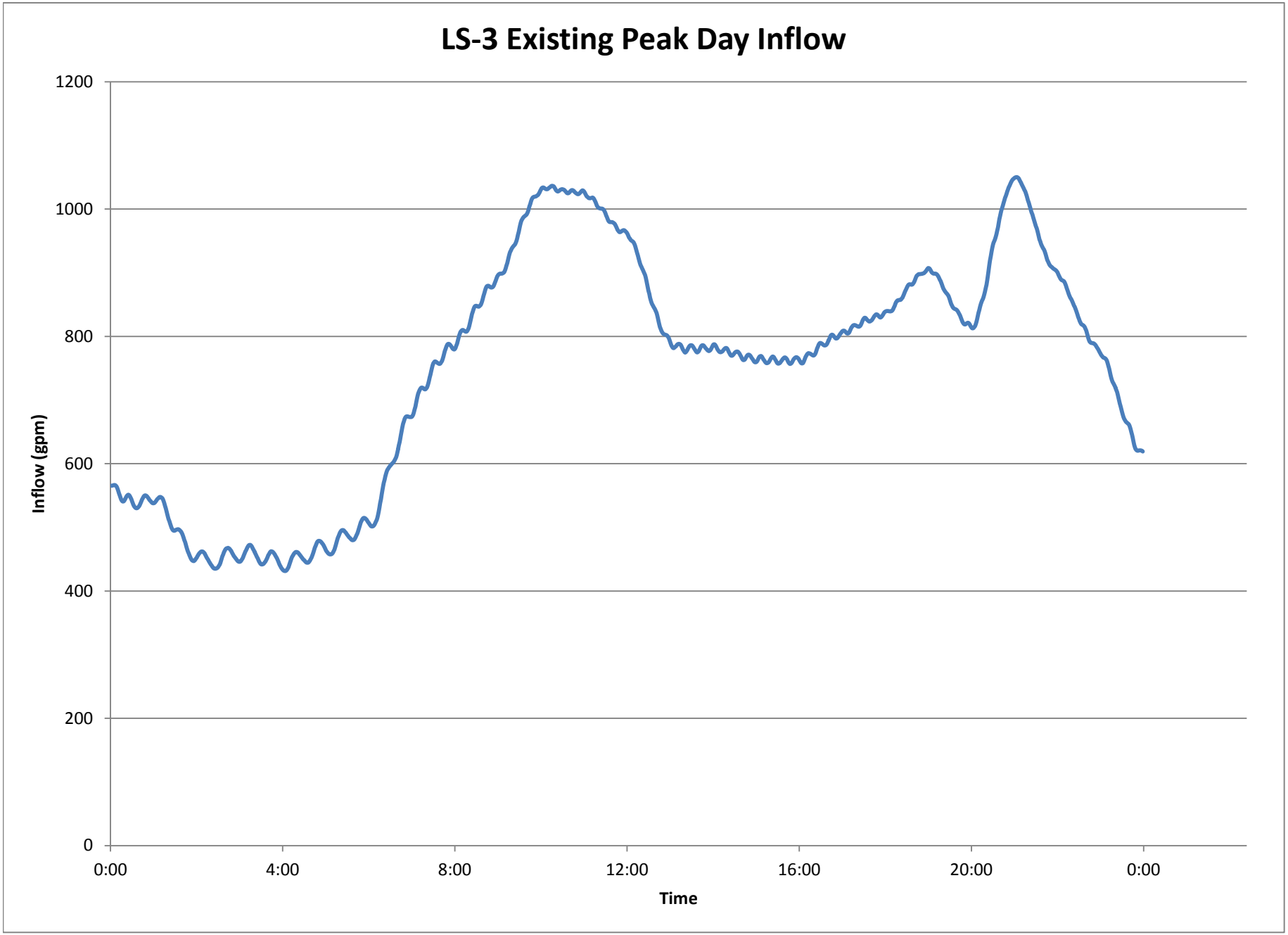


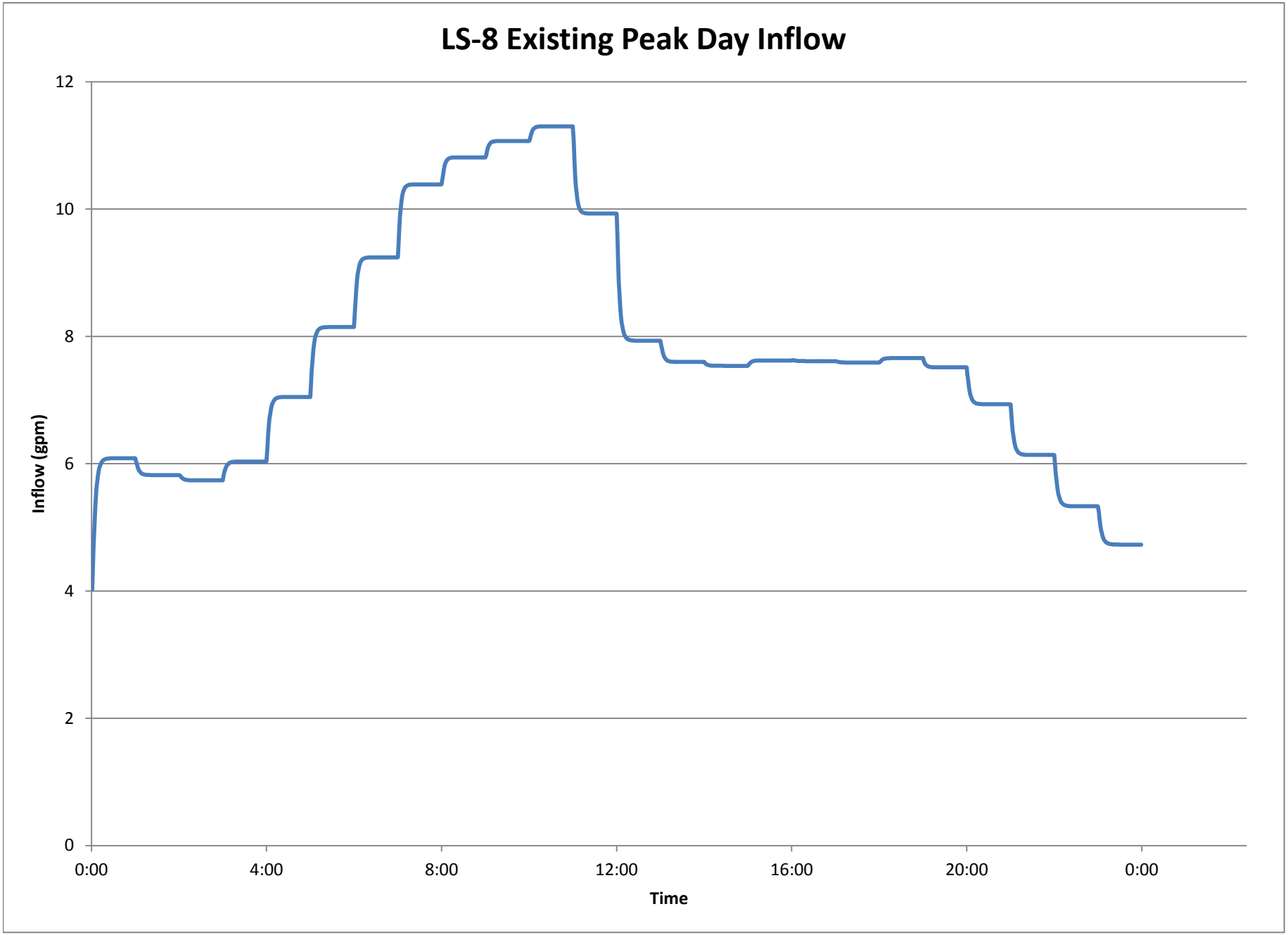

Note: Force mains and STEP mains are always full and are shown as always surcharging.

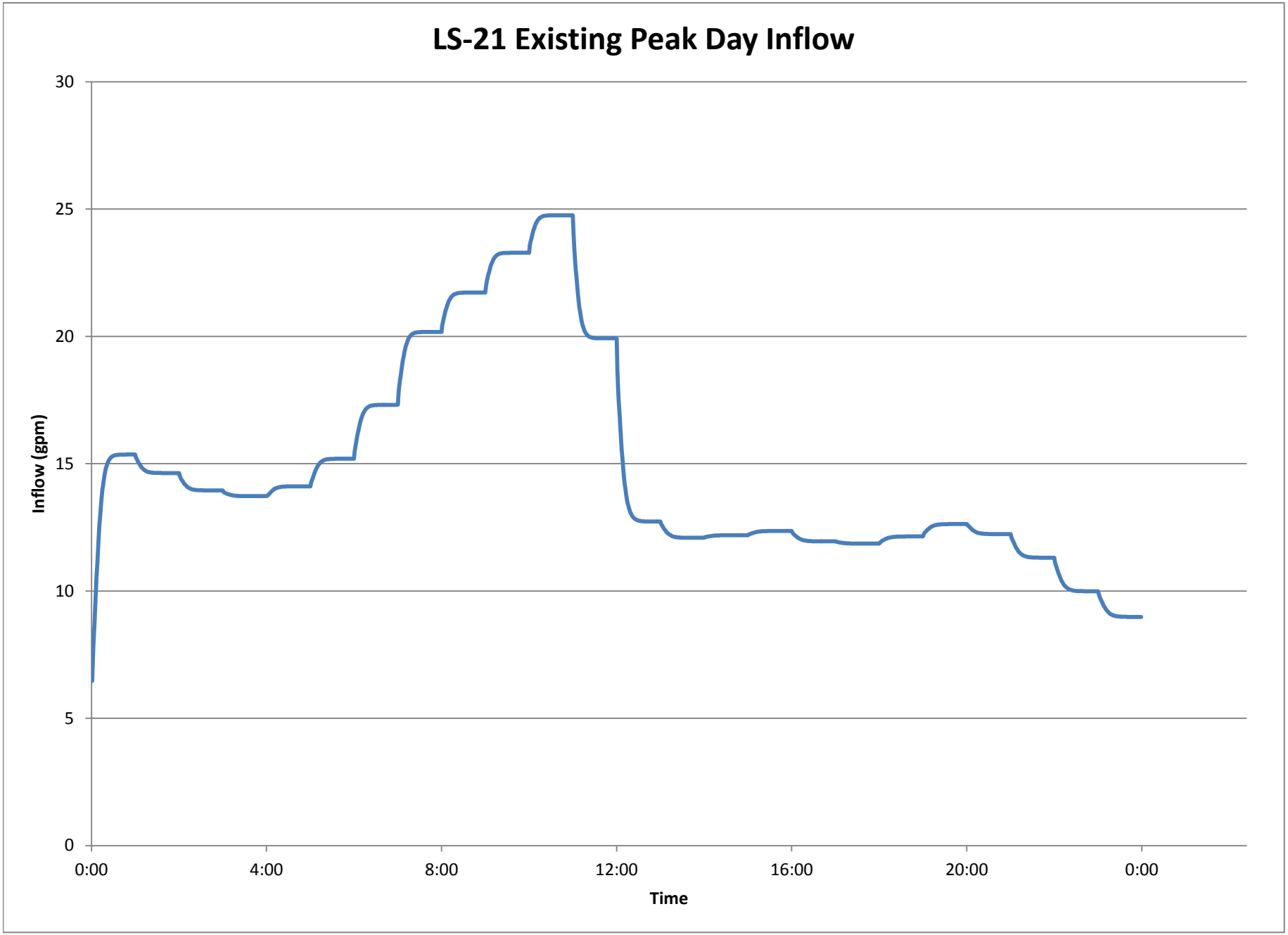
# Sleater Kinney Alignment: 2012 Peak HGL

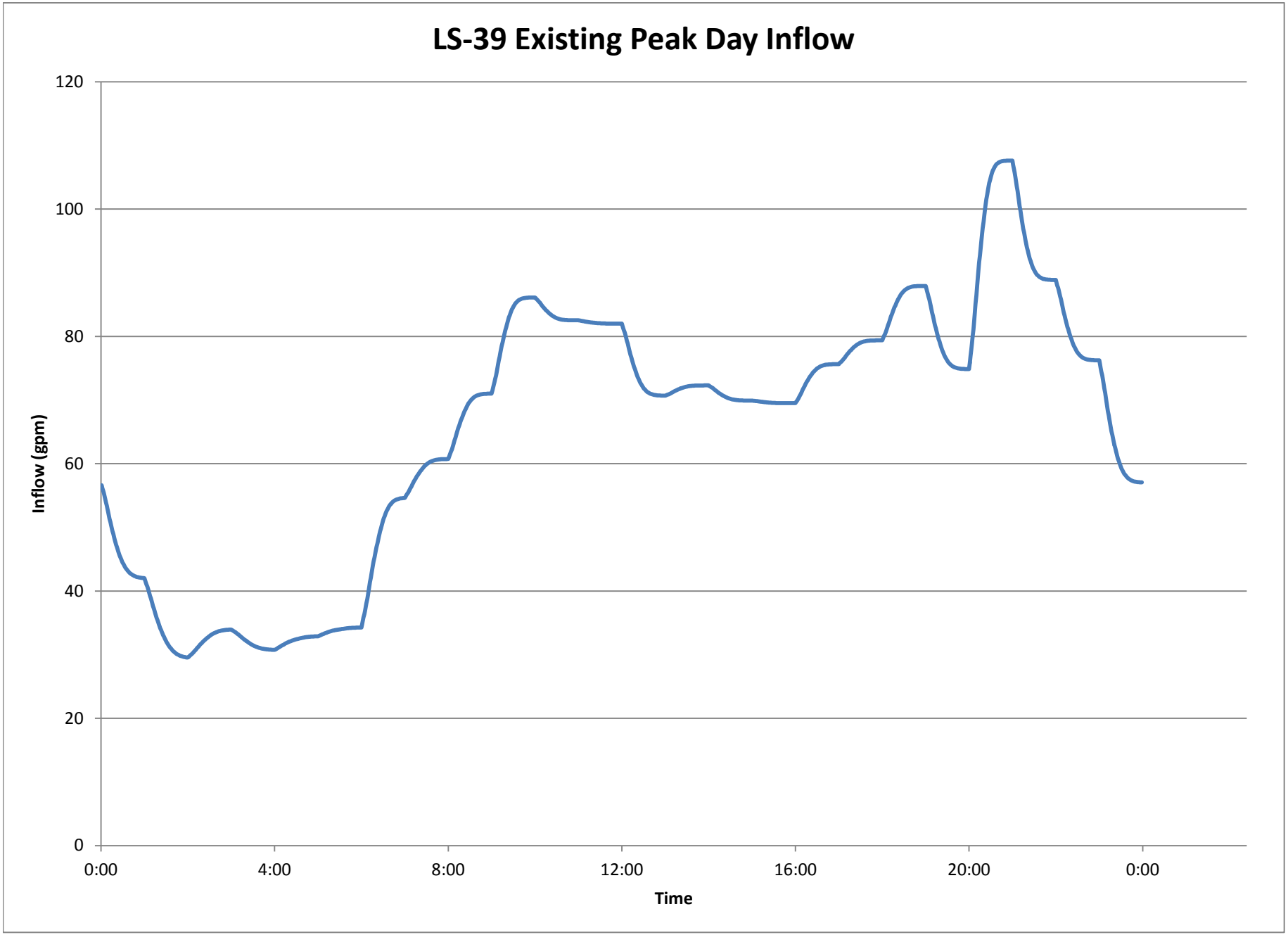



LS-2 Existing Peak Day Inflow
Inflow (gpm)
100
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-3 Existing Peak Day Inflow
1200
1000
800
600
400
200
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-8 Existing Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

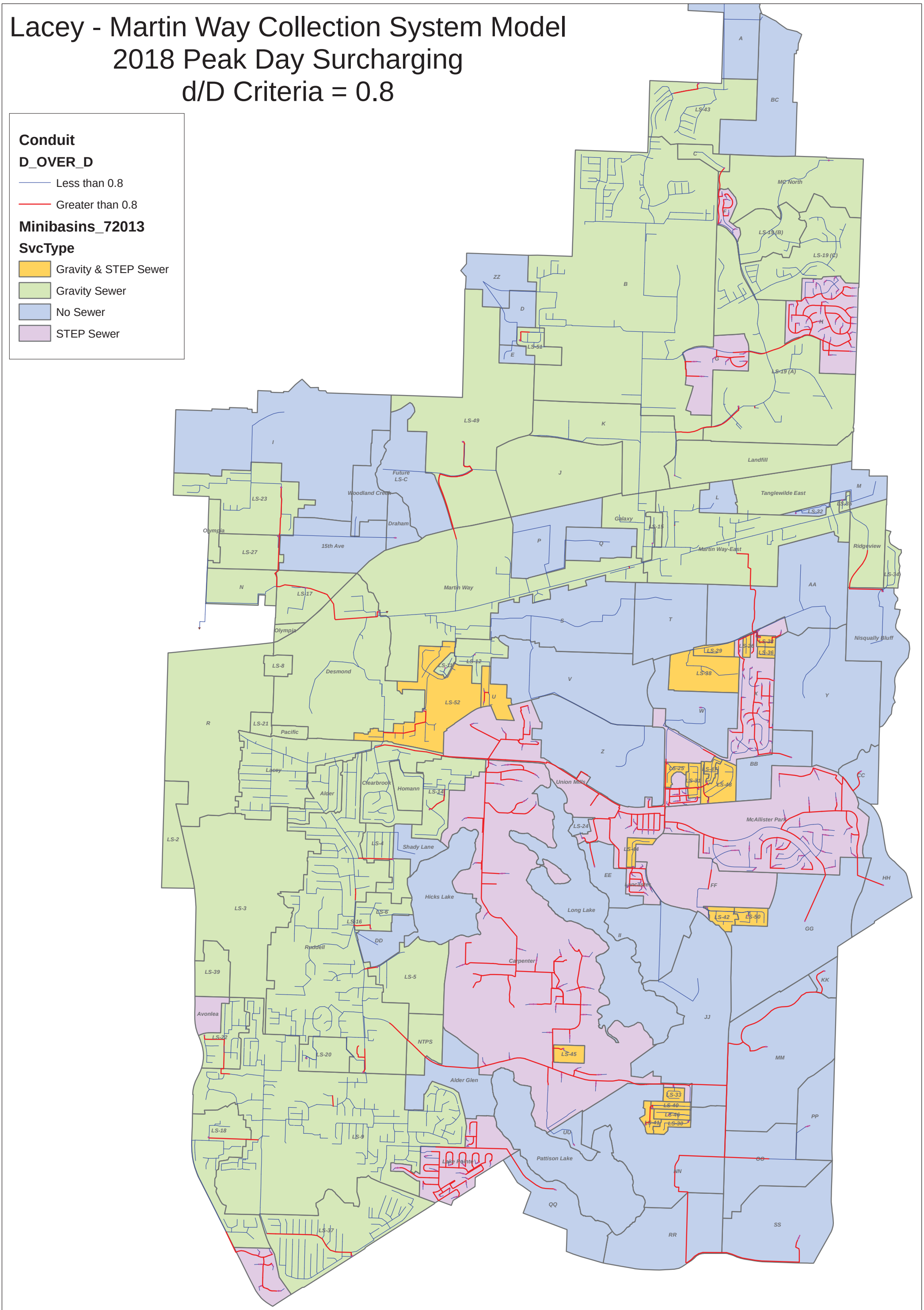

LS-21 Existing Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

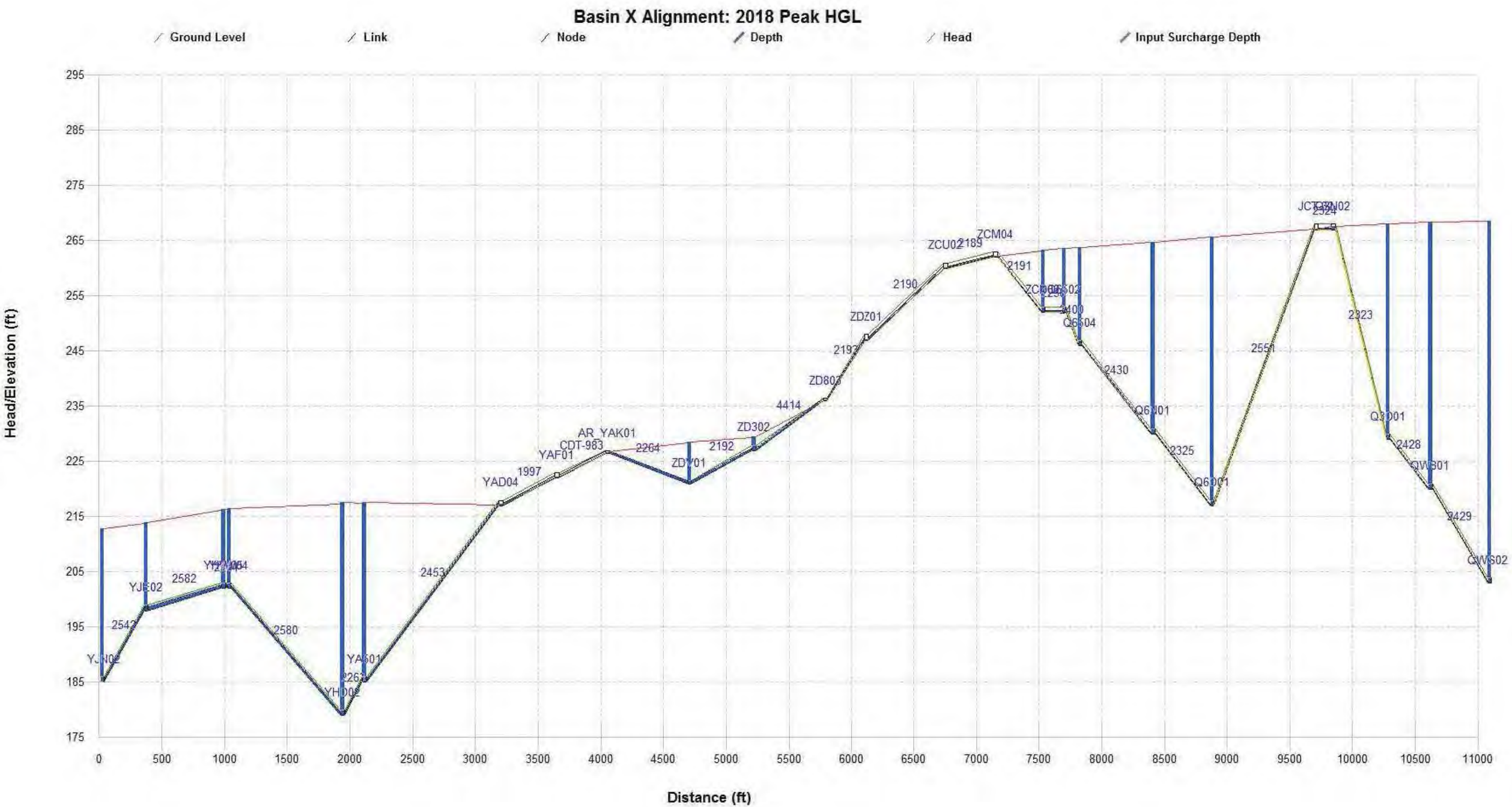

LS-39 Existing Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# 2018 MODEL RESULTS

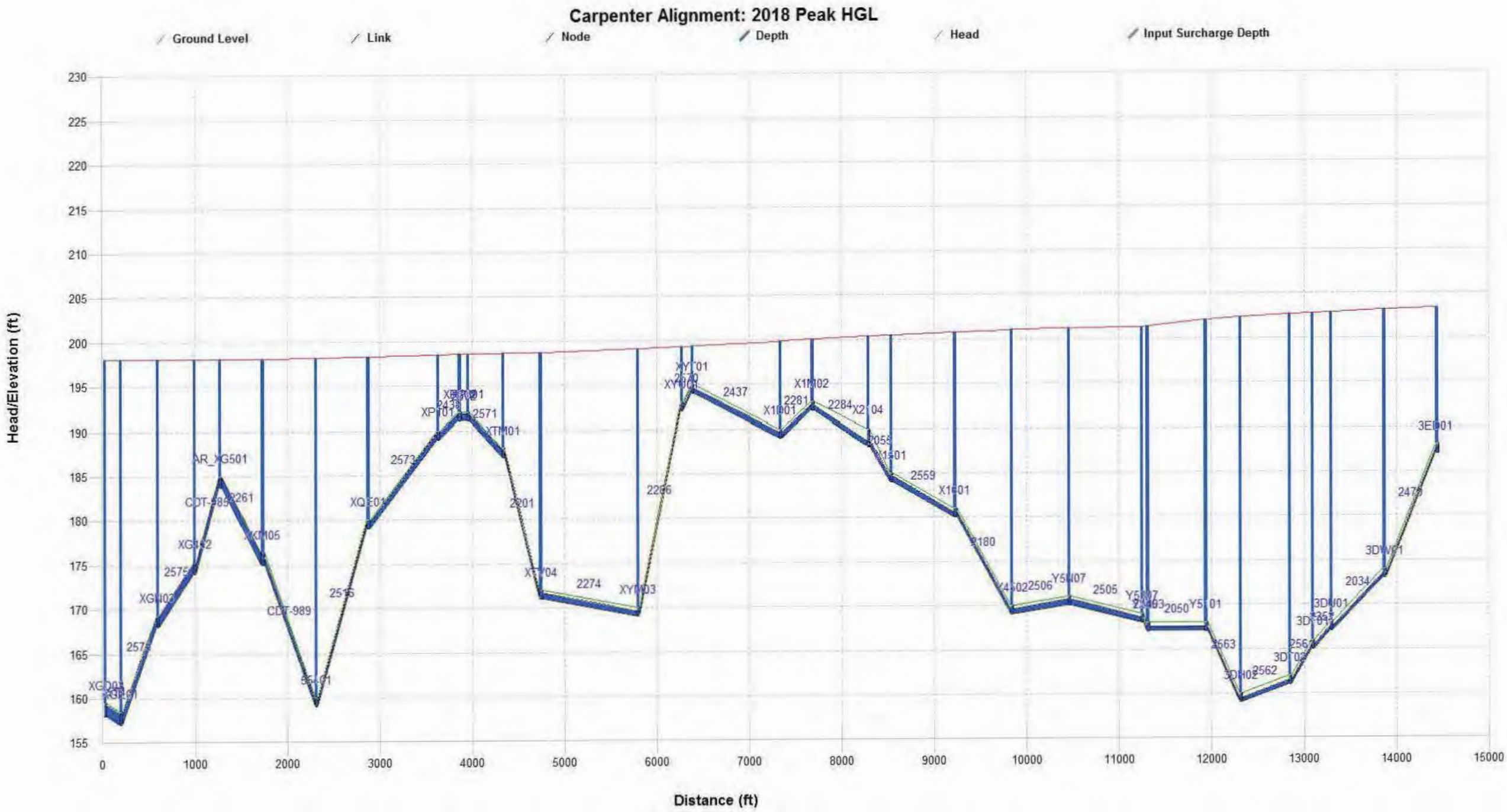
## MARTIN WAY BASIN

# Lacey - Martin Way Collection System Model
## 2018 Peak Day Surcharging
## d/D Criteria = 0.8

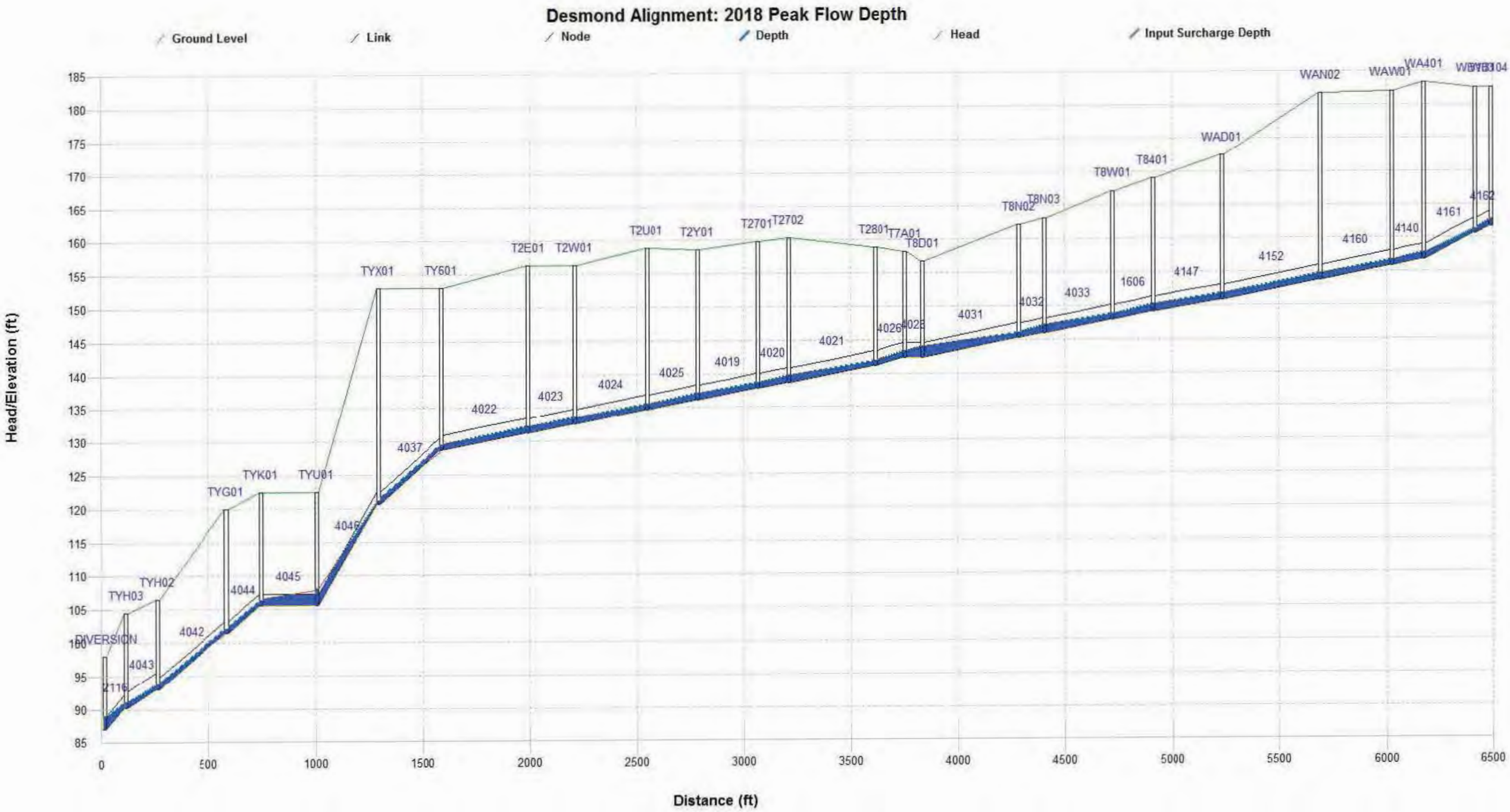


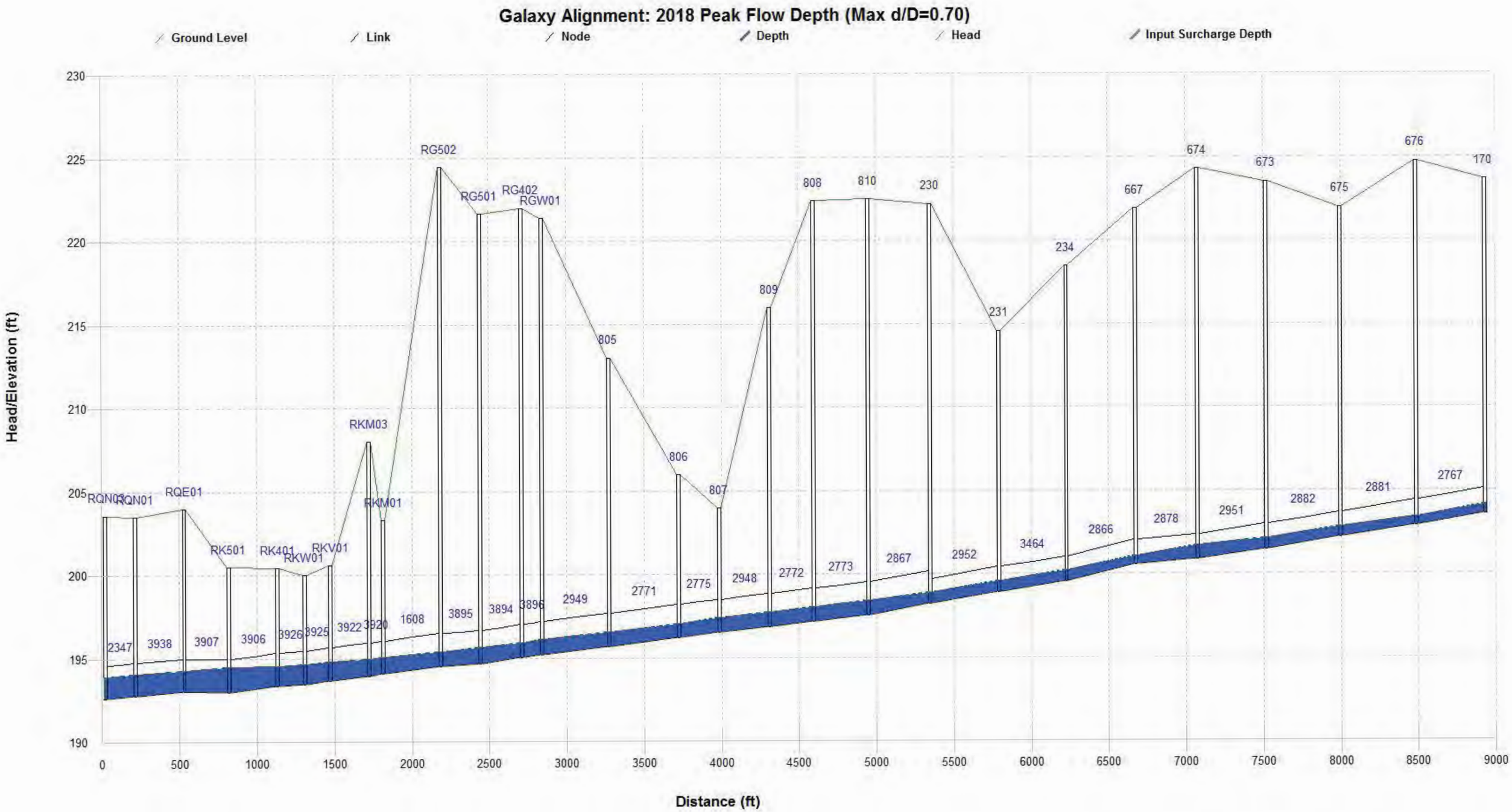


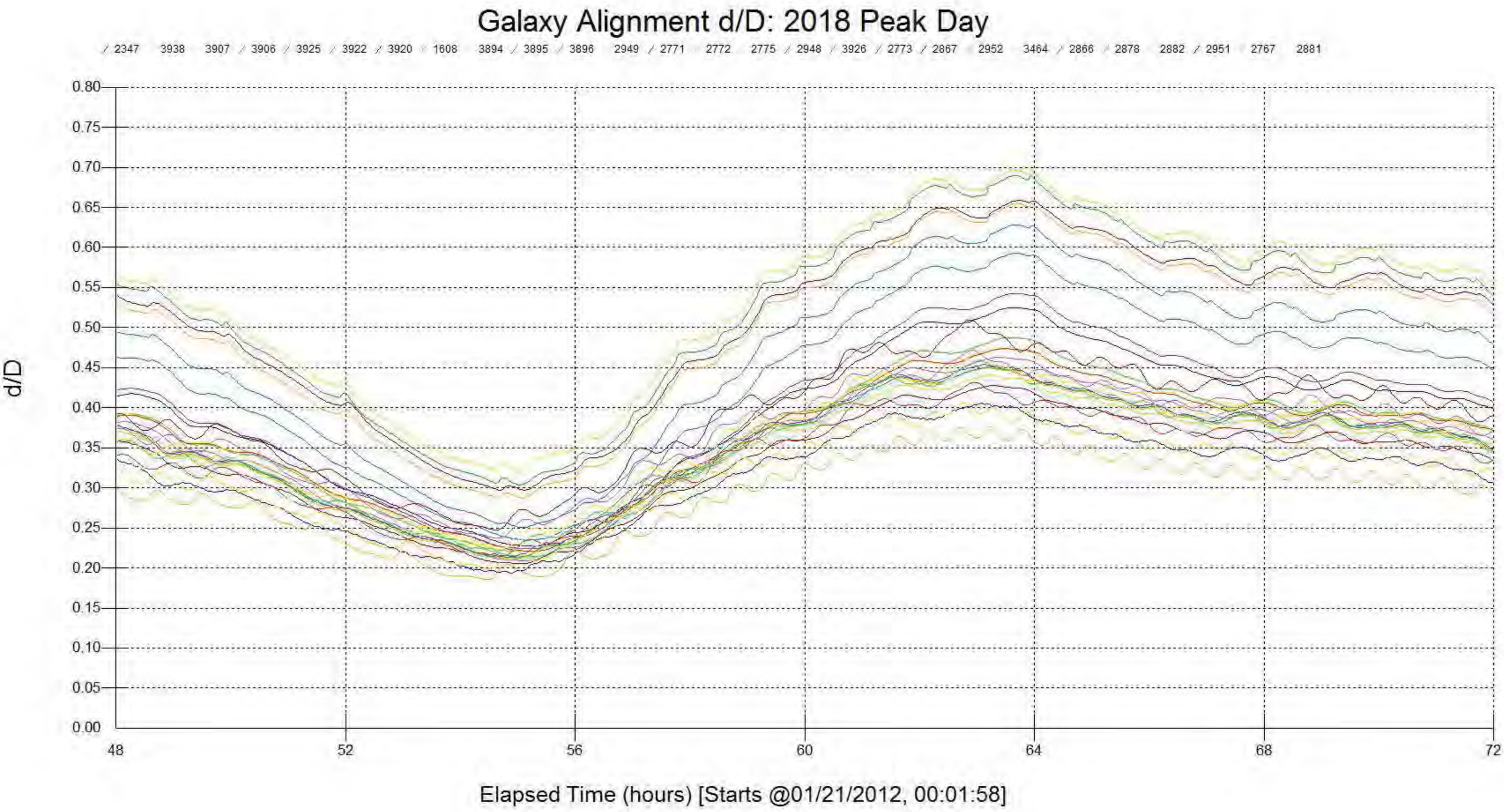
Basin X Alignment: 2018 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
295
285
275
265
255
245
235
225
215
205
195
185
175
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000
10500
11000
YJN02
2542
YJE02
2582
2580
YHD02
2263
YAS01
2453
YAD04
1997
YAF01
CDT-983
AR_YAK01
2264
ZDY01
2192
ZD302
4414
ZD803
2193
ZDZ01
2190
ZCU02
2189
ZCM04
2191
2400
Q6504
2430
Q6001
2325
Q6001
2551
2324
2323
Q3001
2428
QWS01
2429
QWS02



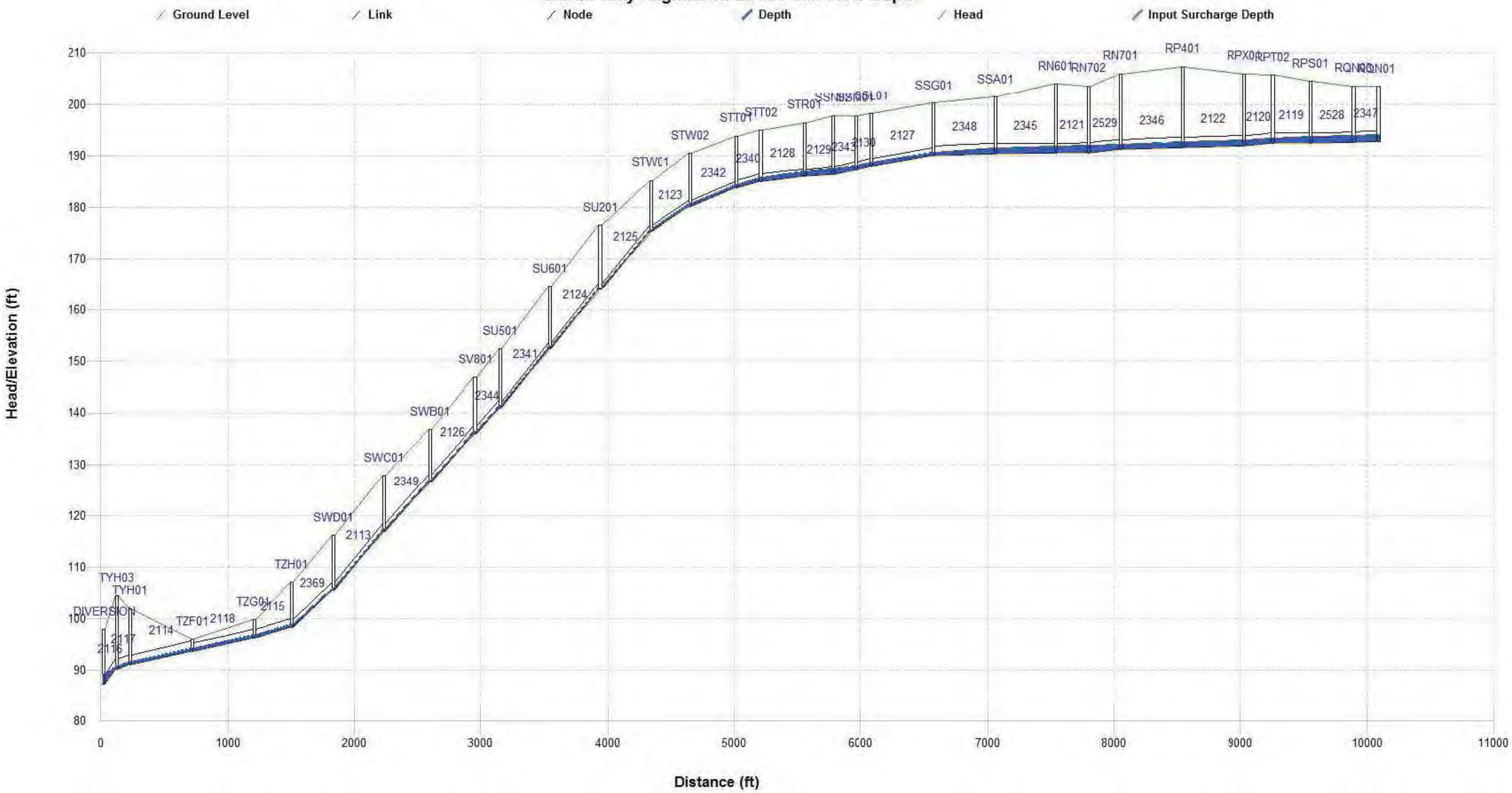
Carpenter Alignment: 2018 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

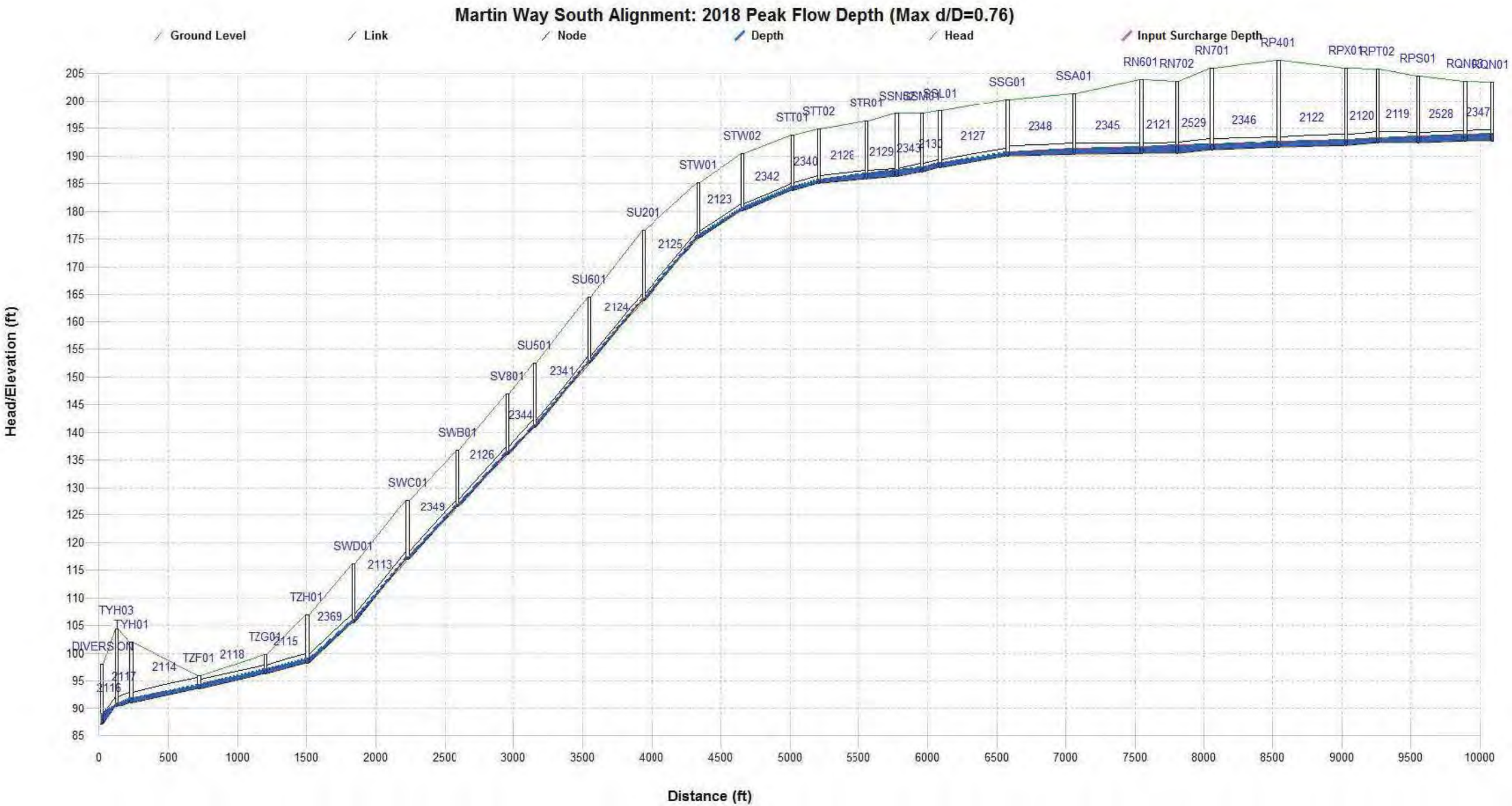

Desmond Alignment: 2018 Peak Flow Depth
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
TYX01
TY601
T2E01
T2W01
T2U01
T2Y01
T2701
T2702
T2801
T7A01
T8D01
T8N02
T8N03
T8W01
T8401
WAD01
WAN02
WAW01
WA401
TYK01
TYU01
TYG01
TYH02
TYH03
DIVERSION
4022
4023
4024
4025
4019
4020
4021
4026
4031
4032
4033
1606
4147
4152
4160
4140
4161
4162
4037
4046
4045
4044
4042
4043
2116


Galaxy Alignment: 2018 Peak Flow Depth (Max d/D=0.70)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
230
225
220
215
210
205
200
195
190
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
RQN03
RQN01
RQE01
RK501
RK401
RKW01
RKV01
RKM03
RKM01
RG502
RG501
RG402
RGW01
805
806
807
808
809
810
230
231
234
667
674
673
675
676
170
2347
3938
3907
3906
3926
3925
3922
3920
1608
3895
3894
3896
2949
2771
2775
2948
2772
2773
2867
2952
3464
2866
2878
2951
2882
2881
2767

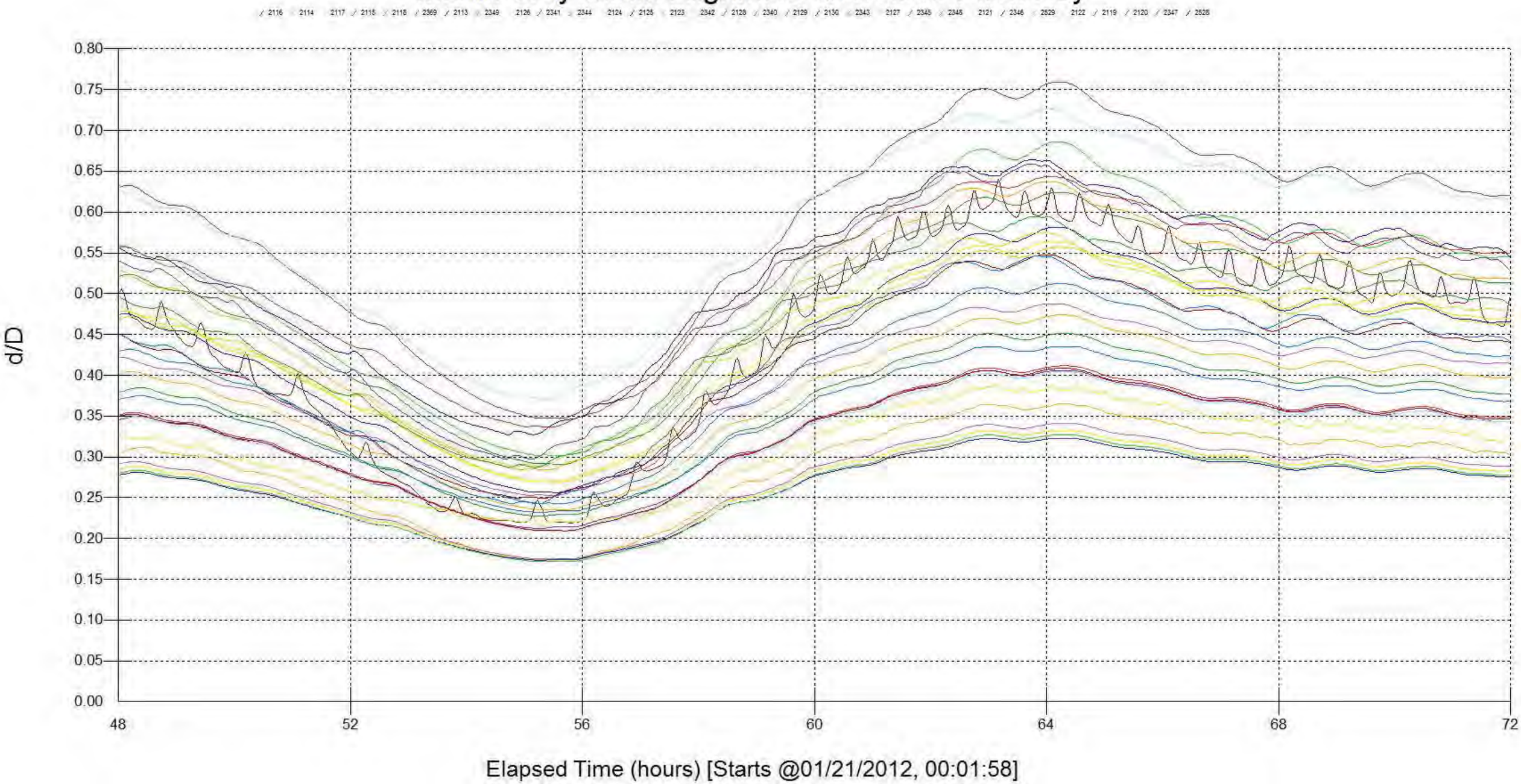

Galaxy Alignment d/D: 2018 Peak Day
2347 3938 3907 3906 3925 3922 3920 1608 3894 3895 3896 2949 2771 2772 2775 2948 3926 2773 2867 2952 3464 2866 2878 2882 2951 2767 2881
d/D
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
48
52
56
60
64
68
72
Elapsed Time (hours) [Starts @01/21/2012, 00:01:58]

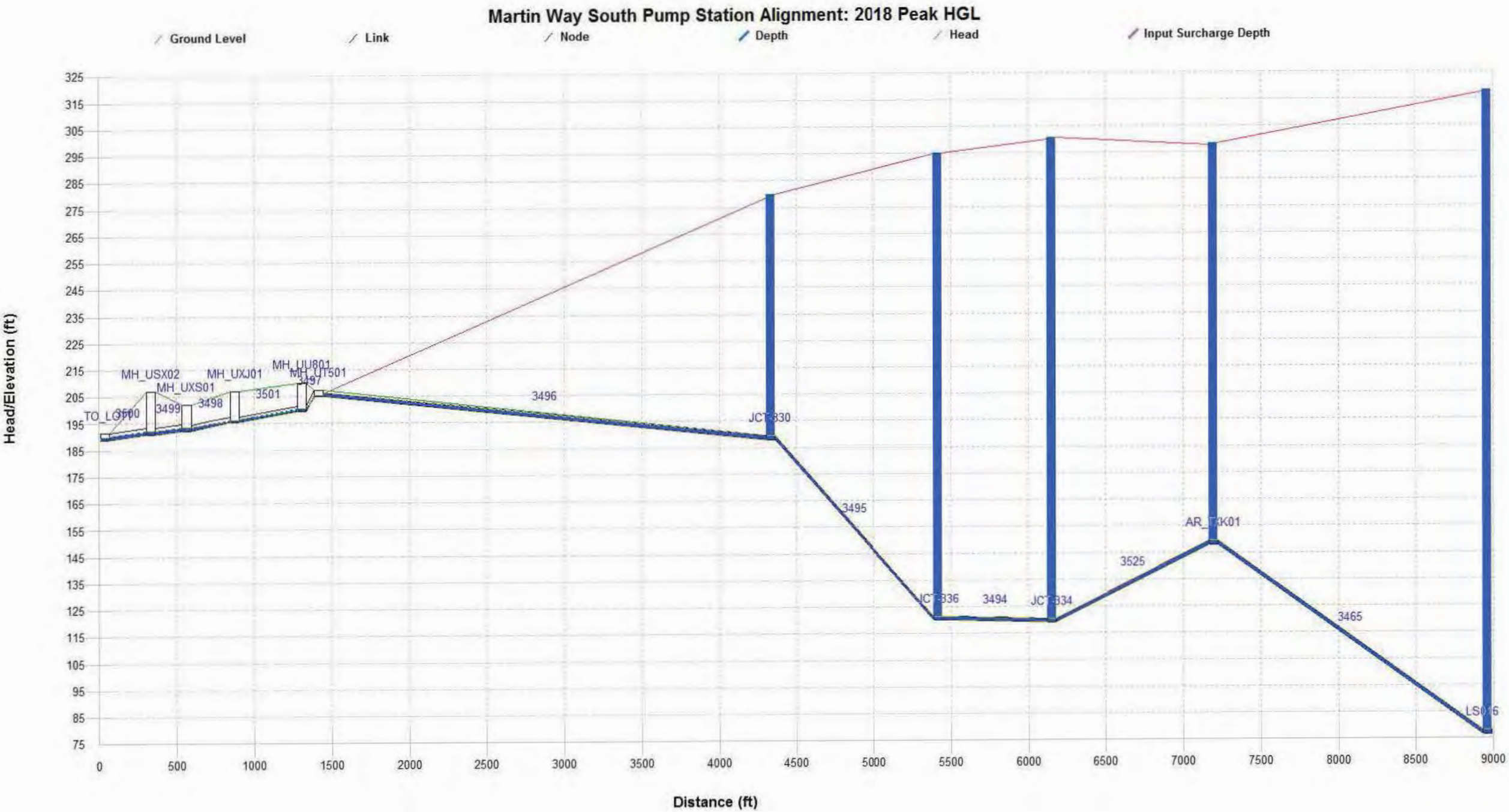
# Martin Way Alignment: 2018 Peak Flow Depth

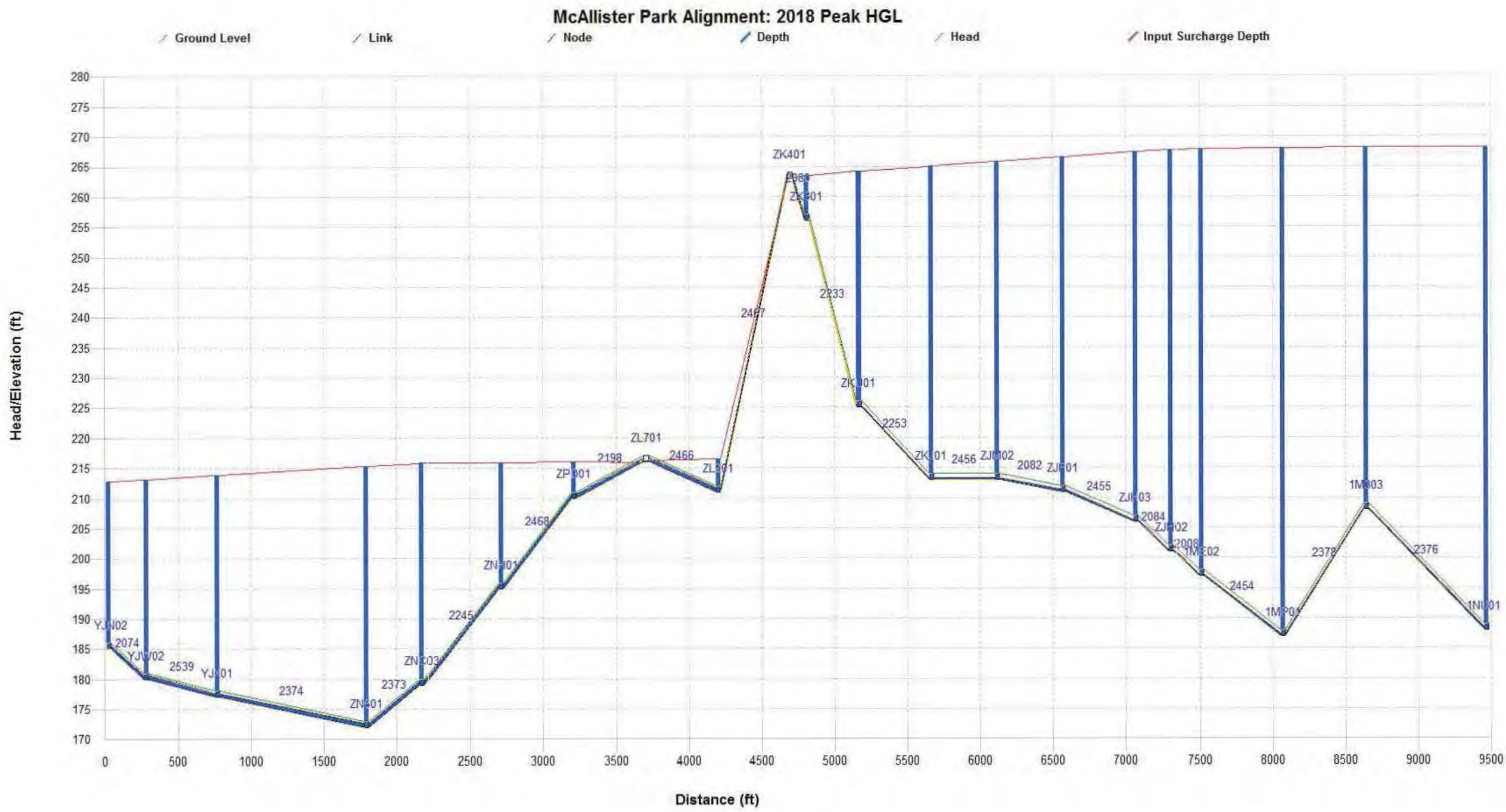



Martin Way South Alignment: 2018 Peak Flow Depth (Max d/D=0.76)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
TYH03
TYH01
DIVERSION
TZF01
TZG01
TZH01
SWD01
SWC01
SWB01
SV801
SU501
SU601
SU201
STW01
STW02
STT01
STT02
STR01
SSG01
SSA01
RN601
RN702
RN701
RP401
RPX01
RPT02
RPS01
2116
2117
2114
2118
2115
2369
2113
2349
2126
2344
2341
2124
2125
2123
2342
2340
2128
2129
2343
2130
2127
2348
2345
2121
2529
2346
2122
2120
2119
2528
2347

# Martin Way South Alignment d/D: 2018 Peak Day

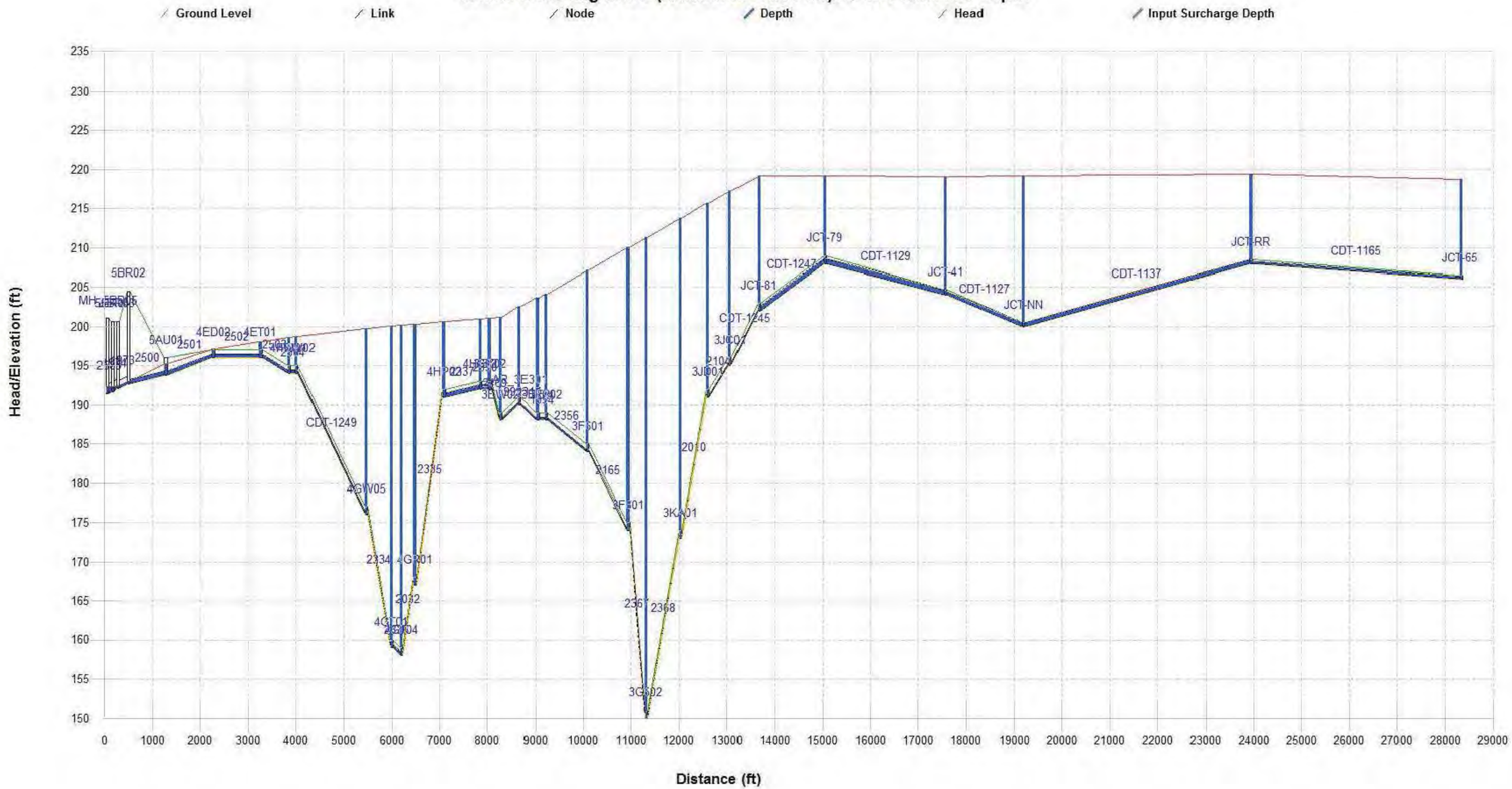


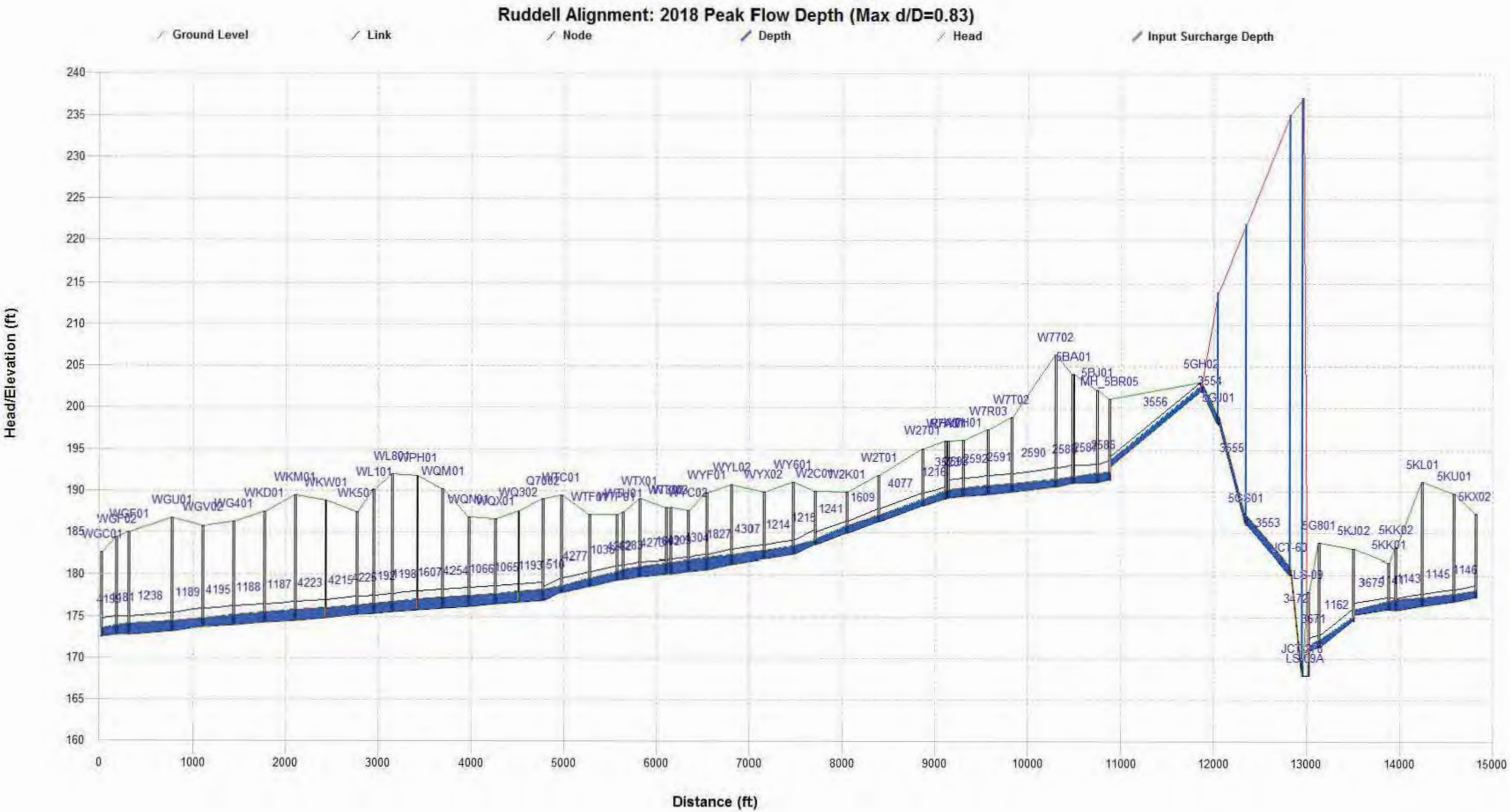

Martin Way South Pump Station Alignment: 2018 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
MH_USX02
MH_UXS01
MH_UXJ01
MH_UU801
MH_UT501
3500
3499
3498
3501
3497
3496
JCT830
3495
JCT836
3494
JCT834
3525
AR_TK01
3465
LS016



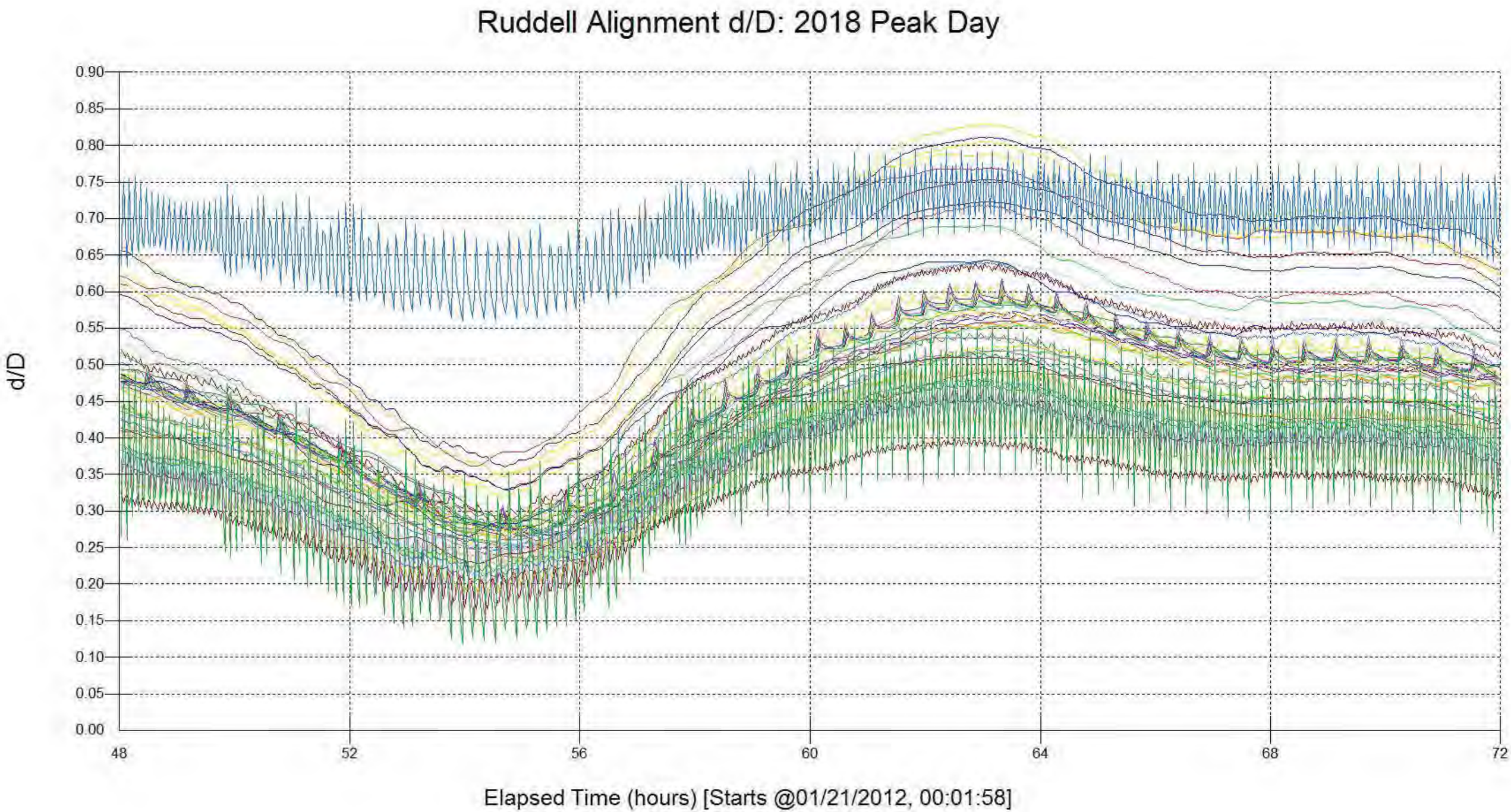
McAllister Park Alignment: 2018 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
ZK401
2233
2253
2456
2082
2455
2084
2454
2376
2466
2198
2468
2245
2373
2374
2539
2074
ZL701

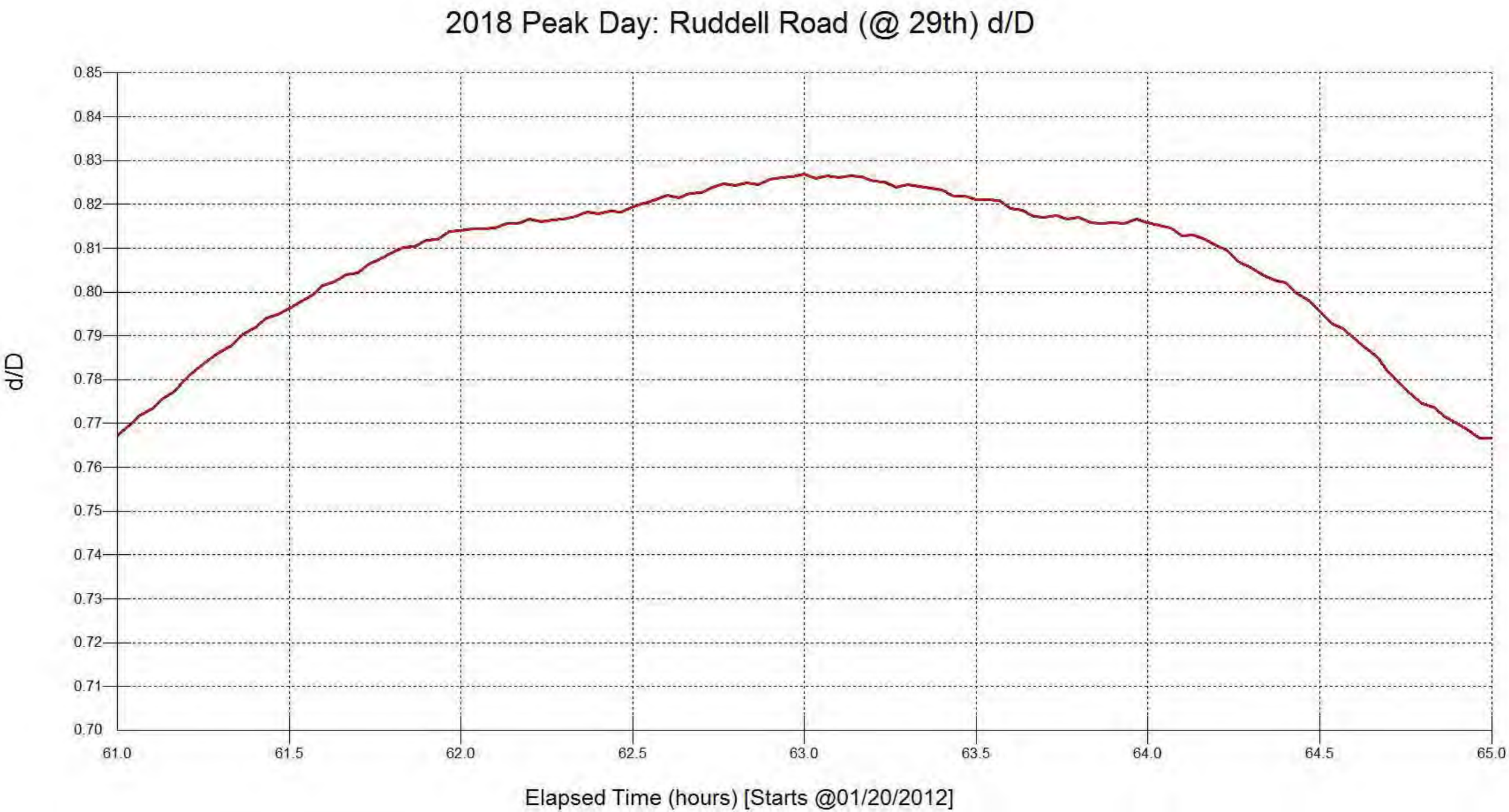
# Mullen Road Alignment (Ruddell to Basin SS): 2018 Peak Flow Depth

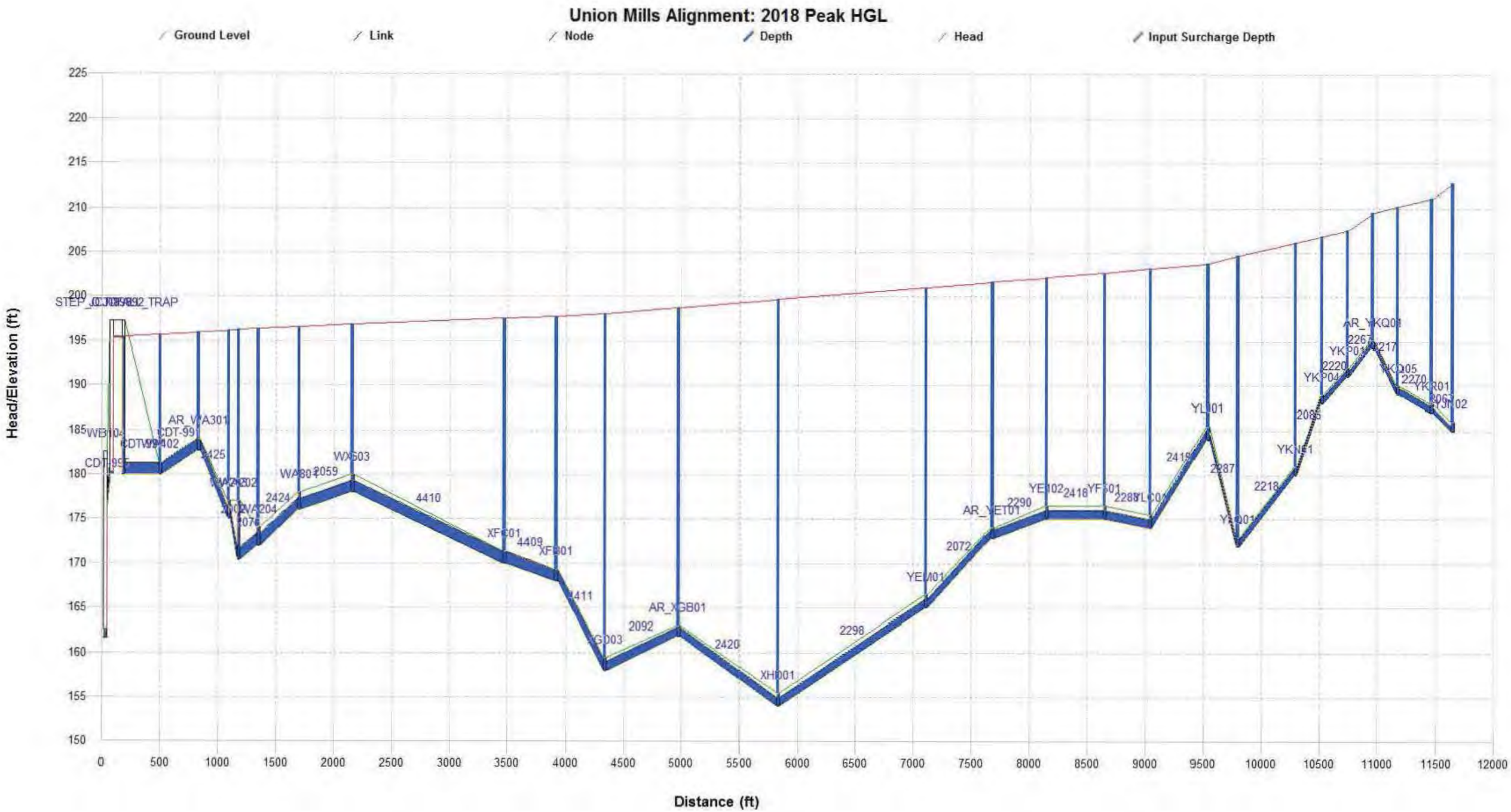




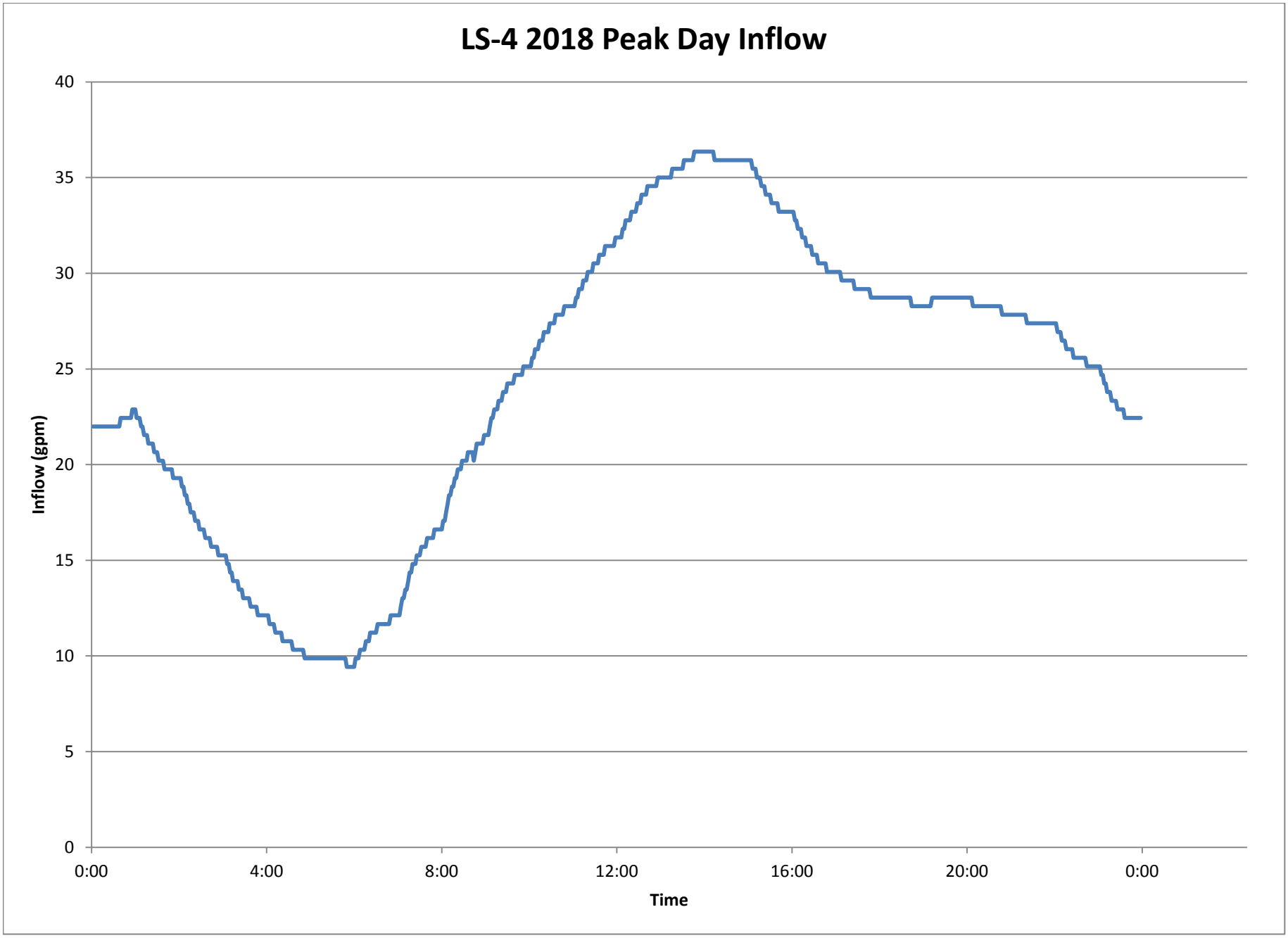
Ruddell Alignment: 2018 Peak Flow Depth (Max d/D=0.83)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

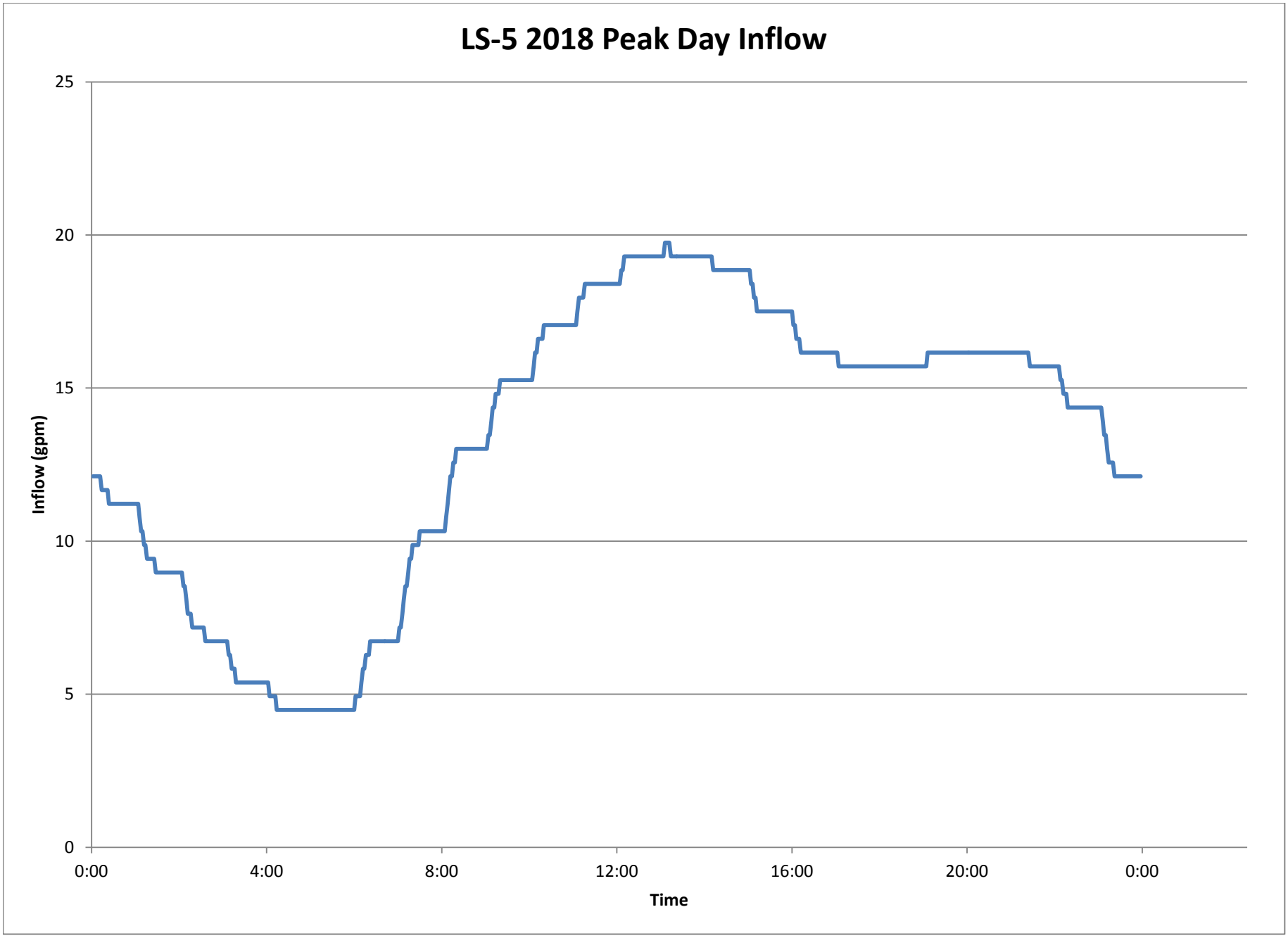

Ruddell Alignment d/D: 2018 Peak Day
d/D
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
48
52
56
60
64
68
72
Elapsed Time (hours) [Starts @01/21/2012, 00:01:58]

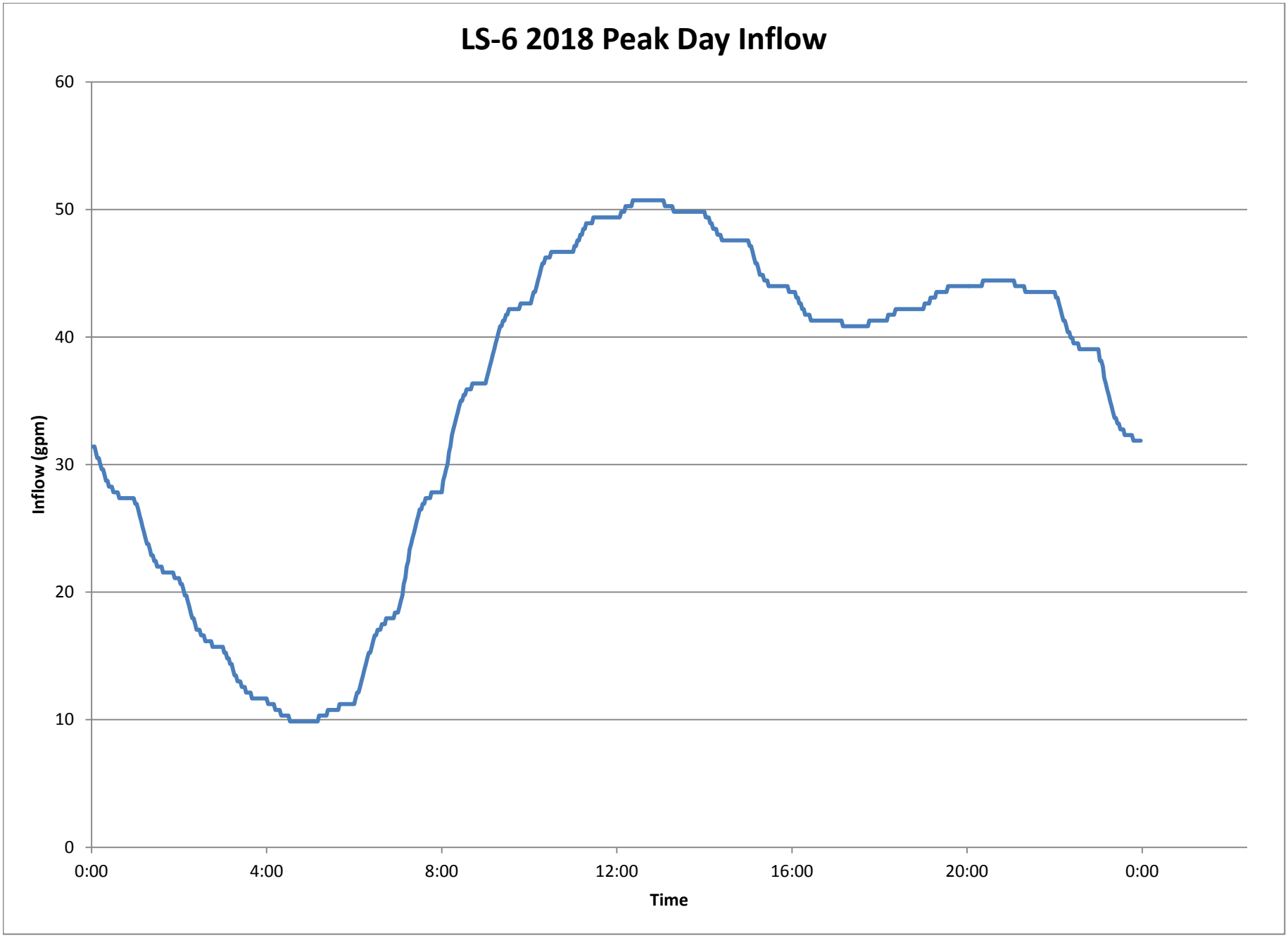

2018 Peak Day: Ruddell Road (@ 29th) d/D
d/D
0.85
0.84
0.83
0.82
0.81
0.80
0.79
0.78
0.77
0.76
0.75
0.74
0.73
0.72
0.71
0.70
61.0
61.5
62.0
62.5
63.0
63.5
64.0
64.5
65.0
Elapsed Time (hours) [Starts @01/20/2012]

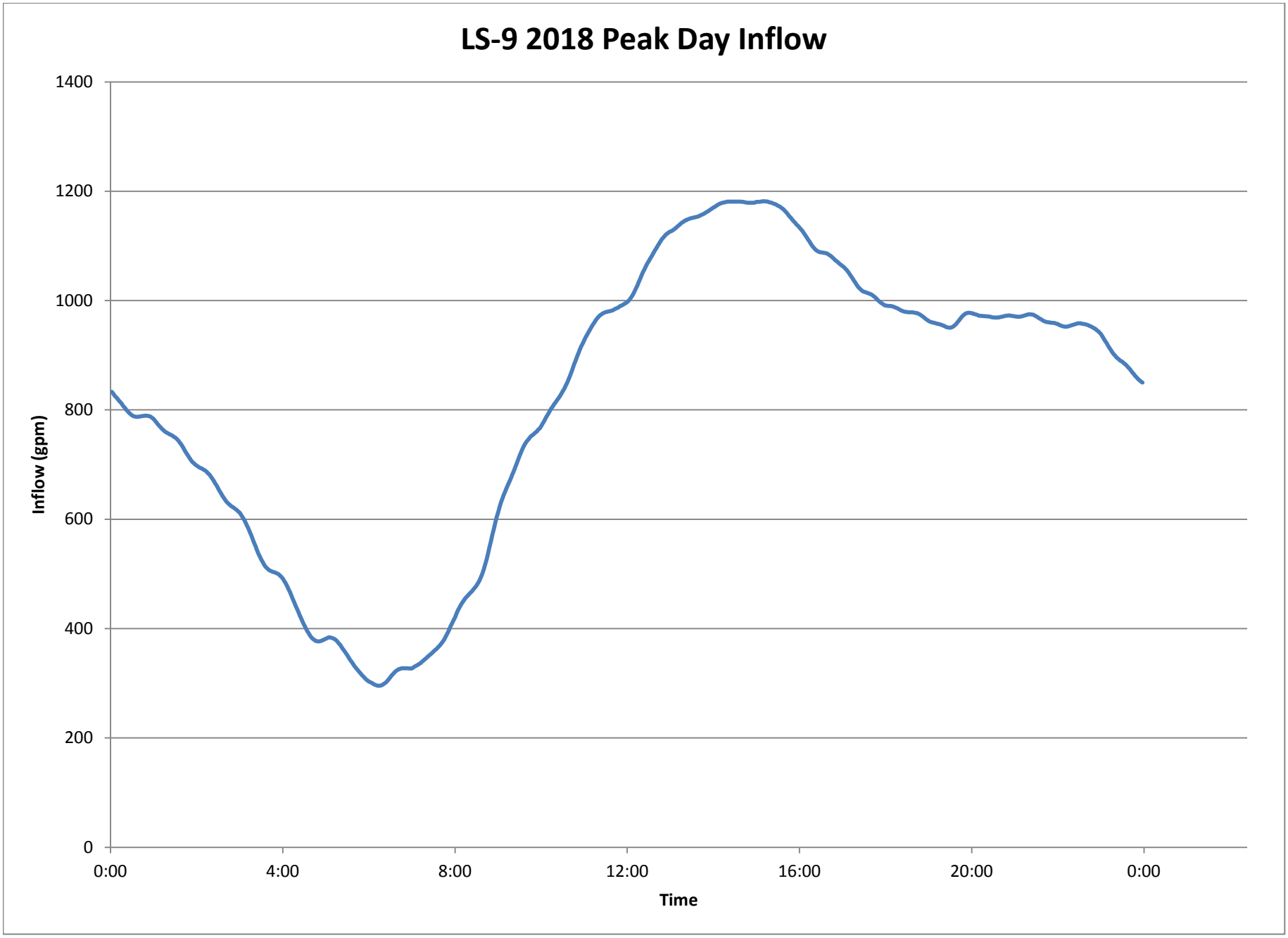


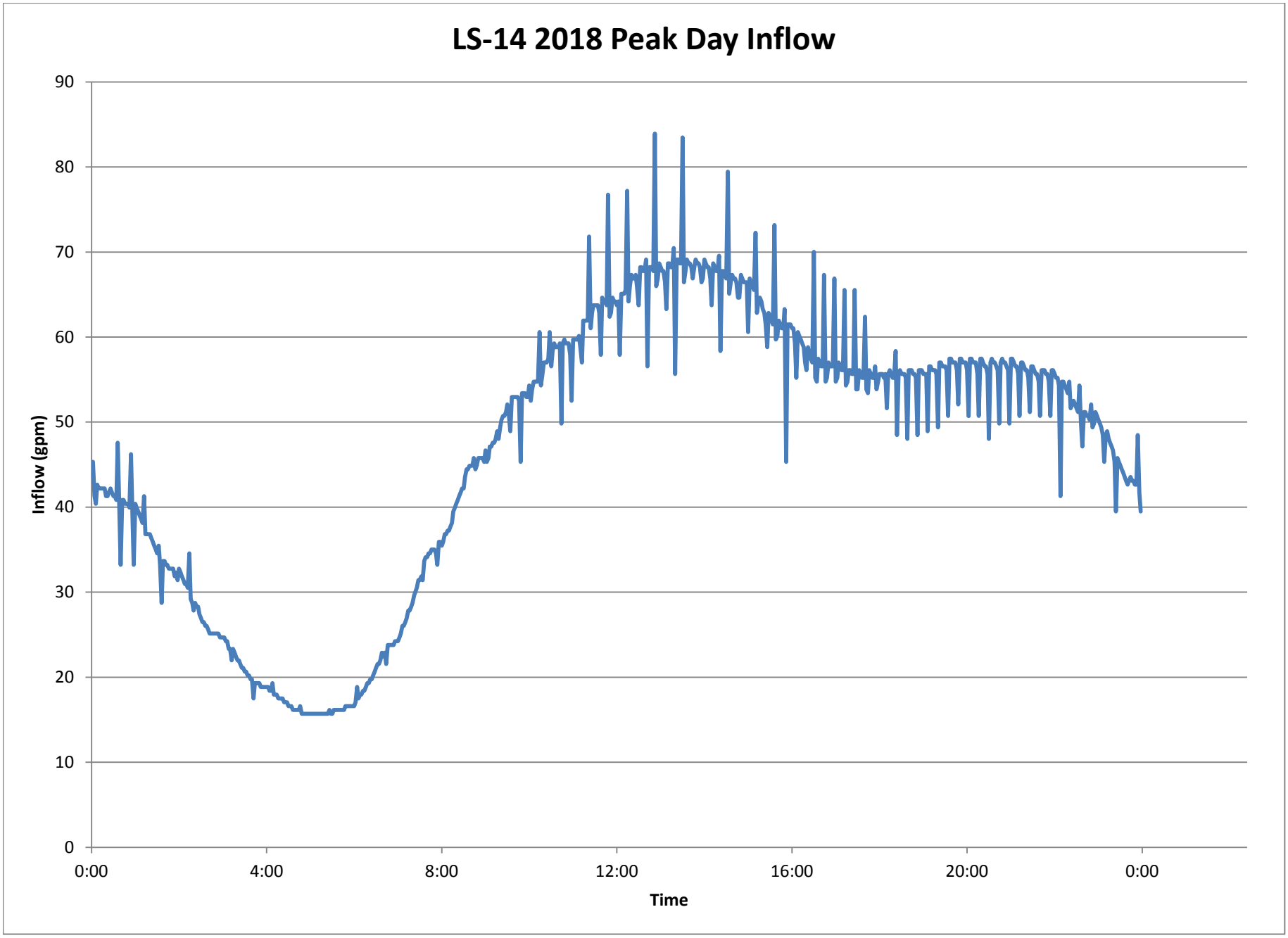
Union Mills Alignment: 2018 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
225
220
215
210
205
200
195
190
185
180
175
170
165
160
155
150
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000
10500
11000
11500
12000
AR_WA301
CDT-99
WX603
2059
4410
4409
2424
2092
2420
2298
2072
2290
2418
2287
2218
2220
2217
2270

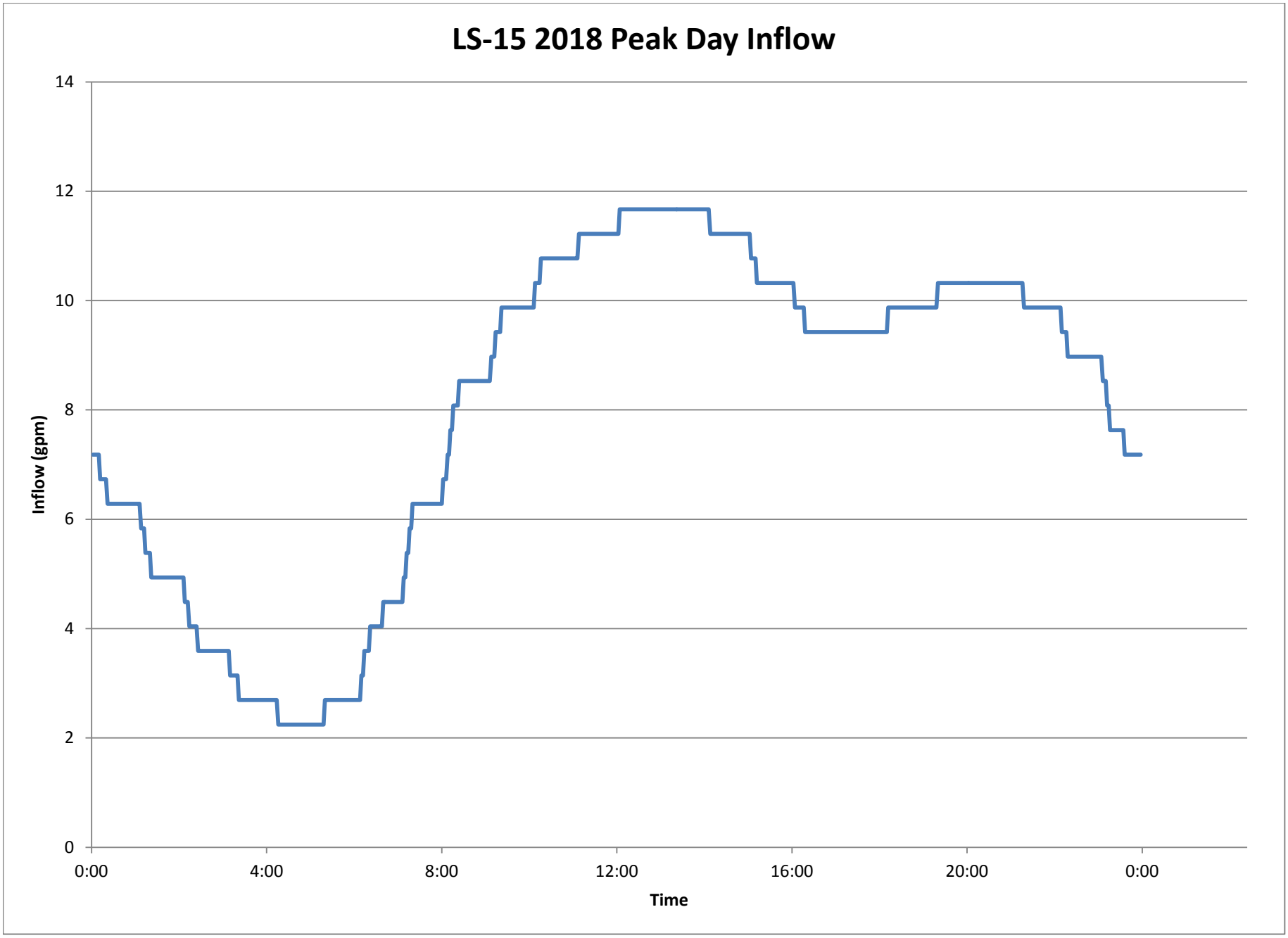

LS-4 2018 Peak Day Inflow
Inflow (gpm)
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

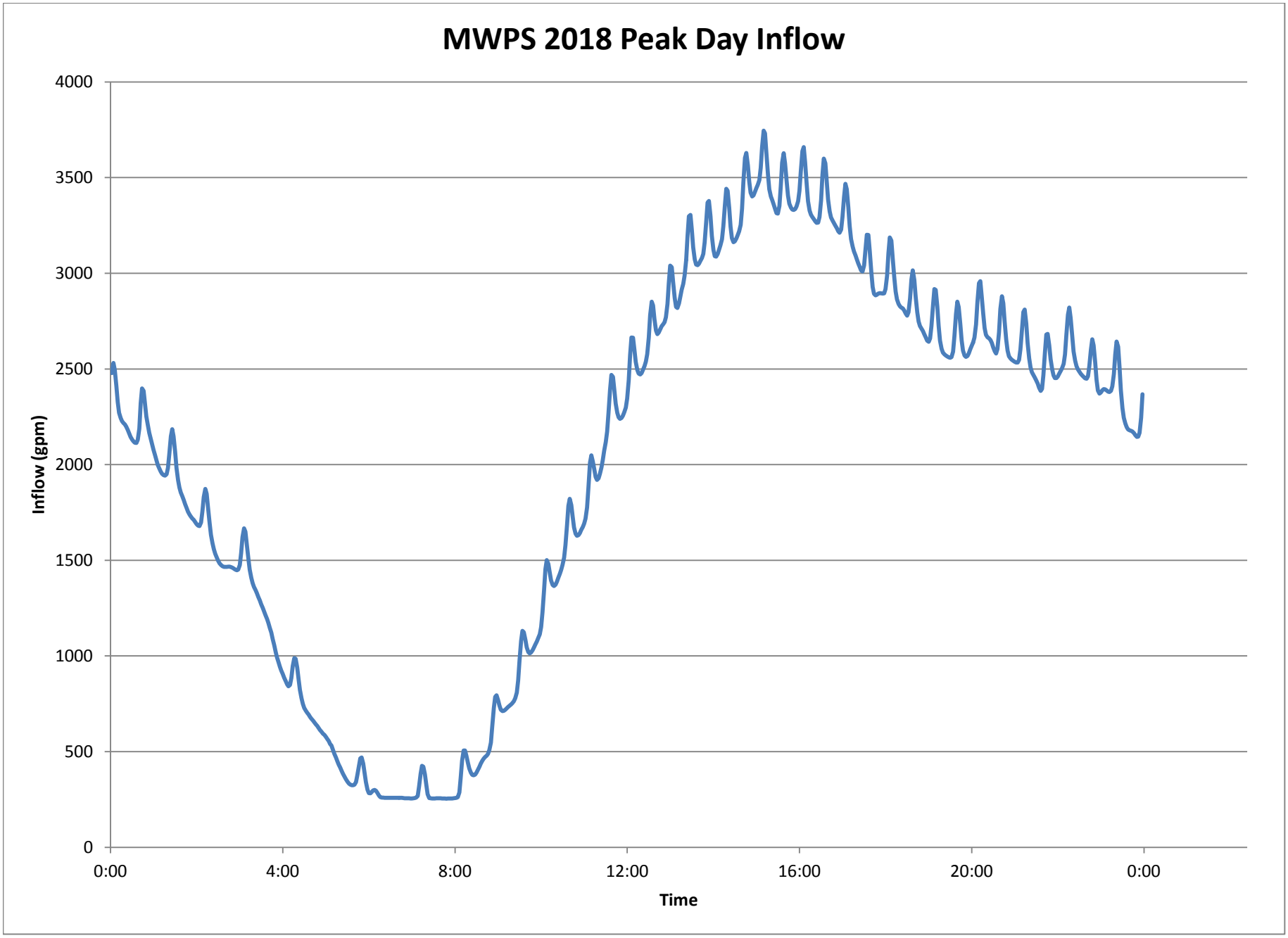

LS-5 2018 Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

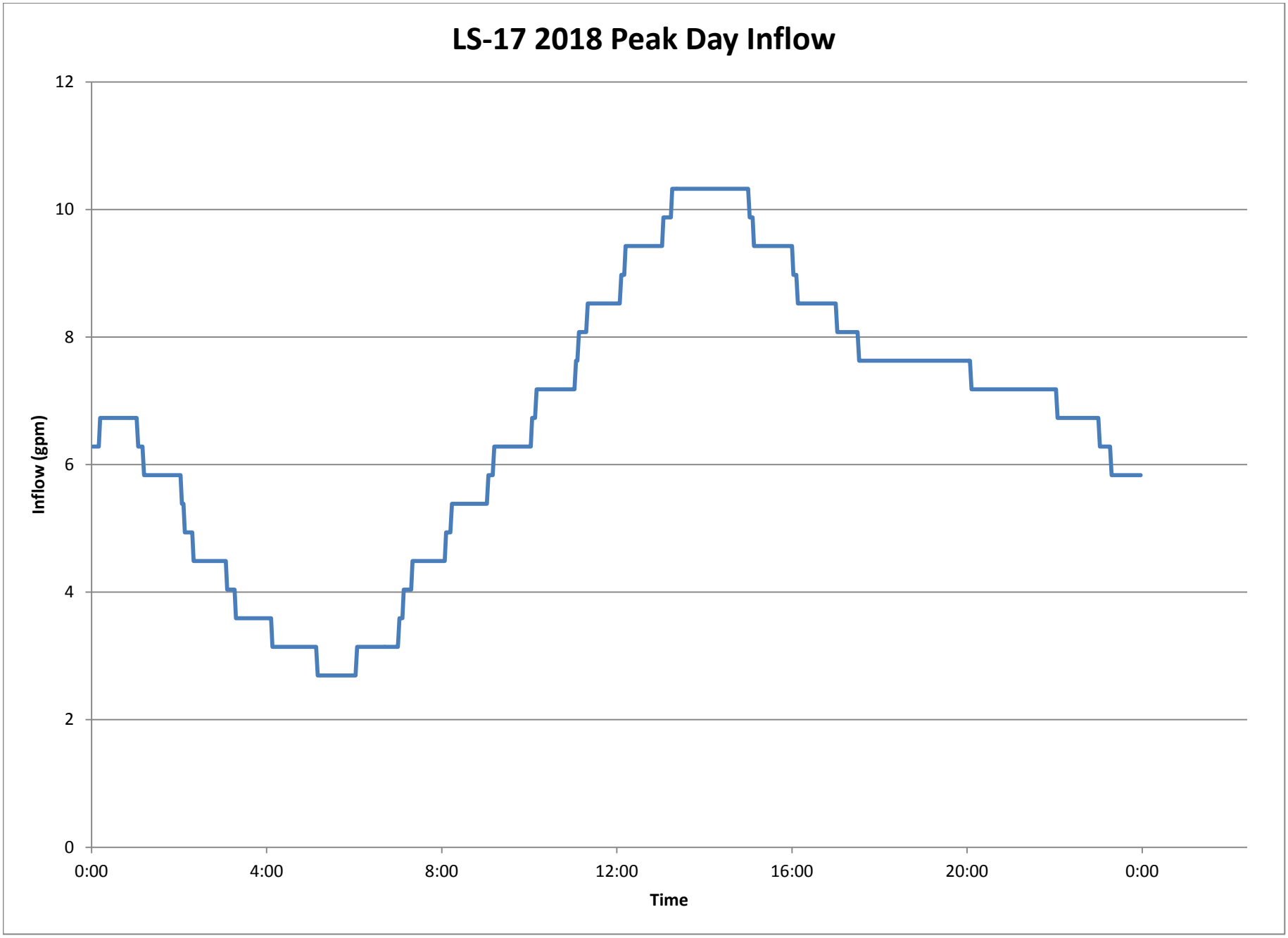

LS-6 2018 Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

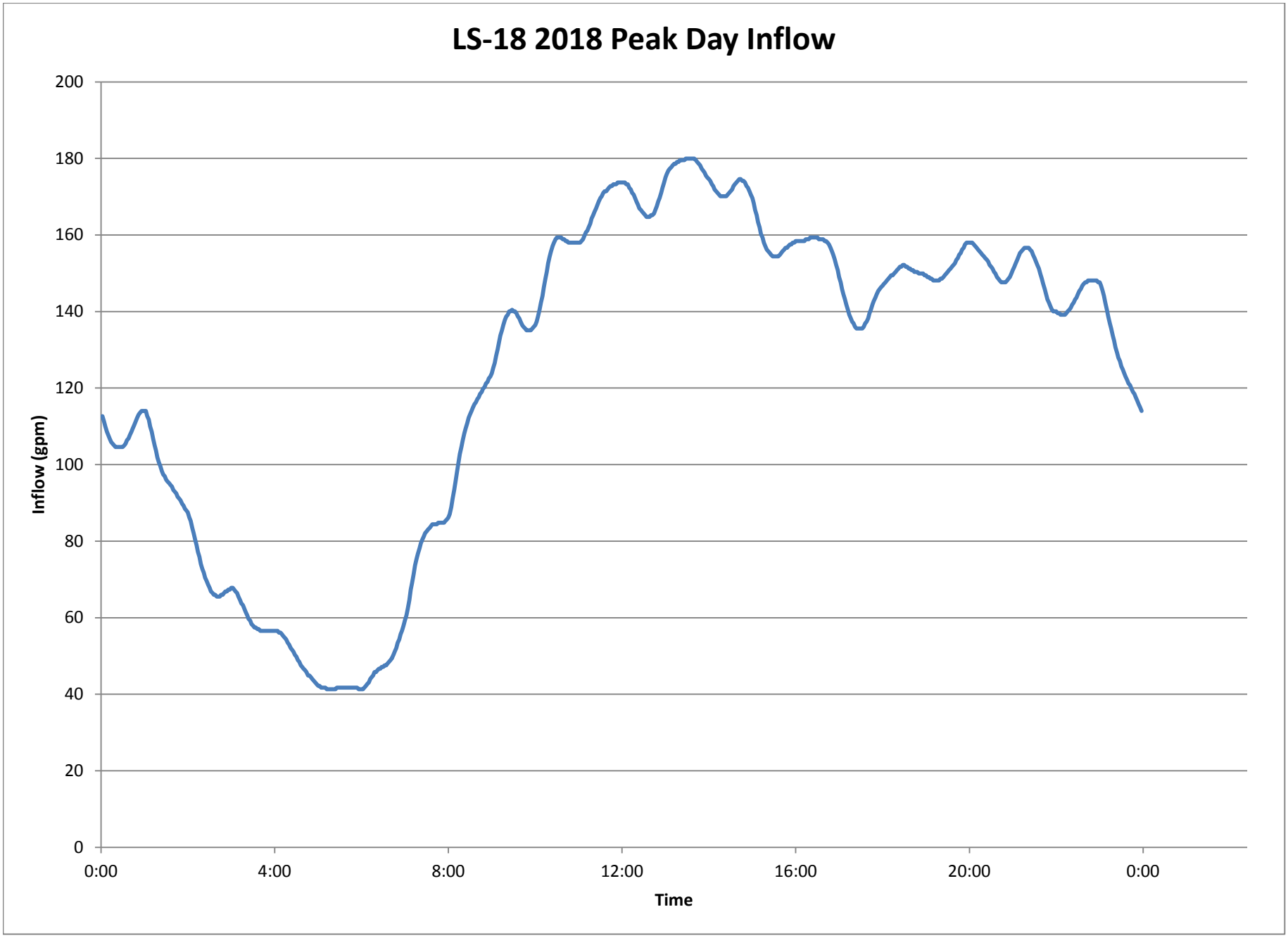

LS-9 2018 Peak Day Inflow
1400
1200
1000
800
600
400
200
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

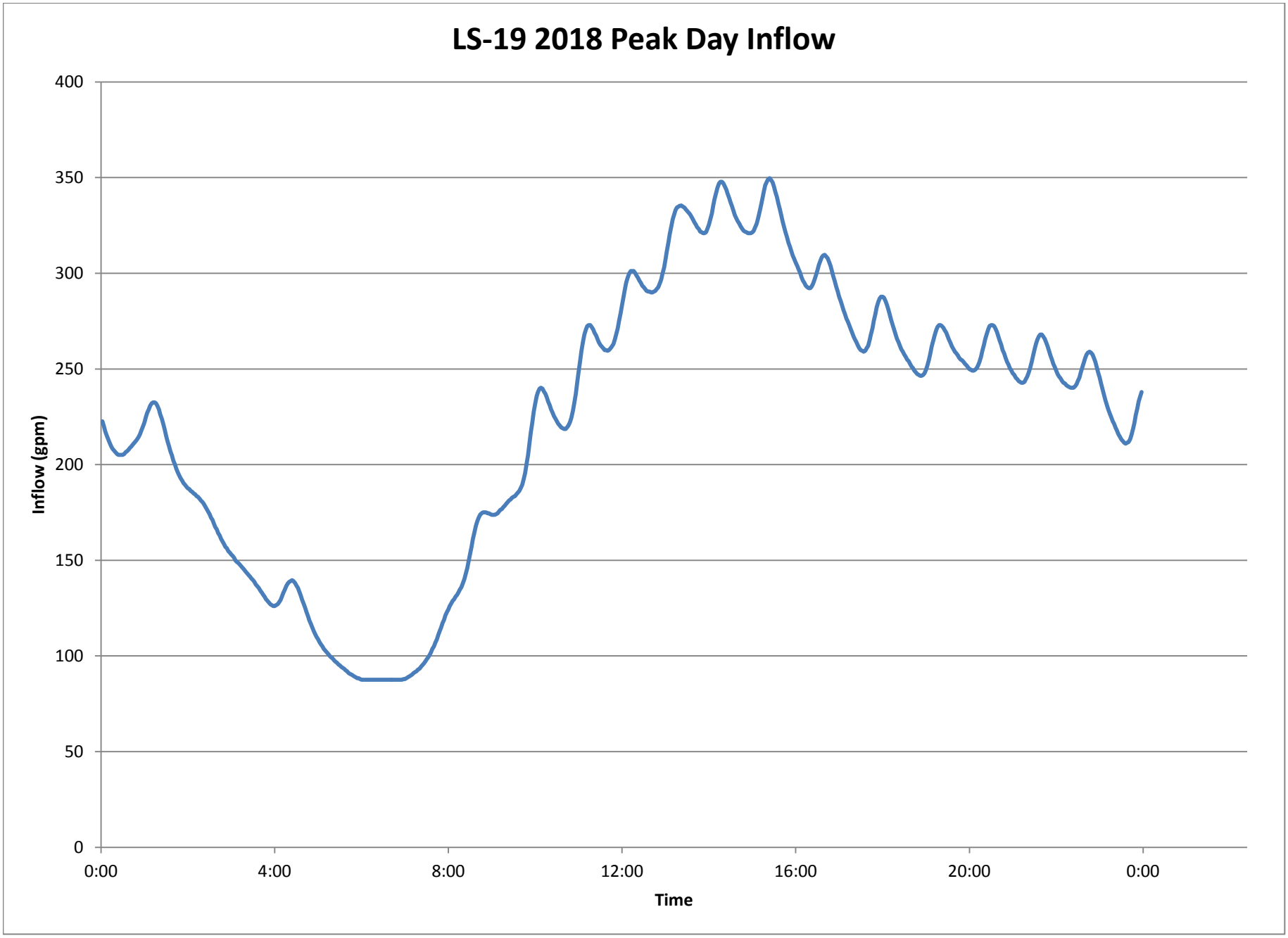

LS-14 2018 Peak Day Inflow
Inflow (gpm)
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

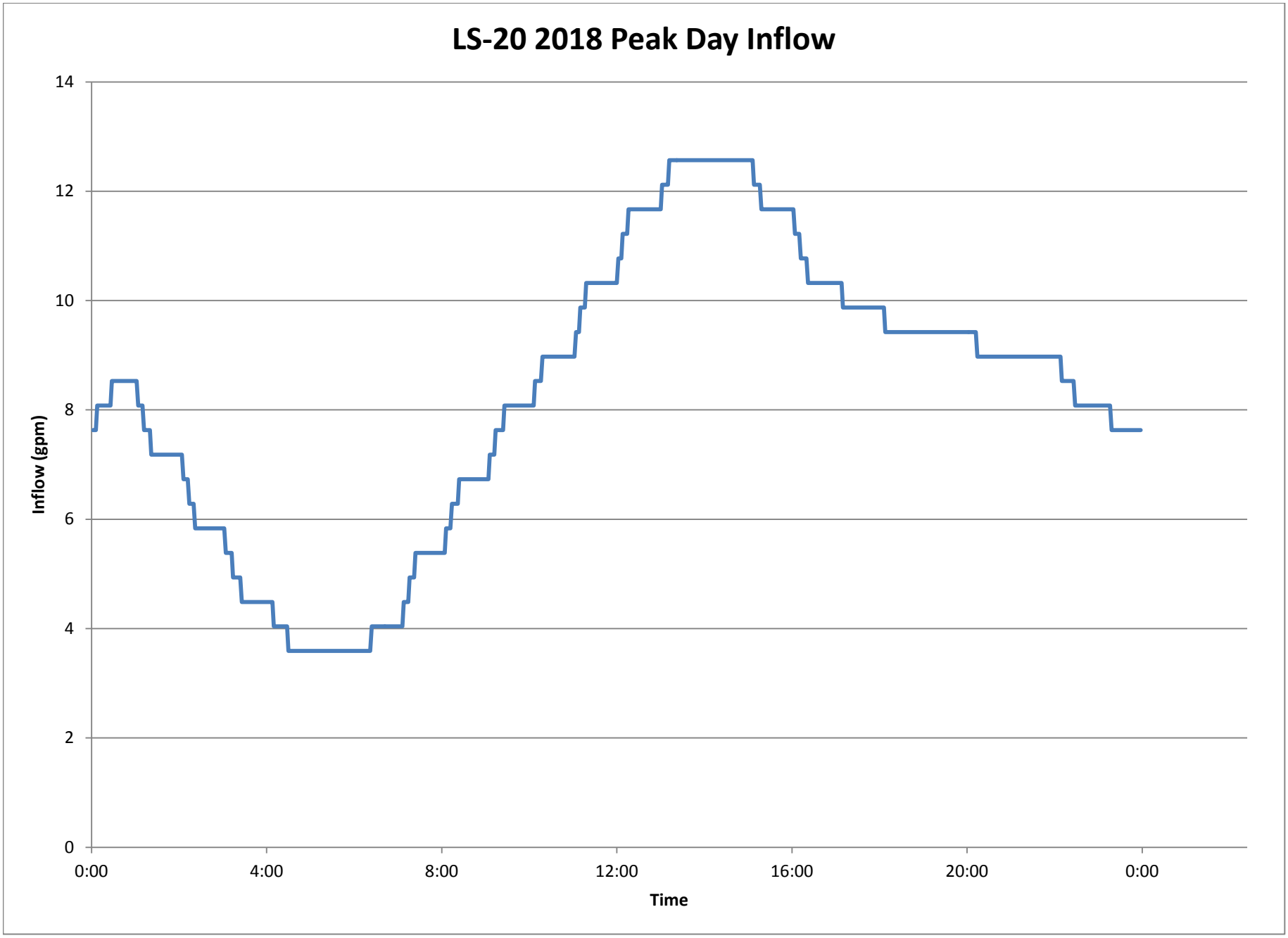

LS-15 2018 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

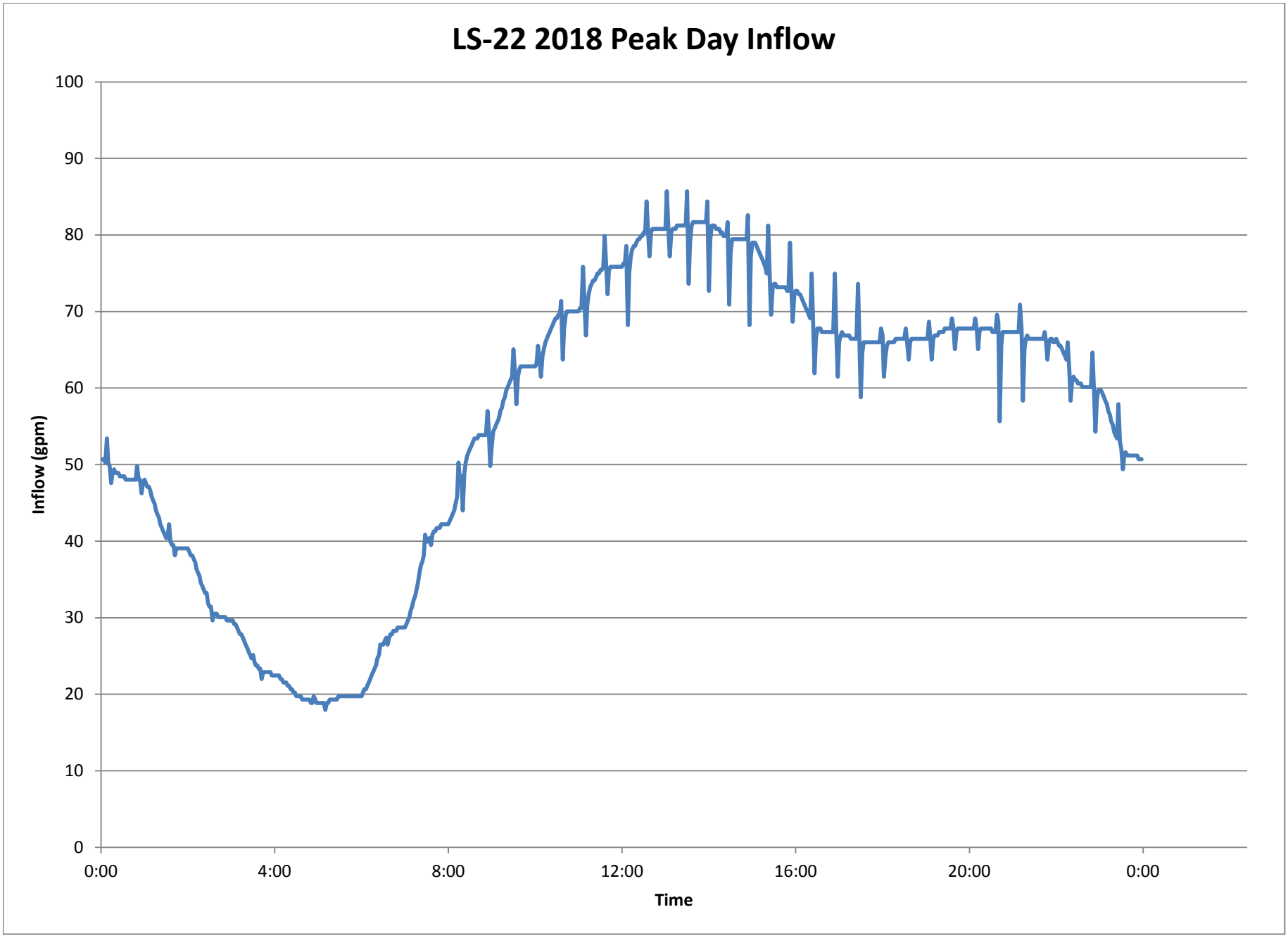

MWPS 2018 Peak Day Inflow
Inflow (gpm)
4000
3500
3000
2500
2000
1500
1000
500
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

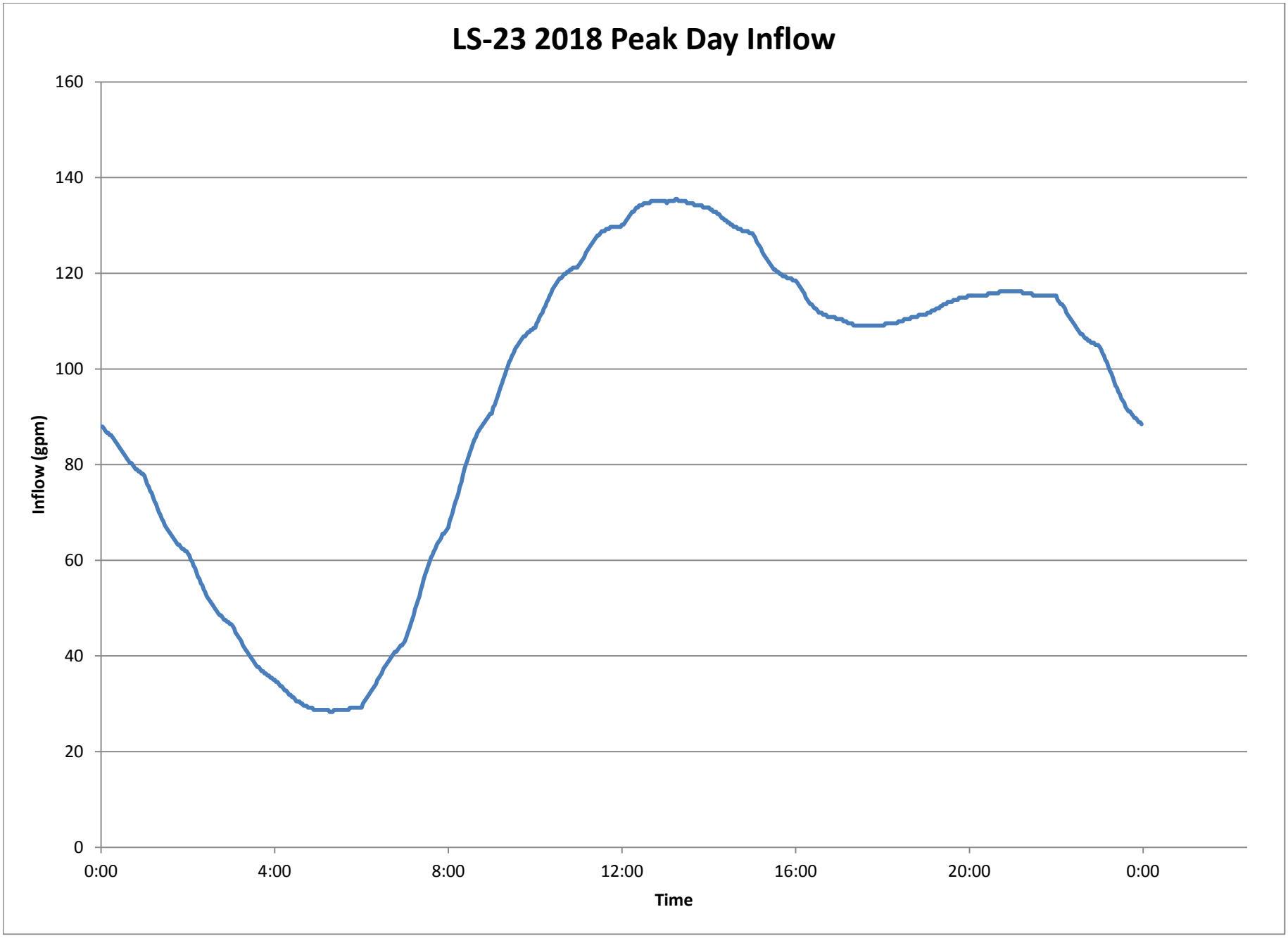

LS-17 2018 Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

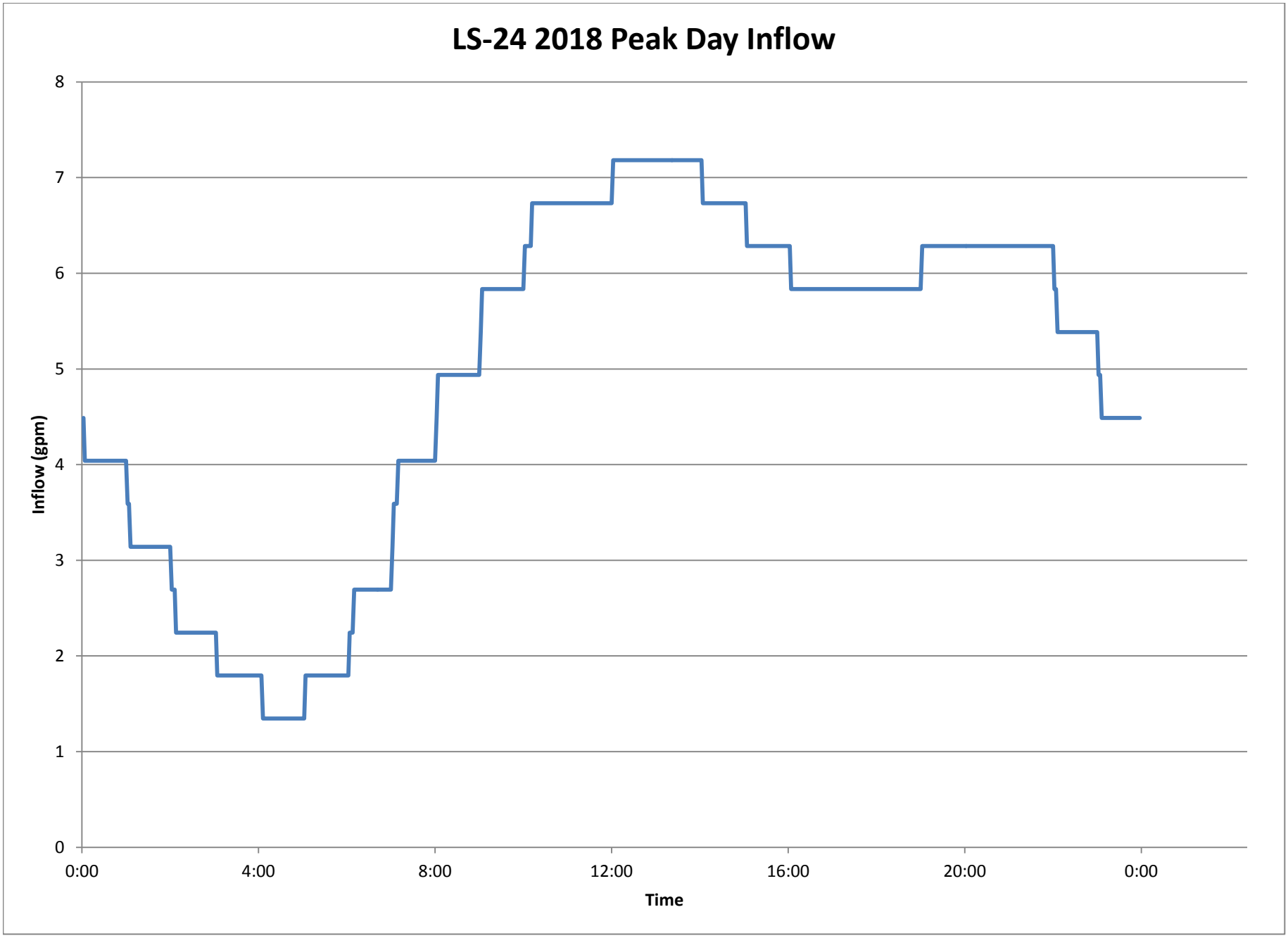

LS-18 2018 Peak Day Inflow
Inflow (gpm)
200
180
160
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

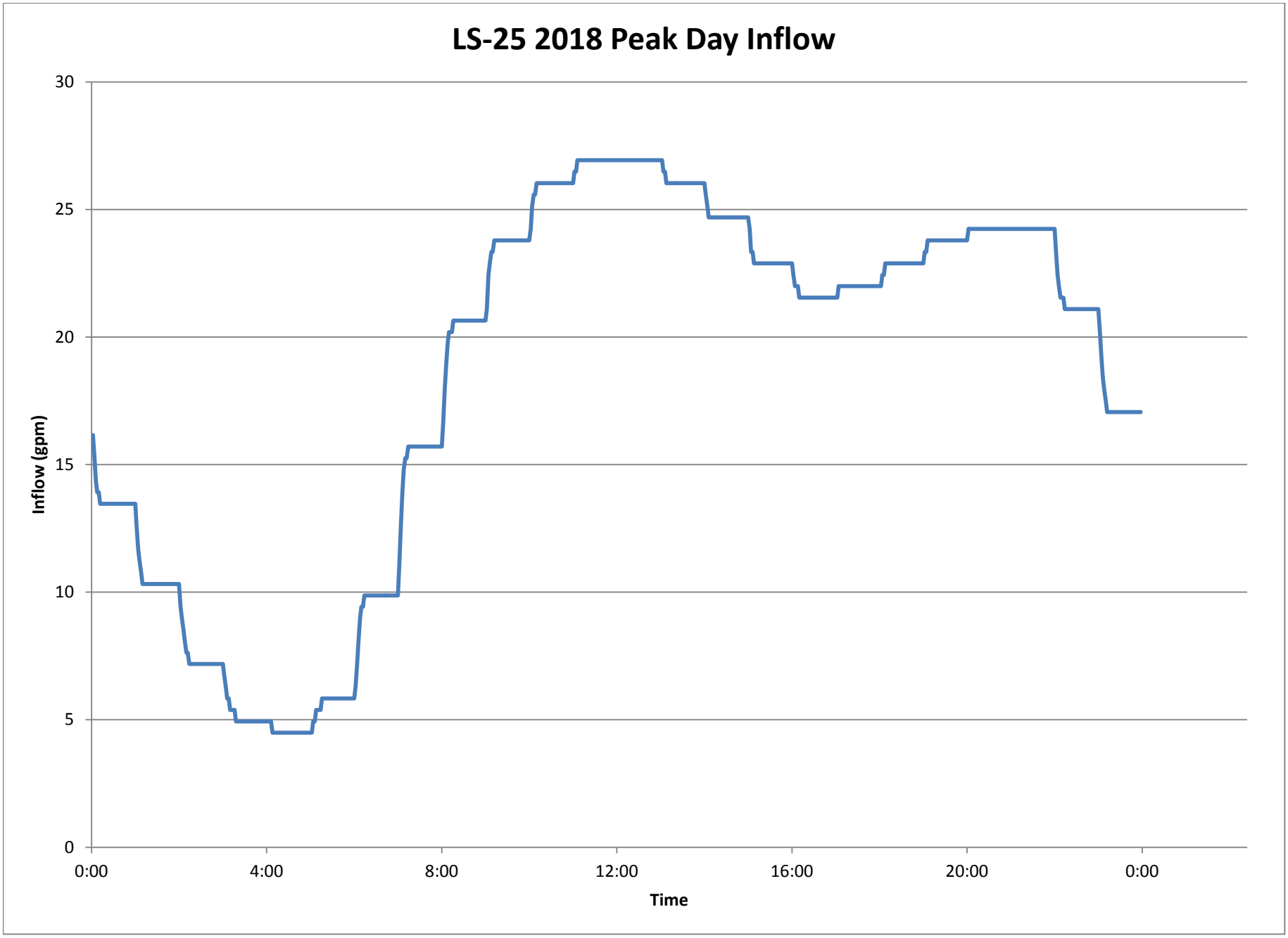

LS-19 2018 Peak Day Inflow
Inflow (gpm)
400
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

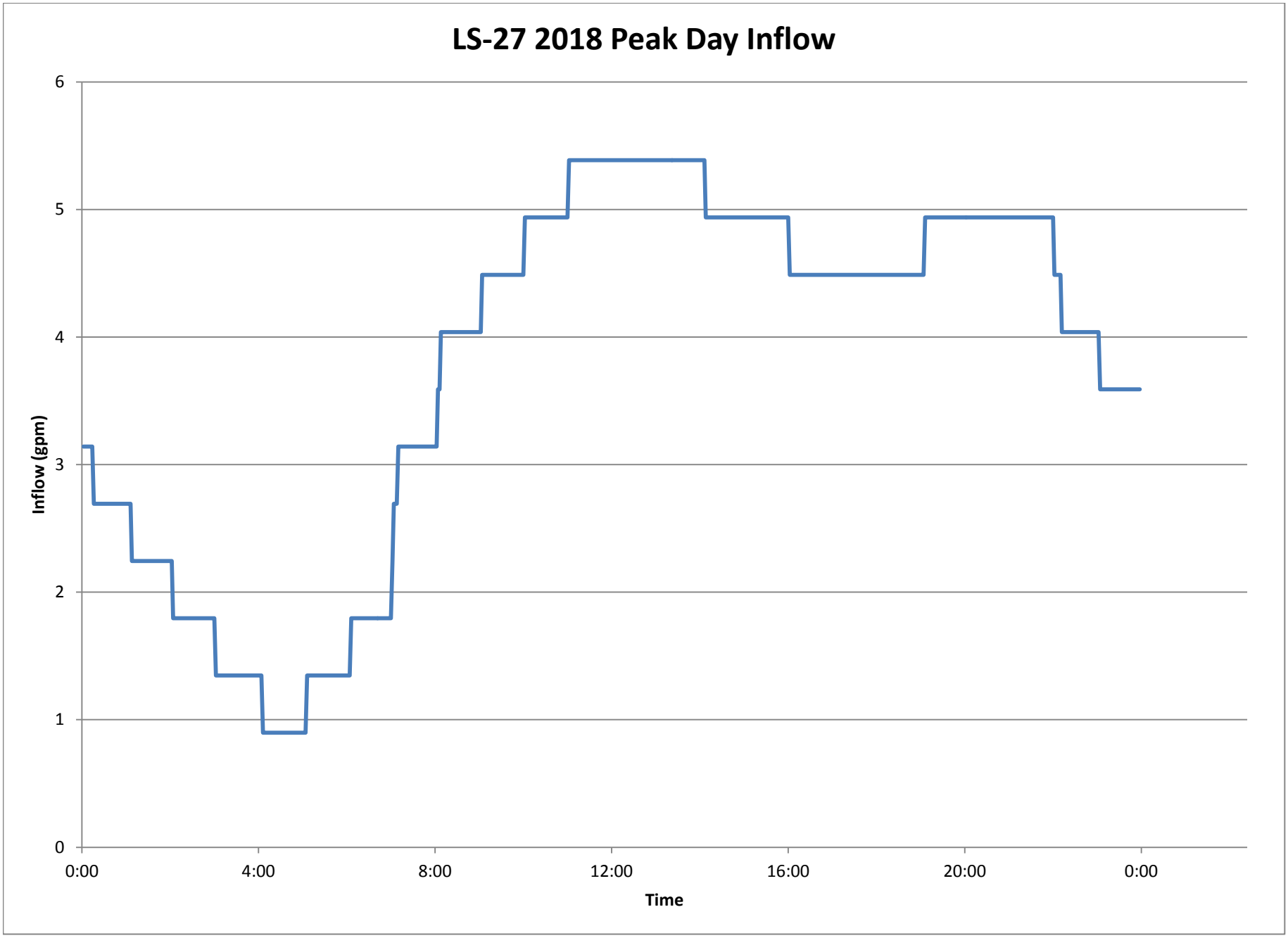

LS-20 2018 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

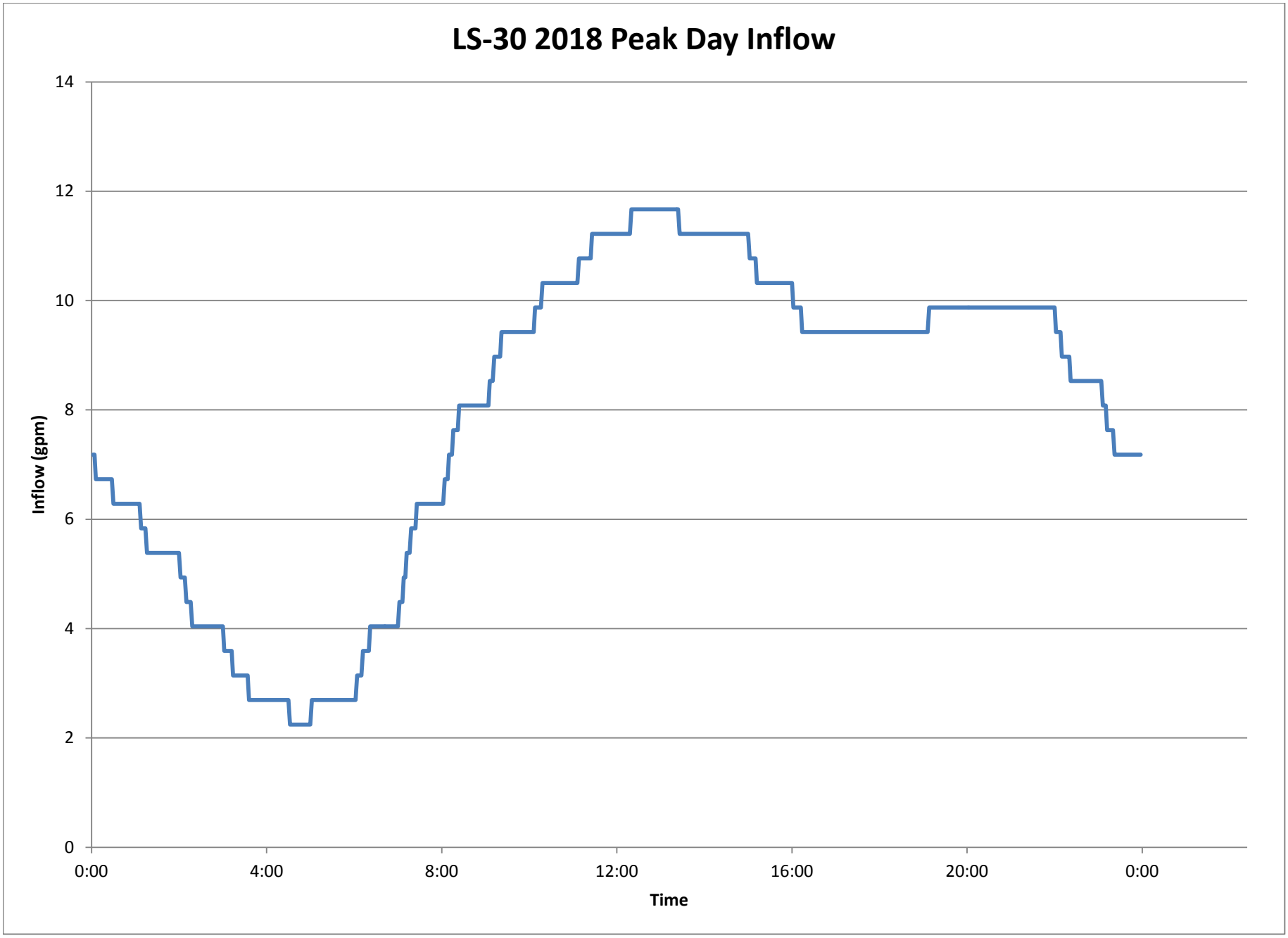

LS-22 2018 Peak Day Inflow
Inflow (gpm)
100
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

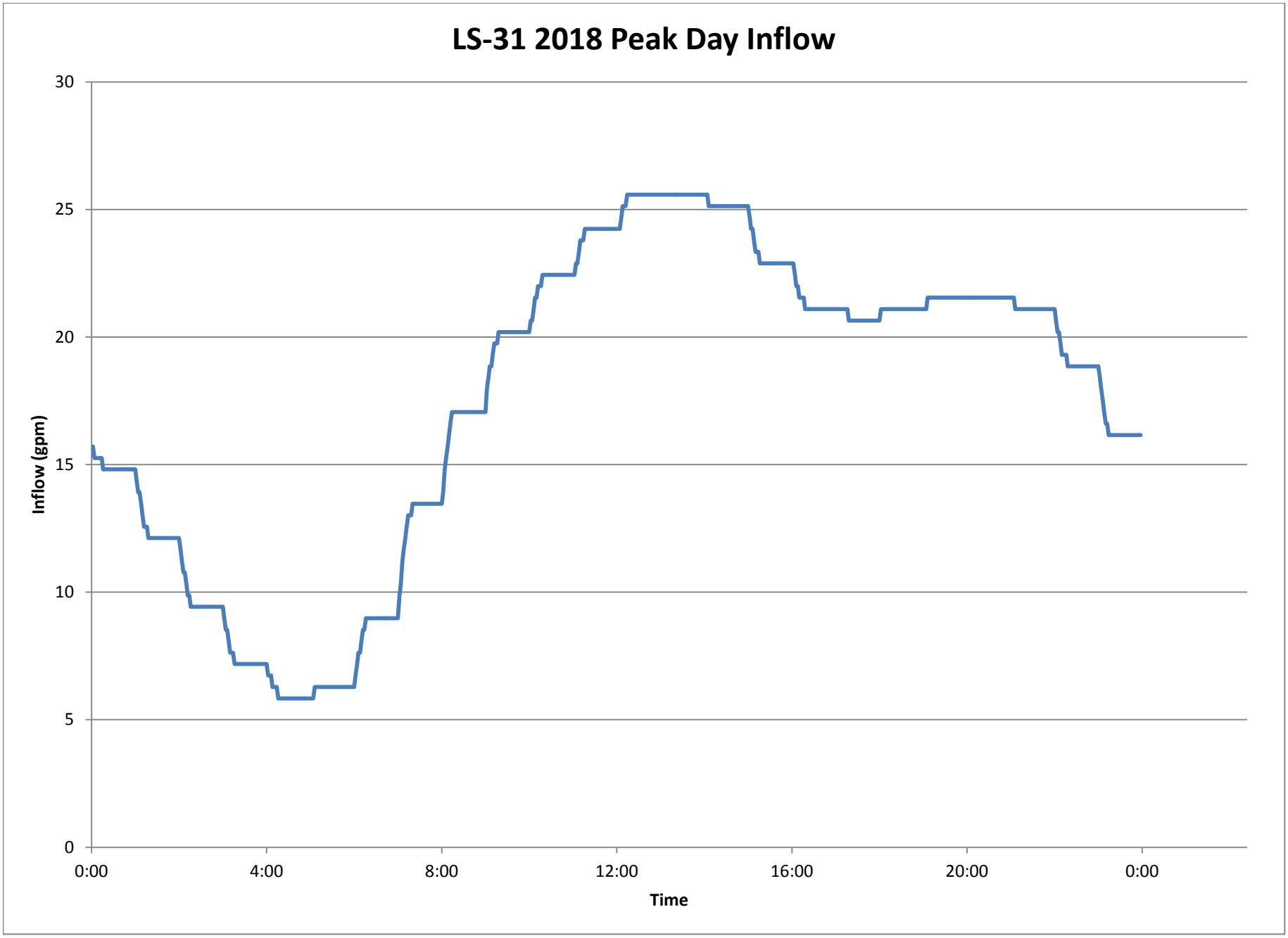

LS-23 2018 Peak Day Inflow
160
140
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

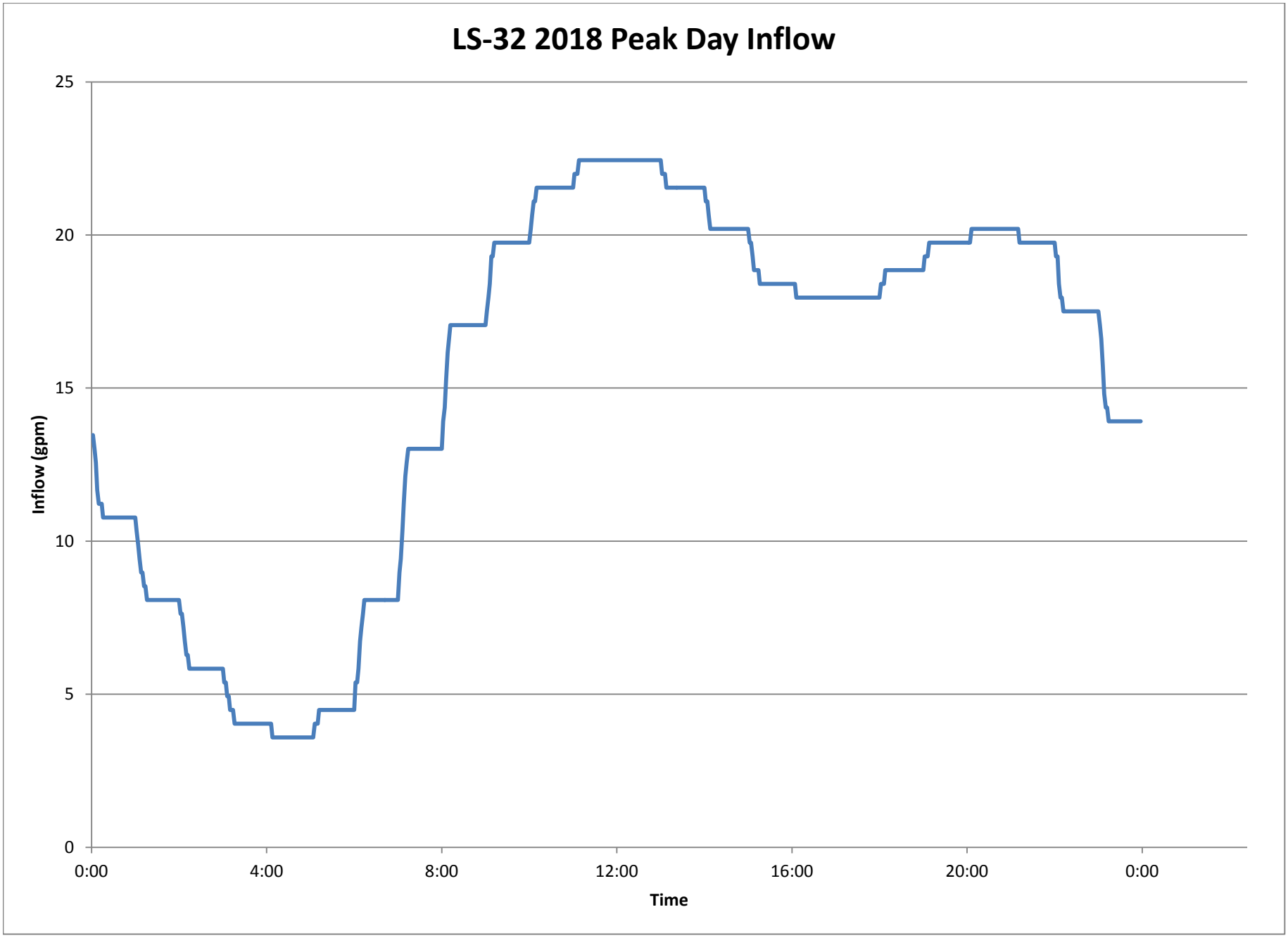

LS-24 2018 Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

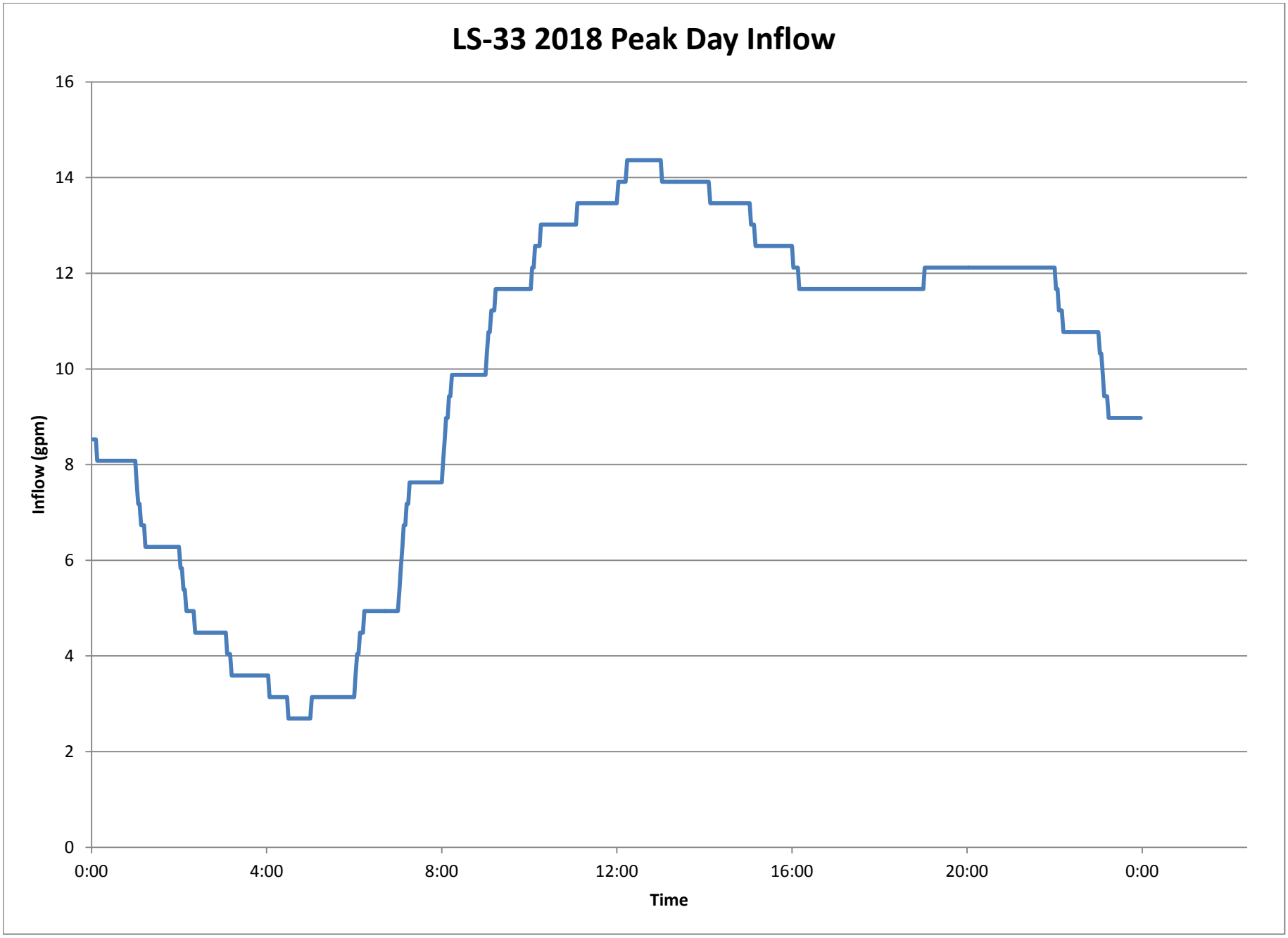

LS-25 2018 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

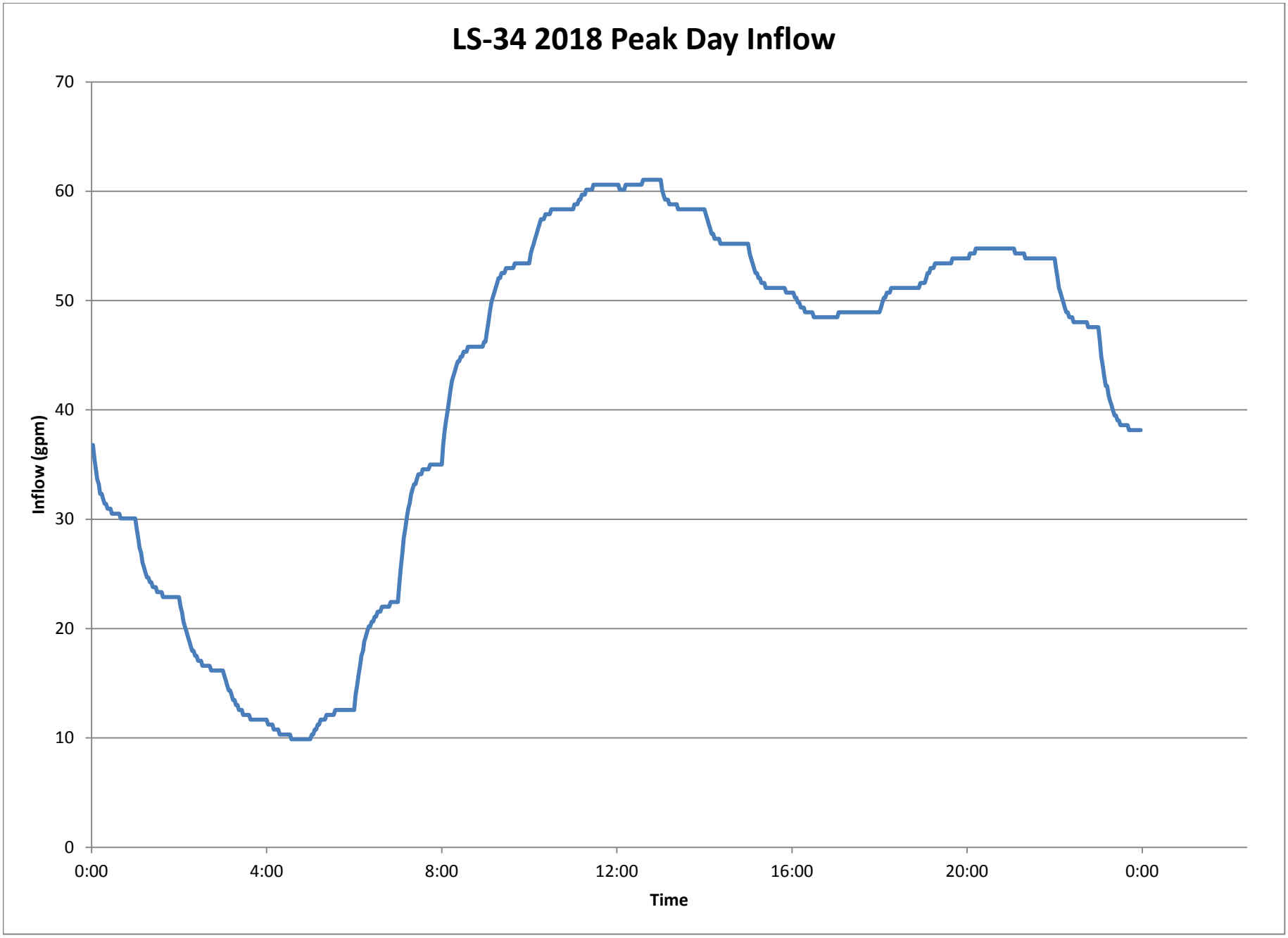

LS-27 2018 Peak Day Inflow
Inflow (gpm)
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

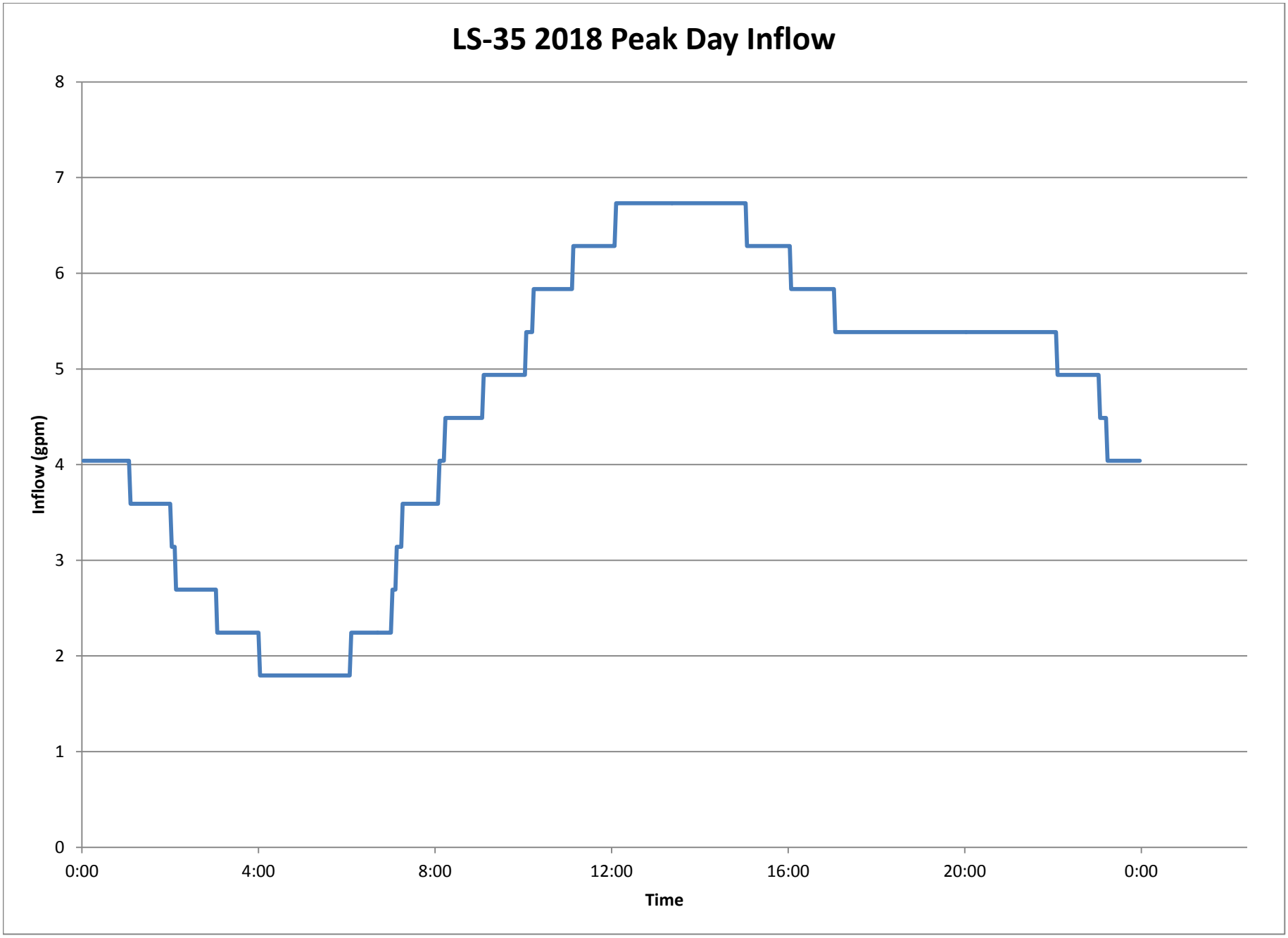

LS-30 2018 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

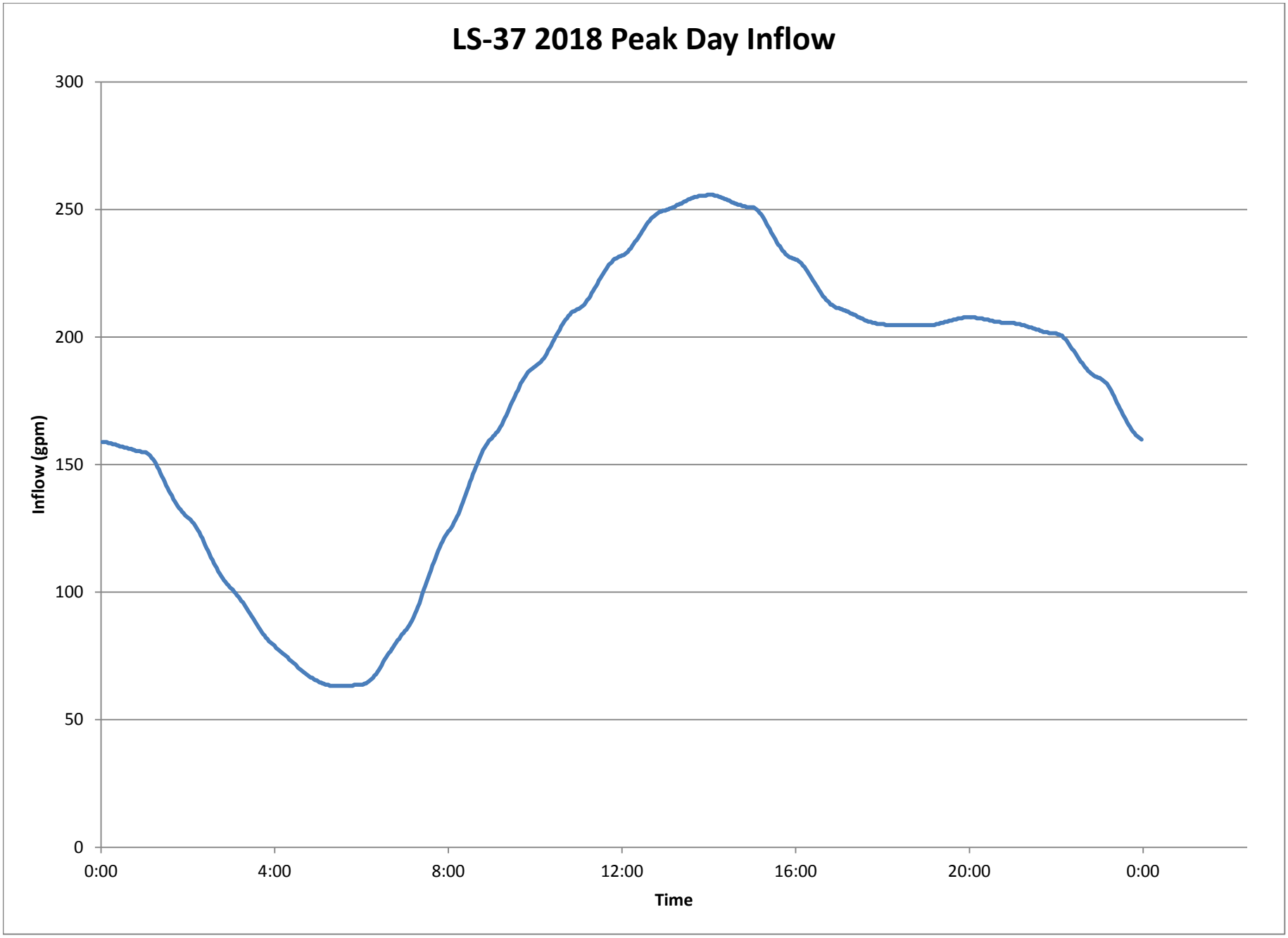

LS-31 2018 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

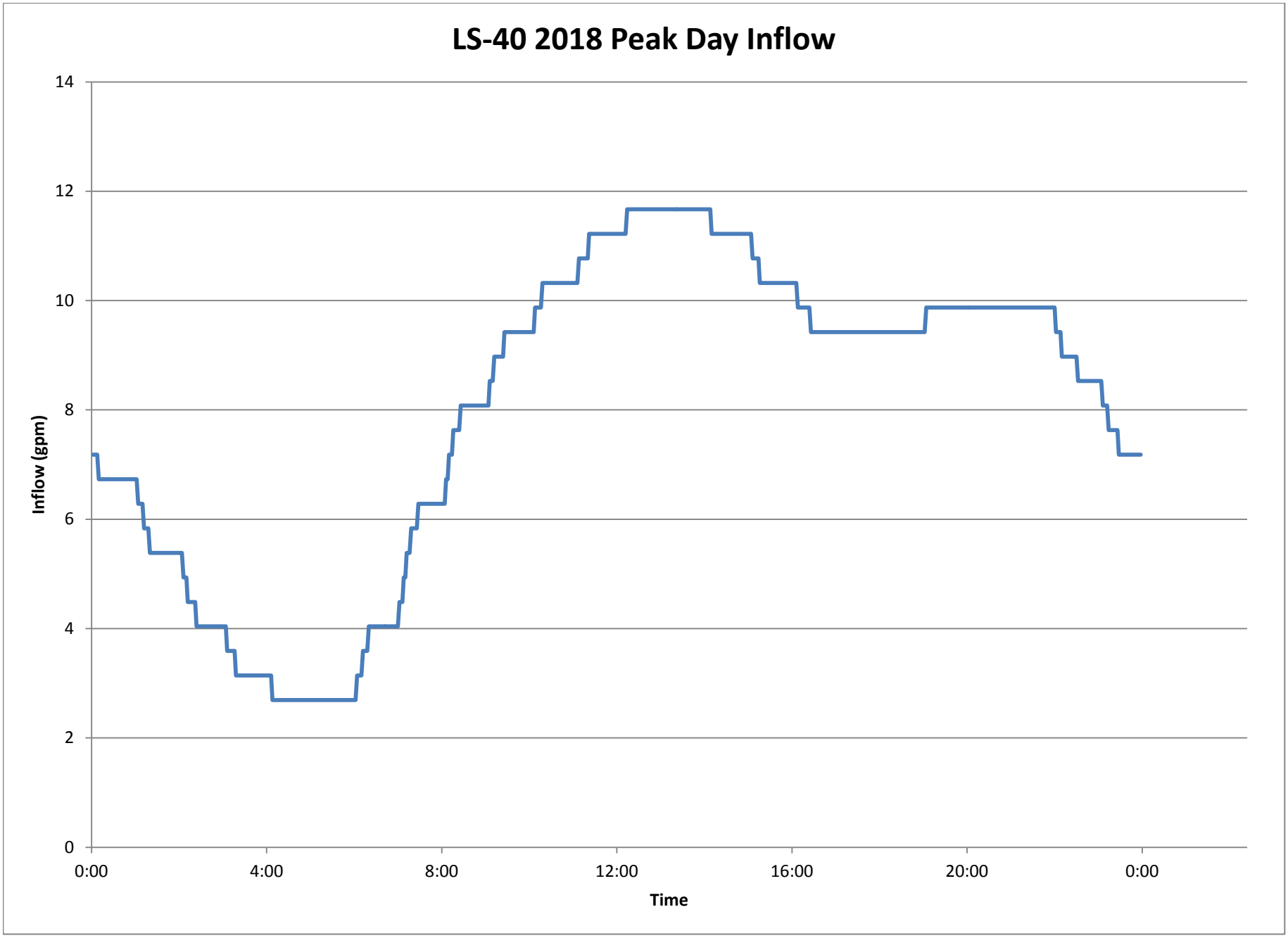

LS-32 2018 Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

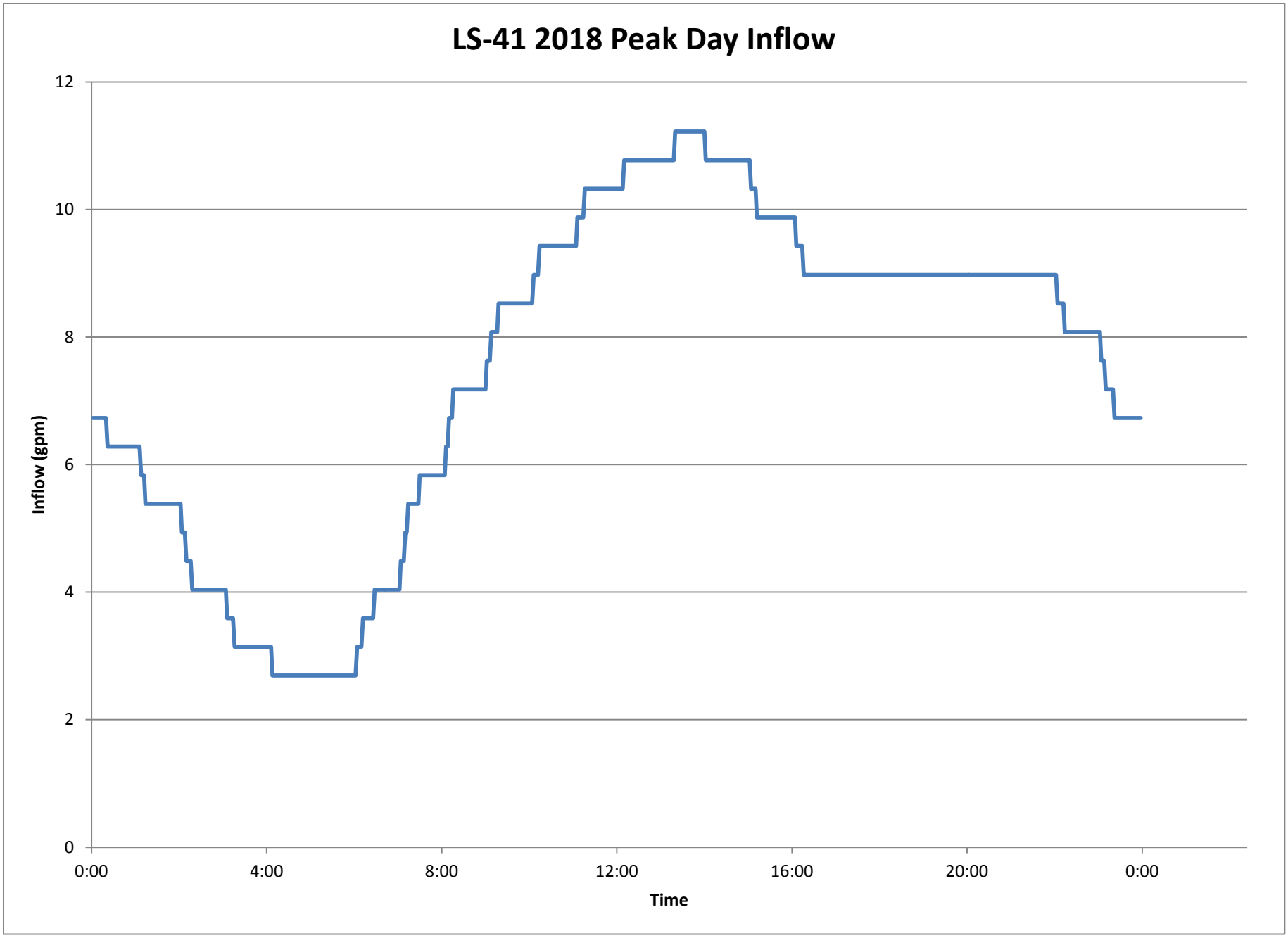

LS-33 2018 Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

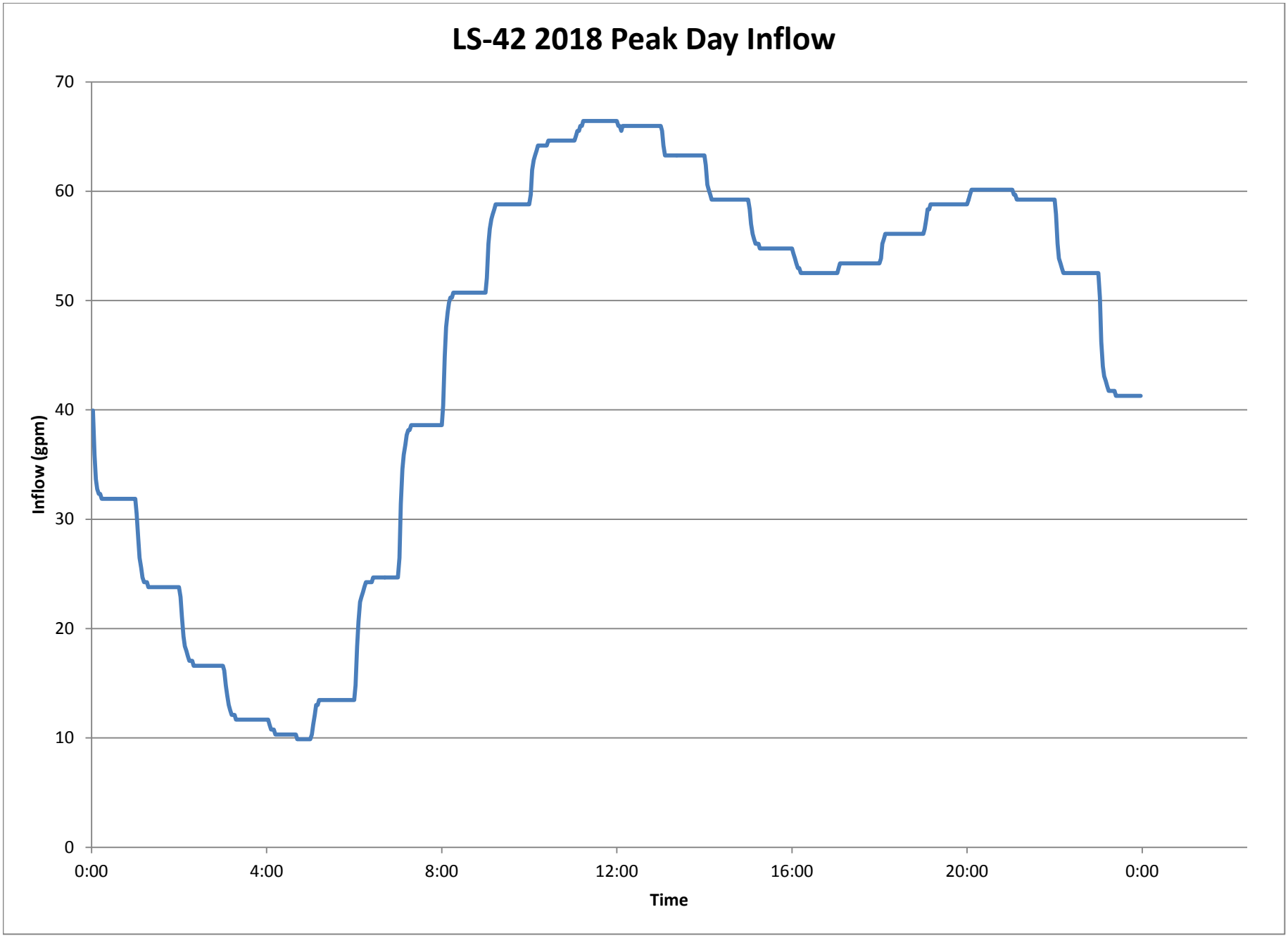

LS-34 2018 Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

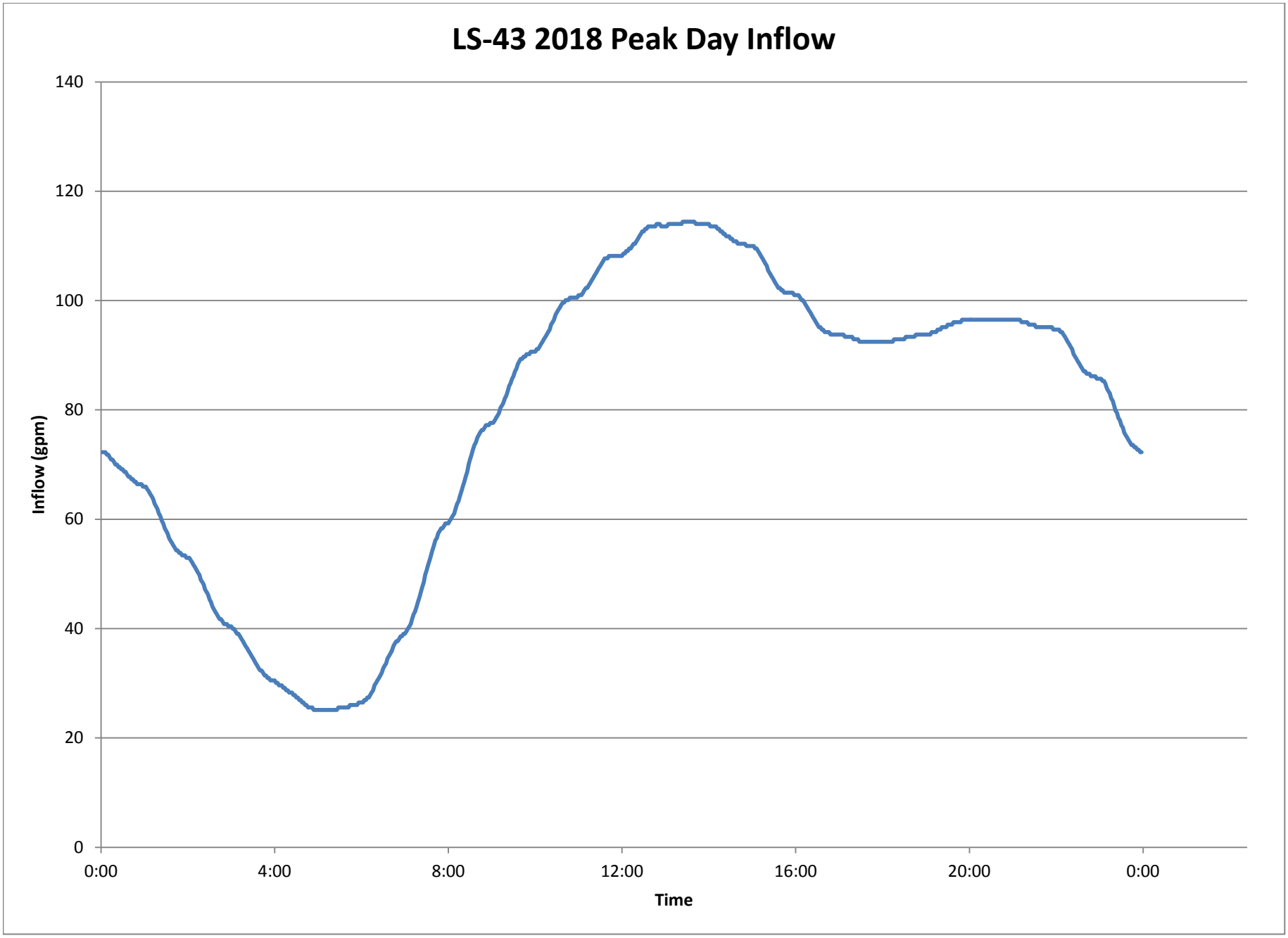

LS-35 2018 Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

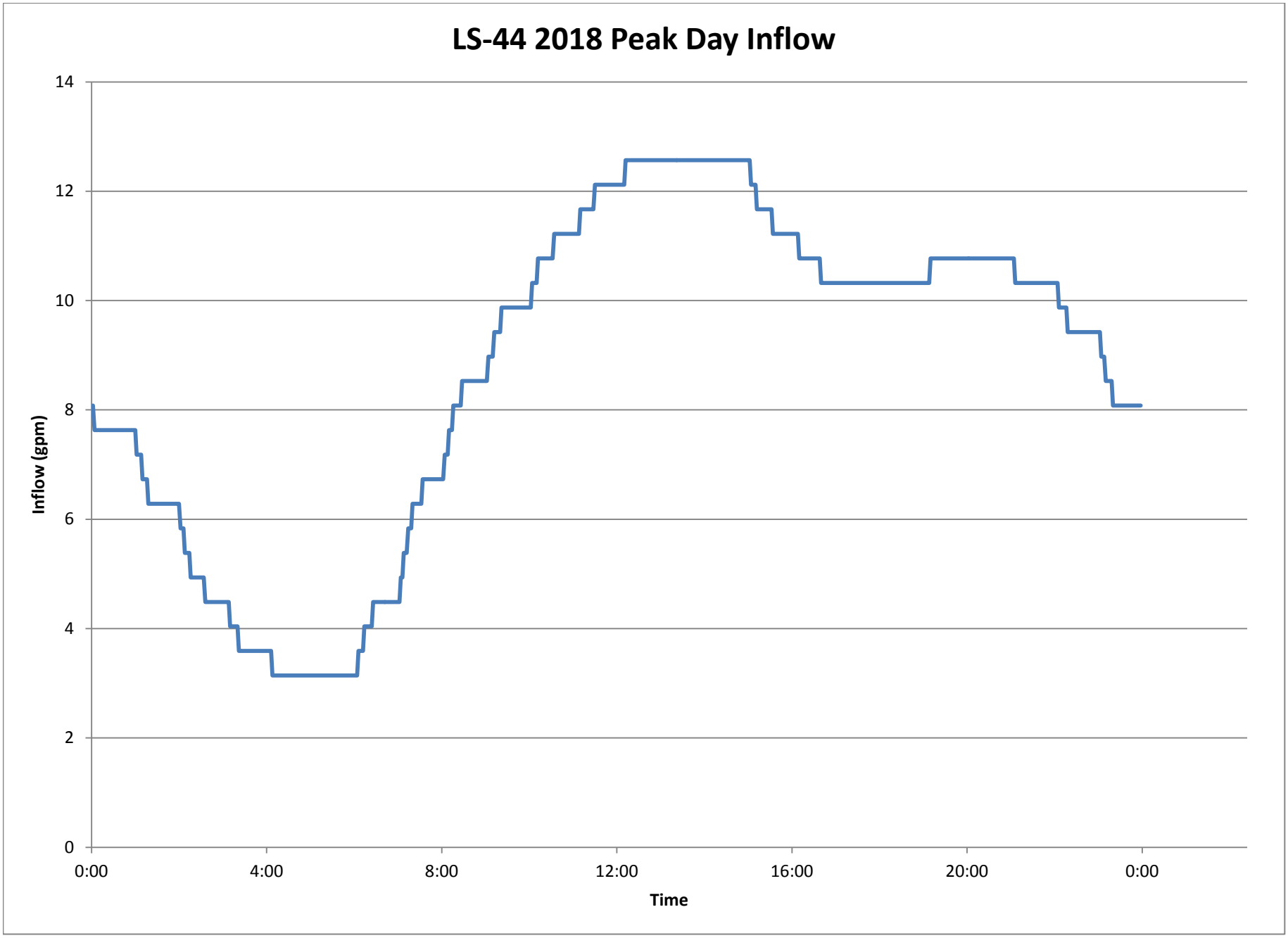

LS-37 2018 Peak Day Inflow
Inflow (gpm)
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

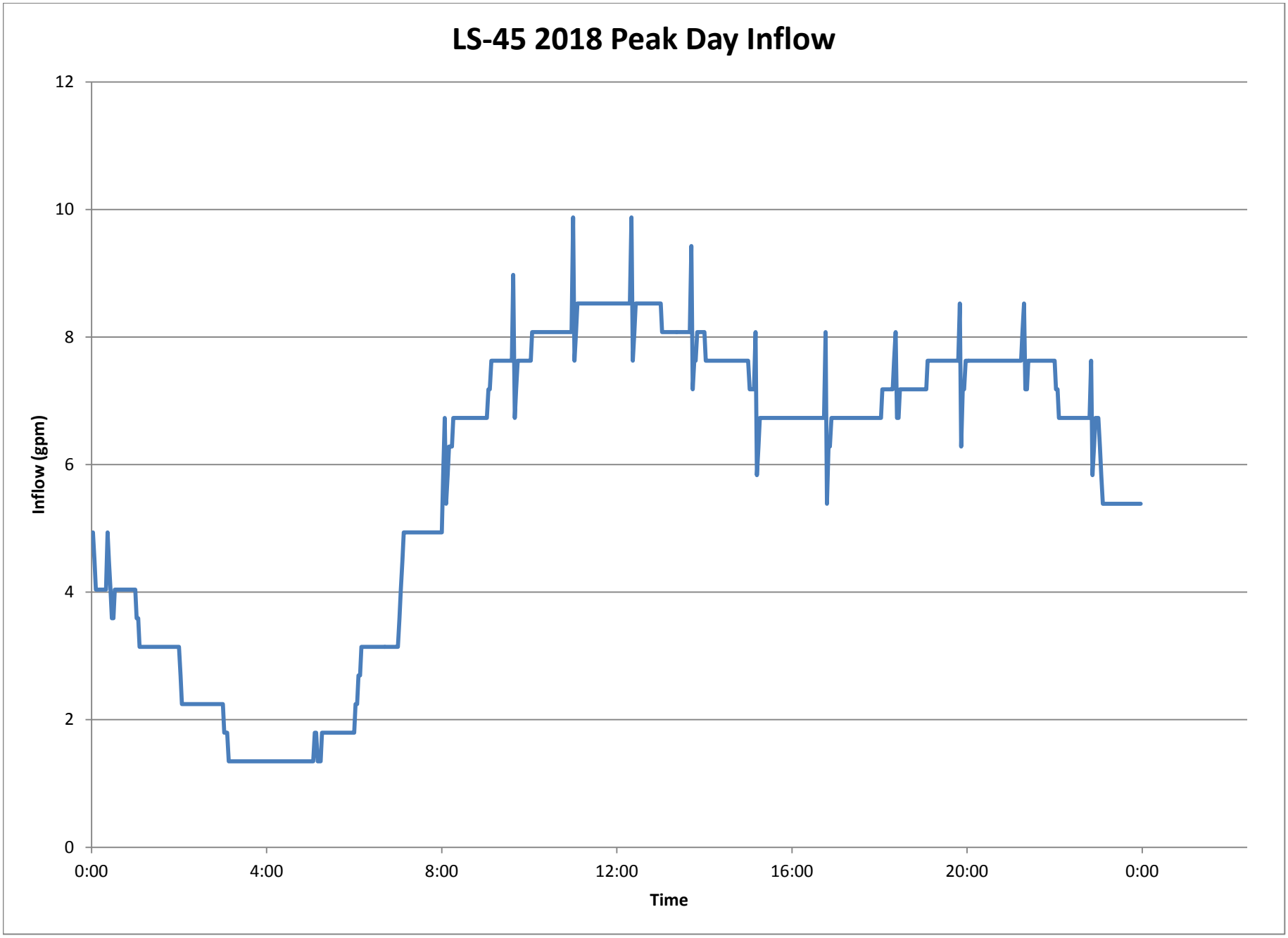

LS-40 2018 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

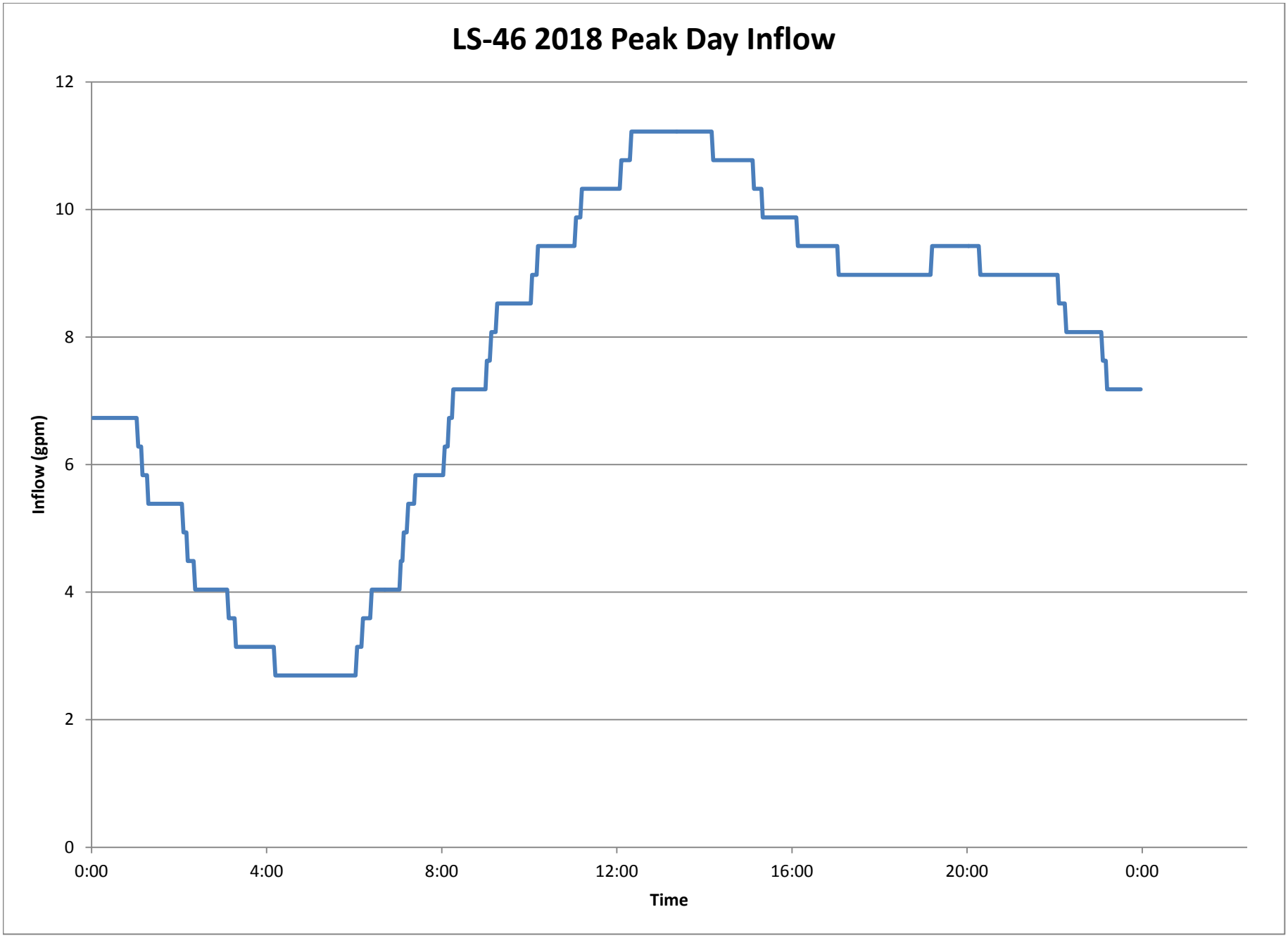

LS-41 2018 Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

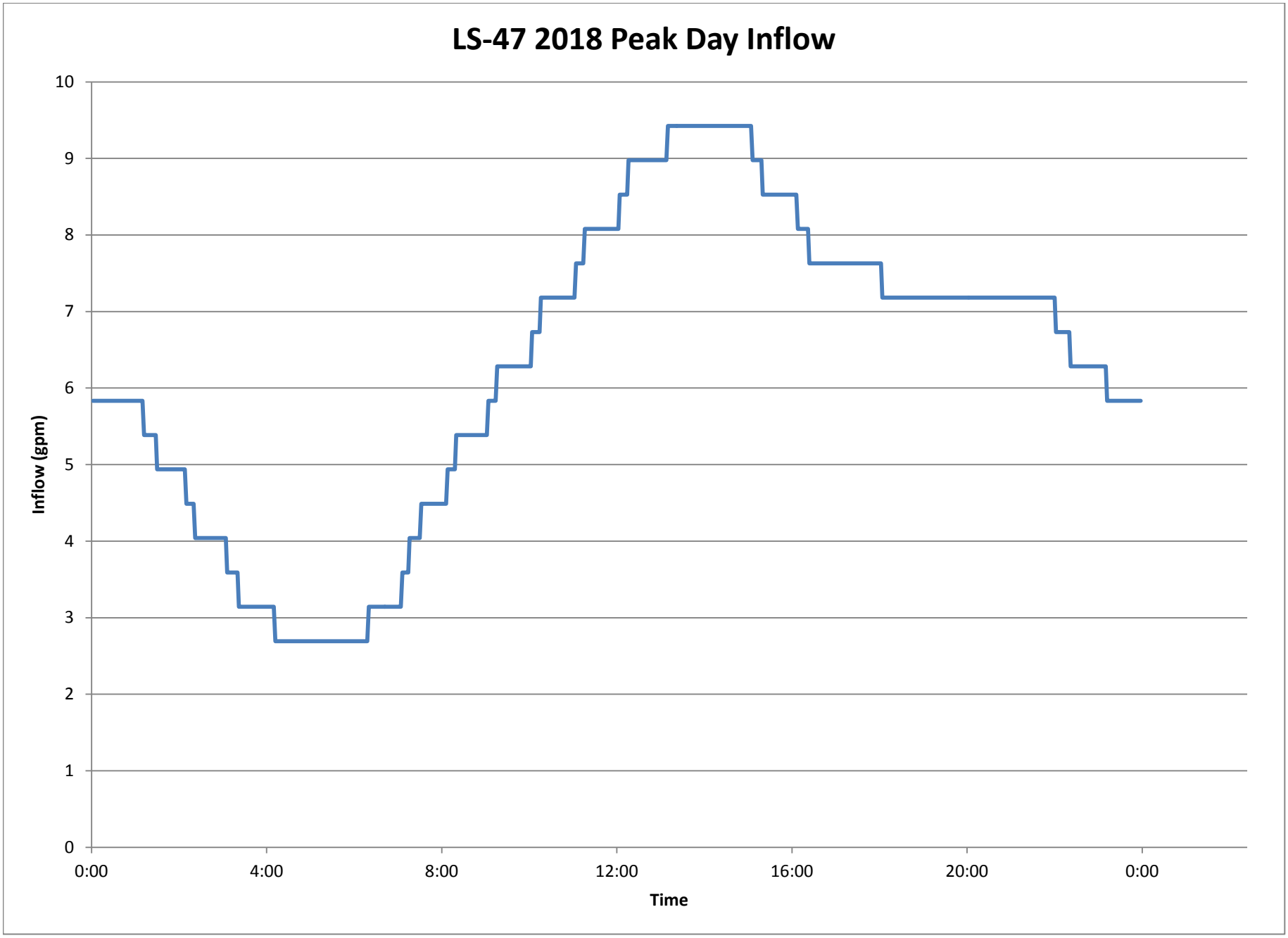

LS-42 2018 Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

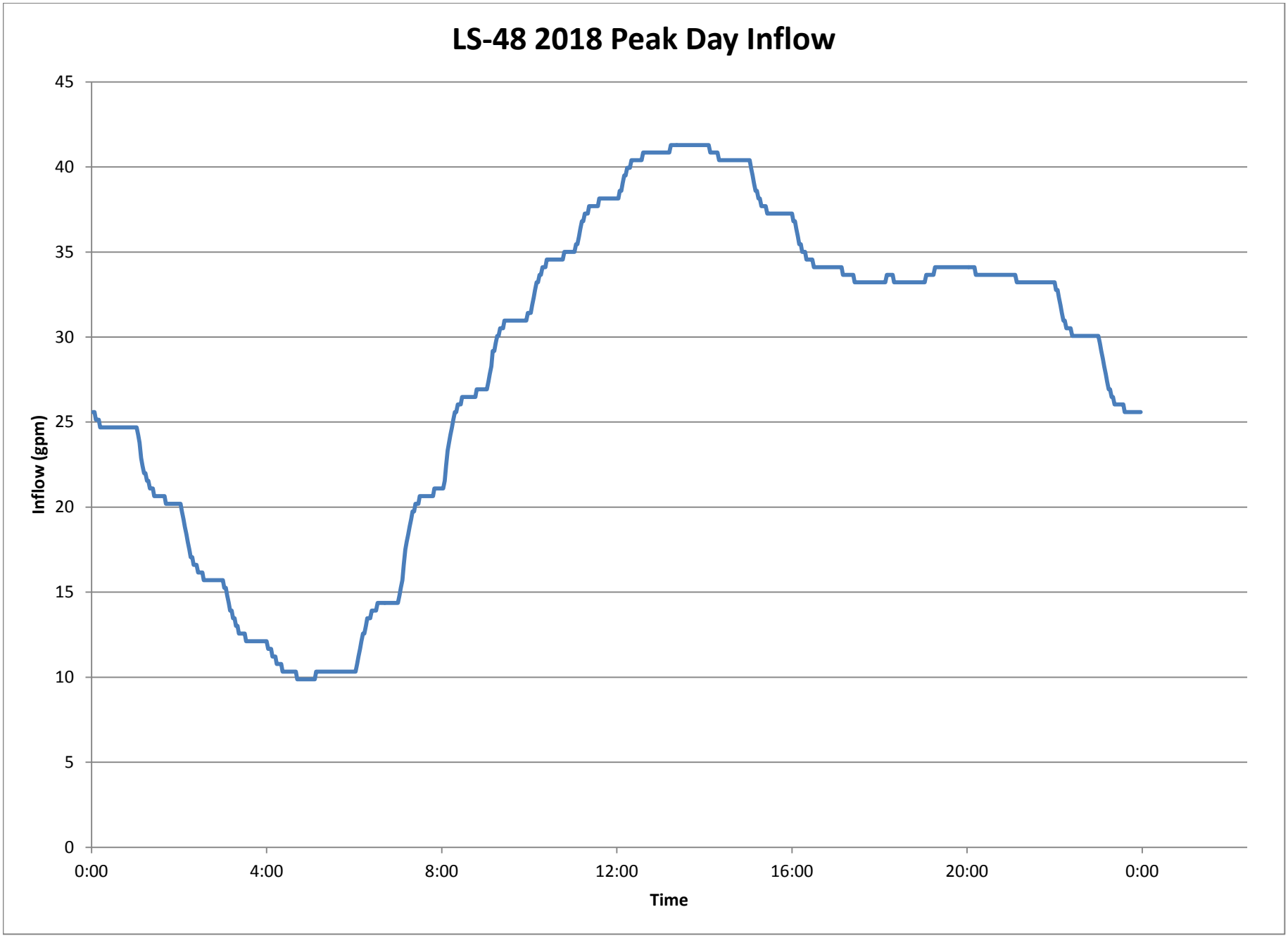

LS-43 2018 Peak Day Inflow
Inflow (gpm)
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

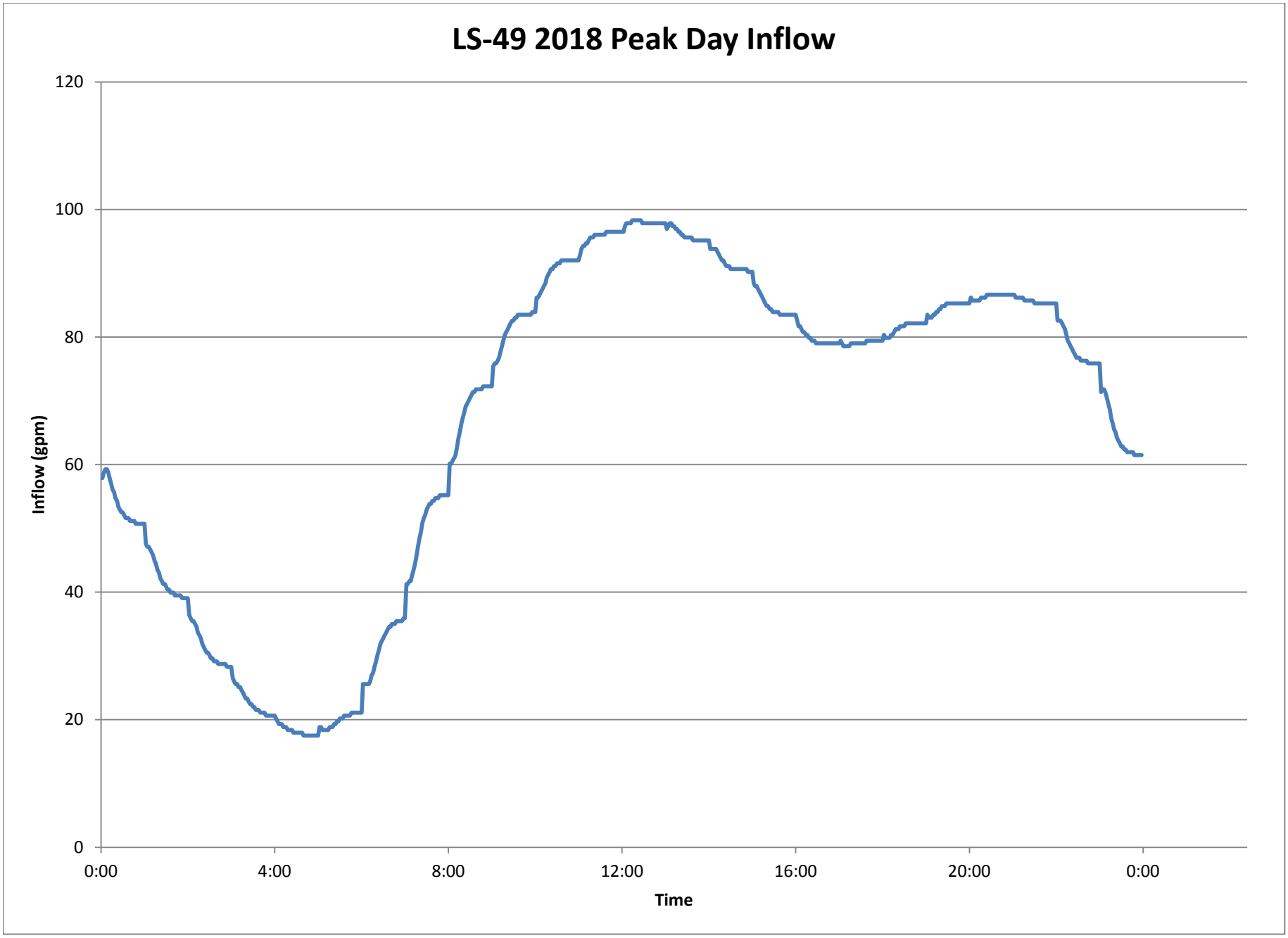

LS-44 2018 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

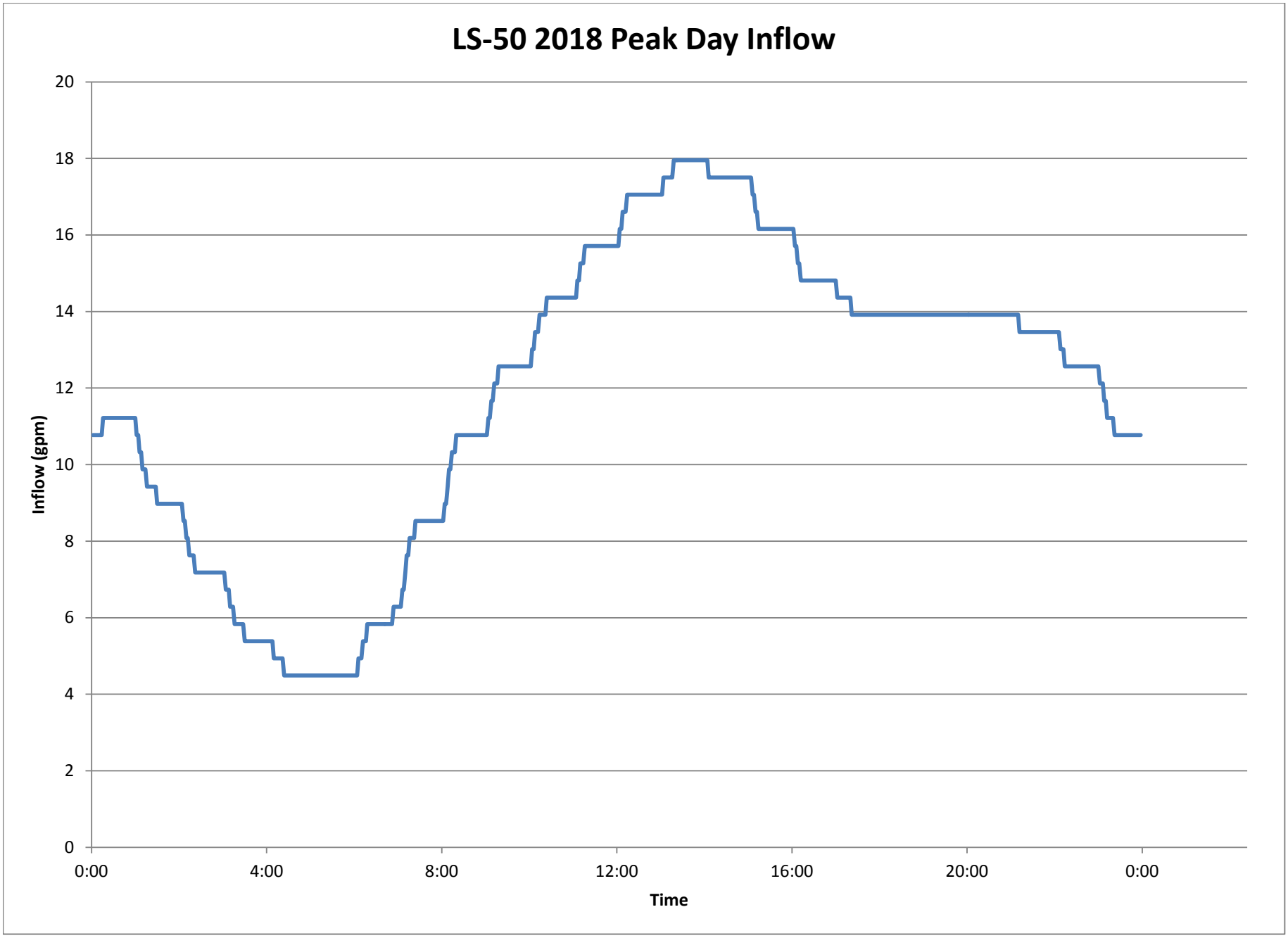

LS-45 2018 Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

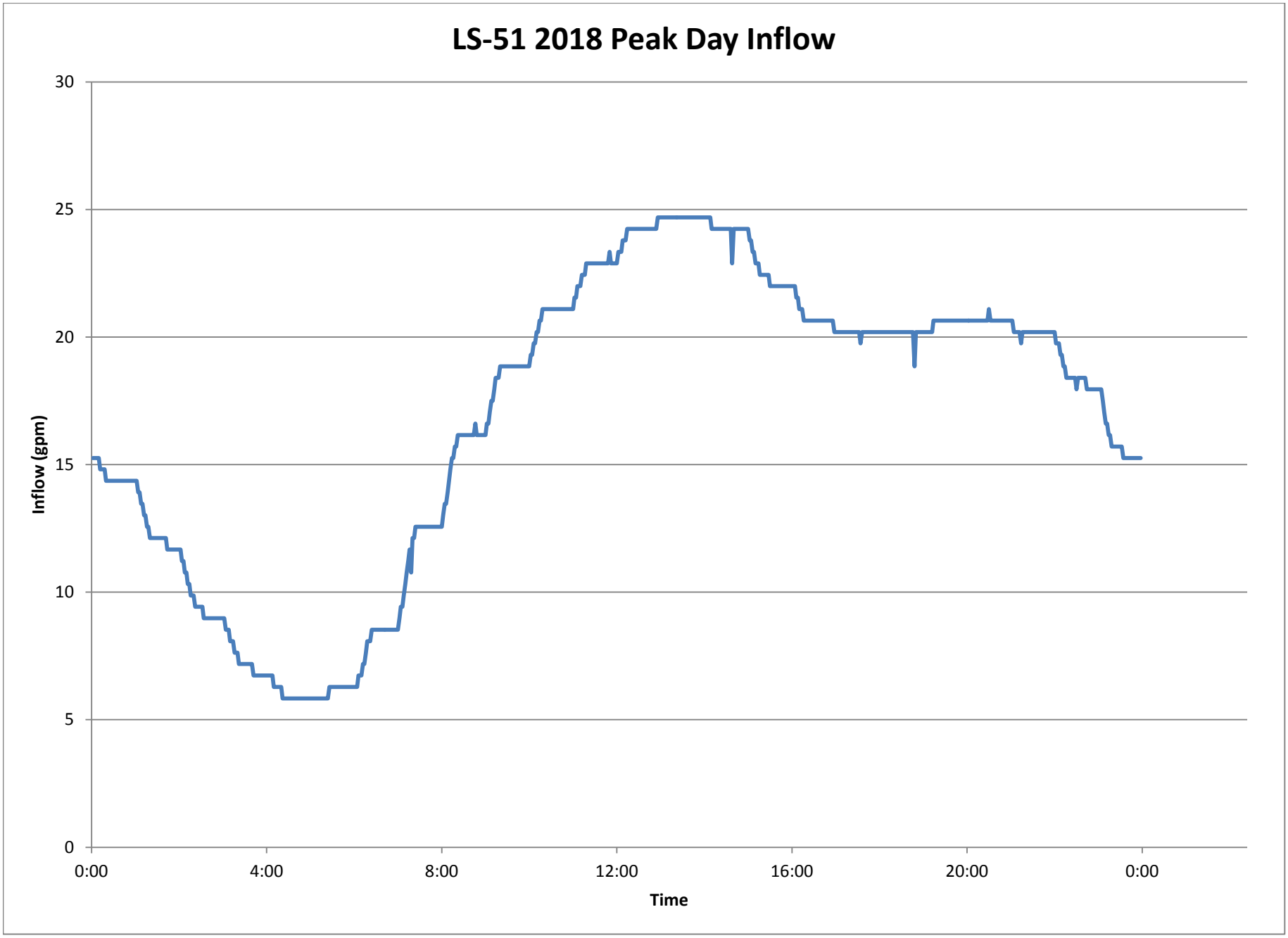

LS-46 2018 Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

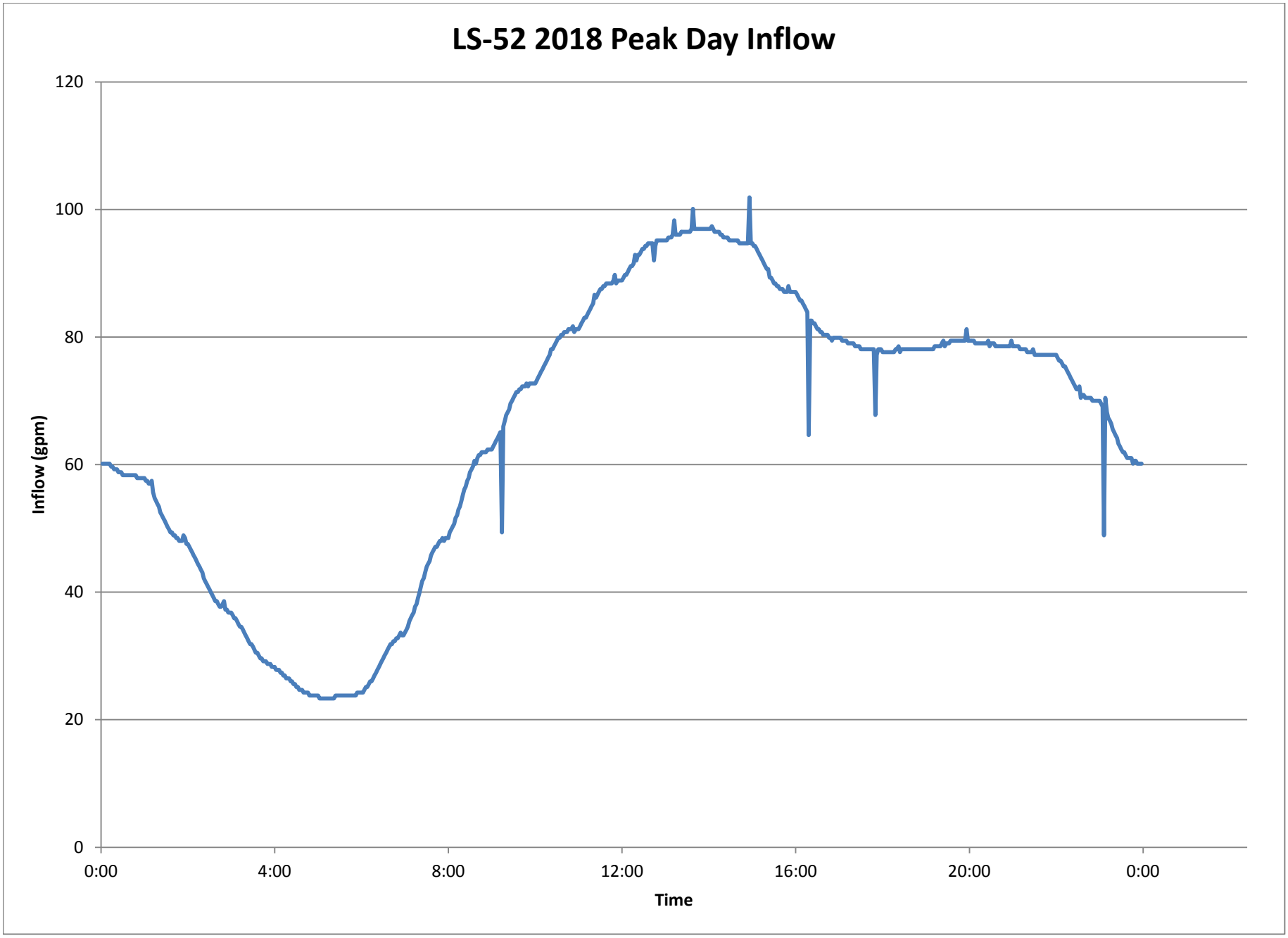

LS-47 2018 Peak Day Inflow
Inflow (gpm)
10
9
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

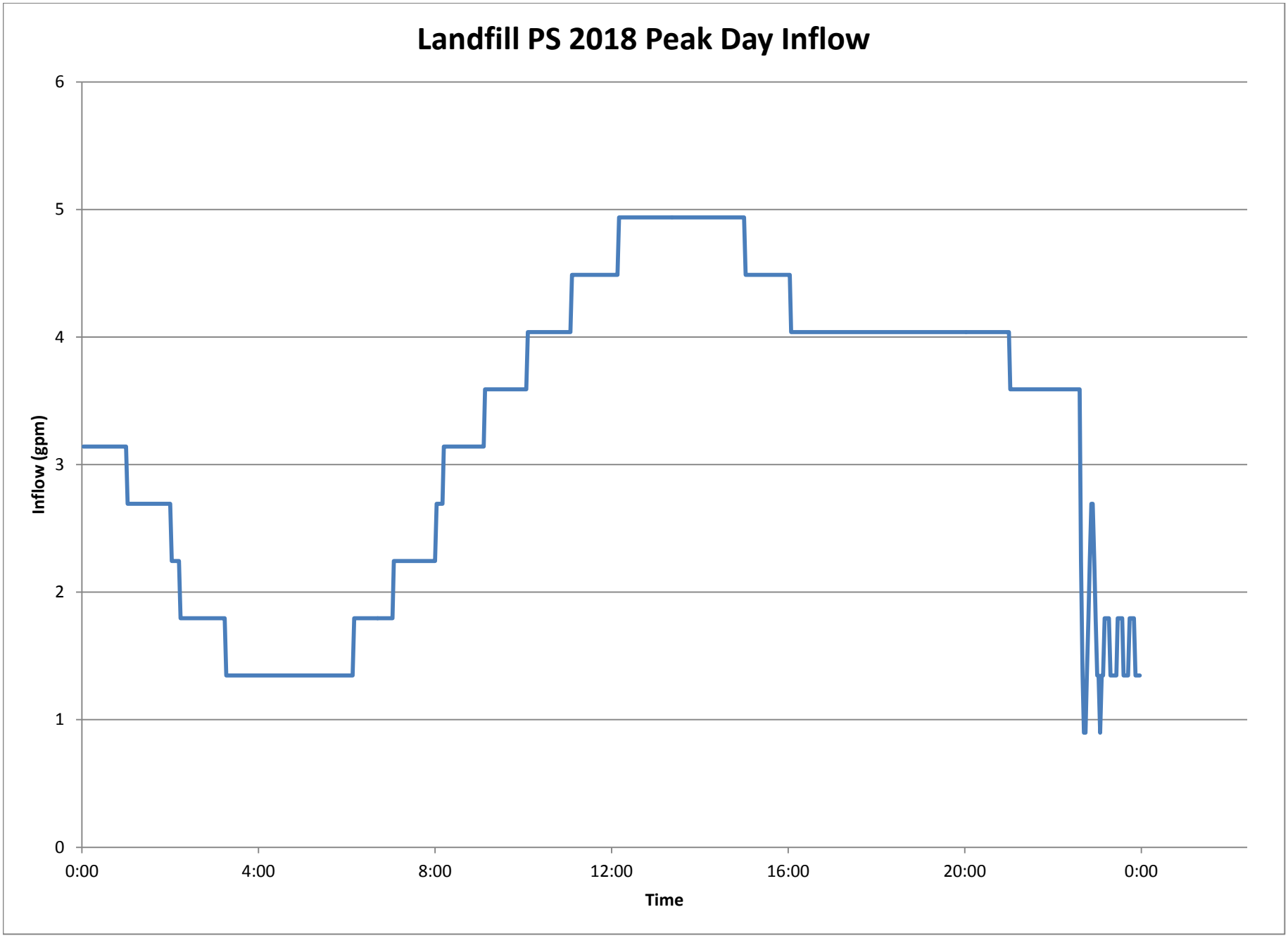

LS-48 2018 Peak Day Inflow
Inflow (gpm)
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

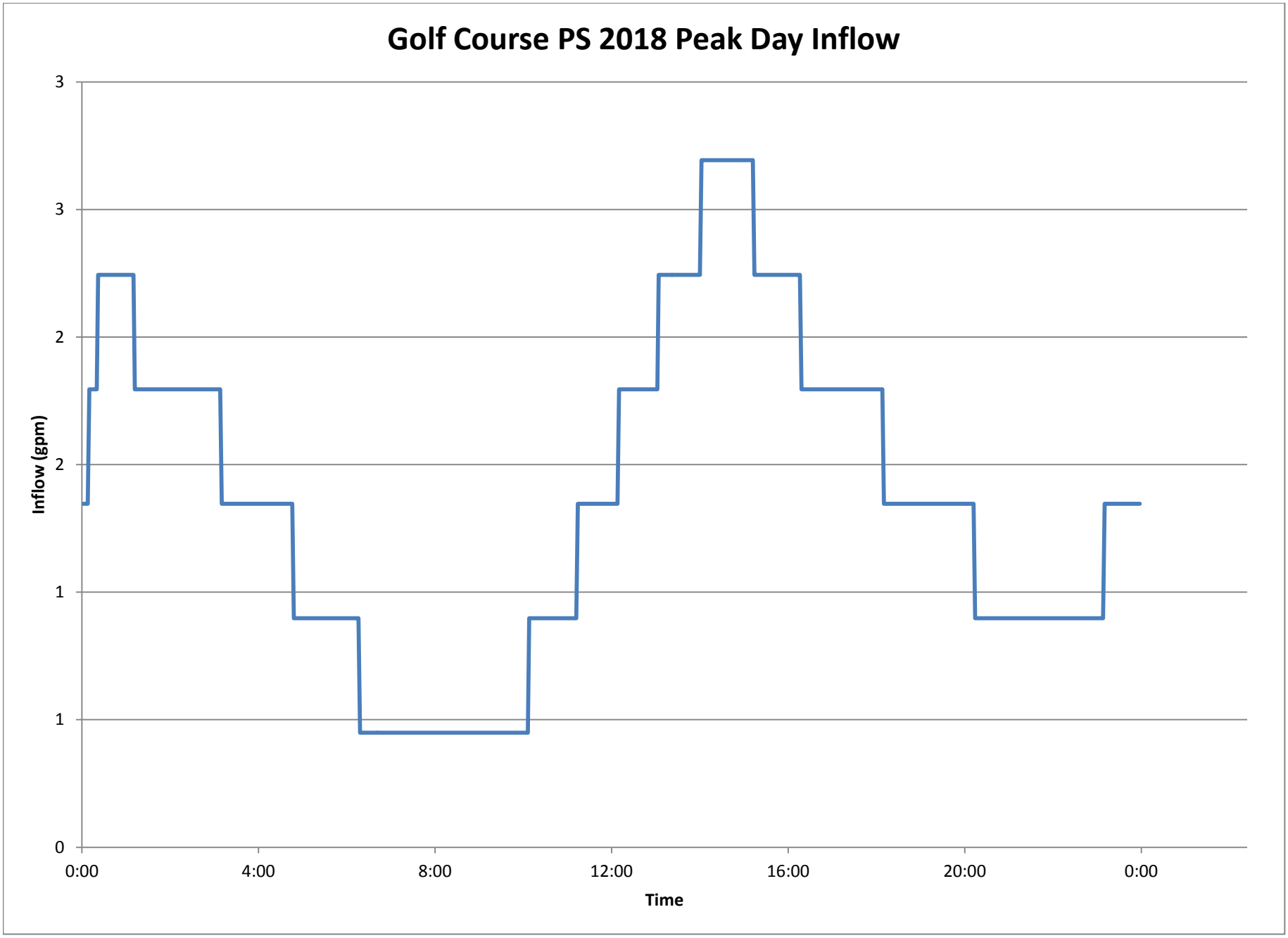

LS-49 2018 Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

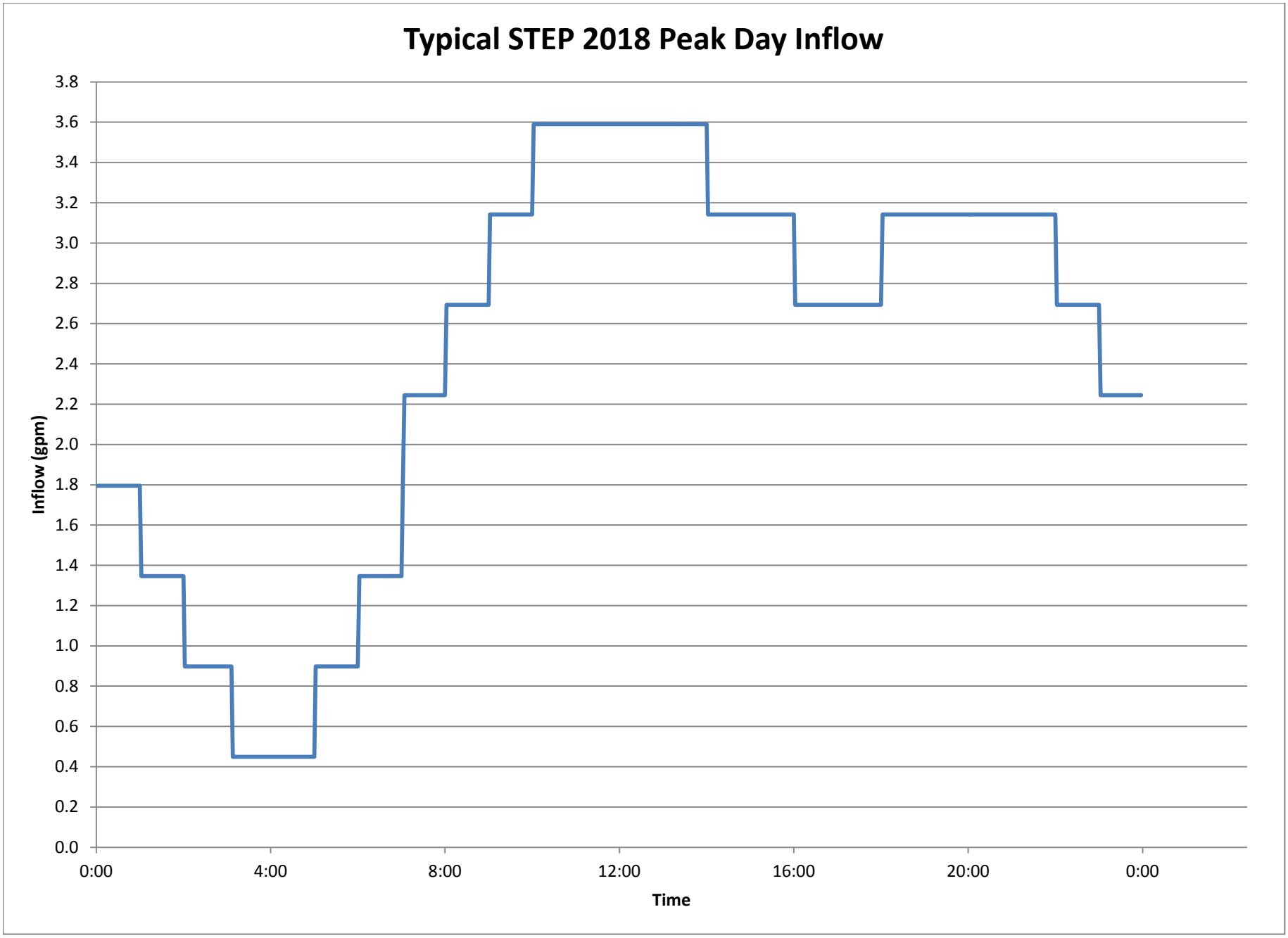

LS-50 2018 Peak Day Inflow
Inflow (gpm)
20
18
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

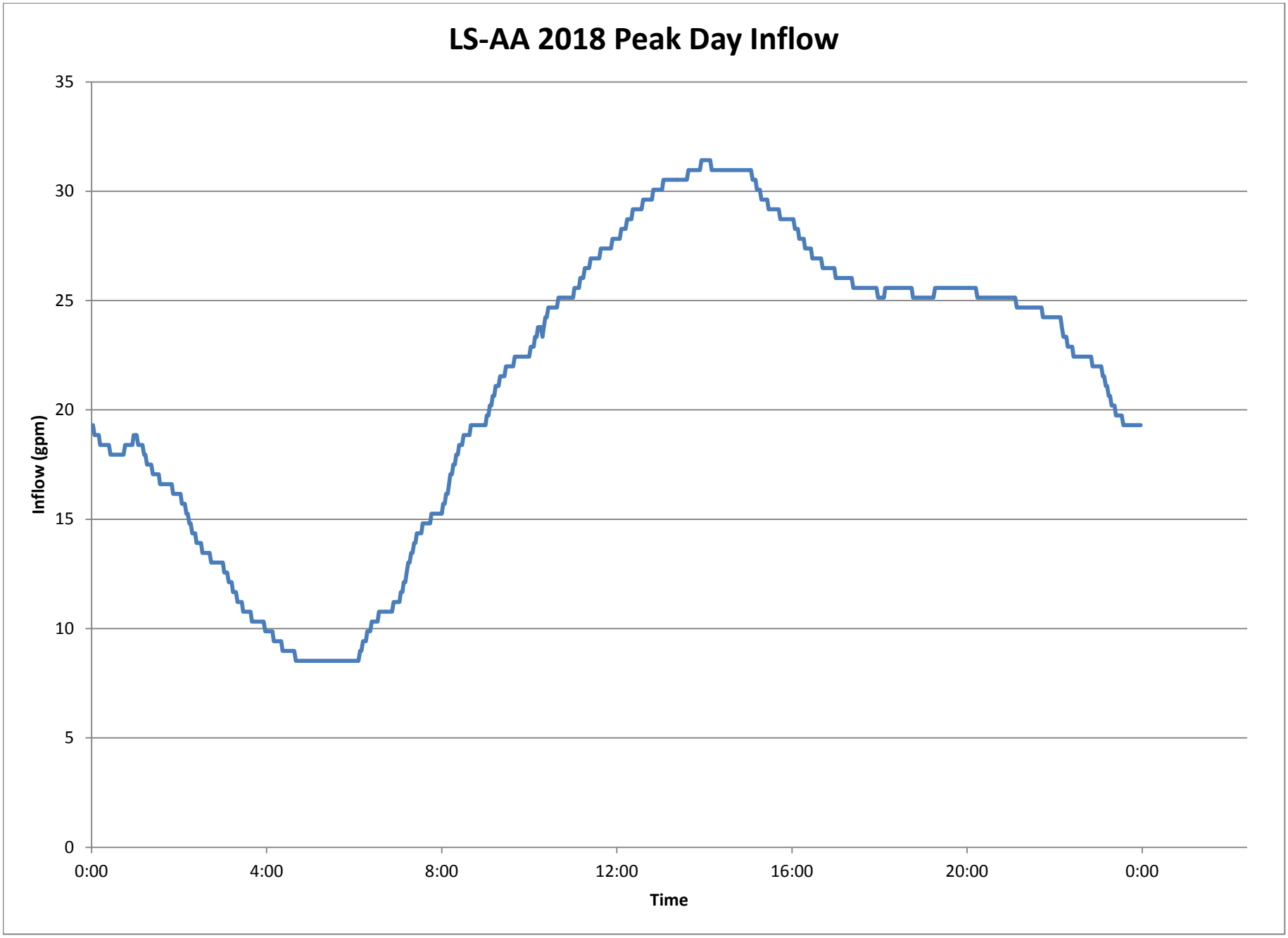

LS-51 2018 Peak Day Inflow
30
25
20
15
10
5
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

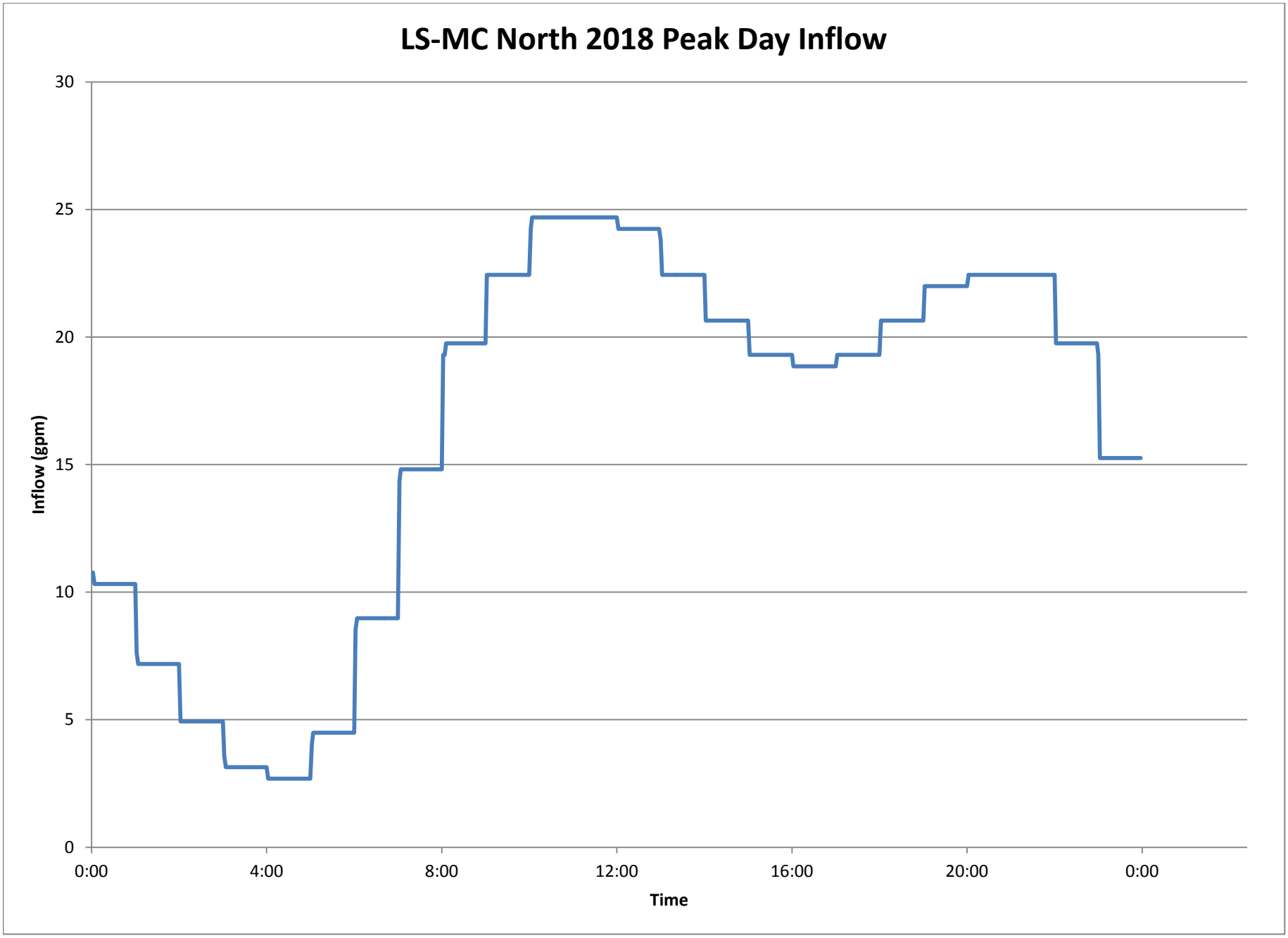

LS-52 2018 Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Landfill PS 2018 Peak Day Inflow
Inflow (gpm)
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Golf Course PS 2018 Peak Day Inflow
Inflow (gpm)
3
3
2
2
1
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Typical STEP 2018 Peak Day Inflow
Inflow (gpm)
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

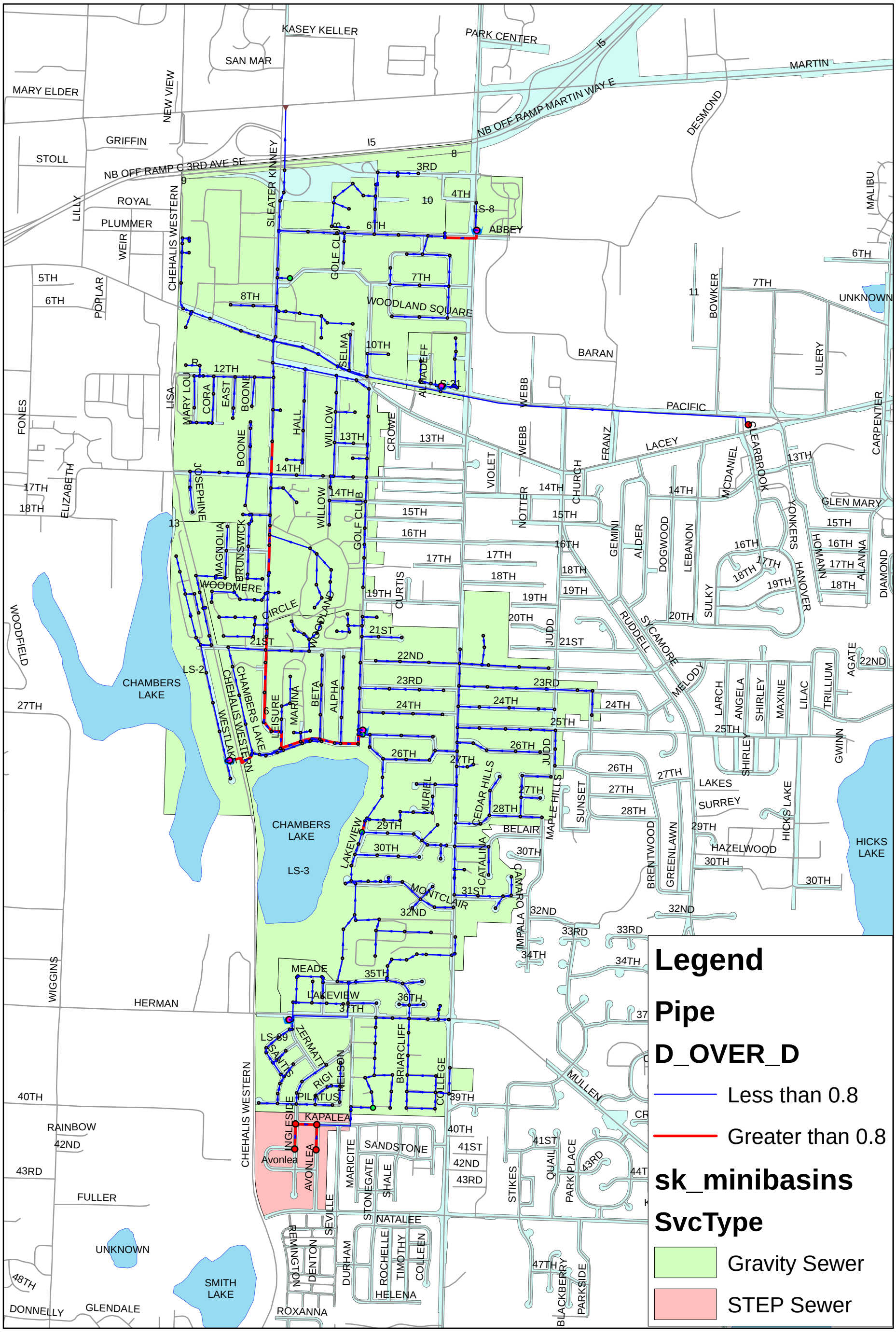

LS-AA 2018 Peak Day Inflow
Inflow (gpm)
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-MC North 2018 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# 2018 MODEL RESULTS

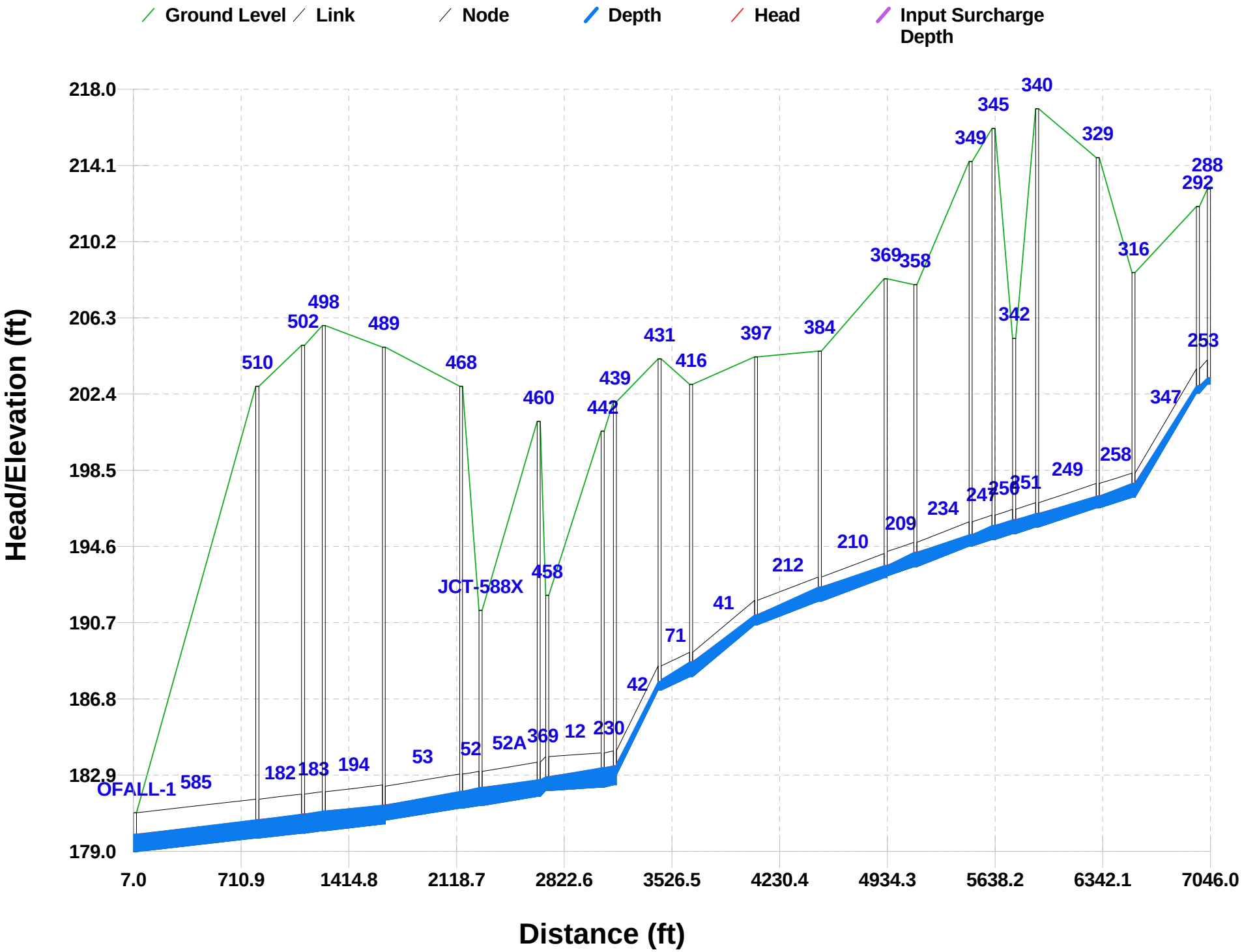
## SLEATER KINNEY BASIN

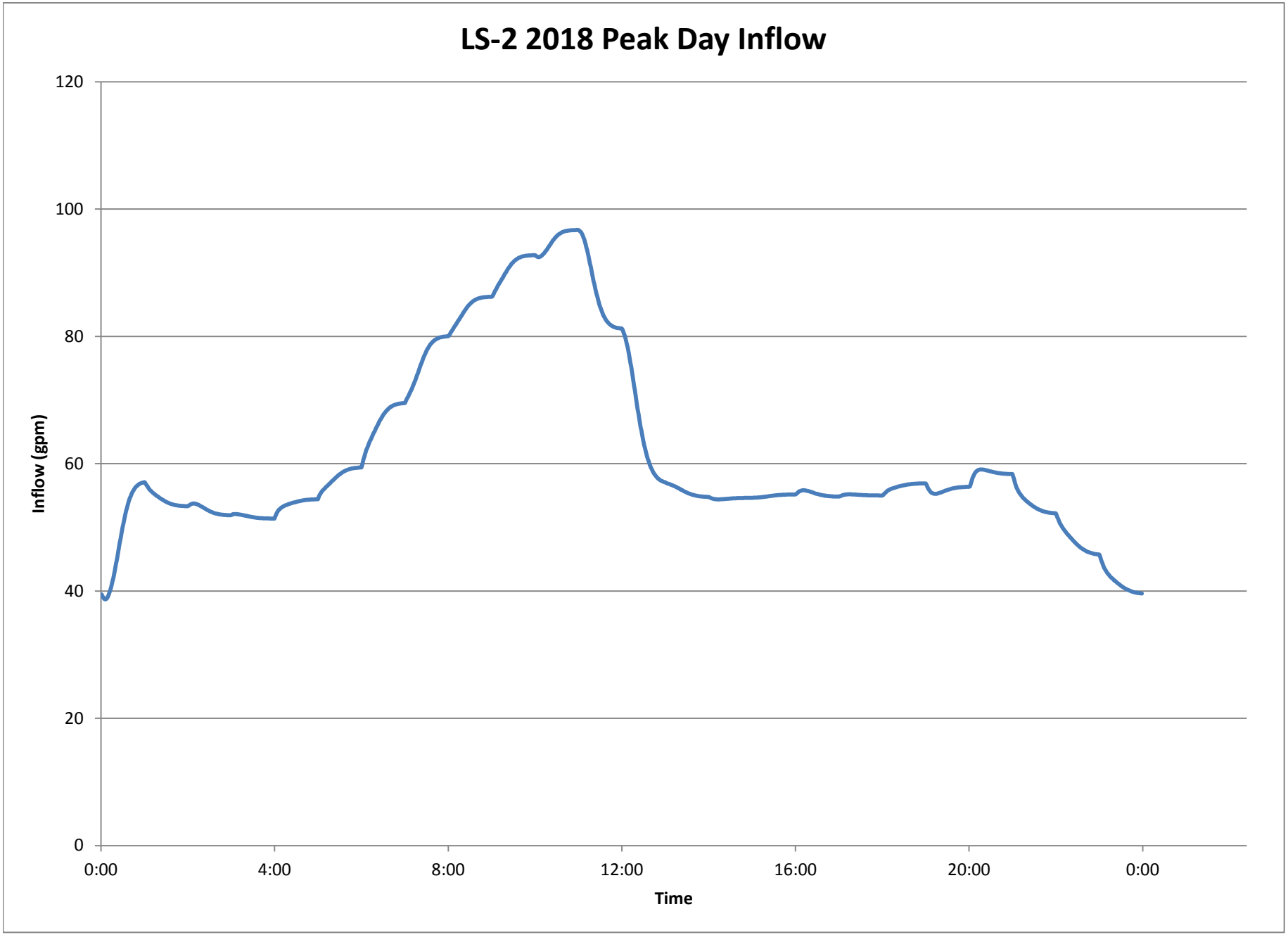
# Lacey - Sleater Kinney Collection System Model
# 2018 Peak Day Surcharging
# d/D Criteria = 0.80

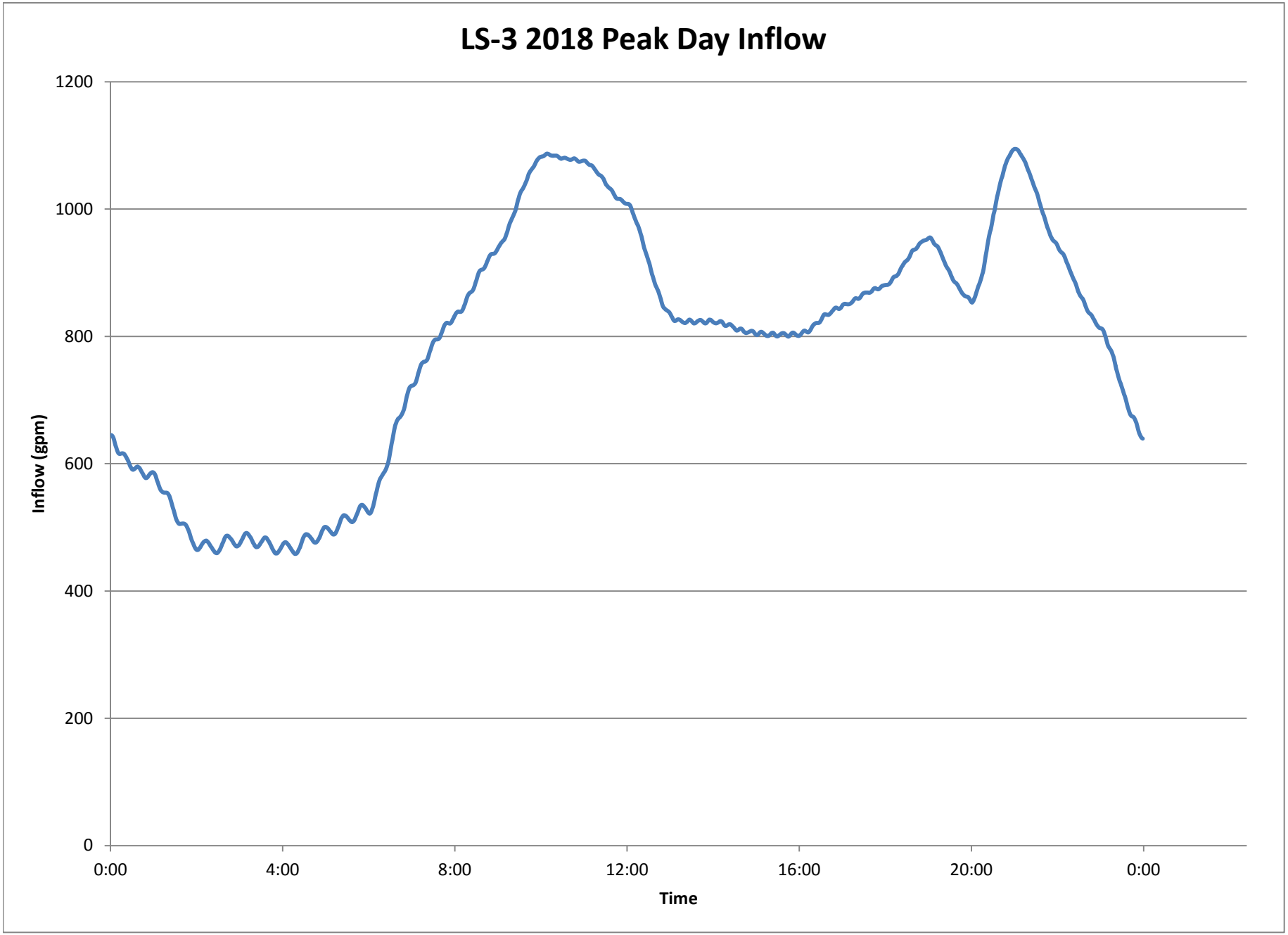


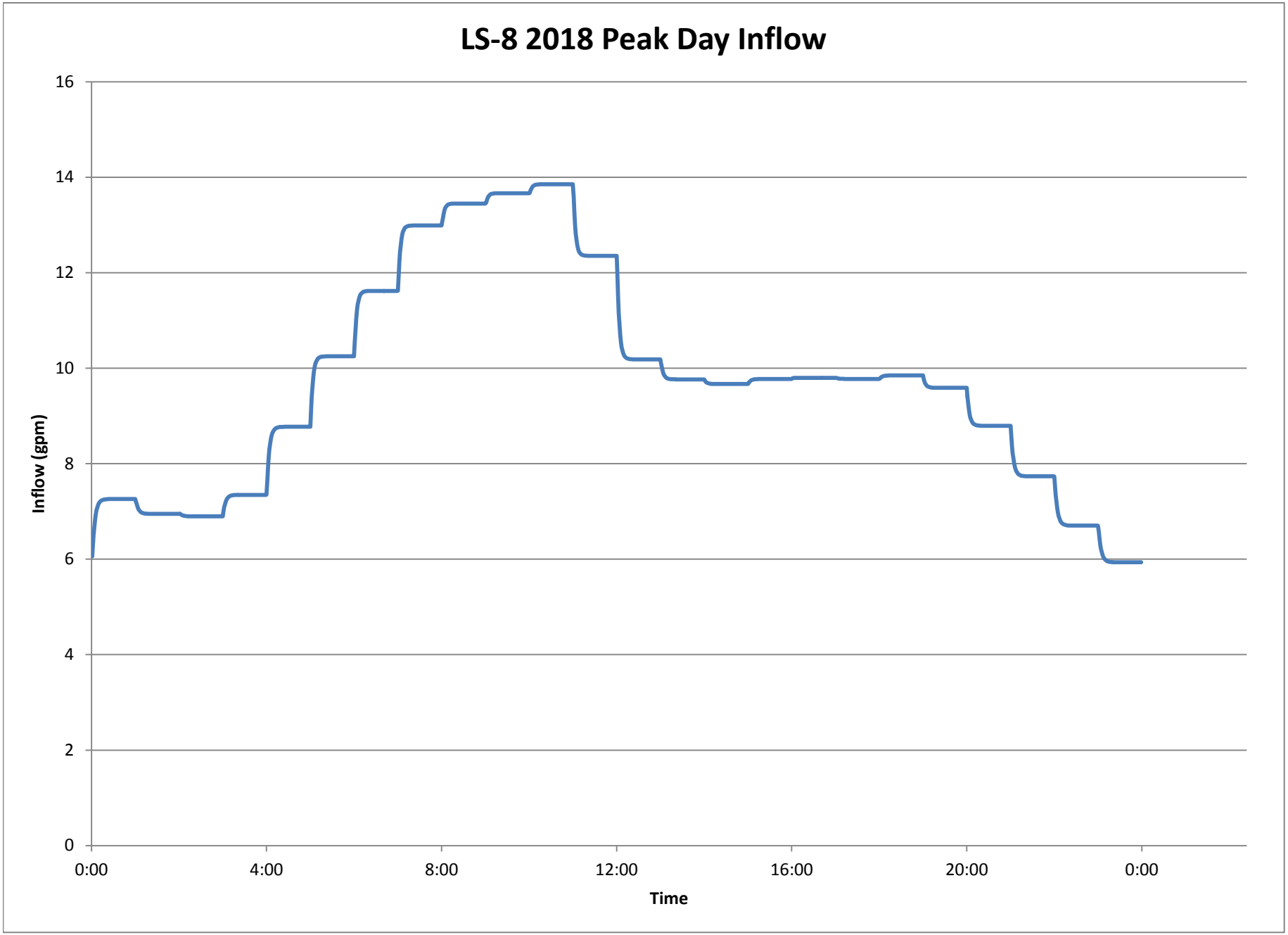

Note: Force mains and STEP mains are always full and are shown as always surcharging.

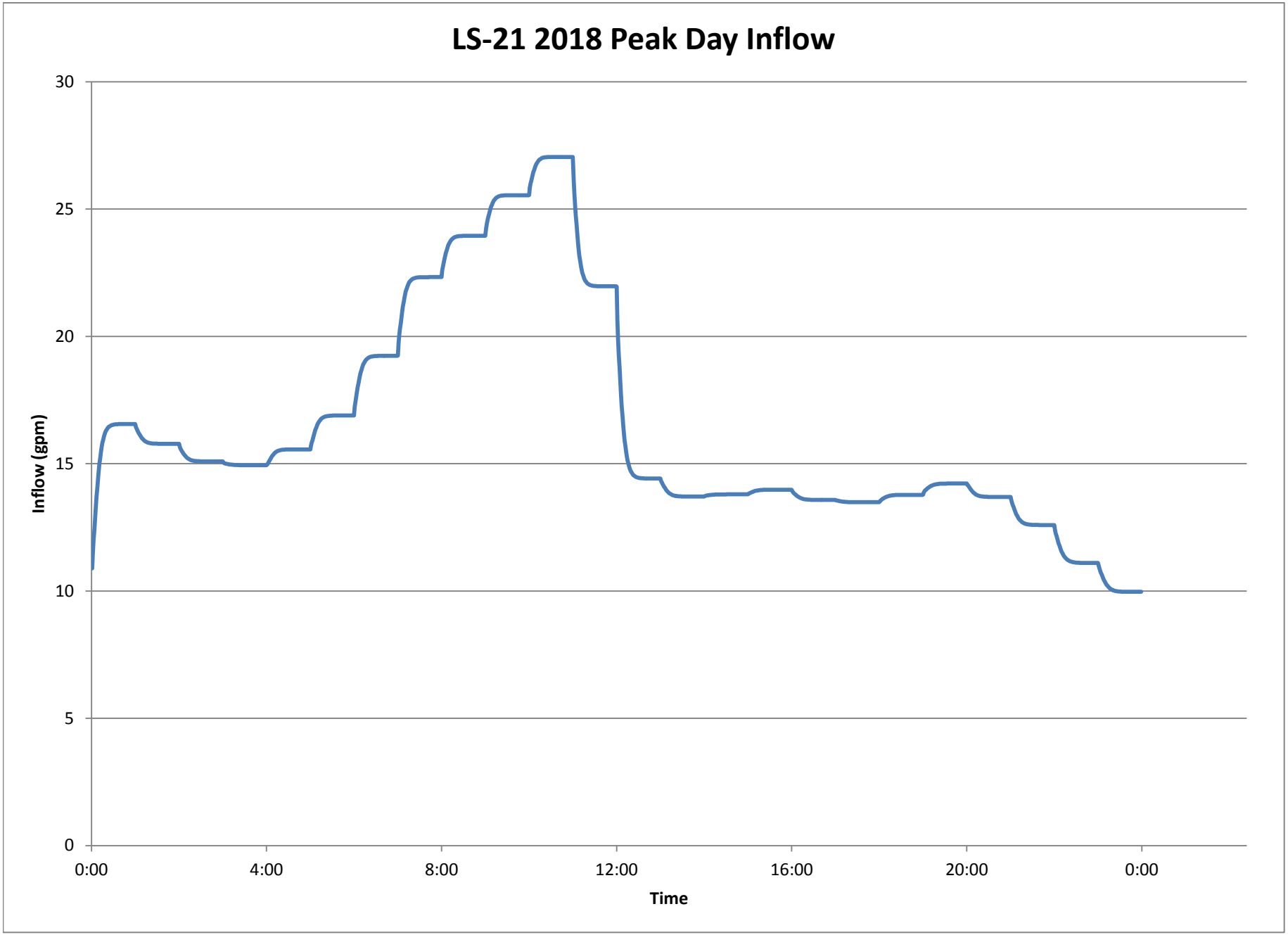
# Sleater Kinney Alignment: 2018 Peak HGL

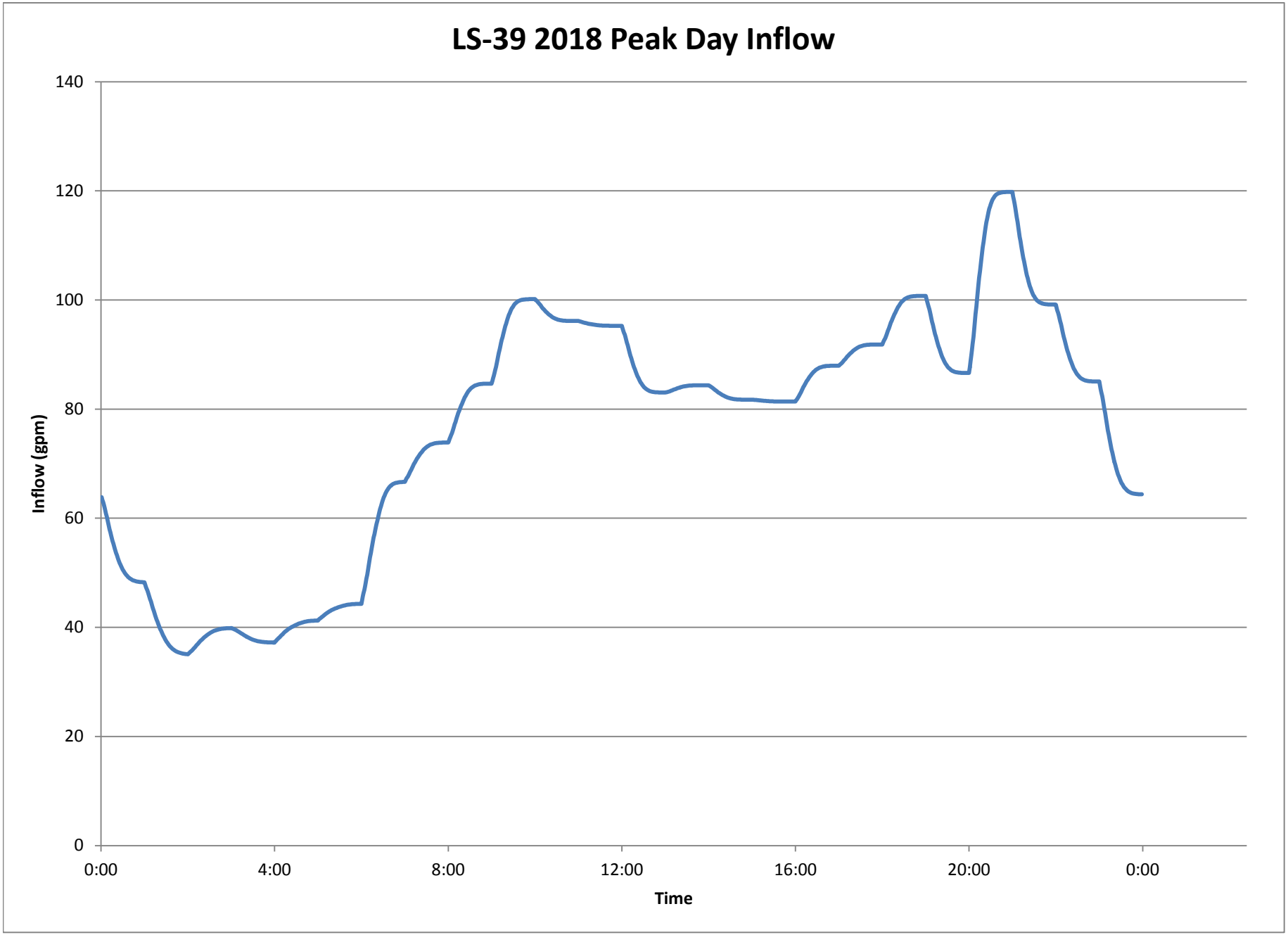



LS-2 2018 Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-3 2018 Peak Day Inflow
1200
1000
800
600
400
200
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-8 2018 Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

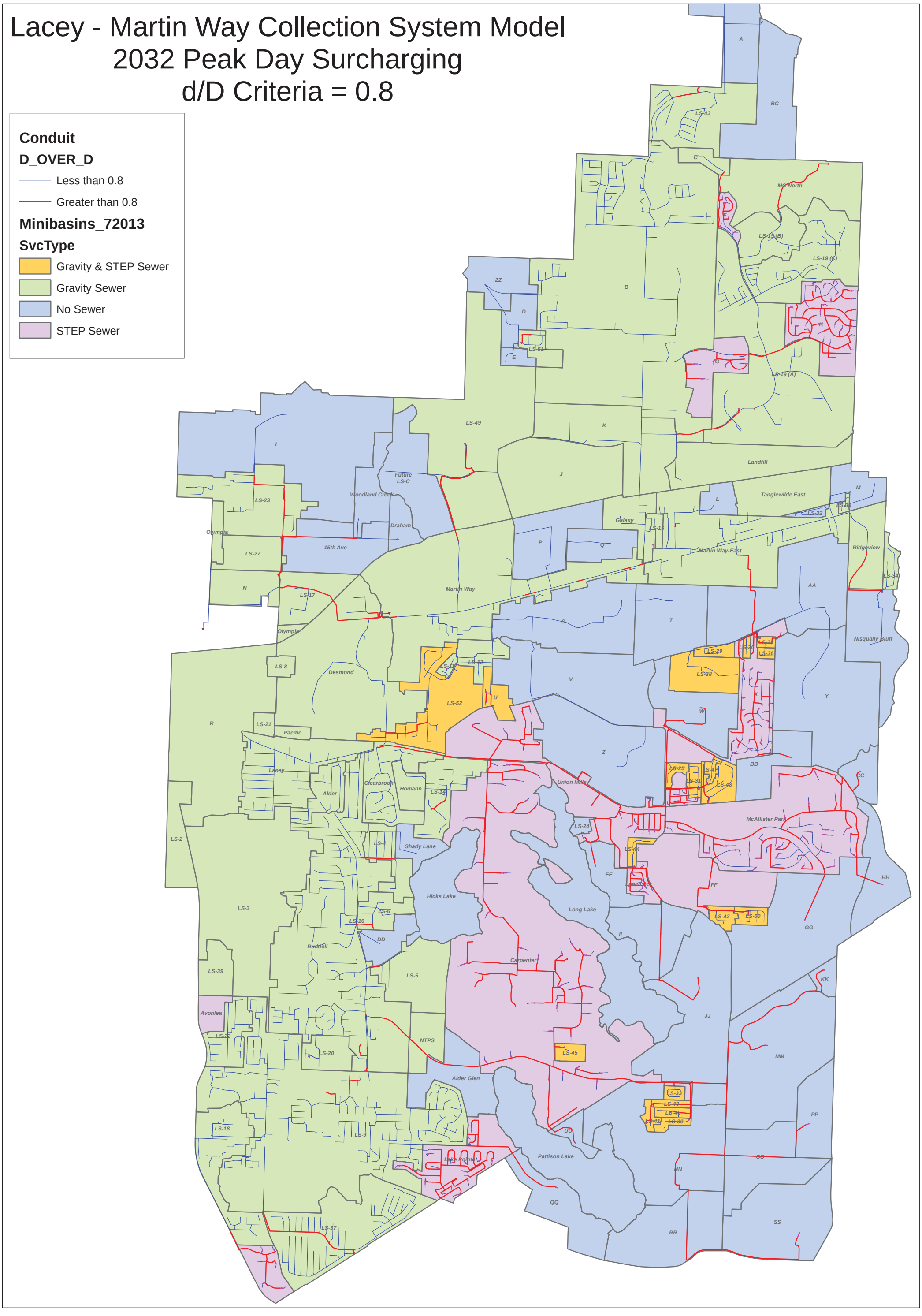

LS-21 2018 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

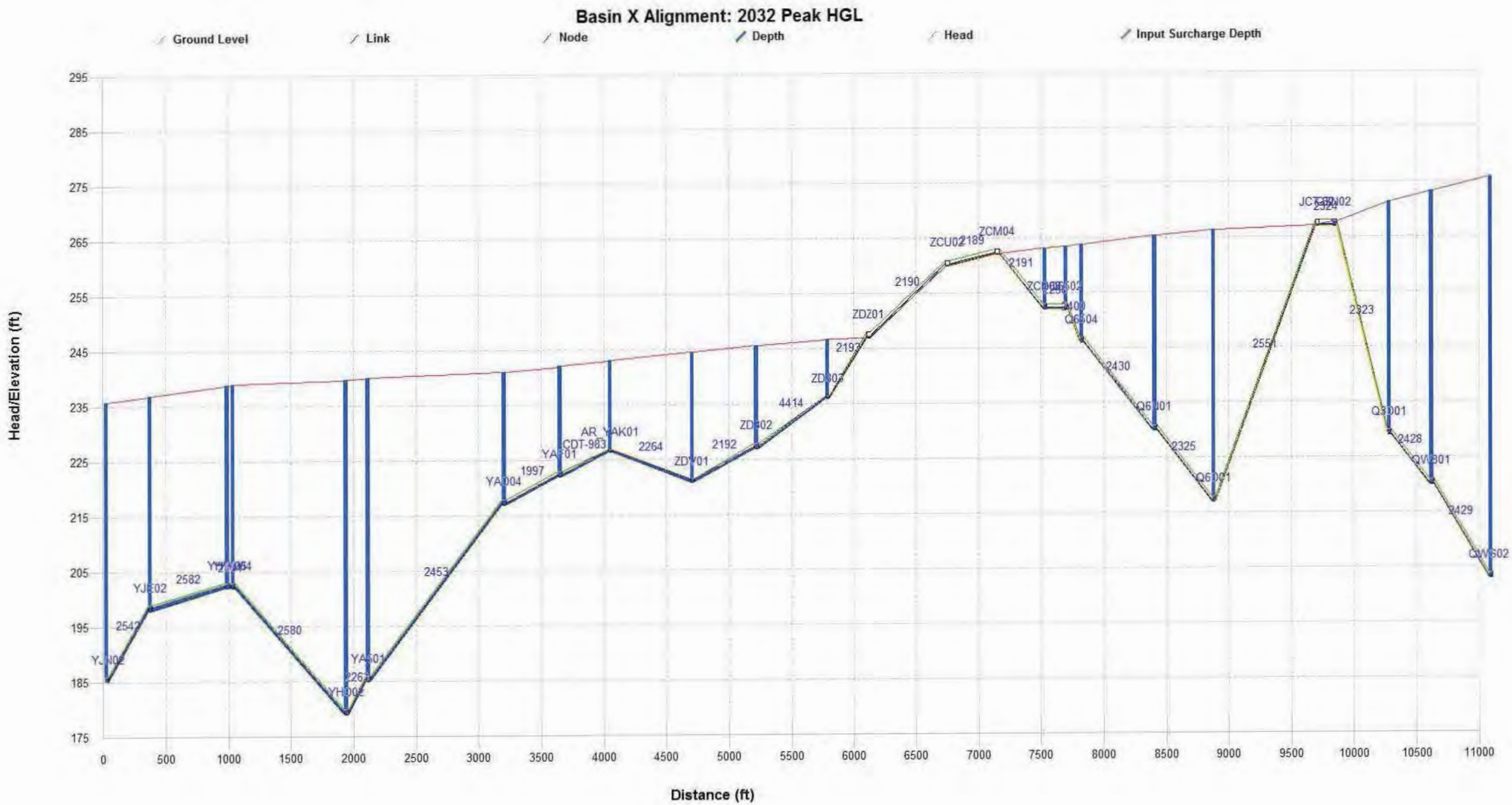

LS-39 2018 Peak Day Inflow
Inflow (gpm)
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# 2032 MODEL RESULTS

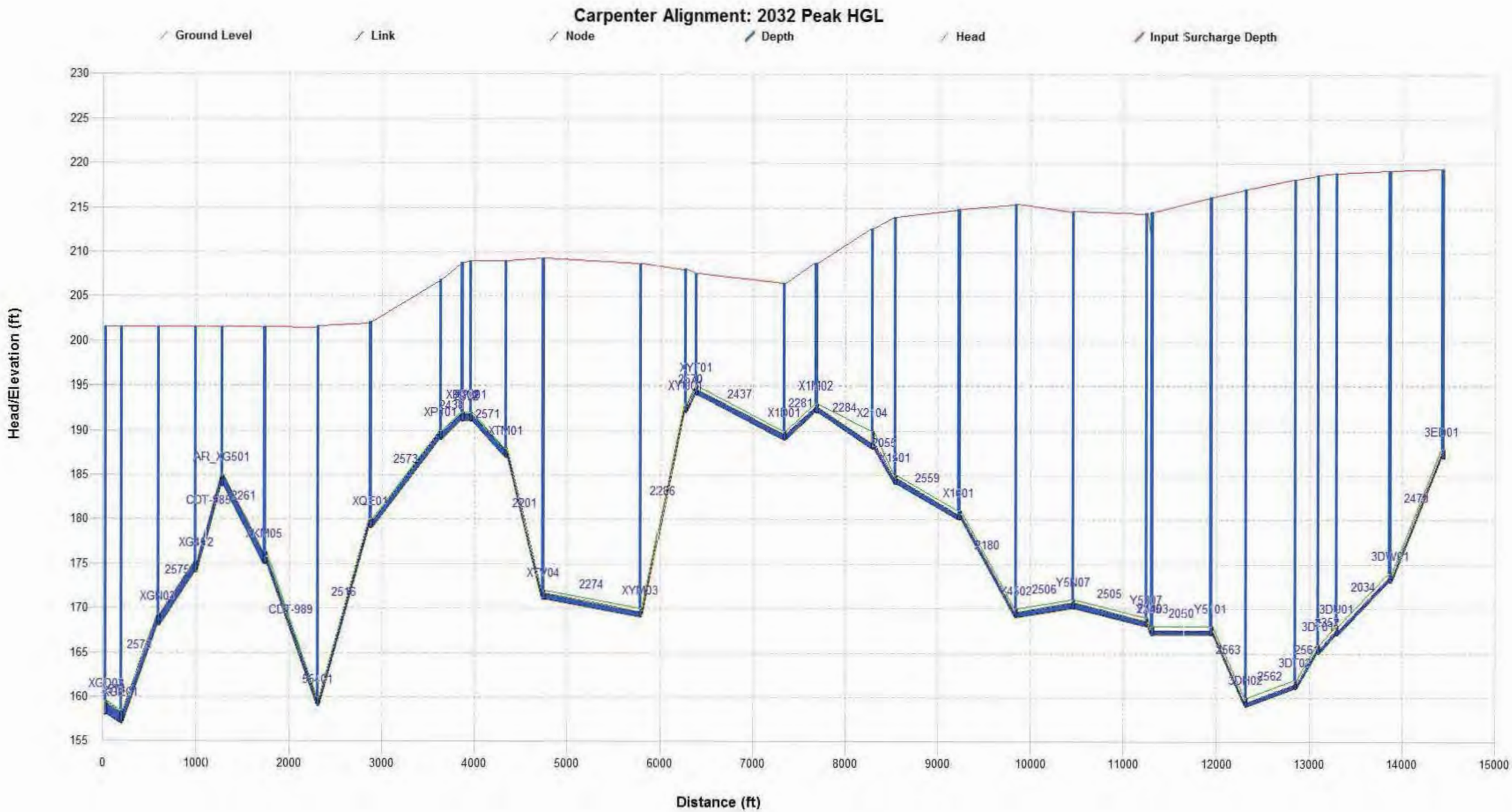
## MARTIN WAY BASIN

# Lacey - Martin Way Collection System Model
## 2032 Peak Day Surcharging
## d/D Criteria = 0.8

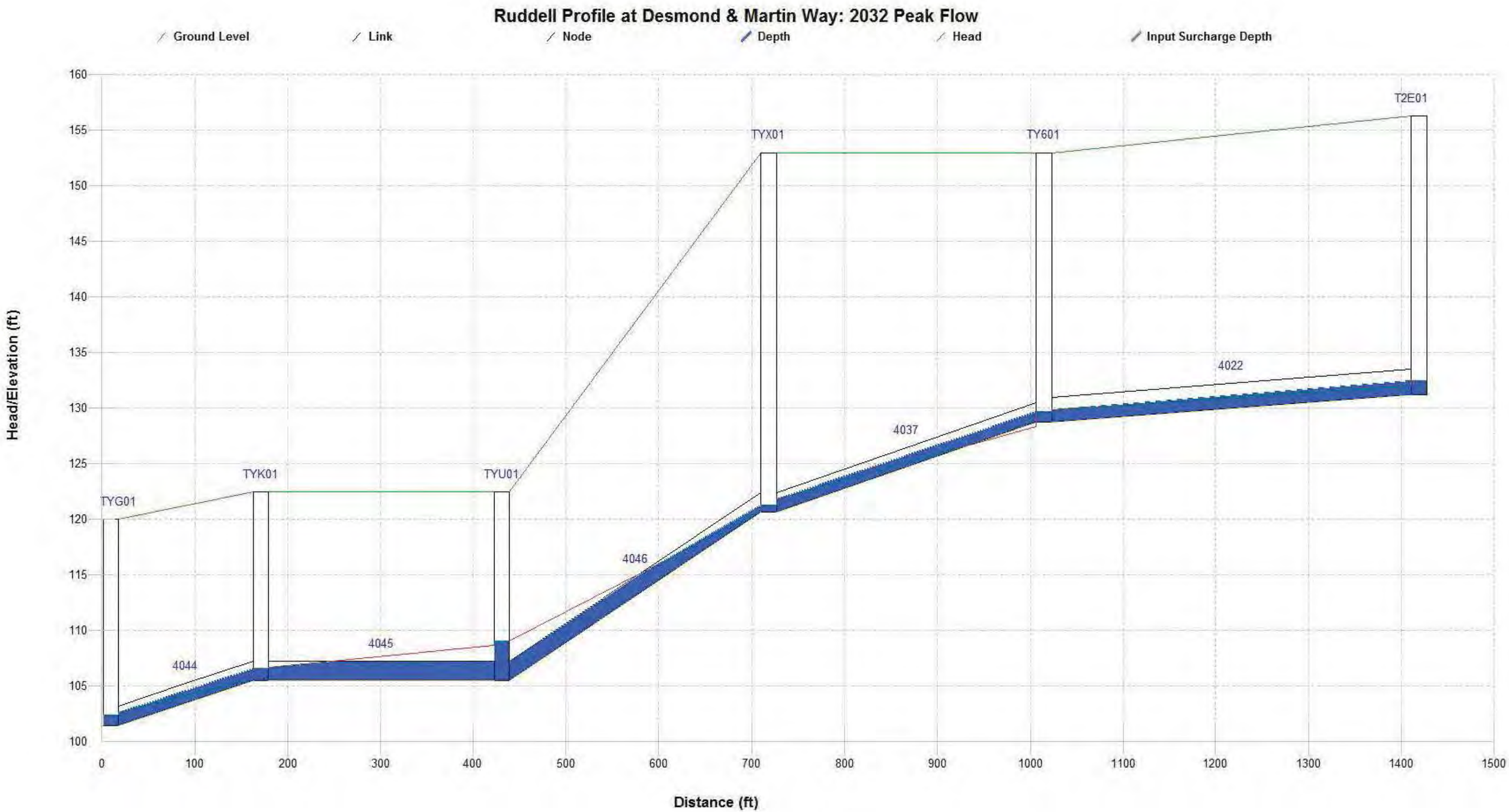


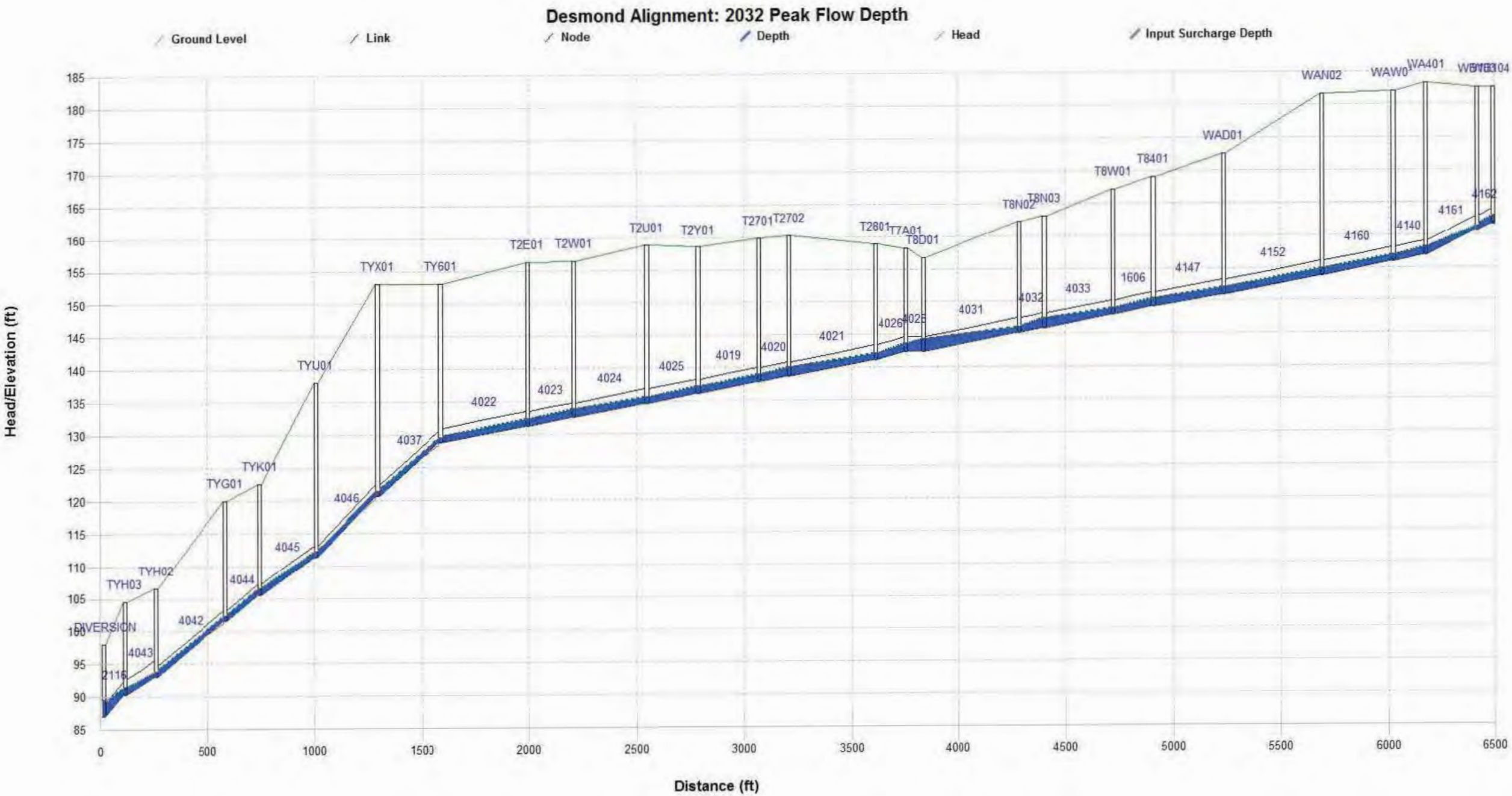


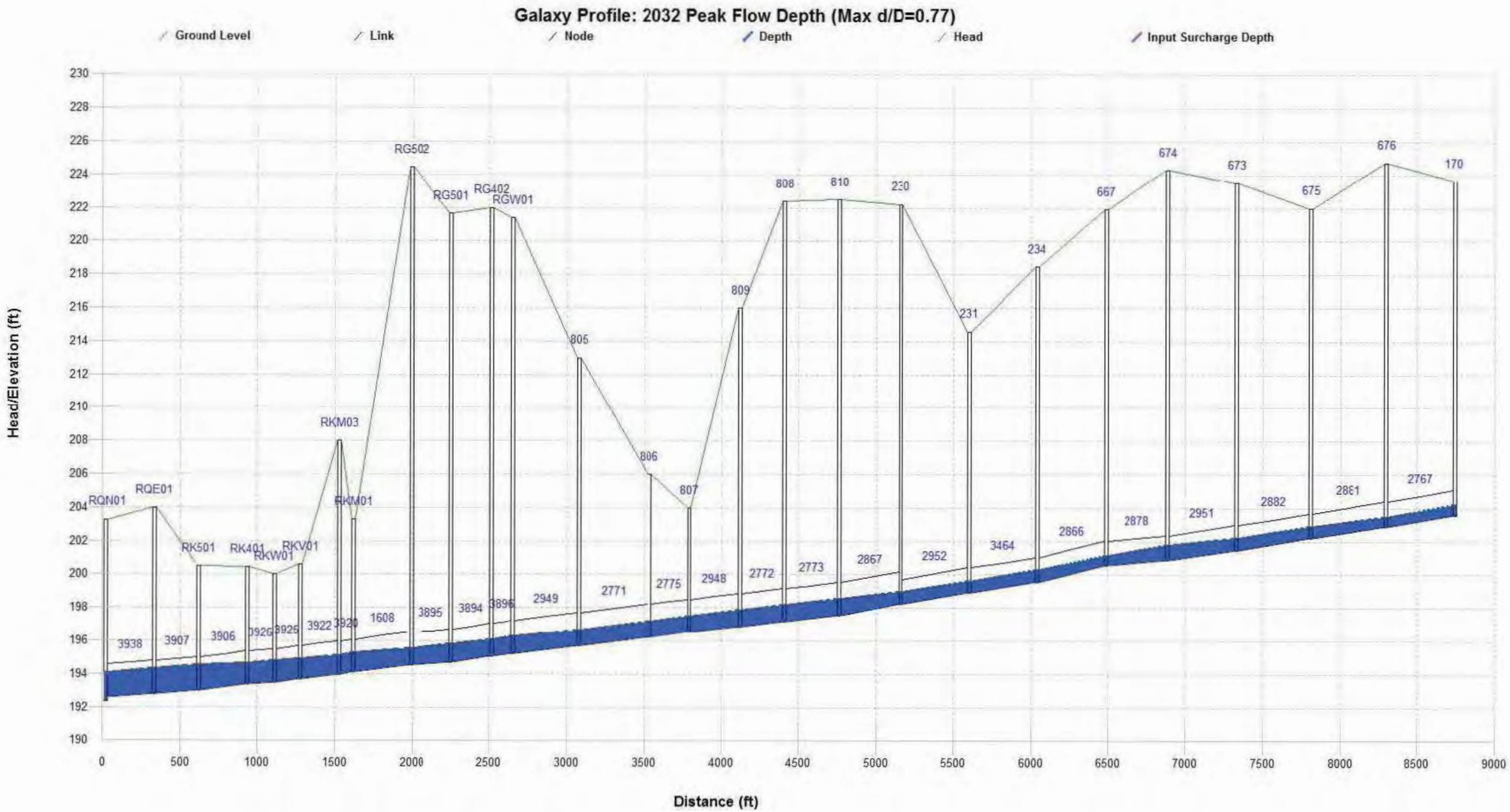
Basin X Alignment: 2032 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
295
285
275
265
255
245
235
225
215
205
195
185
175
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000
10500
11000
YJN02
2542
YJE02
2582
2580
YH002
2263
YA501
2453
YA004
1997
YAF01
CDT-983
AR_YAK01
2264
ZDY01
2192
ZD802
4414
ZD803
2193
ZDZ01
2190
ZCU02
2189
ZCM04
2191
2400
Q6504
2430
Q6001
2325
Q6001
2551
2324
2323
Q3001
2428
QWB01
2429
QWS02

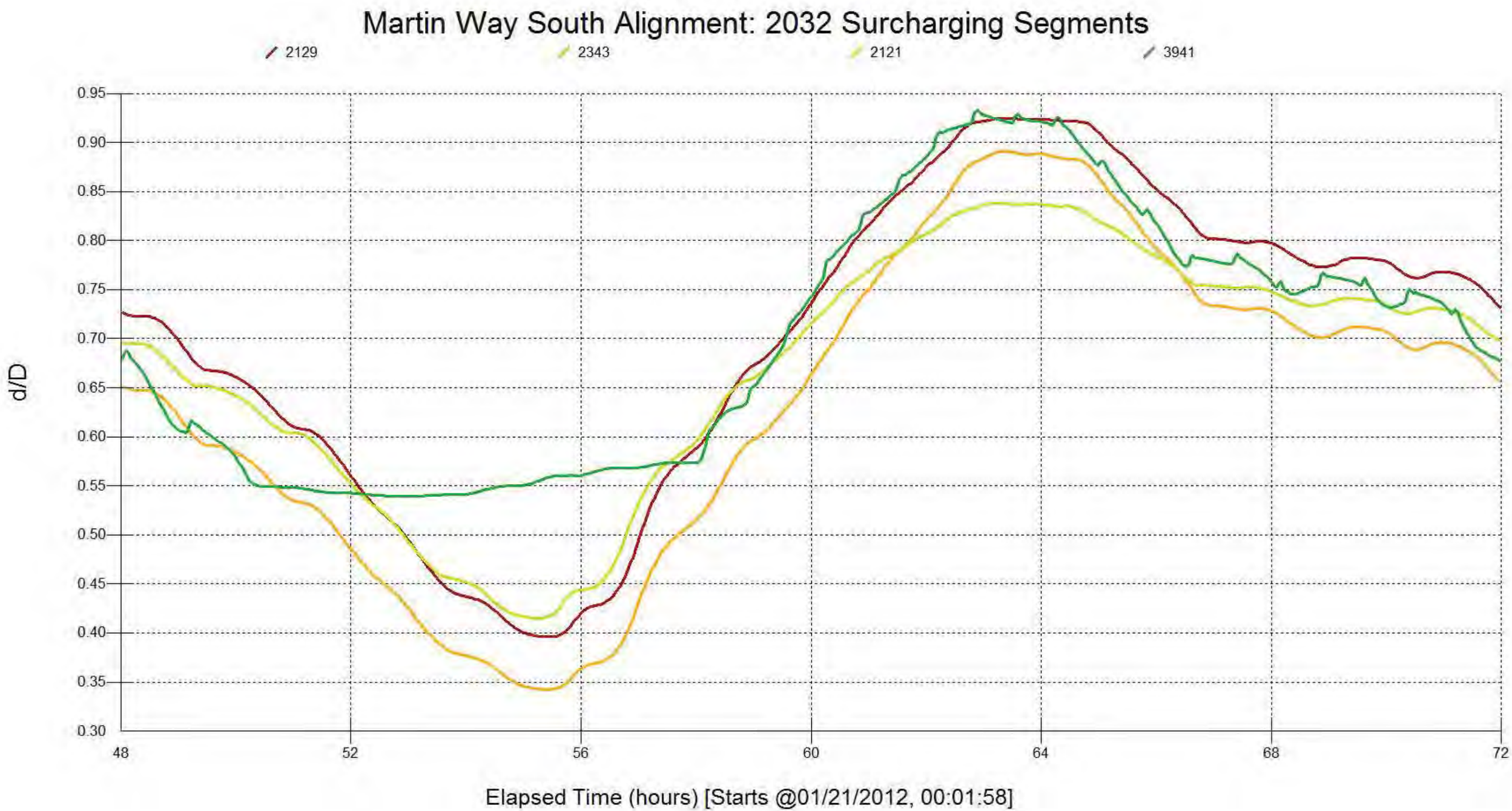


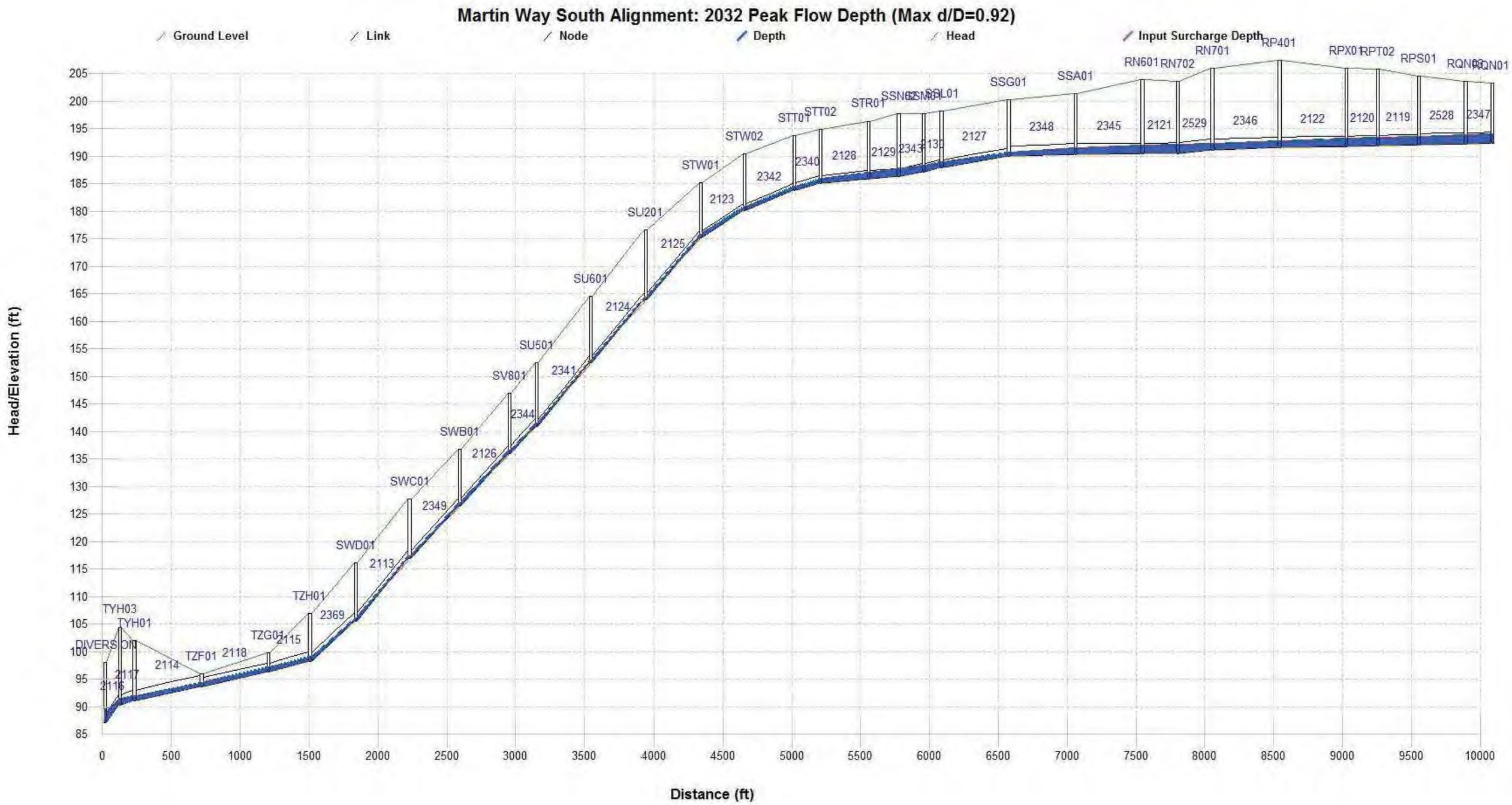
Carpenter Alignment: 2032 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

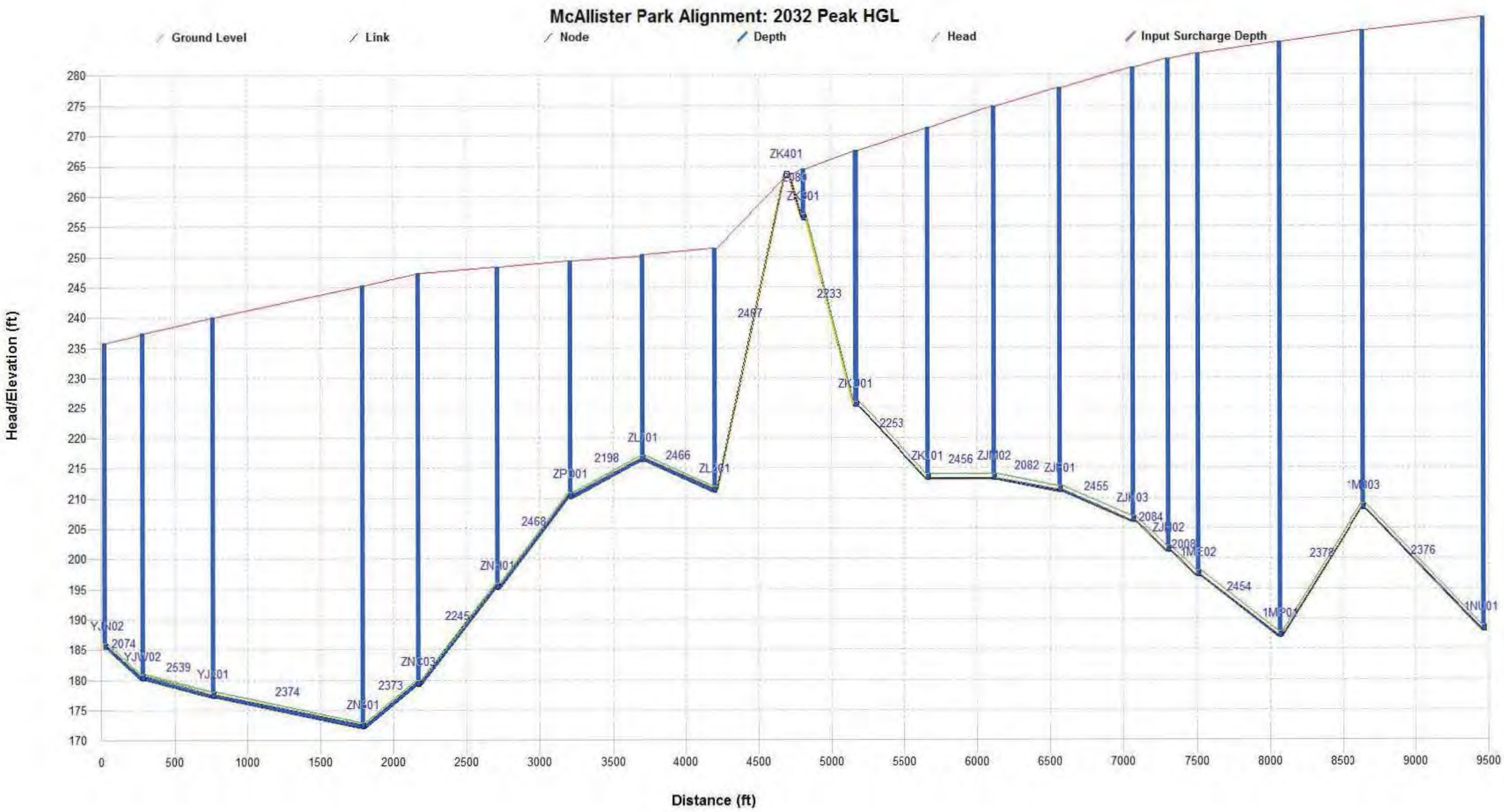

Ruddell Profile at Desmond & Martin Way: 2032 Peak Flow
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
TYG01
TYK01
TYU01
TYX01
TY601
T2E01
4044
4045
4046
4037
4022
160
155
150
145
140
135
130
125
120
115
110
105
100
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500


Desmond Alignment: 2032 Peak Flow Depth
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
DIVERSION
TYH03
TYH02
TYU01
TYX01
TY601
TYG01
TYK01
T2E01
T2W01
T2U01
T2Y01
T2701
T2702
T2801
T7A01
T8D01
T8N02
T8N03
T8W01
T8401
WAD01
WAN02
WAW0
WA401
4043
2116
4042
4044
4045
4046
4037
4022
4023
4024
4025
4019
4020
4021
4026
4025
4031
4032
4033
1606
4147
4152
4160
4140
4161
4162

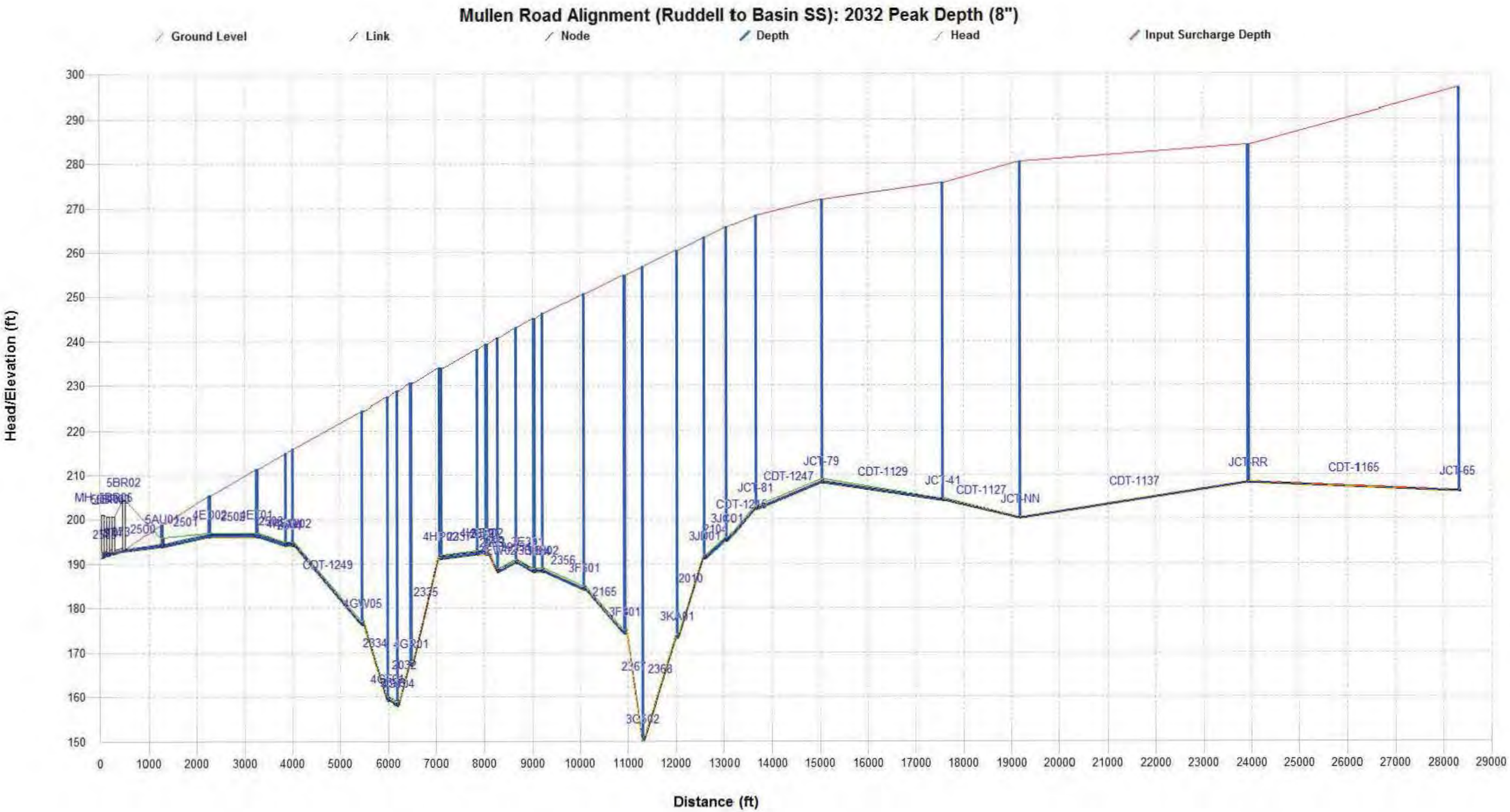

Galaxy Profile: 2032 Peak Flow Depth (Max d/D=0.77)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
RQN01
RQE01
RK501
RK401
RKW01
RKV01
RKM03
RKM01
RG502
RG501
RG402
RGW01
805
806
807
808
809
810
230
231
234
667
674
673
675
676
170
3938
3907
3906
3926
3922
1608
3895
3894
2949
2771
2775
2948
2772
2773
2867
2952
3464
2866
2878
2951
2882
2881
2767


Martin Way South Alignment: 2032 Surcharging Segments
2129
2343
2121
3941
d/D
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
48
52
56
60
64
68
72
Elapsed Time (hours) [Starts @01/21/2012, 00:01:58]

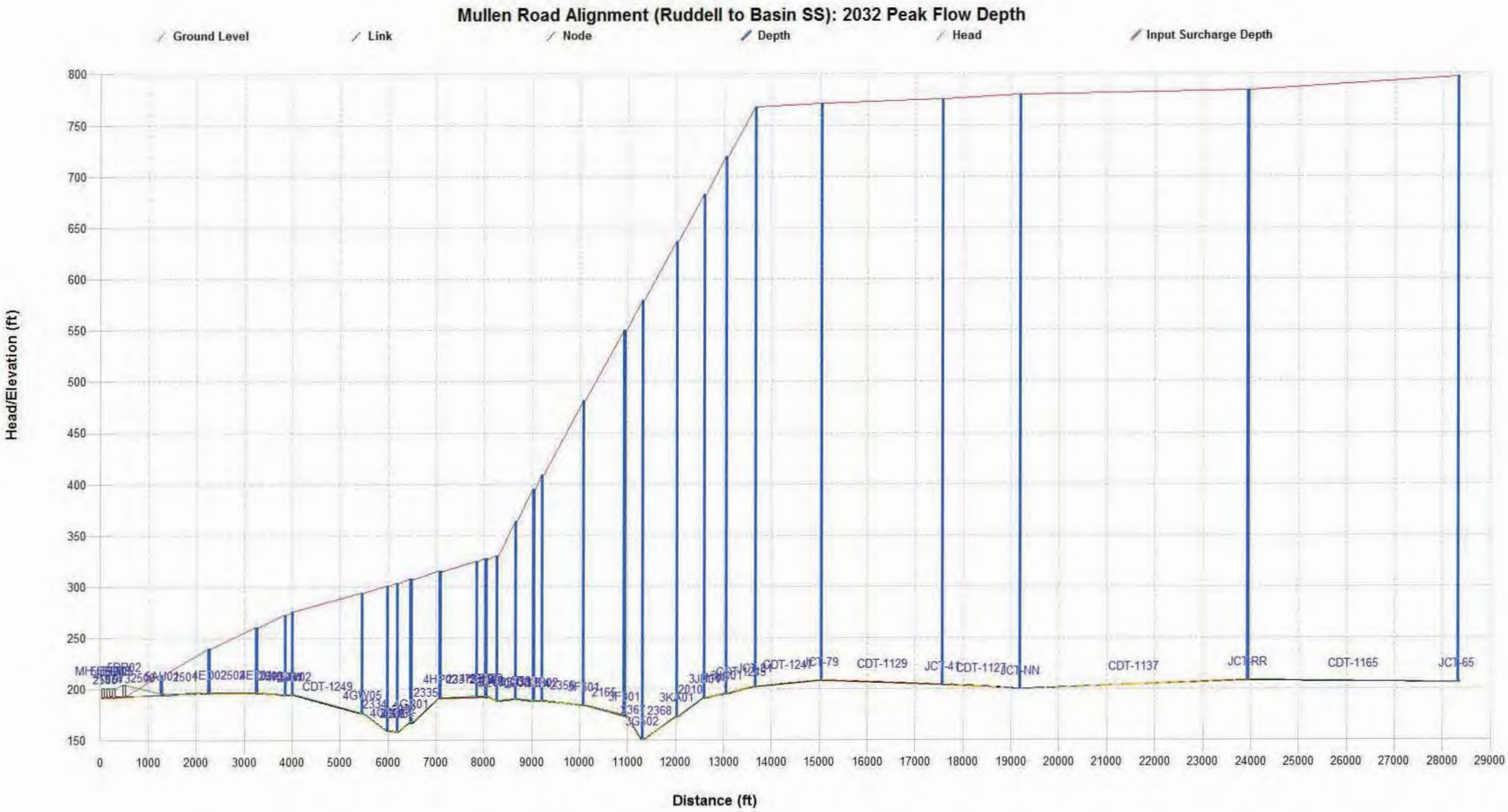

Martin Way South Alignment: 2032 Peak Flow Depth (Max d/D=0.92)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
TYH03
TYH01
DIVERSION
2116
2117
2114
TZF01
2118
TZG01
2115
TZH01
2369
SWD01
2113
SWC01
2349
SWB01
2126
SV801
2344
SU501
2341
SU601
2124
SU201
2125
STW01
2123
STW02
2342
STT01
2340
STT02
2128
STR01
2129
2343
2127
SSG01
2348
SSA01
2345
RN601
2121
RN702
2529
RN701
2346
RP401
2122
RPX01
2120
RPT02
2119
RPS01
2528
2347

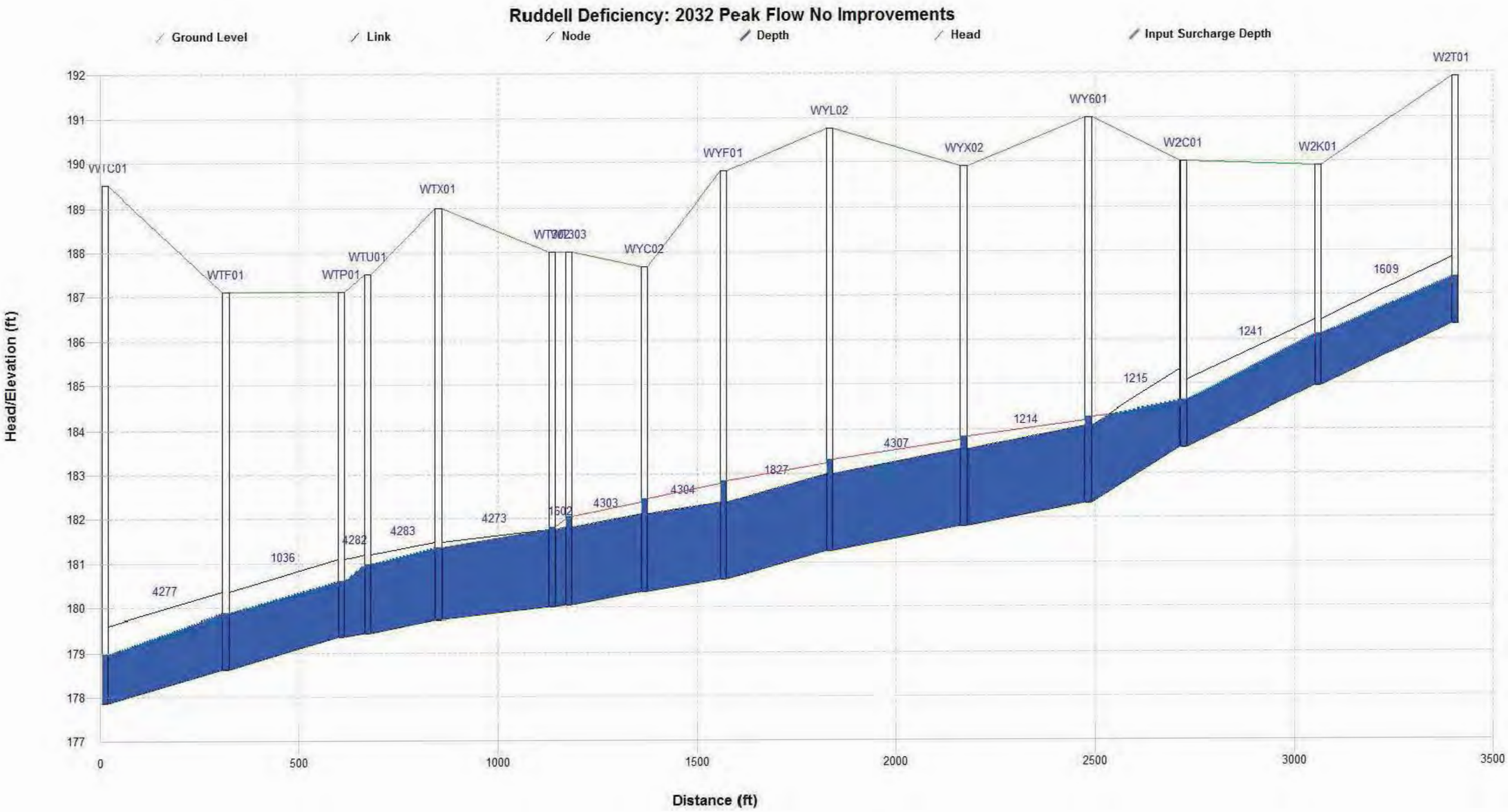


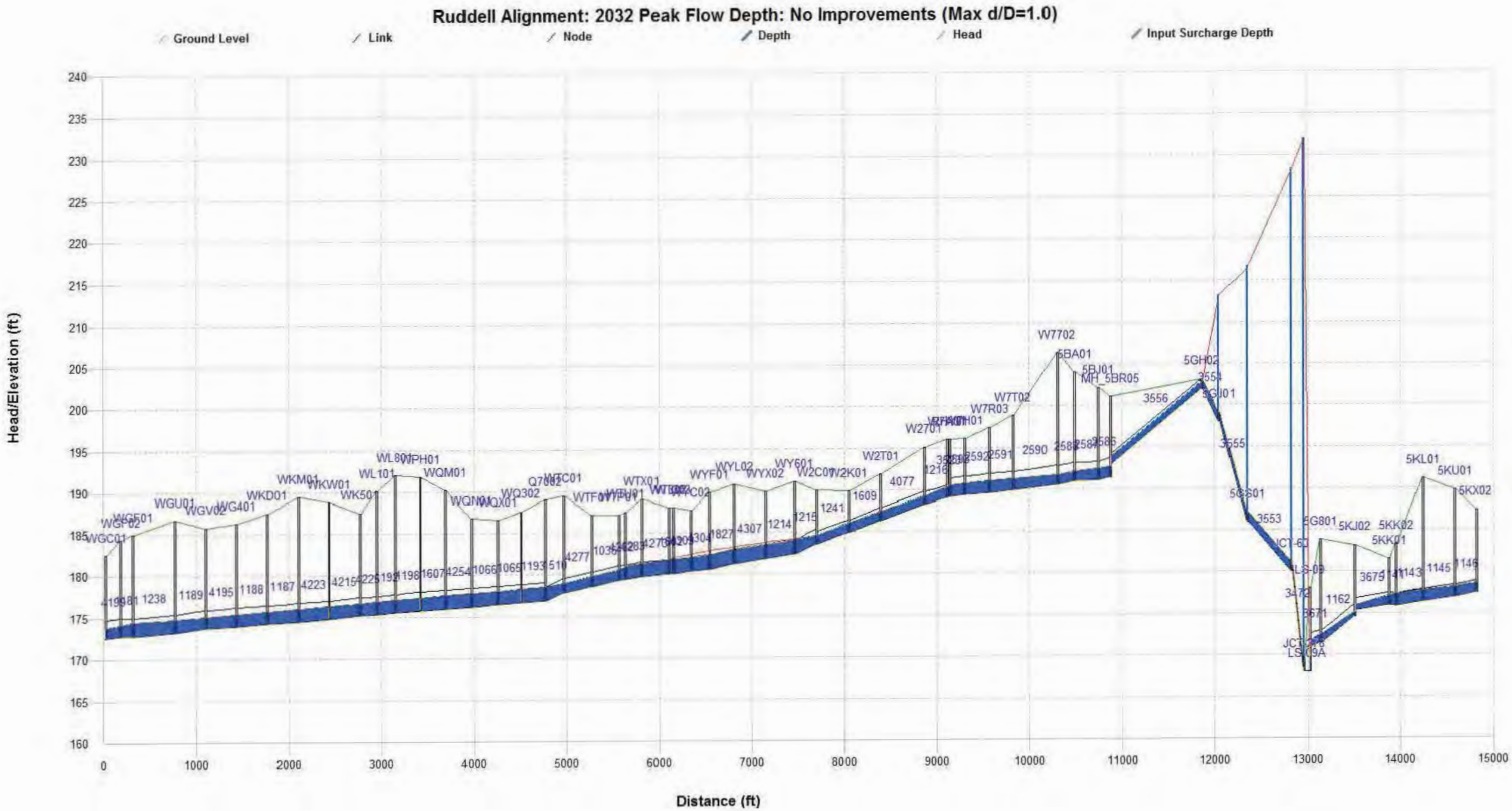
McAllister Park Alignment: 2032 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
ZK401
2233
2407
2253
2456
2082
2455
2084
2454
2376
2198
2466
2468
2245
2373
2374
2539
2074



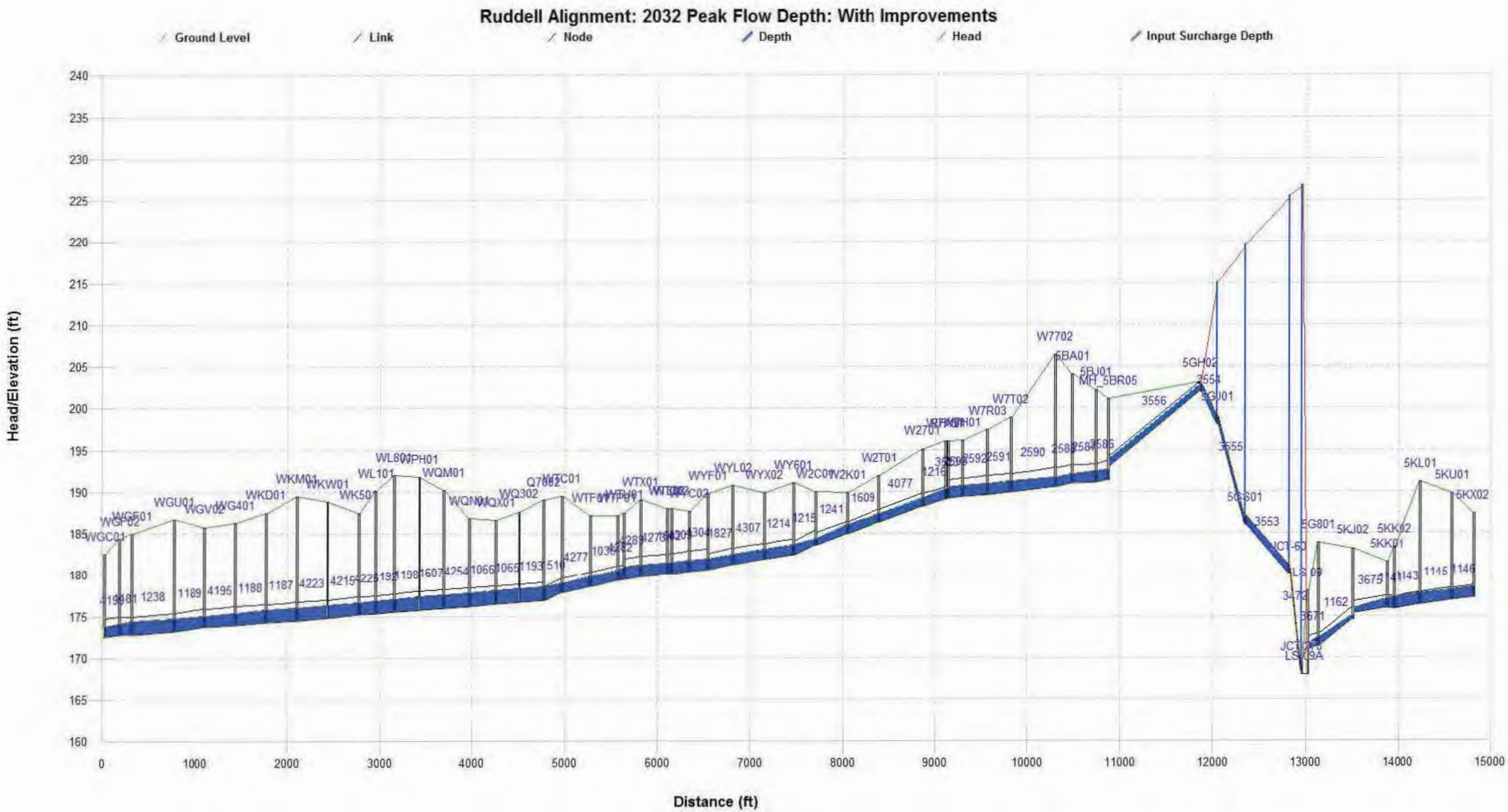
Mullen Road Alignment (Ruddell to Basin SS): 2032 Peak Depth (8")
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
5BR02
CDT-1249
4GW05
2334
2335
2032
2356
3F501
2165
2368
3KA01
2010
3JC01
CDT-1247
JCT-81
JCT-79
CDT-1129
JCT-41
CDT-1127
JCT-NN
CDT-1137
JCT-RR
CDT-1165
JCT-65


Mullen Road Alignment (Ruddell to Basin SS): 2032 Peak Flow Depth
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
CDT-1249
CDT-1129
CDT-1137
CDT-1165
JCT-79
JCT-NN
JCT-RR
JCT-65

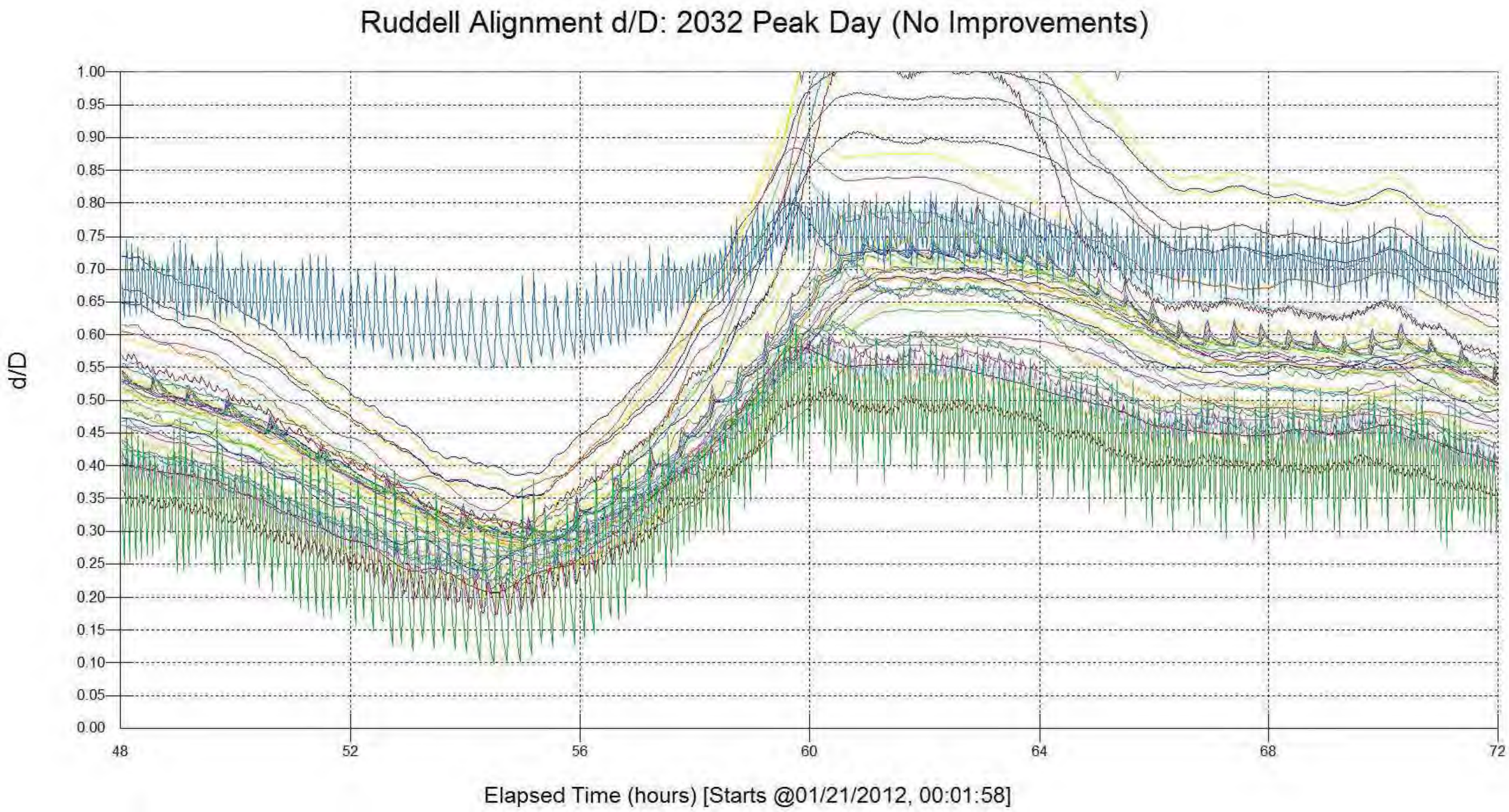

Ruddell Deficiency: 2032 Peak Flow No Improvements
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
WTC01
WTF01
WTP01
WTU01
WTX01
WYC02
WYF01
WYL02
WYX02
WY601
W2C01
W2K01
W2T01
4277
1036
4282
4283
4273
1502
4303
4304
1827
4307
1214
1215
1241
1609

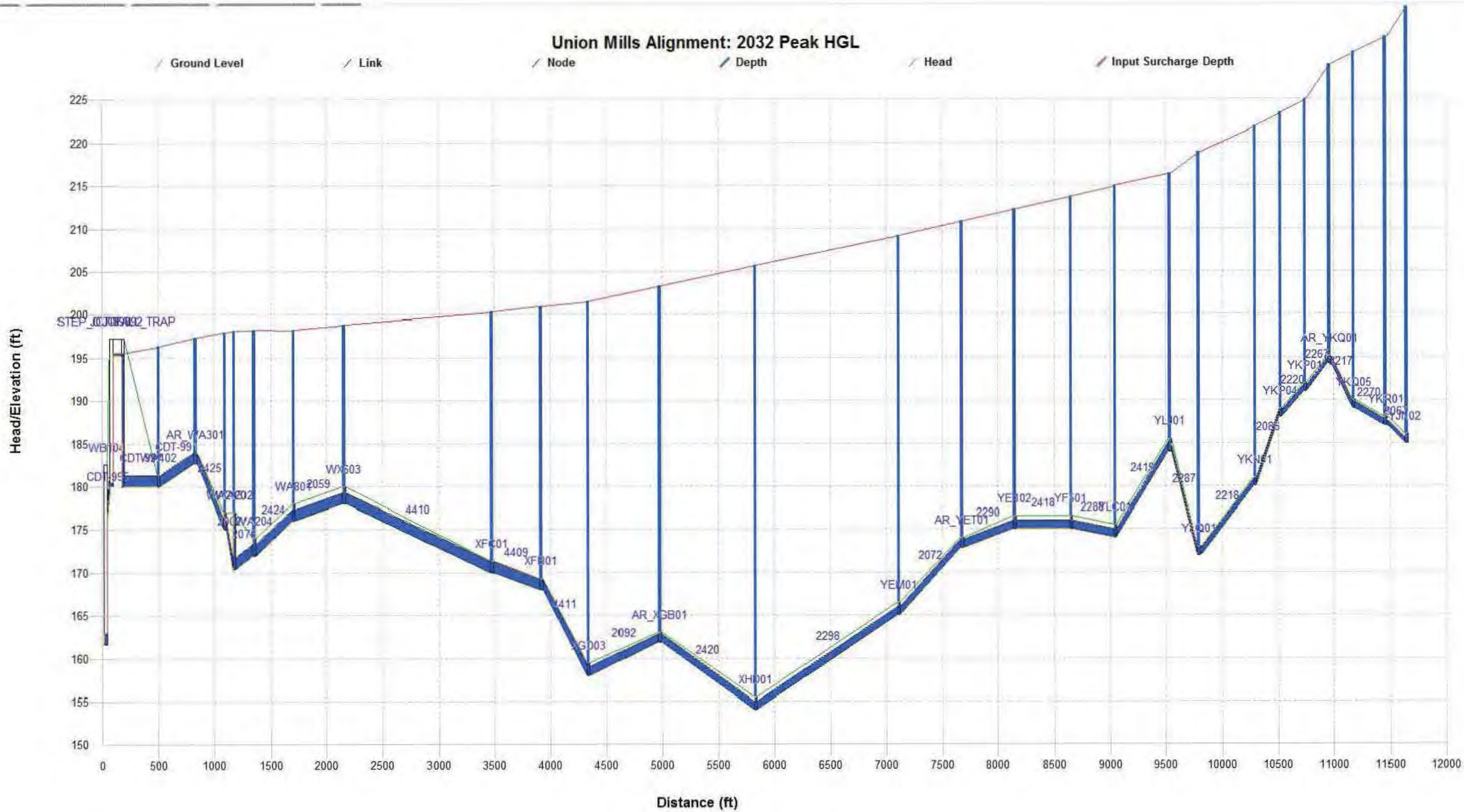


Ruddell Alignment: 2032 Peak Flow Depth: No Improvements (Max d/D=1.0)
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

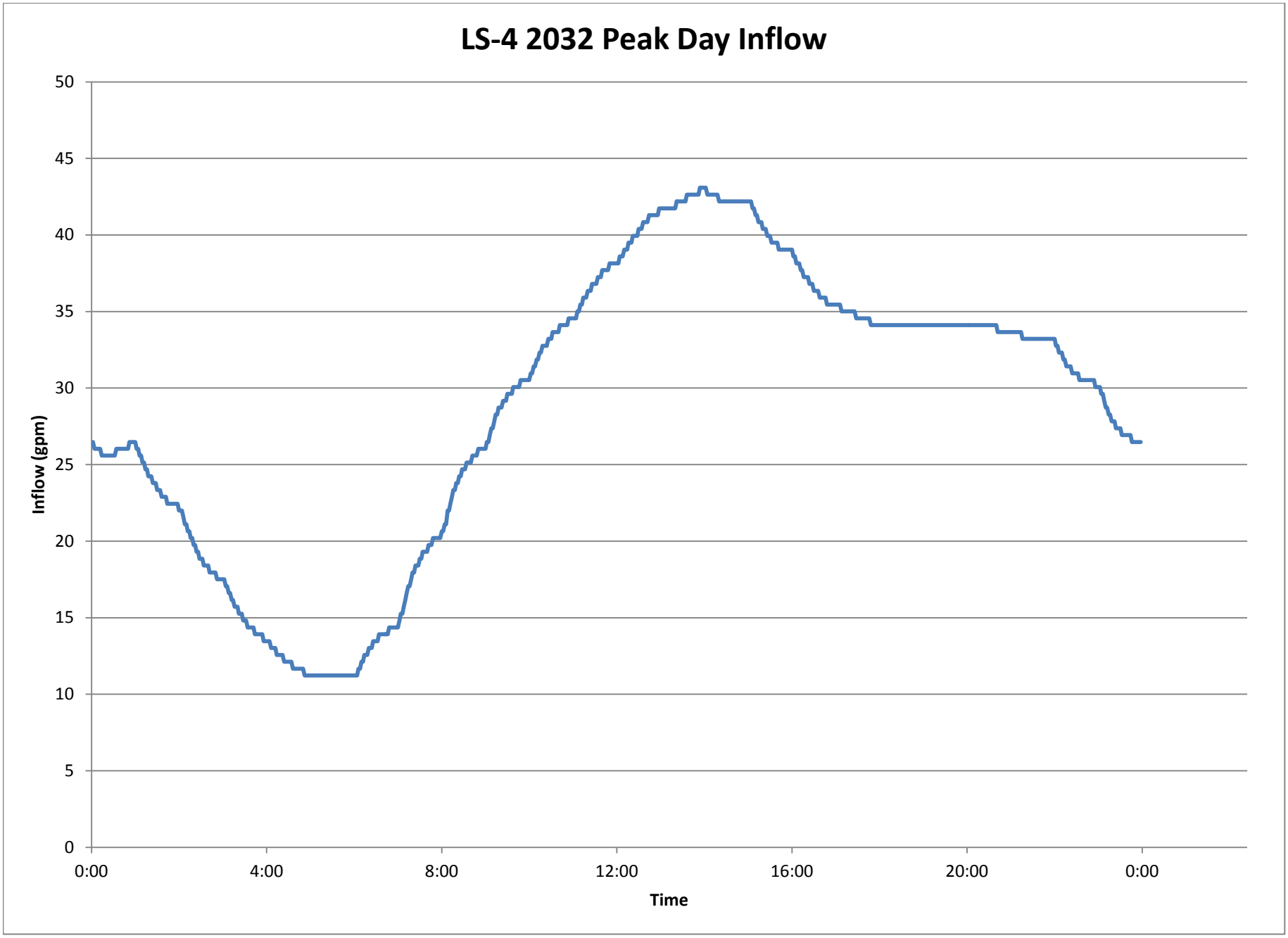


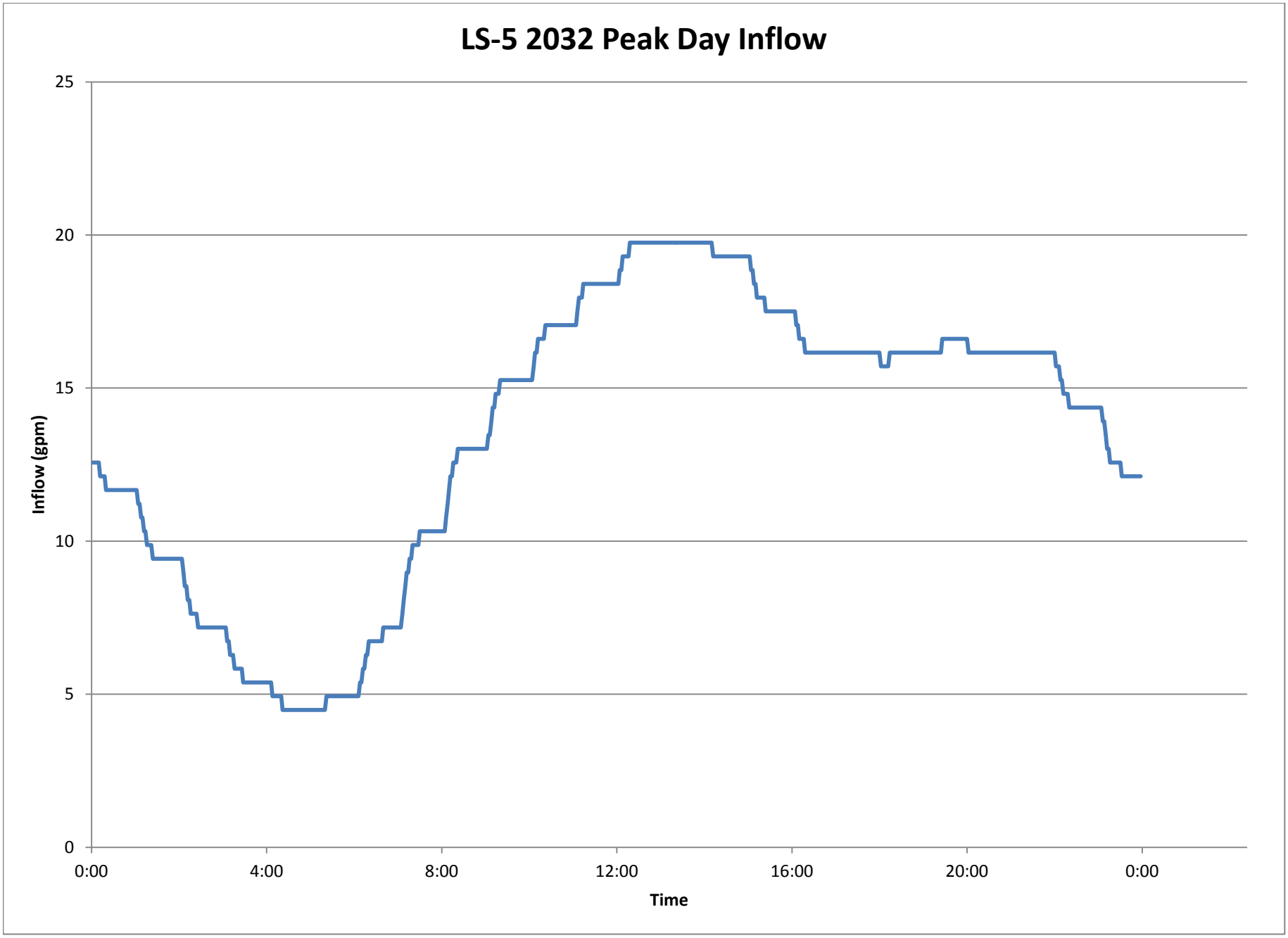
Ruddell Alignment: 2032 Peak Flow Depth: With Improvements
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

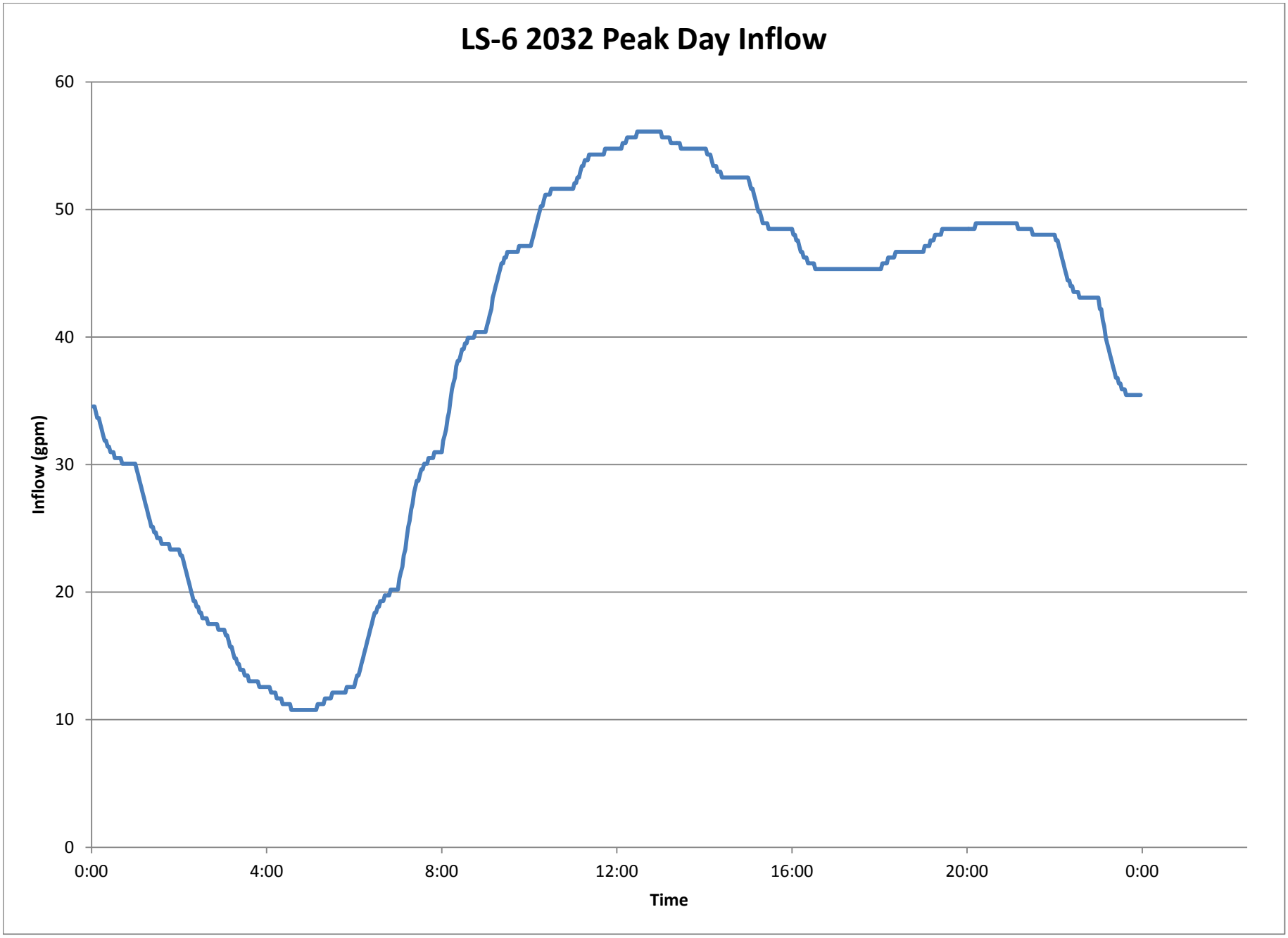

Ruddell Alignment d/D: 2032 Peak Day (No Improvements)
d/D
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
48
52
56
60
64
68
72
Elapsed Time (hours) [Starts @01/21/2012, 00:01:58]

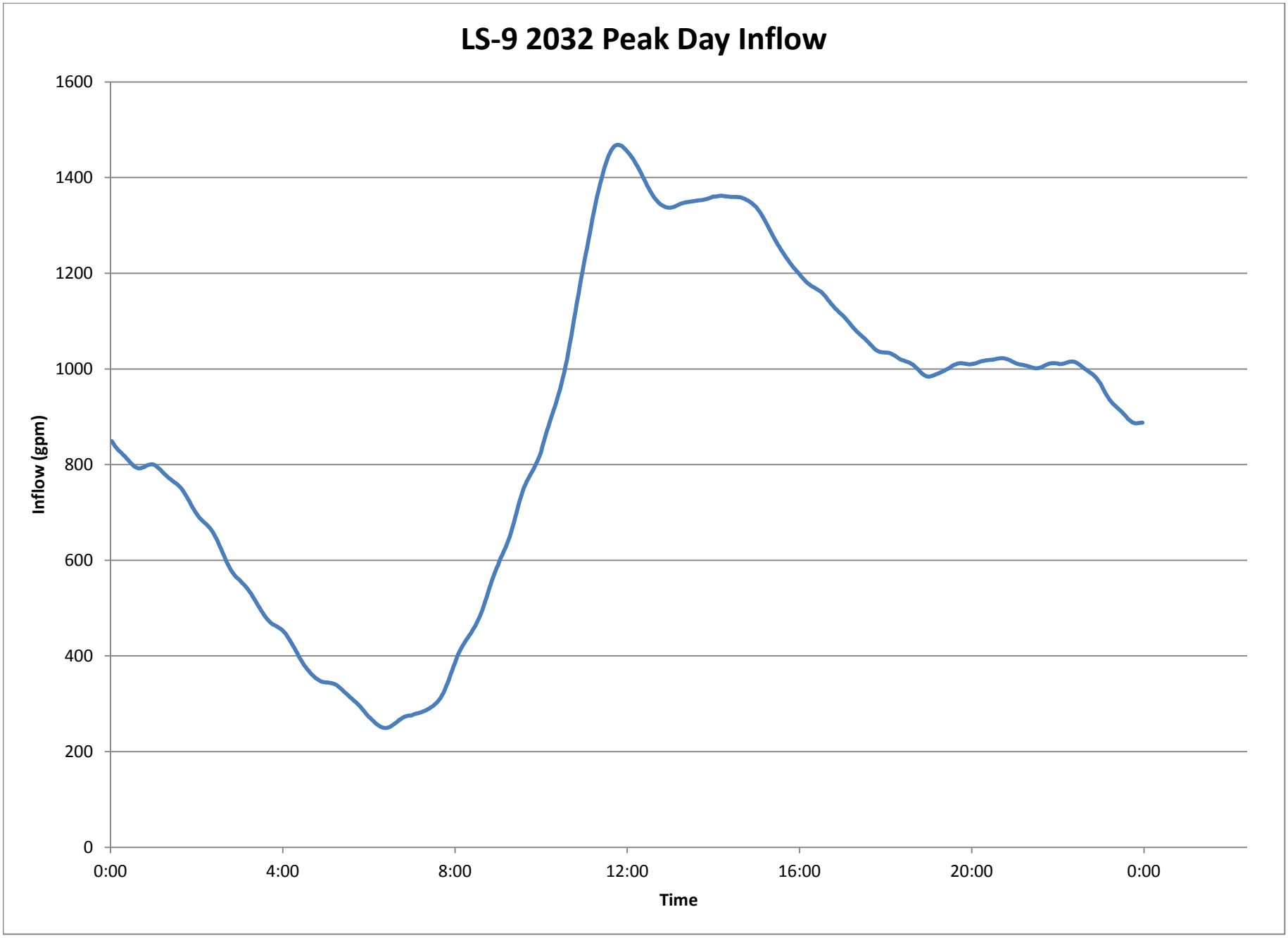


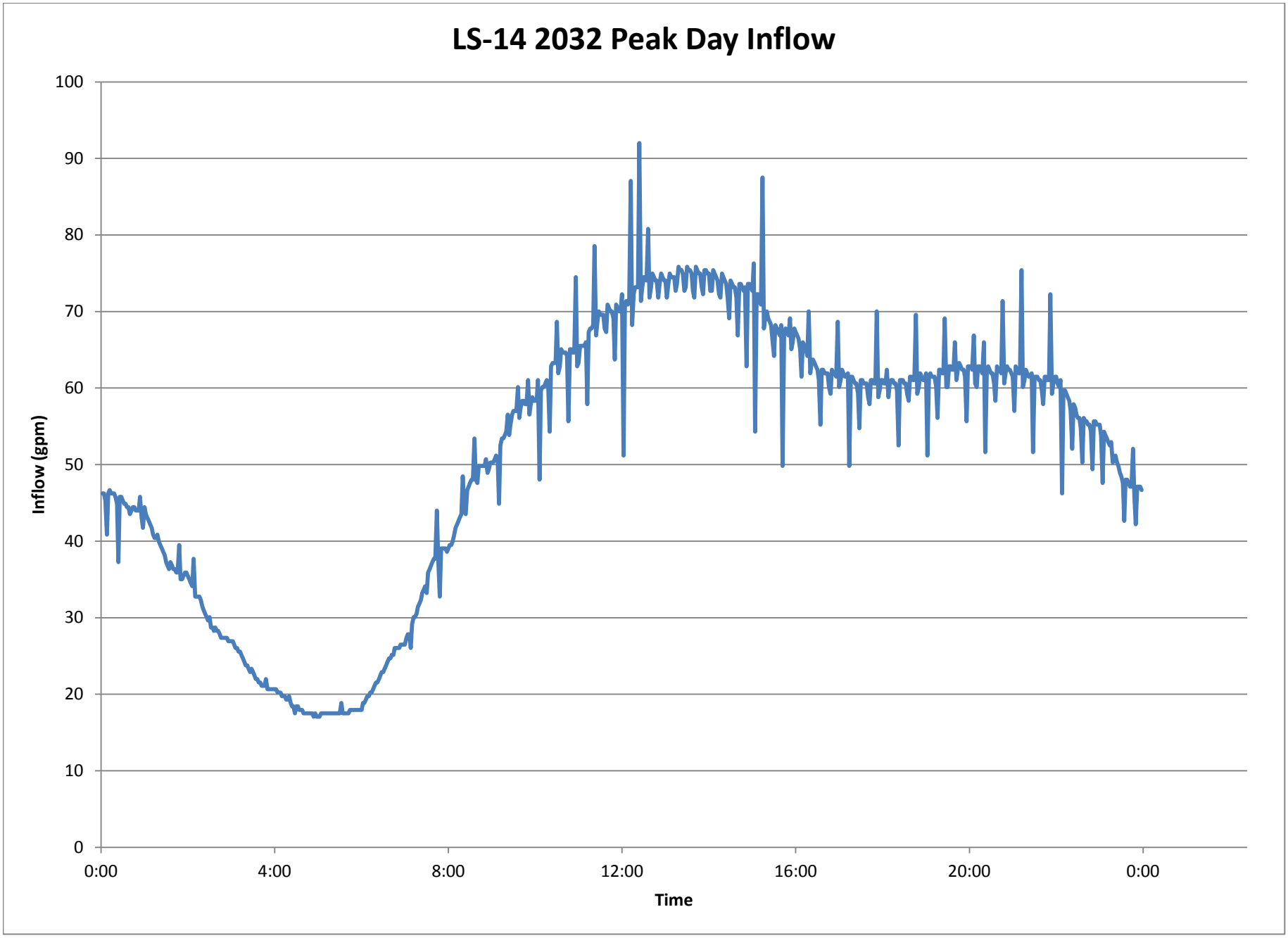
Union Mills Alignment: 2032 Peak HGL
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
225
220
215
210
205
200
195
190
185
180
175
170
165
160
155
150
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
9500
10000
10500
11000
11500
12000
AR_WA301
CDT-99
WX603
4410
4409
2059
2424
2092
2420
2298
2072
2290
2418
2287
2218
2085
2220
2217
2270

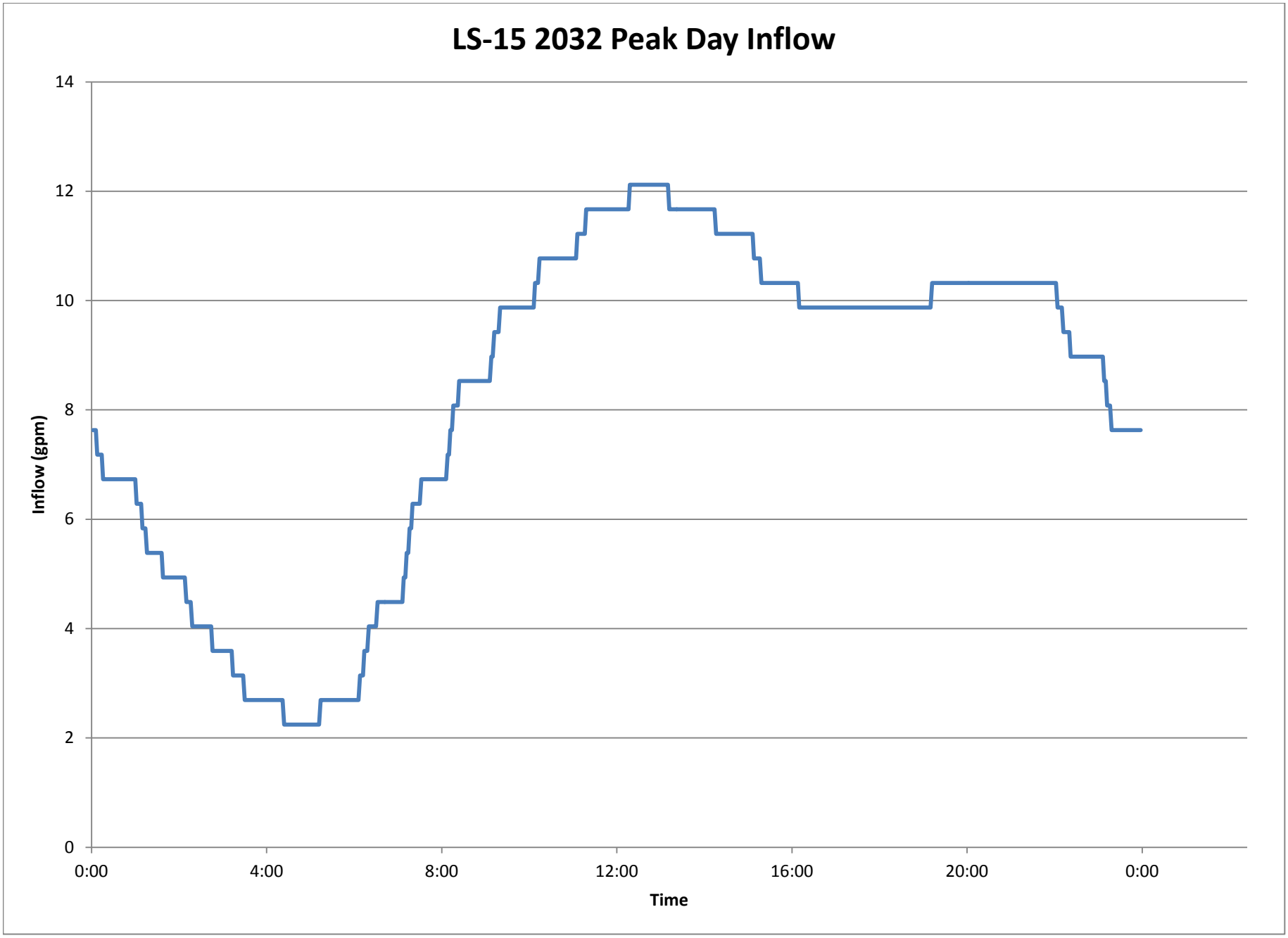

LS-4 2032 Peak Day Inflow
Inflow (gpm)
50
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

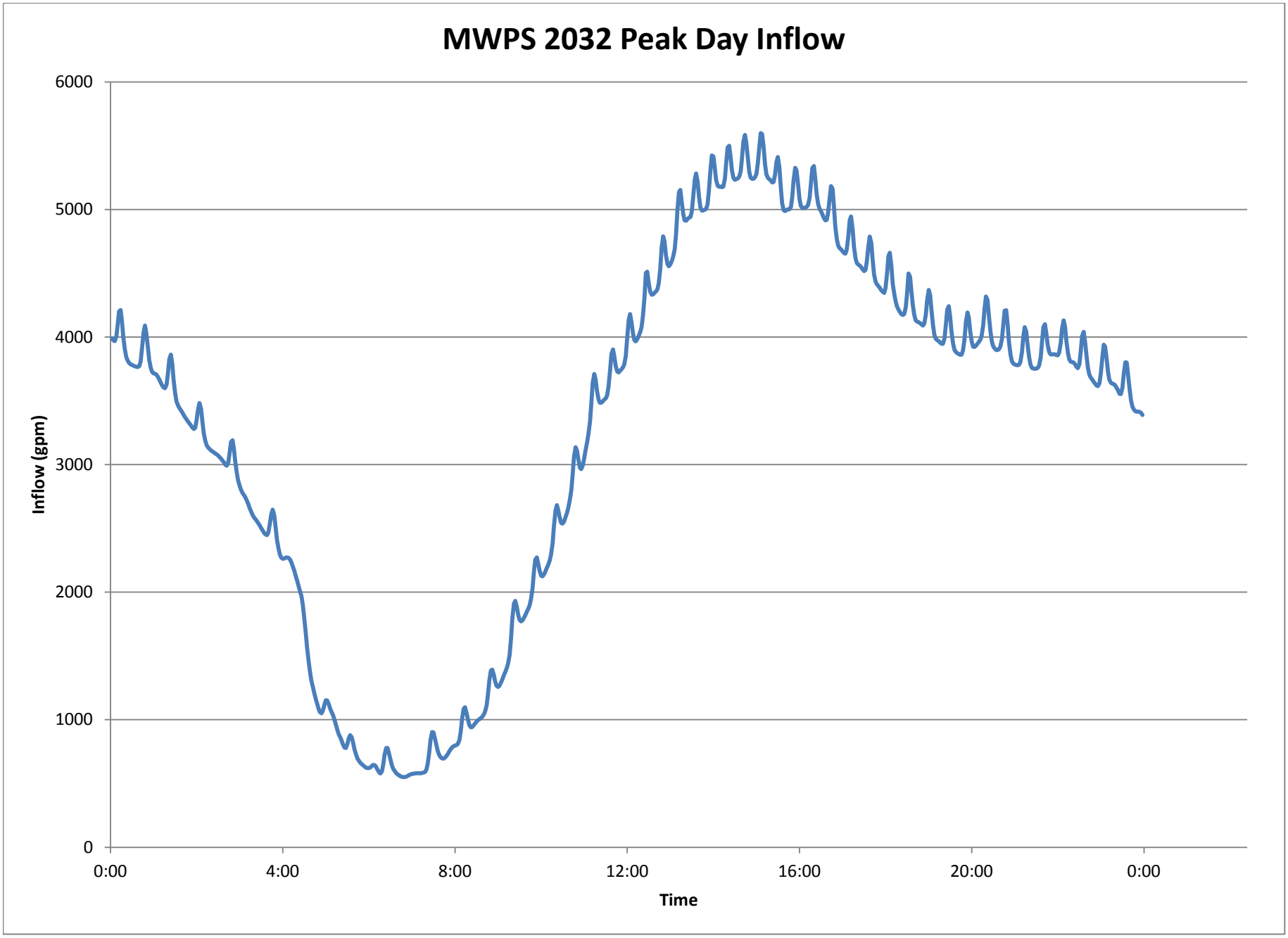

LS-5 2032 Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

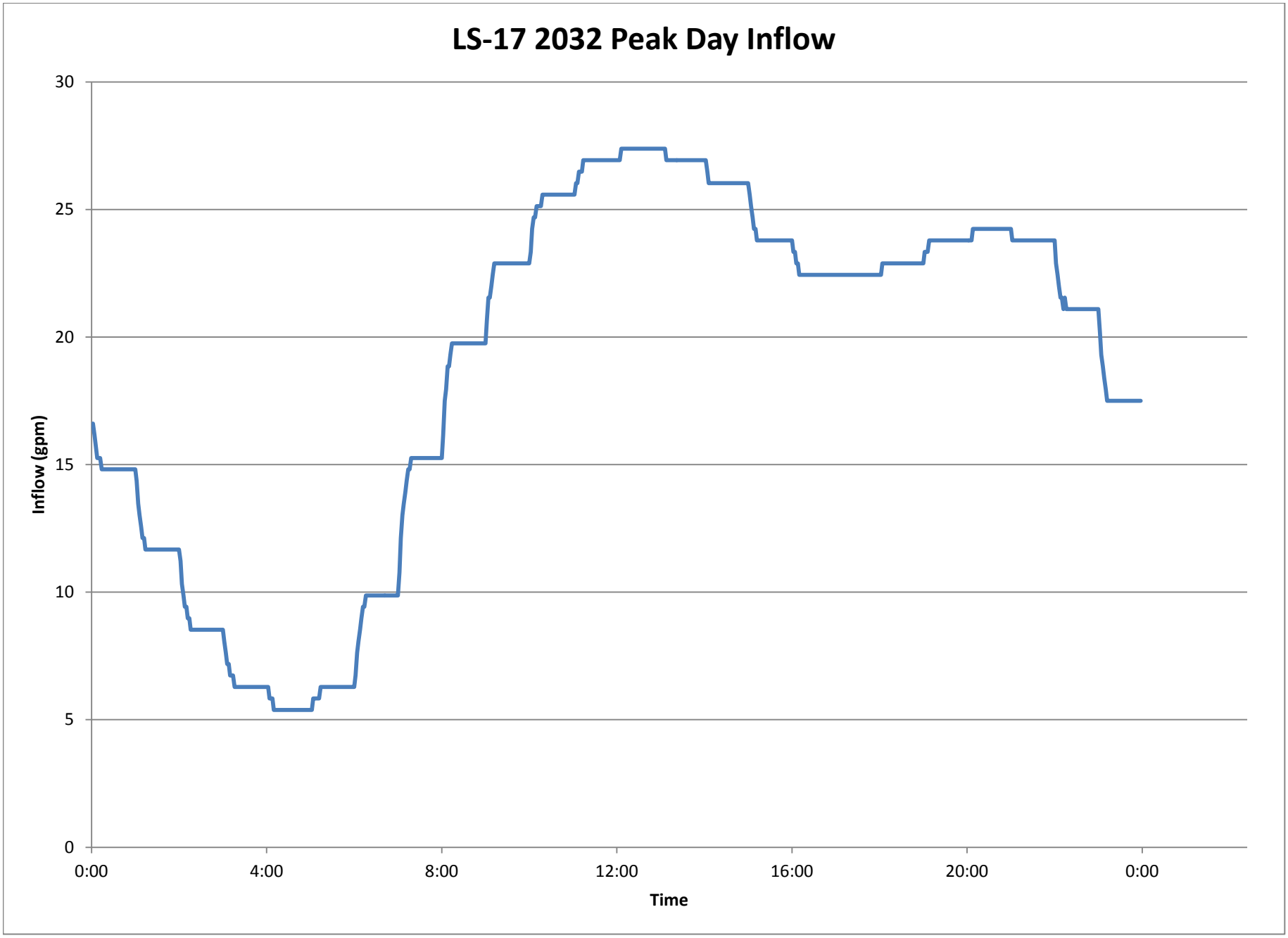

LS-6 2032 Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

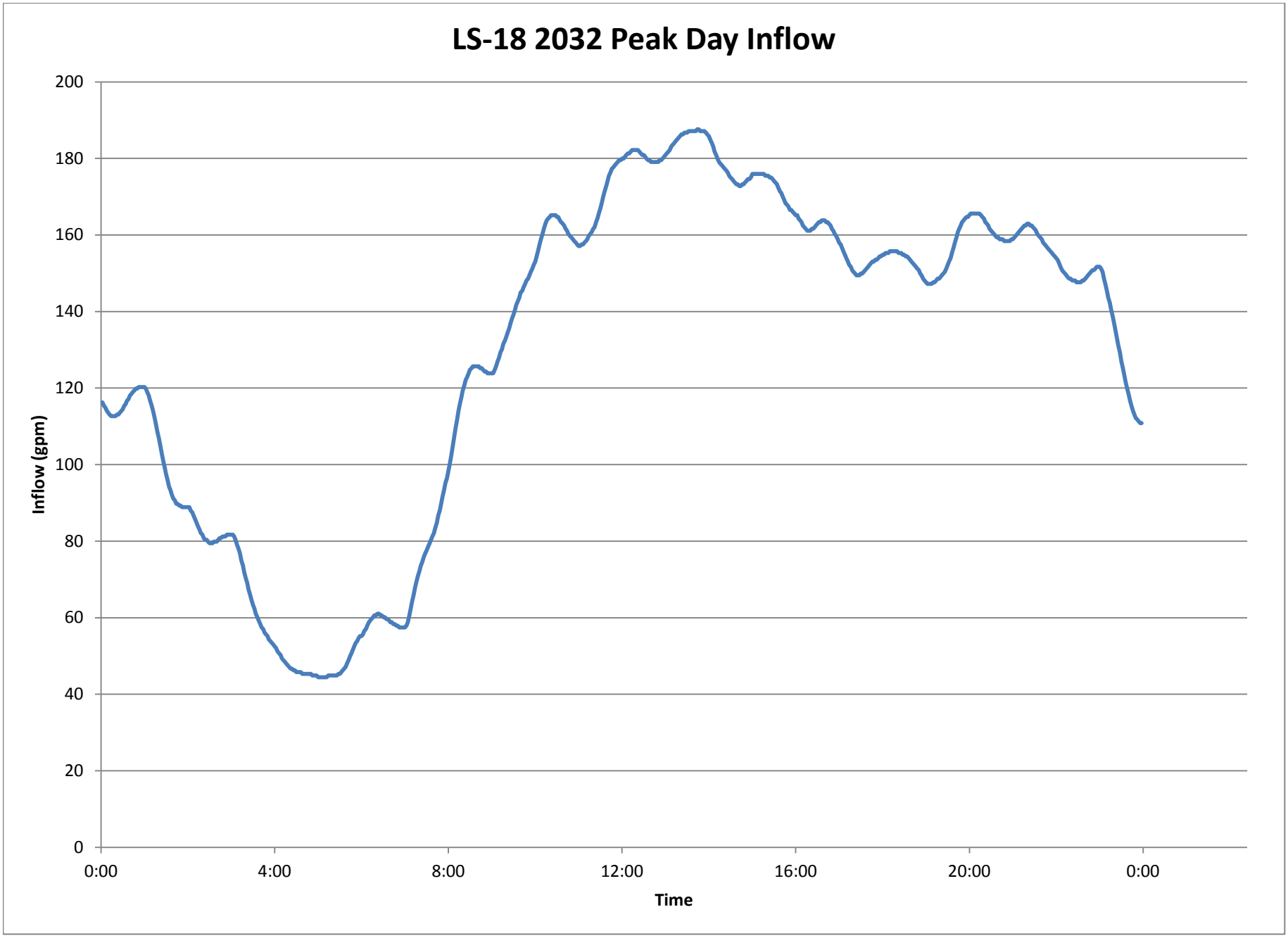

LS-9 2032 Peak Day Inflow
1600
1400
1200
1000
800
600
400
200
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

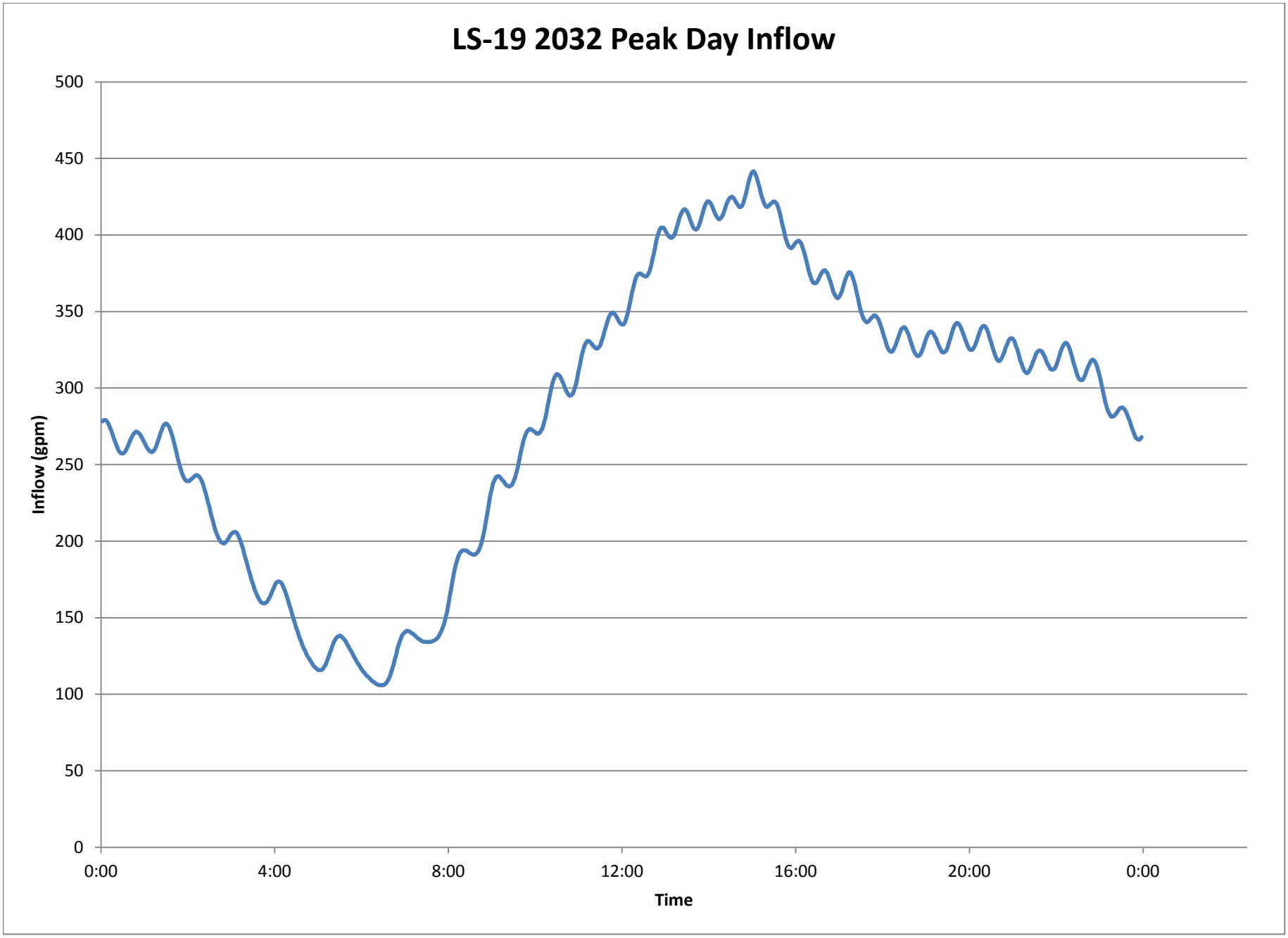

LS-14 2032 Peak Day Inflow
Inflow (gpm)
100
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

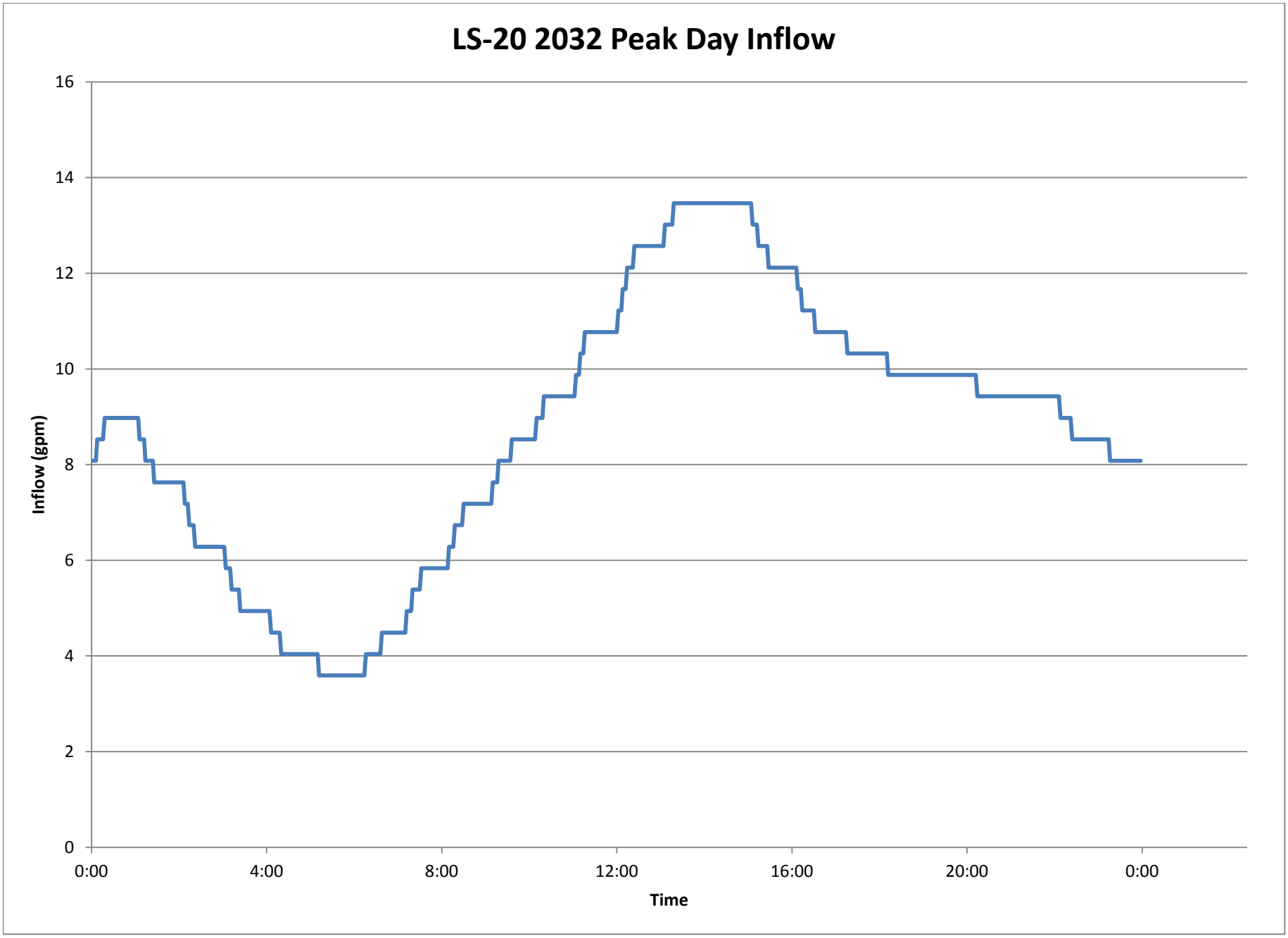

LS-15 2032 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

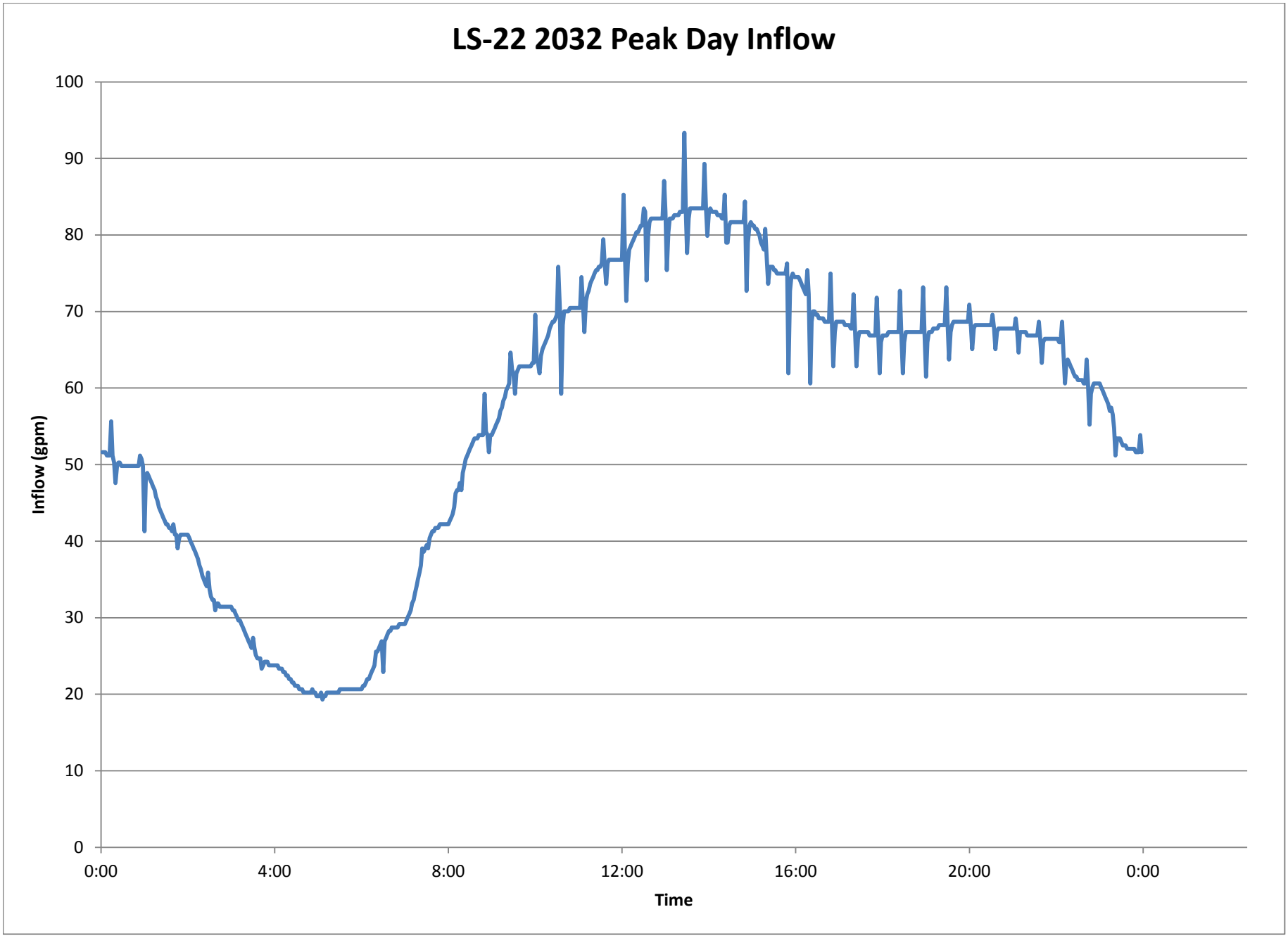

MWPS 2032 Peak Day Inflow
6000
5000
4000
3000
2000
1000
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

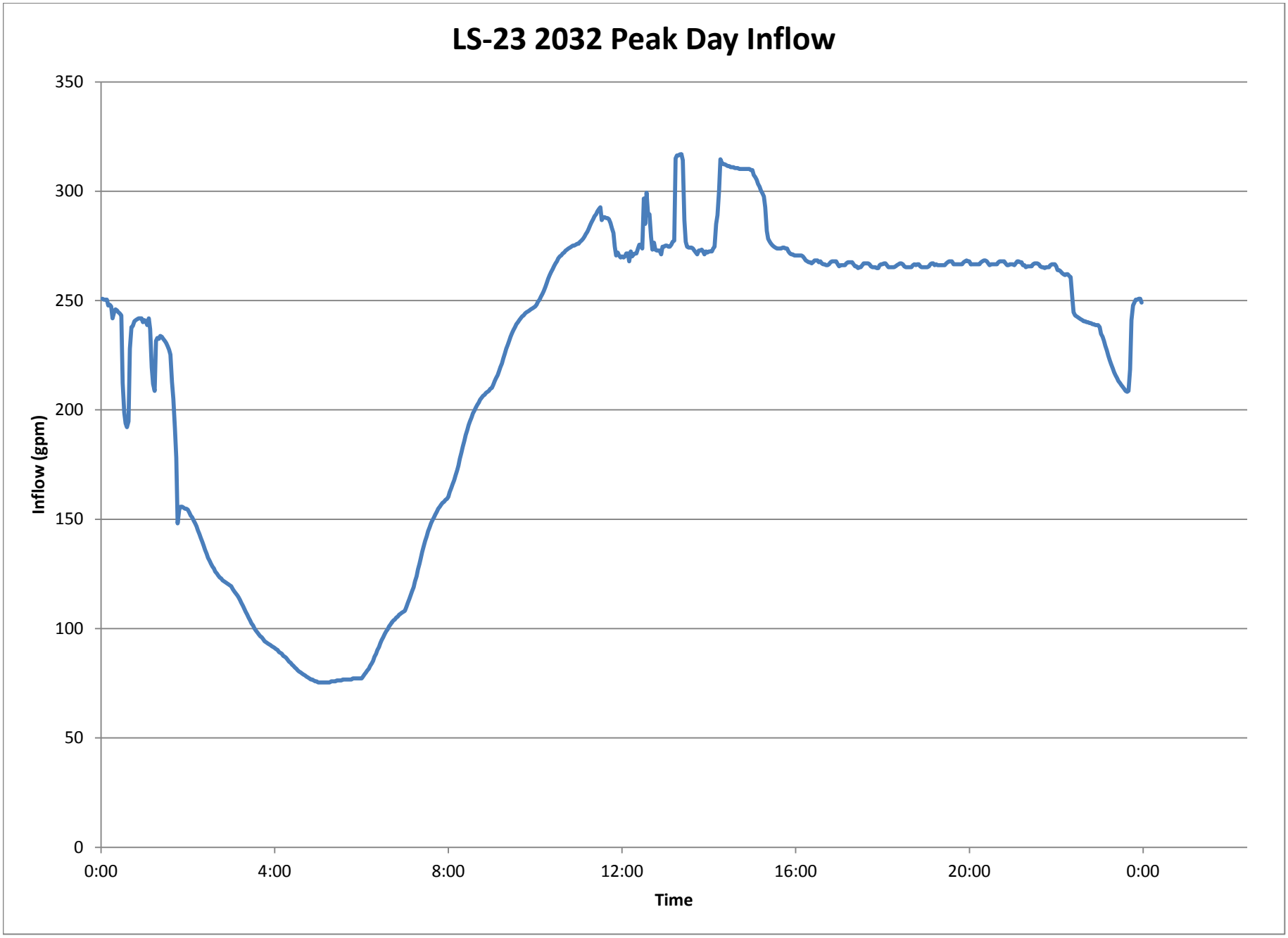

LS-17 2032 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

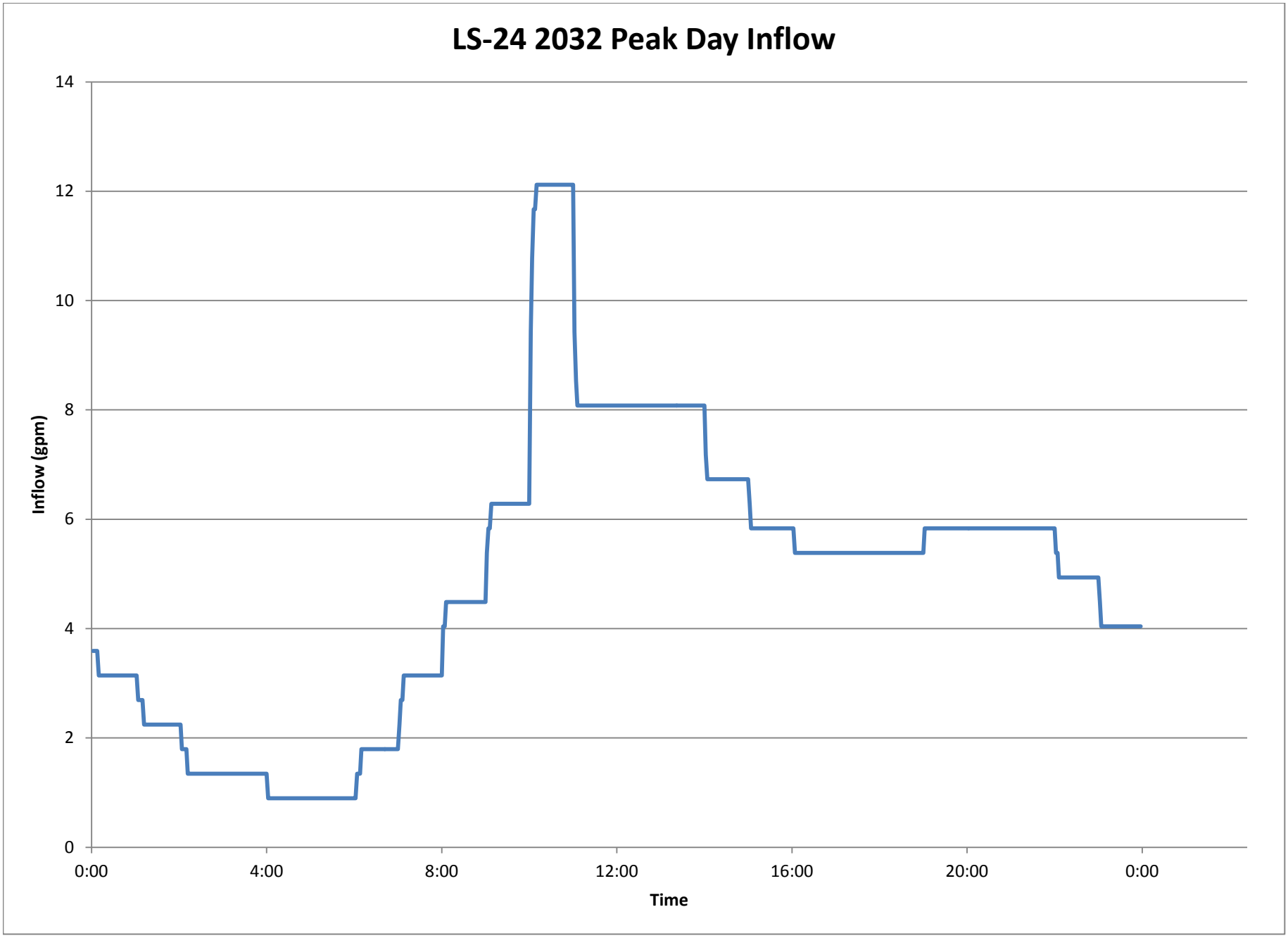

LS-18 2032 Peak Day Inflow
Inflow (gpm)
200
180
160
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

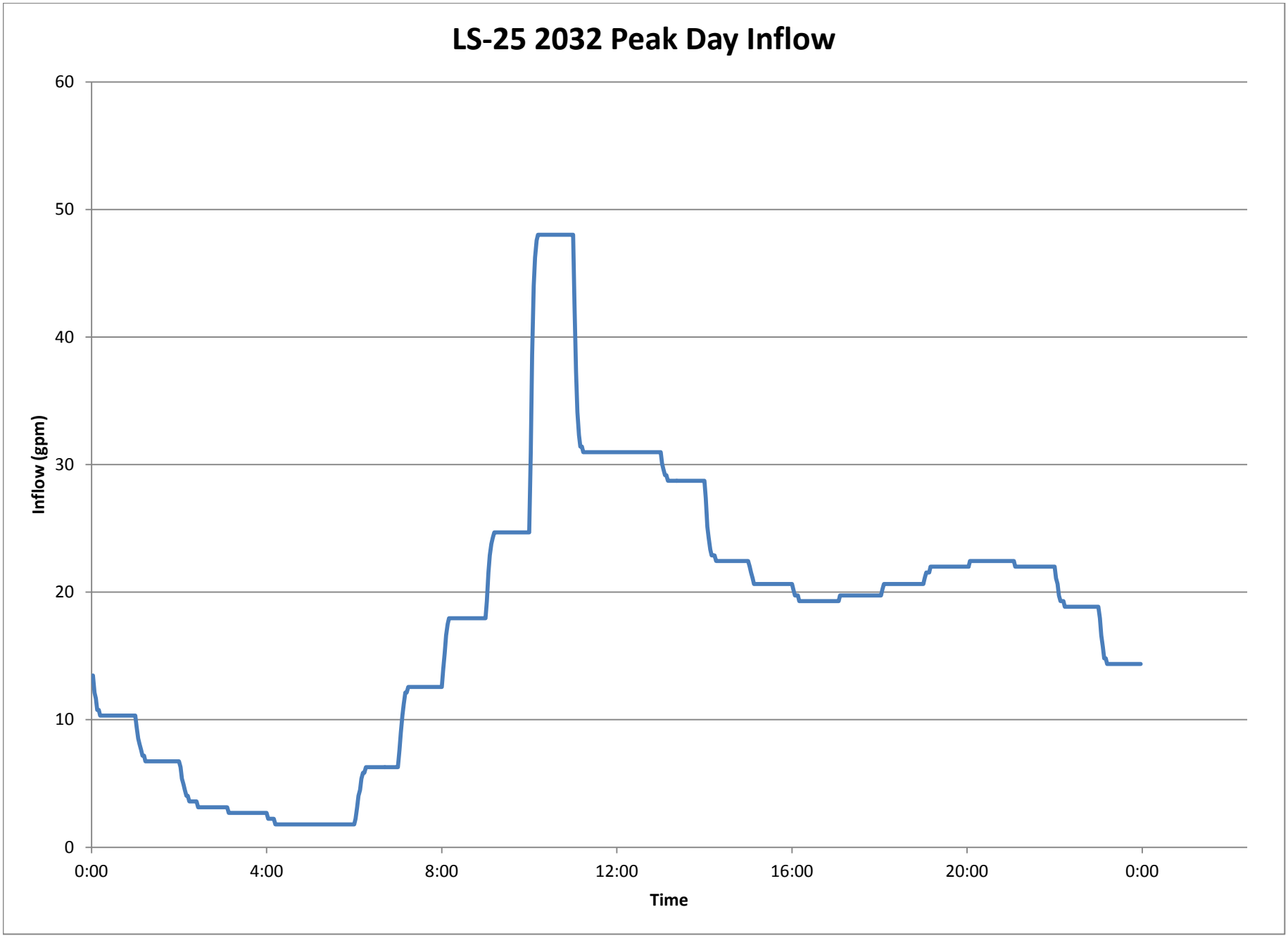

LS-19 2032 Peak Day Inflow
Inflow (gpm)
500
450
400
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

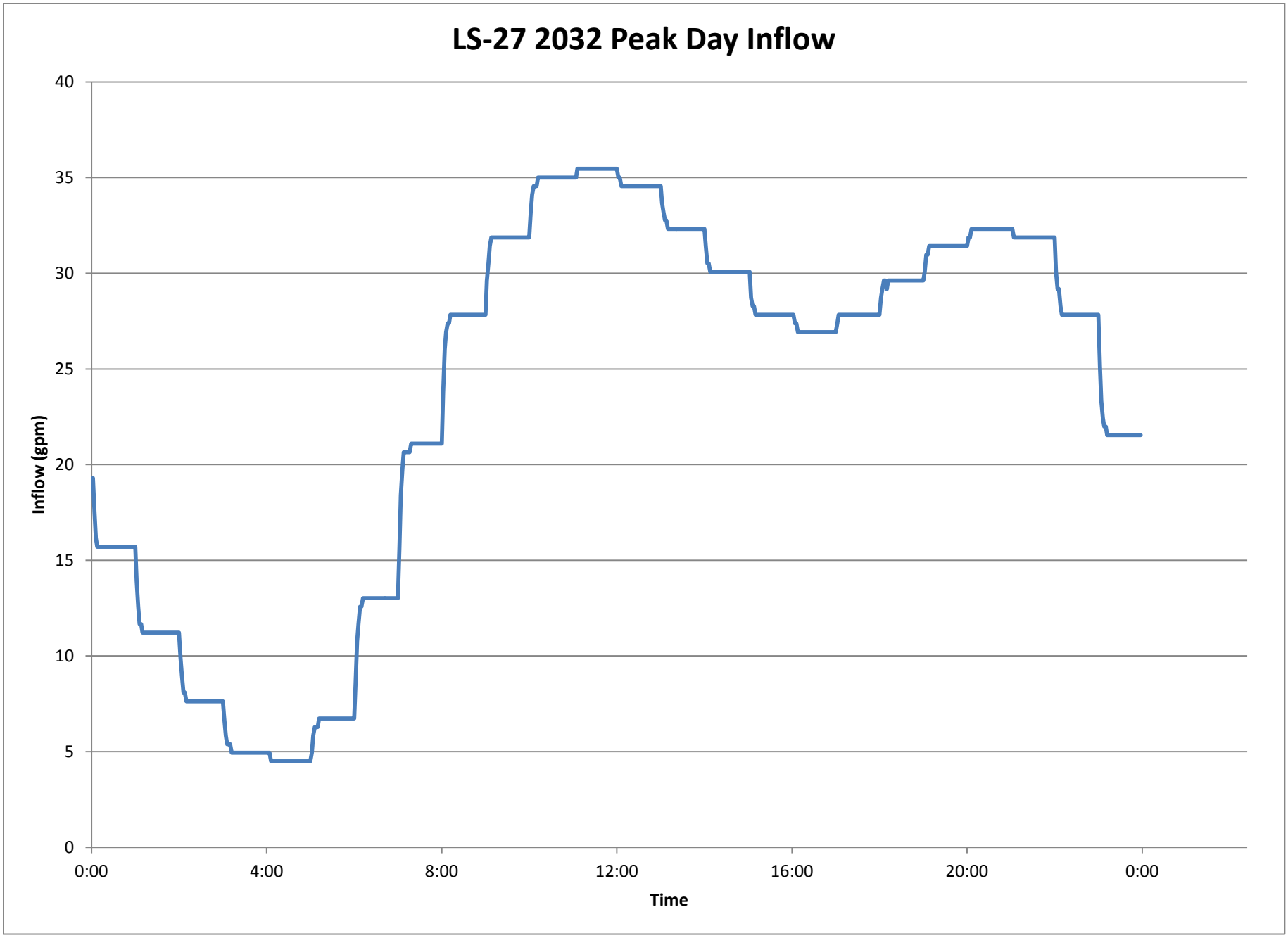

LS-20 2032 Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

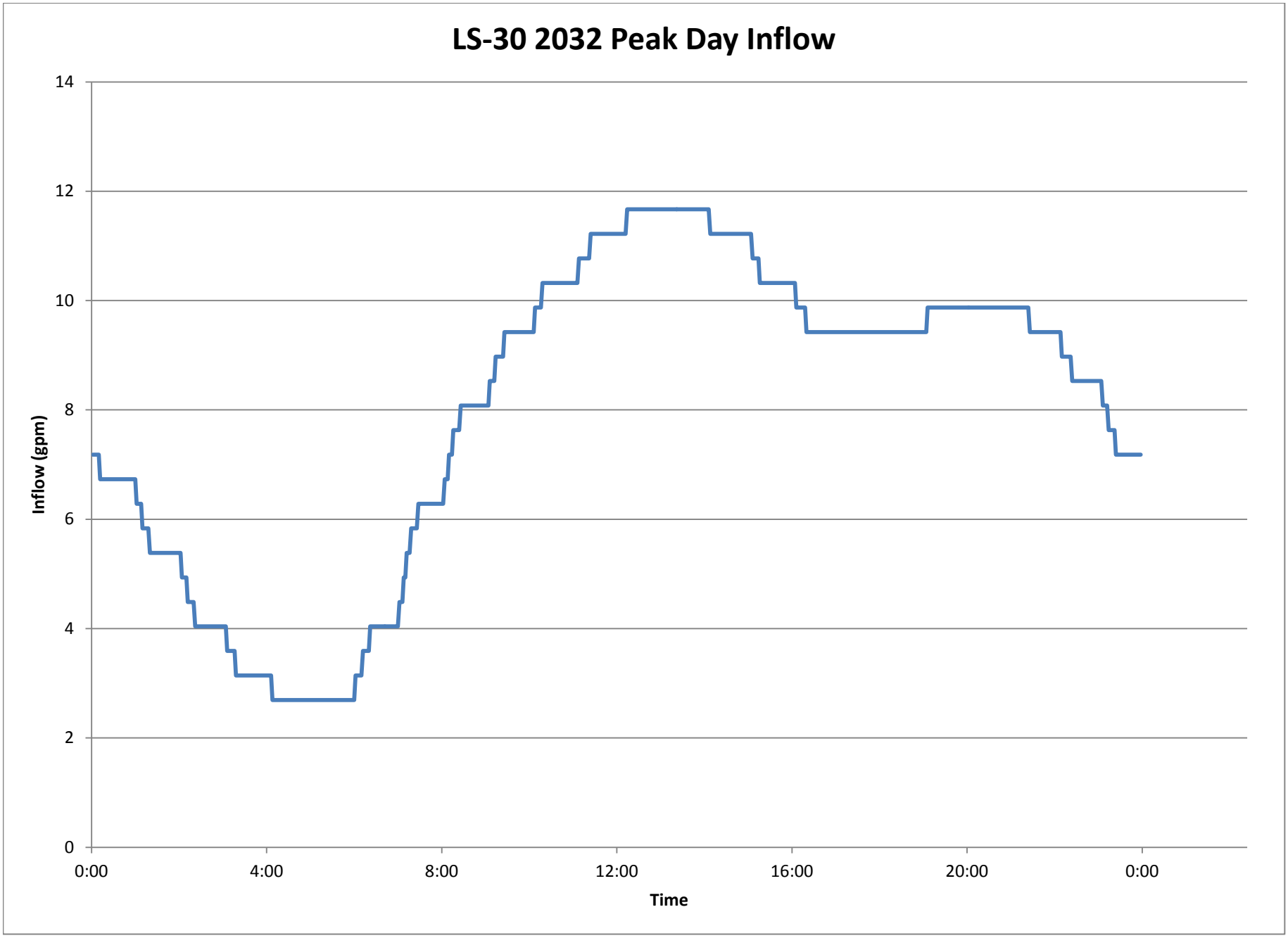

LS-22 2032 Peak Day Inflow
Inflow (gpm)
100
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

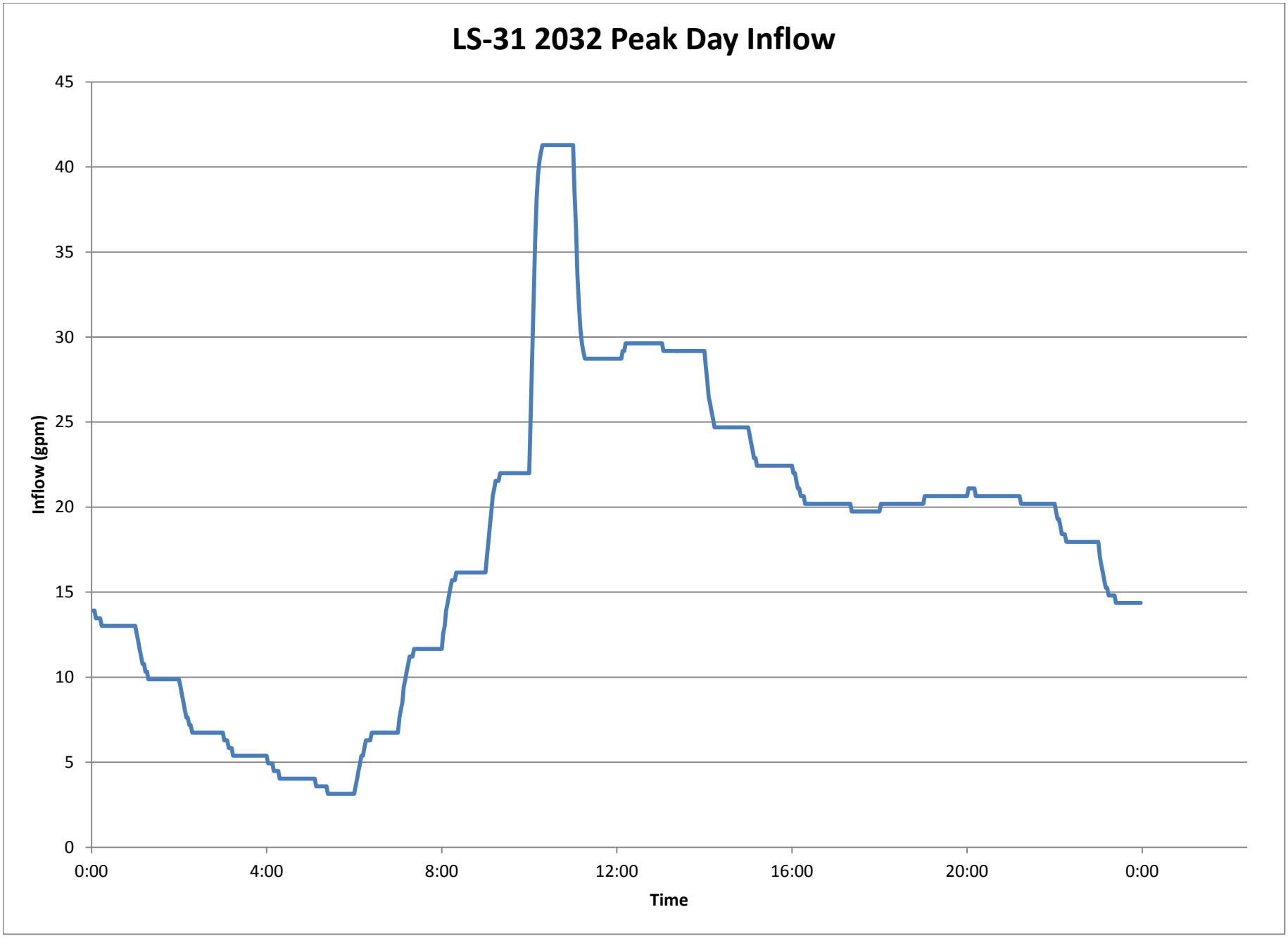

LS-23 2032 Peak Day Inflow
350
300
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

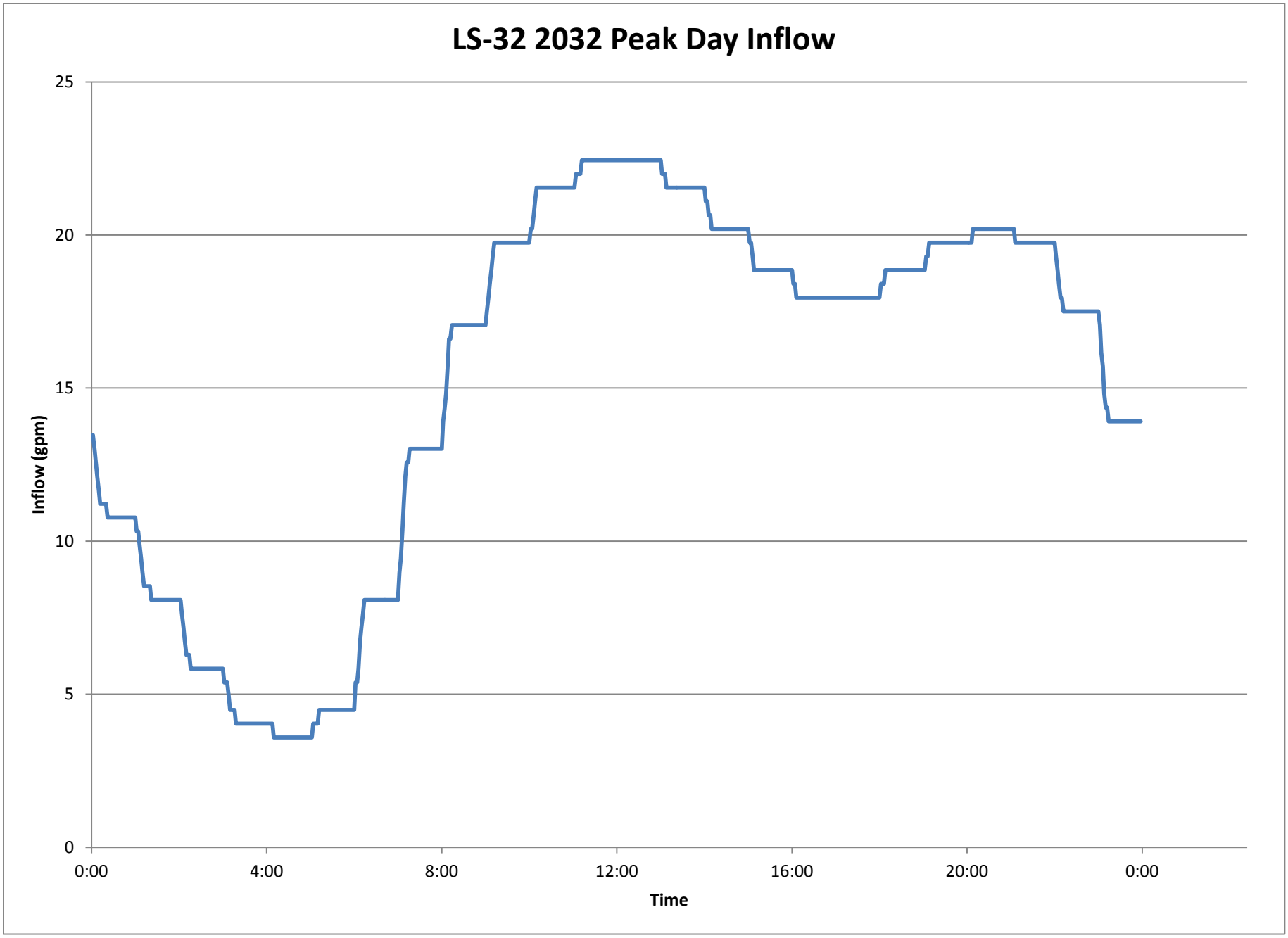

LS-24 2032 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

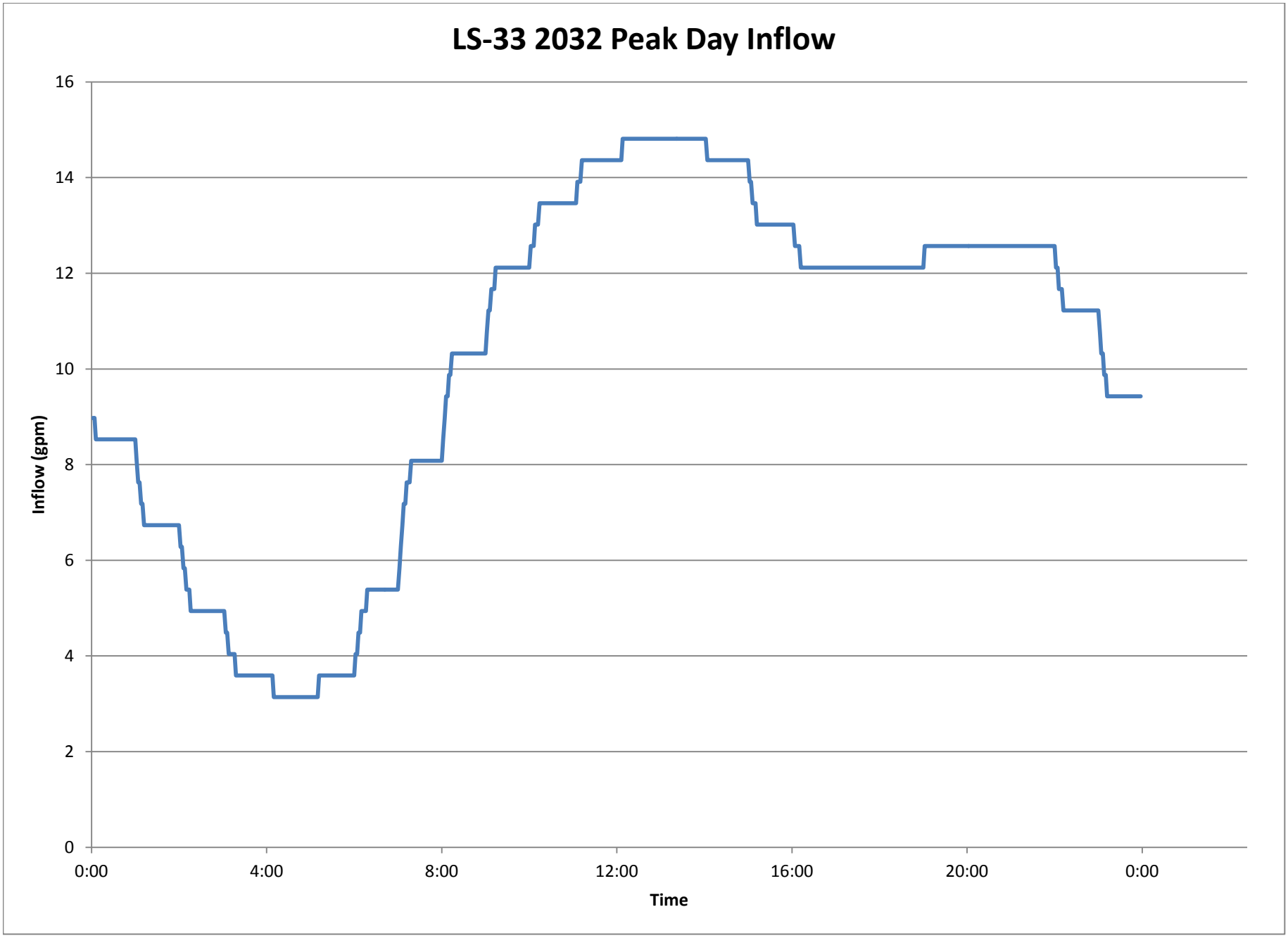

LS-25 2032 Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

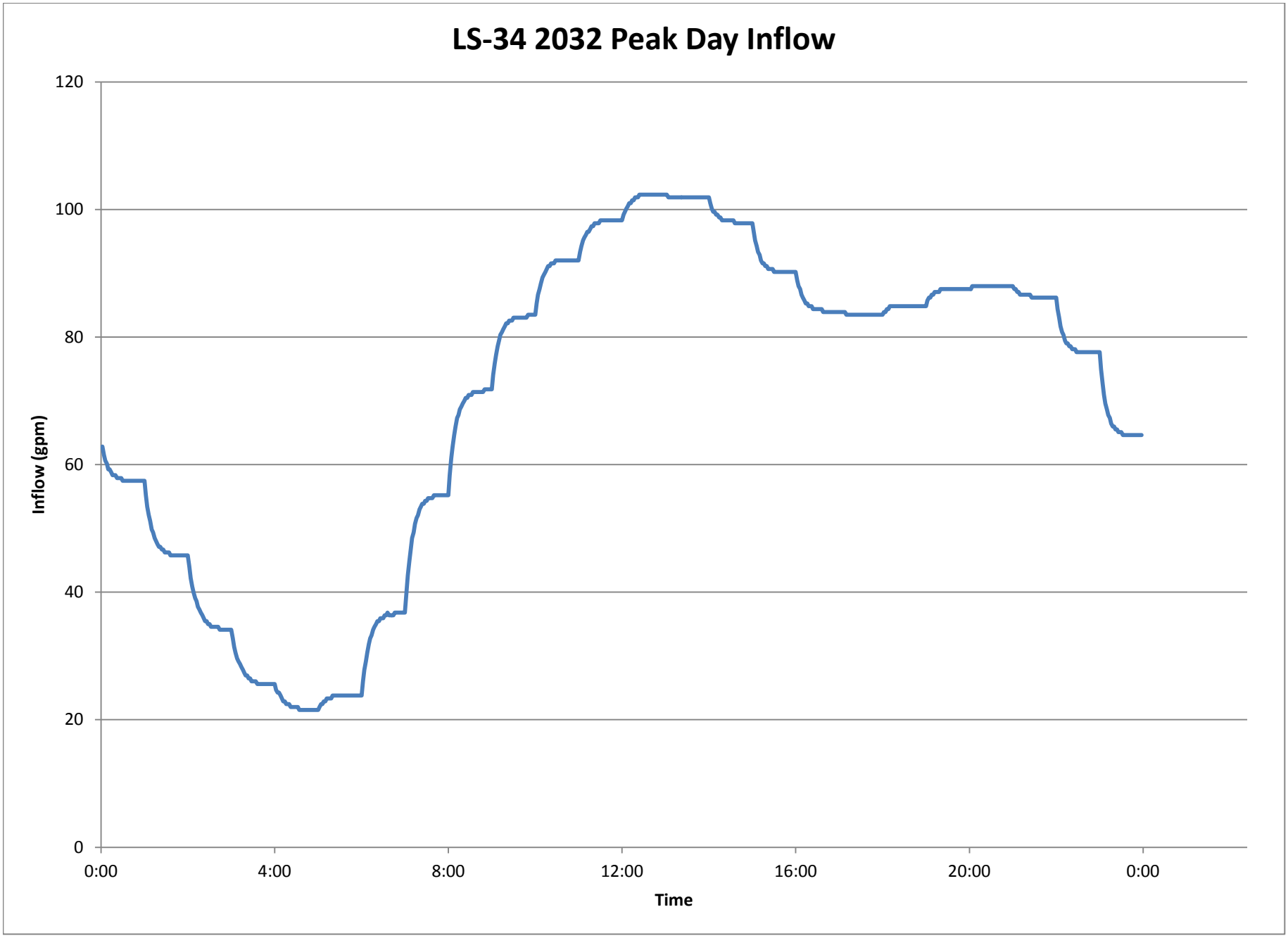

LS-27 2032 Peak Day Inflow
Inflow (gpm)
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

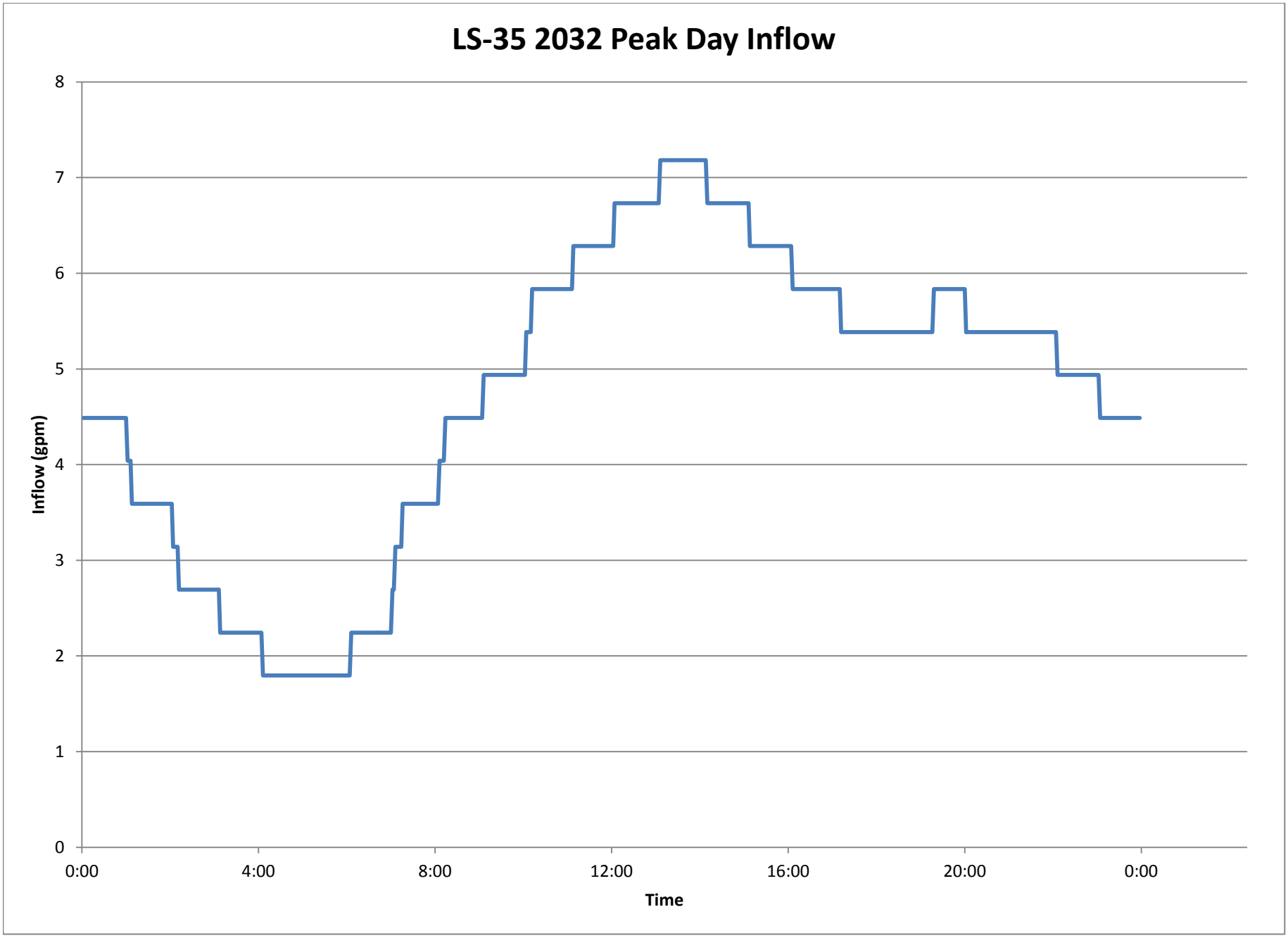

LS-30 2032 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

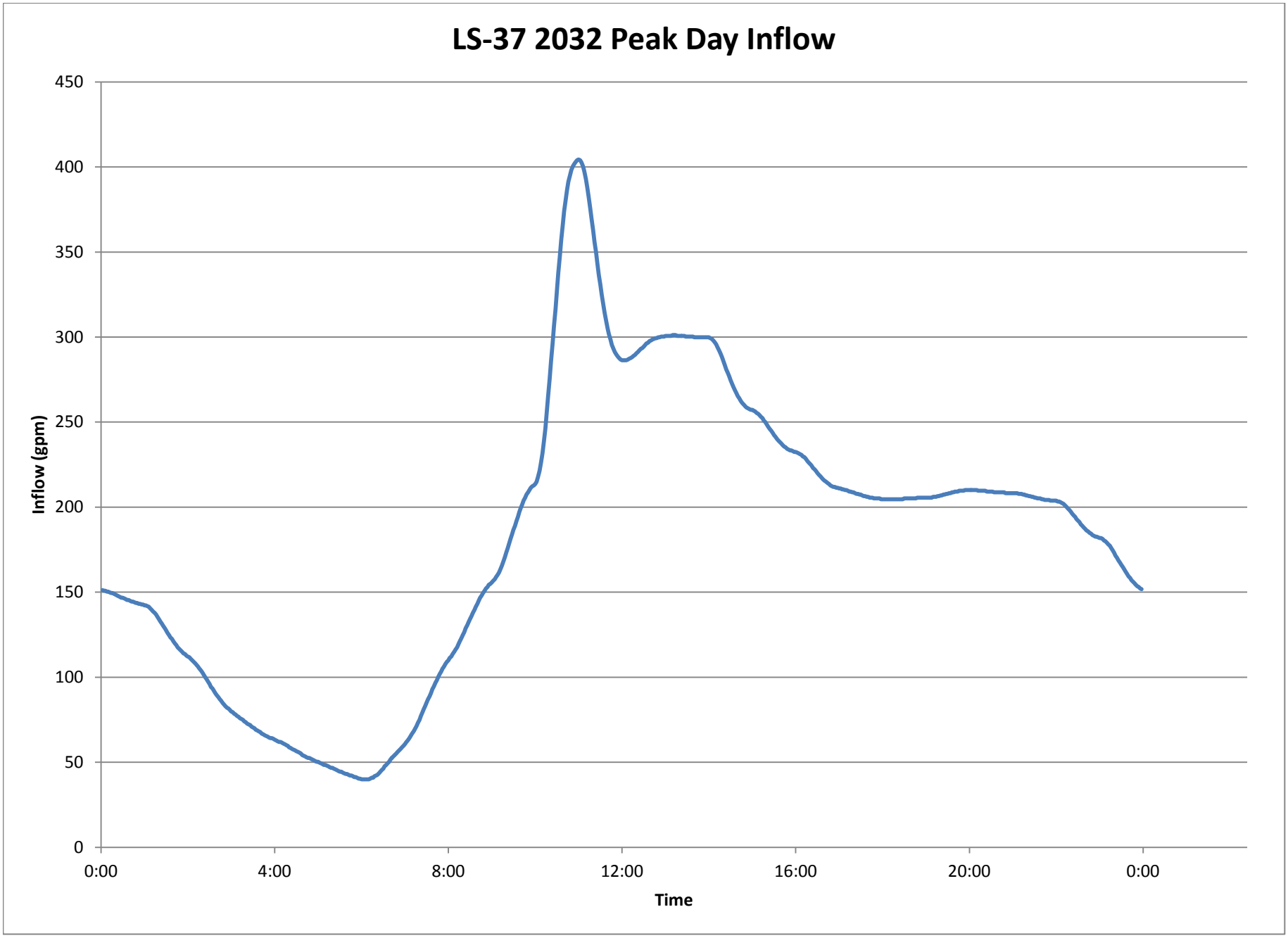

LS-31 2032 Peak Day Inflow
Inflow (gpm)
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

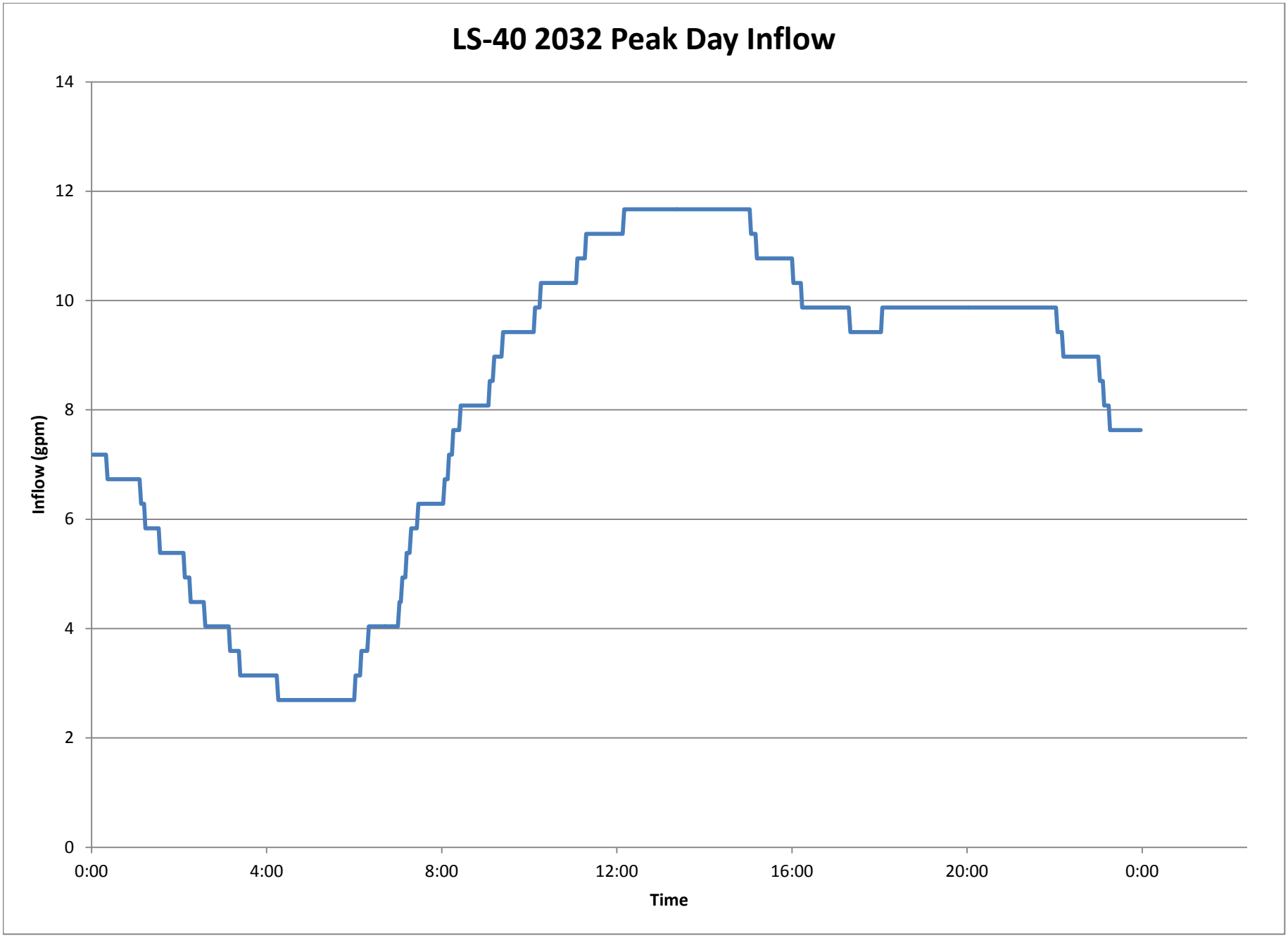

LS-32 2032 Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

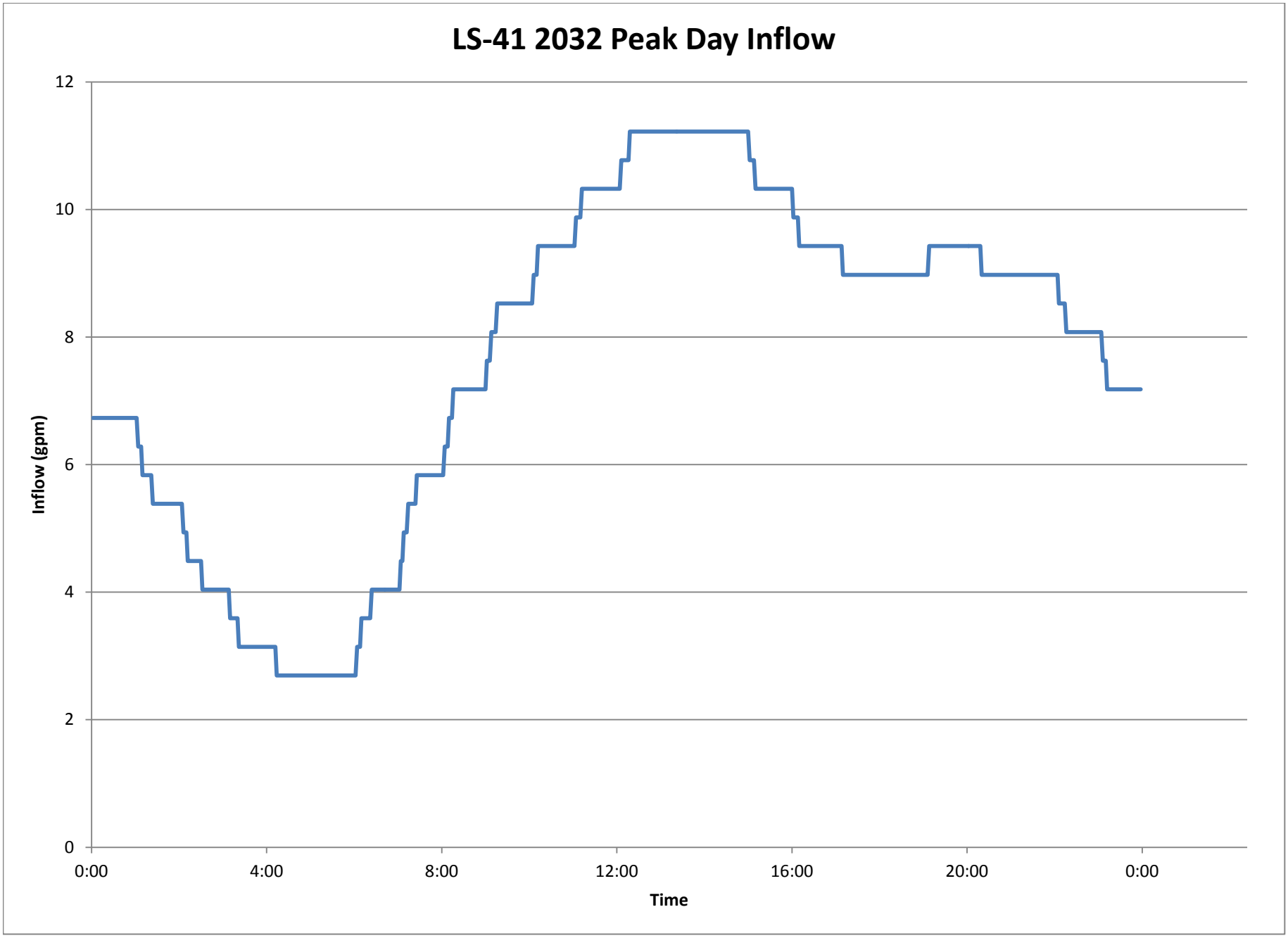

LS-33 2032 Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

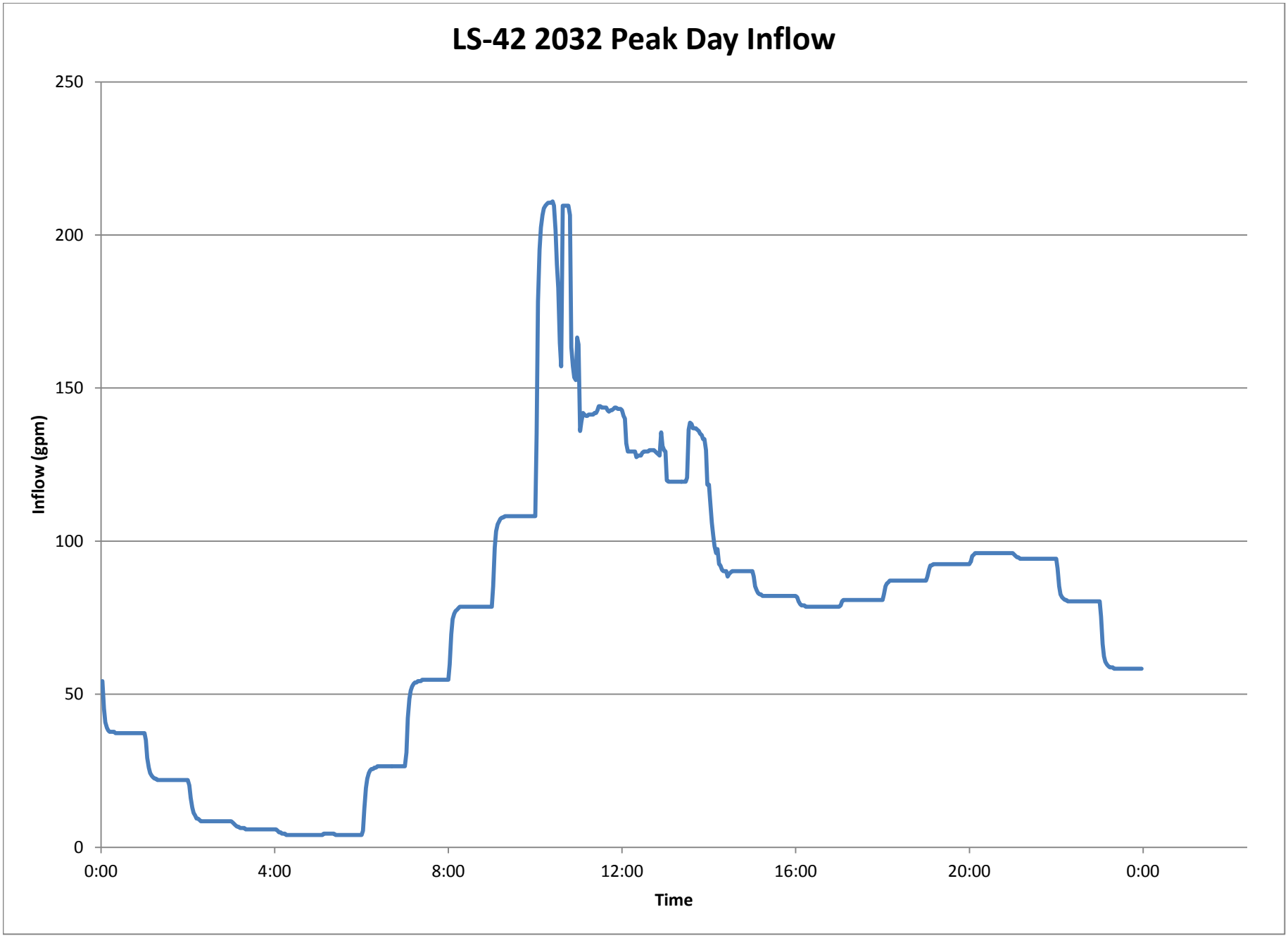

LS-34 2032 Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

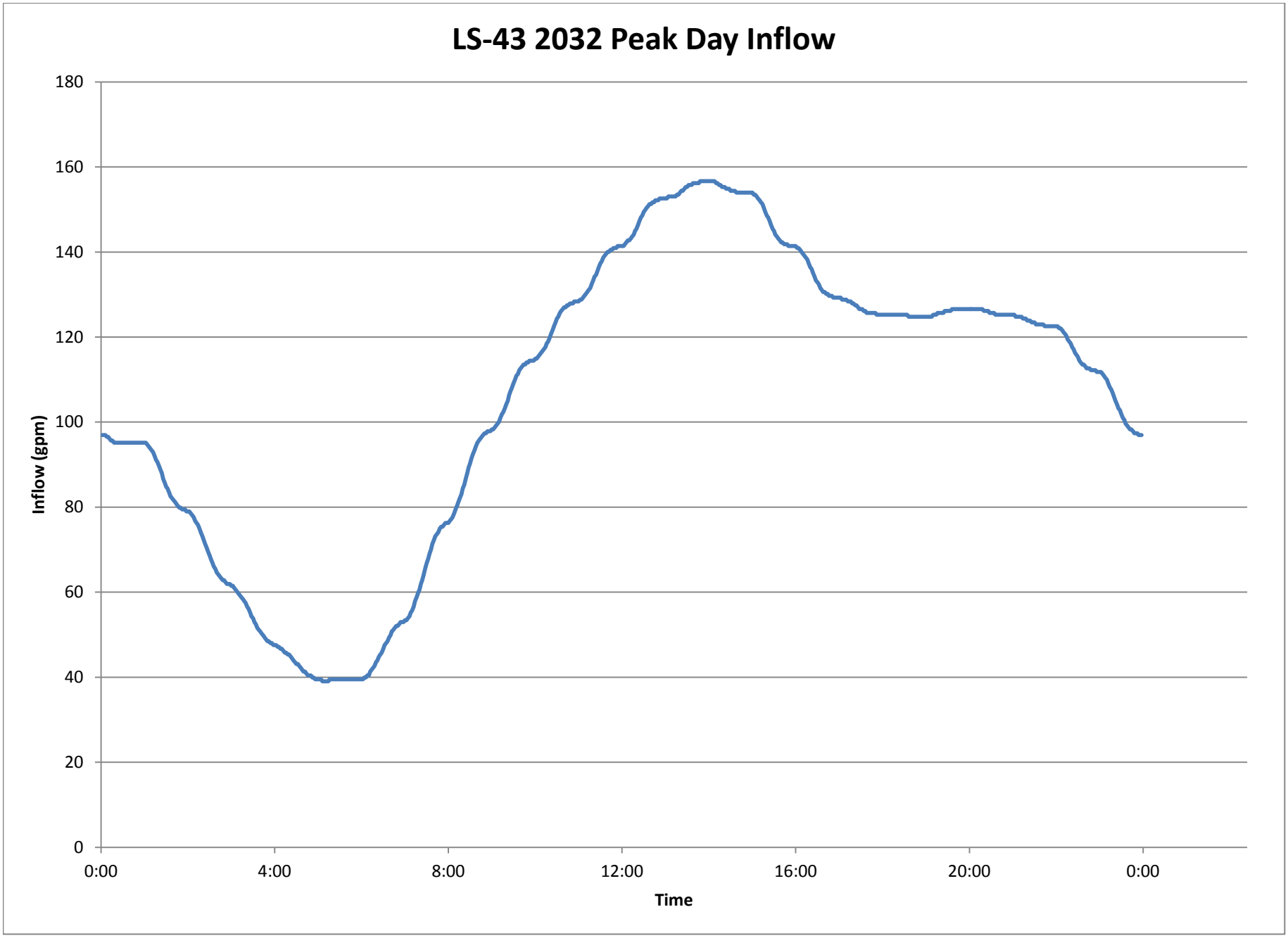

LS-35 2032 Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

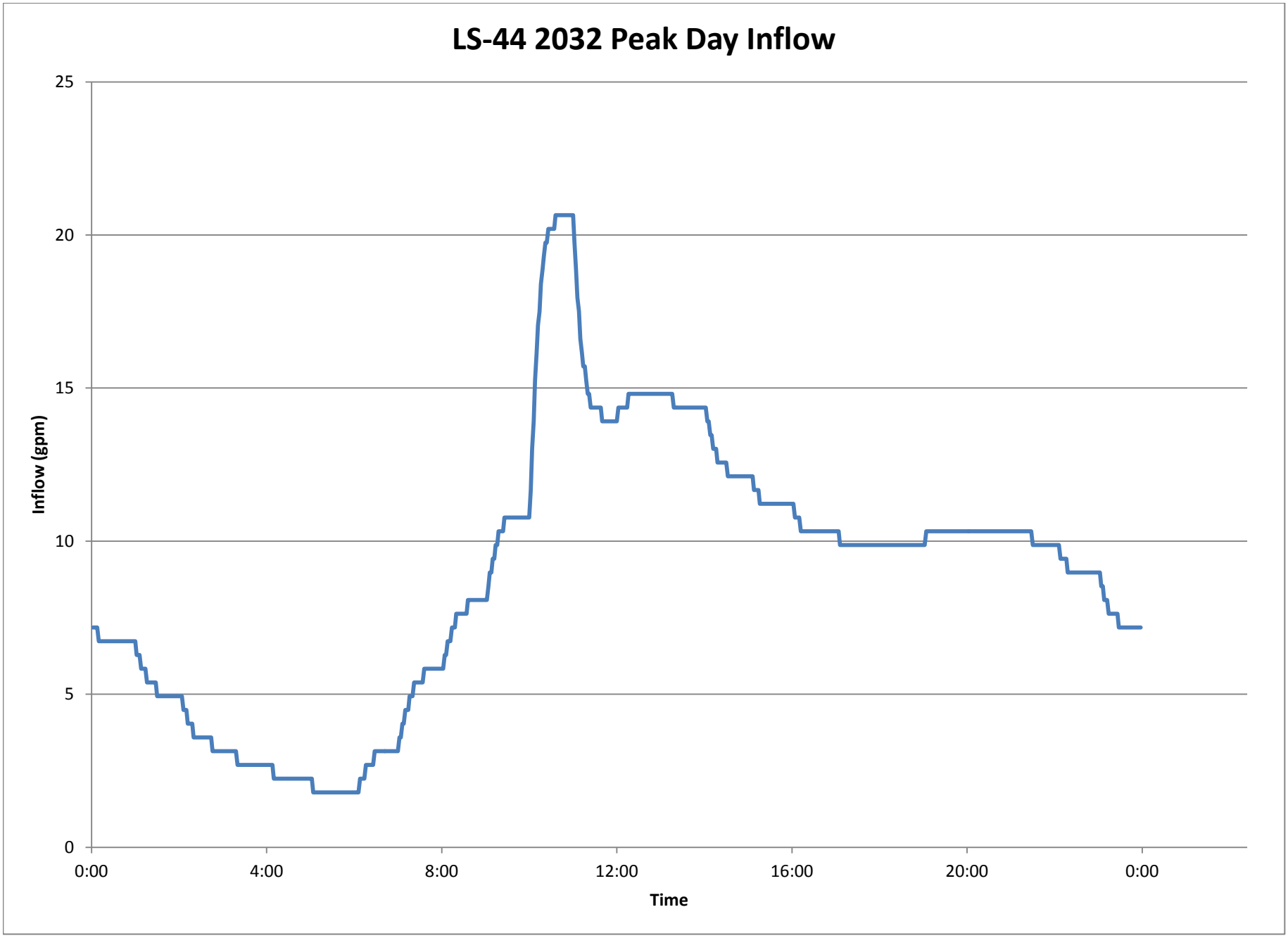

LS-37 2032 Peak Day Inflow
Inflow (gpm)
450
400
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

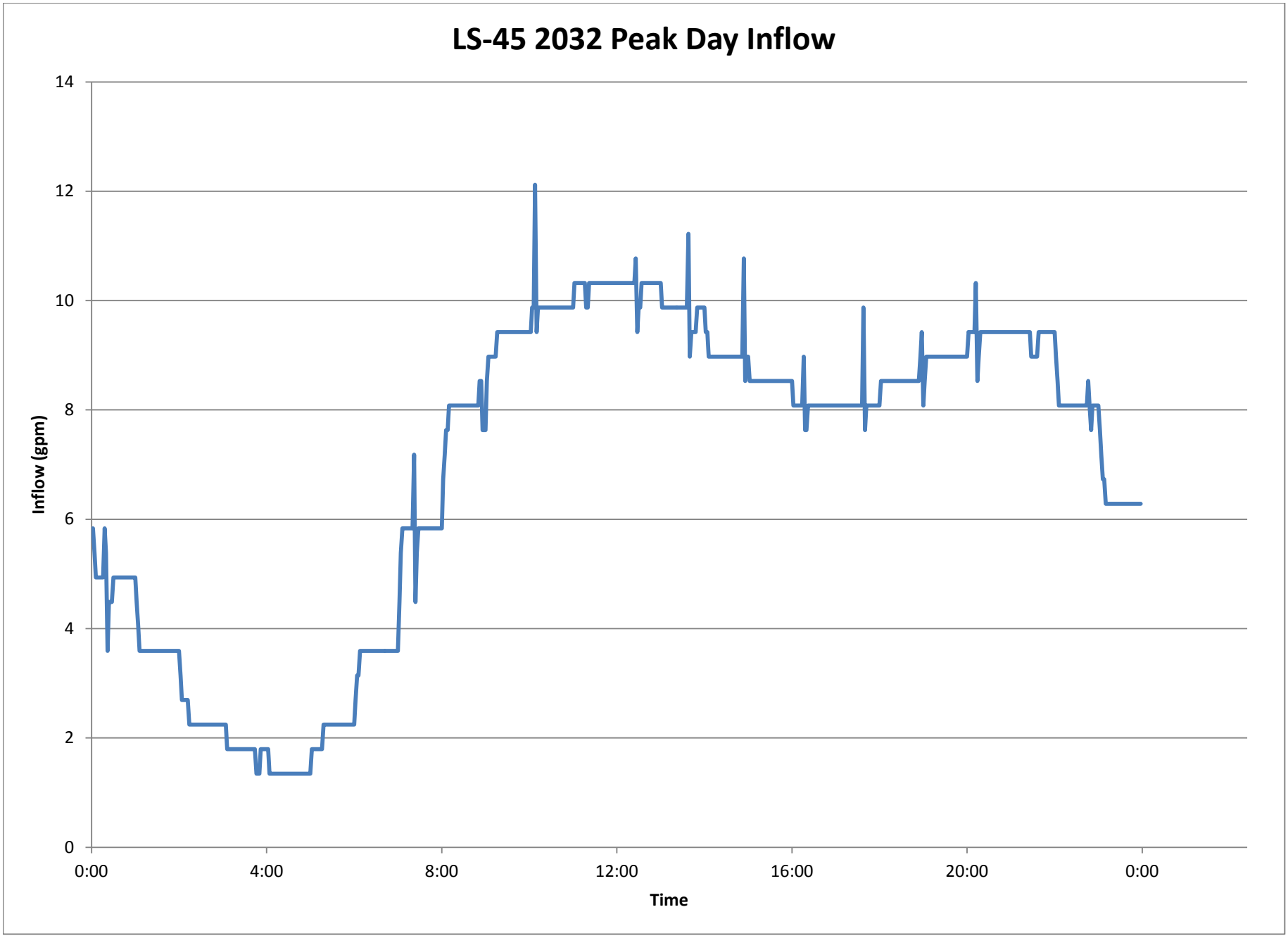

LS-40 2032 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

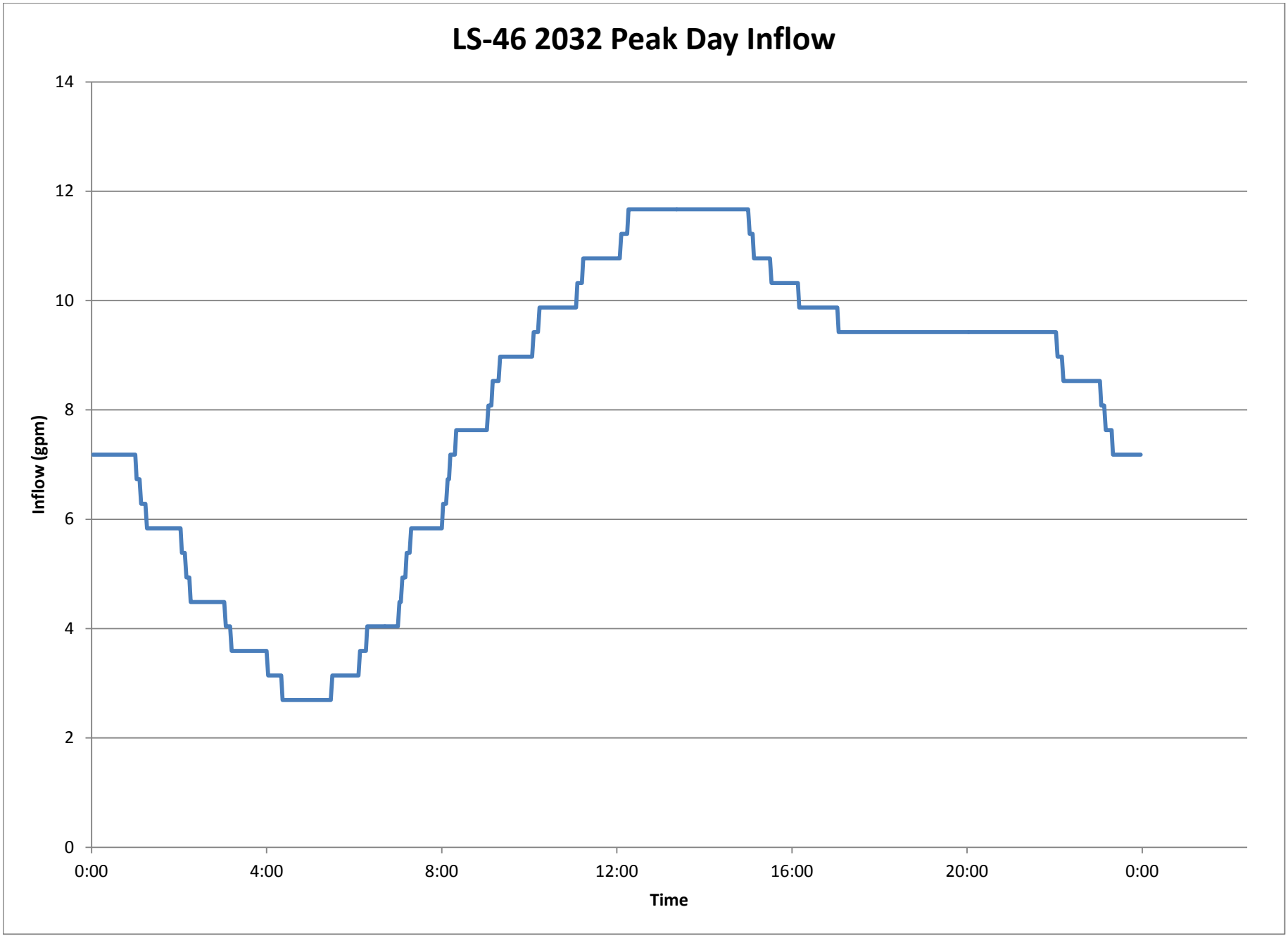

LS-41 2032 Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

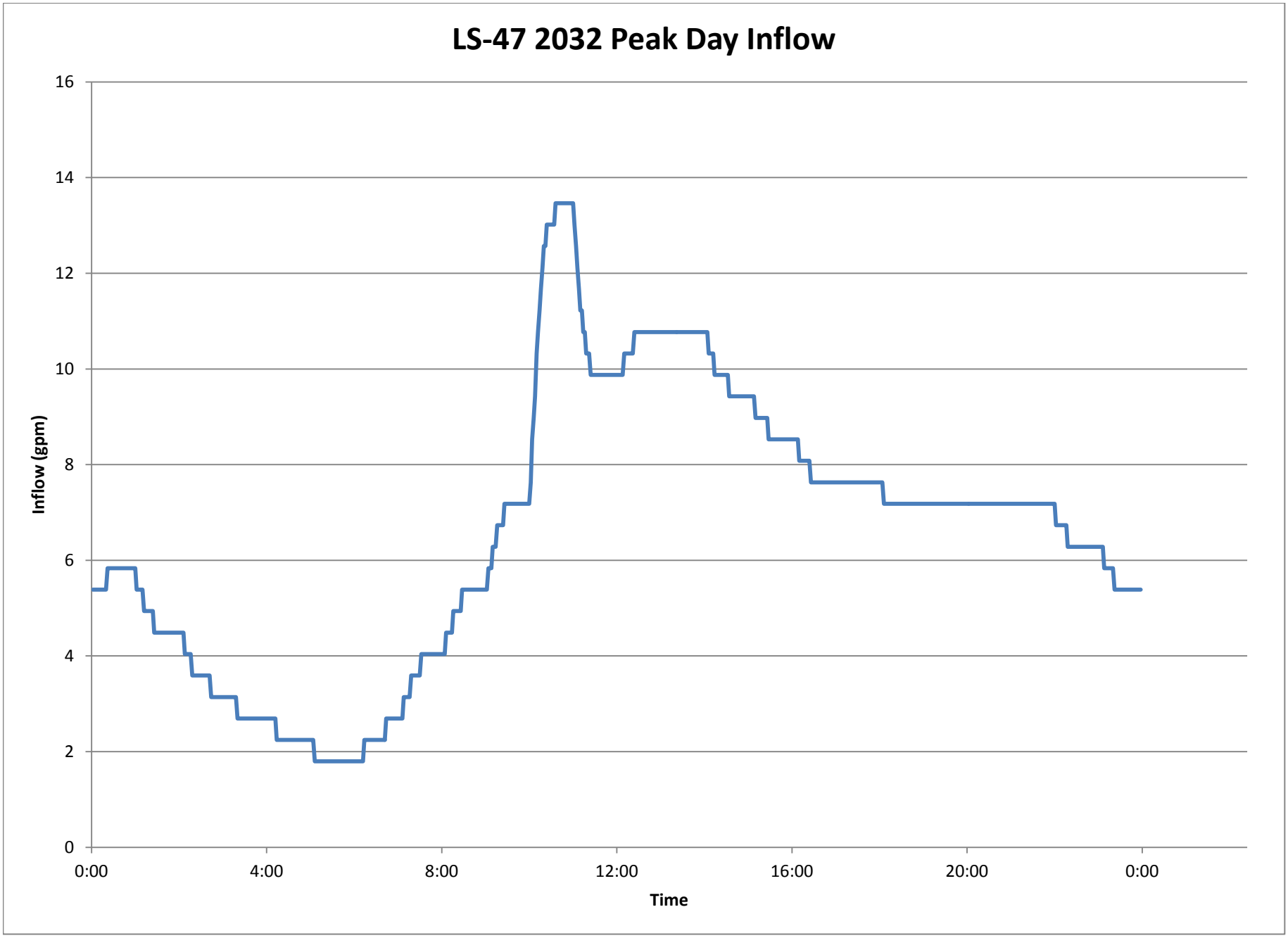

LS-42 2032 Peak Day Inflow
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

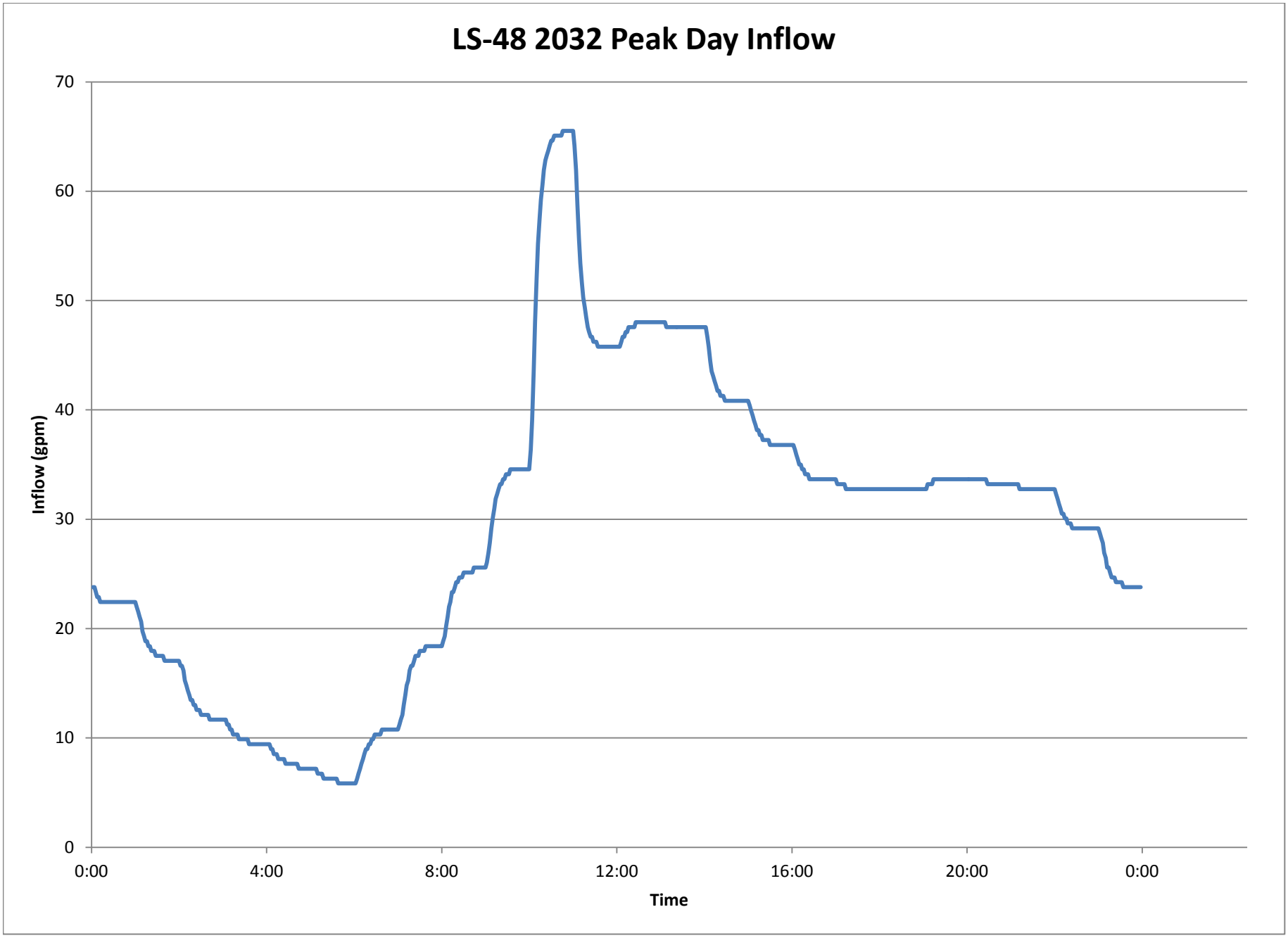

LS-43 2032 Peak Day Inflow
Inflow (gpm)
180
160
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

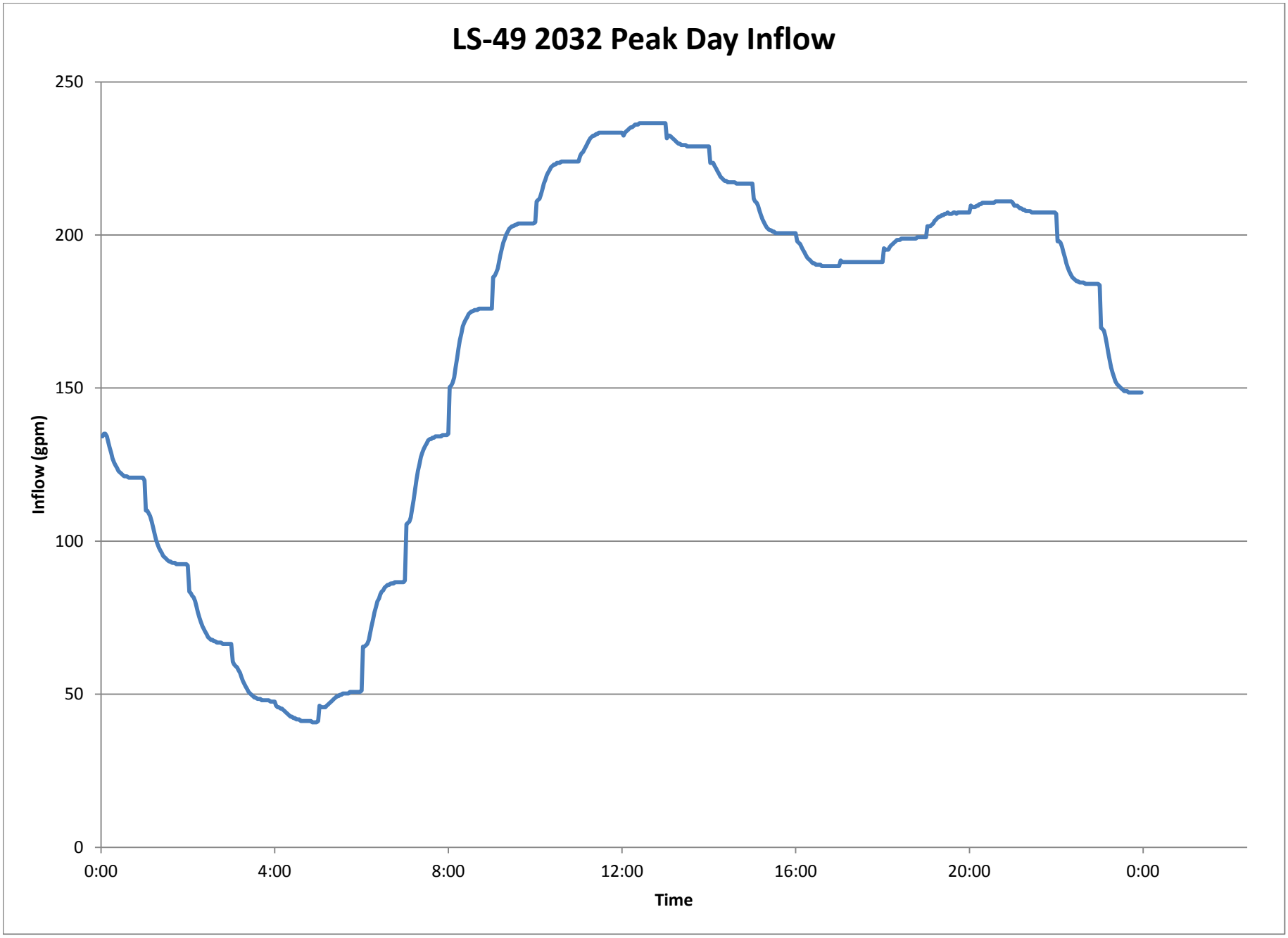

LS-44 2032 Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

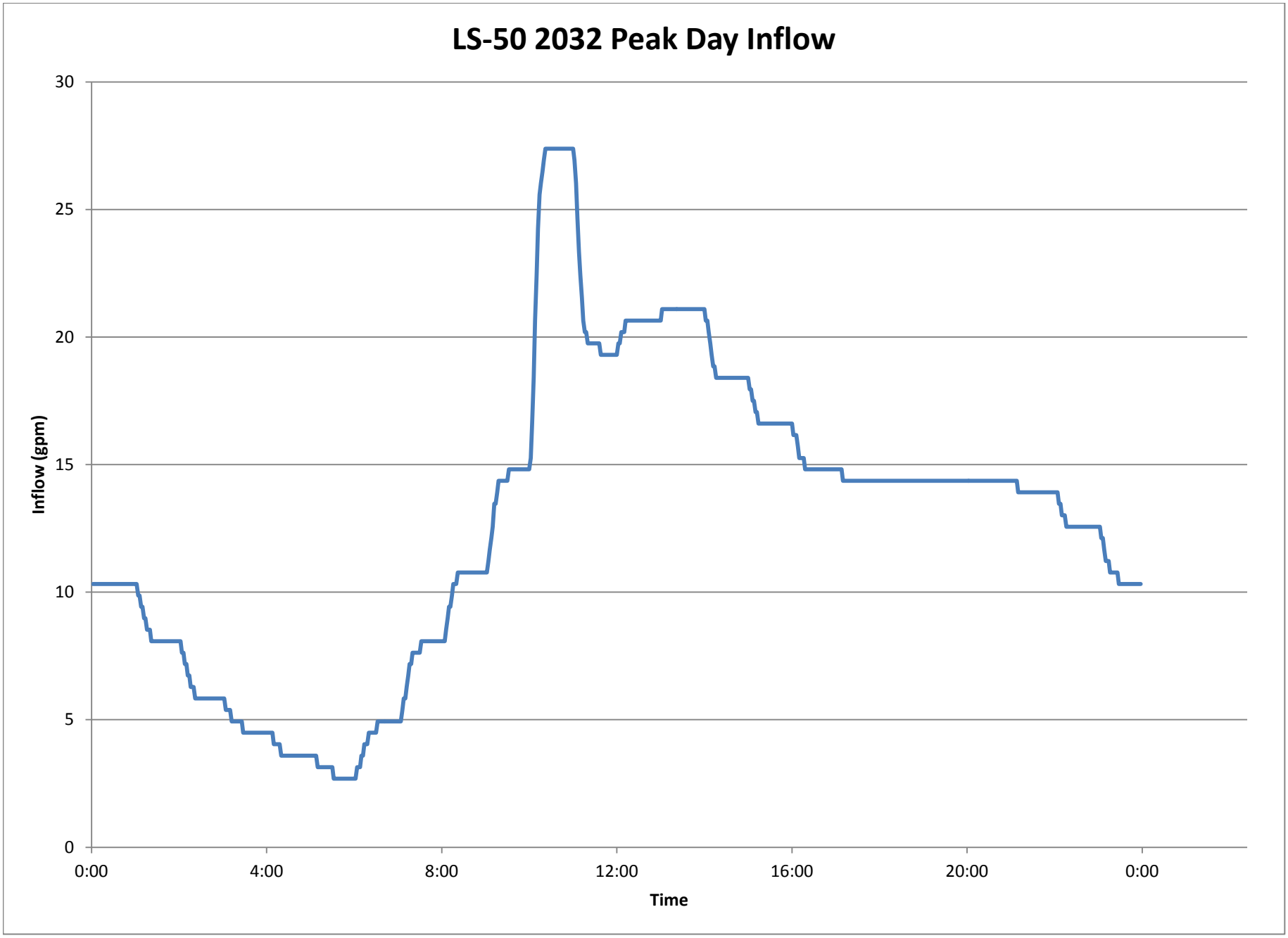

LS-45 2032 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

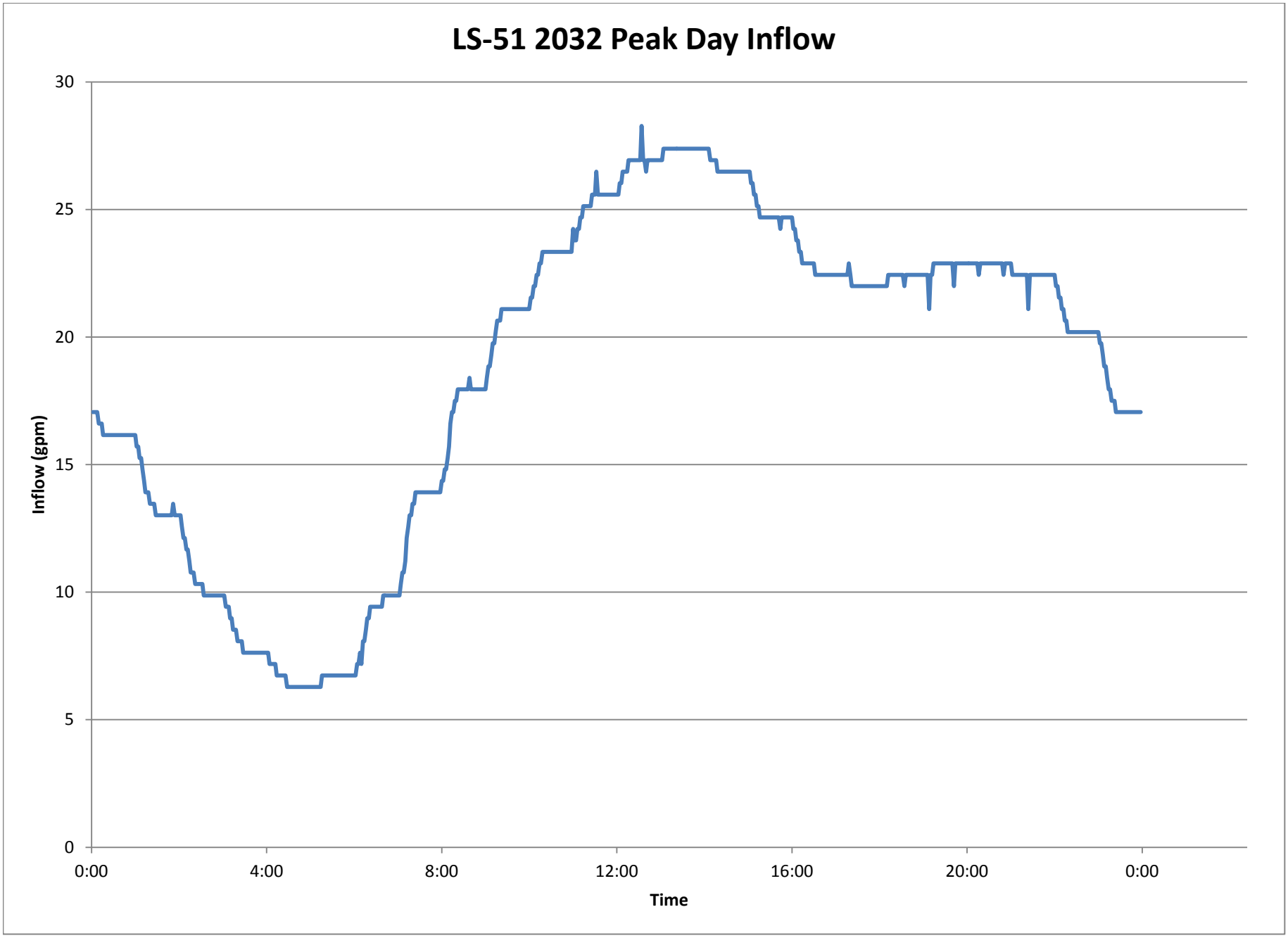

LS-46 2032 Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

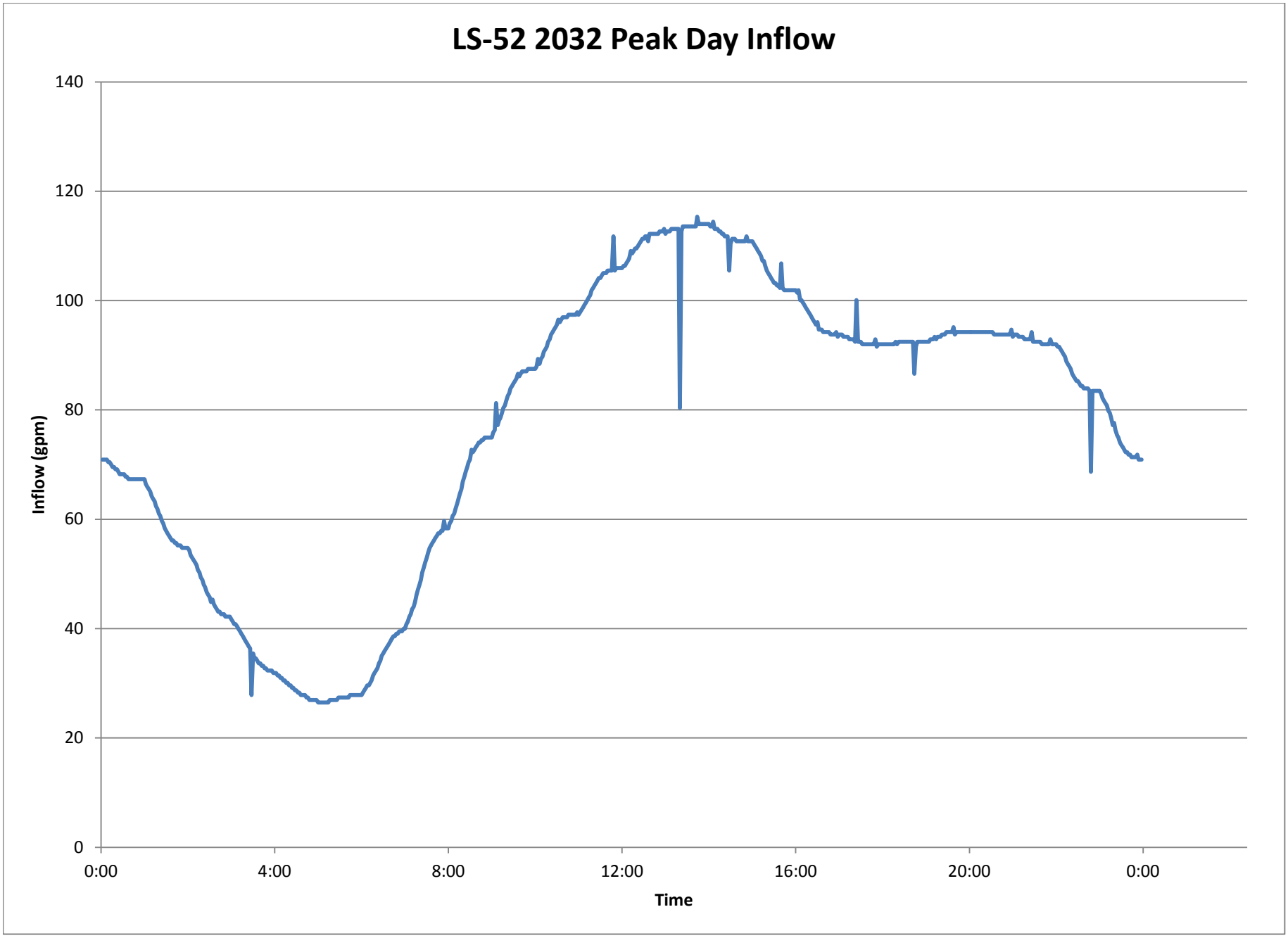

LS-47 2032 Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

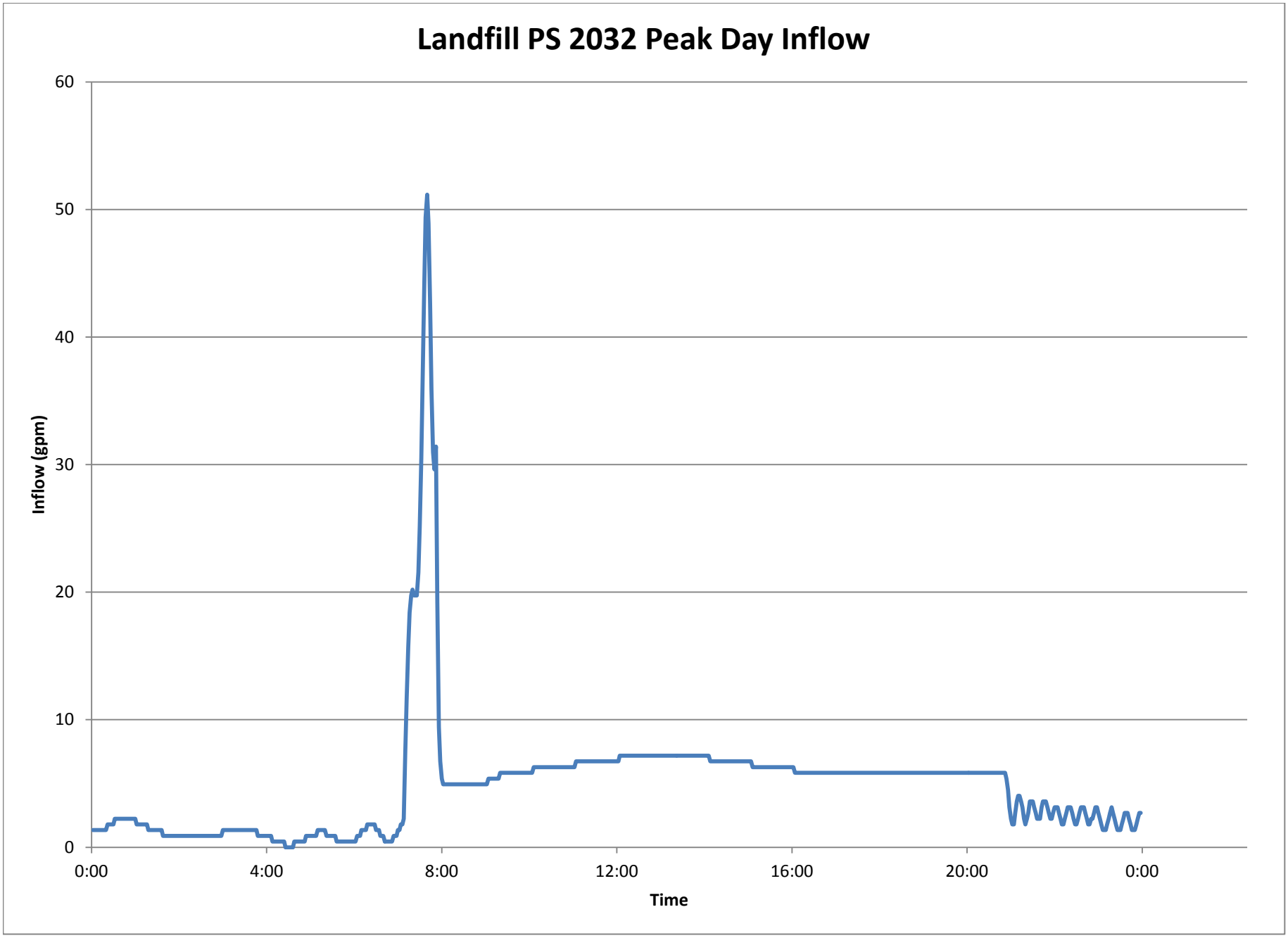

LS-48 2032 Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

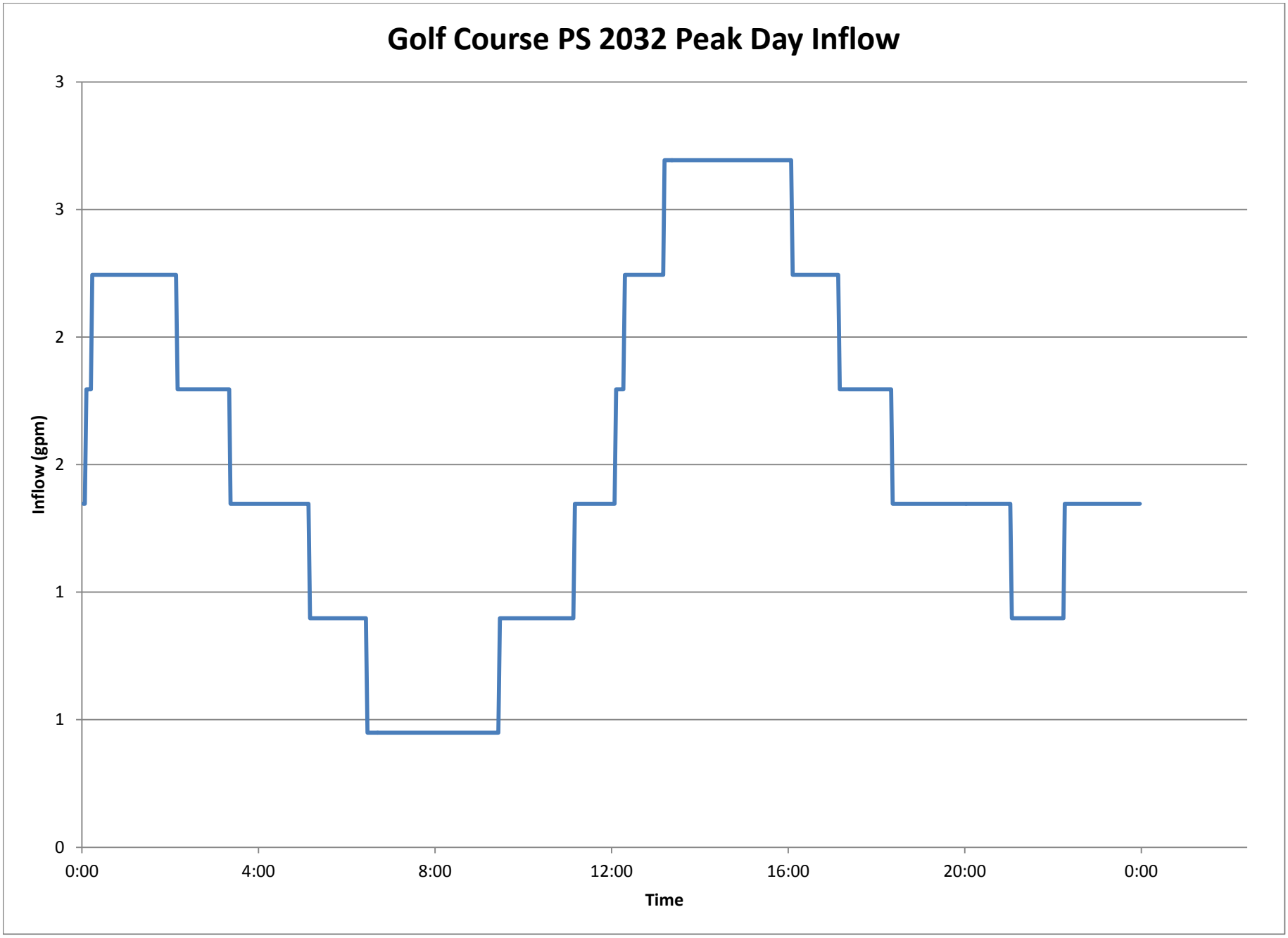

LS-49 2032 Peak Day Inflow
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

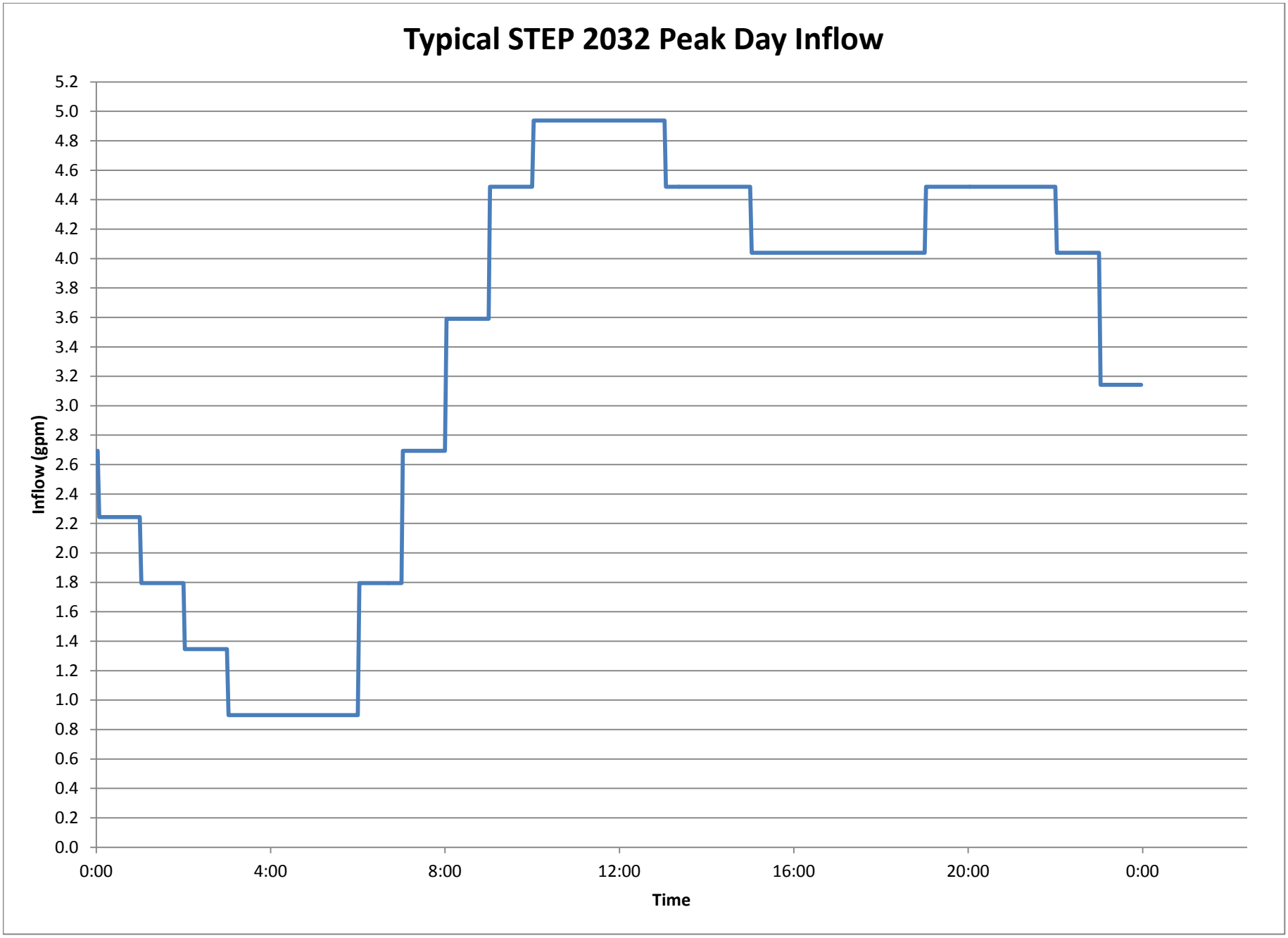

LS-50 2032 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

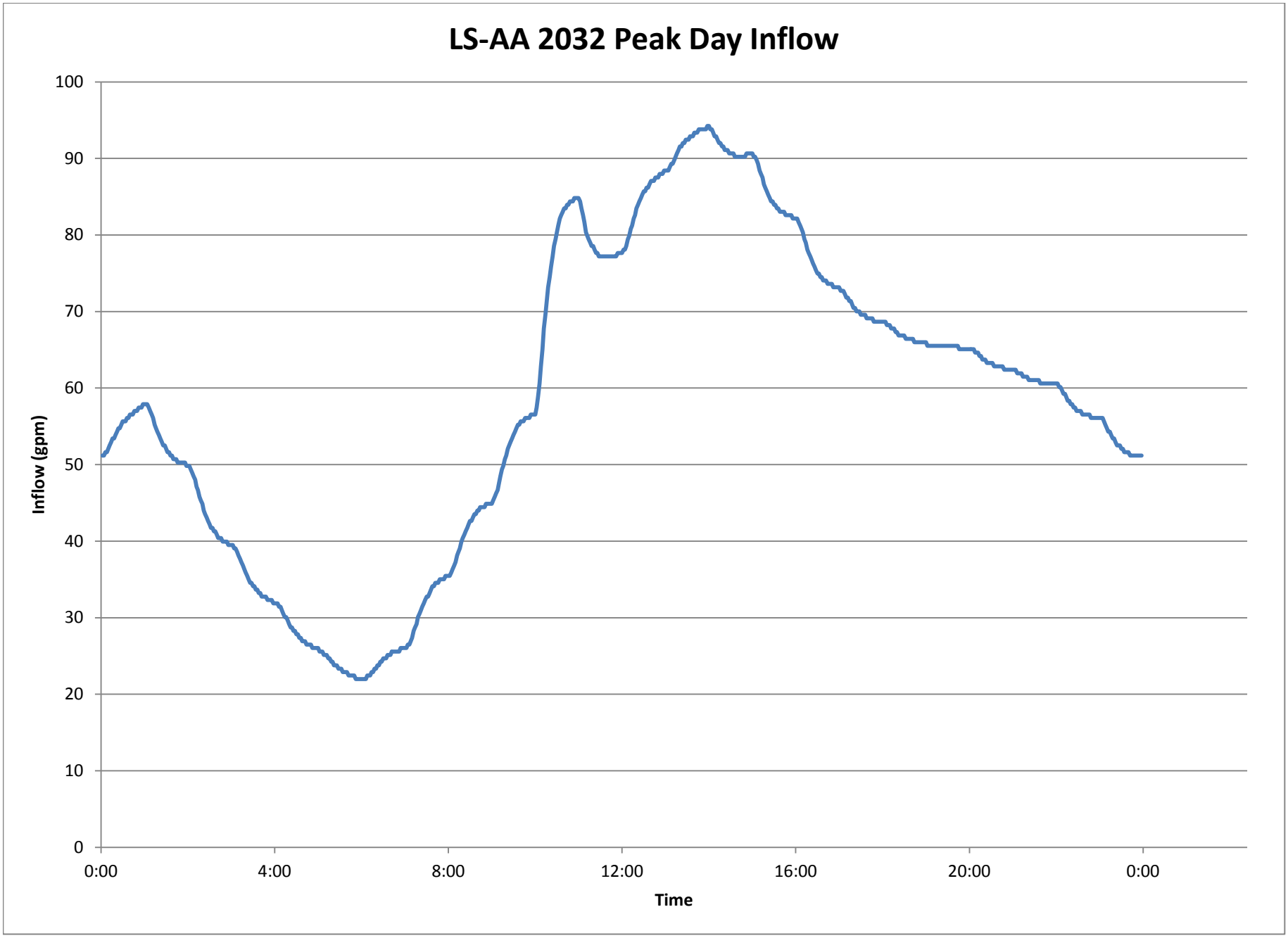

LS-51 2032 Peak Day Inflow
Inflow (gpm)
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

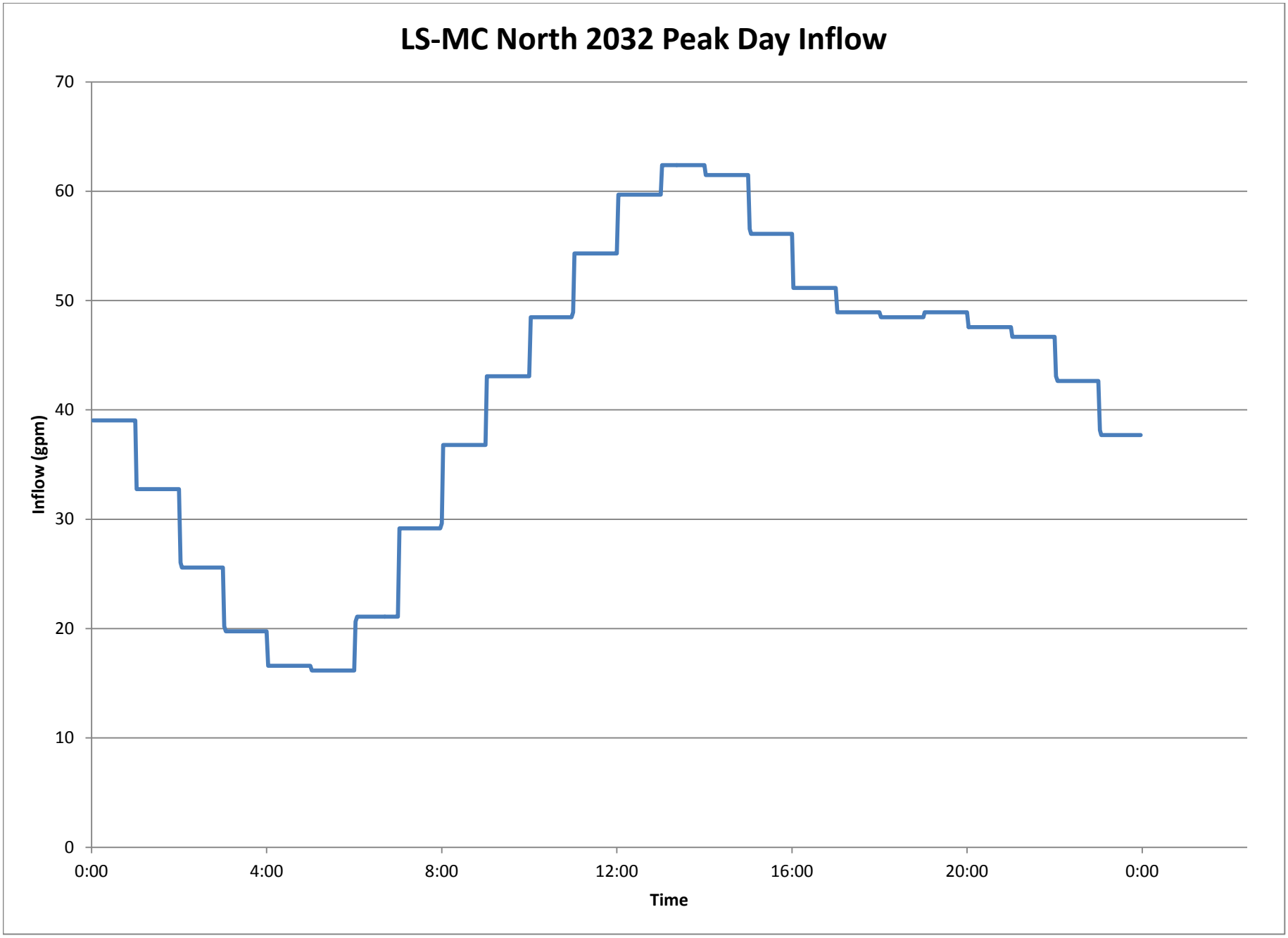

LS-52 2032 Peak Day Inflow
Inflow (gpm)
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Landfill PS 2032 Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Golf Course PS 2032 Peak Day Inflow
Inflow (gpm)
3
3
2
2
1
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Typical STEP 2032 Peak Day Inflow
Inflow (gpm)
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

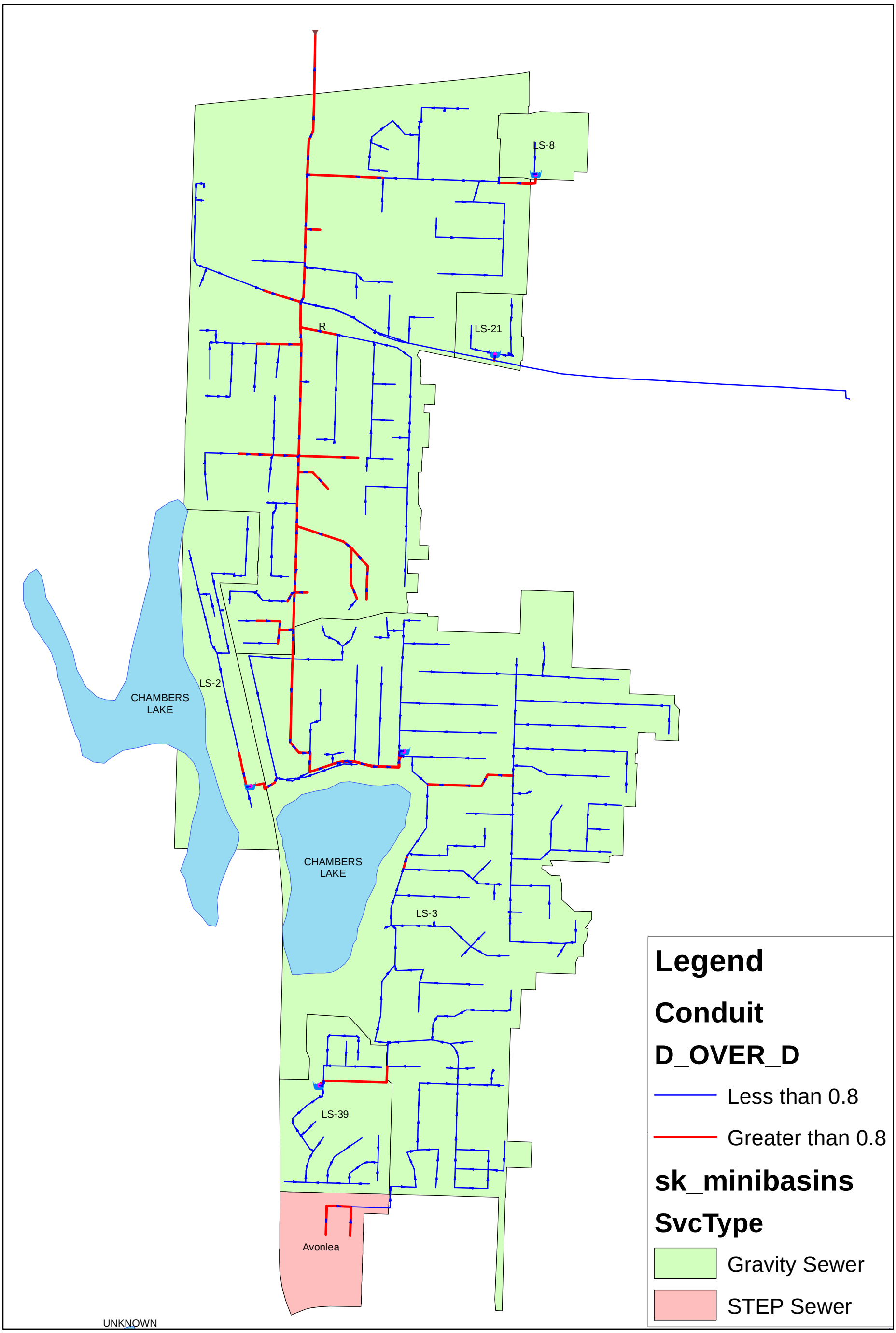

LS-AA 2032 Peak Day Inflow
Inflow (gpm)
100
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-MC North 2032 Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# 2032 MODEL RESULTS

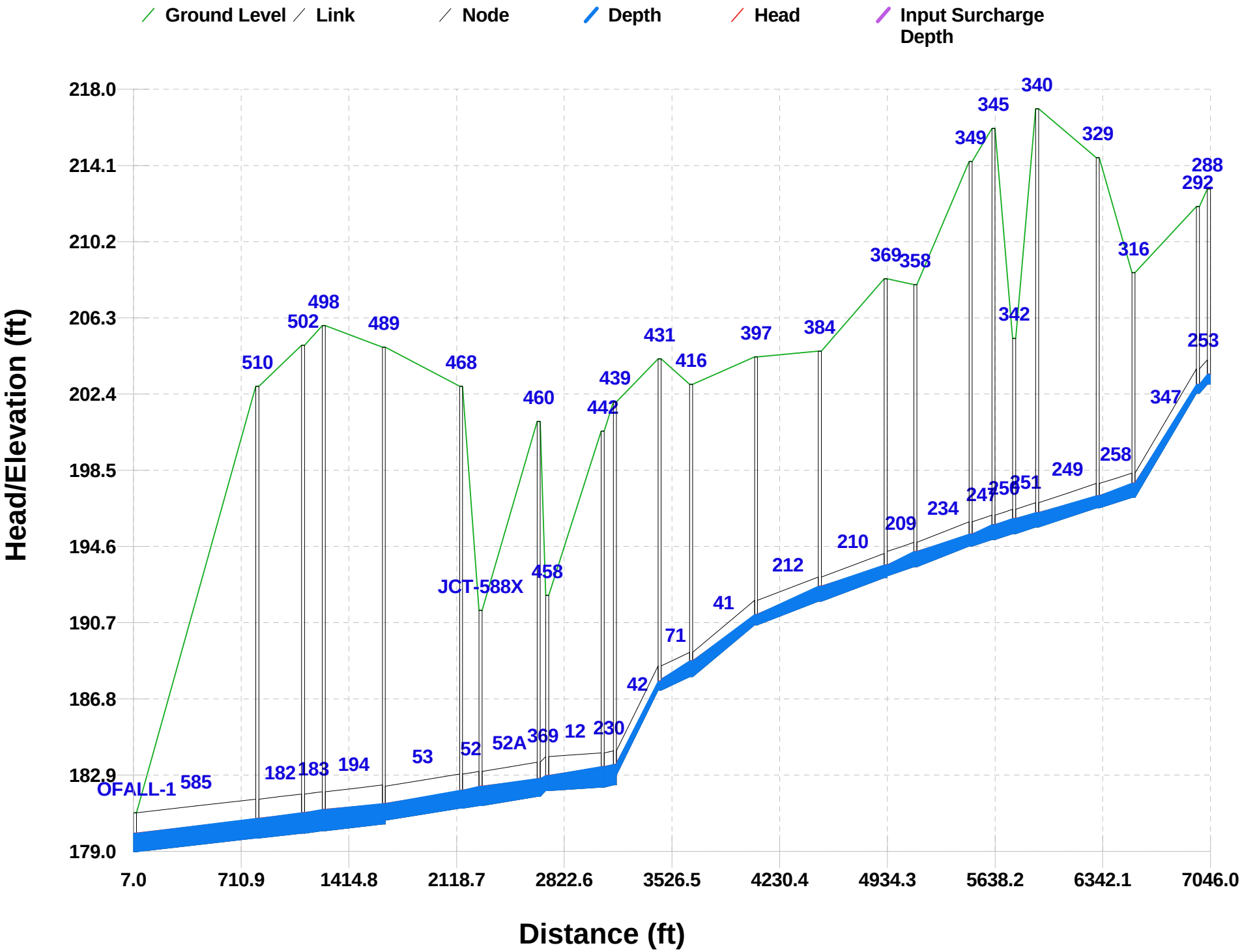
## SLEATER KINNEY BASIN

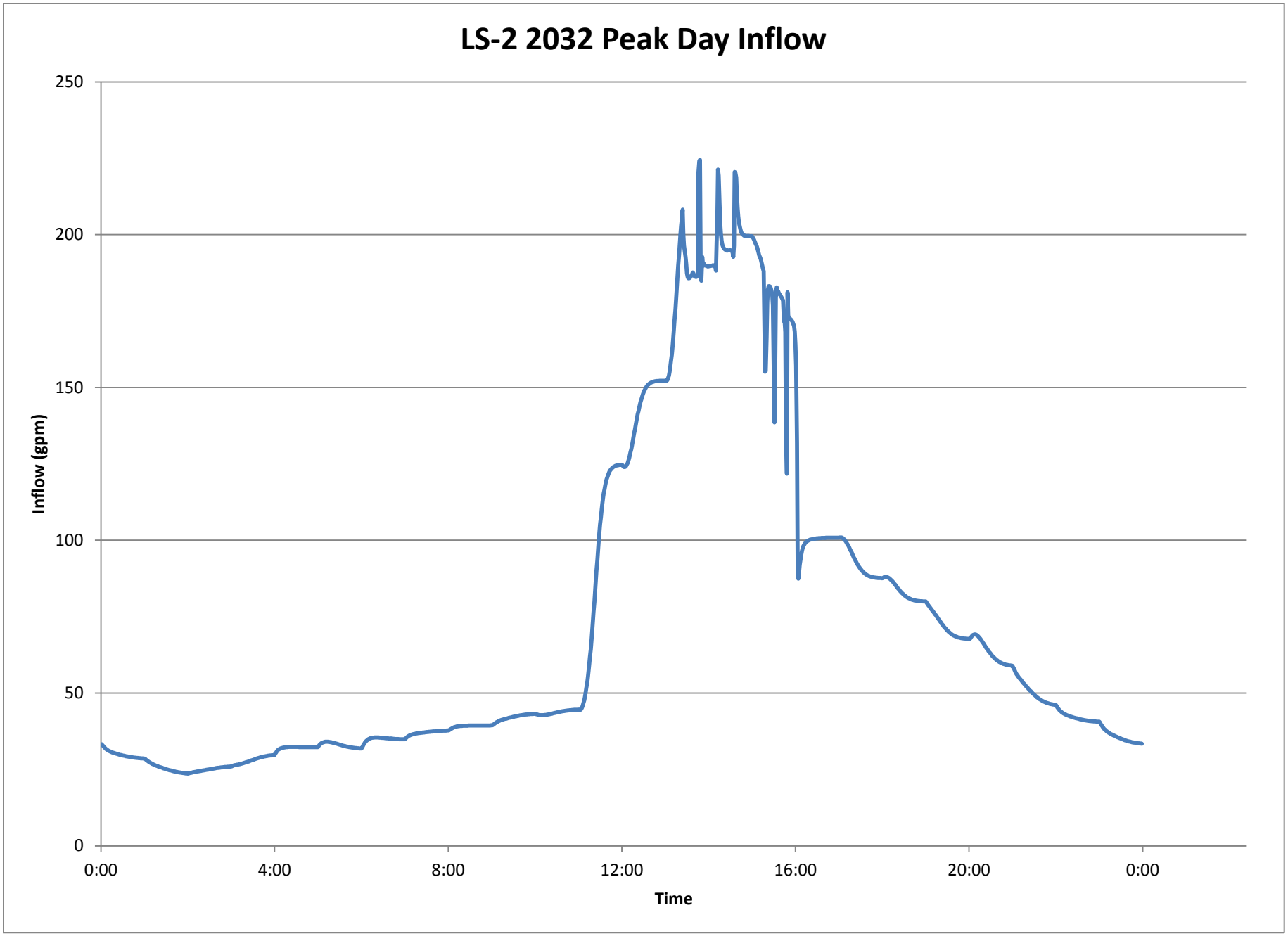
# Lacey - Sleater Kinney Collection System Model
# 2032 Peak Day Surcharging
# d/D Criteria = 0.80

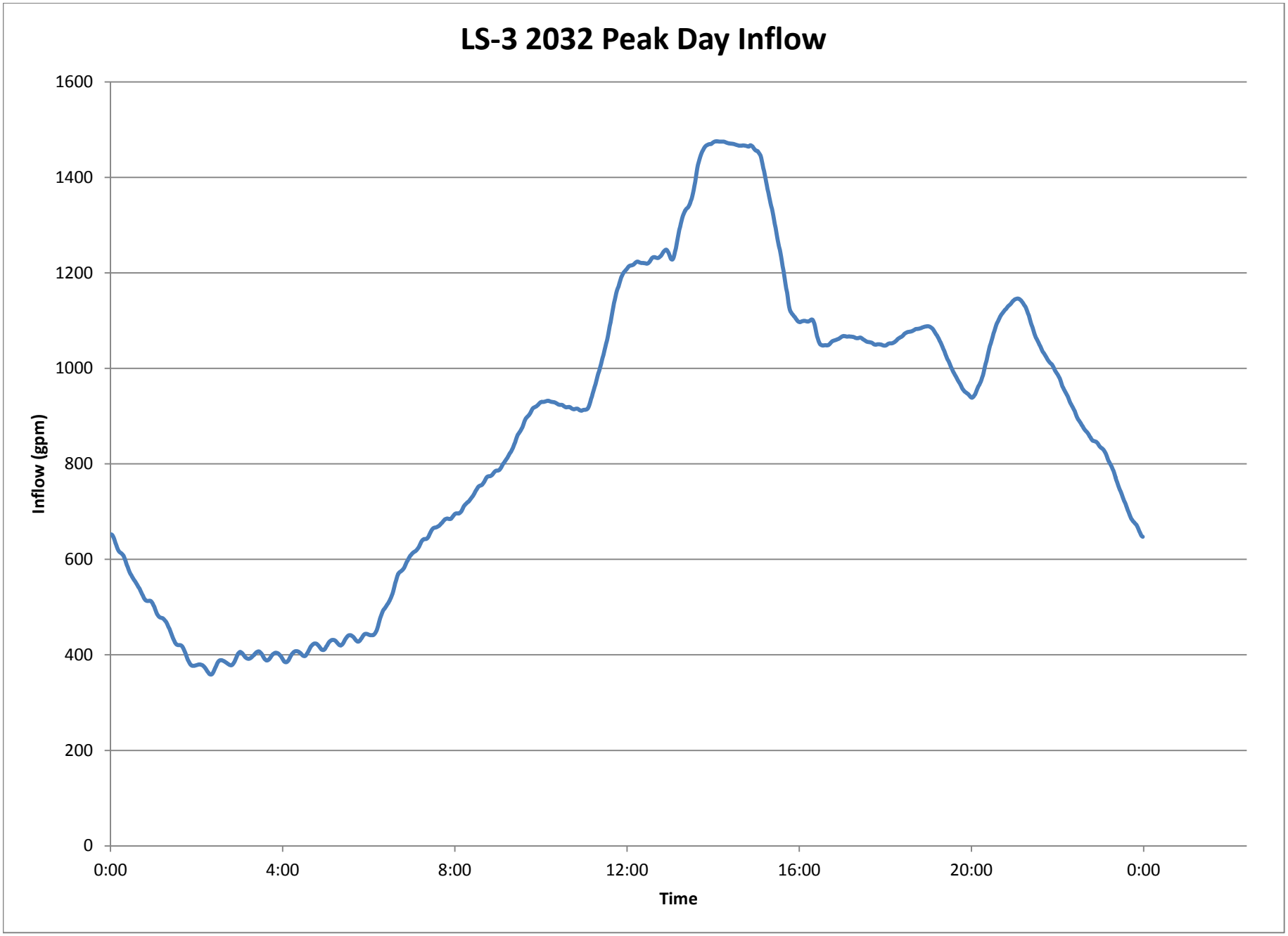


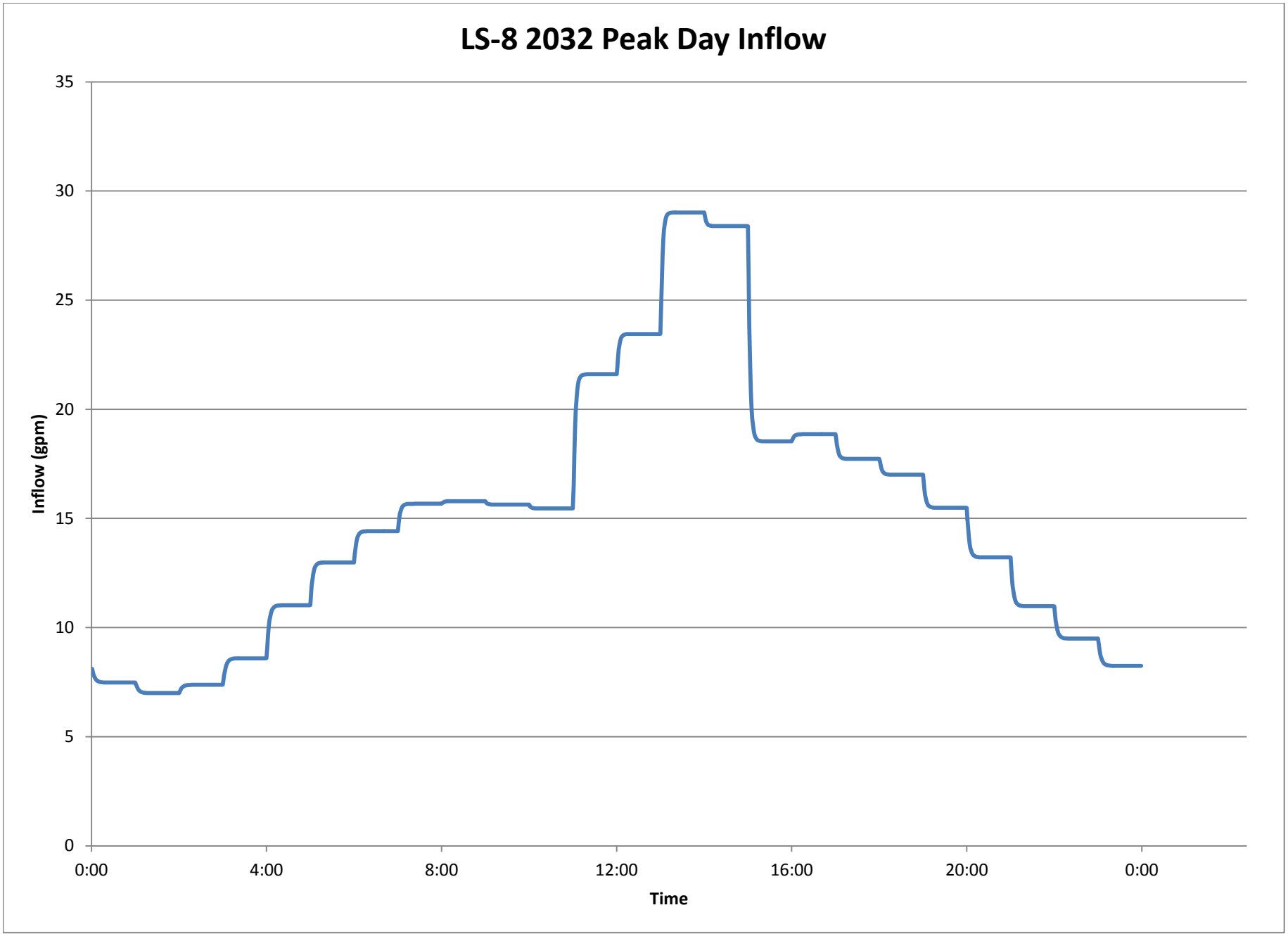

Note: Force mains and STEP mains are always full and are shown as always surcharging.

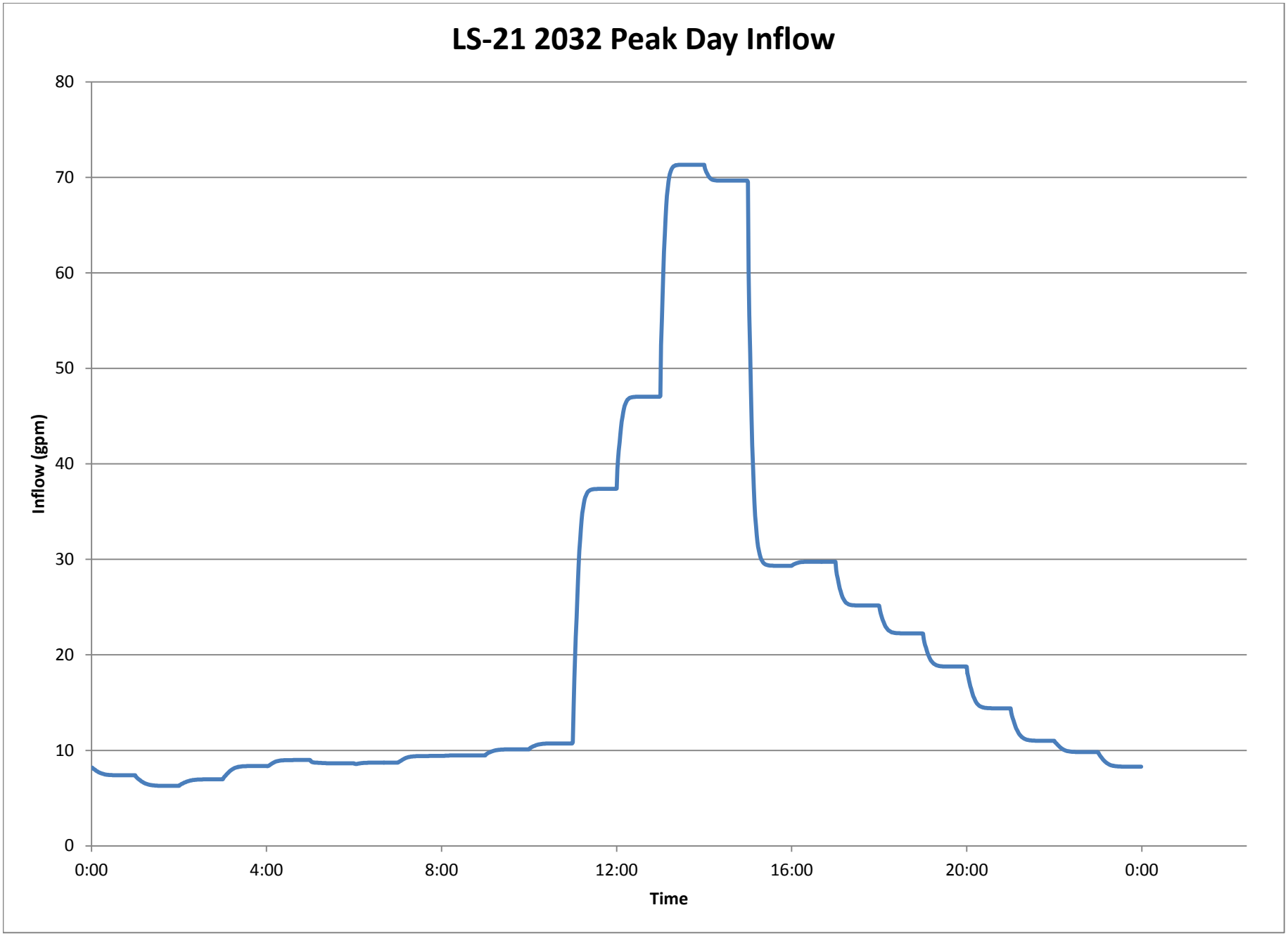
# Sleater Kinney Alignment: 2032 Peak HGL

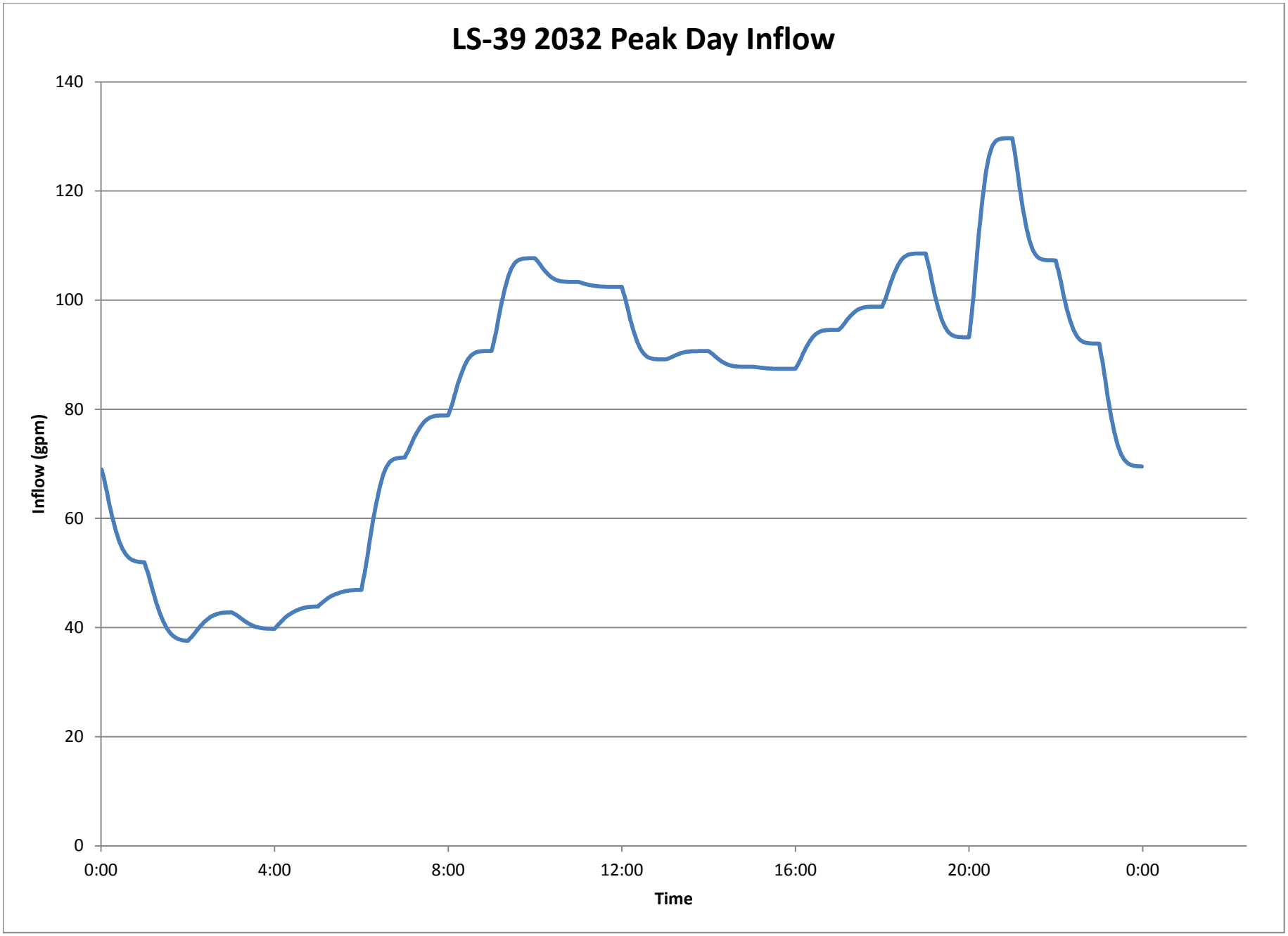



LS-2 2032 Peak Day Inflow
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-3 2032 Peak Day Inflow
Inflow (gpm)
1600
1400
1200
1000
800
600
400
200
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-8 2032 Peak Day Inflow
Inflow (gpm)
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

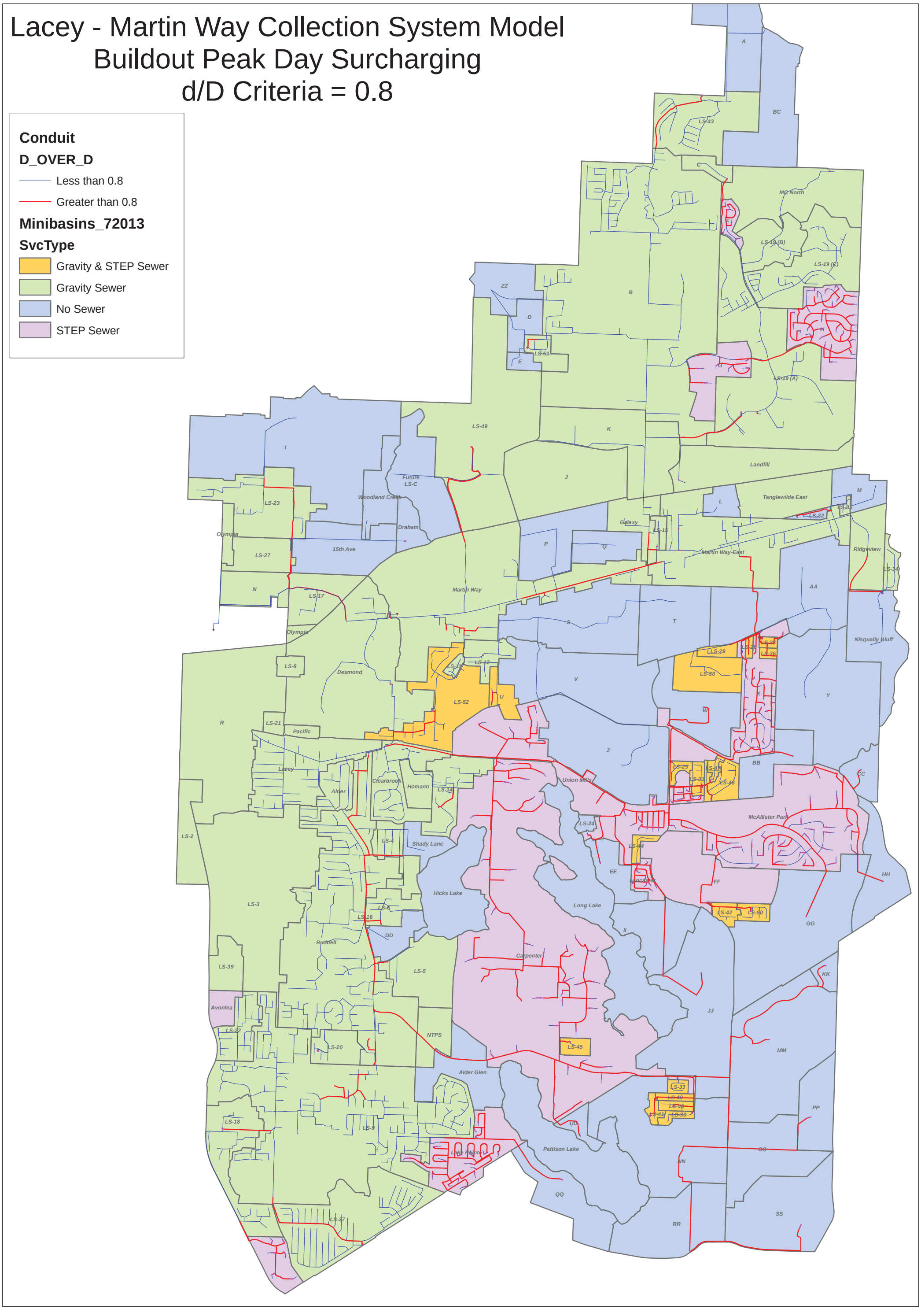

LS-21 2032 Peak Day Inflow
Inflow (gpm)
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

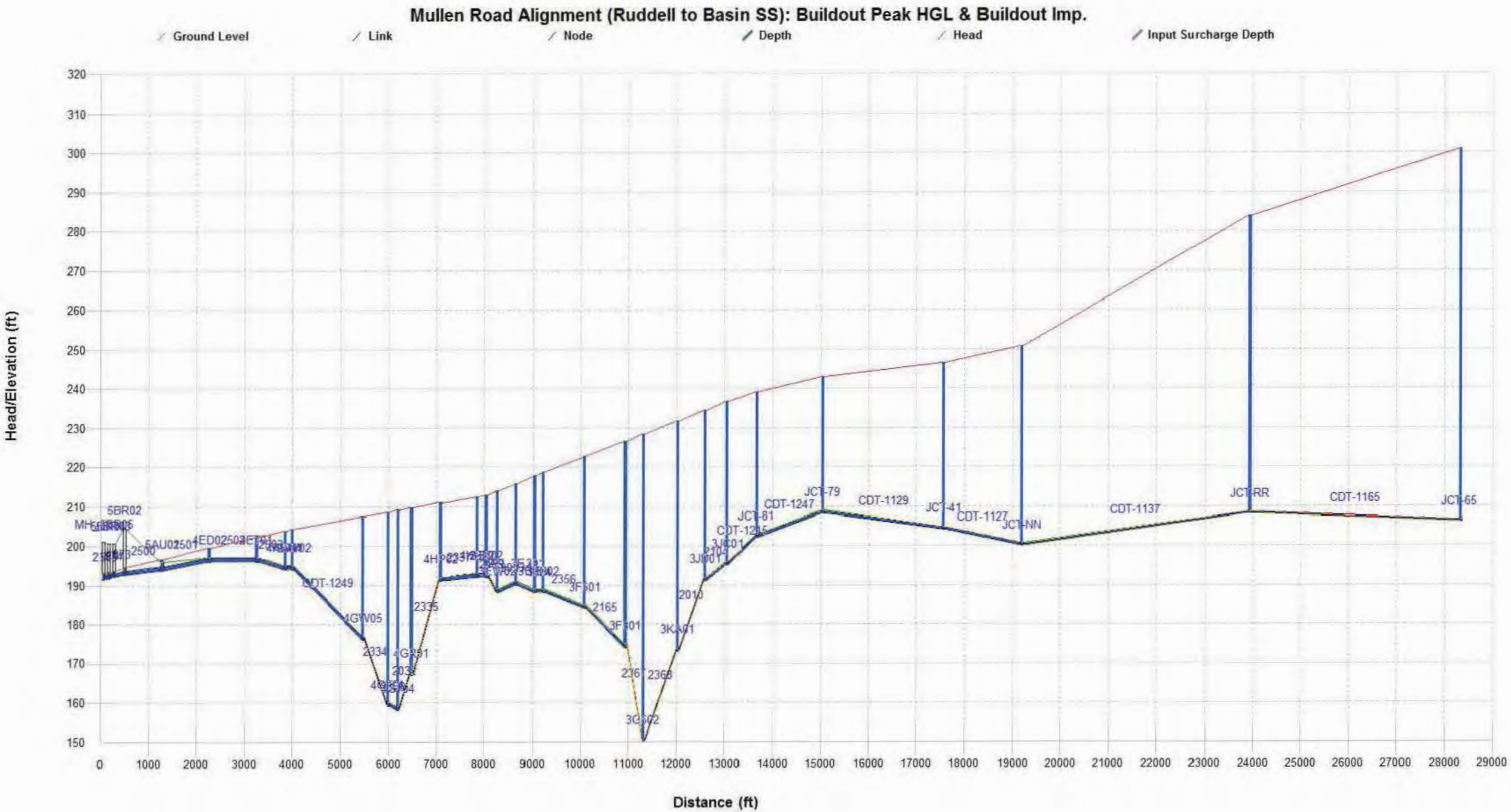

LS-39 2032 Peak Day Inflow
Inflow (gpm)
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# BUILD-OUT MODEL RESULTS

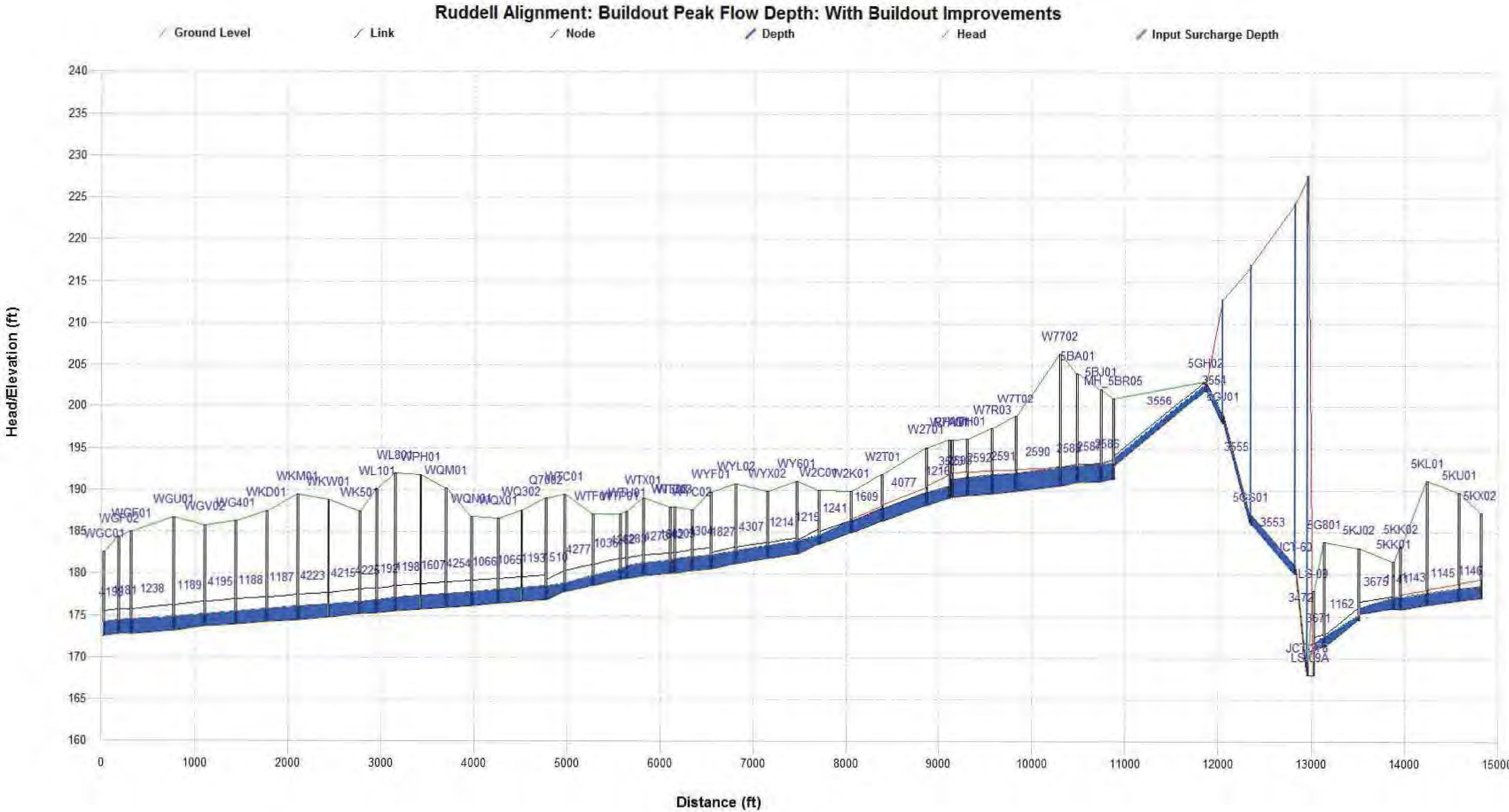
## MARTIN WAY BASIN

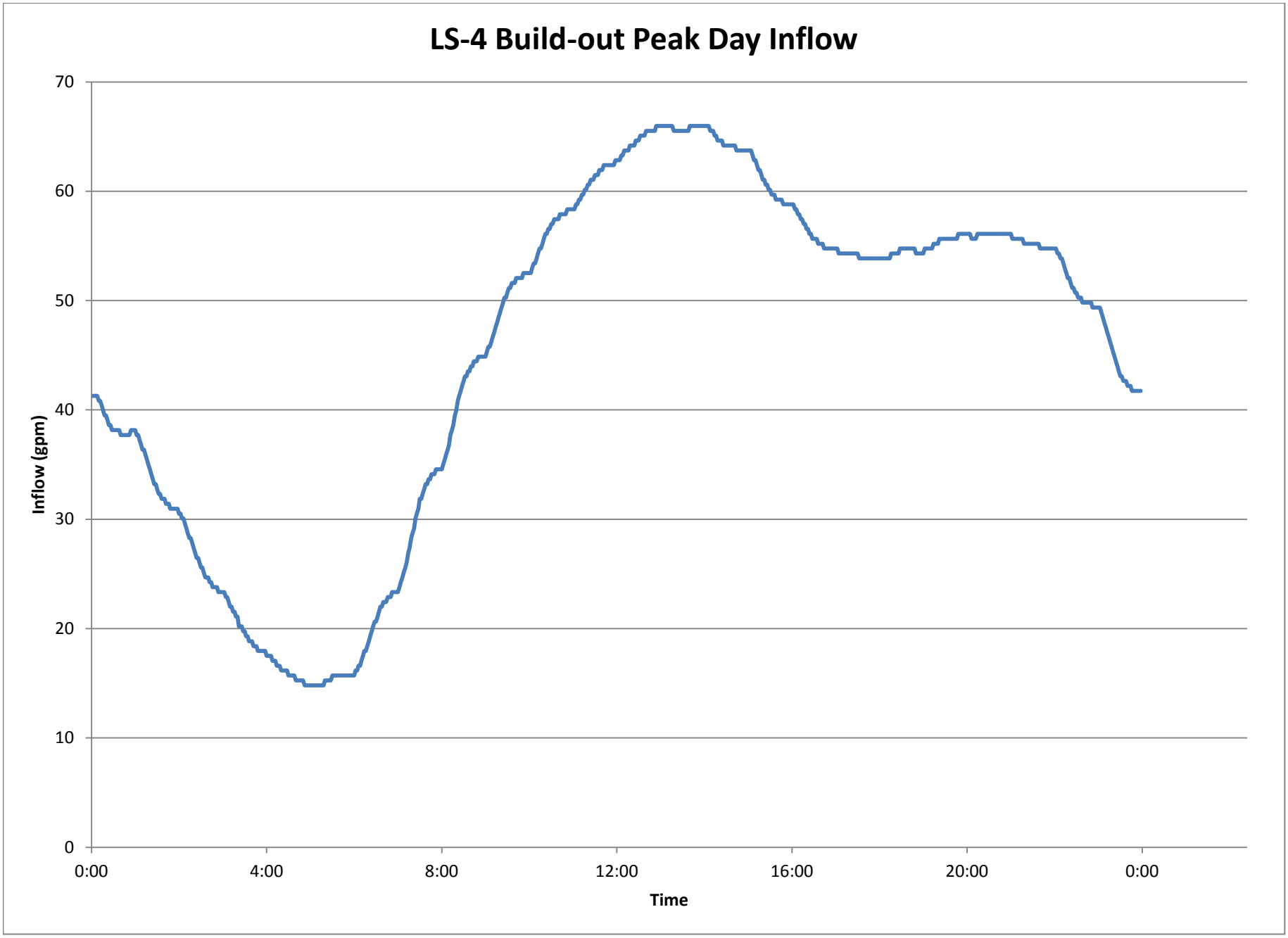
# Lacey - Martin Way Collection System Model
## Buildout Peak Day Surcharging
## d/D Criteria = 0.8

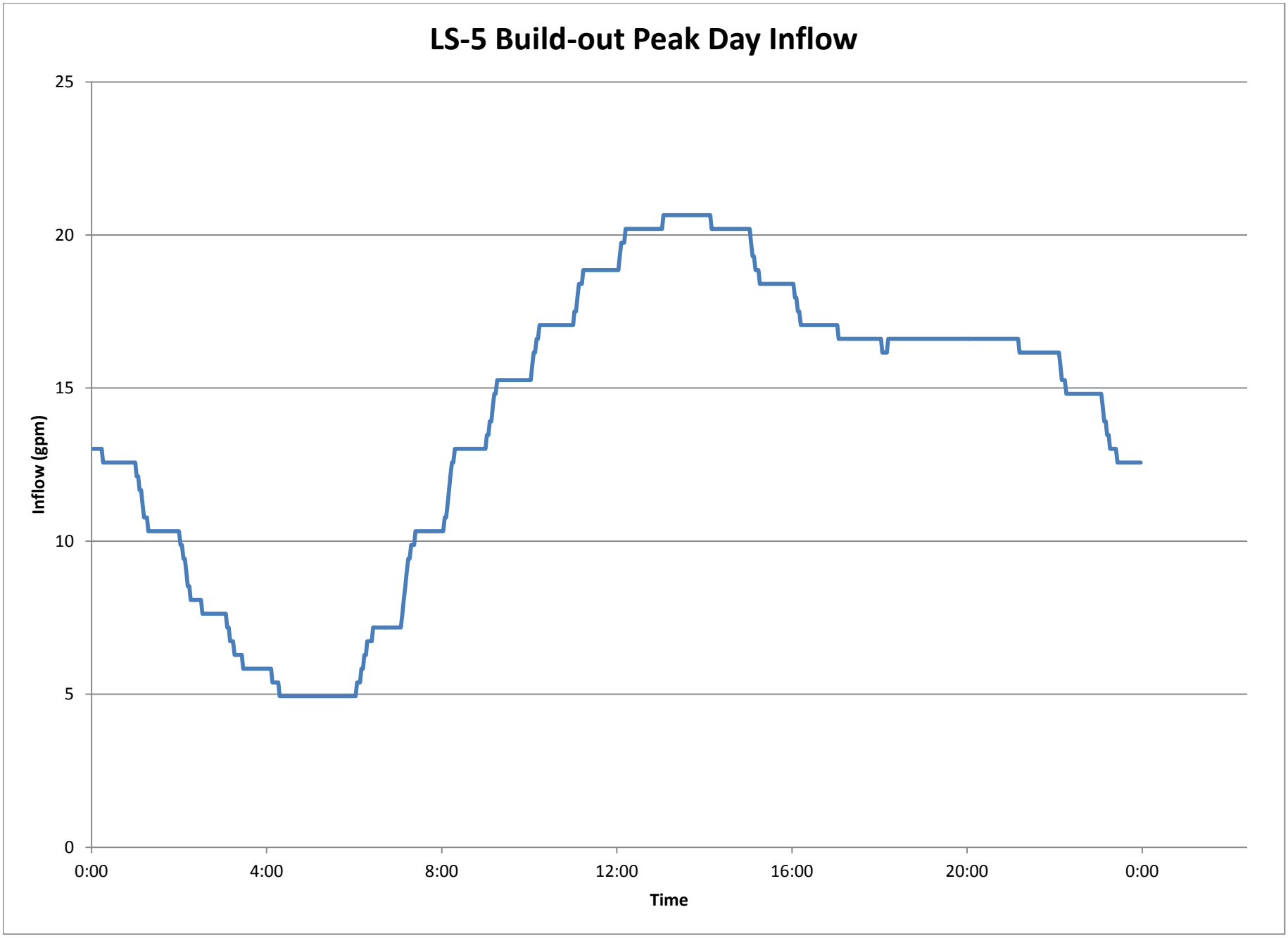


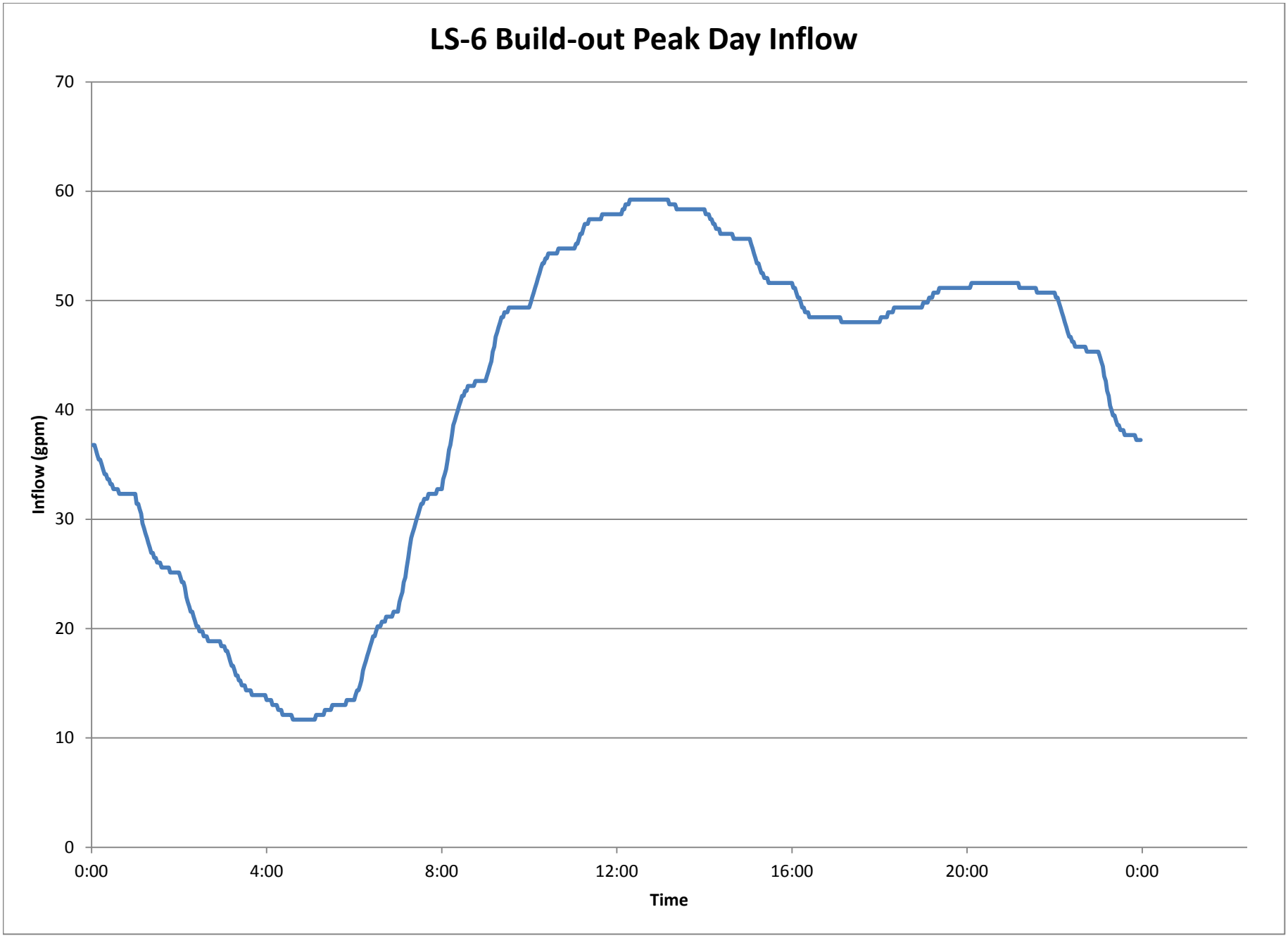


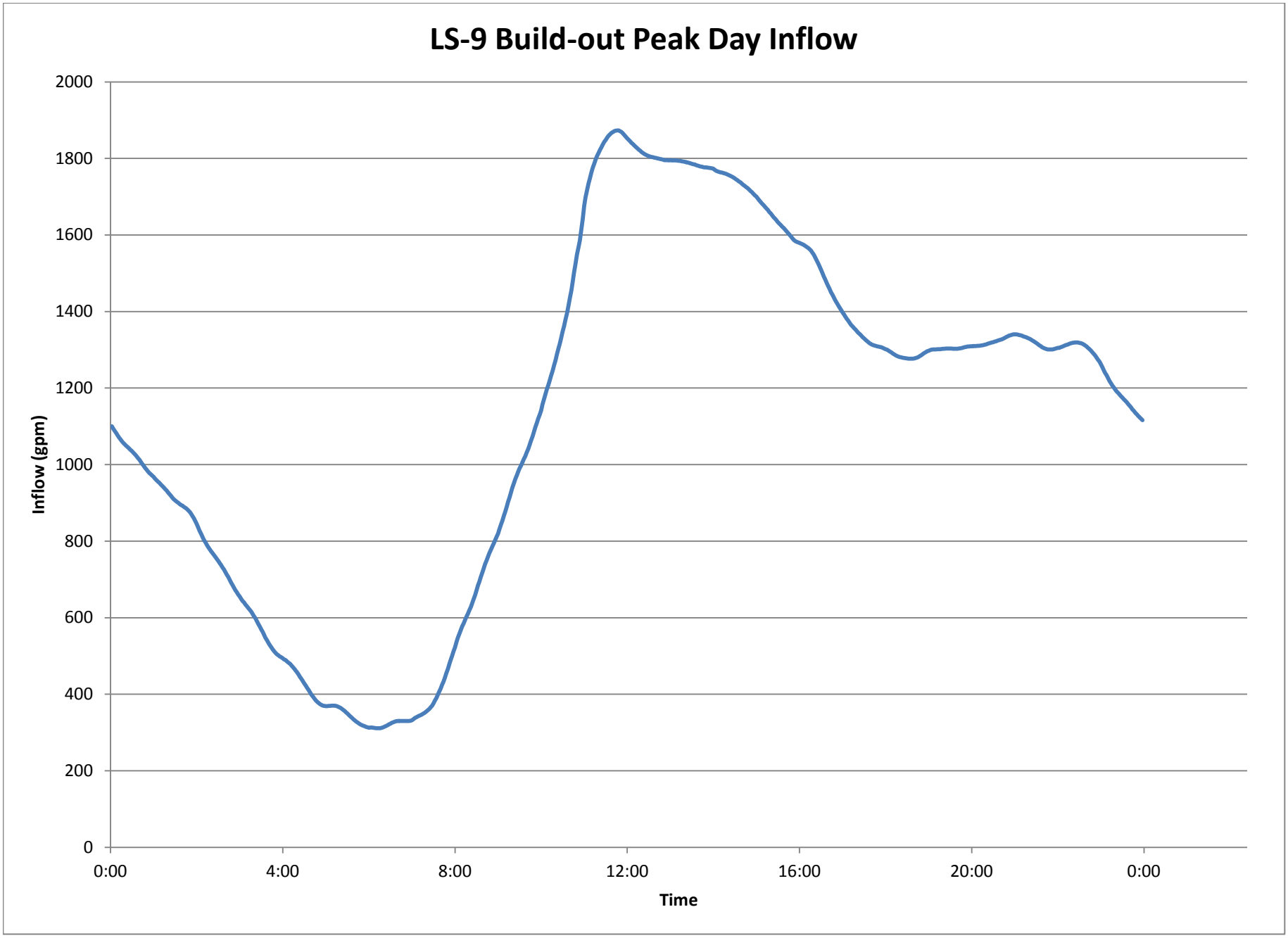
Mullen Road Alignment (Ruddell to Basin SS): Buildout Peak HGL & Buildout Imp.
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)
5BR02
CDT-1249
4GW05
2334
2335
2356
2165
2367
2368
3GS02
3KA01
2010
JCT-81
CDT-1247
JCT-79
CDT-1129
JCT-41
CDT-1127
JCT-NN
CDT-1137
JCT-RR
CDT-1165
JCT-65

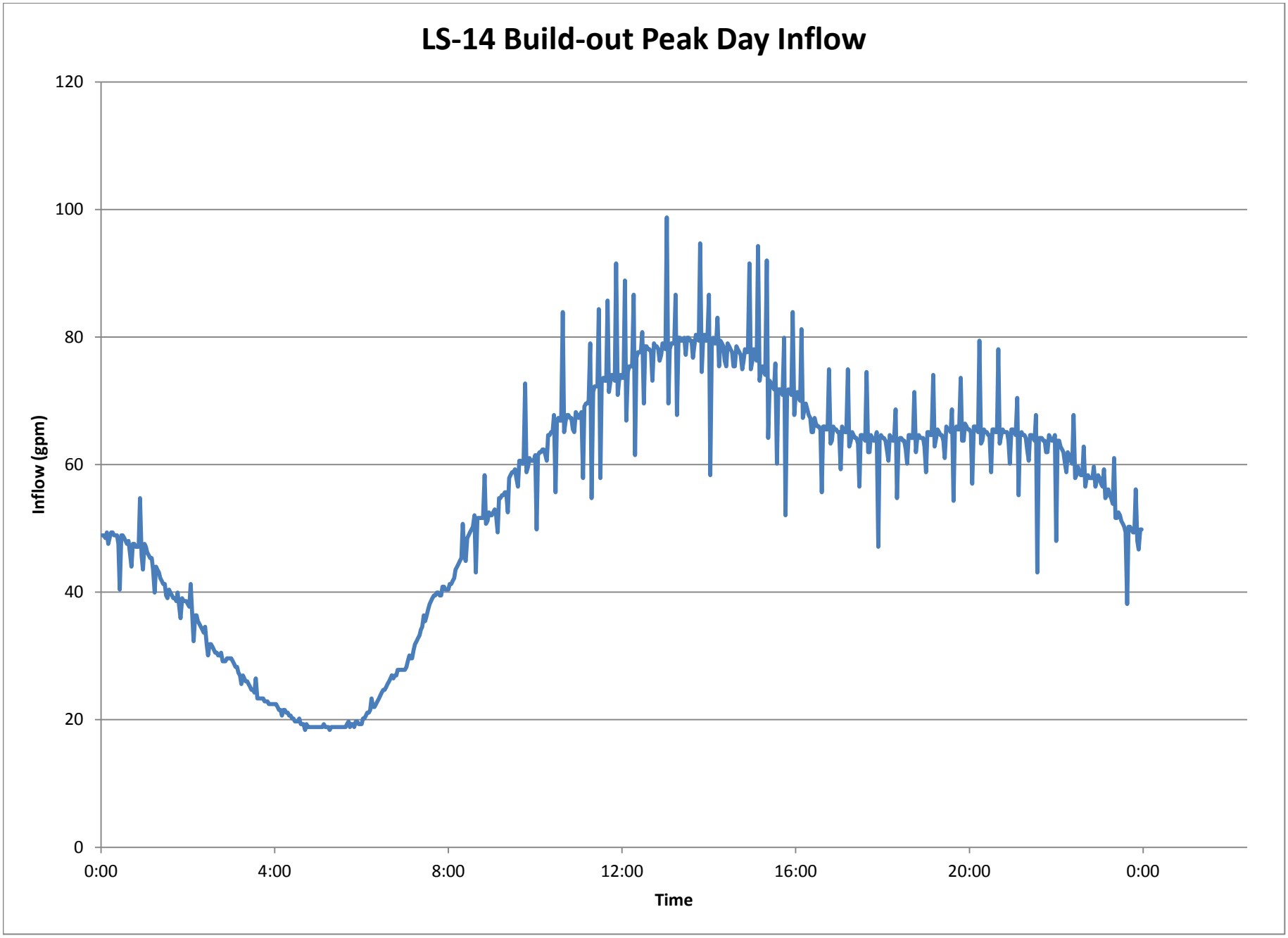

Ruddell Alignment: Buildout Peak Flow Depth: With Buildout Improvements
Ground Level
Link
Node
Depth
Head
Input Surcharge Depth
Head/Elevation (ft)
Distance (ft)

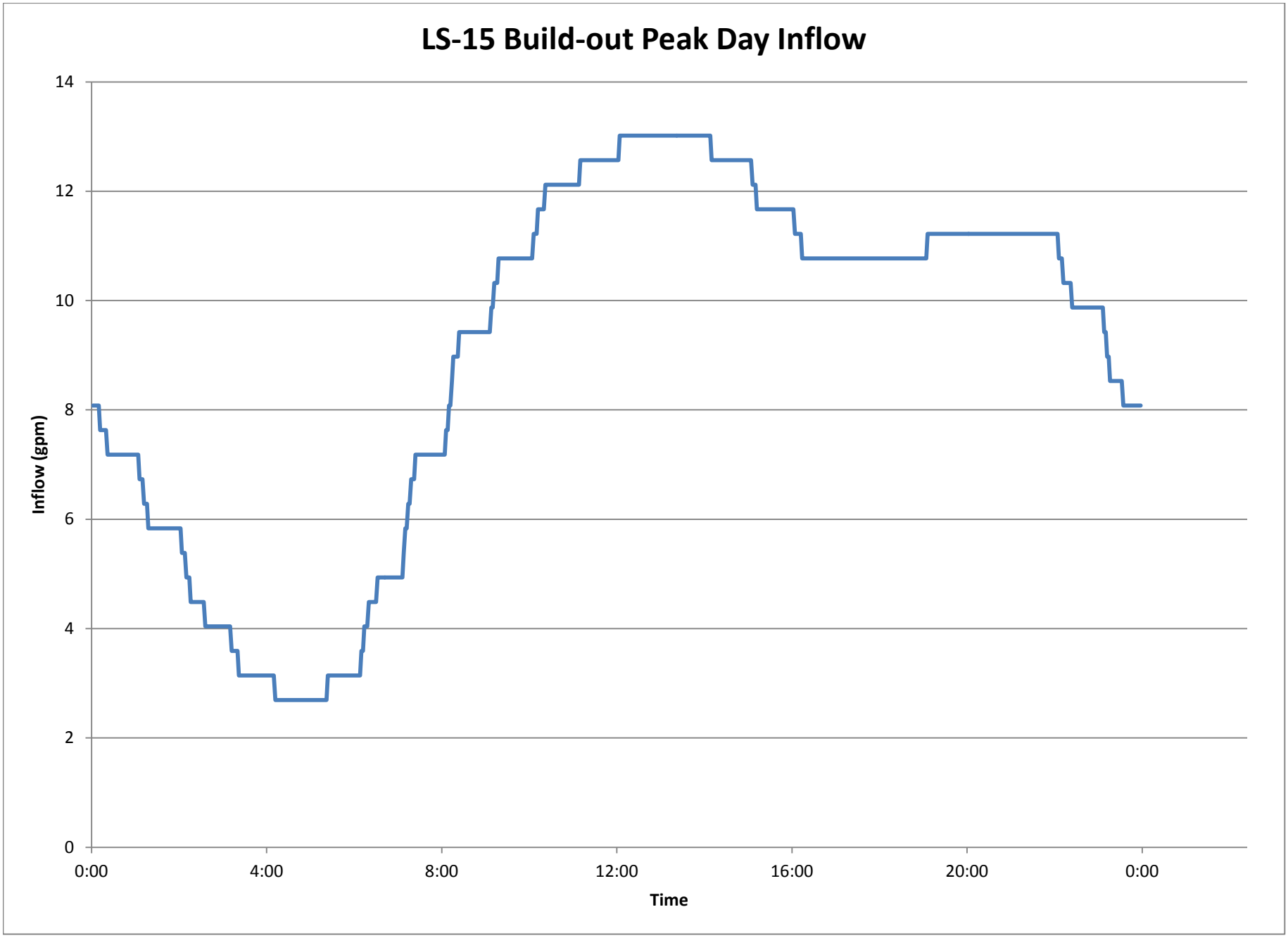

LS-4 Build-out Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

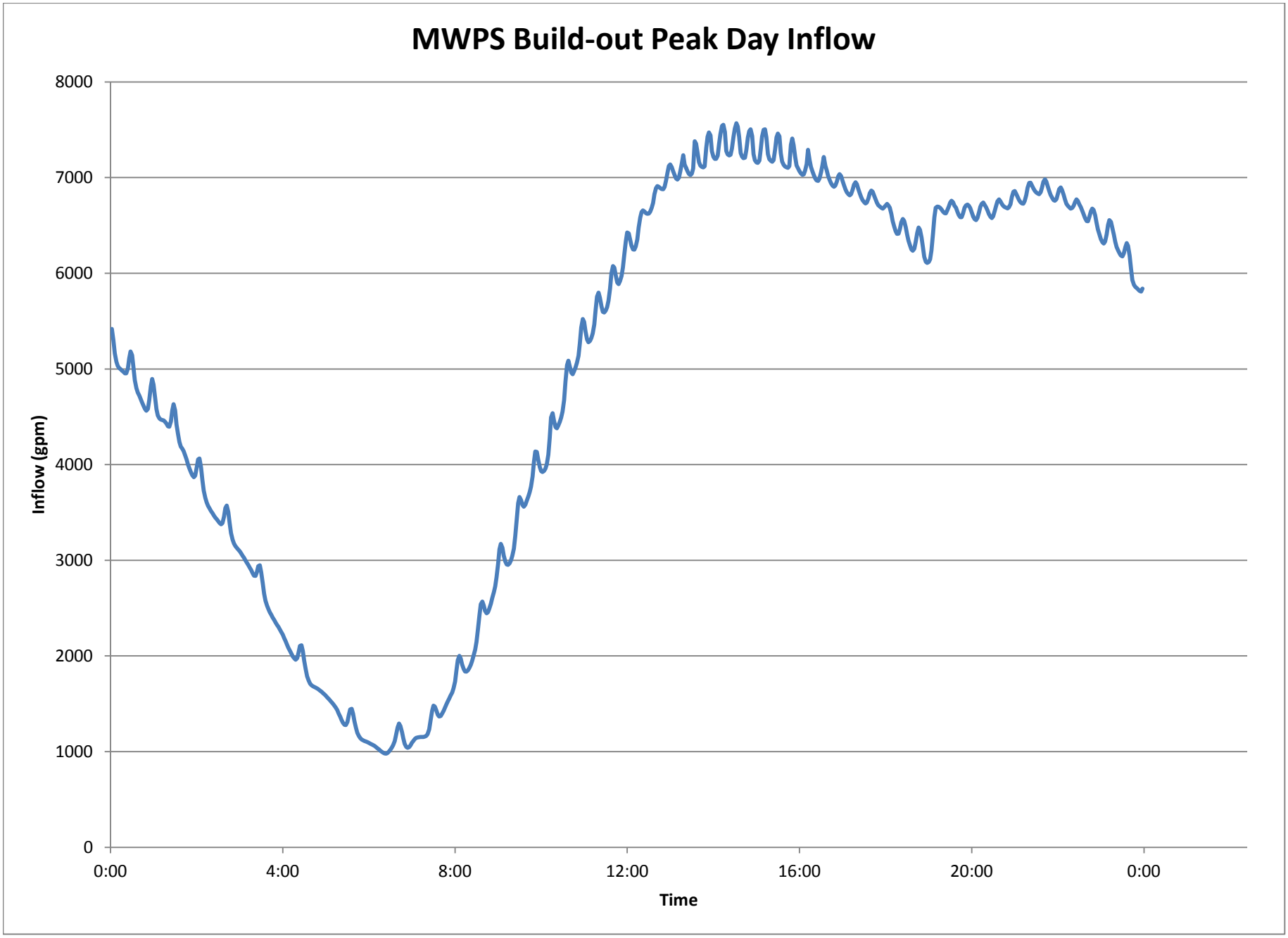

LS-5 Build-out Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

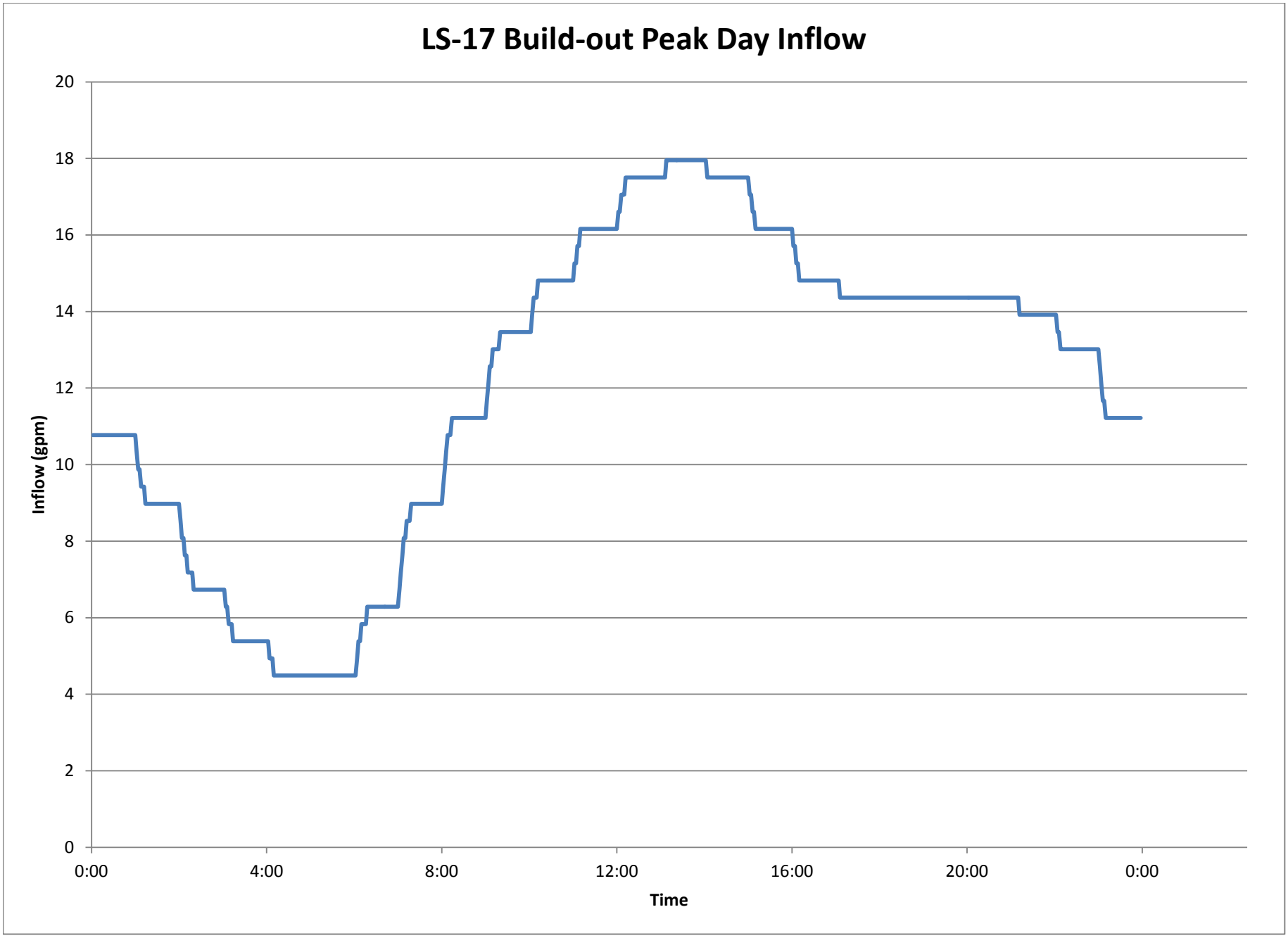

LS-6 Build-out Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

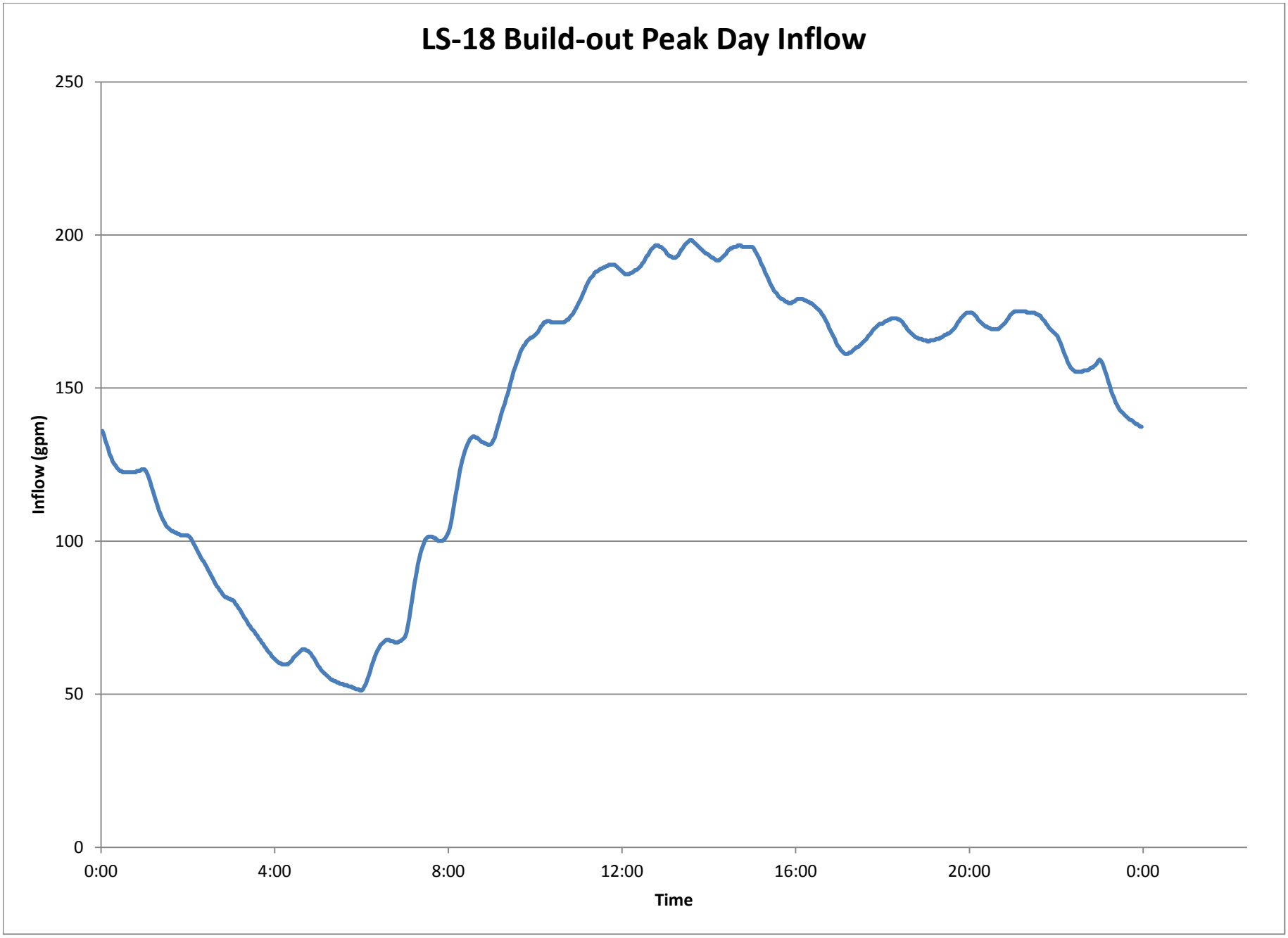

LS-9 Build-out Peak Day Inflow
Inflow (gpm)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

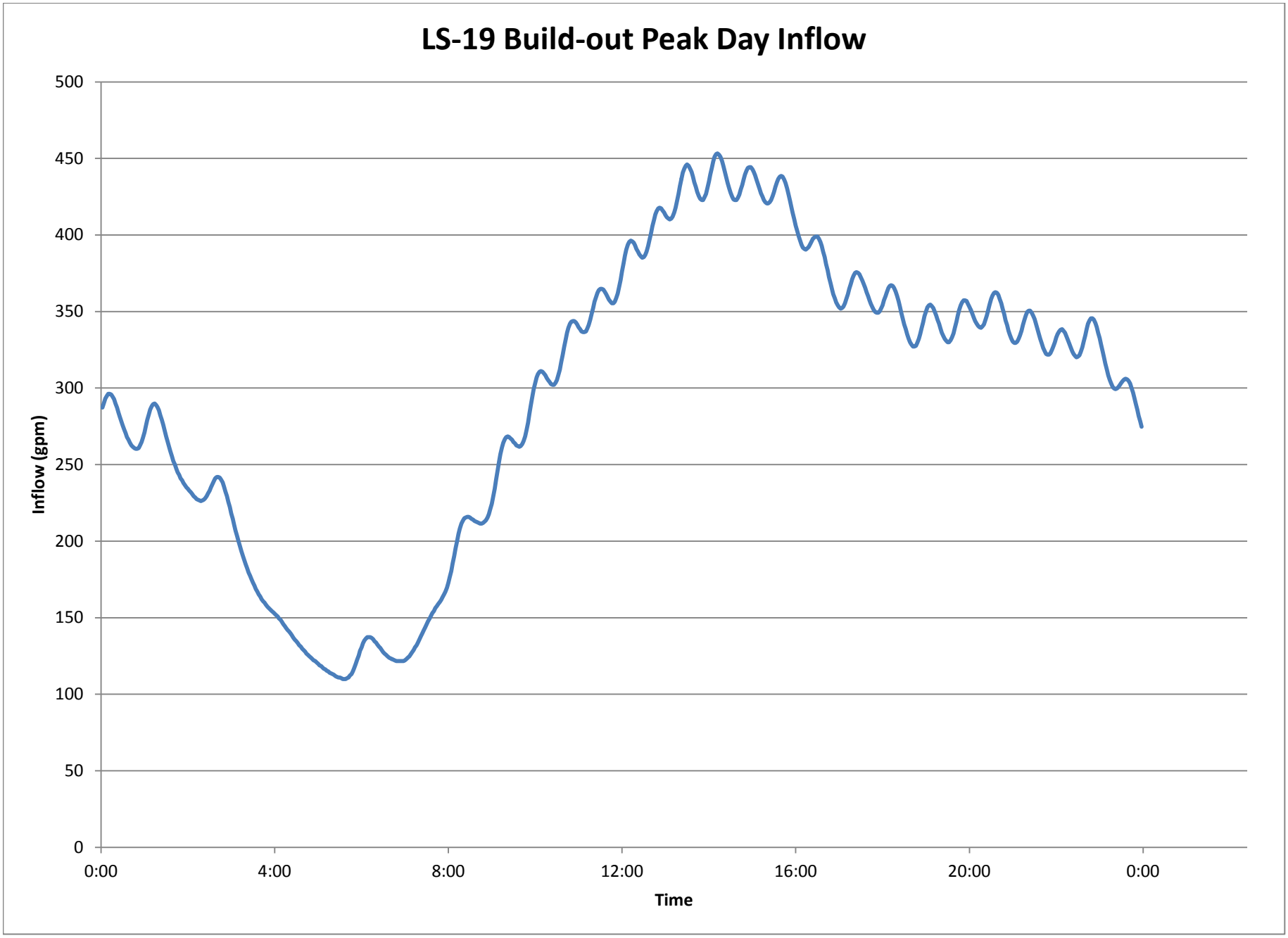

LS-14 Build-out Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

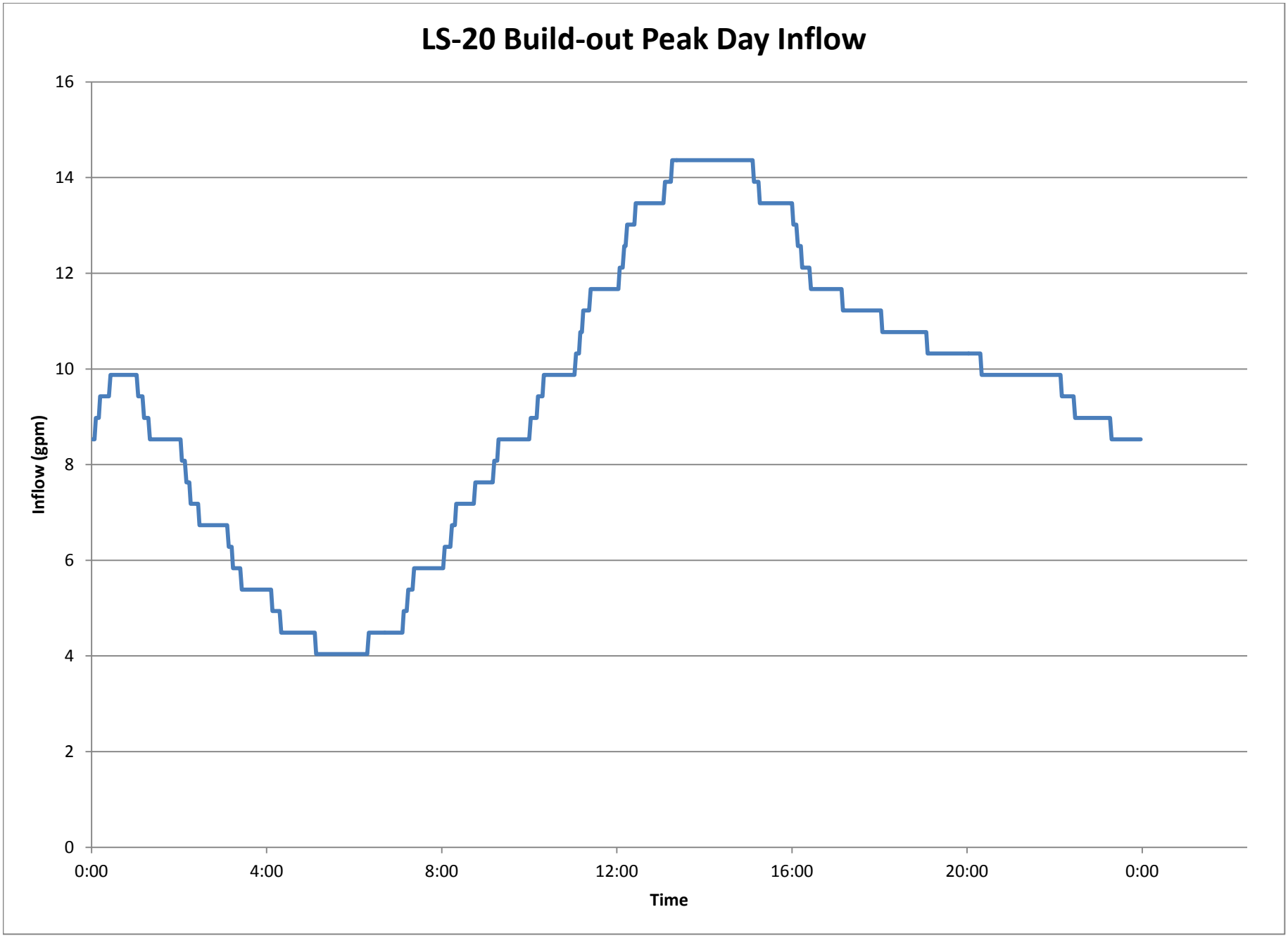

LS-15 Build-out Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

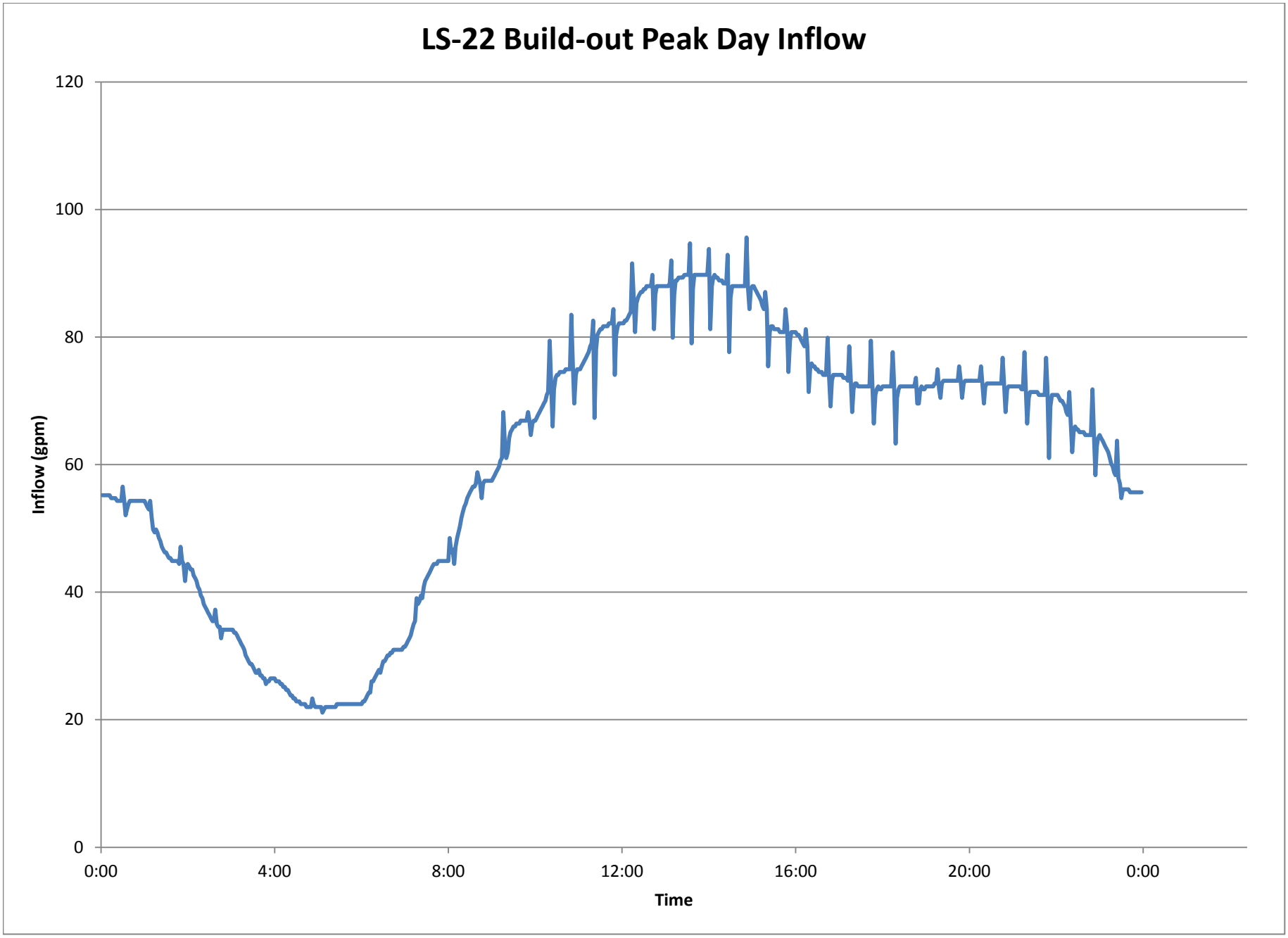

MWPS Build-out Peak Day Inflow
8000
7000
6000
5000
4000
3000
2000
1000
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

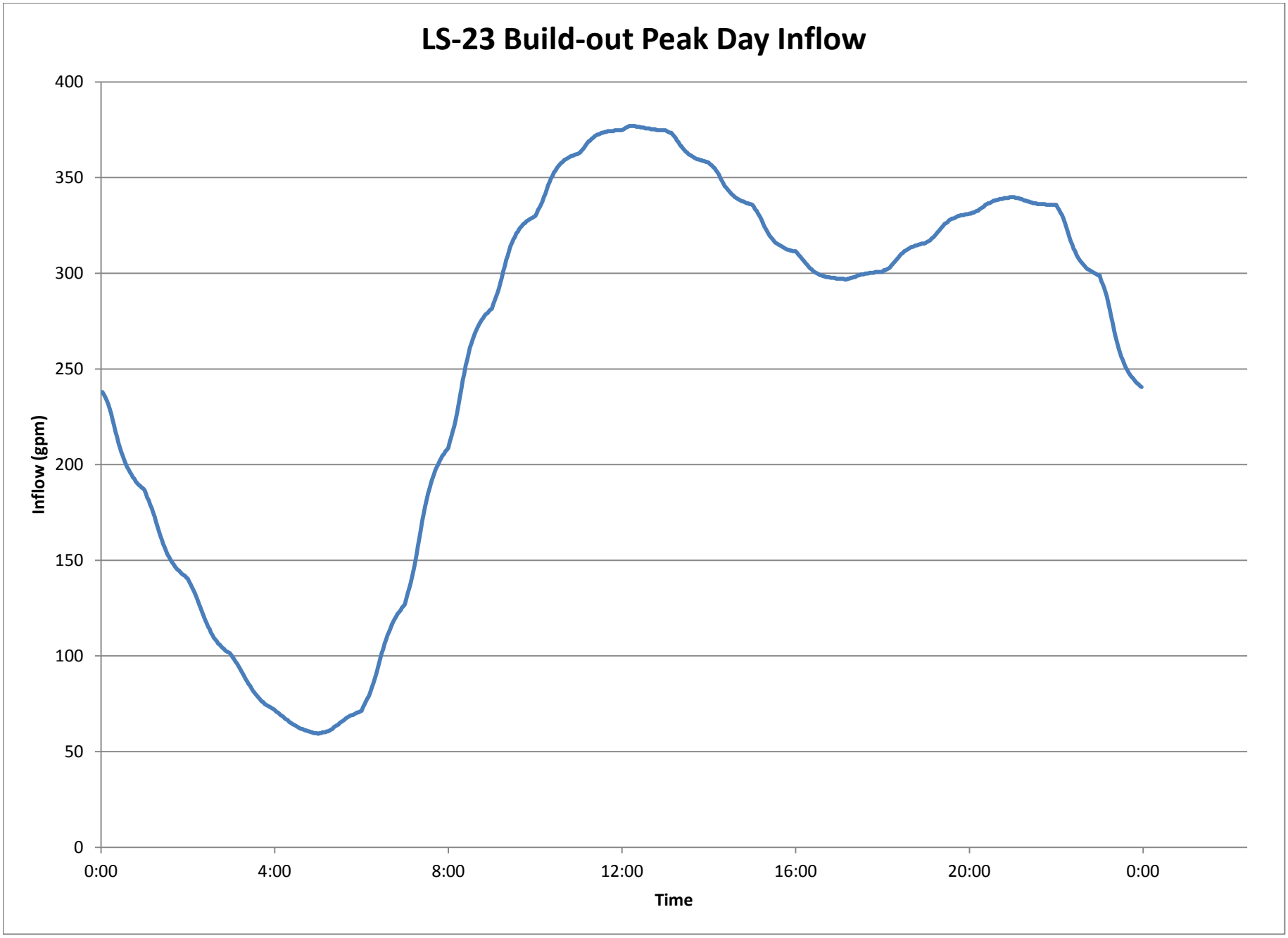

LS-17 Build-out Peak Day Inflow
Inflow (gpm)
20
18
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

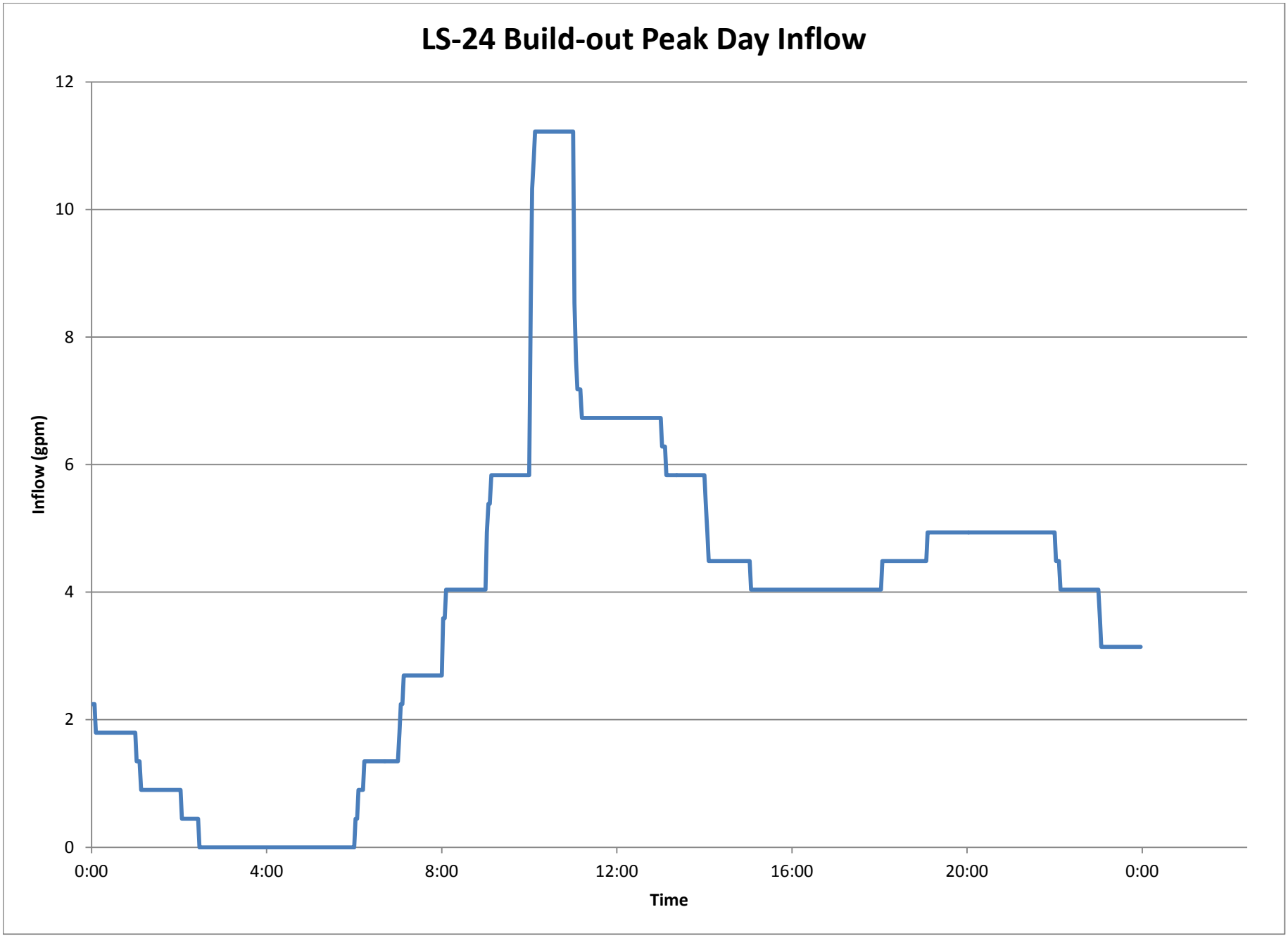

LS-18 Build-out Peak Day Inflow
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

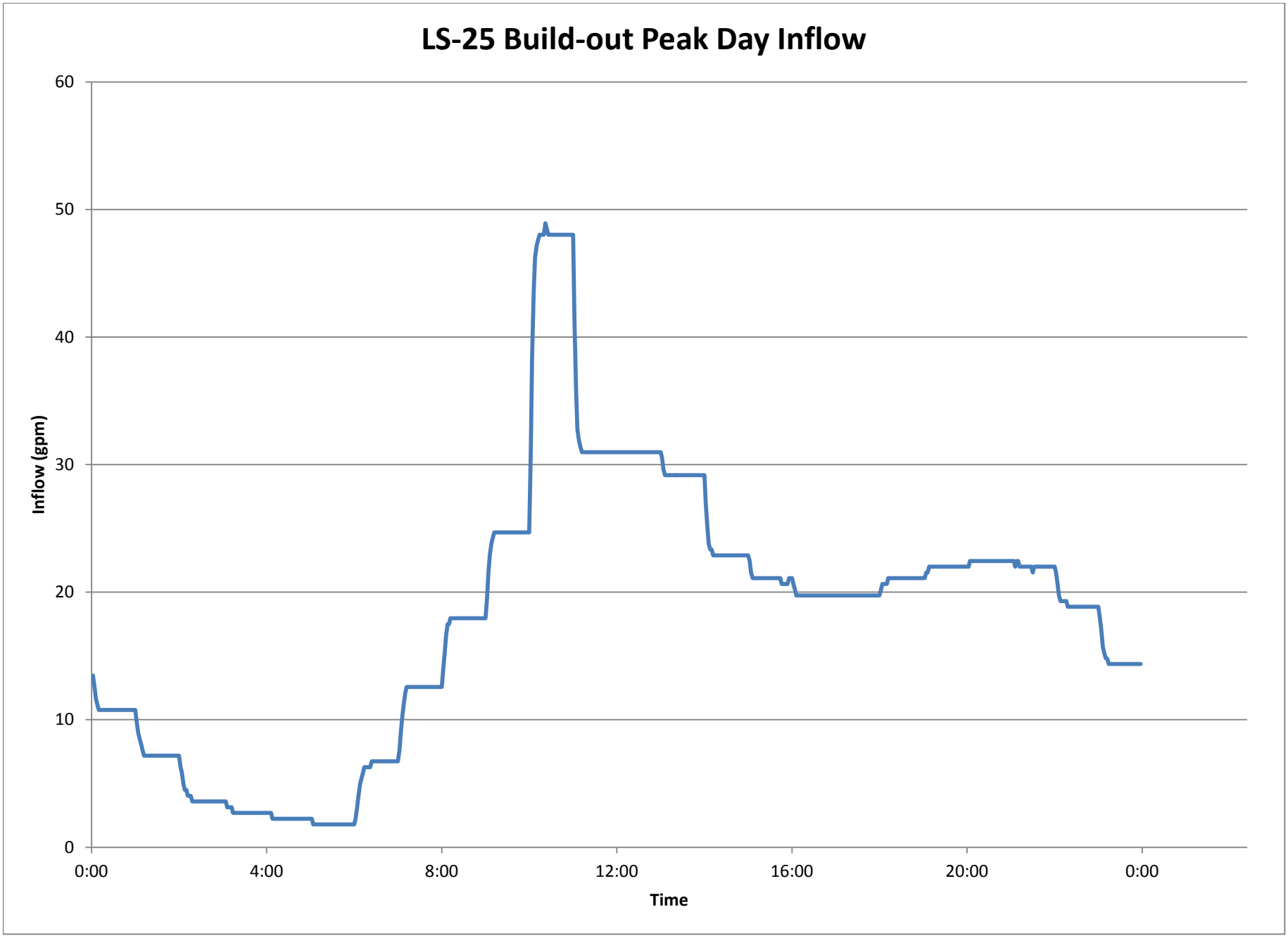

LS-19 Build-out Peak Day Inflow
Inflow (gpm)
500
450
400
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

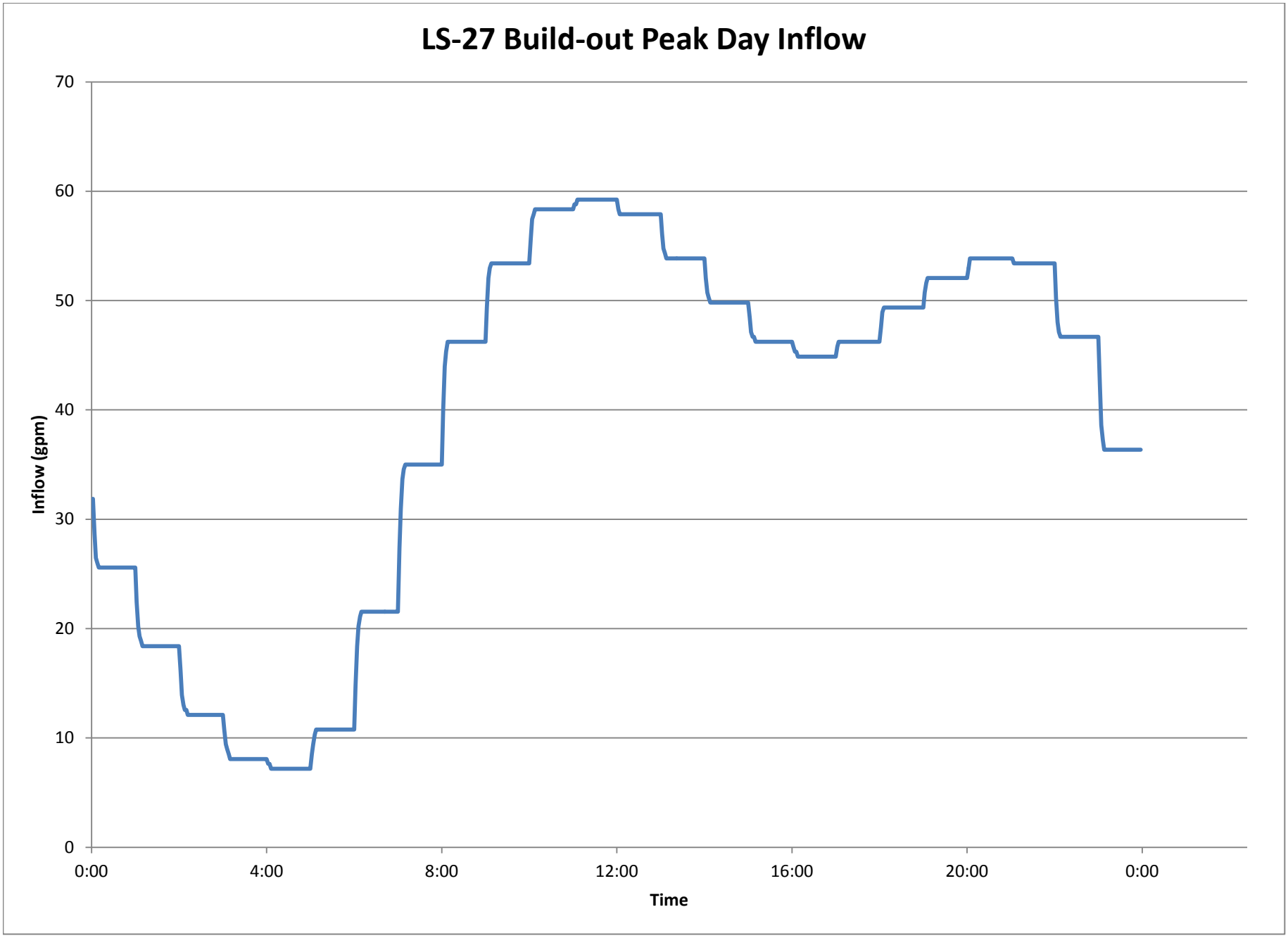

LS-20 Build-out Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

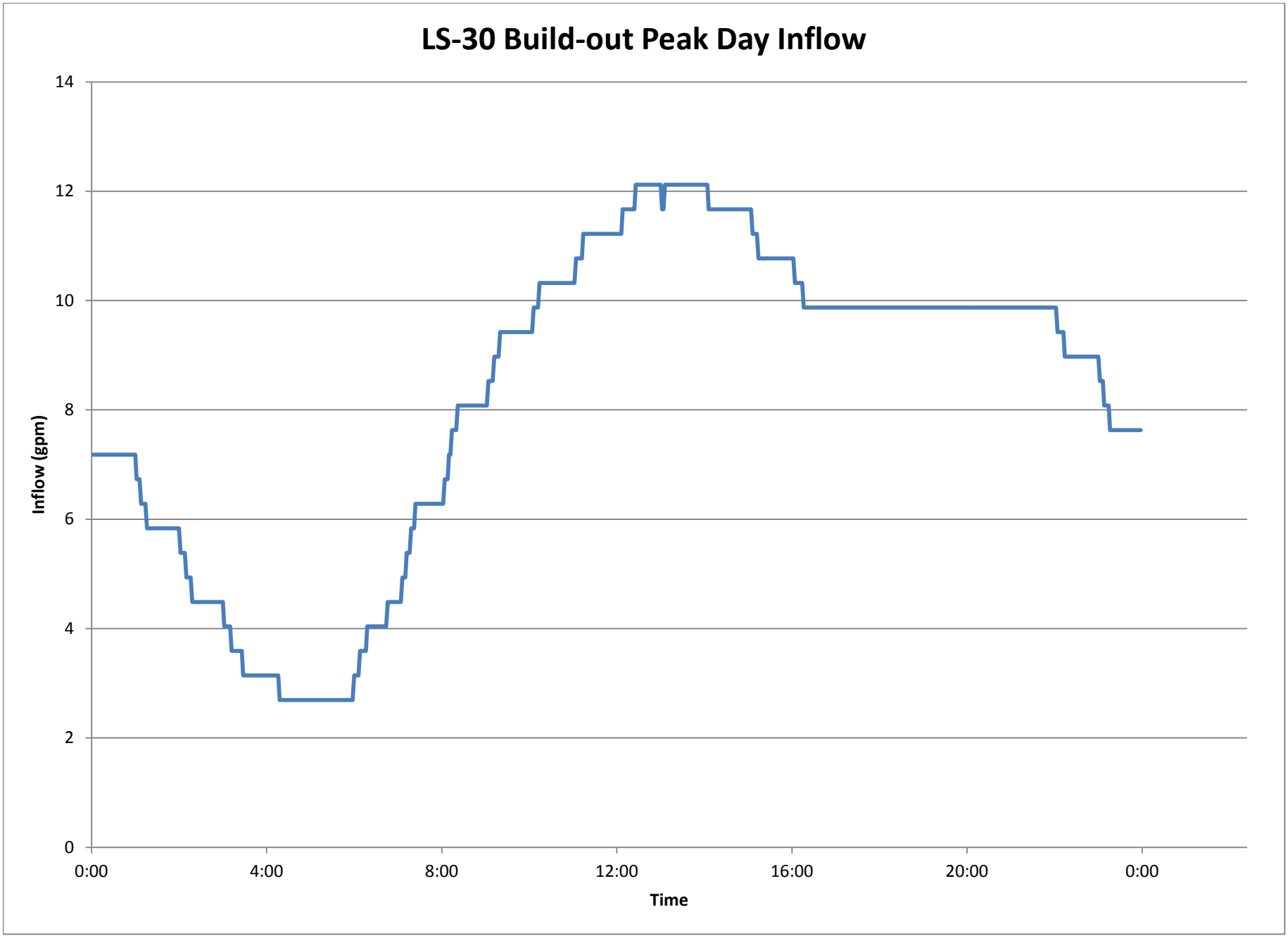

LS-22 Build-out Peak Day Inflow
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

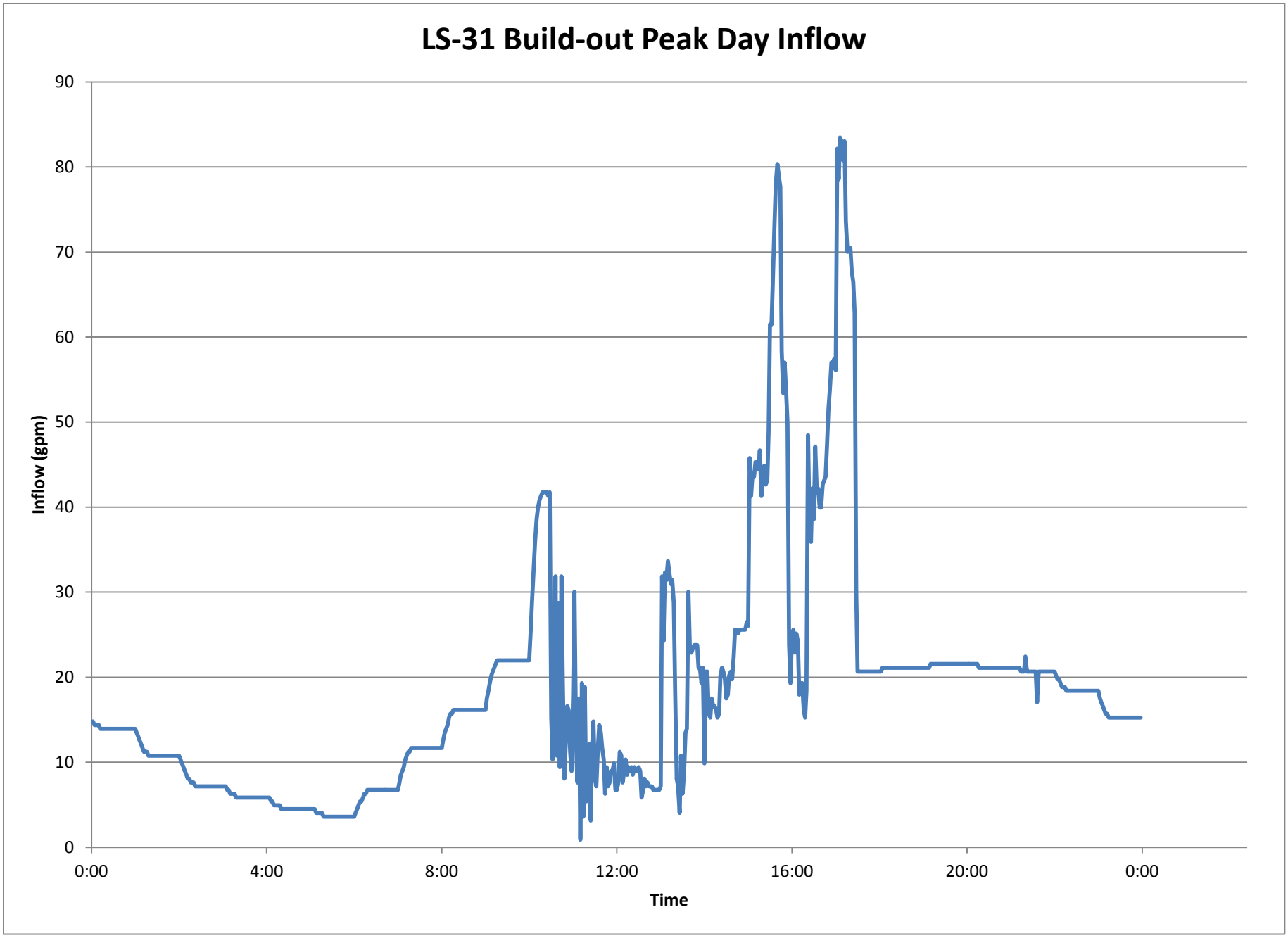

LS-23 Build-out Peak Day Inflow
Inflow (gpm)
400
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

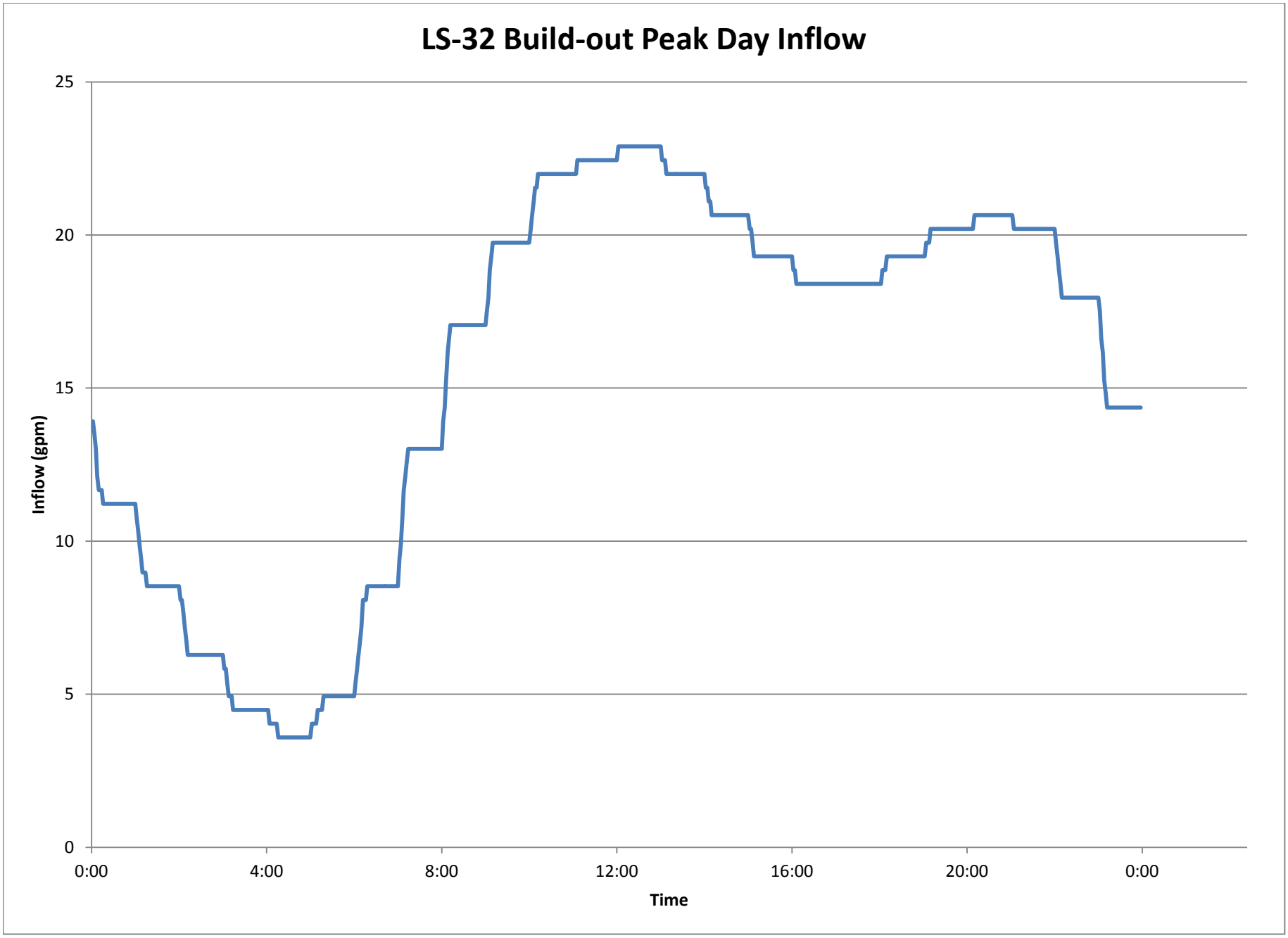

LS-24 Build-out Peak Day Inflow
Inflow (gpm)
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

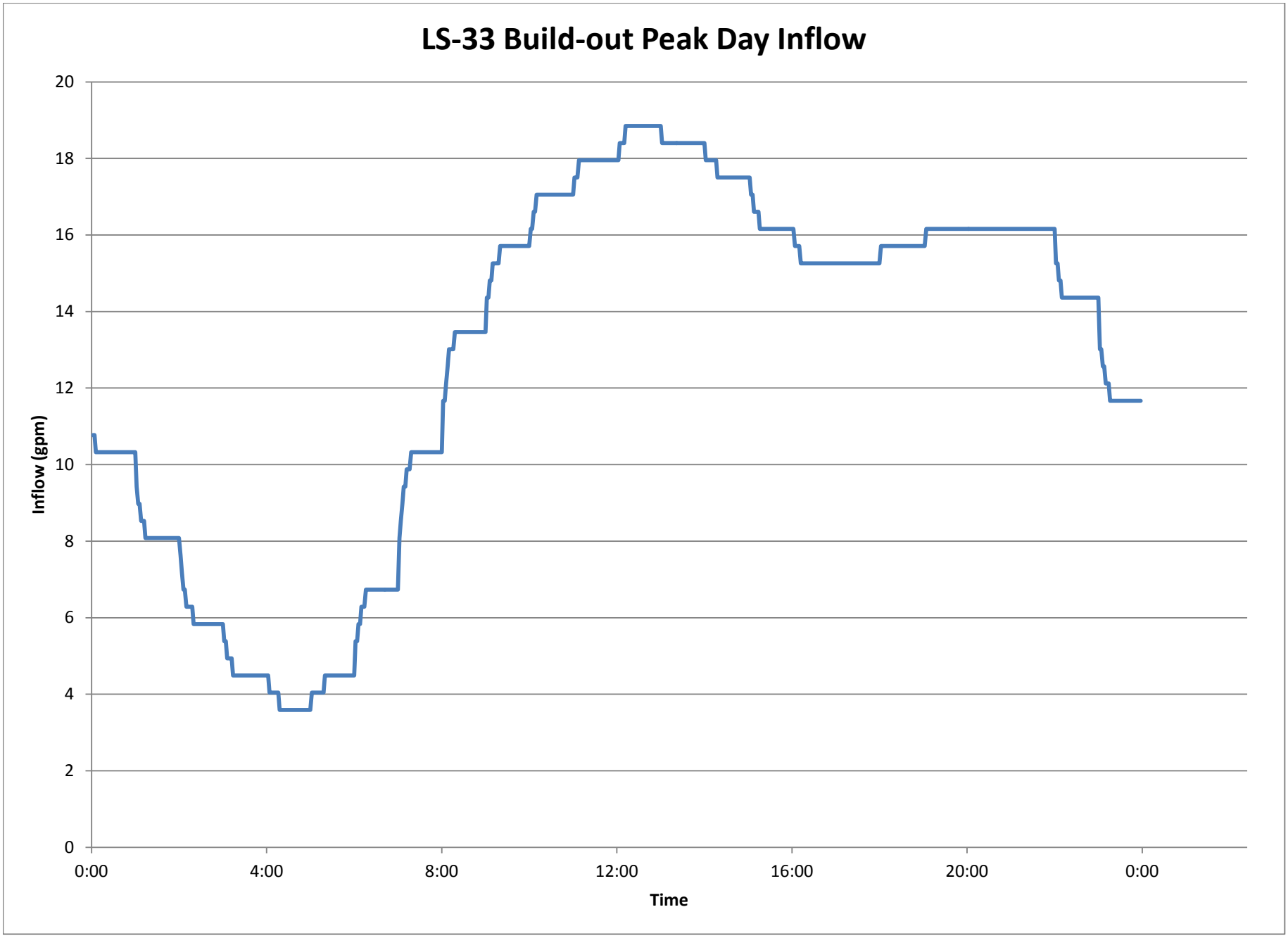

LS-25 Build-out Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

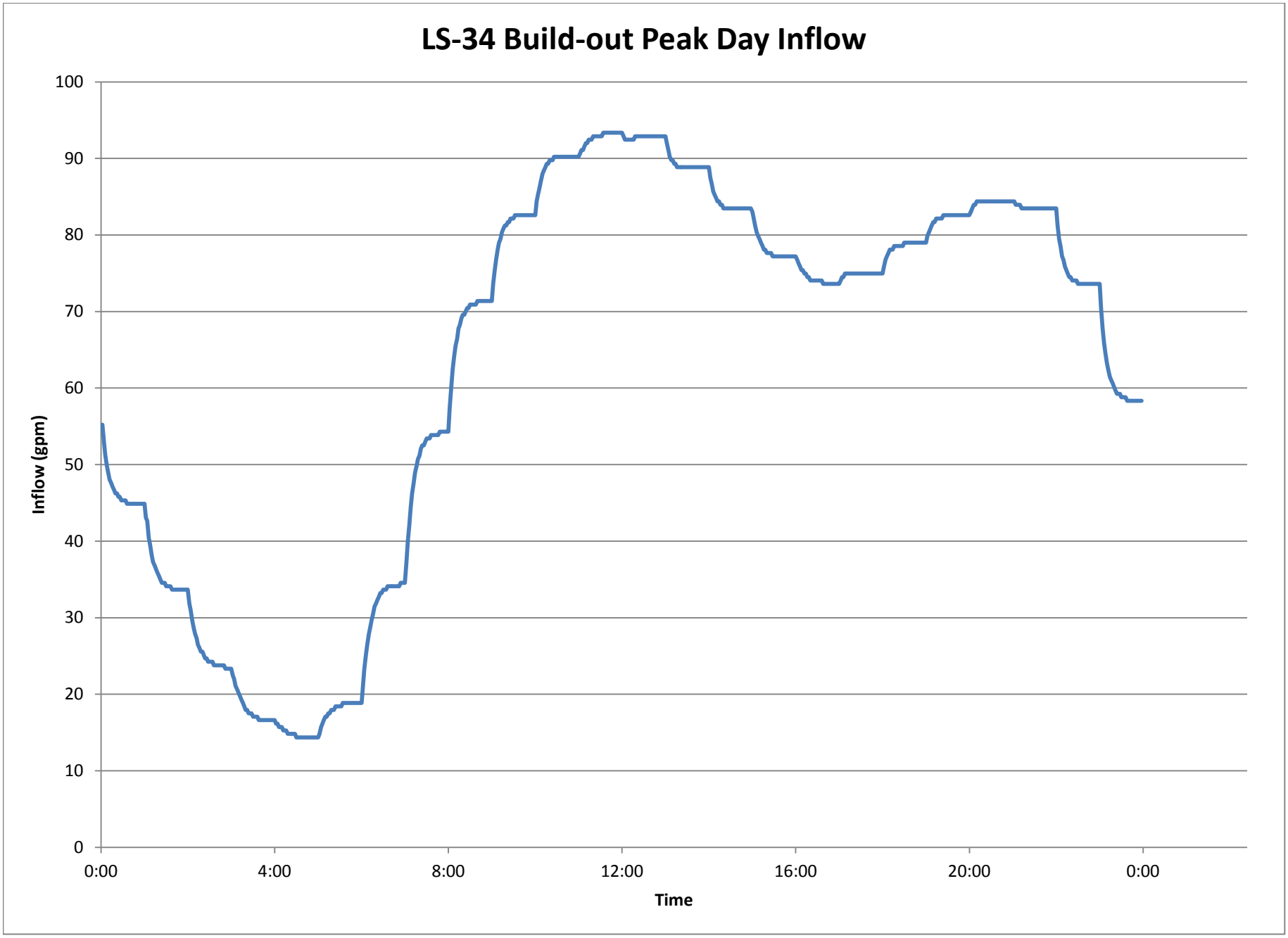

LS-27 Build-out Peak Day Inflow
Inflow (gpm)
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

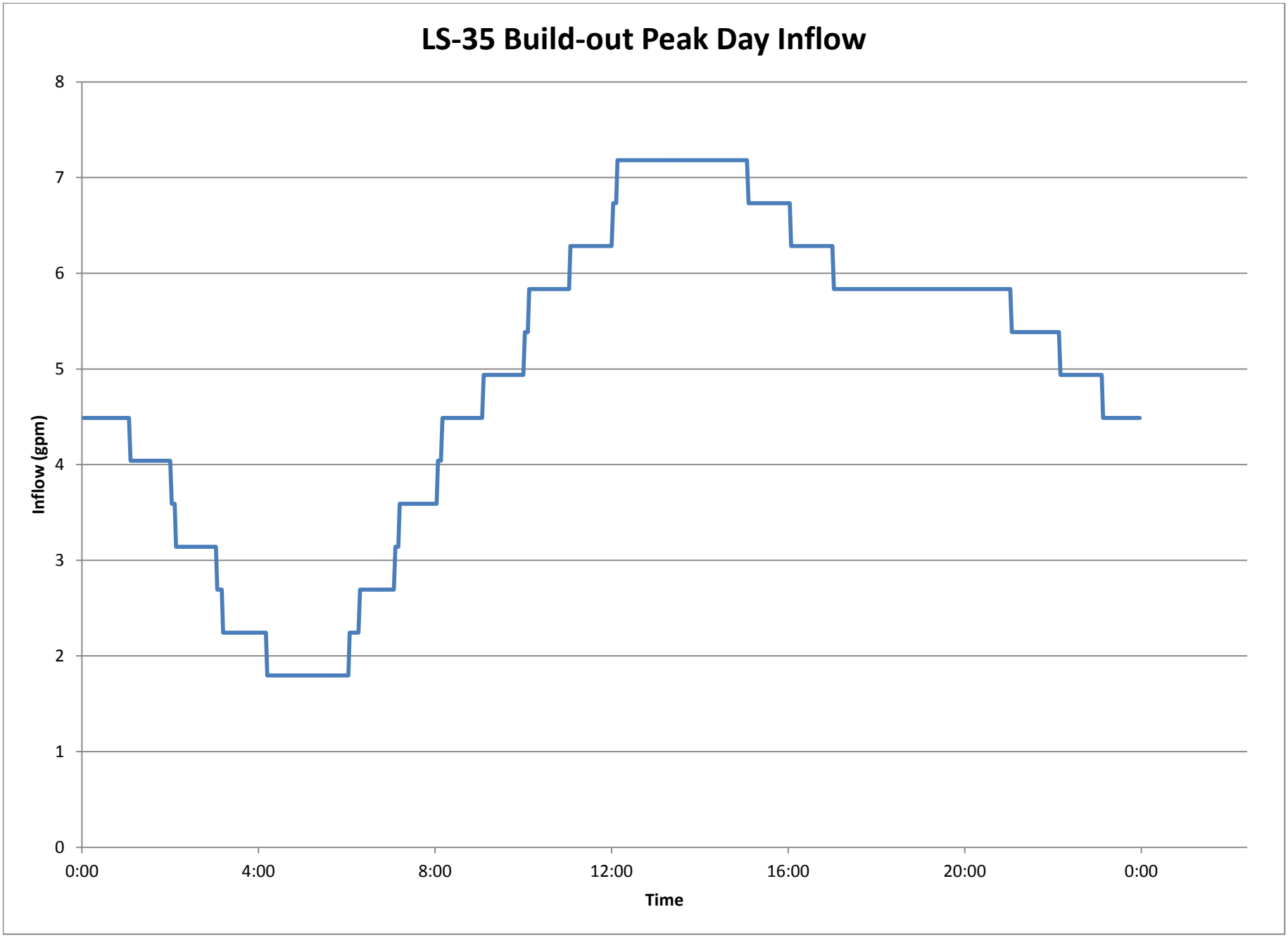

LS-30 Build-out Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

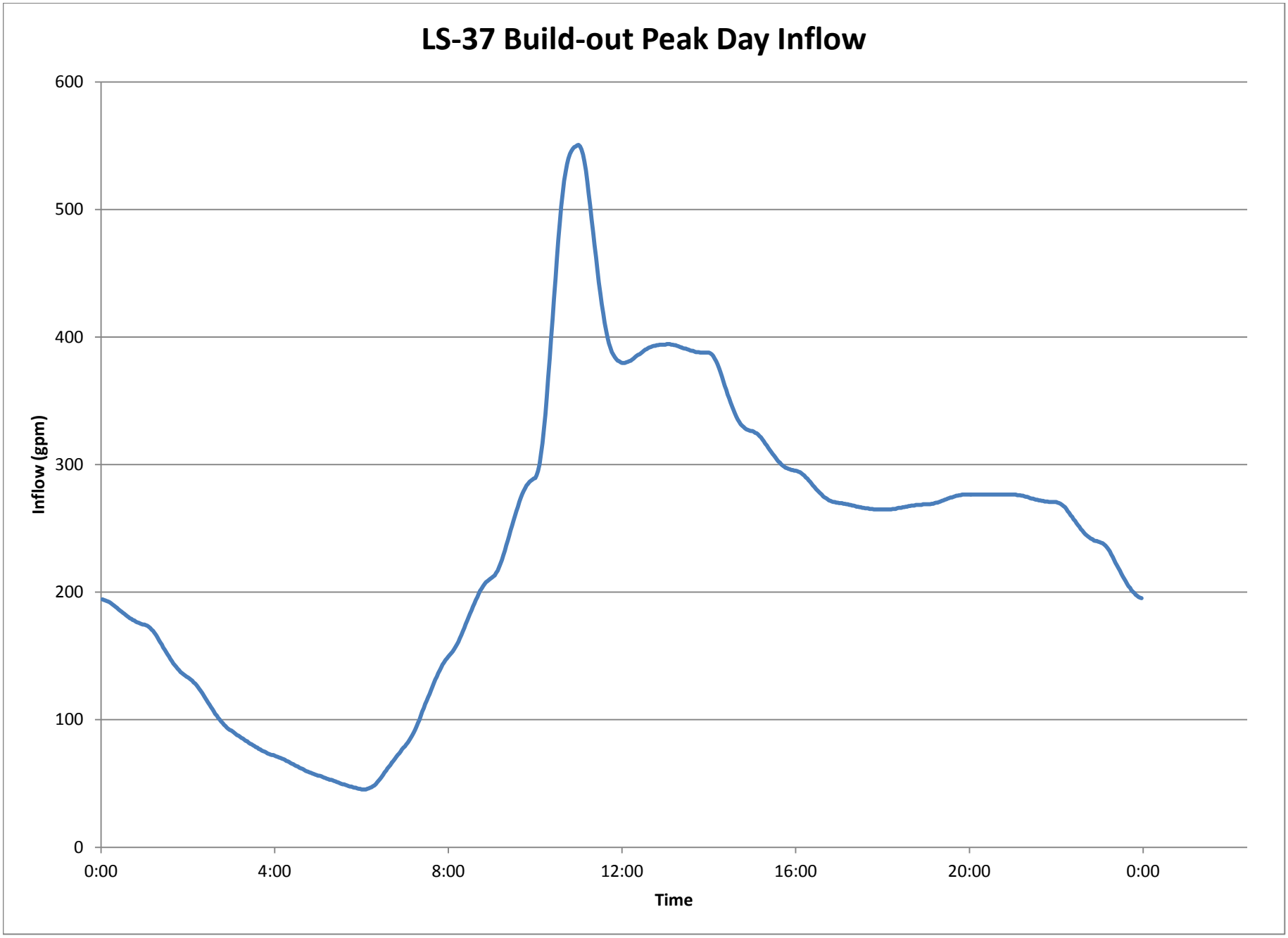

LS-31 Build-out Peak Day Inflow
Inflow (gpm)
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

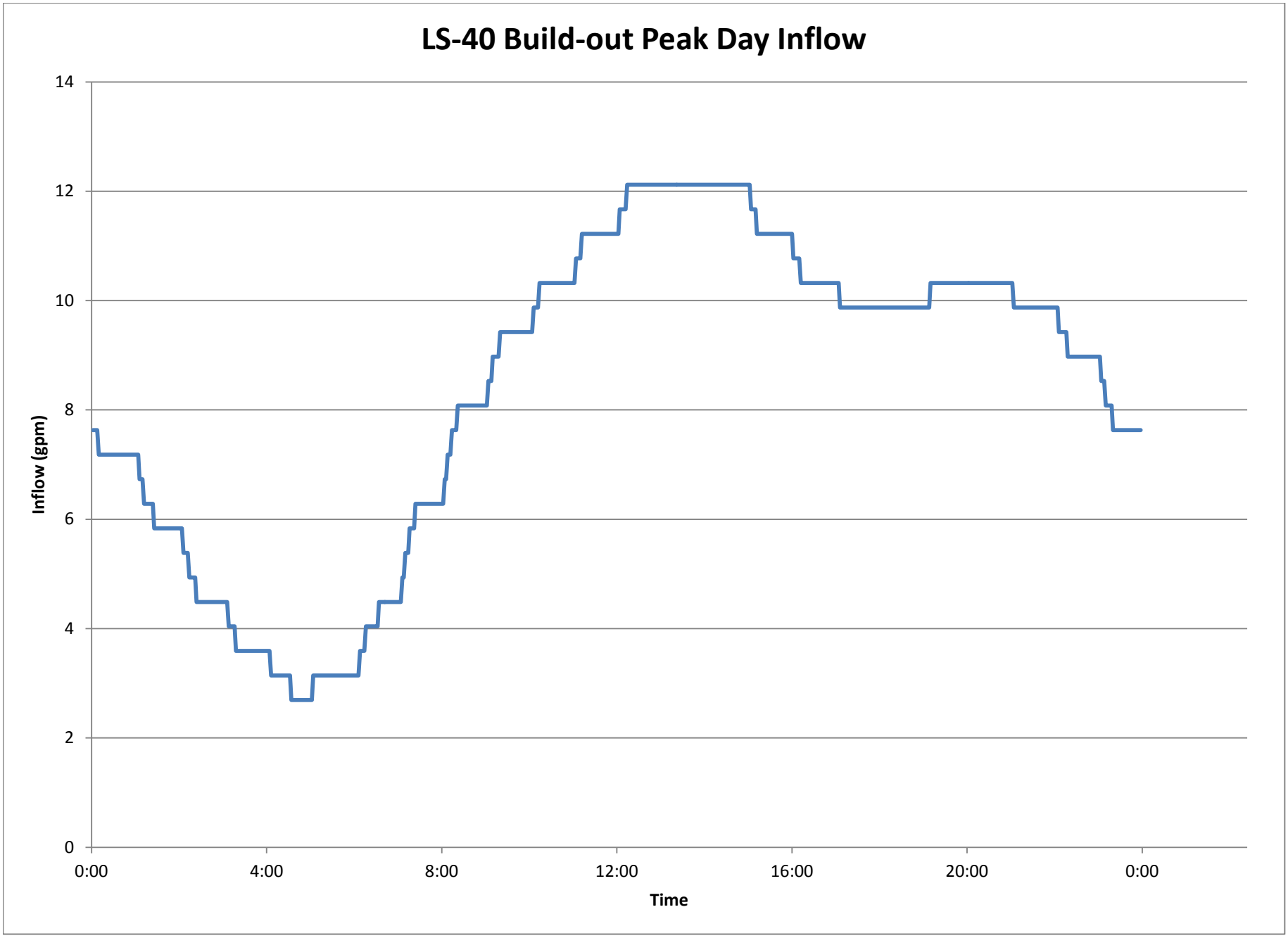

LS-32 Build-out Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

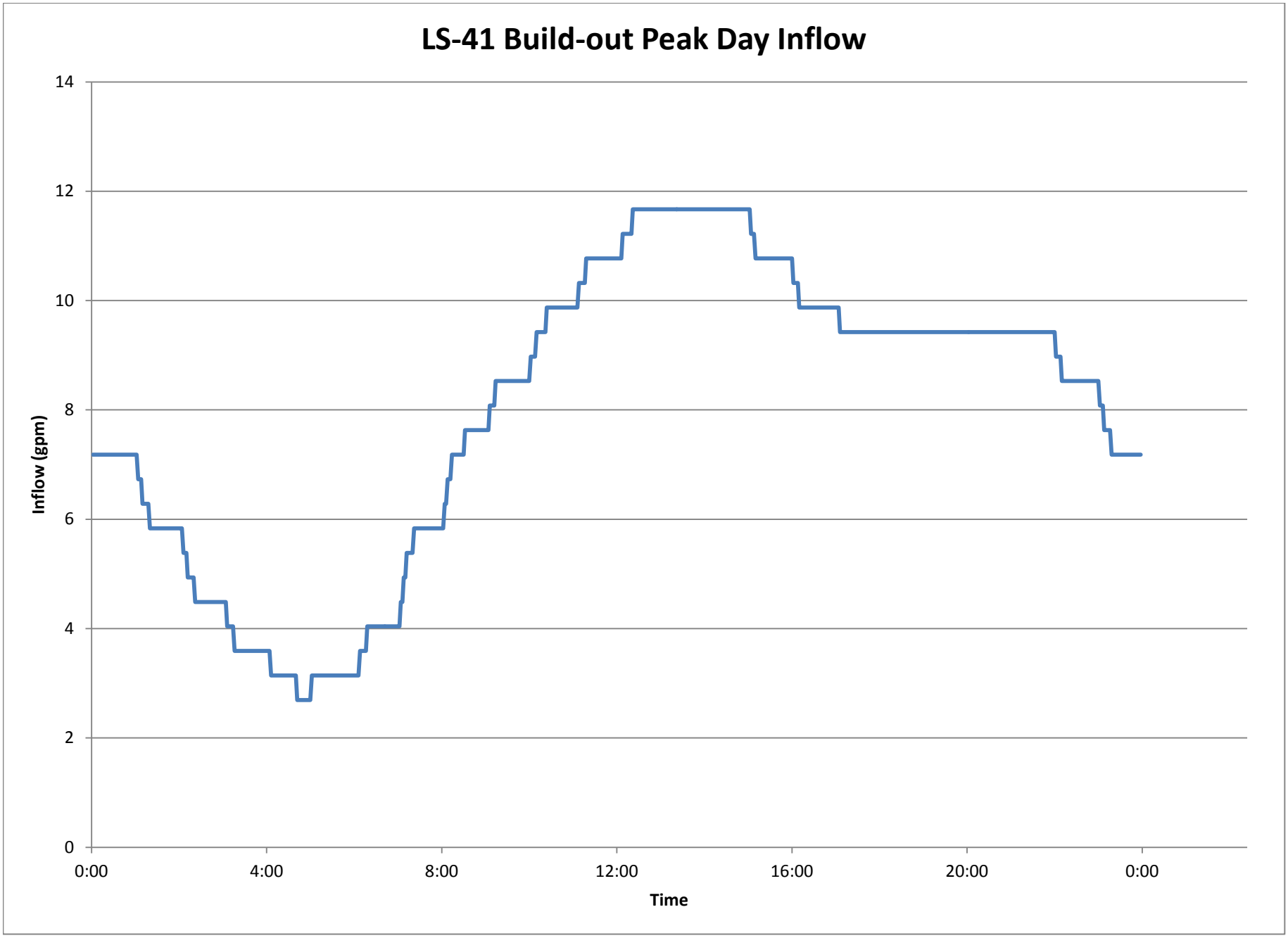

LS-33 Build-out Peak Day Inflow
Inflow (gpm)
20
18
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

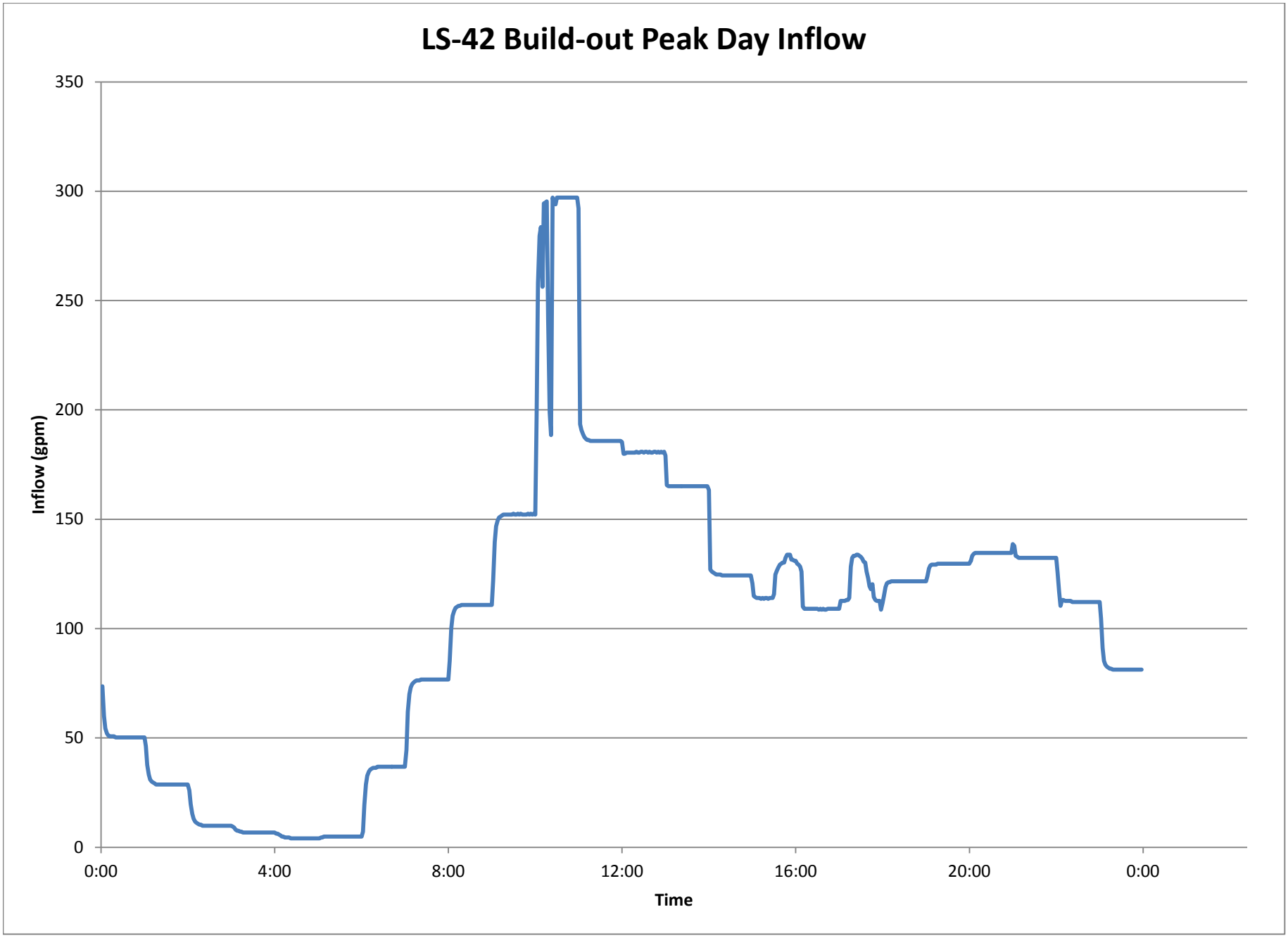

LS-34 Build-out Peak Day Inflow
Inflow (gpm)
100
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

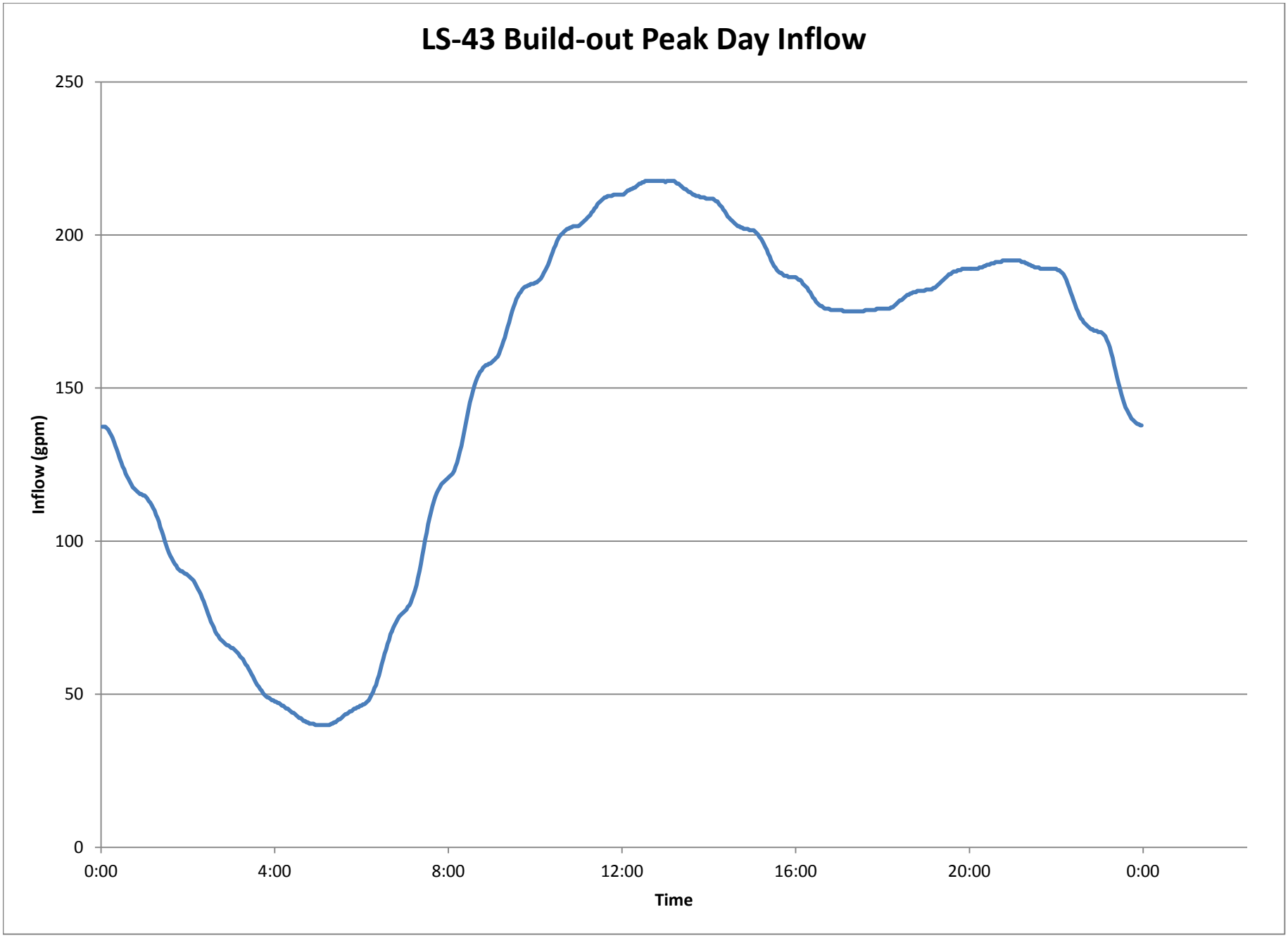

LS-35 Build-out Peak Day Inflow
Inflow (gpm)
8
7
6
5
4
3
2
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

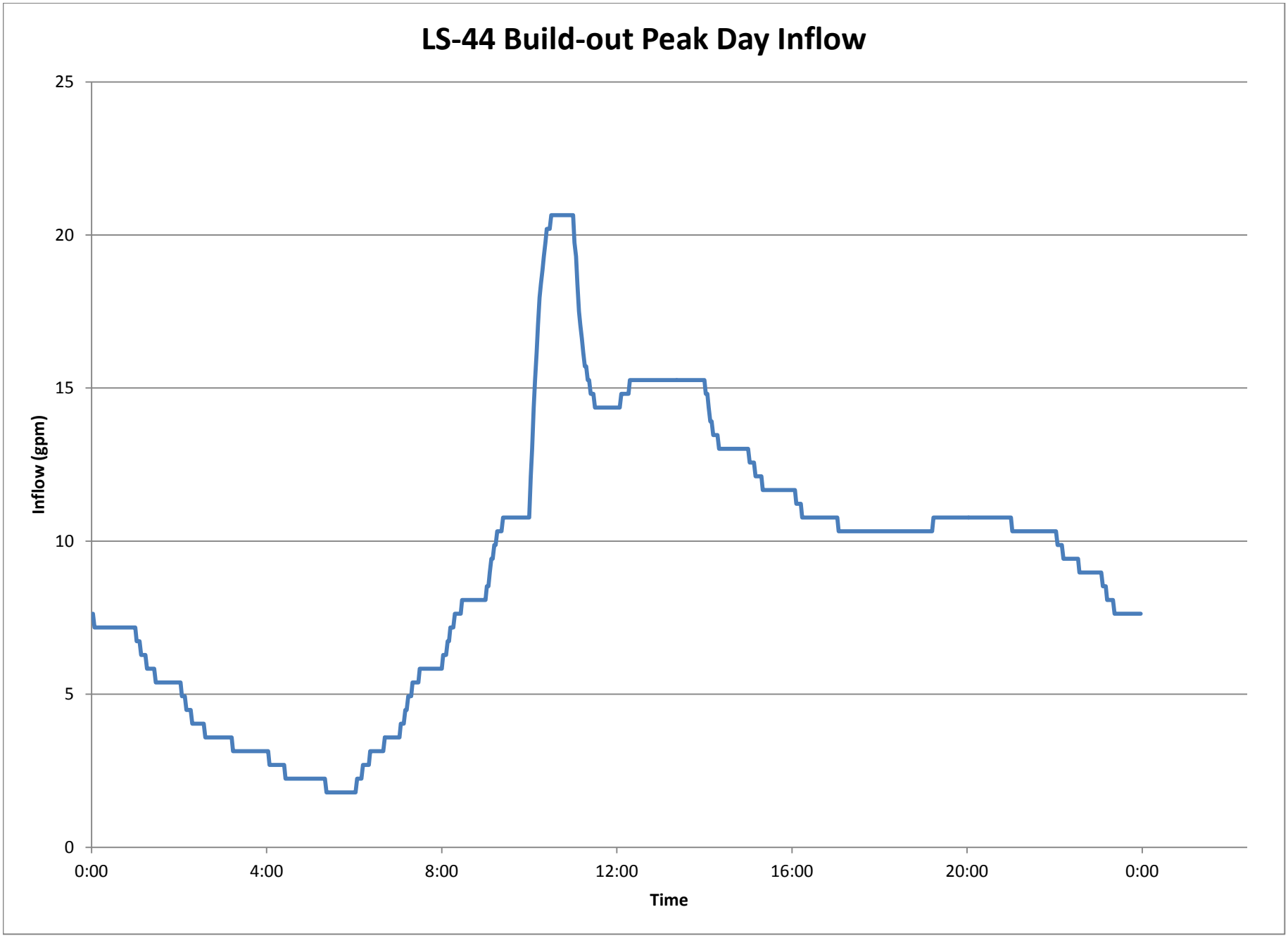

LS-37 Build-out Peak Day Inflow
Inflow (gpm)
600
500
400
300
200
100
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

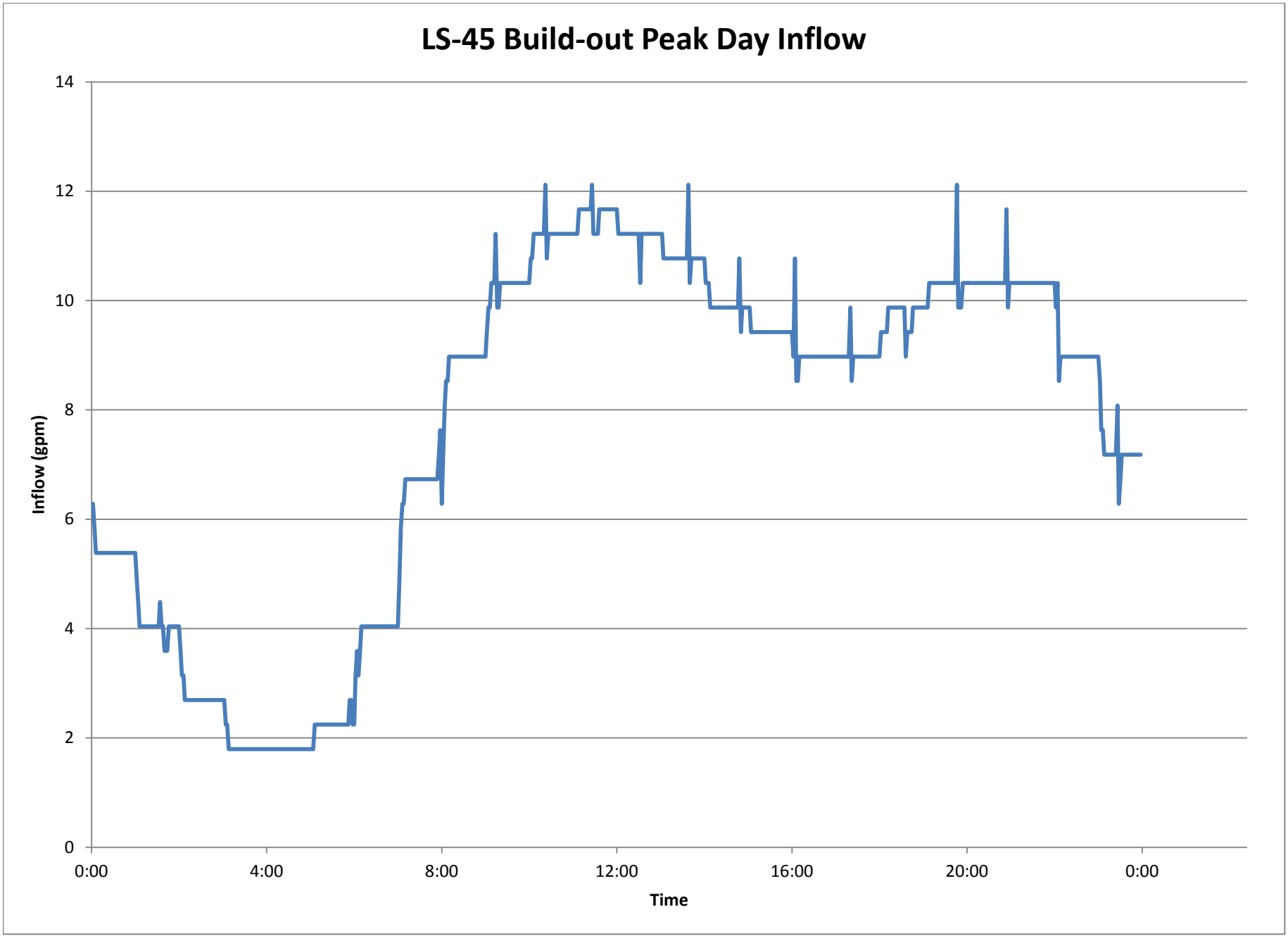

LS-40 Build-out Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

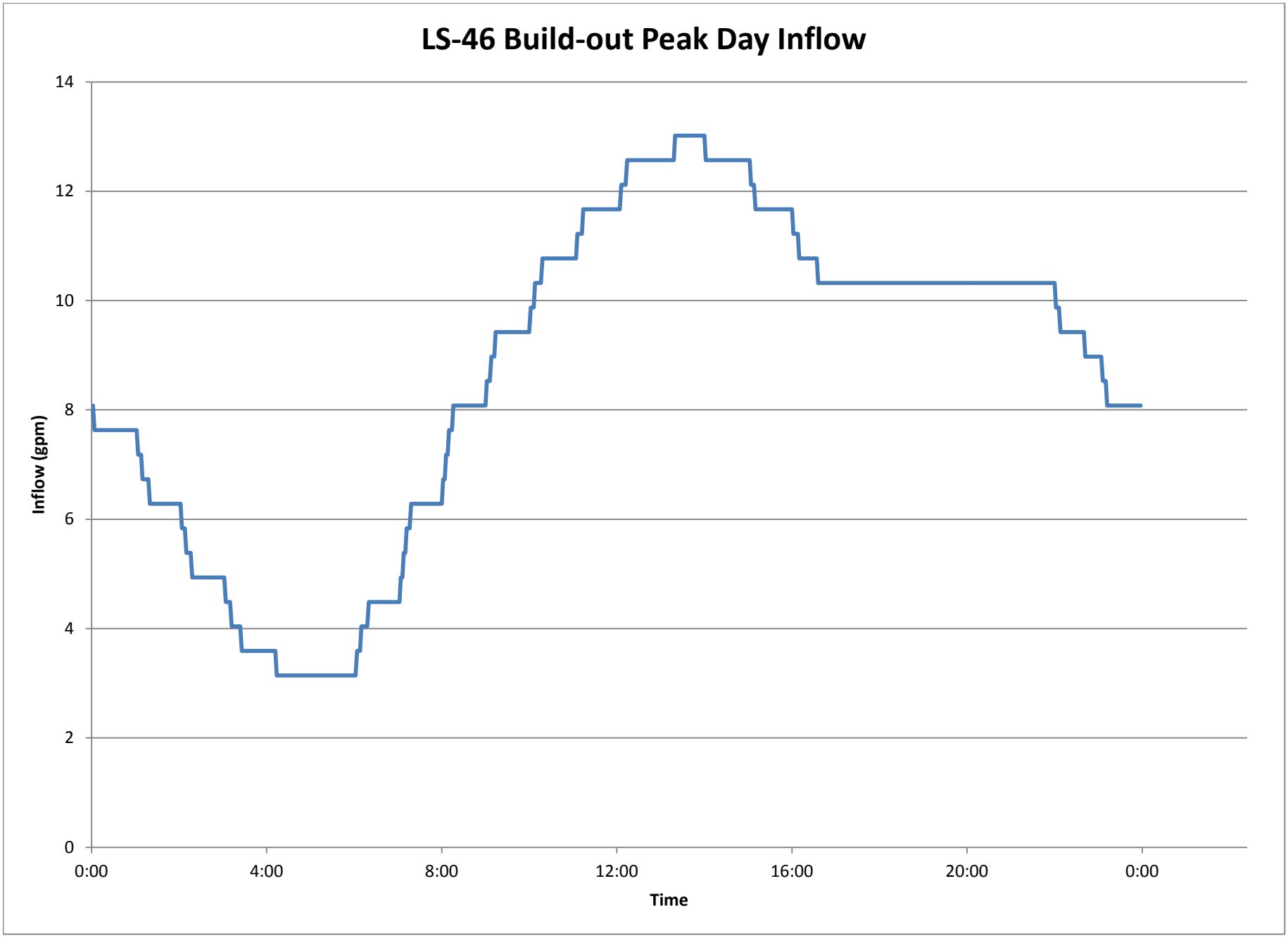

LS-41 Build-out Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

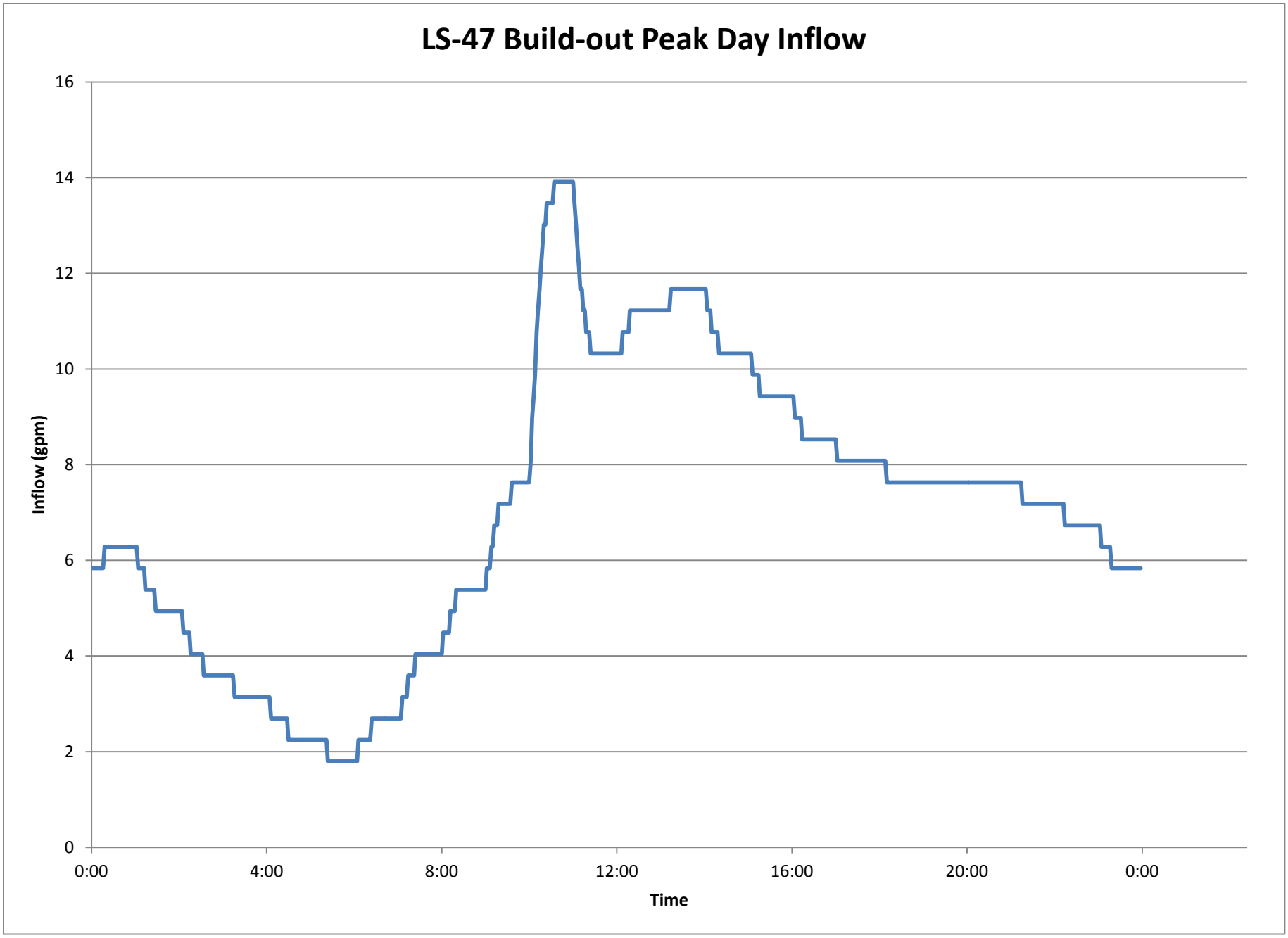

LS-42 Build-out Peak Day Inflow
Inflow (gpm)
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

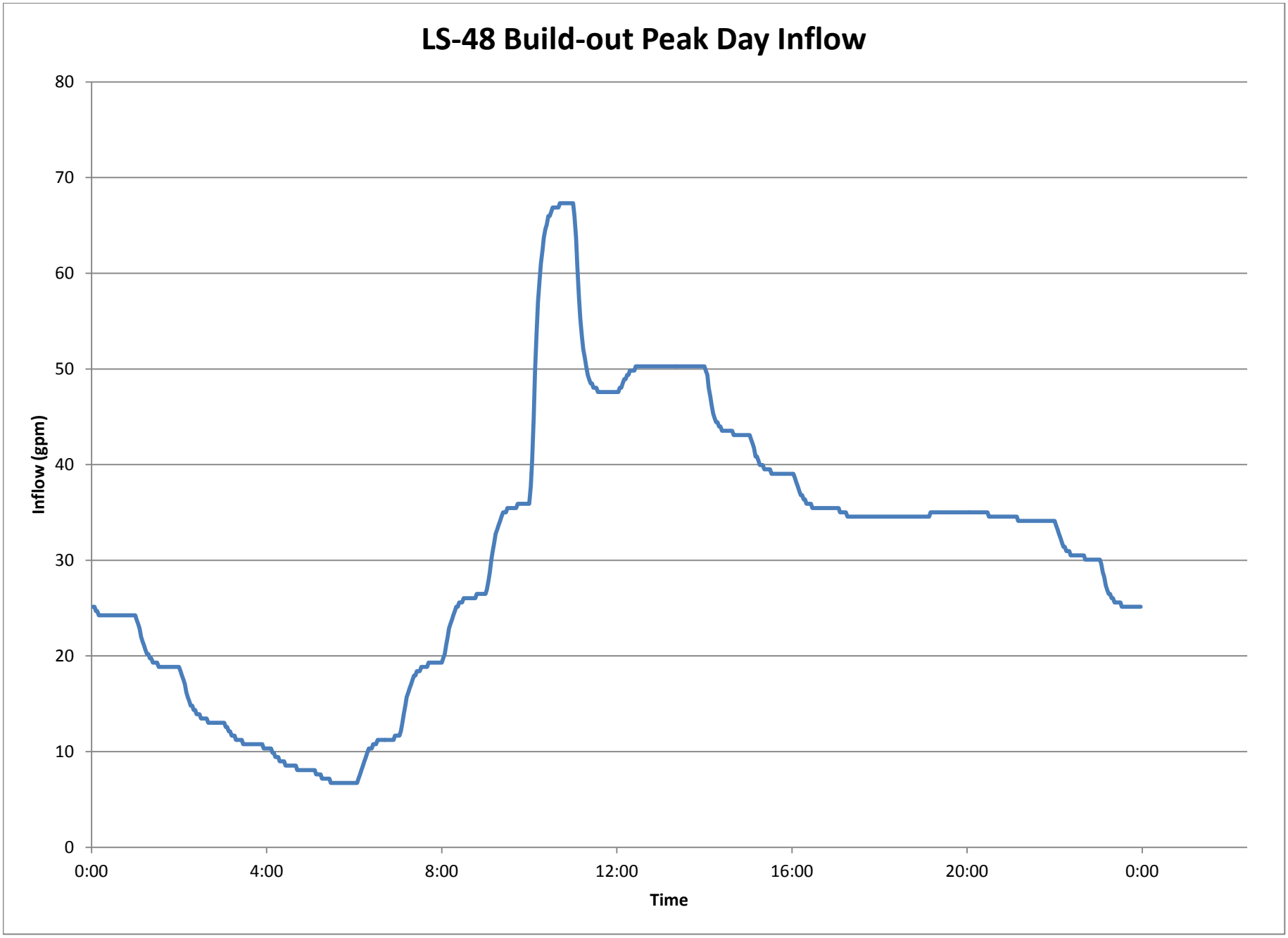

LS-43 Build-out Peak Day Inflow
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

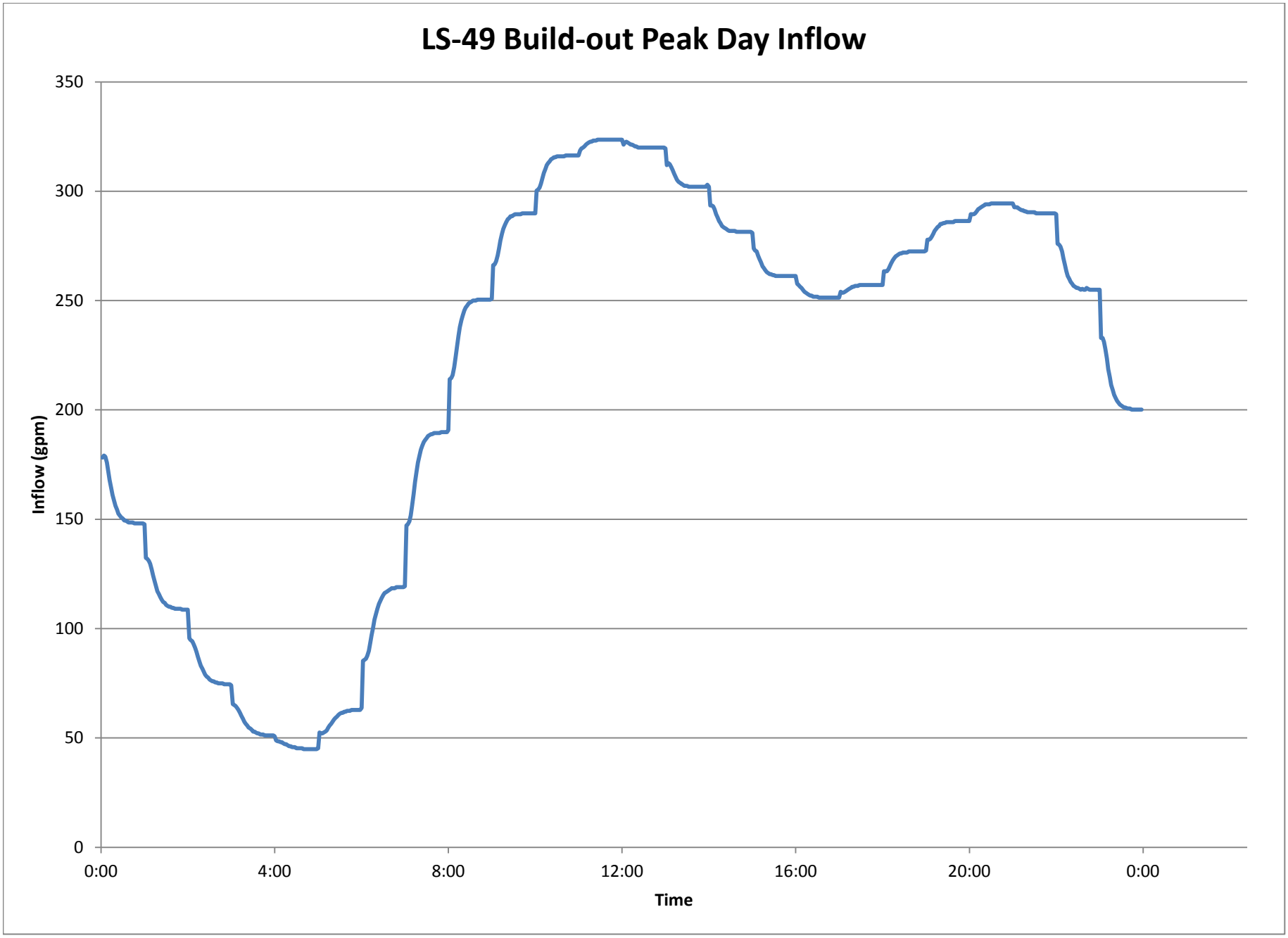

LS-44 Build-out Peak Day Inflow
Inflow (gpm)
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

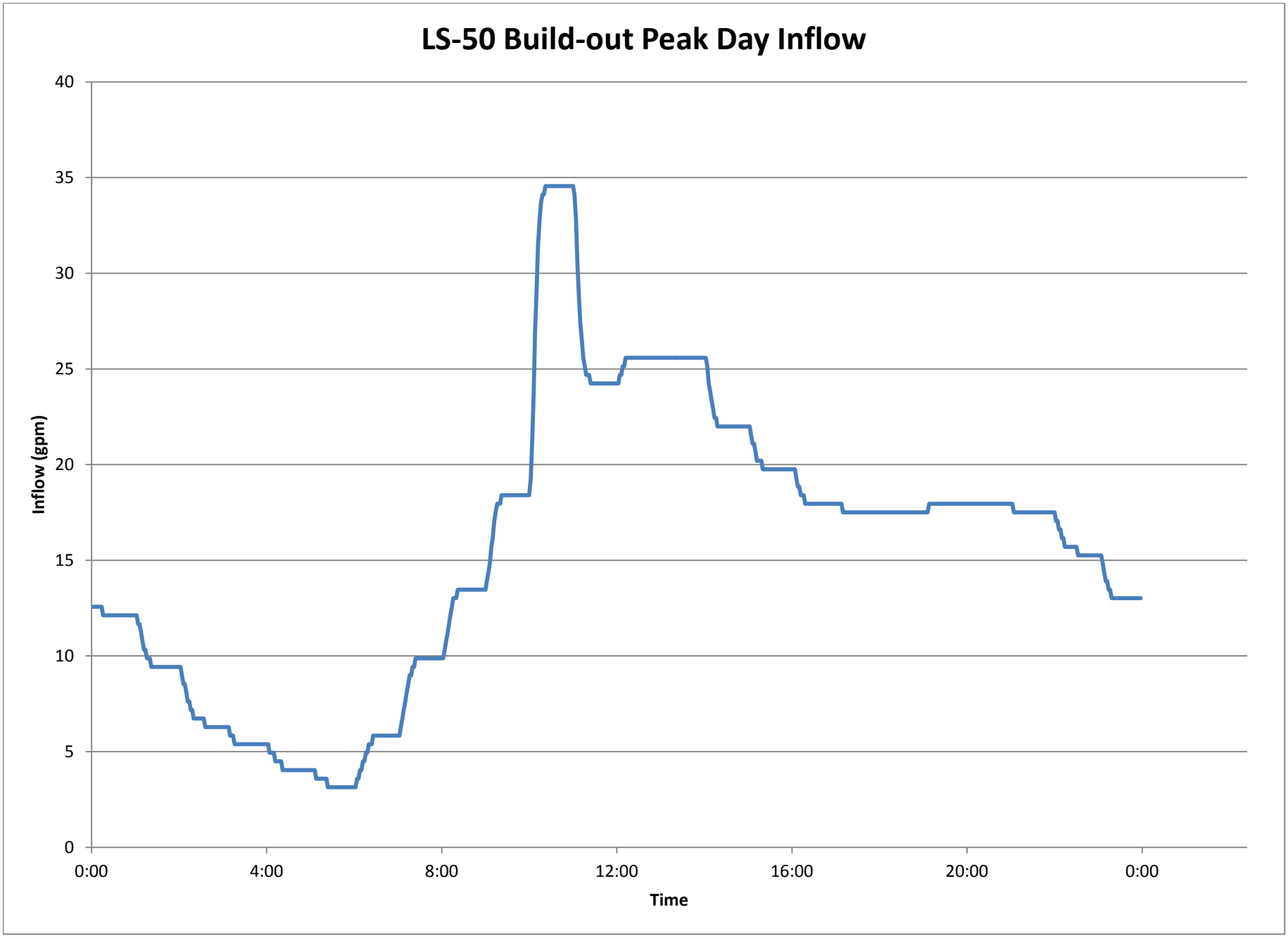

LS-45 Build-out Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

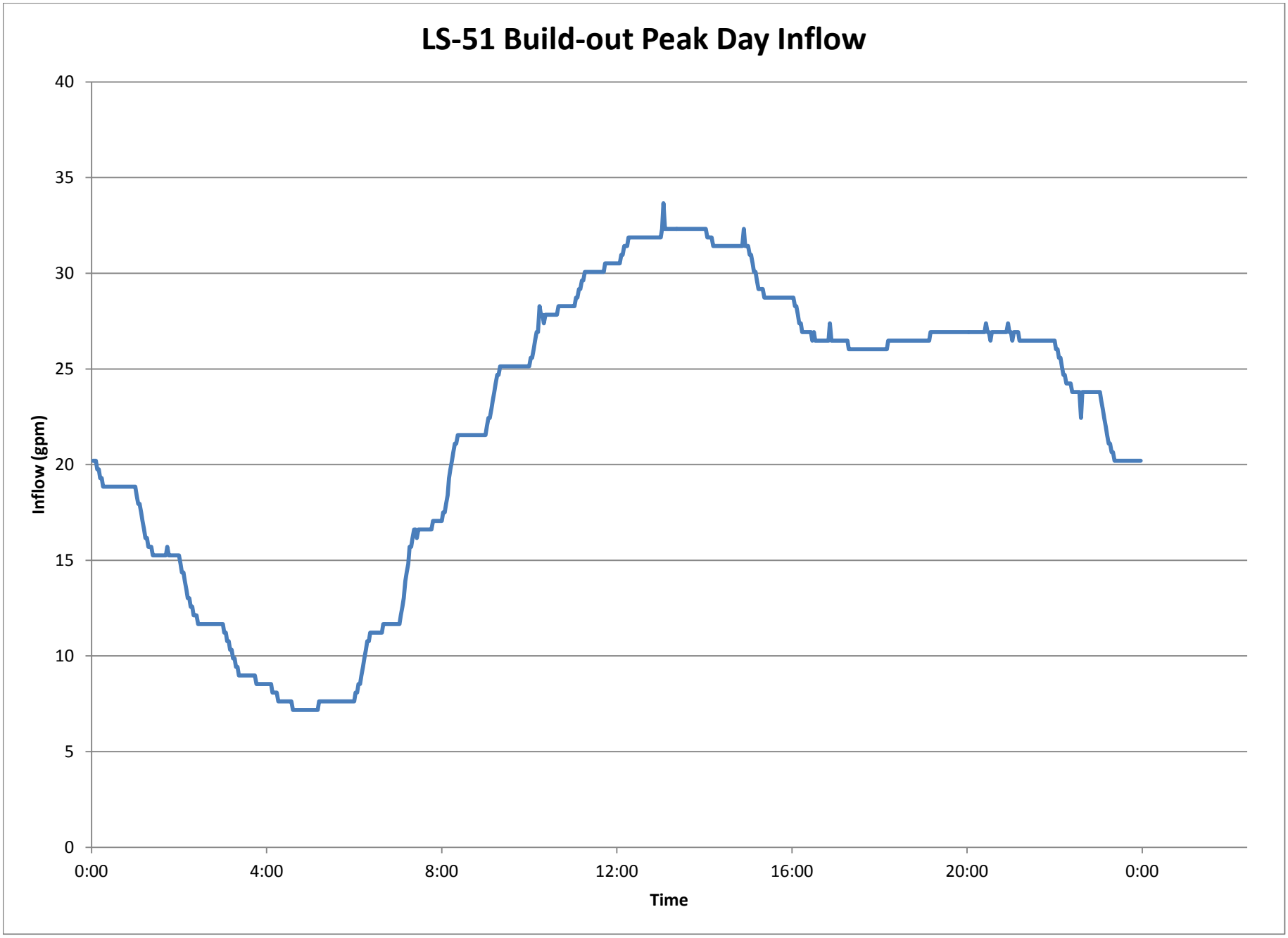

LS-46 Build-out Peak Day Inflow
Inflow (gpm)
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

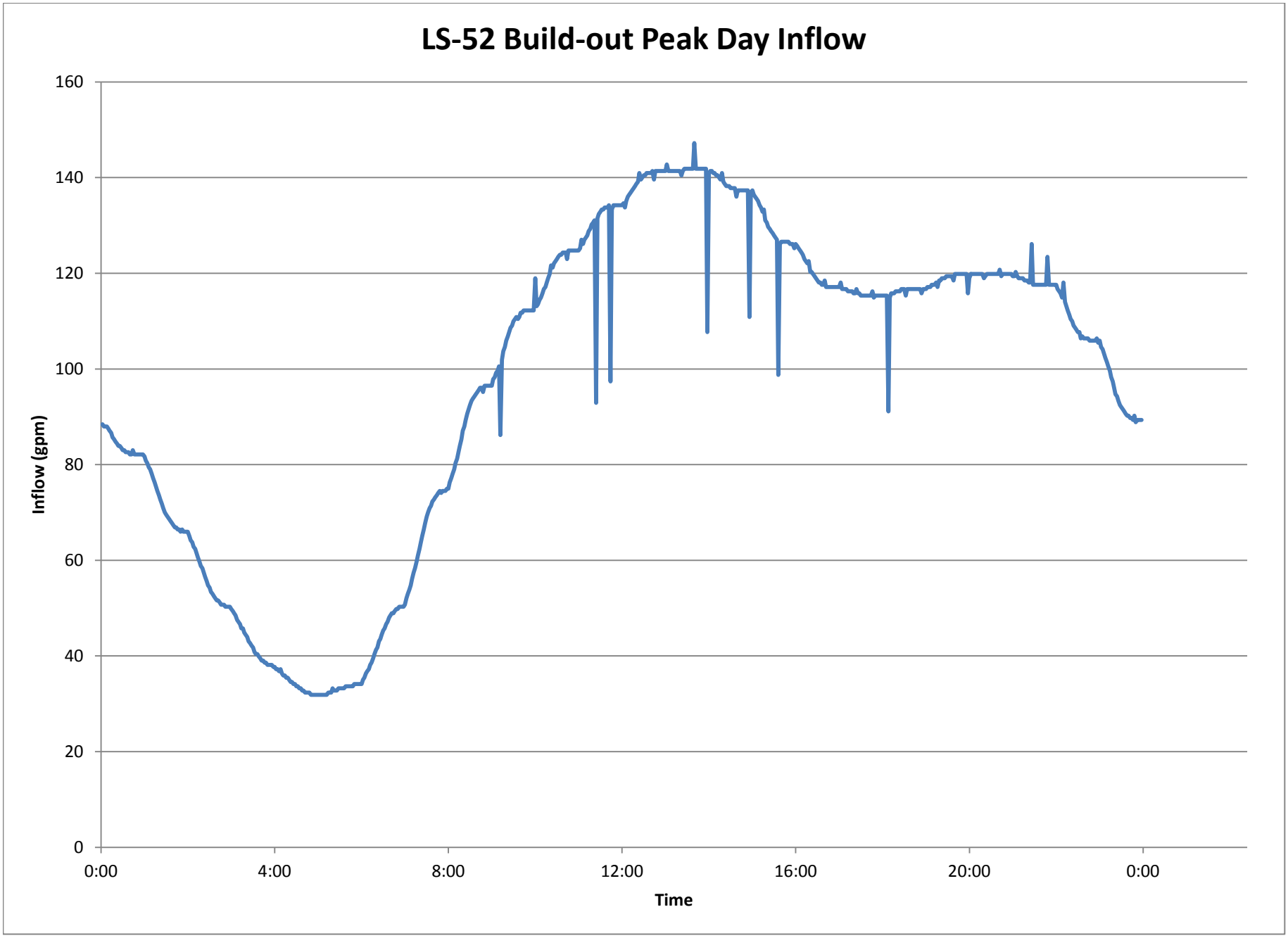

LS-47 Build-out Peak Day Inflow
Inflow (gpm)
16
14
12
10
8
6
4
2
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

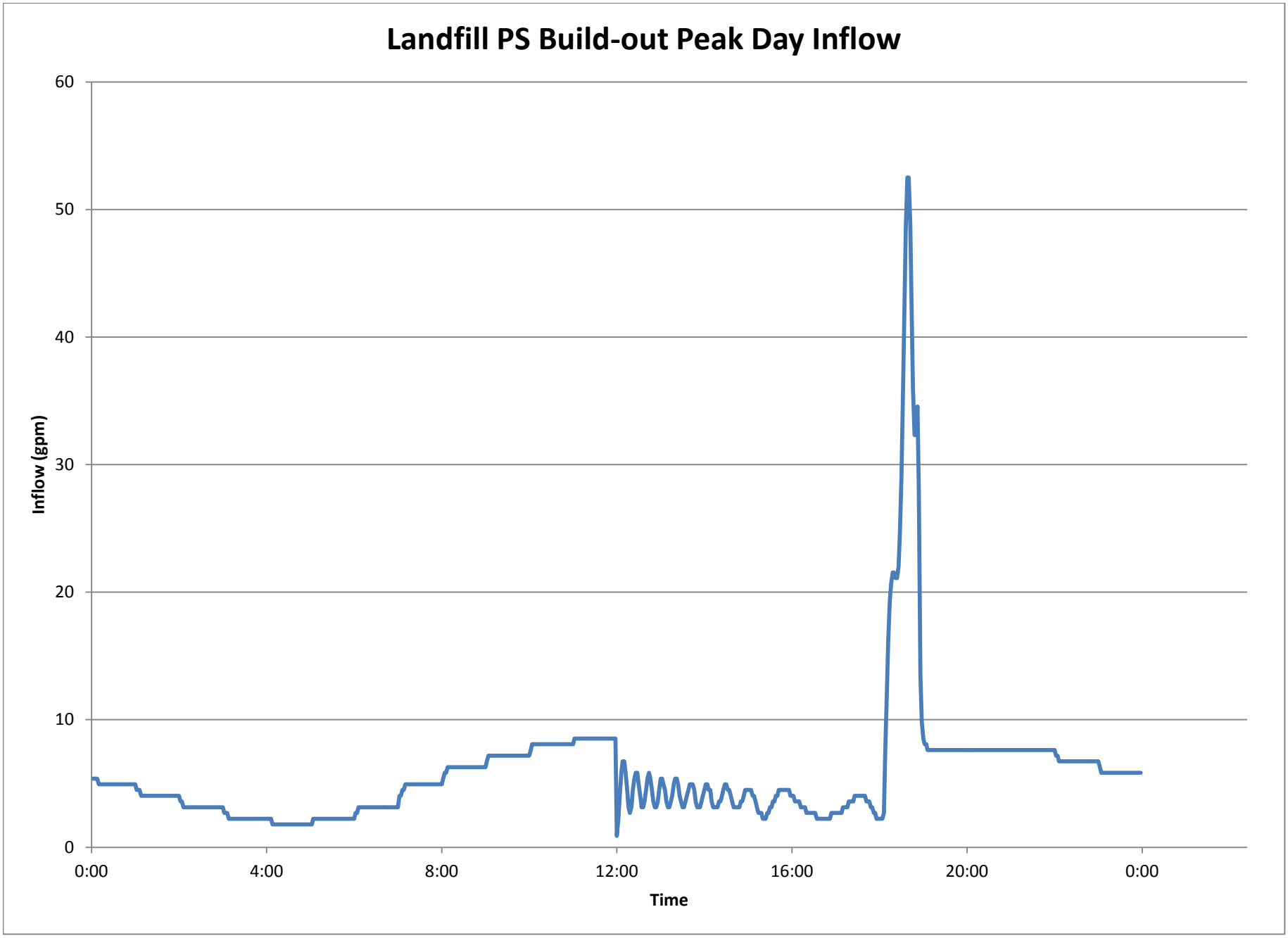

LS-48 Build-out Peak Day Inflow
Inflow (gpm)
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

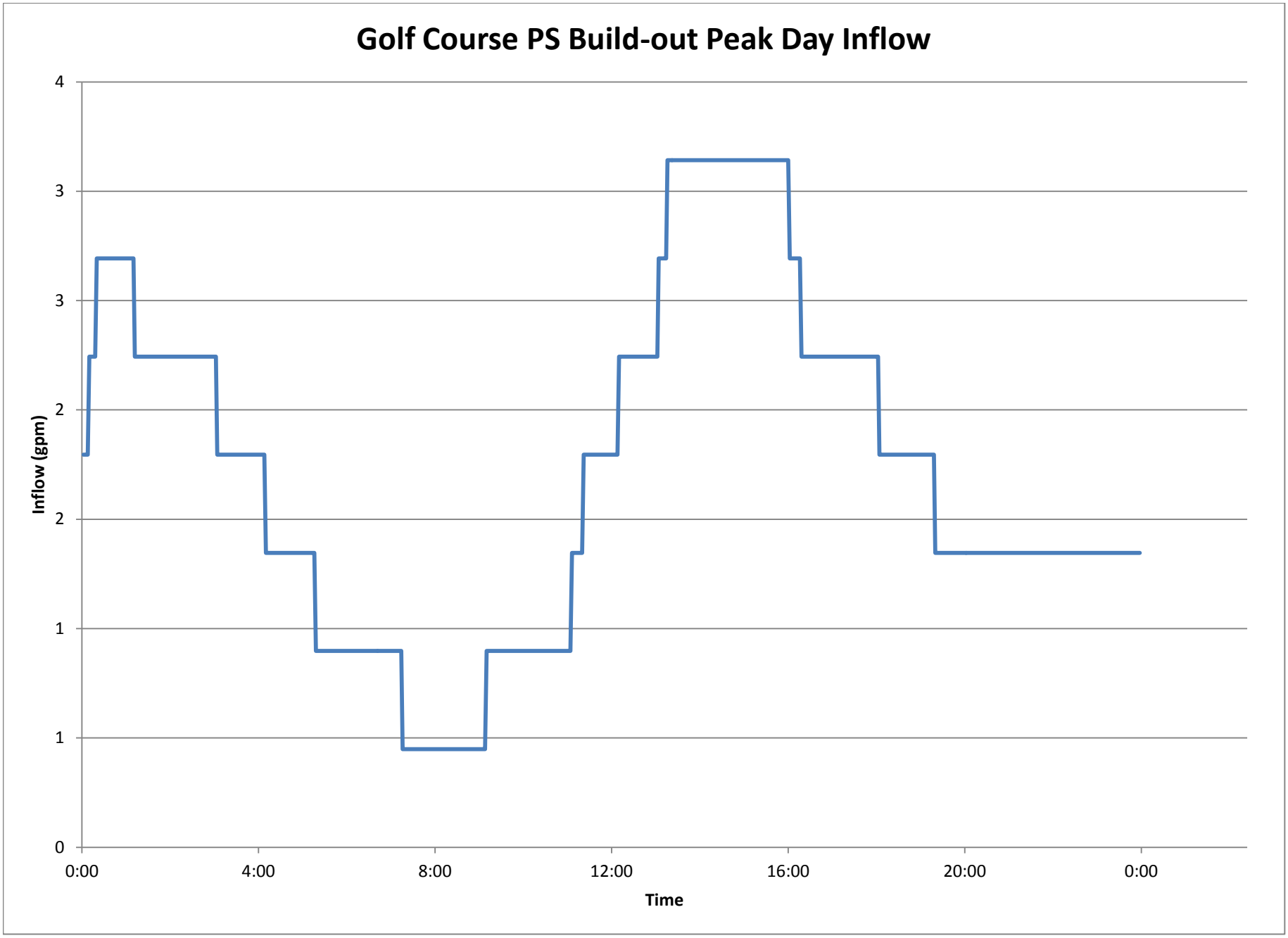

LS-49 Build-out Peak Day Inflow
350
300
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

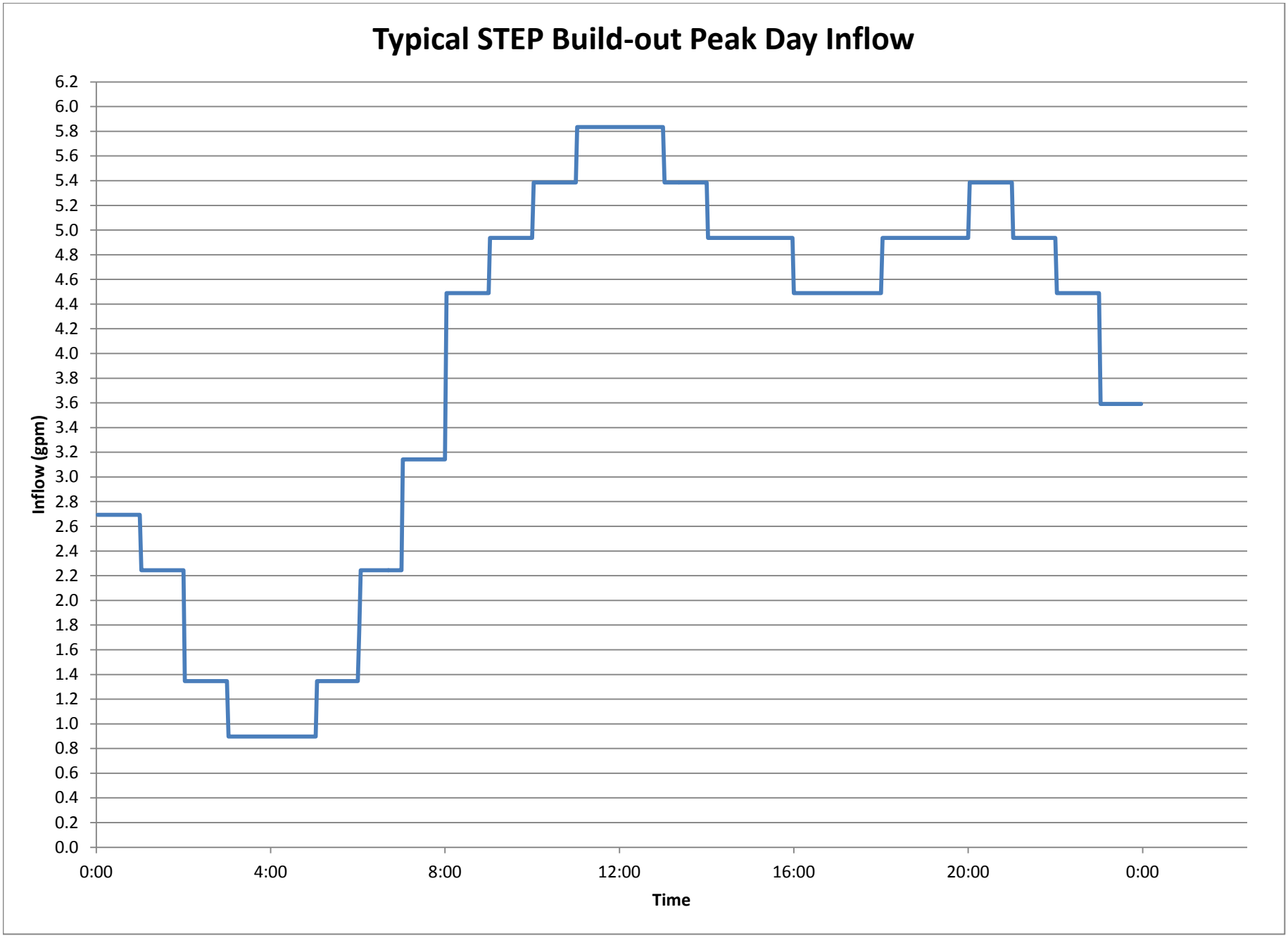

LS-50 Build-out Peak Day Inflow
Inflow (gpm)
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

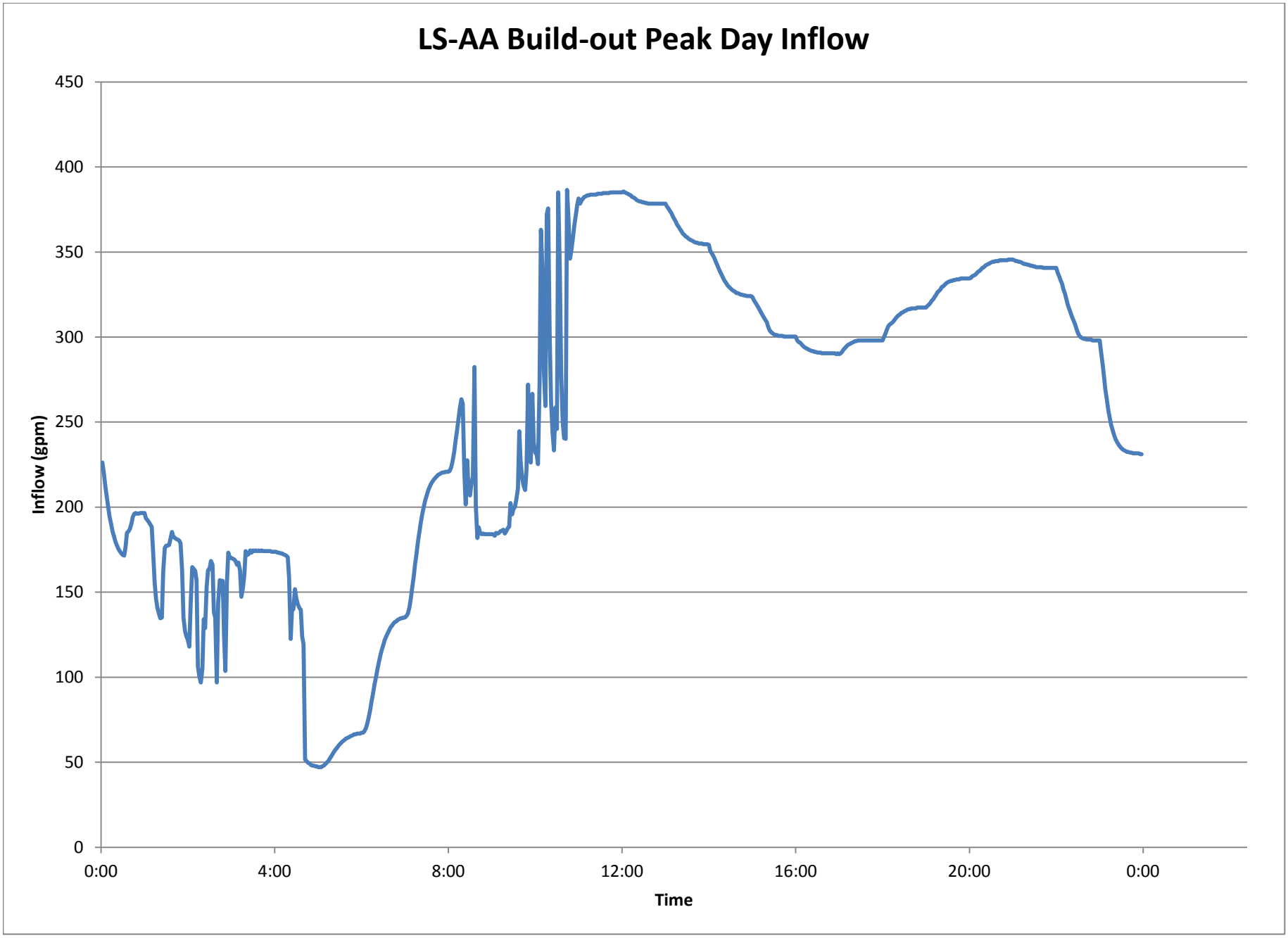

LS-51 Build-out Peak Day Inflow
Inflow (gpm)
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

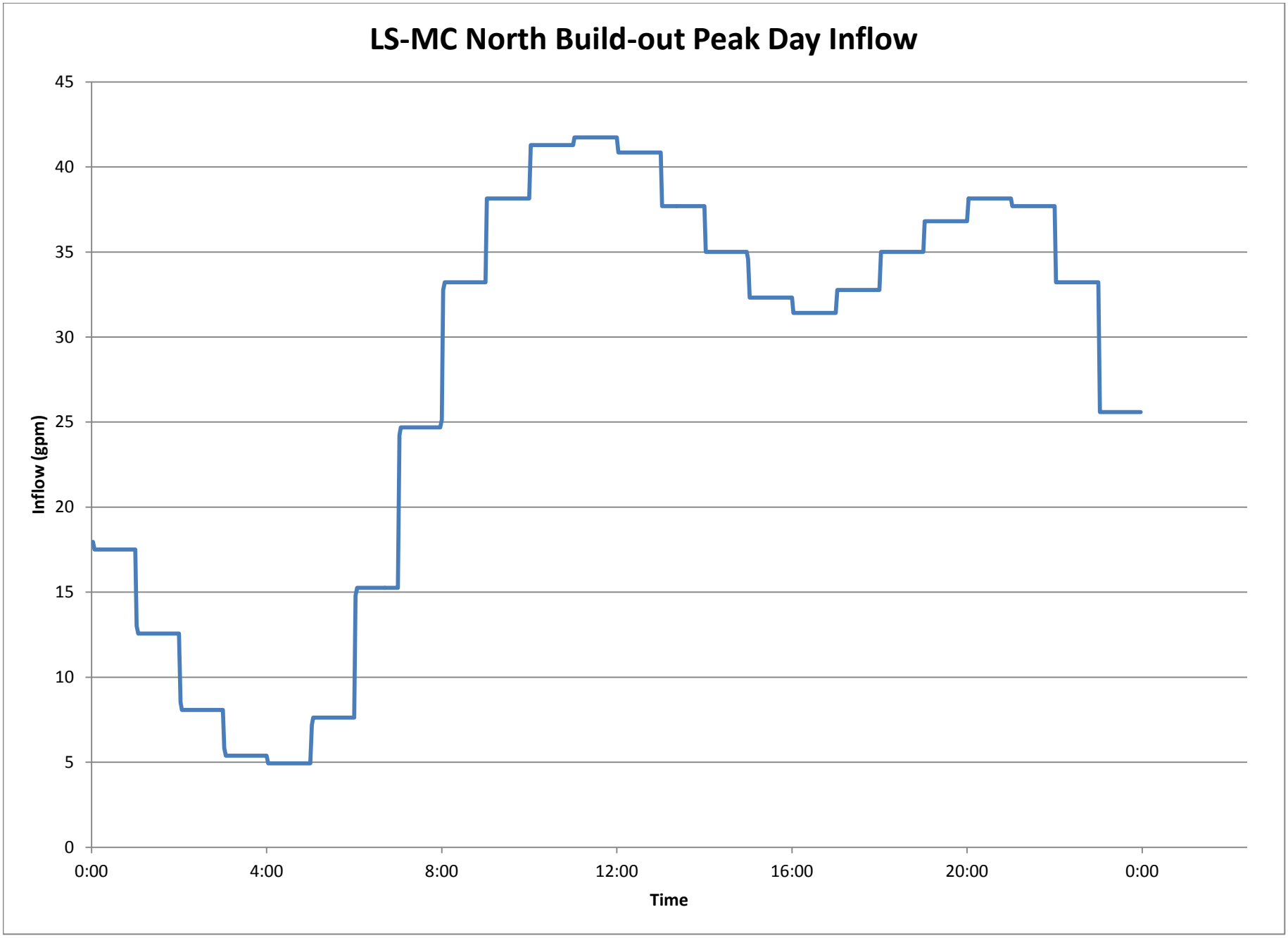

LS-52 Build-out Peak Day Inflow
160
140
120
100
80
60
40
20
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Landfill PS Build-out Peak Day Inflow
Inflow (gpm)
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Golf Course PS Build-out Peak Day Inflow
Inflow (gpm)
4
3
3
2
2
1
1
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


Typical STEP Build-out Peak Day Inflow
Inflow (gpm)
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

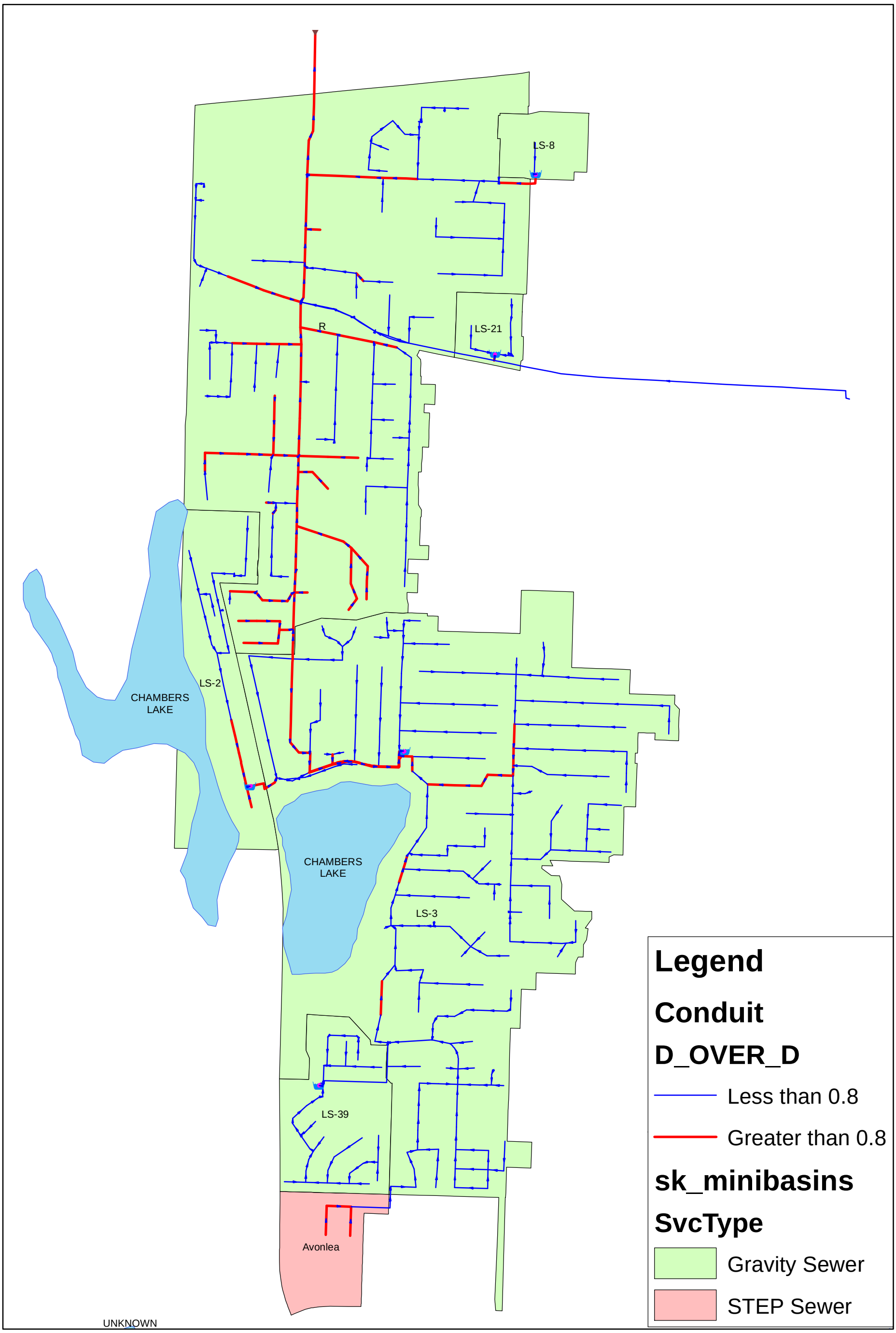

LS-AA Build-out Peak Day Inflow
Inflow (gpm)
450
400
350
300
250
200
150
100
50
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-MC North Build-out Peak Day Inflow
Inflow (gpm)
45
40
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time

# BUILD-OUT MODEL RESULTS

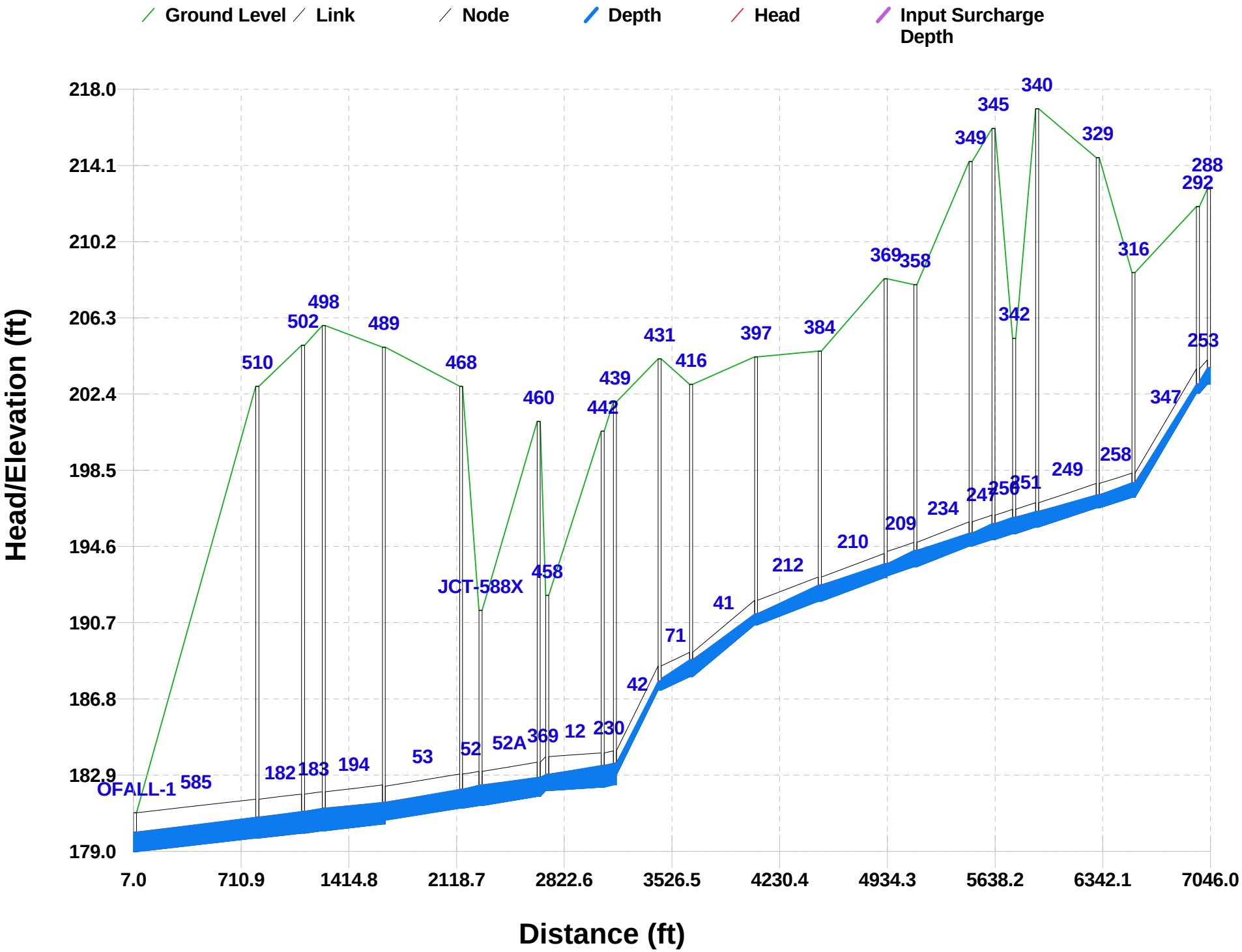
## SLEATER KINNEY BASIN

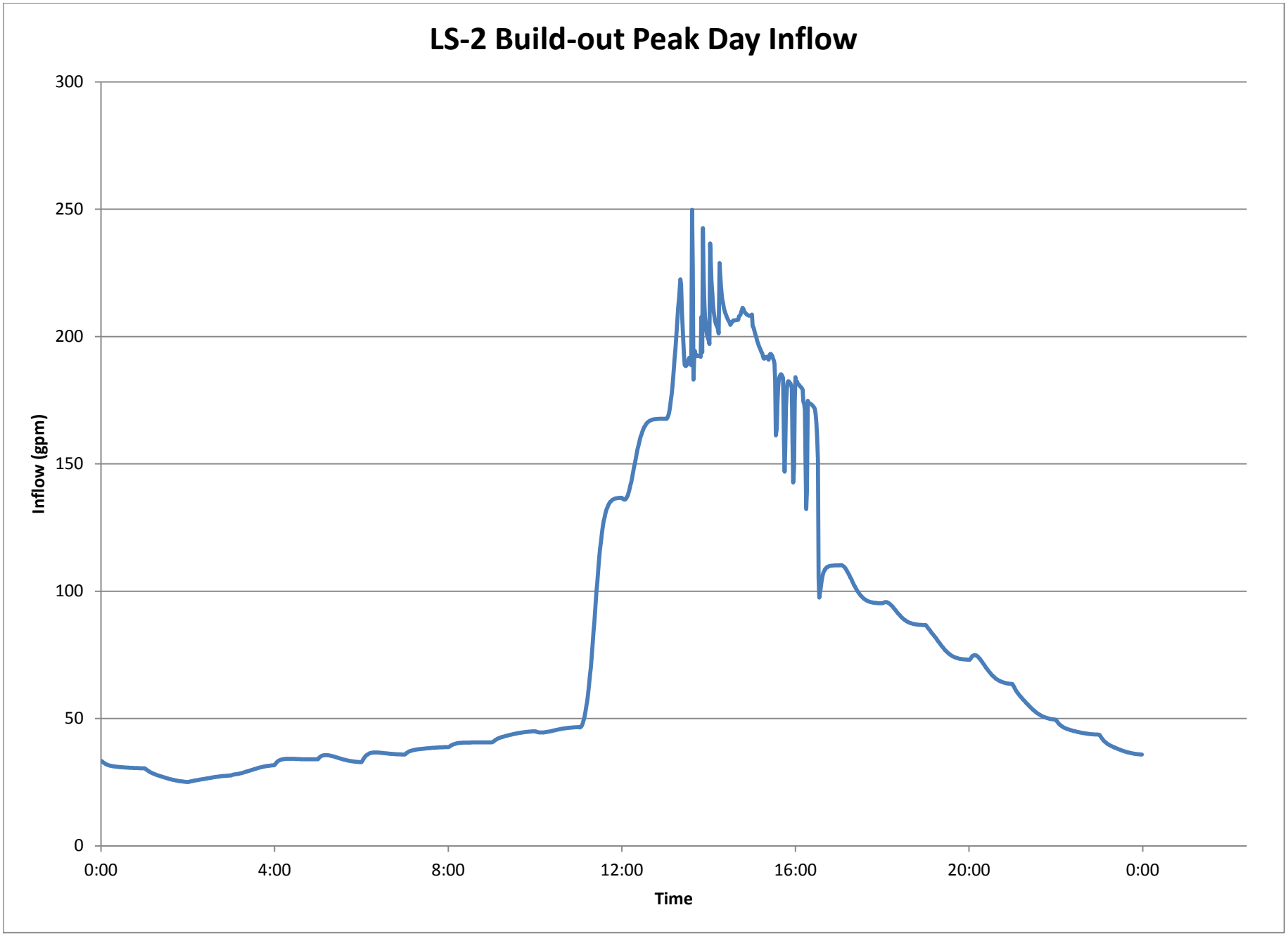
# Lacey - Sleater Kinney Collection System Model
# Build-Out Peak Day Surcharging
# d/D Criteria = 0.80

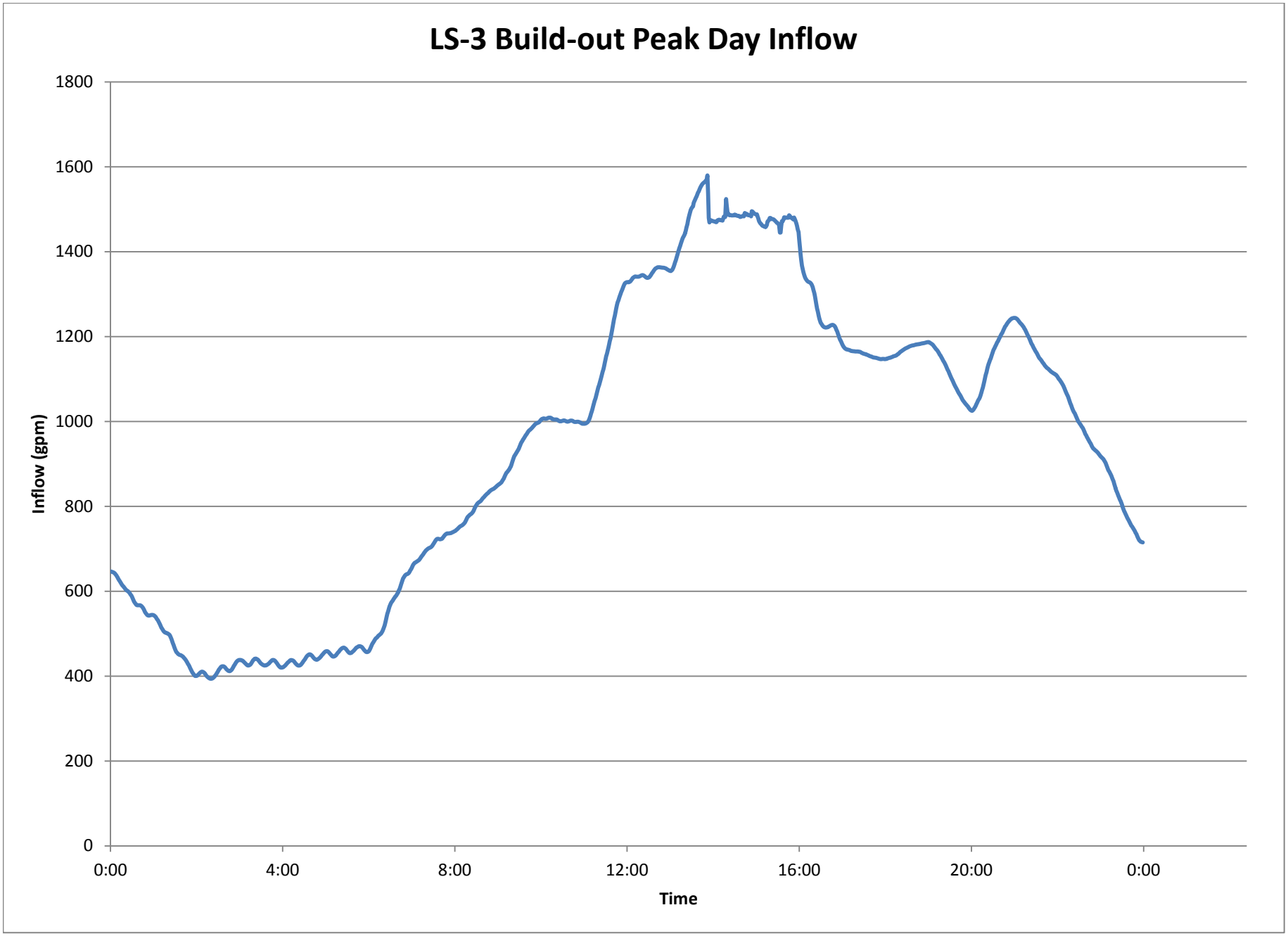


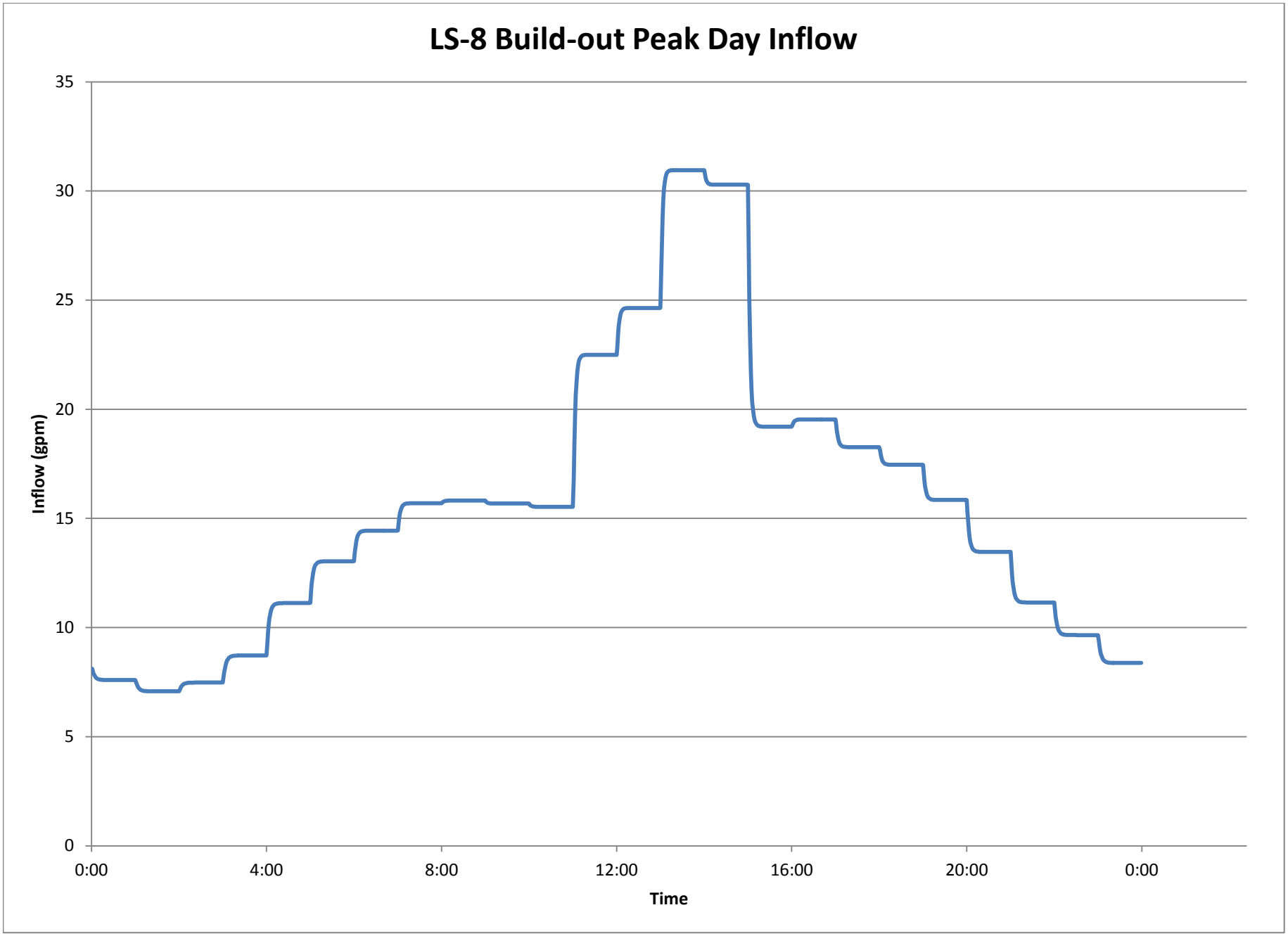

Note: Force mains and STEP mains are always full and are shown as always surcharging.

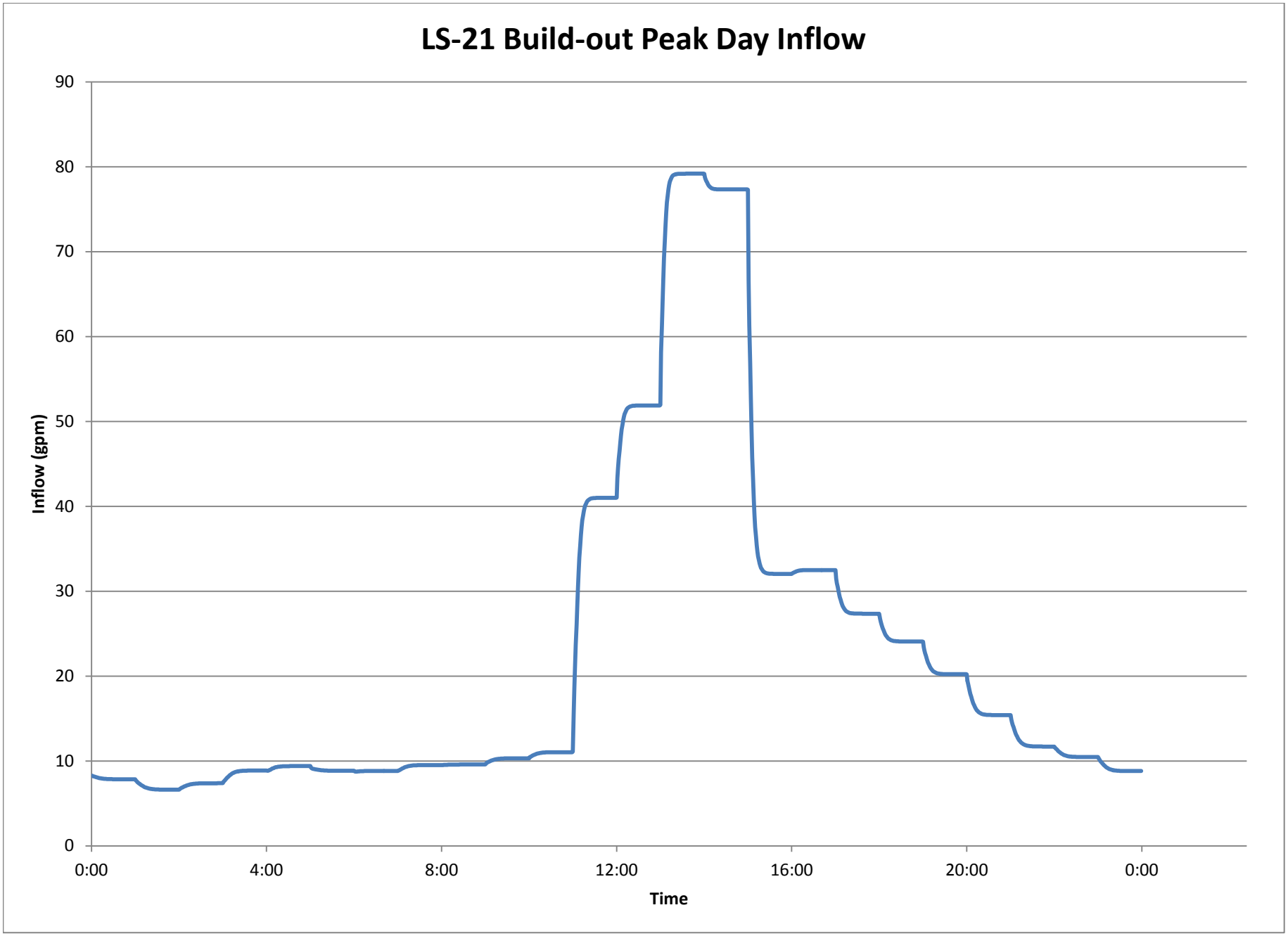
# Sleater Kinney Alignment: Build-Out Peak HGL

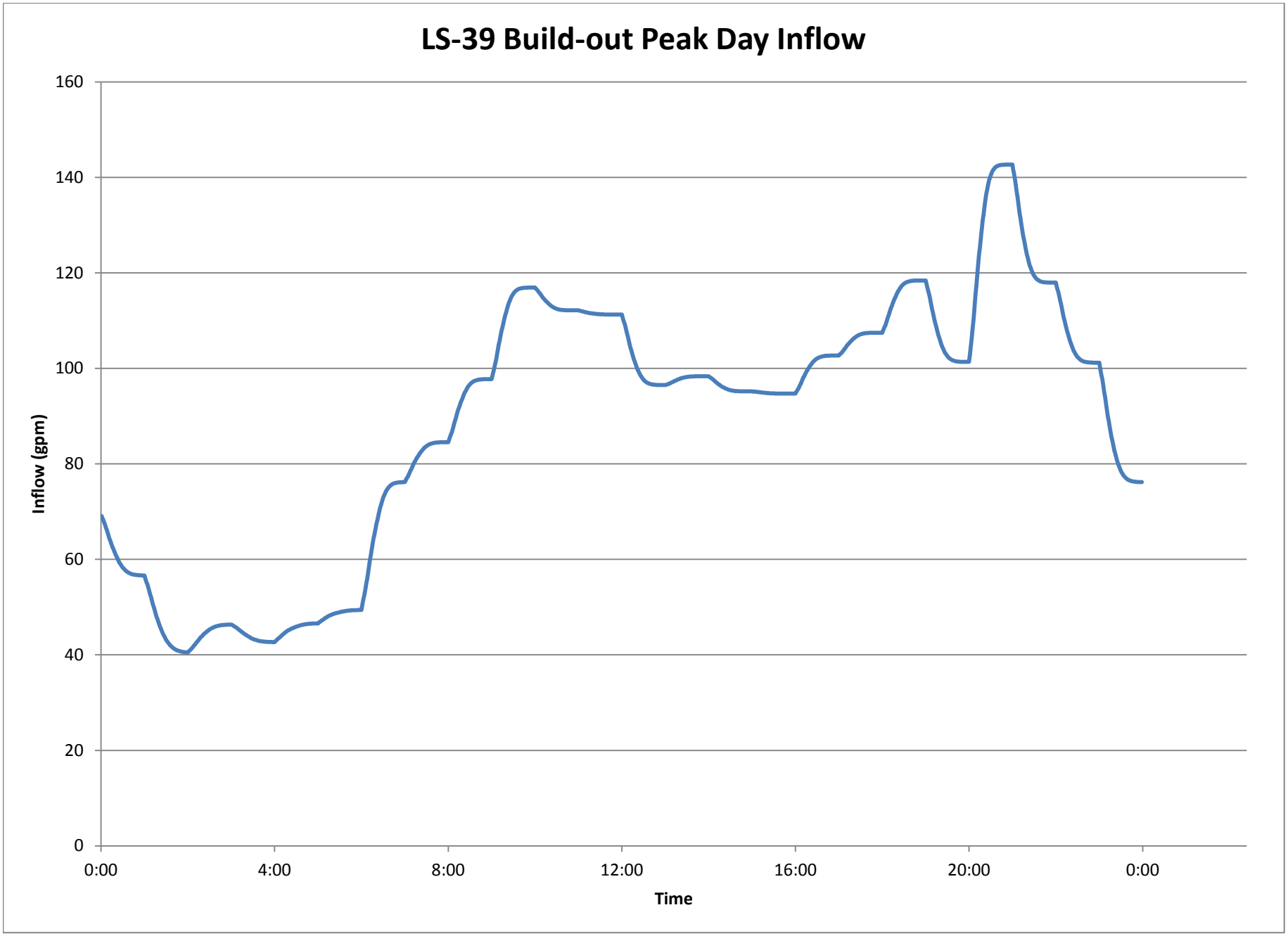



LS-2 Build-out Peak Day Inflow
300
250
200
150
100
50
0
Inflow (gpm)
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-3 Build-out Peak Day Inflow
Inflow (gpm)
1800
1600
1400
1200
1000
800
600
400
200
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-8 Build-out Peak Day Inflow
Inflow (gpm)
35
30
25
20
15
10
5
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-21 Build-out Peak Day Inflow
Inflow (gpm)
90
80
70
60
50
40
30
20
10
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time


LS-39 Build-out Peak Day Inflow
Inflow (gpm)
160
140
120
100
80
60
40
20
0
0:00
4:00
8:00
12:00
16:00
20:00
0:00
Time