PUMP STATION #30
HYDRAULIC REPORT
2X2 DESIGN BULLETIN 75 APPENDIX

INTERSTATE 55 (STEVENSON EXPRESSWAY)
AT HOMAN AVENUE
P-91-762-10

CHICAGO, COOK COUNTY, ILLINOIS

Prepared for:

Illinois Department of Transportation
201 West Center Court
Schaumburg, IL 60196

Prepared By:

Christopher B. Burke Engineering, Ltd.
9575 W. Higgins Road
Rosemont, IL 60018

CBBEL Project No. 11-0203

March 2022
Final April 2022

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018-4920 Tel (847) 823-0500 Fax (847) 823-0520

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CHAPTER 1 B75 APPENDIX OVERVIEW

1.1 INTRODUCTION

The purpose of this Appendix is to update the results and conclusions of the April 2022 Pump Station #30 (PS 30) Hydraulic Report 2x2 Design with the Illinois State Water Survey (ISWS) Bulletin 75 (B75) rainfall depths and Huff distributions. The subject Pump Station Hydraulic Report was started before Bulletin 75 was released and used Bulletin 70 (B70) isohyetal depths. This report updates the existing conditions results using B75 Northeast Sectional data and proposes upstream storage alternatives that meet the design criteria presented in the 2x2 Hydraulic Report. The upstream alternatives include combinations of the previous 2x2 Finalist Alternatives A, B, and C. New alternatives such as upsized storm sewer in the shoulders or downstream storage or increased conveyance were not analyzed but may be considered in Phase II.

It should be noted that this study utilized XP-SWMM 2014 to be consistent with the 2x2 Hydraulic Report. Use of other versions of XP-SWMM may provide slightly different model results. The Phase II designer should use the newest version of XP-SWMM at the time.

The proposed I-55 roadway improvement increases traffic capacity by developing two "managed" lanes in each direction by converting the median to additional travel lanes and minimal widening to the outside. This is referred to as the "2x2" proposed design. Please refer to the PS 30 2x2 Hydraulic Report dated April 2022 for the 2x2 geometry and proposed storage alternatives using the original B70 rainfall depths.

CHAPTER 2 BULLETIN 75 VS. BULLETIN 70

2.1 RAINFALL DEPTHS

Bulletin 75 Northeast (NE) Sectional rainfall depths are on average 14% higher than the B70 isohyetal depths used in the original PS 30 2x2 Hydraulic Report. A comparison of the rainfall depths is provided below in Table 2-1. Excerpts from the ISWS B75 Report and the isohyetal calculations for PS 30 are provided in Section 1.

Note that there is an unexpected coincidence in rainfall depths between the new B75 50-year NE Sectional values and the original B70 isohyetal 100-year values.

Storm Duration (hr)	Rainfall Depth (in)				Huff Quartile
	50-Year		100-Year		
	B70 Isohyetal	B75 NE Sectional	B70 Isohyetal	B75 NE Sectional	
0.25	1.78	2.03	2.03	2.32	1st
0.5	2.44	2.78	2.78	3.17	1st
1	3.10	3.53	3.53	4.03	1st
2	3.83	4.35	4.35	4.97	1st
3	4.22	4.8	4.80	5.49	1st
6	4.95	5.63	5.63	6.43	1st
12	5.74	6.53	6.53	7.46	2nd
18	6.20	7.05	7.05	8.06	3rd

Table 2-1 Rainfall Depths Comparison

2.2 HUFF DISTRIBUTIONS

As part of the Bulletin 75 update, new Huff distributions were developed. As a result, the Huff distributions are in 24 increments for the same quartiles. Table 2-2 contains the updated Bulletin 75 Quartiles.

Portion of Storm	First Quaritle	Second Quaritle	Third Quaritle	Fourth Quaritle
0/24	0.00	0.00	0.00	0.00
1/24	8.36	2.29	2.05	2.31
2/24	17.73	4.82	4.31	4.79
3/24	28.11	7.78	6.67	7.12
4/24	38.33	11.33	9.12	9.78
5/24	47.45	15.79	11.71	12.53
6/24	55.50	21.39	14.36	15.23
7/24	62.25	28.41	16.91	17.91
8/24	67.22	36.44	19.64	20.33
9/24	70.82	45.29	22.78	22.83
10/24	74.17	54.35	26.33	25.41
11/24	76.97	62.38	30.93	28.35
12/24	79.81	69.76	36.35	31.25
13/24	82.55	75.48	43.92	33.90
14/24	85.18	80.38	52.11	36.33
15/24	87.40	84.70	61.02	38.61
16/24	89.47	87.81	69.89	41.24
17/24	91.17	90.22	78.19	45.08
18/24	92.70	92.17	84.92	51.29
19/24	94.03	93.81	89.74	59.31
20/24	95.36	95.29	93.11	69.19
21/24	96.56	96.57	95.34	80.05
22/24	97.74	97.74	97.06	89.71
23/24	98.85	98.84	98.56	96.04
24/24	100.00	100.00	100.00	100.00

Table 2-2 Bulletin 75 Huff Distrubution Values

CHAPTER 3 HYDROLOGIC & HYDRAULIC ANALYSIS

This chapter presents a description of the XP Software Stormwater and Wastewater Management Model (XP-SWMM) hydrologic and hydraulic modeling used for this analysis. Chapter 3.1 will only discuss the existing conditions results from the B75 update to the April 2022 PS 30 2x2 Hydraulic Report. Please refer to the full Hydraulic Report for discussion of how the model was built.

3.1 EXISTING CONDITIONS RESULTS COMPARISION

3.1.1 EXISTING CONDITIONS KINEMATIC MODELING

A critical duration analysis was performed to determine peak 50-year and 100-year flow rates to the existing pump station using B75 rainfall depths and Huff distributions ('Existing DISCONNECT Kinematic upsize pipe_B75.xp').

A summary of the differences between the B70 and B75, existing Kinematic analysis results are provided in Table 3-1 below. The critical duration storm event was used to evaluate the existing pump station because it is the most conservative. This study modeled the system in XP-SWMM 2014. Use of other versions of XP-SWMM may provide slightly different model results.

Storm Duration (hr)	Peak Flowrate (cfs)				Flow Volume (ft^3)	
	100-Year		50-Year		100-Year	50-Year
	B70	B75	B70	B75	B75	B75
0.25	124.9	158.2	100.9	128.5		
0.5*	150.3	184.3	123.6	151.7	292,086	245,181
1	141.1	176.8	117.4	147.3		
2	112.3	141.5	93.8	119.3		

* Critical duration

Table 3-1 Existing Conditions DISCONNECT Kinematic Critical Duration Analysis Summary

In comparing the flows between B70 and B75, the flows are approximately 25% higher for the B75 results. This is within the expected range.

3.1.2 EXISTING CONDITIONS DYNAMIC MODELING

The existing conditions XP-SWMM Dynamic model was updated using the B75 rainfall depths and Huff distributions. The existing conditions XP-SWMM Existing Conditions Dynamic analysis results are summarized in Table 3-2 below and compared. In addition, the XP-SWMM model titled ('Existing FINAL 12_2021_B75_v14.xp') is provided on the CD in Section 6.

Max Pump Rate		Storage (ft^3) (at elevation 577.3 ft)		Peak Elevation at Roadway Sag (NAVD88, ft)				Lowest Pavement Elevation (NAVD88, ft)	Freeboard (ft)			
				50-yr		100-yr			50-yr		100-yr	
cfs	gpm	Wet Well	Storm Sewers	B70	B75	B70	B75		B70	B75	B70	B75
118	53,200	13,806	47,019	573.76	578.21	577.91	578.95	577.31	3.55	-0.9	-0.6	-1.64

Table 3-2 Existing Conditions Dynamic XP-SWMM Results

Many of the existing conditions observations found in the April 2022 PS 30 Hydraulic Report are repeated in the updated B75 Appendix version. Below are additional comparisons:

- As expected, the Existing Conditions Dynamic model critical 100-year, 0.5-hour peak flow rate of 159.0 cfs entering the wet well is slightly lower than the rate of 184.3 cfs from the Kinematic model. (See XP-SWMM Conduit N851 SS.)
- The existing pump station and main drain system do not meet freeboard requirements for the 50-year or 100 critical duration storm event.
- Based on the Dynamic model's results, the existing main drain storm sewer line upstream of the pump station is inadequate to convey the peak 50-year or 100-year runoff rate under gravity flow conditions.
- The XP-SWMM B75 models continue to show no overflow from the areas east and west of the subway for the 50-year and 100-year, critical duration storm events;
- The modeling results 'Existing FINAL 12_2021_B75_v14.xp' indicate a peak 100-year water surface elevation of 578.95 feet at surveyed Structure 10559 (Node N867), which is located at the outer edge of southbound Lane 3 just west of the railroad tracks. Based on Cook County's 1-foot topography, this would put standing water in southbound Lane 3 for an approximately 450-foot section of roadway.
- XP-SWMM modeling results 'Existing FINAL 12_2021_B75_v14.xp' show that peak Hydraulic Grade Line (HGL) in the 54-inch diameter storm sewer downstream of the pump station is above the crown for the 50-year and 100-year storm events. The peak HGL is below existing ground elevations for the 50-year event. The 100-year HGL is slightly above the rim elevations at the I-55 median ditch and causes a small amount of overland flow down the median towards the pump station drainage system, which is reflected in the model by overland flow links. The gravity total flow capacity of the 54" discharge pipe out of the pump station is 100 cfs. The peak HGL for the 50-year and 100-year storm events (598.8 feet 50-yr, 598.7 feet 100-yr) is also above the invert of the 24-inch diameter pump discharge pipes (EL = 591.5 feet) in the discharge chamber.
- The results based on the B75 rainfall depths and Huff distributions have increased calculated WSEs as expected.

3.1.3 EXISTING CONDITIONS MASS CURVE ROUTING

Mass curves were generated for the 50-year and 100-year design storm events and are included in Section 3. A separate kinematic XP-SWMM model that disconnects the existing pump station and assumes a free flow outlet was created to determine the inflow hydrograph for each return interval ('Existing DISCONNECT Kinematic upsize pipe_B75.xp'). The inflow hydrograph to the pump station was taken from the incoming storm sewer to the pump station for a 30-minute duration. The mass curve tabulations and plots use a 1-minute time interval to facilitate curve smoothness without generating excessive output data. The XP-SWMM peak inflow rates to the pump station are 151.7 cfs and 184.3 cfs for the 50-year and 100-year storm events, respectively. The pump flow rates in the model use the nominal rates, which is a more conservative approach than using the performance curves.

Comparison of the mass curves to the XP-SWMM model output shows a close correlation between pump on/off times. The calculated wet well elevation varies for both the 50-year and 100-year event. Previous experience has shown that an undersized main drain scenario can produce model instability resulting in more significant differences between XP-SWMM and mass routing results as reflected in the original Hydraulic Report. The updated B75 results are higher than the original report but are within the expected range. Therefore, the XP-SWMM models provide verification of the output generated by the mass curves. A comparison summary is provided in Table 3-3.

	Wet Well EL (ft)	Lead on (min)	Lag #1 on (min)	Lag #2 on (min)	Standby On (min)
	50-yr				
XP-SWMM	571.3	15	15	16	16
Mass Route	566.7	14	16	18	21
	100-yr				
XP-SWMM	572.9	14	14	15	15
Mass Route	569.0	13	15	17	19

Table 3-3 Existing Conditions Dynamic Model vs. Mass Routing Summary

3.2 PROPOSED CONDITIONS

The proposed B75 update was applied to the two alternatives from the April 2022 2x2 Hydraulic Report, as it is believed that the 2x2 is the selected geometric configuration for future I-55 improvements. Please refer to the April 2022 PS-30 Hydraulic report 2x2 for discussion on the proposed configuration of I-55 and the conclusion of the B70 selected alternatives.

3.2.1 PROPOSED CONDITIONS KINEMATIC MODELING

A proposed conditions kinematic disconnect model (Proposed DISCONNECT Kinematic upsize pipe_B75.xp) was developed by adjusting the CN values for the affected subbasins in the existing conditions kinematic disconnect model. Peak flow rates for the previously identified critical duration storm event are summarized in Table 3-4.

State	Storm Duration (hr)	Peak Flowrate (cfs)				Flow Volume (ft^3)			
		100-Year		50-Year		100-Year		50-Year	
		B75	B70	B75	B70	B75	B70	B75	B70
Existing	0.5*	184.3	150.2	151.7	123.4	292,086	245,138	245,182	205,118
Proposed		204.7	169.6	170.9	141.2	315,539	267,448	267,635	226,504

Table 3-4 Proposed Disconnect Kinematic Model Summary

3.2.2 PROPOSED CONDITIONS DYNAMIC MODELING

Three original finalist alternatives were developed for the project for the B70 report. Finalist Alternative A provides increased storage and conveyance by installing a parallel median storm sewer system interconnected with the existing main drain. Finalist Alternative B consists of constructing a new storage vault upstream of PS 30 in the south ROW, with a single connection point to the main drain. Finalist Alternative C (Selected Alternative) consists of a parallel storm sewer located in the south ROW and interconnected to the existing main drain at the upstream and downstream ends.

As part of the B75 update, Alternatives A and C were rerun using the updated rainfall depths and distributions. Based on the original 2x2 B70 analysis, Alternative B was not a viable solution for the 2x2, so it was not considered as part of this analysis. Comparisons of the original B70 results to the updated B75 results are provided in Table 3-5.

Alternative	# of Main Pumps	Pump Rate (cfs)	Peak Elevation at Roadway Sag (ft, NAVD 88) Node N867 1-Hour Critical				Lowest Inlet Elevation (NAVD 88, ft)	Freeboard (ft)			
			100-year		50-year			100-year		50-year	
			B75	B70	B75	B70		B75	B70	B75	B70
FINAL 'A'	3 + 1 standby	88.8	579.05	576.89	577.78	573.7	577.31	-1.74	0.42	-0.47	3.61
FINAL 'C'			579.2	576.96	577.9	573.82		-1.89	0.35	-0.59	3.49

Table 3-5 Original Finalist Alternatives B75 Results

The results reported in Table 3-5 indicate the original Finalist Alternatives do not meet the design criteria outlined in the original April 2022 Hydraulic Report when using the updated B75 rainfall data. In particular, the edge of pavement protection requirement is not met. These results are expected as the B75 50-year rainfall depth is equivalent to the B70 100-year rainfall depth. It should be noted that the original Hydraulic Report stated that the I-55 main drain was undersized under B70 existing conditions. Therefore, the main drain and its laterals may require additional improvements not considered in this update.

This update look***s*** at providing feasible alternatives based on combinations of the previously selected alternatives with no modifications to the main drain. Table 3-6 summarizes the results of the proposed Bulletin 75 alternatives. Additional alternatives with only one single oversized pipe either in the median or south ROW were looked at, but they did not meet the proposed design criteria.

Alternative	# of Main Pumps	Pump Rate (cfs)	Peak Elevation at Roadway Sag (ft, NAVD 88) Node N867		Wet Well EL (ft, NAVD 88) Critical		Lowest Inlet Elevation (NAVD 88, ft)	Freeboard (ft)	
			100-year	50-year	100-year	50-year		100-year	50-year
Alt 1	3 + 1 standby	88.8	577.2	574.1	574.0 (SWMM) 570.1 (MASS)	572.1 (SWMM) 567.7 (MASS)	577.31	0.11	3.21
Alt 2			577.1	574.8				0.21	2.51
Alt 3			577.2	575.31				0.11	2

Table 3-6 Proposed B75 Finalist Alternatives

3.2.2.1 ALTERNATIVE 1 A+C – PARALLEL MEDIAN SEWER and SOUTH ROW SEWER

Alternative 1 is to install 1,013 feet of 84-inch diameter parallel storm sewer within the median between invert elevations 567.2 ft and 570.2 ft. The new storm sewer connects to the existing main drain at existing manholes located approximately at Station 1201+72 and Station 1210+15. The most upstream extension allows the median system to pick up additional runoff from the median and north pavement. Additionally, there would be 1,200 feet of 72-inch diameter parallel storm sewer within the south ROW between inverts 564.8 ft and 565.0 ft installed. The parallel sewer is proposed to tie into the existing main drain at the upstream end through a 48-inch diameter storm sewer at approximately Station 1201+72. It will be necessary to bore/tunnel the 48-inch storm sewer under the pavement to connect to the existing main drain. The downstream end of the 72-inch storm sewer is proposed to tie back into the main drain just upstream of PS 30. The new storage volume added under Finalist Alternative C is approximately 74,160 ft^3. The new storage volume added under Finalist Alternative A is approximately 38,990 ft^3. PS 30 operation is proposed to be updated to include three main pumps at 13,300 gpm (29.6 cfs) and one stand-by pump at 13,300 gpm (29.6 cfs). The low flow pump remains unchanged.

Alternative 1 is the recommended alternative. Mass routing for Alternative 1 is provided in Section 3. A schematic of Alterative 1 is provided as Exhibit 1 in Section 4. Installing the pipe by

boring/tunneling increases the concept estimated construction cost to $5,258,835. Cost information is provided in Section 4.

3.2.2.2 ALTERNATIVE 2 – A+B PARALLEL MEDIAN SEWER and STORAGE VAULT IN S. ROW

Finalist Alternative 2 proposes installing 1,013 feet of 84-inch diameter parallel storm sewer within the median between invert elevations 567.2 ft and 570.2 ft. The new storm sewer connects to the existing main drain at existing manholes located approximately at Station 1201+72 and Station 1210+15. The most upstream extension allows the median system to pick up additional runoff from the median and north pavement. Additionally, there will be the need to construct an approximately 70,000 ft^3 vault within the south ROW at invert 563.0 ft. The 40 ft x 2500 ft x 7 ft vault connects to the existing main drain upstream of PS 30. PS 30 operation is proposed to be updated to include three main pumps at 13,300 gpm (29.6 cfs) and one stand-by pump at 13,300 gpm (29.6 cfs). The low flow pump remains unchanged. The new storage volume added under Alternative 3 is approximately 108,980 ft^3. A schematic of Finalist Alternative 2 is provided as Exhibit 2 in Section 4. No cost estimate was provided as this is not the recommended alternative.

3.2.2.3 ALTERNATIVE 3 C+B – PARALLEL STORM SEWER + STORAGE VAULT IN SOUTH ROW

Alternative 3 is to install 950 feet of 72-inch diameter parallel storm sewer within the south ROW between inverts 564.8 ft and 565.0 ft. The parallel sewer is proposed to tie into a proposed storage vault. It will be necessary to bore/tunnel the 48-inch storm sewer under the pavement to connect to the existing main drain. The downstream end of the 72-inch storm sewer is proposed to tie into a proposed approximately 70,000 ft^3 vault within the south ROW at invert 563.0 ft. The 40 ft x 2500 ft x 7 ft vault connects to the existing main drain upstream of PS 30. PS 30 operation is proposed to be updated to include three main pumps at 13,300 gpm (29.6 cfs) and one stand-by pump at 13,300 gpm (29.6 cfs). The low flow pump remains unchanged. The new storage volume added under Alternative 3 is approximately 101,521 ft^3. A schematic of Alternative 3 is provided as Exhibit 3 in Section 4. No cost estimate was provided as this is not the recommended alternative.

CHAPTER 4 CONCLUSIONS

Based on the detailed evaluation of improvements presented in the previous chapters, conclusions are provided below.

4.1 DESIGN SUMMARY

As analyzed with the Bulletin 75 update, the existing pump station and main drain system does not meet freeboard requirements at the sag for the 50-year critical duration storm event under existing pavement conditions; the main drain does not provide 50-year capacity under gravity flow conditions. The existing system also does not provide 100-year edge of pavement protection.

Alternatives 1-3, as presented in Chapter 3, meet the 50-year and 100-year freeboard requirements. This was demonstrated in the XP-SWMM computer modeling described in Chapter 3, HYDROLOGIC & HYDRAULIC ANALYSIS. These alternatives include combinations of the previous 2x2 Finalist Alternatives A, B, and C. The proposed Alternative 1 is the recommended alternative. Cost and constructability were considered in determining the finalist alternatives and in the choice of Alternative 1 as the selected alternative.

Constructability issues in the median include room for open cut and boring/jacking pits, the possibility of contaminated soils, proximity to bridge pier footings and sign supports, connections to the existing main drain at the upstream and downstream ends of the new sewer, and maintenance of traffic. Constructability issues in the south ROW are similar. They include open cut vs. boring/jacking, the possibility of contaminated soils, proximity to light pole foundations, and connections to the existing main drain near the median. In all cases, updated hydraulic analysis and additional geotechnical and environmental studies are recommended during Phase II design. There may be other solutions involving further improvements associated with I-55 main drain and laterals that should be investigate as part of Phase II. Additionally Phase II should considered using an updated version of XP-SWMM.

4.2 RECOMMENDATION

Based on the results of the hydrologic and hydraulic analysis discussed in Chapter 3, the existing PS 30 system does not meet IDOT freeboard requirements for the 50/100-year, critical duration storm events. The main drain is insufficient to convey the 50-year or 100-year design flowrate under gravity conditions, as shown on the XP-SWMM storm sewer profiles provided in Section 5. The existing main drain was not evaluated to be upsized; additional conveyance and storage could be provided in the median along with further sewer improvements along the shoulder. Alternatively, system operation may be improved by constructing stormwater storage volume upstream of the pump station. The proposed alternatives provide variations of providing upstream storage volume and conveyance. Alternative 1 is the selected alternative.

Section 1
ISWS Bulletin 75 Excerpts and Bulletin 70 Isohyetal Calculations

ISWS Bulletin 75

Precipitation Frequency Study for Illinois

James R. Angel and Momcilo Markus

Contributing Authors:

Kexuan Ariel Wang, Brian M. Kerschner, and Shailendra Singh

Illinois State Water Survey
University of Illinois at Urbana-Champaign

March 2020

ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

Table 7. Rainfall (inches) for Given Recurrence Interval for Section 2 (Northeast)

Storm Duration	2-month	3-month	4-month	6-month	9-month	1-year	2-year	5-year	10-year	25-year	50-year	100-year	500-year
5 minutes	0.19	0.22	0.24	0.27	0.31	0.33	0.40	0.52	0.62	0.77	0.90	1.03	1.35
10 minutes	0.33	0.38	0.41	0.47	0.53	0.58	0.70	0.90	1.08	1.35	1.58	1.80	2.36
15 minutes	0.42	0.49	0.53	0.61	0.69	0.75	0.90	1.16	1.39	1.74	2.03	2.32	3.04
30 minutes	0.58	0.66	0.73	0.83	0.94	1.03	1.24	1.59	1.91	2.39	2.78	3.17	4.16
1 hour	0.74	0.84	0.93	1.05	1.20	1.30	1.57	2.02	2.42	3.03	3.53	4.03	5.28
2 hours	0.91	1.04	1.14	1.30	1.48	1.61	1.94	2.49	2.99	3.74	4.35	4.97	6.52
3 hours	1.00	1.15	1.26	1.44	1.63	1.77	2.14	2.75	3.30	4.13	4.80	5.49	7.20
6 hours	1.18	1.35	1.48	1.68	1.91	2.08	2.51	3.23	3.86	4.84	5.63	6.43	8.43
12 hours	1.37	1.56	1.71	1.95	2.21	2.41	2.91	3.74	4.48	5.61	6.53	7.46	9.78
18 hours	1.48	1.69	1.85	2.11	2.39	2.61	3.14	4.04	4.84	6.06	7.05	8.06	10.57
24 hours	1.57	1.80	1.97	2.24	2.55	2.77	3.34	4.30	5.15	6.45	7.50	8.57	11.24
48 hours	1.72	1.97	2.16	2.46	2.79	3.04	3.66	4.71	5.62	6.99	8.13	9.28	12.10
72 hours	1.87	2.14	2.34	2.67	3.03	3.30	3.97	5.08	6.05	7.49	8.64	9.85	12.81
120 hours	2.08	2.38	2.61	2.97	3.37	3.67	4.42	5.63	6.68	8.16	9.39	10.66	13.81
240 hours	2.63	3.01	3.30	3.76	4.27	4.65	5.60	7.09	8.25	9.90	11.26	12.65	16.00

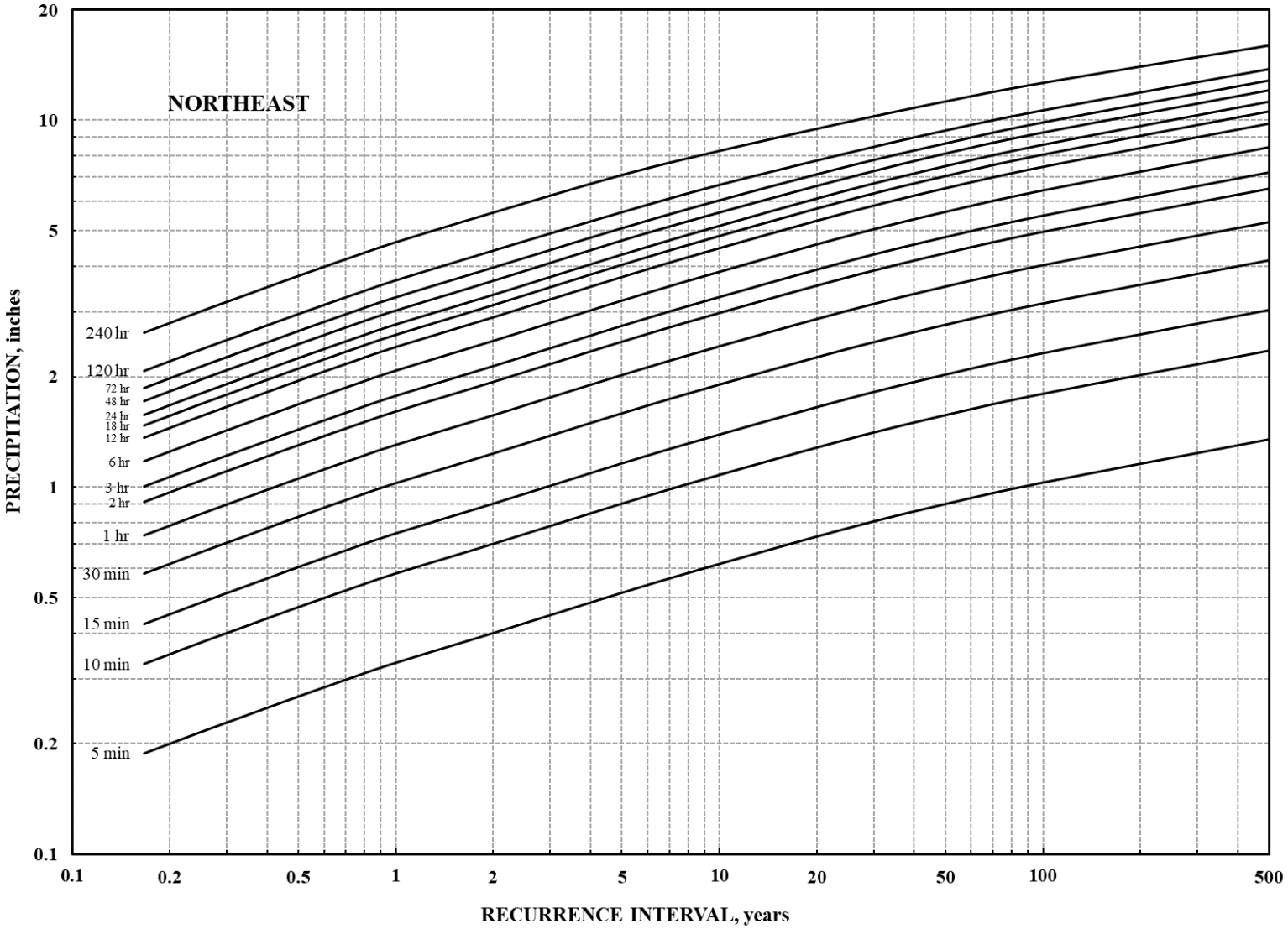


Figure 10. Precipitation frequency estimates for Section 2 (Northeast)

small areas (10–50 square miles), and large areas (50–400 square miles), respectively. The values in these tables are shown in percentages of total rainfall for each quartile. Corresponding Huff curves with comparisons to the results obtained in this study are shown in Figures 42–44. The new updated curves are like the original Huff curves, except for the fourth quartile, for areas 10–50 and 50–400 square miles, and for the first quartile for areas 0–10 square miles. Similar to Circular 173, it is recommended to use the first-quartile curves for design durations of 6 hours and less, the second-quartile designs involving storm durations between 6 and 12 hours, the third-quartile storms for storms between 12 and 24 hours, and the fourth-quartile distribution for storms longer than 24 hours.

Table 26. Median Time Distribution of Heavy Storm Rainfall, Using the Mean of All Point Time Distributions (0 to 10 square miles) from Gages in the CCPN and IVPN. Units are a percentage of the total accumulated precipitation within the storm.

Portion of the Storm	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
0/24	0.00	0.00	0.00	0.00
1/24	8.36	2.29	2.05	2.31
2/24	17.73	4.82	4.31	4.79
3/24	28.11	7.78	6.67	7.12
4/24	38.33	11.33	9.12	9.78
5/24	47.45	15.79	11.71	12.53
6/24	55.50	21.39	14.36	15.23
7/24	62.25	28.41	16.91	17.91
8/24	67.22	36.44	19.64	20.33
9/24	70.82	45.29	22.78	22.83
10/24	74.17	54.35	26.33	25.41
11/24	76.97	62.38	30.93	28.35
12/24	79.81	69.76	36.35	31.25
13/24	82.55	75.48	43.92	33.90
14/24	85.18	80.38	52.11	36.33
15/24	87.40	84.70	61.02	38.61
16/24	89.47	87.81	69.89	41.24
17/24	91.17	90.22	78.19	45.08
18/24	92.70	92.17	84.92	51.29
19/24	94.03	93.81	89.74	59.31
20/24	95.36	95.29	93.11	69.19
21/24	96.56	96.57	95.34	80.05
22/24	97.74	97.74	97.06	89.71
23/24	98.85	98.84	98.56	96.04
24/24	100.00	100.00	100.00	100.00

Table 27. Median Time Distribution of Heavy Storm Rainfall on Medium-size Areas (10 to 50 square miles) in the CCPN and IVPN. Units are a percentage of the total accumulated precipitation within the storm.

Portion of the Storm	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
0/24	0.00	0.00	0.00	0.00
1/24	6.41	1.48	1.33	1.48
2/24	15.69	3.57	3.02	3.34
3/24	27.45	6.39	5.13	5.72
4/24	38.91	10.02	7.53	8.56
5/24	49.34	14.71	10.01	11.69
6/24	58.55	20.89	12.65	14.19
7/24	65.88	28.91	15.24	17.19
8/24	71.10	37.55	18.17	19.69
9/24	74.92	46.86	21.46	22.27
10/24	78.30	56.25	25.36	24.81
11/24	81.16	64.84	29.90	27.46
12/24	83.75	72.90	35.60	30.33
13/24	86.20	79.07	43.42	32.42
14/24	88.64	83.97	52.18	34.28
15/24	90.81	87.58	61.88	36.89
16/24	92.58	90.67	71.81	39.73
17/24	93.99	92.76	80.43	43.85
18/24	95.19	94.59	87.25	49.87
19/24	96.35	95.97	92.01	58.93
20/24	97.27	97.10	95.04	69.85
21/24	98.03	97.99	96.90	82.36
22/24	98.74	98.72	98.22	92.59
23/24	99.37	99.39	99.21	97.96
24/24	100.00	100.00	100.00	100.00

Table 28. Median Time Distribution of Heavy Storm Rainfall on Large Areas (50 to 400 square miles) in the CCPN and IVPN. Units are the percentage of total accumulated precipitation within the storm.

Portion of the Storm	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
0/24	0.00	0.00	0.00	0.00
1/24	4.59	0.88	0.72	0.90
2/24	13.49	2.38	1.85	2.29
3/24	25.94	4.93	3.47	4.36
4/24	39.17	8.52	5.57	7.10
5/24	51.04	13.19	8.28	9.93
6/24	60.79	19.59	10.96	12.84
7/24	69.26	27.46	13.79	15.46
8/24	74.80	37.17	16.35	17.83
9/24	78.74	47.77	19.66	20.12
10/24	82.20	58.18	23.46	23.12
11/24	85.13	67.64	28.07	25.76
12/24	87.38	75.86	34.06	28.26
13/24	89.58	82.04	42.30	30.99
14/24	91.45	86.92	52.02	33.68
15/24	93.35	90.33	62.76	36.12
16/24	94.80	93.09	72.80	39.07
17/24	95.99	94.82	82.27	42.93
18/24	96.94	96.25	89.19	48.98
19/24	97.70	97.34	93.60	59.22
20/24	98.35	98.21	96.33	71.66
21/24	98.86	98.83	97.97	85.18
22/24	99.28	99.30	98.98	94.64
23/24	99.66	99.67	99.58	98.77
24/24	100.00	100.00	100.00	100.00

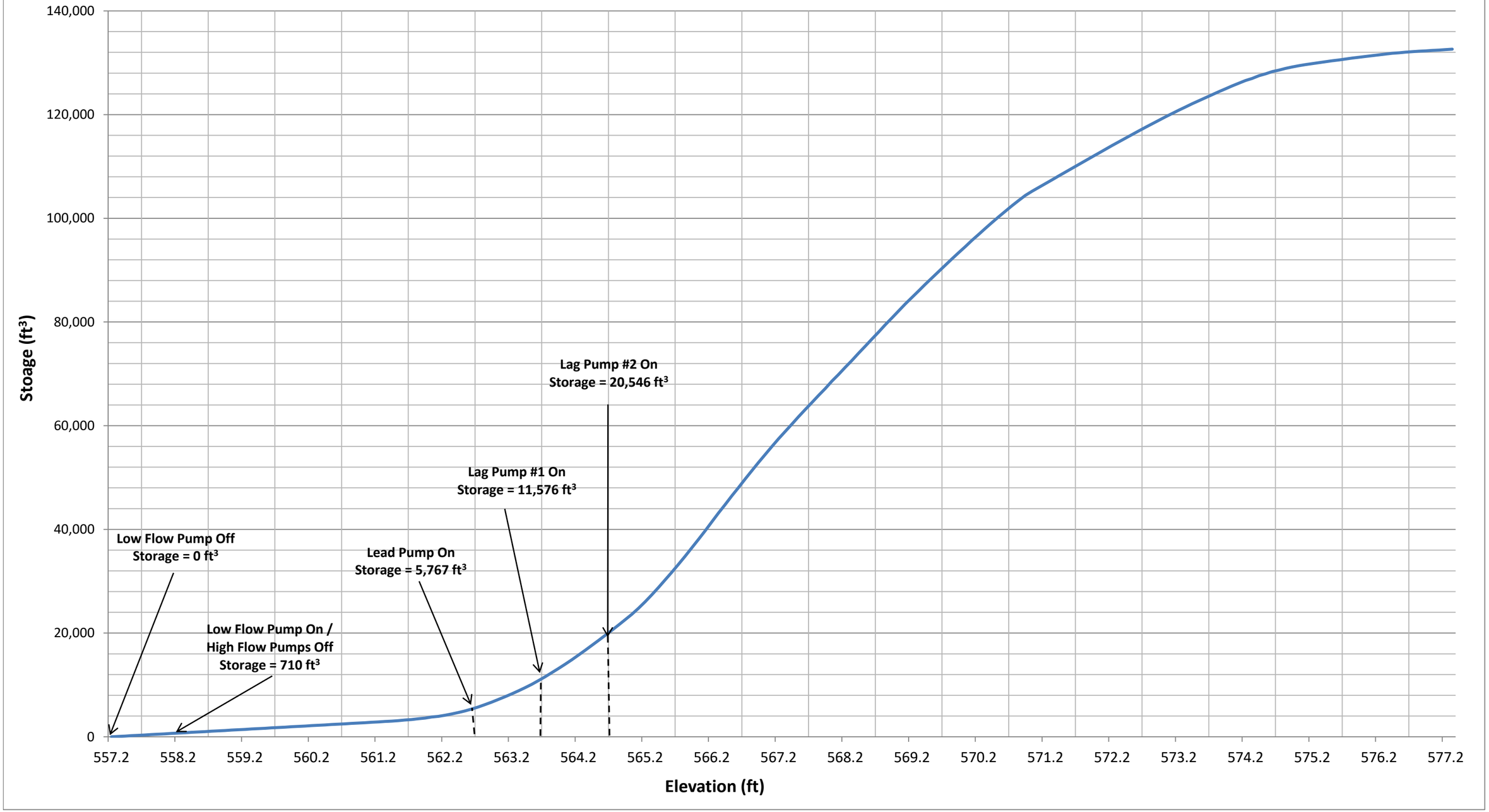
Section 2
Storage Volume Calculations and Plots

EXISTING CONDITIONS

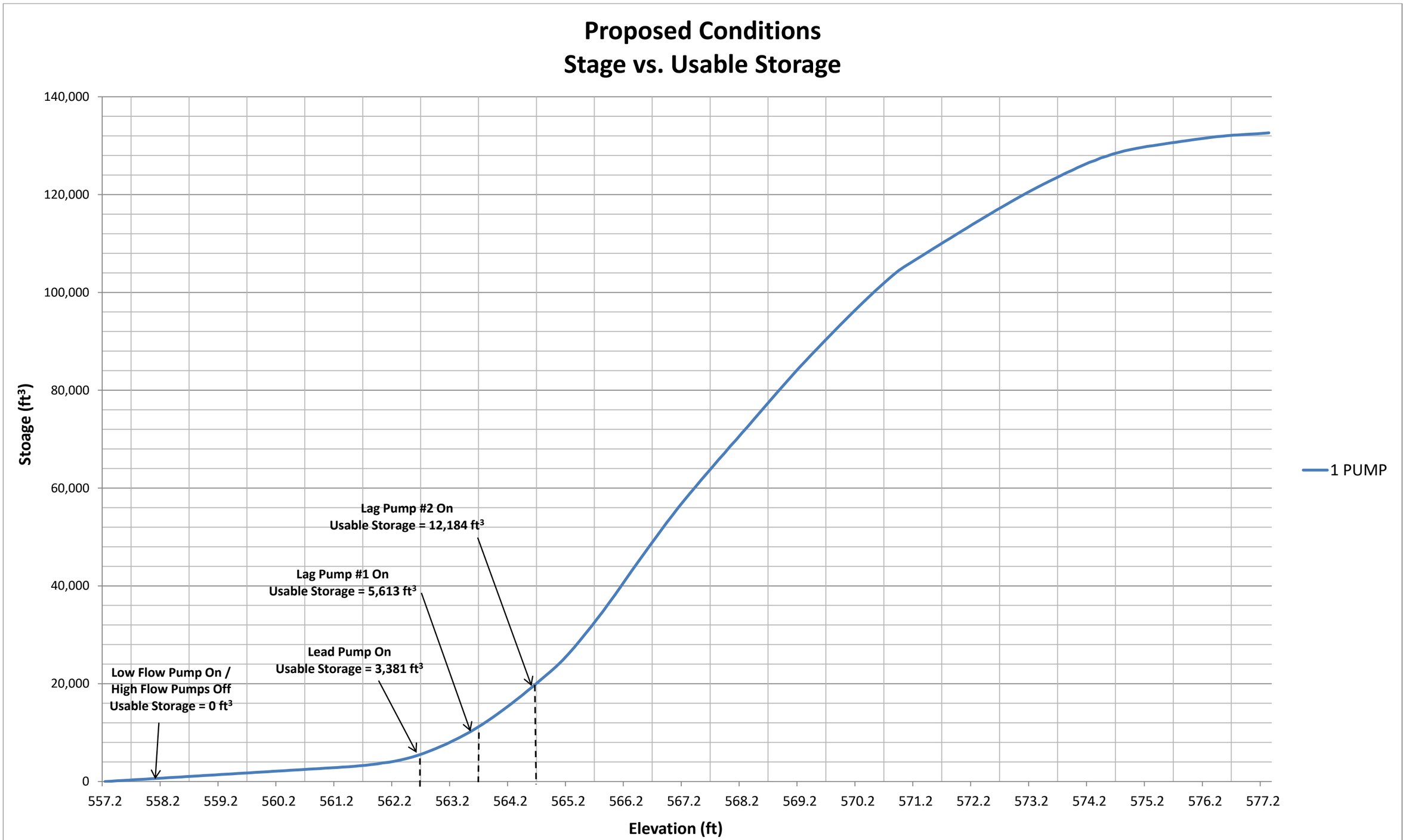
No changes to existing conditions storage

PROPOSED CONDITIONS

Proposed Conditions
Stage vs. Total Storage



Proposed Conditions
Stage vs. Usable Storage



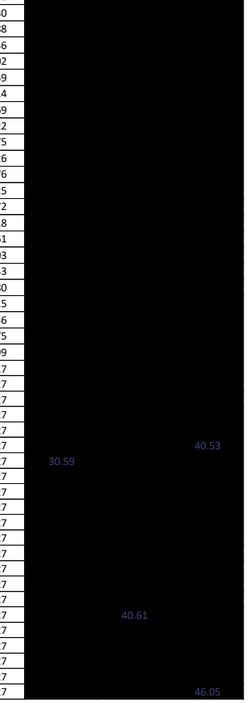
Active Water Stage Elevation (ft, NAVD88)
0.0

Active Water Stage Elevation Results Summary			
	Total System Volume	0	
	Sub-Total Volume 1	0	See Column BM for Component Parts
	Sub-Total Volume 2	0	See Column BM for Component Parts

TRUE	Collectors Volume	0
TRUE	Wet Well Volume	0
	Collectors Volume	0
	PS26 Wet Well Volume	0
	Main Drain Volume 1	0
TRUE	Main Drain Volume 2	0

Iteration Stage	*ITERATION PS26 Wet Well*	Stage	Total Storage	Sub-Total 1	Main Drain	Collectors	Wet Well	Sub-Total 2	Main Drain	Collectors	Wet Well
	0	**561.2**	0		0	0	0	0	0	0	0
	0	**561.3**	1		1	0	0	0	0	0	0
	0	**561.4**	13		13	0	0	0	0	0	0
	0	**561.5**	25		25	0	0	0	0	0	0
	0	**561.6**	69		69	0	0	0	0	0	0
	0	**561.7**	98		98	0	0	0	0	0	0
	0	**561.8**	184		184	0	0	0	0	0	0
	0	**561.9**	235		235	0	0	0	0	0	0
	0	**562.0**	369		369	0	0	0	0	0	0
	0	**562.1**	426		426	0	0	0	0	0	0
	0	**562.2**	560		560	0	0	0	0	0	0
	0	**562.3**	743		743	0	0	0	0	0	0
	0	**562.4**	931		931	0	0	0	0	0	0
	0	**562.5**	1,188		1,188	0	0	0	0	0	0
	0	**562.6**	1,489		1,489	0	0	0	0	0	0
	0	**562.7**	1,817		1,817	0	0	0	0	0	0
	0	**562.8**	2,197		2,197	0	0	0	0	0	0
	0	**562.9**	2,584		2,584	0	0	0	0	0	0
	0	**563.0**	3,040		3,040	0	0	0	0	0	0
	0	**563.1**	3,468		3,468	0	0	0	0	0	0
	0	**563.2**	3,958		3,958	0	0	0	0	0	0
	0	**563.3**	4,474		4,474	0	0	0	0	0	0
0	0	**563.4**	5,015	5,015	5,015	0	0	0	0	0	0
0	0	**563.5**	5,605	5,605	5,605	0	0	0	0	0	0
0	0	**563.6**	6,238	6,238	6,238	0	0	0	0	0	0
0	0	**563.7**	6,906	6,906	6,906	0	0	0	0	0	0
0	0	**563.8**	7,611	7,611	7,611	0	0	0	0	0	0
0	0	**563.9**	8,339	8,339	8,339	0	0	0	0	0	0
0	0	**564.0**	9,115	9,115	9,115	0	0	0	0	0	0
0	0	**564.1**	9,895	9,895	9,895	0	0	0	0	0	0
0	0	**564.2**	10,728	10,728	10,728	0	0	0	0	0	0
0	0	**564.3**	11,574	11,574	11,574	0	0	0	0	0	0
0	0	**564.4**	12,441	12,441	12,441	0	0	0	0	0	0
0	0	**564.5**	13,329	13,329	13,329	0	0	0	0	0	0
0	0	**564.6**	14,230	14,230	14,230	0	0	0	0	0	0
0	0	**564.7**	15,156	15,156	15,156	0	0	0	0	0	0
0	0	**564.8**	16,085	16,085	16,085	0	0	0	0	0	0
0	0	**564.9**	17,042	17,042	17,042	0	0	0	0	0	0
0	0	**565.0**	18,008	18,008	18,008	0	0	0	0	0	0
0	0	**565.1**	19,114	19,114	19,114	0	0	0	0	0	0
0	0	**565.2**	20,293	20,293	20,293	0	0	0	0	0	0
0	0	**565.3**	21,585	21,585	21,585	0	0	0	0	0	0
0	0	**565.4**	22,917	22,917	22,917	0	0	0	0	0	0
0	0	**565.5**	24,294	24,294	24,294	0	0	0	0	0	0
0	0	**565.6**	25,702	25,702	25,702	0	0	0	0	0	0
0	0	**565.7**	27,151	27,151	27,151	0	0	0	0	0	0
0	0	**565.8**	28,644	28,644	28,644	0	0	0	0	0	0
0	0	**565.9**	30,192	30,192	30,192	0	0	0	0	0	0
0	0	**566.0**	31,755	31,755	31,755	0	0	0	0	0	0
0	0	**566.1**	33,345	33,345	33,345	0	0	0	0	0	0
0	0	**566.2**	34,965	34,965	34,965	0	0	0	0	0	0
0	0	**566.3**	36,604	36,604	36,604	0	0	0	0	0	0
0	0	**566.4**	38,165	38,165	38,165	0	0	0	0	0	0
0	0	**566.5**	39,779	39,779	39,779	0	0	0	0	0	0
0	0	**566.6**	41,327	41,327	41,327	0	0	0	0	0	0
0	0	**566.7**	42,894	42,894	42,894	0	0	0	0	0	0
0	0	**566.8**	44,417	44,417	44,417	0	0	0	0	0	0
0	0	**566.9**	45,931	45,931	45,931	0	0	0	0	0	0
0	0	**567.0**	47,408	47,408	47,408	0	0	0	0	0	0
0	0	**567.1**	48,873	48,873	48,873	0	0	0	0	0	0
0	0	**567.2**	50,290	50,290	50,290	0	0	0	0	0	0
0	0	**567.3**	51,633	51,633	51,633	0	0	0	0	0	0
0	0	**567.4**	52,979	52,979	52,979	0	0	0	0	0	0
0	0	**567.5**	54,306	54,306	54,306	0	0	0	0	0	0
0	0	**567.6**	55,619	55,619	55,619	0	0	0	0	0	0
0	0	**567.7**	56,906	56,906	56,906	0	0	0	0	0	0
0	0	**567.8**	58,229	58,229	58,229	0	0	0	0	0	0
0	0	**567.9**	59,478	59,478	59,478	0	0	0	0	0	0
0	0	**568.0**	60,828	60,828	60,828	0	0	0	0	0	0
0	0	**568.1**	62,044	62,044	62,044	0	0	0	0	0	0
0	0	**568.2**	63,342	63,342	63,342	0	0	0	0	0	0
0	0	**568.3**	64,614	64,614	64,614	0	0	0	0	0	0

SIZE	5.00	4.50	4.00	3.50	3.00	7.00	6.50	6.00
COLUMN #	2	3	4	5	6	7	8	9
Depth	Circle Area	Circle Area	Circle Area	Circle Area	Circle Area	Circle Area	Circle Area	Circle Area
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.1	0.09	0.09	0.08	0.08	0.07	0.11	0.11	0.10
0.2	0.26	0.25	0.23	0.22	0.20	0.31	0.30	0.29
0.3	0.48	0.46	0.43	0.40	0.37	0.57	0.55	0.53
0.4	0.74	0.70	0.65	0.61	0.56	0.88	0.84	0.81
0.5	1.02	0.97	0.91	0.84	0.77	1.22	1.17	1.13
0.6	1.33	1.26	1.18	1.10	1.01	1.60	1.54	1.47
0.7	1.67	1.58	1.48	1.37	1.25	2.00	1.93	1.84
0.8	2.03	1.91	1.79	1.66	1.51	2.44	2.34	2.24
0.9	2.40	2.26	2.12	1.96	1.78	2.89	2.78	2.66
1.0	2.80	2.63	2.46	2.27	2.06	3.37	3.24	3.10
1.1	3.20	3.01	2.81	2.59	2.35	3.87	3.72	3.55
1.2	3.62	3.40	3.17	2.92	2.64	4.39	4.21	4.03
1.3	4.06	3.81	3.54	3.25	2.94	4.93	4.72	4.51
1.4	4.50	4.22	3.92	3.59	3.23	5.48	5.25	5.01
1.5	4.95	4.64	4.30	3.94	3.53	6.05	5.79	5.53
1.6	5.42	5.07	4.69	4.29	3.83	6.63	6.35	6.05
1.7	5.89	5.50	5.09	4.64	4.13	7.22	6.91	6.59
1.8	6.36	5.94	5.48	4.99	4.43	7.83	7.49	7.13
1.9	6.85	6.38	5.88	5.33	4.72	8.45	8.08	7.69
2.0	7.33	6.83	6.28	5.68	5.01	9.07	8.67	8.25
2.1	7.83	7.28	6.68	6.03	5.29	9.71	9.28	8.82
2.2	8.32	7.73	7.08	6.37	5.56	10.36	9.89	9.39
2.3	8.82	8.18	7.48	6.70	5.82	11.01	10.51	9.98
2.4	9.32	8.63	7.87	7.03	6.06	11.67	11.13	10.56
2.5	9.82	9.07	8.26	7.35	6.29	12.34	11.76	11.15
2.6	10.32	9.52	8.65	7.66	6.51	13.01	12.39	11.74
2.7	10.82	9.96	9.02	7.96	6.70	13.69	13.03	12.34
2.8	11.31	10.40	9.40	8.25	6.87	14.38	13.68	12.94
2.9	11.81	10.84	9.76	8.52	7.00	15.06	14.32	13.54
3.0	12.30	11.26	10.11	8.78	7.07	15.75	14.97	14.14
3.1	12.79	11.68	10.45	9.01	7.07	16.45	15.62	14.74
3.2	13.27	12.10	10.78	9.22	7.07	17.14	16.27	15.34
3.3	13.75	12.50	11.09	9.40	7.07	17.84	16.92	15.93
3.4	14.22	12.89	11.38	9.54	7.07	18.54	17.57	16.53
3.5	14.68	13.27	11.66	9.62	7.07	19.24	18.21	17.12
3.6	15.13	13.64	11.91	9.62	7.07	19.94	18.86	17.71
3.7	15.58	13.99	12.14	9.62	7.07	20.64	19.51	18.30
3.8	16.01	14.33	12.33	9.62	7.07	21.34	20.15	18.88
3.9	16.43	14.64	12.48	9.62	7.07	22.04	20.79	19.46
4.0	16.84	14.94	12.57	9.62	7.07	22.73	21.42	20.02
4.1	17.23	15.21	12.57	9.62	7.07	23.42	22.05	20.59
4.2	17.61	15.45	12.57	9.62	7.07	24.11	22.68	21.14
4.3	17.96	15.65	12.57	9.62	7.07	24.79	23.30	21.69
4.4	18.30	15.82	12.57	9.62	7.07	25.47	23.91	22.22
4.5	18.61	15.90	12.57	9.62	7.07	26.15	24.51	22.75
4.6	18.90	15.90	12.57	9.62	7.07	26.81	25.11	23.26
4.7	19.15	15.90	12.57	9.62	7.07	27.47	25.69	23.76
4.8	19.37	15.90	12.57	9.62	7.07	28.13	26.27	24.25
4.9	19.54	15.90	12.57	9.62	7.07	28.77	26.84	24.72
5.0	19.63	15.90	12.57	9.62	7.07	29.41	27.39	25.18
5.1	19.63	15.90	12.57	9.62	7.07	30.04	27.93	25.61
5.2	19.63	15.90	12.57	9.62	7.07	30.66	28.46	26.03
5.3	19.63	15.90	12.57	9.62	7.07	31.26	28.97	26.43
5.4	19.63	15.90	12.57	9.62	7.07	31.86	29.47	26.80
5.5	19.63	15.90	12.57	9.62	7.07	32.44	29.95	27.15
5.6	19.63	15.90	12.57	9.62	7.07	33.01	30.40	27.46
5.7	19.63	15.90	12.57	9.62	7.07	33.56	30.84	27.75
5.8	19.63	15.90	12.57	9.62	7.07	34.09	31.26	27.99
5.9	19.63	15.90	12.57	9.62	7.07	34.61	31.65	28.17
6.0	19.63	15.90	12.57	9.62	7.07	35.11	32.01	28.27
6.1	19.63	15.90	12.57	9.62	7.07	35.59	32.34	28.27
6.2	19.63	15.90	12.57	9.62	7.07	36.05	32.63	28.27
6.3	19.63	15.90	12.57	9.62	7.07	36.48	32.88	28.27
6.4	19.63	15.90	12.57	9.62	7.07	36.89	33.08	28.27
6.5	19.63	15.90	12.57	9.62	7.07	37.26	33.18	28.27
6.6	19.63	15.90	12.57	9.62	7.07	37.61	33.18	28.27
6.7	19.63	15.90	12.57	9.62	7.07	37.91	33.18	28.27
6.8	19.63	15.90	12.57	9.62	7.07	38.17	33.18	28.27
6.9	19.63	15.90	12.57	9.62	7.07	38.37	33.18	28.27
7.0	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.1	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.2	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.3	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.4	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.5	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.6	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.7	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.8	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
7.9	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27
8.0	19.63	15.90	12.57	9.62	7.07	38.48	33.18	28.27



	0	0	0	0	0	0	0	0

VOLUME CALCULATOR

Conduit ID	Conduit Size (ft)	Length (ft)	Up IE (NAVD88)	Down IE (NAVD88)	Up IE is above Down IE	Column # of Size	Size Output (ft)	Sizes Match	Water Stage Elevation (NAVD88)	Up Wetted Depth	Down Wetted Depth (ft)	Up Wetted Area (sf)	Down Wetted Area (sf)	Full Length (ft)	Full Volume (cf)	Empty Length (ft)	Partially-Full Length (ft)	Partially-Full Midsection Wetted Area (sf)	Partially-Full Average Wetted Area (sf)	Partially-Full Volume (cf)	**Total Volume (cf)**	Sub-System (ft)
1.0	5.00	478	562.06	561.17	TRUE	2	5.00	TRUE	0.0	-562.06	-561.17	0.00	0.00	0	0	478	0	0.00	0.00	0	**0**	1
2.0	5.00	507	562.37	562.06	TRUE	2	5.00	TRUE	0.0	-562.37	-562.06	0.00	0.00	0	0	507	0	0.00	0.00	0	**0**	1
3.0	5.00	339	563.06	562.37	TRUE	2	5.00	TRUE	0.0	-563.06	-562.37	0.00	0.00	0	0	339	0	0.00	0.00	0	**0**	1
4.0	4.50	423	563.52	563.21	TRUE	3	4.50	TRUE	0.0	-563.52	-563.21	0.00	0.00	0	0	423	0	0.00	0.00	0	**0**	1
5.0	4.50	266	564.17	563.52	TRUE	3	4.50	TRUE	0.0	-564.17	-563.52	0.00	0.00	0	0	266	0	0.00	0.00	0	**0**	1
6.0	4.00	261	565.33	564.27	TRUE	4	4.00	TRUE	0.0	-565.33	-564.27	0.00	0.00	0	0	261	0	0.00	0.00	0	**0**	1
7.0	3.50	415	565.79	565.53	TRUE	5	3.50	TRUE	0.0	-565.79	-565.53	0.00	0.00	0	0	415	0	0.00	0.00	0	**0**	1
8.0	3.00	386	573.94	573.34	TRUE	6	3.00	TRUE	0.0	-573.94	-573.34	0.00	0.00	0	0	386	0	0.00	0.00	0	**0**	1
9.0	3.00	400	577.66	576.79	TRUE	6	3.00	TRUE	0.0	-577.66	-576.79	0.00	0.00	0	0	400	0	0.00	0.00	0	**0**	1
10.0	6.00	1200	565.02	564.82	TRUE	9	6.00	TRUE	0.0	-565.02	-564.82	0.00	0.00	0	0	1200	0	0.00	0.00	0	**0**	1
11.0	4.00	100	566.00	565.02	TRUE	4	4.00	TRUE	0.0	-566.00	-565.02	0.00	0.00	0	0	100	0	0.00	0.00	0	**0**	1
12.0	7.00	887	568.13	567.19	TRUE	7	7.00	TRUE	0.0	-568.13	-567.19	0.00	0.00	0	0	887	0	0.00	0.00	0	**0**	1
13.0	5.00	126	570.19	570.07	TRUE	2	5.00	TRUE	0.0	-570.19	-570.07	0.00	0.00	0	0	126	0	0.00	0.00	0	**0**	1

Flow On/Off		Elevation (ft)	Wet Well Volume (ft^3)	Pipe Volume (ft^3)	Total Available Storage (ft^3)	Uniform Depth Volume (ft^3) - Pump 1												Uniform Depth Volume (ft^3) - Pump 2								Uniform Depth Volume (ft^3) - Pump 3								Total Usable Storage (ft^3)
Ascending	Descending					Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 9	Segment 10	Segment 12	Segment 11	Segment 13	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	
	Low flow off	557.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.3	69	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.4	139	0	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.5	209	0	209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.6	280	0	280	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.7	351	0	351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.8	422	0	422	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		557.9	494	0	494	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		558.0	566	0	566	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		558.1	638	0	638	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Low flow on	High flow off, low flow on	558.2	710	0	710	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		558.3	782	0	782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
		558.4	854	0	854	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144
		558.5	926	0	926	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
		558.6	998	0	998	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	288
		558.7	1,070	0	1,070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	360
		558.8	1,142	0	1,142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	432
		558.9	1,214	0	1,214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	504
		559.0	1,286	0	1,286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	576
		559.1	1,358	0	1,358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	648
		559.2	1,430	0	1,430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	720
		559.3	1,502	0	1,502	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	792
		559.4	1,574	0	1,574	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	864
		559.5	1,646	0	1,646	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	936
		559.6	1,718	0	1,718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,008
		559.7	1,790	0	1,790	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,080
		559.8	1,862	0	1,862	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,152
		559.9	1,934	0	1,934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,224
		560.0	2,006	0	2,006	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,296
		560.1	2,078	0	2,078	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,368
		560.2	2,150	0	2,150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,440
		560.3	2,222	0	2,222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,512
		560.4	2,294	0	2,294	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,584
		560.5	2,366	0	2,366	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,656
		560.6	2,438	0	2,438	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,728
		560.7	2,510	0	2,510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,800
		560.8	2,582	0	2,582	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,872
		560.9	2,654	0	2,654	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,944
		561.0	2,726	0	2,726	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,016
		561.1	2,798	0	2,798	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,088
		561.2	2,870	0	2,870	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,160
		561.3	2,942	1	2,943	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2,230
		561.4	3,014	13	3,027	14	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	14	0	0	0	0	0	0	2,303
		561.5	3,086	25	3,111	38	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	38	0	0	0	0	0	0	2,363
		561.6	3,158	69	3,227	79	0	0	0	0	0	0	0	0	0	0	0	0	79	0	0	0	0	0	0	0	79	0	0	0	0	0	0	2,438
		561.7	3,230	98	3,328	137	0	0	0	0	0	0	0	0	0	0	0	0	137	0	0	0	0	0	0	0	137	0	0	0	0	0	0	2,481
		561.8	3,302	184	3,486	211	0	0	0	0	0	0	0	0	0	0	0	0	211	0	0	0	0	0	0	0	211	0	0	0	0	0	0	2,565
		561.9	3,374	235	3,609	309	0	0	0	0	0	0	0	0	0	0	0	0	309	0	0	0	0	0	0	0	309	0	0	0	0	0	0	2,590
		562.0	3,446	369	3,815	434	0	0	0	0	0	0	0	0	0	0	0	0	434	0	0	0	0	0	0	0	434	0	0	0	0	0	0	2,671
		562.1	3,518	426	3,944	572	0	0	0	0	0	0	0	0	0	0	0	0	572	0	0	0	0	0	0	0	572	0	0	0	0	0	0	2,662
		562.2	3,590	560	4,150	686	8	0	0	0	0	0	0	0	0	0	0	0	686	8	0	0	0	0	0	0	686	8	0	0	0	0	0	2,746
		562.3	3,662	743	4,405	827	45	0	0	0	0	0	0	0	0	0	0	0	827	45	0	0	0	0	0	0	827	45	0	0	0	0	0	2,823
		562.4	3,734	931	4,665	983	122	0	0	0	0	0	0	0	0	0	0	0	983	122	0	0	0	0	0	0	983	122	0	0	0	0	0	2,850
		562.5	3,806	1,188	4,994	1,045	212	2	0	0	0	0	0	0	0	0	0	0	1,146	212	2	0	0	0	0	0	1,146	212	2	0	0	0	0	3,025
		562.6	3,878	1,489	5,367	1,114	329	13	0	0	0	0	0	0	0	0	0	0	1,321	329	13	0	0	0	0	0	1,321	329	13	0	0	0	0	3,201
Low flow off, lead pump on		562.7	3,950	1,817	5,767	1,184	457	35	0	0	0	0	0	0	0	0	0	0	1,502	457	35	0	0	0	0	0	1,502	457	35	0	0	0	0	3,381
		562.8	4,022	2,197	6,219	1,265	608	72	0	0	0	0	0	0	0	0	0	0	1,698	608	72	0	0	0	0	0	1,698	608	72	0	0	0	0	3,564
		562.9	4,094	2,584	6,678	1,356	778	125	0	0	0	0	0	0	0	0	0	0	1,895	778	125	0	0	0	0	0	1,895	778	125	0	0	0	0	3,709
		563.0	4,166	3,040	7,206	1,441	942	193	0	0	0	0	0	0	0	0	0	0	2,088	942	193	0	0	0	0	0	2,088	942	193	0	0	0	0	3,920
		563.1	4,238	3,468	7,706	1,532	1,125	281	0	0	0	0	0	0	0	0	0	0	2,304	1,125	281	0	0	0	0	0	2,304	1,125	281	0	0	0	0	4,058
		563.2	4,310	3,958	8,268	1,631	1,326	362	0	0	0	0	0	0	0	0	0	0	2,517	1,326	362	0	0	0	0	0	2,517	1,326	362	0	0	0	0	4,239
		563.3	4,382	4,474	8,856	1,737	1,528	451	6	0	0	0	0	0	0	0	0	0	2,738	1,528	451	6	0	0	0	0	2,738	1,528	451	6	0	0	0	4,424
		563.4	4,454	5,015	9,469	1,737	1,732	552	35	0	0	0	0	0	0	0	0	0	2,956	1,732	552	35	0	0	0	0	2,956	1,732	552	35	0	0	0	4,703
		563.5	4,526	5,605	10,131	1,737	1,949	666	95	0	0	0	0	0	0	0	0	0	3,063	1,949	666	95	0	0	0	0	3,181	1,949	666	95	0	0	0	4,974
		563.6	4,598	6,238	10,836	1,737	2,179	790	166	2	0	0	0	0	0	0	0	0	3,173	2,179	790	166	2	0	0	0	3,411	2,179	790	166	2	0	0	5,252
Lag pump 1 on		563.7	4,670	6,906	11,576	1,737	2,408	840	258	10	0	0	0	0	0	0	0	0	3,289	2,408	912	258	10	0	0	0	3,645	2,408	912	258	10	0	0	5,613
		563.8	4,742	7,611	12,353	1,737	2,632	897	364	26	0	0	0	0	0	0	0	0	3,394	2,632	1,044	364	26	0	0	0	3,870	2,632	1,044	364	26	0	0	5,987
		563.9	4,814	8,339	13,153	1,737	2,750	962	480	53	0	0	0	0	0	0	0	0	3,503	2,866	1,187	480	53	0	0	0	4,098	2,866	1,187	480	53	0	0	6,461
		564.0	4,886	9,115	14,001	1,737	2,872	1,022	608	92	0	0	0	0	0	0	0	0	3,628	3,121	1,329	608	92	0	0	0	4,342	3,121	1,329	608	92	0	0	6,960
		564.1	4,958	9,895	14,853	1,737	2,984	1,086	745	145	0	0	0	0	0	0	0	0	3,742	3,353	1,469	745	145	0	0	0	4,573	3,353	1,469	745	145	0	0	7,446
		564.2	5,030	10,728	15,758	1,737	2,984	1,157	887	209	0	0	0	0	0	0	0	0	3,857	3,591	1,616	887	209	0	0	0	4,804	3,591	1,616	887	209	0	0	8,074
		564.3	5,102	11,574	16,676	1,737	2,984	616	1,042	266	0	0	0	0	0	0	0	0	3,975	3,848	1,779	1,042	266	0	0	0	4,921	3,848	1,779	1,042	266	0	0	9,321
		564.4	5,174	12,441	17,615	1,737	2,984	616	1,196	333	1	0	0	0	0	0	0	0	3,975	4,095	1,932	1,196	333	1	0	0	5,040	4,095	1,932	1,196	333	1	0	10,038
		564.5	5,246	13,329	18,575	1,737	2,984	616	1,360	408	6	0	0	0	0	0	0	0	3,975	4,343	2,089	1,360	408	6	0	0	5,159	4,343	2,089	1,360	408	6	0	10,754
		564.6	5,318	14,230	19,548	1,737	2,984	616	1,534	494	17	0	0	0	0	0	0	0	3,975	4,594	2,168	1,534	494	17	0	0	5,278	4,594	2,251	1,534	494	17	0	11,456
Lag pump 2 on		564.7	5,390	15,156	20,546	1,737	2,984	616	1,700	581	34	0	0	0	0	0	0	0	3,975	4,846	2,249	1,700	581	34	0	0	5,397	4,846	2,416	1,700	581	34	0	12,184
		564.8	5,462	16,085	21,547	1,737	2,984	616	1,882	622	60	0	0	0	0	0	0	0	3,975	5,099	2,324	1,882	676	60	0	0	5,516	5,099	2,575	1,882	676	60	0	12,936
		564.9	5,534	17,042	22,576	1,737	2,984	616	1,972	662	92	0	0	0	29	0	0	0	3,975	5,351	2,401	2,062	772	92	0	0	5,635	5,351	2,737	2,062	772	92	0	13,774
		565.0	5,606	18,008	23,614	1,737	2,984	616	2,056	706	136	0	0	0	158	0	0	0	3,975	5,602	2,490	2,237	870	136	0	0	5,752	5,602	2,911	2,237	870	136	0	14,511
		565.1	5,678	19,114	24,792	1,737	2,984	616	2,153	752	186	0	0	0	378	0	0	0	3,975	5,851	2,571	2,427	976	186	0	0	5,867	5,851	3,076	2,427	976	186	0	15,276
		565.2	5,750	20,293	26,043	1,737	2,984	616	2,153	801	250	0	0	0	650	2	0	0	3,975	6,112	2,653	2,612	1,082	250	0	0	5,867	6,112	3,242	2,612	1,082	250	0	16,140
		565.3	5,822	21,585	27,407	1,737	2,984	616	2,153	854	319	0	0	0	989	7	0	0	3,975	6,237	2,653	2,799	1,192	319	0	0	5,867	6,355	3,408	2,799	1,192	319	0	17,038
		565.4	5,894	22,917	28,811	1,737	2,984	616	2,153	905	379	0	0	0	1,368	13	0	0	3,975	6,359	2,653	2,988	1,302	379	0	0	5,867	6,593	3,492	2,988	1,302	379	0	17,946
		565.5	5,966	24,294	30,260	1,737	2,984	616	2,153	905	398	0	0	0	1,770	23	0	0	3,975	6,495	2,653	3,179	1,416	445	0	0	5,867	6,854	3,576	3,179	1,416	445	0	18,964
		565.6	6,038	25,702	31,740	1,737	2,984	616	2,153	905	423	5	0	0	2,245	36	0	0	3,975	6,495	2,653	3,371	1,532	520	5	0	5,867	7,081	3,661	3,371	1,532	520	5	0	19,926
		565.7	6,110	27,151	33,261	1,737	2,984	616	2,153	905	453	31	0	0	2,690	53	0	0	3,975	6,495	2,653	3,552	1,585	596	31	0	5,867	7,314	3,746	3,552	1,646	596	31	0	20,929
		565.8	6,182	28,644	34,826	1,737	2,984	616	2,153	905	487	83	0	0	3,209	73	0	0	3,975	6,495	2,653	3,743	1,646	683	83	0	5,867	7,552	3,830	3,743	1,767	683	83	0	21,869
		565.9	6,254	30,192	36,446	1,737	2,984	616	2,153	905	521	143	0	0	3,726	98	0	0	3,975	6,495	2,653	3,933	1,702	767	143	0	5,867	7,780	3,914	3,933	1,884	767	143	0	22,853
		566.0	6,326	31,755	38,081	1,737	2,984	616	2,153	905	561	221	0	0	4,252	106	0	0	3,975	6,495	2,653	4,120	1,760	858	221	0	5,867	7,998	3,997	4,120	1,995	858	221	0	23,836
		566.1	6,398	33,345	39,743	1,737	2,984	616	2,153	905	599	312	0	0	4,853	111	0	0	3,975	6,495	2,653	4,304	1,819	947	312	0	5,867	8,216	3,997	4,304	2,113	947	312	0	24,763
		566.2	6,470	34,965	41,435	1,737	2,984	616	2,153	905	645	409	0	0	5,422	118	0	0	3,975	6,495	2,653	2,381	1,878	1,044	409	0	5,867	8,432	3,997	4,484	2,231	1,044	409	0	25,736
		566.3	6,542	36,604	43,146	1,737	2,984	616	2,153	905	686	517	0	0	6,019	128	0	0	3,975	6,495	2,653	2,475	1,938	1,138	517	0	5,867	8,631	3,997	4,679	2,356	1,138	517	0	26,691
		566.4	6,614	38,165	44,779	1,737	2,984	616	2,153	905	735	636	0	0	6,652	139	0	0	3,975	6,495	2,653	2,555	1,938	1,187	636	0	5,867	8,825	3,997	4,849	2,472	1,239	636	0	27,512

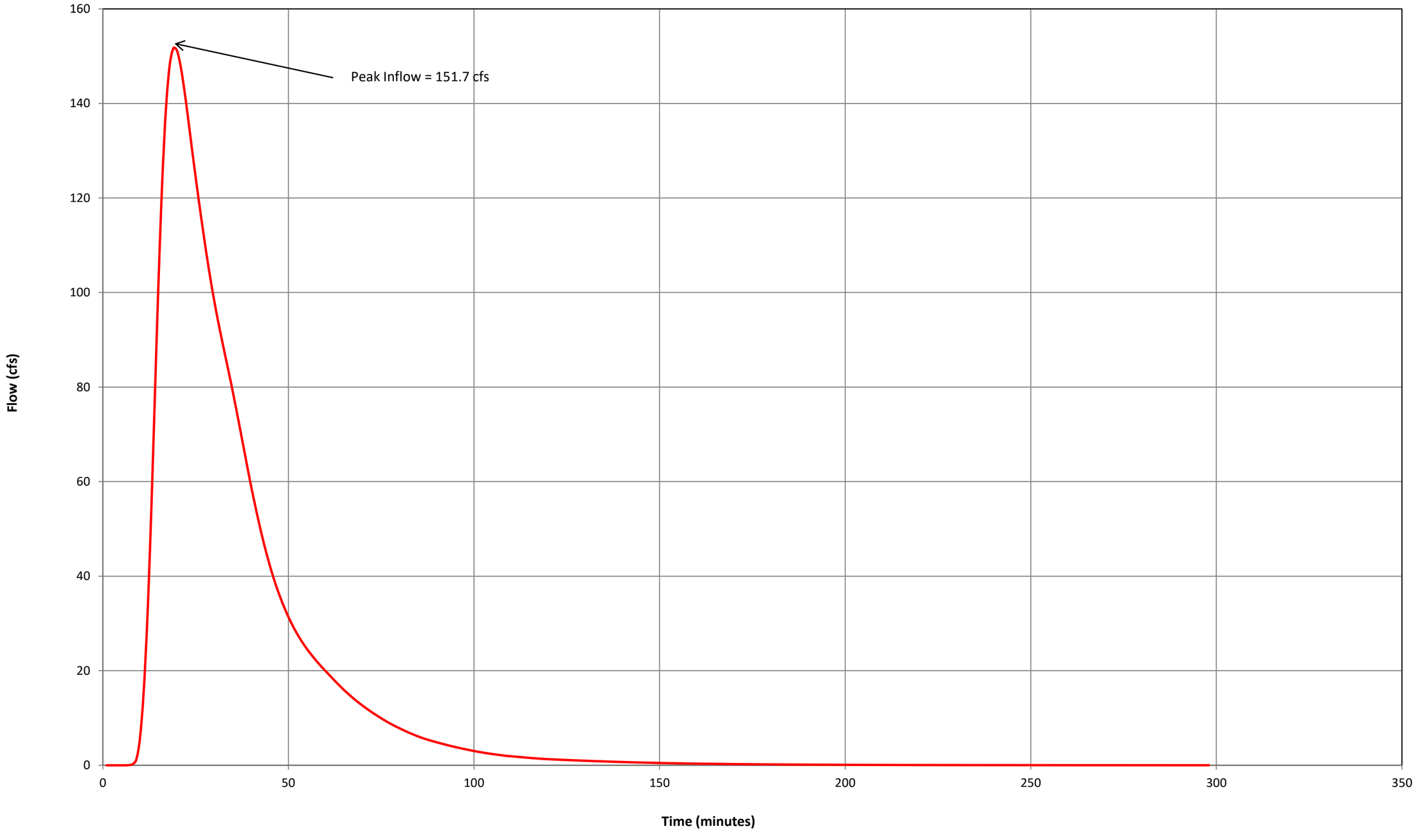
Flow On/Off		Elevation (ft)	Wet Well Volume (ft^3)	Pipe Volume (ft^3)	Total Available Storage (ft^3)	Uniform Depth Volume (ft^3) - Pump 1													Uniform Depth Volume (ft^3) - Pump 2								Uniform Depth Volume (ft^3) - Pump 3								Total Usable Storage (ft^3)
Ascending	Descending					Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 9	Segment 10	Segment 12	Segment 11	Segment 13	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	
		566.5	6,686	39,779	46,465	1,737	2,984	616	2,153	905	735	755	0	0	7,273	152	0	0	3,975	6,495	2,653	2,555	1,938	1,234	755	0	5,867	9,008	3,997	5,023	2,533	1,338	755	0	28,445
		566.6	6,758	41,327	48,085	1,737	2,984	616	2,153	905	735	879	0	0	7,916	165	0	0	3,975	6,495	2,653	2,555	1,938	1,283	879	0	5,867	9,187	3,997	5,198	2,593	1,438	879	0	29,285
		566.7	6,830	42,894	49,724	1,737	2,984	616	2,153	905	735	1,012	0	0	8,584	181	0	0	3,975	6,495	2,653	2,555	1,938	1,330	1,012	0	5,867	9,348	3,997	5,363	2,647	1,536	1,012	0	30,107
		566.8	6,902	44,417	51,319	1,737	2,984	616	2,153	905	735	1,147	0	0	9,228	195	0	0	3,975	6,495	2,653	2,555	1,938	1,383	1,147	0	5,867	9,495	3,997	5,527	2,706	1,643	1,147	0	30,909
		566.9	6,974	45,931	52,905	1,737	2,984	616	2,153	905	735	1,284	0	0	9,890	213	0	0	3,975	6,495	2,653	2,555	1,938	1,432	1,284	0	5,867	9,632	3,997	5,681	2,765	1,741	1,284	0	31,678
		567.0	7,046	47,408	54,454	1,737	2,984	616	2,153	905	735	1,418	0	0	10,222	213	0	0	3,975	6,495	2,653	2,555	1,938	1,483	1,418	0	5,867	9,747	3,997	5,837	2,829	1,843	1,418	0	32,761
		567.1	7,118	48,873	55,991	1,737	2,984	616	2,153	905	735	1,564	0	0	10,561	213	0	0	3,975	6,495	2,653	2,555	1,938	1,534	1,564	0	5,867	9,832	3,997	5,984	2,885	1,939	1,564	0	33,813
High water alarm		567.2	7,190	50,290	57,480	1,737	2,984	616	2,153	905	735	959	0	0	10,561	213	0	0	3,975	6,495	2,653	2,555	1,938	1,586	1,706	0	5,867	9,889	3,997	6,116	2,885	2,042	1,706	0	35,907
		567.3	7,262	51,633	58,895	1,737	2,984	616	2,153	905	735	1,035	0	0	10,561	213	6	0	3,975	6,495	2,653	2,555	1,938	1,638	1,850	0	5,867	9,932	3,997	6,245	2,885	2,139	1,850	0	37,240
		567.4	7,334	52,979	60,313	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	31	0	3,975	6,495	2,653	2,555	1,938	1,638	1,994	0	5,867	9,955	3,997	6,366	2,885	2,236	1,994	0	38,563
		567.5	7,406	54,306	61,712	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	84	0	3,975	6,495	2,653	2,555	1,938	1,638	2,139	0	5,867	9,955	3,997	6,469	2,885	2,330	2,139	0	39,909
		567.6	7,478	55,619	63,097	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	176	0	3,975	6,495	2,653	2,555	1,938	1,638	2,283	0	5,867	9,955	3,997	6,560	2,885	2,423	2,283	0	41,202
		567.7	7,550	56,906	64,456	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	300	0	3,975	6,495	2,653	2,555	1,938	1,638	2,425	0	5,867	9,955	3,997	6,632	2,885	2,510	2,425	0	42,437
		567.8	7,622	58,229	65,851	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	476	0	3,975	6,495	2,653	2,555	1,938	1,638	2,571	0	5,867	9,955	3,997	6,674	2,885	2,602	2,571	0	43,656
		567.9	7,694	59,478	67,172	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	699	0	3,975	6,495	2,653	2,555	1,938	1,638	2,706	0	5,867	9,955	3,997	6,708	2,885	2,683	2,706	0	44,754
		568.0	7,766	60,828	68,594	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	966	0	3,975	6,495	2,653	2,555	1,938	1,638	2,847	0	5,867	9,955	3,997	6,727	2,885	2,763	2,847	0	45,909
		568.1	7,838	62,044	69,882	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	1,291	0	3,975	6,495	2,653	2,555	1,938	1,638	2,983	0	5,867	9,955	3,997	6,727	2,885	2,833	2,983	0	46,872
		568.2	7,910	63,342	71,252	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	1,544	0	3,975	6,495	2,653	2,555	1,938	1,638	3,111	0	5,867	9,955	3,997	6,727	2,885	2,904	3,111	0	47,989
		568.3	7,974	64,614	72,588	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	1,856	0	3,975	6,495	2,653	2,555	1,938	1,638	1,713	0	5,867	9,955	3,997	6,727	2,885	2,960	3,240	0	49,013
		568.4	8,039	65,939	73,978	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,205	0	3,975	6,495	2,653	2,555	1,938	1,638	1,770	0	5,867	9,955	3,997	6,727	2,885	3,005	3,363	0	50,054
		568.5	8,104	67,234	75,338	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,572	0	3,975	6,495	2,653	2,555	1,938	1,638	1,821	0	5,867	9,955	3,997	6,727	2,885	3,047	3,474	0	51,047
		568.6	8,169	68,554	76,723	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,952	0	3,975	6,495	2,653	2,555	1,938	1,638	1,869	0	5,867	9,955	3,997	6,727	2,885	3,088	3,582	0	52,052
		568.7	8,234	69,843	78,077	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	3,411	0	3,975	6,495	2,653	2,555	1,938	1,638	1,913	0	5,867	9,955	3,997	6,727	2,885	3,125	3,683	0	52,947
		568.8	8,298	71,148	79,446	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	3,819	0	3,975	6,495	2,653	2,555	1,938	1,638	1,951	0	5,867	9,955	3,997	6,727	2,885	3,162	3,772	0	53,908
		568.9	8,363	72,427	80,790	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	4,007	0	3,975	6,495	2,653	2,555	1,938	1,638	1,980	0	5,867	9,955	3,997	6,727	2,885	3,195	3,849	0	55,064
		569.0	8,428	73,707	82,135	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	4,215	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,223	3,909	0	56,201
		569.1	8,493	74,976	83,469	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	4,419	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,249	3,947	0	57,331
		569.2	8,558	76,195	84,753	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	4,641	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,269	3,977	0	58,393
		569.3	8,622	77,384	86,006	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	4,879	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	59,408
		569.4	8,687	78,571	87,258	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	5,103	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	60,436
		569.5	8,752	79,742	88,494	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	5,339	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	61,436
		569.6	8,817	80,915	89,732	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	65,089
		569.7	8,882	82,073	90,955	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	66,312
		569.8	8,946	83,224	92,170	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	67,527
		569.9	9,011	84,363	93,374	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	68,731
		570.0	9,076	85,488	94,564	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	69,921
		570.1	9,141	86,597	95,738	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	0	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	71,095
		570.2	9,206	87,691	96,897	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	6	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	72,248
		570.3	9,270	88,774	98,044	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	23	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	73,378
		570.4	9,335	89,844	99,179	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	47	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	74,489
		570.5	9,400	90,891	100,291	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	77	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	75,571
		570.6	9,465	91,910	101,375	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	112	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	76,620
		570.7	9,530	92,893	102,423	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	148	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	77,632
		570.8	9,594	93,831	103,425	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	188	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	78,594
		570.9	9,659	94,763	104,422	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	233	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	79,546
		571.0	9,724	95,499	105,223	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	279	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	80,301
		571.1	9,789	96,175	105,964	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	326	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	80,995
		571.2	9,854	96,844	106,698	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	376	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	81,679
		571.3	9,918	97,514	107,432	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	430	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	82,359
		571.4	9,983	98,186	108,169	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	484	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	83,042
		571.5	10,048	98,857	108,905	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	539	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	83,723
		571.6	10,113	99,530	109,643	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	596	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	84,404
		571.7	10,178	100,200	110,378	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	656	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	85,079
		571.8	10,242	100,869	111,111	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	85,782
		571.9	10,307	101,537	111,844	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	86,515
		572.0	10,372	102,201	112,573	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	87,244
		572.1	10,437	102,862	113,299	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	87,970
		572.2	10,502	103,518	114,020	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	88,691
		572.3	10,566	104,170	114,736	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	89,407
		572.4	10,631	104,817	115,448	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	90,119
		572.5	10,696	105,457	116,153	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	90,824
		572.6	10,761	106,090	116,851	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	91,522
		572.7	10,826	106,715	117,541	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	92,212
		572.8	10,890	107,331	118,221	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	92,892
		572.9	10,955	107,939	118,894	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	93,565
		573.0	11,020	108,536	119,556	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	94,227
		573.1	11,085	109,121	120,206	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	94,877
		573.2	11,150	109,695	120,845	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	95,516
		573.3	11,214	110,255	121,469	1,737	2,984	616	2,153	905	735	1,105	0	0	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	0	5,867	9,955	3,997	6,727	2,885	3,280	3,993	0	96,140
		573.4	11,279	110,802	122,081	1,737	2,984	616	2,153	905	735	1,105	2	2	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2	96,748
		573.5	11,344	111,334	122,678	1,737	2,984	616	2,153	905	735	1,105	13	13	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	13	5,867	9,955	3,997	6,727	2,885	3,280	3,993	13	97,323
		573.6	11,409	111,860	123,269	1,737	2,984	616	2,153	905	735	1,105	36	37	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	36	5,867	9,955	3,997	6,727	2,885	3,280	3,993	36	97,867
		573.7	11,474	112,366	123,840	1,737	2,984	616	2,153	905	735	1,105	73	75	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	73	5,867	9,955	3,997	6,727	2,885	3,280	3,993	73	98,363
		573.8	11,538	112,884	124,422	1,737	2,984	616	2,153	905	735	1,105	125	129	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	125	5,867	9,955	3,997	6,727	2,885	3,280	3,993	125	98,839
		573.9	11,603	113,364	124,967	1,737	2,984	616	2,153	905	735	1,105	193	200	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	193	5,867	9,955	3,997	6,727	2,885	3,280	3,993	193	99,245
		574.0	11,668	113,856	125,524	1,737	2,984	616	2,153	905	735	1,105	257	266	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	257	5,867	9,955	3,997	6,727	2,885	3,280	3,993	257	99,672
		574.1	11,733	114,326	126,059	1,737	2,984	616	2,153	905	735	1,105	330	342	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	330	5,867	9,955	3,997	6,727	2,885	3,280	3,993	330	100,058
		574.2	11,798	114,784	126,582	1,737	2,984	616	2,153	905	735	1,105	416	431	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	416	5,867	9,955	3,997	6,727	2,885	3,280	3,993	416	100,406
		574.3	11,862	115,112	126,974	1,737	2,984	616	2,153	905	735	1,105	506	525	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	506	5,867	9,955	3,997	6,727	2,885	3,280	3,993	506	100,614
		574.4	11,927	115,585	127,512	1,737	2,984	616	2,153	905	735	1,105	602	624	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	602	5,867	9,955	3,997	6,727	2,885	3,280	3,993	602	100,957
		574.5	11,992	115,866	127,858	1,737	2,984	616	2,153	905	735	1,105	703	729	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	703	5,867	9,955	3,997	6,727	2,885	3,280	3,993	703	101,097
		574.6	12,057	116,233	128,290	1,737	2,984	616	2,153	905	735	1,105	808	837	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	808	5,867	9,955	3,997	6,727	2,885	3,280	3,993	808	101,316
		574.7	12,122	116,464	128,586	1,737	2,984	616	2,153	905	735	1,105	917	950	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	917	5,867	9,955	3,997	6,727	2,885	3,280	3,993	917	101,390
		574.8	12,186	116,737	128,923	1,737	2,984	616	2,153	905	735	1,105	1,026	1,064	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,026	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,026	101,504
		574.9	12,251	116,925	129,176	1,737	2,984	616	2,153	905	735	1,105	1,139	1,181	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,139	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,139	101,527
		575.0	12,316	117,114	129,430	1,737	2,984	616	2,153	905	735	1,105	1,195	1,238	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,251	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,251	101,668
		575.1	12,381	117,264	129,645	1,737	2,984	616	2,153	905	735	1,105	1,252	1,298	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,363	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,363	101,766
		575.2	12,446	117,389	129,835	1,737	2,984	616	2,153	905	735	1,105	1,307	1,354	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,475	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,475	101,845
50-yr Max HWL		575.3	12,510	117,504	130,014	1,737	2,984	616	2,153	905	735	1,105	1,367	1,417	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,591	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,591	101,901

Flow On/Off		Elevation (ft)	Wet Well Volume (ft^3)	Pipe Volume (ft^3)	Total Available Storage (ft^3)	Uniform Depth Volume (ft^3) - Pump 1												Uniform Depth Volume (ft^3) - Pump 2								Uniform Depth Volume (ft^3) - Pump 3								Total Usable Storage (ft^3)
Ascending	Descending					Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 9	Segment 10	Segment 12	Segment 11	Segment 13	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Segment 7	Segment 8	
		575.4	12,575	117,619	130,194	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,700	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,700	103,354
		575.5	12,640	117,732	130,372	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,813	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,813	103,532
		575.6	12,705	117,844	130,549	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	1,922	5,867	9,955	3,997	6,727	2,885	3,280	3,993	1,922	103,709
		575.7	12,770	117,953	130,723	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,023	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,023	103,883
		575.8	12,834	118,060	130,894	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,125	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,125	104,054
		575.9	12,899	118,163	131,062	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,222	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,222	104,222
		576.0	12,964	118,262	131,226	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,312	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,312	104,386
		576.1	13,029	118,356	131,385	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,397	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,397	104,545
		576.2	13,094	118,444	131,538	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,474	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,474	104,698
		576.3	13,158	118,524	131,682	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,535	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,535	104,842
		576.4	13,223	118,610	131,833	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,579	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,579	104,993
		576.5	13,288	118,648	131,936	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,621	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,621	105,096
		576.6	13,353	118,704	132,057	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,658	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,658	105,217
		576.7	13,418	118,723	132,141	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686	3,975	6,495	2,653	2,555	1,938	1,638	1,997	2,690	5,867	9,955	3,997	6,727	2,885	3,280	3,993	2,690	105,301
		576.8	13,482	118,746	132,228	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686																	105,388
		576.9	13,547	118,753	132,300	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686																	105,460
		577.0	13,612	118,761	132,373	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686																	105,533
		577.1	13,677	118,769	132,446	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686																	105,606
		577.2	13,742	118,796	132,538	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686																	105,698
100-yr Max HWL		577.3	13,806	118,815	132,621	1,737	2,984	616	2,153	905	735	1,105	742	769	10,561	213	2,924	686																	105,781

Section 3
Mass Routing Calculations and Mass Curve Plot

EXISTING CONDITIONS MASS ROUTING

Inflow Hydrograph
B75 50-Year, 30-Minute Design Storm



B75 50-Year, 30-Minute Design Storm Event

	LOW FLOW	LEAD	LAG #1	LAG #2	STAND-BY
Pump 'ON' Volume (ft^3)	710	5,767	11,576	20,546	31,010
Pump 'ON' Elevation (ft)	558.2	562.7	563.7	564.7	565.7
Pump Flow Rate (cfs)	6.0	29.6	29.6	29.6	29.6

	LOW FLOW	LEAD	LAG #1	LAG #2	STAND-BY
Pump 'OFF' Volume (ft^3)	0	710	710	710	0
Pump 'OFF' Elevation (ft)	557.2	558.2	558.2	558.2	556.2

1

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
1	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
2	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
3	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
4	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
5	0.001				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
6	0.008				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	2													
7	0.045				2	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	8													
8	0.218				10	0	0	0	0	0	0	10	0	0	0	0	0
		1	60	42													
9	1.176				52	0	0	0	0	0	0	52	0	0	0	0	0
		3.430	60	205.77													
10	5.683				257	0	0	0	0	0	0	257	0	0	0	0	0
		10.570	60	634.20													
11	15.457				892	360	0	0	0	0	360	532	1	0	0	0	0
		23.29	60	1,397.28													
12	31.119				2,289	720	0	0	0	0	720	1,569	1	0	0	0	0
		41.82	60	2,509.47													
13	52.53				4,798	1,080	0	0	0	0	1,080	3,718	1	0	0	0	0
		65.09	60	3,905.10													
14	77.64				8,703	1,080	1,776	0	0	0	2,856	5,847	0	1	0	0	0
		89.97	60	5,398.26													
15	102.302				14,102	1,080	3,552	0	0	0	4,632	9,470	0	1	0	0	0
		112.84	60	6,770.58													
16	123.384				20,872	1,080	5,328	1,776	0	0	8,184	12,688	0	1	1	0	0
		131.10	60	7,865.85													
17	138.811				28,738	1,080	7,104	3,552	0	0	11,736	17,002	0	1	1	0	0
		143.42	60	8,605.02													
18	148.023				37,343	1,080	8,880	5,328	1,776	0	17,064	20,279	0	1	1	1	0
		149.85	60	8,991.12													
19	151.681				46,334	1,080	10,656	7,104	3,552	0	22,392	23,942	0	1	1	1	0
		151.40	60	9,084.09													
20	151.122				55,418	1,080	12,432	8,880	5,328	0	27,720	27,698	0	1	1	1	0

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		149.42	60	8,965.14													
21	147.716				64,383	1,080	14,208	10,656	7,104	1,776	34,824	29,559	0	1	1	1	1
		145.16	60	8,709.84													
22	142.612				73,093	1,080	15,984	12,432	8,880	3,552	41,928	31,165	0	1	1	1	1
		139.64	60	8,378.46													
23	136.67				81,472	1,080	17,760	14,208	10,656	5,328	49,032	32,440	0	1	1	1	1
		133.58	60	8,014.86													
24	130.492				89,487	1,080	19,536	15,984	12,432	7,104	56,136	33,351	0	1	1	1	1
		127.47	60	7,648.08													
25	124.444				97,135	1,080	21,312	17,760	14,208	8,880	63,240	33,895	0	1	1	1	1
		121.54	60	7,292.46													
26	118.638				104,427	1,080	23,088	19,536	15,984	10,656	70,344	34,083	0	1	1	1	1
		115.86	60	6,951.66													
27	113.084				111,379	1,080	24,864	21,312	17,760	12,432	77,448	33,931	0	1	1	1	1
		110.43	60	6,625.68													
28	107.772				118,005	1,080	26,640	23,088	19,536	14,208	84,552	33,453	0	1	1	1	1
		105.31	60	6,318.36													
29	102.84				124,323	1,080	28,416	24,864	21,312	15,984	91,656	32,667	0	1	1	1	1
		100.58	60	6,034.59													
30	98.313				130,357	1,080	30,192	26,640	23,088	17,760	98,760	31,597	0	1	1	1	1
		96.24	60	5,774.22													
31	94.161				136,132	1,080	31,968	28,416	24,864	19,536	105,864	30,268	0	1	1	1	1
		92.22	60	5,533.41													
32	90.286				141,665	1,080	33,744	30,192	26,640	21,312	112,968	28,697	0	1	1	1	1
		88.42	60	5,305.41													
33	86.561				146,971	1,080	35,520	31,968	28,416	23,088	120,072	26,899	0	1	1	1	1
		84.72	60	5,083.14													
34	82.877				152,054	1,080	37,296	33,744	30,192	24,864	127,176	24,878	0	1	1	1	1
		80.97	60	4,858.41													
35	79.07				156,912	1,080	39,072	35,520	31,968	26,640	134,280	22,632	0	1	1	1	1
		77.09	60	4,625.16													
36	75.102				161,537	1,080	40,848	37,296	33,744	28,416	141,384	20,153	0	1	1	1	1
		73.07	60	4,384.14													
37	71.036				165,921	1,080	42,624	39,072	35,520	30,192	148,488	17,433	0	1	1	1	1
		68.99	60	4,139.16													
38	66.936				170,061	1,080	44,400	40,848	37,296	31,968	155,592	14,469	0	1	1	1	1
		64.89	60	3,893.16													
39	62.836				173,954	1,080	46,176	42,624	39,072	33,744	162,696	11,258	0	1	1	1	1
		60.84	60	3,650.28													
40	58.84				177,604	1,080	47,952	44,400	40,848	35,520	169,800	7,804	0	1	1	1	1
		56.97	60	3,418.11													
41	55.097				181,022	1,080	49,728	46,176	42,624	37,296	176,904	4,118	0	1	1	1	1
		53.31	60	3,198.57													
42	51.522				184,221	1,080	51,504	47,952	44,400	39,072	184,008	213	0	1	1	1	1
		49.85	60	2,991.00													
43	48.178				187,212	1,080	53,280	49,728	46,176	40,848	191,112	0	0	1	1	1	1
		46.63	60	2,797.95													
44	45.087				190,010	1,080	53,280	49,728	46,176	40,848	191,112	0	0	0	0	0	0
		43.66	60	2,619.81													
45	42.24				192,629	1,440	53,280	49,728	46,176	40,848	191,472	1,157	1	0	0	0	0
		40.93	60	2,455.95													

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
46	39.625				195,085	1,800	53,280	49,728	46,176	40,848	191,832	3,253	1	0	0	0	0
		38.44	60	2,306.46													
47	37.257				197,392	2,160	53,280	49,728	46,176	40,848	192,192	5,200	1	0	0	0	0
		36.20	60	2,171.73													
48	35.134				199,564	2,160	55,056	49,728	46,176	40,848	193,968	5,596	0	1	0	0	0
		34.15	60	2,049.27													
49	33.175				201,613	2,160	56,832	49,728	46,176	40,848	195,744	5,869	0	1	0	0	0
		32.28	60	1,936.86													
50	31.387				203,550	2,160	58,608	49,728	46,176	40,848	197,520	6,030	0	1	0	0	0
		30.57	60	1,834.47													
51	29.762				205,384	2,160	60,384	49,728	46,176	40,848	199,296	6,088	0	1	0	0	0
		29.03	60	1,741.56													
52	28.29				207,126	2,160	62,160	49,728	46,176	40,848	201,072	6,054	0	1	0	0	0
		27.62	60	1,657.29													
53	26.953				208,783	2,160	63,936	49,728	46,176	40,848	202,848	5,935	0	1	0	0	0
		26.34	60	1,580.46													
54	25.729				210,363	2,160	65,712	49,728	46,176	40,848	204,624	5,739	0	1	0	0	0
		25.17	60	1,509.99													
55	24.604				211,873	2,160	67,488	49,728	46,176	40,848	206,400	5,473	0	1	0	0	0
		24.08	60	1,445.07													
56	23.565				213,319	2,160	69,264	49,728	46,176	40,848	208,176	5,143	0	1	0	0	0
		23.08	60	1,384.62													
57	22.589				214,703	2,160	71,040	49,728	46,176	40,848	209,952	4,751	0	1	0	0	0
		22.13	60	1,327.59													
58	21.664				216,031	2,160	72,816	49,728	46,176	40,848	211,728	4,303	0	1	0	0	0
		21.22	60	1,273.11													
59	20.773				217,304	2,160	74,592	49,728	46,176	40,848	213,504	3,800	0	1	0	0	0
		20.36	60	1,221.54													
60	19.945				218,525	2,160	76,368	49,728	46,176	40,848	215,280	3,245	0	1	0	0	0
		19.53	60	1,171.86													
61	19.117				219,697	2,160	78,144	49,728	46,176	40,848	217,056	2,641	0	1	0	0	0
		18.70	60	1,122.27													
62	18.292				220,820	2,160	79,920	49,728	46,176	40,848	218,832	1,988	0	1	0	0	0
		17.88	60	1,072.95													
63	17.473				221,892	2,160	81,696	49,728	46,176	40,848	220,608	1,284	0	1	0	0	0
		17.08	60	1,024.53													
64	16.678				222,917	2,160	83,472	49,728	46,176	40,848	222,384	533	0	1	0	0	0
		16.30	60	977.82													
65	15.916				223,895	2,520	83,472	49,728	46,176	40,848	222,744	1,151	1	0	0	0	0
		15.55	60	933.21													
66	15.191				224,828	2,880	83,472	49,728	46,176	40,848	223,104	1,724	1	0	0	0	0
		14.84	60	890.67													
67	14.498				225,719	3,240	83,472	49,728	46,176	40,848	223,464	2,255	1	0	0	0	0
		14.17	60	849.93													
68	13.833				226,569	3,600	83,472	49,728	46,176	40,848	223,824	2,745	1	0	0	0	0
		13.52	60	811.14													
69	13.205				227,380	3,960	83,472	49,728	46,176	40,848	224,184	3,196	1	0	0	0	0
		12.91	60	774.45													
70	12.61				228,154	4,320	83,472	49,728	46,176	40,848	224,544	3,610	1	0	0	0	0
		12.32	60	739.44													
71	12.038				228,894	4,680	83,472	49,728	46,176	40,848	224,904	3,990	1	0	0	0	0

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		11.76	60	705.75													
72	11.487				229,599	5,040	83,472	49,728	46,176	40,848	225,264	4,335	1	0	0	0	0
		11.22	60	673.32													
73	10.957				230,273	5,400	83,472	49,728	46,176	40,848	225,624	4,649	1	0	0	0	0
		10.70	60	642.03													
74	10.444				230,915	5,760	83,472	49,728	46,176	40,848	225,984	4,931	1	0	0	0	0
		10.20	60	611.76													
75	9.948				231,527	6,120	83,472	49,728	46,176	40,848	226,344	5,183	1	0	0	0	0
		9.71	60	582.57													
76	9.471				232,109	6,480	83,472	49,728	46,176	40,848	226,704	5,405	1	0	0	0	0
		9.24	60	554.46													
77	9.011				232,664	6,840	83,472	49,728	46,176	40,848	227,064	5,600	1	0	0	0	0
		8.80	60	528.03													
78	8.59				233,192	6,840	85,248	49,728	46,176	40,848	228,840	4,352	0	1	0	0	0
		8.39	60	503.64													
79	8.198				233,695	6,840	87,024	49,728	46,176	40,848	230,616	3,079	0	1	0	0	0
		8.00	60	480.21													
80	7.809				234,175	6,840	88,800	49,728	46,176	40,848	232,392	1,783	0	1	0	0	0
		7.62	60	457.20													
81	7.431				234,633	6,840	90,576	49,728	46,176	40,848	234,168	465	0	1	0	0	0
		7.25	60	434.97													
82	7.068				235,068	7,200	90,576	49,728	46,176	40,848	234,528	540	1	0	0	0	0
		6.90	60	413.76													
83	6.724				235,481	7,560	90,576	49,728	46,176	40,848	234,888	593	1	0	0	0	0
		6.56	60	393.69													
84	6.399				235,875	7,920	90,576	49,728	46,176	40,848	235,248	627	1	0	0	0	0
		6.25	60	374.79													
85	6.094				236,250	8,280	90,576	49,728	46,176	40,848	235,608	642	1	0	0	0	0
		5.95	60	356.97													
86	5.805				236,607	8,640	90,576	49,728	46,176	40,848	235,968	639	1	0	0	0	0
		5.67	60	340.41													
87	5.542				236,947	9,000	90,576	49,728	46,176	40,848	236,328	619	1	0	0	0	0
		5.42	60	325.35													
88	5.303				237,273	9,360	90,576	49,728	46,176	40,848	236,688	585	1	0	0	0	0
		5.19	60	311.37													
89	5.076				237,584	9,720	90,576	49,728	46,176	40,848	237,048	536	1	0	0	0	0
		4.97	60	297.99													
90	4.857				237,882	10,080	90,576	49,728	46,176	40,848	237,408	474	1	0	0	0	0
		4.75	60	285.06													
91	4.645				238,167	10,440	90,576	49,728	46,176	40,848	237,768	399	1	0	0	0	0
		4.54	60	272.52													
92	4.439				238,439	10,800	90,576	49,728	46,176	40,848	238,128	311	1	0	0	0	0
		4.34	60	260.34													
93	4.239				238,700	11,160	90,576	49,728	46,176	40,848	238,488	212	1	0	0	0	0
		4.14	60	248.55													
94	4.046				238,948	11,520	90,576	49,728	46,176	40,848	238,848	100	1	0	0	0	0
		3.95	60	237.18													
95	3.86				239,186	11,880	90,576	49,728	46,176	40,848	239,208	0	1	0	0	0	0
		3.77	60	226.20													
96	3.68				239,412	12,240	90,576	49,728	46,176	40,848	239,568	0	1	0	0	0	0
		3.59	60	215.61													

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
97	3.507				239,627	12,240	90,576	49,728	46,176	40,848	239,568	59	0	0	0	0	0
		3.42	60	205.41													
98	3.34				239,833	12,240	90,576	49,728	46,176	40,848	239,568	265	0	0	0	0	0
		3.26	60	195.63													
99	3.181				240,028	12,240	90,576	49,728	46,176	40,848	239,568	460	0	0	0	0	0
		3.10	60	186.24													
100	3.027				240,215	12,240	90,576	49,728	46,176	40,848	239,568	647	0	0	0	0	0
		2.95	60	177.24													
101	2.881				240,392	12,600	90,576	49,728	46,176	40,848	239,928	464	1	0	0	0	0
		2.81	60	168.72													
102	2.743				240,561	12,960	90,576	49,728	46,176	40,848	240,288	273	1	0	0	0	0
		2.68	60	160.71													
103	2.614				240,721	13,320	90,576	49,728	46,176	40,848	240,648	73	1	0	0	0	0
		2.55	60	153.21													
104	2.493				240,875	13,680	90,576	49,728	46,176	40,848	241,008	0	1	0	0	0	0
		2.44	60	146.19													
105	2.38				241,021	14,040	90,576	49,728	46,176	40,848	241,368	0	1	0	0	0	0
		2.33	60	139.56													
106	2.272				241,160	14,040	90,576	49,728	46,176	40,848	241,368	0	0	0	0	0	0
		2.22	60	133.23													
107	2.169				241,294	14,040	90,576	49,728	46,176	40,848	241,368	0	0	0	0	0	0
		2.12	60	127.20													
108	2.071				241,421	14,040	90,576	49,728	46,176	40,848	241,368	53	0	0	0	0	0
		2.02	60	121.47													
109	1.978				241,542	14,040	90,576	49,728	46,176	40,848	241,368	174	0	0	0	0	0
		1.95	60	116.73													
110	1.913				241,659	14,040	90,576	49,728	46,176	40,848	241,368	291	0	0	0	0	0
		1.88	60	112.71													
111	1.844				241,772	14,040	90,576	49,728	46,176	40,848	241,368	404	0	0	0	0	0
		1.81	60	108.51													
112	1.773				241,880	14,040	90,576	49,728	46,176	40,848	241,368	512	0	0	0	0	0
		1.74	60	104.25													
113	1.702				241,984	14,040	90,576	49,728	46,176	40,848	241,368	616	0	0	0	0	0
		1.67	60	100.08													
114	1.634				242,084	14,400	90,576	49,728	46,176	40,848	241,728	356	1	0	0	0	0
		1.60	60	96.09													
115	1.569				242,181	14,760	90,576	49,728	46,176	40,848	242,088	93	1	0	0	0	0
		1.54	60	92.31													
116	1.508				242,273	15,120	90,576	49,728	46,176	40,848	242,448	0	1	0	0	0	0
		1.48	60	88.71													
117	1.449				242,362	15,120	90,576	49,728	46,176	40,848	242,448	0	0	0	0	0	0
		1.42	60	85.29													
118	1.394				242,447	15,120	90,576	49,728	46,176	40,848	242,448	0	0	0	0	0	0
		1.37	60	82.11													
119	1.343				242,529	15,120	90,576	49,728	46,176	40,848	242,448	81	0	0	0	0	0
		1.32	60	79.23													
120	1.298				242,608	15,120	90,576	49,728	46,176	40,848	242,448	160	0	0	0	0	0
		1.28	60	76.68													
121	1.258				242,685	15,120	90,576	49,728	46,176	40,848	242,448	237	0	0	0	0	0
		1.24	60	74.37													
122	1.221				242,759	15,120	90,576	49,728	46,176	40,848	242,448	311	0	0	0	0	0

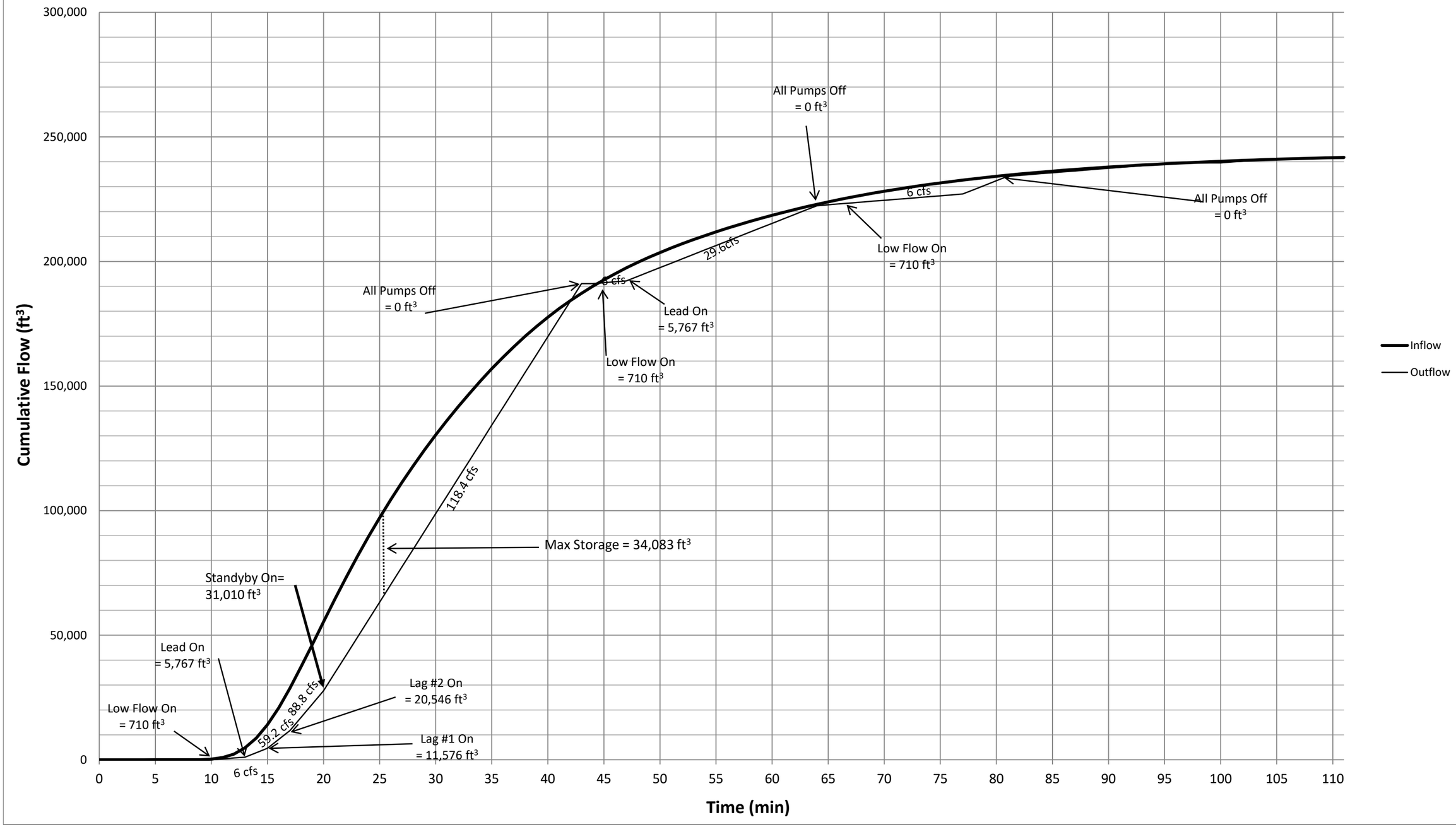
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		1.20	60	72.21													
123	1.186				242,831	15,120	90,576	49,728	46,176	40,848	242,448	383	0	0	0	0	0
		1.17	60	70.17													
124	1.153				242,902	15,120	90,576	49,728	46,176	40,848	242,448	454	0	0	0	0	0
		1.14	60	68.19													
125	1.12				242,970	15,120	90,576	49,728	46,176	40,848	242,448	522	0	0	0	0	0
		1.10	60	66.24													
126	1.088				243,036	15,120	90,576	49,728	46,176	40,848	242,448	588	0	0	0	0	0
		1.07	60	64.32													
127	1.056				243,100	15,120	90,576	49,728	46,176	40,848	242,448	652	0	0	0	0	0
		1.04	60	62.43													
128	1.025				243,163	15,120	90,576	49,728	46,176	40,848	242,448	715	0	0	0	0	0
		1.01	60	60.57													
129	0.994				243,223	15,480	90,576	49,728	46,176	40,848	242,808	415	1	0	0	0	0
		0.98	60	58.71													
130	0.963				243,282	15,840	90,576	49,728	46,176	40,848	243,168	114	1	0	0	0	0
		0.95	60	56.88													
131	0.933				243,339	16,200	90,576	49,728	46,176	40,848	243,528	0	1	0	0	0	0
		0.92	60	55.08													
132	0.903				243,394	16,200	90,576	49,728	46,176	40,848	243,528	0	0	0	0	0	0
		0.89	60	53.31													
133	0.874				243,447	16,200	90,576	49,728	46,176	40,848	243,528	0	0	0	0	0	0
		0.86	60	51.60													
134	0.846				243,499	16,200	90,576	49,728	46,176	40,848	243,528	0	0	0	0	0	0
		0.83	60	49.92													
135	0.818				243,549	16,200	90,576	49,728	46,176	40,848	243,528	21	0	0	0	0	0
		0.80	60	48.27													
136	0.791				243,597	16,200	90,576	49,728	46,176	40,848	243,528	69	0	0	0	0	0
		0.78	60	46.68													
137	0.765				243,644	16,200	90,576	49,728	46,176	40,848	243,528	116	0	0	0	0	0
		0.75	60	45.15													
138	0.74				243,689	16,200	90,576	49,728	46,176	40,848	243,528	161	0	0	0	0	0
		0.73	60	43.68													
139	0.716				243,733	16,200	90,576	49,728	46,176	40,848	243,528	205	0	0	0	0	0
		0.70	60	42.24													
140	0.692				243,775	16,200	90,576	49,728	46,176	40,848	243,528	247	0	0	0	0	0
		0.68	60	40.83													
141	0.669				243,816	16,200	90,576	49,728	46,176	40,848	243,528	288	0	0	0	0	0
		0.66	60	39.48													
142	0.647				243,855	16,200	90,576	49,728	46,176	40,848	243,528	327	0	0	0	0	0
		0.64	60	38.19													
143	0.626				243,893	16,200	90,576	49,728	46,176	40,848	243,528	365	0	0	0	0	0
		0.62	60	36.96													
144	0.606				243,930	16,200	90,576	49,728	46,176	40,848	243,528	402	0	0	0	0	0
		0.60	60	35.76													
145	0.586				243,966	16,200	90,576	49,728	46,176	40,848	243,528	438	0	0	0	0	0
		0.58	60	34.56													
146	0.566				244,001	16,200	90,576	49,728	46,176	40,848	243,528	473	0	0	0	0	0
		0.56	60	33.42													
147	0.548				244,034	16,200	90,576	49,728	46,176	40,848	243,528	506	0	0	0	0	0
		0.54	60	32.31													

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
148	0.529				244,066	16,200	90,576	49,728	46,176	40,848	243,528	538	0	0	0	0	0
		0.52	60	31.23													
149	0.512				244,098	16,200	90,576	49,728	46,176	40,848	243,528	570	0	0	0	0	0
		0.50	60	30.21													
150	0.495				244,128	16,200	90,576	49,728	46,176	40,848	243,528	600	0	0	0	0	0
		0.49	60	29.19													
151	0.478				244,157	16,200	90,576	49,728	46,176	40,848	243,528	629	0	0	0	0	0
		0.47	60	28.23													
152	0.463				244,185	16,200	90,576	49,728	46,176	40,848	243,528	657	0	0	0	0	0
		0.46	60	27.30													
153	0.447				244,213	16,200	90,576	49,728	46,176	40,848	243,528	685	0	0	0	0	0
		0.44	60	26.37													
154	0.432				244,239	16,200	90,576	49,728	46,176	40,848	243,528	711	0	0	0	0	0
		0.43	60	25.50													
155	0.418				244,264	16,200	90,576	49,728	46,176	40,848	243,528	736	0	0	0	0	0
		0.41	60	24.66													
156	0.404				244,289	16,200	90,576	49,728	46,176	40,848	243,528	761	0	0	0	0	0
		0.40	60	23.85													
157	0.391				244,313	16,200	90,576	49,728	46,176	40,848	243,528	785	0	0	0	0	0
		0.38	60	23.07													
158	0.378				244,336	16,200	90,576	49,728	46,176	40,848	243,528	808	0	0	0	0	0
		0.37	60	22.32													
159	0.366				244,358	16,200	90,576	49,728	46,176	40,848	243,528	830	0	0	0	0	0
		0.36	60	21.60													
160	0.354				244,380	16,200	90,576	49,728	46,176	40,848	243,528	852	0	0	0	0	0
		0.35	60	20.91													
161	0.343				244,401	16,200	90,576	49,728	46,176	40,848	243,528	873	0	0	0	0	0
		0.34	60	20.25													
162	0.332				244,421	16,200	90,576	49,728	46,176	40,848	243,528	893	0	0	0	0	0
		0.33	60	19.62													
163	0.322				244,441	16,200	90,576	49,728	46,176	40,848	243,528	913	0	0	0	0	0
		0.32	60	19.02													
164	0.312				244,460	16,200	90,576	49,728	46,176	40,848	243,528	932	0	0	0	0	0
		0.31	60	18.42													
165	0.302				244,478	16,200	90,576	49,728	46,176	40,848	243,528	950	0	0	0	0	0
		0.30	60	17.85													
166	0.293				244,496	16,200	90,576	49,728	46,176	40,848	243,528	968	0	0	0	0	0
		0.29	60	17.31													
167	0.284				244,513	16,200	90,576	49,728	46,176	40,848	243,528	985	0	0	0	0	0
		0.28	60	16.77													
168	0.275				244,530	16,200	90,576	49,728	46,176	40,848	243,528	1,002	0	0	0	0	0
		0.27	60	16.23													
169	0.266				244,546	16,200	90,576	49,728	46,176	40,848	243,528	1,018	0	0	0	0	0
		0.26	60	15.72													
170	0.258				244,562	16,200	90,576	49,728	46,176	40,848	243,528	1,034	0	0	0	0	0
		0.25	60	15.24													
171	0.25				244,577	16,200	90,576	49,728	46,176	40,848	243,528	1,049	0	0	0	0	0
		0.25	60	14.76													
172	0.242				244,592	16,200	90,576	49,728	46,176	40,848	243,528	1,064	0	0	0	0	0
		0.24	60	14.31													
173	0.235				244,606	16,200	90,576	49,728	46,176	40,848	243,528	1,078	0	0	0	0	0

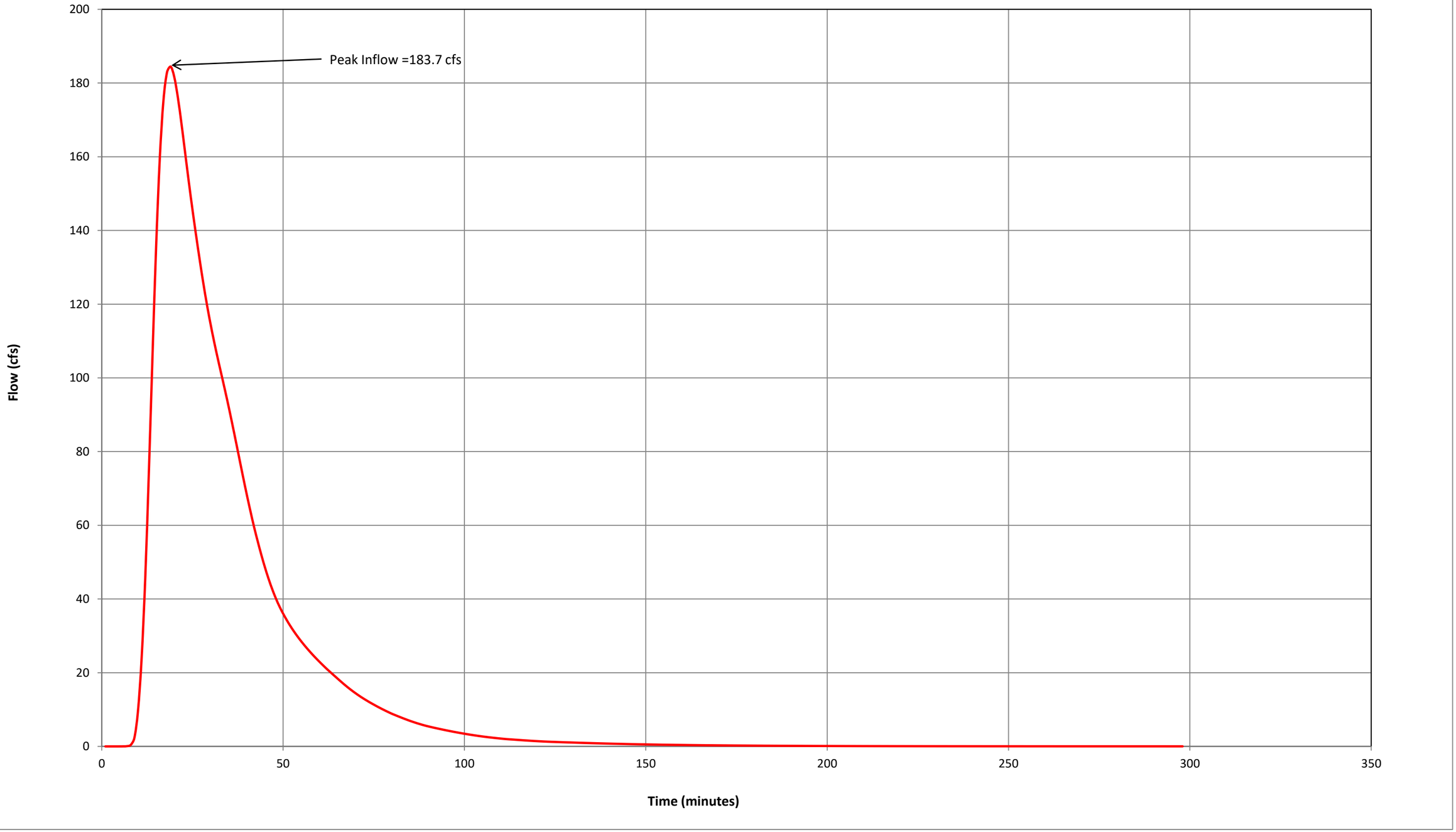
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		0.23	60	13.86													
174	0.227				244,620	16,200	90,576	49,728	46,176	40,848	243,528	1,092	0	0	0	0	0
		0.22	60	13.41													
175	0.22				244,634	16,200	90,576	49,728	46,176	40,848	243,528	1,106	0	0	0	0	0
		0.22	60	13.02													
176	0.214				244,647	16,200	90,576	49,728	46,176	40,848	243,528	1,119	0	0	0	0	0
		0.21	60	12.63													
177	0.207				244,659	16,200	90,576	49,728	46,176	40,848	243,528	1,131	0	0	0	0	0
		0.20	60	12.24													
178	0.201				244,672	16,200	90,576	49,728	46,176	40,848	243,528	1,144	0	0	0	0	0
		0.20	60	11.88													
179	0.195				244,683	16,200	90,576	49,728	46,176	40,848	243,528	1,155	0	0	0	0	0
		0.19	60	11.52													
180	0.189				244,695	16,200	90,576	49,728	46,176	40,848	243,528	1,167	0	0	0	0	0
		0.19	60	11.16													
181	0.183				244,706	16,200	90,576	49,728	46,176	40,848	243,528	1,178	0	0	0	0	0
		0.18	60	10.80													
182	0.177				244,717	16,200	90,576	49,728	46,176	40,848	243,528	1,189	0	0	0	0	0
		0.17	60	10.47													
183	0.172				244,727	16,200	90,576	49,728	46,176	40,848	243,528	1,199	0	0	0	0	0
		0.17	60	10.17													
184	0.167				244,738	16,200	90,576	49,728	46,176	40,848	243,528	1,210	0	0	0	0	0
		0.16	60	9.87													
185	0.162				244,747	16,200	90,576	49,728	46,176	40,848	243,528	1,219	0	0	0	0	0
		0.16	60	9.57													
186	0.157				244,757	16,200	90,576	49,728	46,176	40,848	243,528	1,229	0	0	0	0	0
		0.15	60	9.27													
187	0.152				244,766	16,200	90,576	49,728	46,176	40,848	243,528	1,238	0	0	0	0	0
		0.15	60	8.97													
188	0.147				244,775	16,200	90,576	49,728	46,176	40,848	243,528	1,247	0	0	0	0	0
		0.15	60	8.70													
189	0.143				244,784	16,200	90,576	49,728	46,176	40,848	243,528	1,256	0	0	0	0	0
		0.14	60	8.46													
190	0.139				244,792	16,200	90,576	49,728	46,176	40,848	243,528	1,264	0	0	0	0	0
		0.14	60	8.22													
191	0.135				244,801	16,200	90,576	49,728	46,176	40,848	243,528	1,273	0	0	0	0	0
		0.13	60	7.98													
192	0.131				244,809	16,200	90,576	49,728	46,176	40,848	243,528	1,281	0	0	0	0	0
		0.13	60	7.74													
193	0.127				244,816	16,200	90,576	49,728	46,176	40,848	243,528	1,288	0	0	0	0	0
		0.13	60	7.50													
194	0.123				244,824	16,200	90,576	49,728	46,176	40,848	243,528	1,296	0	0	0	0	0
		0.12	60	7.26													
195	0.119				244,831	16,200	90,576	49,728	46,176	40,848	243,528	1,303	0	0	0	0	0
		0.12	60	7.05													
196	0.116				244,838	16,200	90,576	49,728	46,176	40,848	243,528	1,310	0	0	0	0	0
		0.11	60	6.87													
197	0.113				244,845	16,200	90,576	49,728	46,176	40,848	243,528	1,317	0	0	0	0	0
		0.11	60	6.66													
198	0.109				244,852	16,200	90,576	49,728	46,176	40,848	243,528	1,324	0	0	0	0	0
		0.11	60	6.45													

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
199	0.106				244,858	16,200	90,576	49,728	46,176	40,848	243,528	1,330	0	0	0	0	0
		0.10	60	6.27													
200	0.103				244,864	16,560	90,576	49,728	46,176	40,848	243,888	976	1	0	0	0	0
		0.10	60	6.09													
201	0.1				244,870	16,920	90,576	49,728	46,176	40,848	244,248	622	1	0	0	0	0
		0.10	60	5.94													
202	0.098				244,876	16,920	90,576	49,728	46,176	40,848	244,248	628	0	0	0	0	0
		0.10	60	5.79													
203	0.095				244,882	16,920	90,576	49,728	46,176	40,848	244,248	634	0	0	0	0	0
		0.09	60	5.61													
204	0.092				244,888	16,920	90,576	49,728	46,176	40,848	244,248	640	0	0	0	0	0

Existing Conditions Mass Curve Routing
B75 50-Year, 30-Minute Event



Inflow Hydrograph
B75 100-Year, 30-Minute Design Storm



B75 100-Year, 30-Minute Design Storm Event

	LOW FLOW	LEAD	LAG #1	LAG #2	STAND-BY
Pump 'ON' Volume (ft^3)	710	5,767	11,576	20,546	31,010
Pump 'ON' Elevation (ft)	558.2	562.7	563.7	564.7	565.7
Pump Flow Rate (cfs)	6.0	29.6	29.6	29.6	29.6

	LOW FLOW	LEAD	LAG #1	LAG #2	STAND-BY
Pump 'OFF' Volume (ft^3)	0	710	710	710	0
Pump 'OFF' Elevation (ft)	557.2	558.2	558.2	558.2	556.2

1

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
1	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
2	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
3	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
4	0				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
5	0.002				0	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0													
6	0.013				1	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	3													
7	0.073				3	0	0	0	0	0	0	0	0	0	0	0	0
		0	60	14													
8	0.403				17	0	0	0	0	0	0	17	0	0	0	0	0
		1	60	81													
9	2.308				99	0	0	0	0	0	0	99	0	0	0	0	0
		6.013	60	360.78													
10	9.718				459	0	0	0	0	0	0	459	0	0	0	0	0
		16.833	60	1,009.98													
11	23.948				1,469	360	0	0	0	0	360	1,109	1	0	0	0	0
		34.88	60	2,092.83													
12	45.813				3,562	720	0	0	0	0	720	2,842	1	0	0	0	0
		60.21	60	3,612.54													
13	74.605				7,175	720	1,776	0	0	0	2,496	4,679	0	1	0	0	0
		90.40	60	5,424.09													
14	106.198				12,599	720	3,552	0	0	0	4,272	8,327	0	1	0	0	0
		120.98	60	7,259.07													
15	135.771				19,858	720	5,328	1,776	0	0	7,824	12,034	0	1	1	0	0
		147.60	60	8,856.24													
16	159.437				28,714	720	7,104	3,552	0	0	11,376	17,338	0	1	1	0	0
		167.28	60	10,036.77													
17	175.122				38,751	720	8,880	5,328	1,776	0	16,704	22,047	0	1	1	1	0
		179.02	60	10,741.35													
18	182.923				49,492	720	10,656	7,104	3,552	0	22,032	27,460	0	1	1	1	0
		183.69	60	11,021.67													
19	184.466				60,514	720	12,432	8,880	5,328	1,776	29,136	31,378	0	1	1	1	1
		183.05	60	10,982.85													
20	181.629				71,497	720	14,208	10,656	7,104	3,552	36,240	35,257	0	1	1	1	1

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		178.82	60	10,728.93													
21	176.002				82,226	720	15,984	12,432	8,880	5,328	43,344	38,882	0	1	1	1	1
		172.42	60	10,345.08													
22	168.834				92,571	720	17,760	14,208	10,656	7,104	50,448	42,123	0	1	1	1	1
		164.92	60	9,895.32													
23	161.01				102,466	720	19,536	15,984	12,432	8,880	57,552	44,914	0	1	1	1	1
		157.11	60	9,426.63													
24	153.211				111,893	720	21,312	17,760	14,208	10,656	64,656	47,237	0	1	1	1	1
		149.48	60	8,968.89													
25	145.752				120,862	720	23,088	19,536	15,984	12,432	71,760	49,102	0	1	1	1	1
		142.25	60	8,534.91													
26	138.745				129,397	720	24,864	21,312	17,760	14,208	78,864	50,533	0	1	1	1	1
		135.40	60	8,123.97													
27	132.054				137,521	720	26,640	23,088	19,536	15,984	85,968	51,553	0	1	1	1	1
		128.89	60	7,733.52													
28	125.73				145,254	720	28,416	24,864	21,312	17,760	93,072	52,182	0	1	1	1	1
		122.81	60	7,368.63													
29	119.891				152,623	720	30,192	26,640	23,088	19,536	100,176	52,447	0	1	1	1	1
		117.24	60	7,034.49													
30	114.592				159,657	720	31,968	28,416	24,864	21,312	107,280	52,377	0	1	1	1	1
		112.16	60	6,729.84													
31	109.736				166,387	720	33,744	30,192	26,640	23,088	114,384	52,003	0	1	1	1	1
		107.48	60	6,448.68													
32	105.22				172,836	720	35,520	31,968	28,416	24,864	121,488	51,348	0	1	1	1	1
		103.06	60	6,183.48													
33	100.896				179,019	720	37,296	33,744	30,192	26,640	128,592	50,427	0	1	1	1	1
		98.73	60	5,924.01													
34	96.571				184,943	720	39,072	35,520	31,968	28,416	135,696	49,247	0	1	1	1	1
		94.34	60	5,660.40													
35	92.109				190,604	720	40,848	37,296	33,744	30,192	142,800	47,804	0	1	1	1	1
		89.78	60	5,386.56													
36	87.443				195,990	720	42,624	39,072	35,520	31,968	149,904	46,086	0	1	1	1	1
		85.05	60	5,103.00													
37	82.657				201,093	720	44,400	40,848	37,296	33,744	157,008	44,085	0	1	1	1	1
		80.23	60	4,813.53													
38	77.794				205,907	720	46,176	42,624	39,072	35,520	164,112	41,795	0	1	1	1	1
		75.38	60	4,522.53													
39	72.957				210,429	720	47,952	44,400	40,848	37,296	171,216	39,213	0	1	1	1	1
		70.62	60	4,236.93													
40	68.274				214,666	720	49,728	46,176	42,624	39,072	178,320	36,346	0	1	1	1	1
		66.03	60	3,962.07													
41	63.795				218,628	720	51,504	47,952	44,400	40,848	185,424	33,204	0	1	1	1	1
		61.66	60	3,699.78													
42	59.531				222,328	720	53,280	49,728	46,176	42,624	192,528	29,800	0	1	1	1	1
		57.59	60	3,455.31													
43	55.646				225,783	720	55,056	51,504	47,952	44,400	199,632	26,151	0	1	1	1	1
		53.81	60	3,228.48													
44	51.97				229,012	720	56,832	53,280	49,728	46,176	206,736	22,276	0	1	1	1	1
		50.27	60	3,016.02													
45	48.564				232,028	720	58,608	55,056	51,504	47,952	213,840	18,188	0	1	1	1	1
		47.01	60	2,820.75													

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
46	45.461				234,849	720	60,384	56,832	53,280	49,728	220,944	13,905	0	1	1	1	1
		44.06	60	2,643.84													
47	42.667				237,492	720	62,160	58,608	55,056	51,504	228,048	9,444	0	1	1	1	1
		41.42	60	2,485.20													
48	40.173				239,978	720	63,936	60,384	56,832	53,280	235,152	4,826	0	1	1	1	1
		39.07	60	2,344.26													
49	37.969				242,322	720	65,712	62,160	58,608	55,056	242,256	66	0	1	1	1	1
		37.01	60	2,220.39													
50	36.044				244,542	1,080	65,712	62,160	58,608	55,056	242,616	1,926	1	0	0	0	0
		35.17	60	2,109.93													
51	34.287				246,652	1,440	65,712	62,160	58,608	55,056	242,976	3,676	1	0	0	0	0
		33.48	60	2,008.83													
52	32.674				248,661	1,800	65,712	62,160	58,608	55,056	243,336	5,325	1	0	0	0	0
		31.93	60	1,915.80													
53	31.186				250,577	1,800	67,488	62,160	58,608	55,056	245,112	5,465	0	1	0	0	0
		30.49	60	1,829.67													
54	29.803				252,407	1,800	69,264	62,160	58,608	55,056	246,888	5,519	0	1	0	0	0
		29.16	60	1,749.36													
55	28.509				254,156	1,800	71,040	62,160	58,608	55,056	248,664	5,492	0	1	0	0	0
		27.90	60	1,674.06													
56	27.293				255,830	1,800	72,816	62,160	58,608	55,056	250,440	5,390	0	1	0	0	0
		26.72	60	1,602.99													
57	26.14				257,433	1,800	74,592	62,160	58,608	55,056	252,216	5,217	0	1	0	0	0
		25.59	60	1,535.34													
58	25.038				258,968	1,800	76,368	62,160	58,608	55,056	253,992	4,976	0	1	0	0	0
		24.52	60	1,470.93													
59	23.993				260,439	1,800	78,144	62,160	58,608	55,056	255,768	4,671	0	1	0	0	0
		23.49	60	1,409.34													
60	22.985				261,849	1,800	79,920	62,160	58,608	55,056	257,544	4,305	0	1	0	0	0
		22.50	60	1,349.94													
61	22.013				263,198	1,800	81,696	62,160	58,608	55,056	259,320	3,878	0	1	0	0	0
		21.54	60	1,292.40													
62	21.067				264,491	1,800	83,472	62,160	58,608	55,056	261,096	3,395	0	1	0	0	0
		20.62	60	1,237.14													
63	20.171				265,728	1,800	85,248	62,160	58,608	55,056	262,872	2,856	0	1	0	0	0
		19.73	60	1,183.89													
64	19.292				266,912	1,800	87,024	62,160	58,608	55,056	264,648	2,264	0	1	0	0	0
		18.85	60	1,131.21													
65	18.415				268,043	1,800	88,800	62,160	58,608	55,056	266,424	1,619	0	1	0	0	0
		17.98	60	1,078.80													
66	17.545				269,122	1,800	90,576	62,160	58,608	55,056	268,200	922	0	1	0	0	0
		17.12	60	1,027.35													
67	16.7				270,149	2,160	90,576	62,160	58,608	55,056	268,560	1,589	1	0	0	0	0
		16.30	60	977.85													
68	15.895				271,127	2,520	90,576	62,160	58,608	55,056	268,920	2,207	1	0	0	0	0
		15.51	60	930.87													
69	15.134				272,058	2,880	90,576	62,160	58,608	55,056	269,280	2,778	1	0	0	0	0
		14.77	60	886.38													
70	14.412				272,944	3,240	90,576	62,160	58,608	55,056	269,640	3,304	1	0	0	0	0
		14.07	60	844.17													
71	13.727				273,789	3,600	90,576	62,160	58,608	55,056	270,000	3,789	1	0	0	0	0

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		13.41	60	804.39													
72	13.086				274,593	3,960	90,576	62,160	58,608	55,056	270,360	4,233	1	0	0	0	0
		12.78	60	766.95													
73	12.479				275,360	4,320	90,576	62,160	58,608	55,056	270,720	4,640	1	0	0	0	0
		12.19	60	731.25													
74	11.896				276,091	4,680	90,576	62,160	58,608	55,056	271,080	5,011	1	0	0	0	0
		11.62	60	697.11													
75	11.341				276,788	5,040	90,576	62,160	58,608	55,056	271,440	5,348	1	0	0	0	0
		11.07	60	664.32													
76	10.803				277,453	5,400	90,576	62,160	58,608	55,056	271,800	5,653	1	0	0	0	0
		10.55	60	632.70													
77	10.287				278,085	5,400	92,352	62,160	58,608	55,056	273,576	4,509	0	1	0	0	0
		10.04	60	602.34													
78	9.791				278,688	5,400	94,128	62,160	58,608	55,056	275,352	3,336	0	1	0	0	0
		9.55	60	573.18													
79	9.315				279,261	5,400	95,904	62,160	58,608	55,056	277,128	2,133	0	1	0	0	0
		9.09	60	545.13													
80	8.856				279,806	5,400	97,680	62,160	58,608	55,056	278,904	902	0	1	0	0	0
		8.65	60	519.21													
81	8.451				280,325	5,400	99,456	62,160	58,608	55,056	280,680	0	0	1	0	0	0
		8.25	60	495.15													
82	8.054				280,820	5,400	99,456	62,160	58,608	55,056	280,680	140	0	0	0	0	0
		7.86	60	471.54													
83	7.664				281,292	5,400	99,456	62,160	58,608	55,056	280,680	612	0	0	0	0	0
		7.48	60	448.53													
84	7.287				281,740	5,760	99,456	62,160	58,608	55,056	281,040	700	1	0	0	0	0
		7.11	60	426.42													
85	6.927				282,167	6,120	99,456	62,160	58,608	55,056	281,400	767	1	0	0	0	0
		6.76	60	405.48													
86	6.589				282,572	6,480	99,456	62,160	58,608	55,056	281,760	812	1	0	0	0	0
		6.43	60	385.77													
87	6.27				282,958	6,840	99,456	62,160	58,608	55,056	282,120	838	1	0	0	0	0
		6.12	60	367.23													
88	5.971				283,325	7,200	99,456	62,160	58,608	55,056	282,480	845	1	0	0	0	0
		5.83	60	349.86													
89	5.691				283,675	7,560	99,456	62,160	58,608	55,056	282,840	835	1	0	0	0	0
		5.57	60	333.93													
90	5.44				284,009	7,920	99,456	62,160	58,608	55,056	283,200	809	1	0	0	0	0
		5.32	60	319.41													
91	5.207				284,328	8,280	99,456	62,160	58,608	55,056	283,560	768	1	0	0	0	0
		5.10	60	305.73													
92	4.984				284,634	8,640	99,456	62,160	58,608	55,056	283,920	714	1	0	0	0	0
		4.88	60	292.59													
93	4.769				284,927	9,000	99,456	62,160	58,608	55,056	284,280	647	1	0	0	0	0
		4.66	60	279.87													
94	4.56				285,207	9,360	99,456	62,160	58,608	55,056	284,640	567	1	0	0	0	0
		4.46	60	267.51													
95	4.357				285,474	9,720	99,456	62,160	58,608	55,056	285,000	474	1	0	0	0	0
		4.26	60	255.51													
96	4.16				285,730	10,080	99,456	62,160	58,608	55,056	285,360	370	1	0	0	0	0
		4.07	60	243.90													

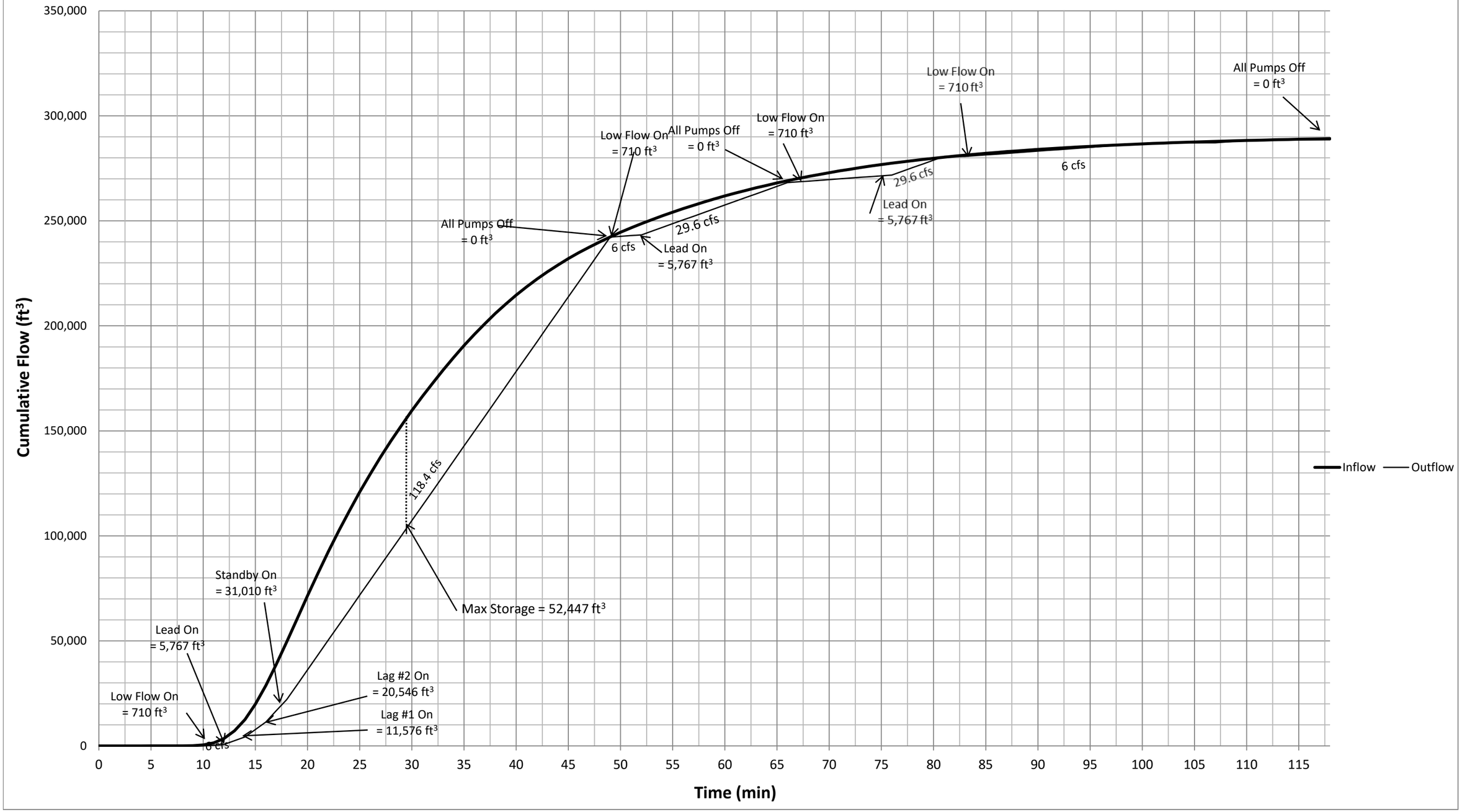
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
97	3.97				285,974	10,440	99,456	62,160	58,608	55,056	285,720	254	1	0	0	0	0
		3.88	60	232.68													
98	3.786				286,206	10,800	99,456	62,160	58,608	55,056	286,080	126	1	0	0	0	0
		3.70	60	221.85													
99	3.609				286,428	11,160	99,456	62,160	58,608	55,056	286,440	0	1	0	0	0	0
		3.52	60	211.41													
100	3.438				286,640	11,520	99,456	62,160	58,608	55,056	286,800	0	1	0	0	0	0
		3.36	60	201.36													
101	3.274				286,841	11,880	99,456	62,160	58,608	55,056	287,160	0	1	0	0	0	0
		3.20	60	191.73													
102	3.117				287,033	11,880	99,456	62,160	58,608	55,056	287,160	0	0	0	0	0	0
		3.04	60	182.49													
103	2.966				287,215	11,880	99,456	62,160	58,608	55,056	287,160	55	0	0	0	0	0
		2.89	60	173.67													
104	2.823				287,389	11,880	99,456	62,160	58,608	55,056	287,160	229	0	0	0	0	0
		2.76	60	165.36													
105	2.689				287,554	11,880	99,456	62,160	58,608	55,056	287,160	394	0	0	0	0	0
		2.63	60	157.59													
106	2.564				287,712	11,880	99,456	62,160	58,608	55,056	287,160	552	0	0	0	0	0
		2.51	60	150.30													
107	2.446				287,862	11,880	99,456	62,160	58,608	55,056	287,160	702	0	0	0	0	0
		2.39	60	143.43													
108	2.335				288,005	12,240	99,456	62,160	58,608	55,056	287,520	485	1	0	0	0	0
		2.28	60	136.92													
109	2.229				288,142	12,600	99,456	62,160	58,608	55,056	287,880	262	1	0	0	0	0
		2.18	60	130.74													
110	2.129				288,273	12,960	99,456	62,160	58,608	55,056	288,240	33	1	0	0	0	0
		2.08	60	124.83													
111	2.032				288,398	13,320	99,456	62,160	58,608	55,056	288,600	0	1	0	0	0	0
		1.99	60	119.52													
112	1.952				288,517	13,320	99,456	62,160	58,608	55,056	288,600	0	0	0	0	0	0
		1.92	60	115.11													
113	1.885				288,633	13,320	99,456	62,160	58,608	55,056	288,600	33	0	0	0	0	0
		1.85	60	111.00													
114	1.815				288,744	13,320	99,456	62,160	58,608	55,056	288,600	144	0	0	0	0	0
		1.78	60	106.77													
115	1.744				288,850	13,320	99,456	62,160	58,608	55,056	288,600	250	0	0	0	0	0
		1.71	60	102.54													
116	1.674				288,953	13,320	99,456	62,160	58,608	55,056	288,600	353	0	0	0	0	0
		1.64	60	98.43													
117	1.607				289,051	13,320	99,456	62,160	58,608	55,056	288,600	451	0	0	0	0	0
		1.58	60	94.50													
118	1.543				289,146	13,320	99,456	62,160	58,608	55,056	288,600	546	0	0	0	0	0
		1.51	60	90.78													
119	1.483				289,237	13,320	99,456	62,160	58,608	55,056	288,600	637	0	0	0	0	0
		1.45	60	87.27													
120	1.426				289,324	13,680	99,456	62,160	58,608	55,056	288,960	364	1	0	0	0	0
		1.40	60	83.94													
121	1.372				289,408	14,040	99,456	62,160	58,608	55,056	289,320	88	1	0	0	0	0
		1.35	60	80.85													
122	1.323				289,489	14,400	99,456	62,160	58,608	55,056	289,680	0	1	0	0	0	0

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		1.30	60	78.09													
123	1.28				289,567	14,400	99,456	62,160	58,608	55,056	289,680	0	0	0	0	0	0
		1.26	60	75.63													
124	1.241				289,642	14,400	99,456	62,160	58,608	55,056	289,680	0	0	0	0	0	0
		1.22	60	73.38													
125	1.205				289,716	14,400	99,456	62,160	58,608	55,056	289,680	36	0	0	0	0	0
		1.19	60	71.25													
126	1.17				289,787	14,400	99,456	62,160	58,608	55,056	289,680	107	0	0	0	0	0
		1.15	60	69.21													
127	1.137				289,856	14,400	99,456	62,160	58,608	55,056	289,680	176	0	0	0	0	0
		1.12	60	67.23													
128	1.104				289,923	14,400	99,456	62,160	58,608	55,056	289,680	243	0	0	0	0	0
		1.09	60	65.28													
129	1.072				289,989	14,400	99,456	62,160	58,608	55,056	289,680	309	0	0	0	0	0
		1.06	60	63.33													
130	1.039				290,052	14,400	99,456	62,160	58,608	55,056	289,680	372	0	0	0	0	0
		1.02	60	61.41													
131	1.008				290,113	14,400	99,456	62,160	58,608	55,056	289,680	433	0	0	0	0	0
		0.99	60	59.52													
132	0.976				290,173	14,400	99,456	62,160	58,608	55,056	289,680	493	0	0	0	0	0
		0.96	60	57.66													
133	0.946				290,231	14,400	99,456	62,160	58,608	55,056	289,680	551	0	0	0	0	0
		0.93	60	55.83													
134	0.915				290,286	14,400	99,456	62,160	58,608	55,056	289,680	606	0	0	0	0	0
		0.90	60	54.03													
135	0.886				290,340	14,400	99,456	62,160	58,608	55,056	289,680	660	0	0	0	0	0
		0.87	60	52.29													
136	0.857				290,393	14,760	99,456	62,160	58,608	55,056	290,040	353	1	0	0	0	0
		0.84	60	50.58													
137	0.829				290,443	15,120	99,456	62,160	58,608	55,056	290,400	43	1	0	0	0	0
		0.82	60	48.93													
138	0.802				290,492	15,480	99,456	62,160	58,608	55,056	290,760	0	1	0	0	0	0
		0.79	60	47.34													
139	0.776				290,540	15,480	99,456	62,160	58,608	55,056	290,760	0	0	0	0	0	0
		0.76	60	45.78													
140	0.75				290,585	15,480	99,456	62,160	58,608	55,056	290,760	0	0	0	0	0	0
		0.74	60	44.25													
141	0.725				290,630	15,480	99,456	62,160	58,608	55,056	290,760	0	0	0	0	0	0
		0.71	60	42.78													
142	0.701				290,672	15,480	99,456	62,160	58,608	55,056	290,760	0	0	0	0	0	0
		0.69	60	41.37													
143	0.678				290,714	15,480	99,456	62,160	58,608	55,056	290,760	0	0	0	0	0	0
		0.67	60	40.02													
144	0.656				290,754	15,480	99,456	62,160	58,608	55,056	290,760	0	0	0	0	0	0
		0.65	60	38.73													
145	0.635				290,793	15,480	99,456	62,160	58,608	55,056	290,760	33	0	0	0	0	0
		0.62	60	37.47													
146	0.614				290,830	15,480	99,456	62,160	58,608	55,056	290,760	70	0	0	0	0	0
		0.60	60	36.24													
147	0.594				290,866	15,480	99,456	62,160	58,608	55,056	290,760	106	0	0	0	0	0
		0.58	60	35.04													

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
148	0.574				290,901	15,480	99,456	62,160	58,608	55,056	290,760	141	0	0	0	0	0
		0.56	60	33.87													
149	0.555				290,935	15,480	99,456	62,160	58,608	55,056	290,760	175	0	0	0	0	0
		0.55	60	32.76													
150	0.537				290,968	15,480	99,456	62,160	58,608	55,056	290,760	208	0	0	0	0	0
		0.53	60	31.68													
151	0.519				291,000	15,480	99,456	62,160	58,608	55,056	290,760	240	0	0	0	0	0
		0.51	60	30.63													
152	0.502				291,030	15,480	99,456	62,160	58,608	55,056	290,760	270	0	0	0	0	0
		0.49	60	29.64													
153	0.486				291,060	15,480	99,456	62,160	58,608	55,056	290,760	300	0	0	0	0	0
		0.48	60	28.65													
154	0.469				291,089	15,480	99,456	62,160	58,608	55,056	290,760	329	0	0	0	0	0
		0.46	60	27.69													
155	0.454				291,116	15,480	99,456	62,160	58,608	55,056	290,760	356	0	0	0	0	0
		0.45	60	26.79													
156	0.439				291,143	15,480	99,456	62,160	58,608	55,056	290,760	383	0	0	0	0	0
		0.43	60	25.89													
157	0.424				291,169	15,480	99,456	62,160	58,608	55,056	290,760	409	0	0	0	0	0
		0.42	60	25.02													
158	0.41				291,194	15,480	99,456	62,160	58,608	55,056	290,760	434	0	0	0	0	0
		0.40	60	24.21													
159	0.397				291,218	15,480	99,456	62,160	58,608	55,056	290,760	458	0	0	0	0	0
		0.39	60	23.43													
160	0.384				291,242	15,480	99,456	62,160	58,608	55,056	290,760	482	0	0	0	0	0
		0.38	60	22.65													
161	0.371				291,264	15,480	99,456	62,160	58,608	55,056	290,760	504	0	0	0	0	0
		0.37	60	21.90													
162	0.359				291,286	15,480	99,456	62,160	58,608	55,056	290,760	526	0	0	0	0	0
		0.35	60	21.18													
163	0.347				291,307	15,480	99,456	62,160	58,608	55,056	290,760	547	0	0	0	0	0
		0.34	60	20.49													
164	0.336				291,328	15,480	99,456	62,160	58,608	55,056	290,760	568	0	0	0	0	0
		0.33	60	19.86													
165	0.326				291,348	15,480	99,456	62,160	58,608	55,056	290,760	588	0	0	0	0	0
		0.32	60	19.23													
166	0.315				291,367	15,480	99,456	62,160	58,608	55,056	290,760	607	0	0	0	0	0
		0.31	60	18.60													
167	0.305				291,385	15,480	99,456	62,160	58,608	55,056	290,760	625	0	0	0	0	0
		0.30	60	18.03													
168	0.296				291,404	15,480	99,456	62,160	58,608	55,056	290,760	644	0	0	0	0	0
		0.29	60	17.46													
169	0.286				291,421	15,480	99,456	62,160	58,608	55,056	290,760	661	0	0	0	0	0
		0.28	60	16.89													
170	0.277				291,438	15,480	99,456	62,160	58,608	55,056	290,760	678	0	0	0	0	0
		0.27	60	16.35													
171	0.268				291,454	15,480	99,456	62,160	58,608	55,056	290,760	694	0	0	0	0	0
		0.26	60	15.84													
172	0.26				291,470	15,840	99,456	62,160	58,608	55,056	291,120	350	1	0	0	0	0
		0.26	60	15.33													
173	0.251				291,485	16,200	99,456	62,160	58,608	55,056	291,480	5	1	0	0	0	0

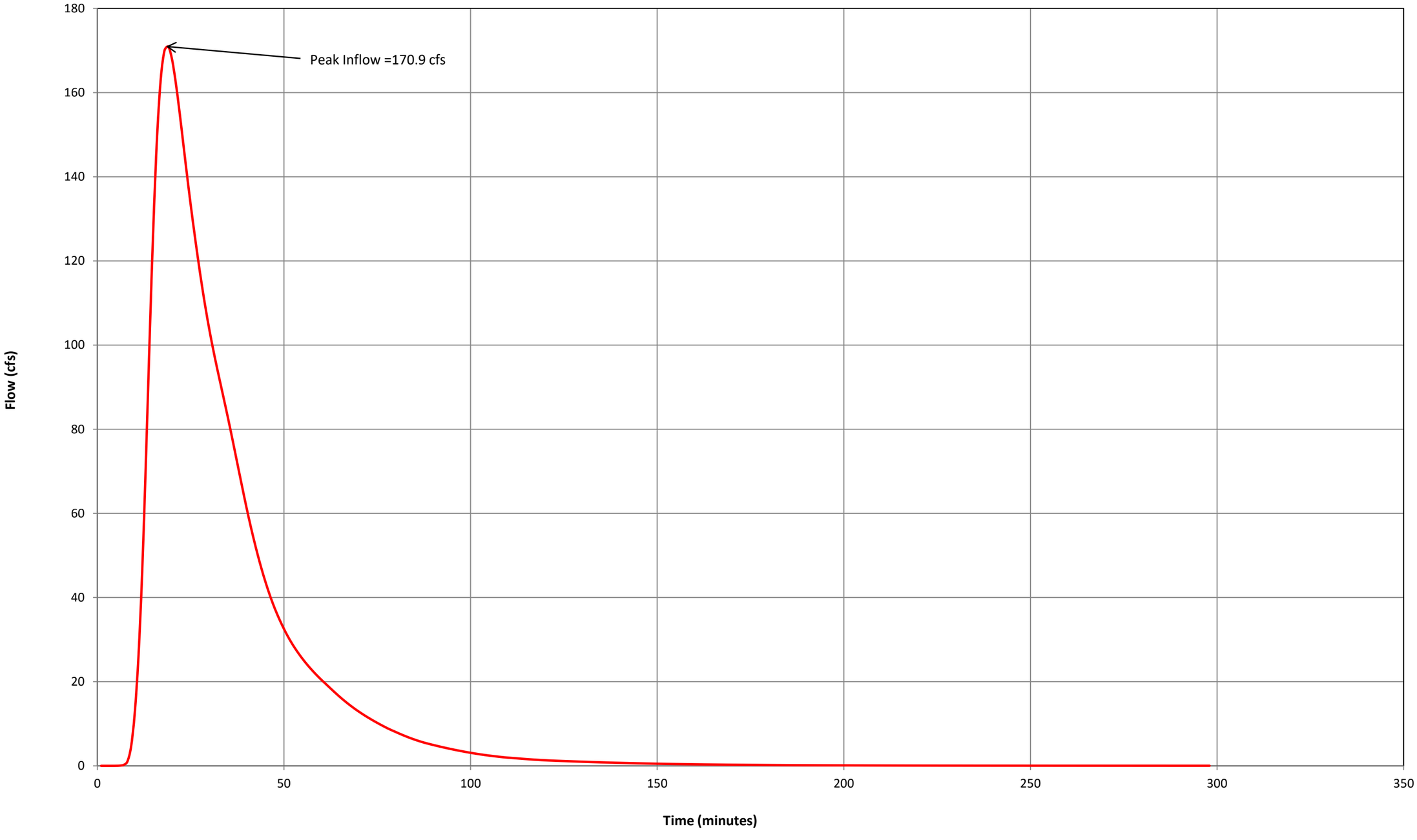
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)				
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2	Stand-by
		0.25	60	14.82													
174	0.243				291,500	16,560	99,456	62,160	58,608	55,056	291,840	0	1	0	0	0	0
		0.24	60	14.34													
175	0.235				291,515	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0
		0.23	60	13.89													
176	0.228				291,528	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0
		0.22	60	13.47													
177	0.221				291,542	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0
		0.22	60	13.05													
178	0.214				291,555	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0
		0.21	60	12.63													
179	0.207				291,568	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0
		0.20	60	12.24													
180	0.201				291,580	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0
		0.20	60	11.85													
181	0.194				291,592	16,560	99,456	62,160	58,608	55,056	291,840	0	0	0	0	0	0

Existing Conditions Mass Curve Routing
B75 100-Year, 30-Minute Event



PROPOSED CONDITIONS MASS ROUTING

Inflow Hydrograph
50-Year, 30-min Design Storm



50-Year, 30-Minute Design Storm Event

	LOW FLOW	LEAD	LAG #1	LAG #2	
Pump 'ON' Volume (ft^3)	710	5,767	11,576	20,546	
Pump 'ON' Elevation (ft)	558.2	562.7	563.7	564.7	
Pump Flow Rate (cfs)	6.0	29.6	29.6	29.6	

	LOW FLOW	LEAD	LAG #1	LAG #2	
Pump 'OFF' Volume (ft^3)	0	710	710	710	
Pump 'OFF' Elevation (ft)	557.2	558.2	558.2	558.2	

1

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
1	0				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
2	0				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
3	0				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
4	0.001				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
5	0.009				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	2												
6	0.05				2	0	0	0	0	0	0	0	0	0	0	0
		0	60	8												
7	0.211				10	0	0	0	0	0	0	0	0	0	0	0
		1	60	35												
8	0.957				45	0	0	0	0	0	0	45	0	0	0	0
		3	60	161												
9	4.415				206	0	0	0	0	0	0	206	0	0	0	0
		8.431	60	505.86												
10	12.447				712	0	0	0	0	0	0	712	0	0	0	0
		19.185	60	1,151.10												
11	25.923				1,863	360	0	0	0	0	360	1,503	1	0	0	0
		35.98	60	2,158.83												
12	46.038				4,022	720	0	0	0	0	720	3,302	1	0	0	0
		59.29	60	3,557.16												
13	72.534				7,579	720	1,776	0	0	0	2,496	5,083	0	1	0	0
		87.05	60	5,223.09												
14	101.569				12,802	720	3,552	0	0	0	4,272	8,530	0	1	0	0
		114.98	60	6,899.01												
15	128.398				19,701	720	5,328	1,776	0	0	7,824	11,877	0	1	1	0
		139.02	60	8,341.44												
16	149.65				28,043	720	7,104	3,552	0	0	11,376	16,667	0	1	1	0
		156.56	60	9,393.60												
17	163.47				37,436	720	8,880	5,328	1,776	0	16,704	20,732	0	1	1	1
		166.75	60	10,005.00												
18	170.03				47,441	720	10,656	7,104	3,552	0	22,032	25,409	0	1	1	1
		170.48	60	10,228.83												
19	170.931				57,670	720	12,432	8,880	5,328	0	27,360	30,310	0	1	1	1
		169.41	60	10,164.66												
20	167.891				67,835	720	14,208	10,656	7,104	0	32,688	35,147	0	1	1	1

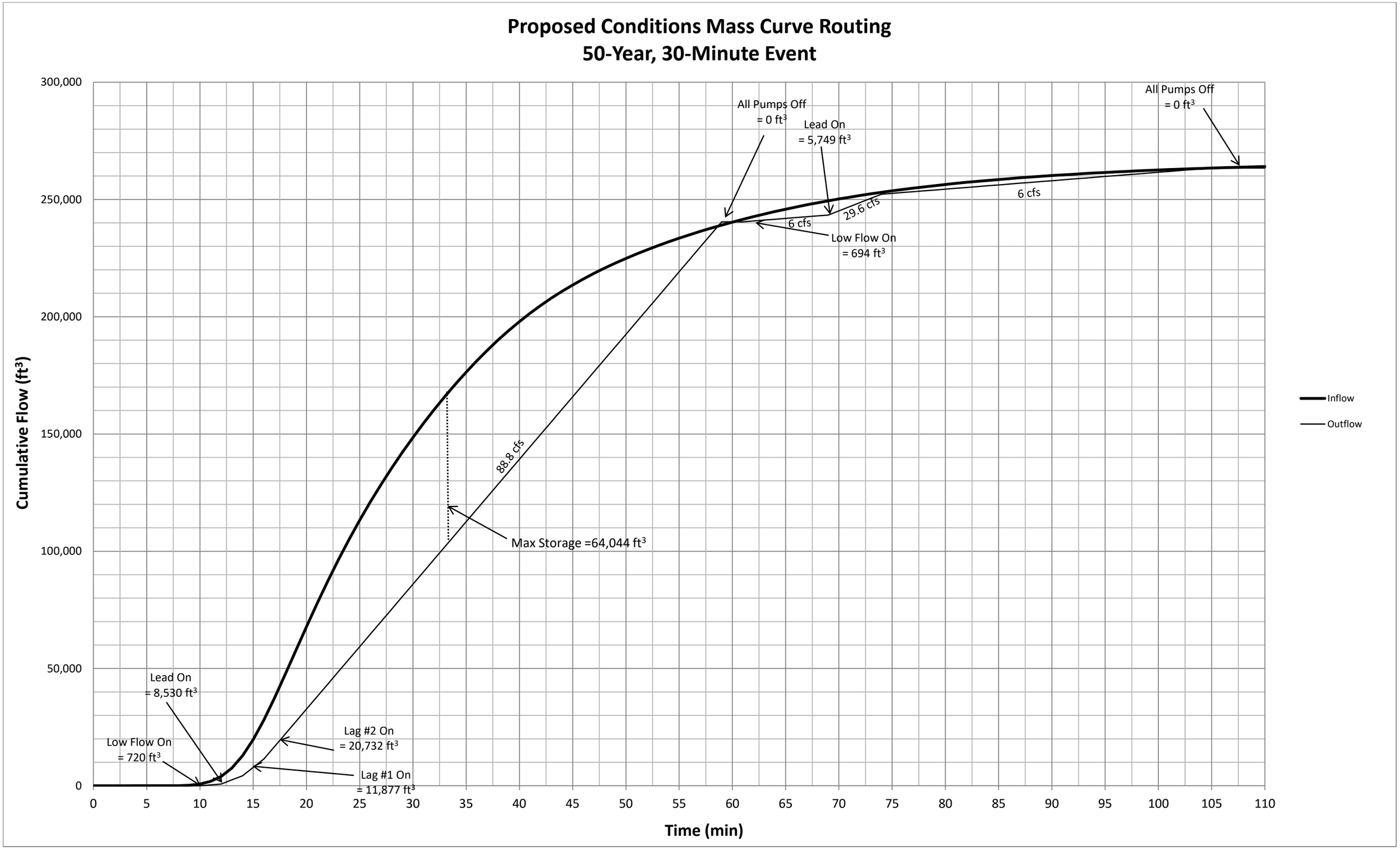
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
		165.11	60	9,906.87												
21	162.338				77,742	720	15,984	12,432	8,880	0	38,016	39,726	0	1	1	1
		158.89	60	9,533.40												
22	155.442				87,275	720	17,760	14,208	10,656	0	43,344	43,931	0	1	1	1
		151.70	60	9,102.21												
23	147.965				96,377	720	19,536	15,984	12,432	0	48,672	47,705	0	1	1	1
		144.22	60	8,653.38												
24	140.481				105,031	720	21,312	17,760	14,208	0	54,000	51,031	0	1	1	1
		136.90	60	8,213.88												
25	133.315				113,244	720	23,088	19,536	15,984	0	59,328	53,916	0	1	1	1
		129.95	60	7,796.91												
26	126.582				121,041	720	24,864	21,312	17,760	0	64,656	56,385	0	1	1	1
		123.39	60	7,403.52												
27	120.202				128,445	720	26,640	23,088	19,536	0	69,984	58,461	0	1	1	1
		117.20	60	7,032.27												
28	114.207				135,477	720	28,416	24,864	21,312	0	75,312	60,165	0	1	1	1
		111.44	60	6,686.52												
29	108.677				142,164	720	30,192	26,640	23,088	0	80,640	61,524	0	1	1	1
		106.16	60	6,369.87												
30	103.652				148,534	720	31,968	28,416	24,864	0	85,968	62,566	0	1	1	1
		101.35	60	6,081.21												
31	99.055				154,615	720	33,744	30,192	26,640	0	91,296	63,319	0	1	1	1
		96.93	60	5,815.56												
32	94.797				160,430	720	35,520	31,968	28,416	0	96,624	63,806	0	1	1	1
		92.77	60	5,565.96												
33	90.735				165,996	720	37,296	33,744	30,192	0	101,952	64,044	0	1	1	1
		88.72	60	5,323.11												
34	86.702				171,319	720	39,072	35,520	31,968	0	107,280	64,039	0	1	1	1
		84.66	60	5,079.57												
35	82.617				176,399	720	40,848	37,296	33,744	0	112,608	63,791	0	1	1	1
		80.50	60	4,829.97												
36	78.382				181,229	720	42,624	39,072	35,520	0	117,936	63,293	0	1	1	1
		76.21	60	4,572.57												
37	74.037				185,801	720	44,400	40,848	37,296	0	123,264	62,537	0	1	1	1
		71.86	60	4,311.72												
38	69.687				190,113	720	46,176	42,624	39,072	0	128,592	61,521	0	1	1	1
		67.54	60	4,052.40												
39	65.393				194,166	720	47,952	44,400	40,848	0	133,920	60,246	0	1	1	1
		63.29	60	3,797.10												
40	61.177				197,963	720	49,728	46,176	42,624	0	139,248	58,715	0	1	1	1
		59.19	60	3,551.64												
41	57.211				201,514	720	51,504	47,952	44,400	0	144,576	56,938	0	1	1	1
		55.35	60	3,320.91												
42	53.486				204,835	720	53,280	49,728	46,176	0	149,904	54,931	0	1	1	1
		51.74	60	3,104.34												
43	49.992				207,940	720	55,056	51,504	47,952	0	155,232	52,708	0	1	1	1
		48.38	60	2,902.68												
44	46.764				210,842	720	56,832	53,280	49,728	0	160,560	50,282	0	1	1	1
		45.28	60	2,717.01												
45	43.803				213,559	720	58,608	55,056	51,504	0	165,888	47,671	0	1	1	1
		42.44	60	2,546.64												

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
46	41.085				216,106	720	60,384	56,832	53,280	0	171,216	44,890	0	1	1	1
		39.85	60	2,390.82												
47	38.609				218,497	720	62,160	58,608	55,056	0	176,544	41,953	0	1	1	1
		37.50	60	2,250.06												
48	36.393				220,747	720	63,936	60,384	56,832	0	181,872	38,875	0	1	1	1
		35.38	60	2,122.86												
49	34.369				222,870	720	65,712	62,160	58,608	0	187,200	35,670	0	1	1	1
		33.44	60	2,006.40												
50	32.511				224,876	720	67,488	63,936	60,384	0	192,528	32,348	0	1	1	1
		31.66	60	1,899.84												
51	30.817				226,776	720	69,264	65,712	62,160	0	197,856	28,920	0	1	1	1
		30.05	60	1,802.85												
52	29.278				228,579	720	71,040	67,488	63,936	0	203,184	25,395	0	1	1	1
		28.58	60	1,714.65												
53	27.877				230,293	720	72,816	69,264	65,712	0	208,512	21,781	0	1	1	1
		27.23	60	1,634.04												
54	26.591				231,927	720	74,592	71,040	67,488	0	213,840	18,087	0	1	1	1
		25.99	60	1,559.46												
55	25.391				233,487	720	76,368	72,816	69,264	0	219,168	14,319	0	1	1	1
		24.83	60	1,490.07												
56	24.278				234,977	720	78,144	74,592	71,040	0	224,496	10,481	0	1	1	1
		23.76	60	1,425.45												
57	23.237				236,402	720	79,920	76,368	72,816	0	229,824	6,578	0	1	1	1
		22.75	60	1,364.91												
58	22.26				237,767	720	81,696	78,144	74,592	0	235,152	2,615	0	1	1	1
		21.80	60	1,307.82												
59	21.334				239,075	720	83,472	79,920	76,368	0	240,480	0	0	1	1	1
		20.90	60	1,253.70												
60	20.456				240,329	720	83,472	79,920	76,368	0	240,480	0	0	0	0	0
		20.04	60	1,202.40												
61	19.624				241,531	720	83,472	79,920	76,368	0	240,480	1,051	0	0	0	0
		19.21	60	1,152.45												
62	18.791				242,684	1,080	83,472	79,920	76,368	0	240,840	1,844	1		0	0
		18.38	60	1,102.56												
63	17.961				243,786	1,440	83,472	79,920	76,368	0	241,200	2,586	1	0	0	0
		17.55	60	1,053.09												
64	17.142				244,839	1,800	83,472	79,920	76,368	0	241,560	3,279	1	0	0	0
		16.75	60	1,004.85												
65	16.353				245,844	2,160	83,472	79,920	76,368	0	241,920	3,924	1	0	0	0
		15.98	60	958.53												
66	15.598				246,803	2,520	83,472	79,920	76,368	0	242,280	4,523	1	0	0	0
		15.24	60	914.31												
67	14.879				247,717	2,880	83,472	79,920	76,368	0	242,640	5,077	1	0	0	0
		14.54	60	872.13												
68	14.192				248,589	3,240	83,472	79,920	76,368	0	243,000	5,589	1	0	0	0
		13.86	60	831.78												
69	13.534				249,421	3,600	83,472	79,920	76,368	0	243,360	6,061	1	0	0	0
		13.23	60	793.53												
70	12.917				250,214	3,600	85,248	79,920	76,368	0	245,136	5,078	0	1	0	0
		12.62	60	757.38												
71	12.329				250,972	3,600	87,024	79,920	76,368	0	246,912	4,060	0	1	0	0

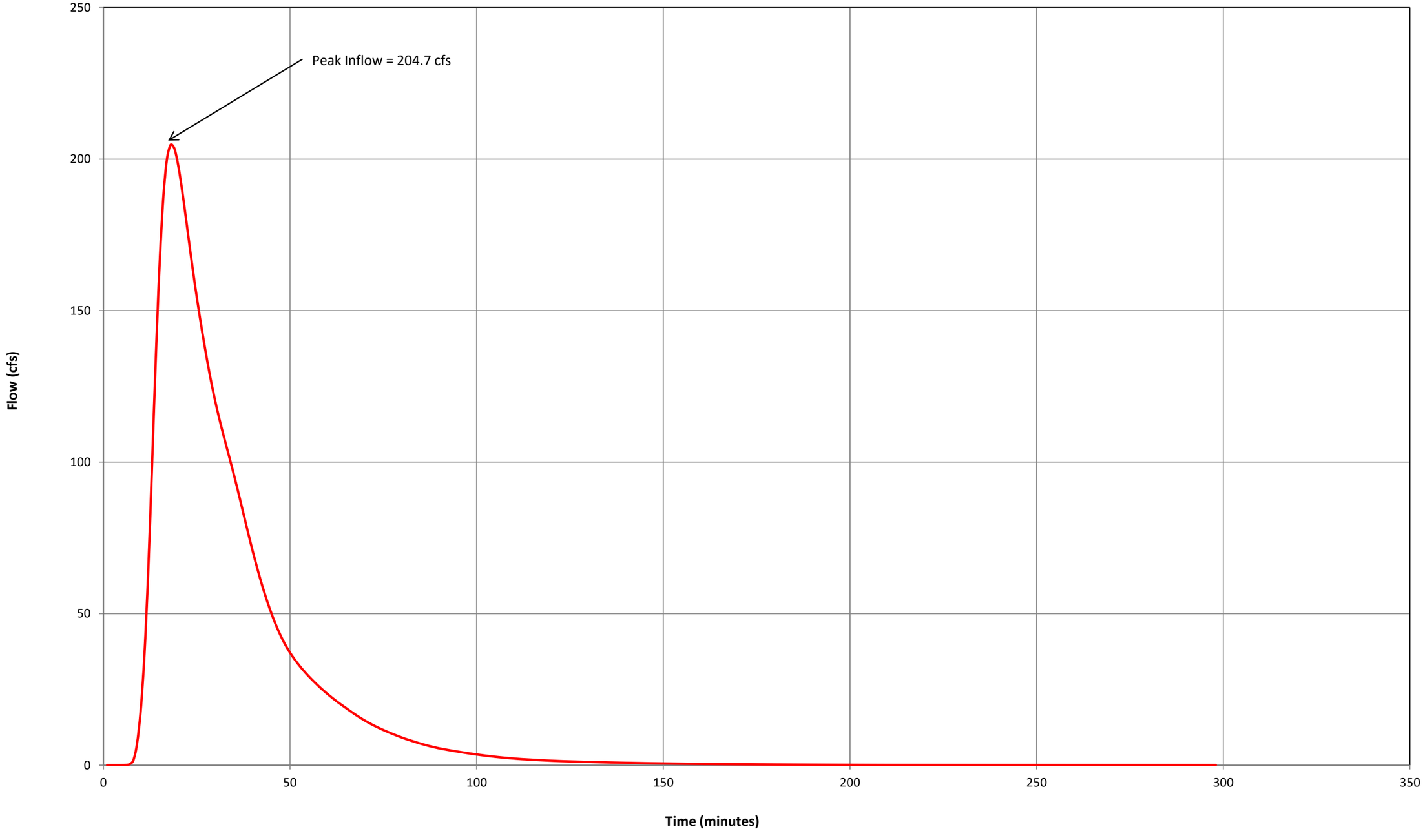
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
		12.05	60	722.73												
72	11.762				251,695	3,600	88,800	79,920	76,368	0	248,688	3,007	0	1	0	0
		11.49	60	689.58												
73	11.224				252,384	3,600	90,576	79,920	76,368	0	250,464	1,920	0	1	0	0
		10.96	60	657.87												
74	10.705				253,042	3,600	92,352	79,920	76,368	0	252,240	802		1	0	0
		10.46	60	627.33												
75	10.206				253,669	3,960	92,352	79,920	76,368	0	252,600	1,069	1	0	0	0
		9.97	60	597.90												
76	9.724				254,267	4,320	92,352	79,920	76,368	0	252,960	1,307	1	0	0	0
		9.49	60	569.49												
77	9.259				254,837	4,680	92,352	79,920	76,368	0	253,320	1,517	1	0	0	0
		9.03	60	542.01												
78	8.808				255,379	5,040	92,352	79,920	76,368	0	253,680	1,699	1	0	0	0
		8.61	60	516.54												
79	8.41				255,895	5,400	92,352	79,920	76,368	0	254,040	1,855	1	0	0	0
		8.21	60	492.75												
80	8.015				256,388	5,760	92,352	79,920	76,368	0	254,400	1,988	1	0	0	0
		7.82	60	469.20												
81	7.625				256,857	6,120	92,352	79,920	76,368	0	254,760	2,097	1	0	0	0
		7.44	60	446.22												
82	7.249				257,303	6,480	92,352	79,920	76,368	0	255,120	2,183	1	0	0	0
		7.07	60	424.20												
83	6.891				257,728	6,840	92,352	79,920	76,368	0	255,480	2,248	1	0	0	0
		6.72	60	403.32												
84	6.553				258,131	7,200	92,352	79,920	76,368	0	255,840	2,291	1	0	0	0
		6.39	60	383.67												
85	6.236				258,515	7,560	92,352	79,920	76,368	0	256,200	2,315	1	0	0	0
		6.09	60	365.19												
86	5.937				258,880	7,920	92,352	79,920	76,368	0	256,560	2,320	1	0	0	0
		5.80	60	347.88												
87	5.659				259,228	8,280	92,352	79,920	76,368	0	256,920	2,308	1	0	0	0
		5.53	60	332.04												
88	5.409				259,560	8,640	92,352	79,920	76,368	0	257,280	2,280	1	0	0	0
		5.29	60	317.58												
89	5.177				259,877	9,000	92,352	79,920	76,368	0	257,640	2,237	1	0	0	0
		5.07	60	303.96												
90	4.955				260,181	9,360	92,352	79,920	76,368	0	258,000	2,181	1	0	0	0
		4.85	60	290.85												
91	4.74				260,472	9,720	92,352	79,920	76,368	0	258,360	2,112	1	0	0	0
		4.64	60	278.13												
92	4.531				260,750	10,080	92,352	79,920	76,368	0	258,720	2,030	1	0	0	0
		4.43	60	265.80												
93	4.329				261,016	10,440	92,352	79,920	76,368	0	259,080	1,936	1	0	0	0
		4.23	60	253.86												
94	4.133				261,270	10,800	92,352	79,920	76,368	0	259,440	1,830	1	0	0	0
		4.04	60	242.31												
95	3.944				261,512	11,160	92,352	79,920	76,368	0	259,800	1,712	1	0	0	0
		3.85	60	231.18												
96	3.762				261,743	11,520	92,352	79,920	76,368	0	260,160	1,583	1	0	0	0
		3.67	60	220.44												

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
97	3.586				261,964	11,880	92,352	79,920	76,368	0	260,520	1,444	1	0	0	0
		3.50	60	210.09												
98	3.417				262,174	12,240	92,352	79,920	76,368	0	260,880	1,294	1	0	0	0
		3.34	60	200.16												
99	3.255				262,374	12,600	92,352	79,920	76,368	0	261,240	1,134	1	0	0	0
		3.18	60	190.65												
100	3.1				262,565	12,960	92,352	79,920	76,368	0	261,600	965	1	0	0	0
		3.03	60	181.50												
101	2.95				262,746	13,320	92,352	79,920	76,368	0	261,960	786	1	0	0	0
		2.88	60	172.74												
102	2.808				262,919	13,680	92,352	79,920	76,368	0	262,320	599	1	0	0	0
		2.74	60	164.52												
103	2.676				263,084	14,040	92,352	79,920	76,368	0	262,680	404	1	0	0	0
		2.61	60	156.81												
104	2.551				263,240	14,400	92,352	79,920	76,368	0	263,040	200	1	0	0	0
		2.49	60	149.58												
105	2.435				263,390	14,760	92,352	79,920	76,368	0	263,400	0	1	0	0	0
		2.38	60	142.80												
106	2.325				263,533	14,760	92,352	79,920	76,368	0	263,400	133	0	0	0	0
		2.27	60	136.35												
107	2.22				263,669	14,760	92,352	79,920	76,368	0	263,400	269	0	0	0	0
		2.17	60	130.20												
108	2.12				263,799	14,760	92,352	79,920	76,368	0	263,400	399	0	0	0	0
		2.07	60	124.32												
109	2.024				263,924	14,760	92,352	79,920	76,368	0	263,400	524	0	0	0	0

Proposed Conditions Mass Curve Routing
50-Year, 30-Minute Event



Inflow Hydrograph
100-Year, 30-min Design Storm



100-Year, 30-Minute Design Storm Event

	LOW FLOW	LEAD	LAG #1	LAG #2	
Pump 'ON' Volume (ft^3)	710	5,767	11,576	20,546	
Pump 'ON' Elevation (ft)	558.2	562.7	563.7	564.7	
Pump Flow Rate (cfs)	6.0	29.6	29.6	29.6	

	LOW FLOW	LEAD	LAG #1	LAG #2	
Pump 'OFF' Volume (ft^3)	0	710	710	710	
Pump 'OFF' Elevation (ft)	557.2	558.2	558.2	558.2	

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
1	0				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
2	0				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
3	0				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
4	0.001				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	0												
5	0.012				0	0	0	0	0	0	0	0	0	0	0	0
		0	60	2												
6	0.069				3	0	0	0	0	0	0	0	0	0	0	0
		0	60	11												
7	0.309				14	0	0	0	0	0	0	0	0	0	0	0
		1	60	55												
8	1.532				69	0	0	0	0	0	0	69	0	0	0	0
		4	60	257												
9	7.021				326	0	0	0	0	0	0	326	0	0	0	0
		12.642	60	758.52												
10	18.263				1,085	360	0	0	0	0	360	725	1	0	0	0
		27.481	60	1,648.86												
11	36.699				2,733	720	0	0	0	0	720	2,013	1	0	0	0
		50.31	60	3,018.45												
12	63.916				5,752	1,080	0	0	0	0	1,080	4,672	1	0	0	0
		80.99	60	4,859.52												
13	98.068				10,611	1,080	1,776	0	0	0	2,856	7,755	0	1	0	0
		115.65	60	6,938.70												
14	133.222				17,550	1,080	3,552	1,776	0	0	6,408	11,142	0	1	1	0
		148.58	60	8,914.50												
15	163.928				26,465	1,080	5,328	3,552	0	0	9,960	16,505	0	1	1	0
		175.26	60	10,515.72												
16	186.596				36,980	1,080	7,104	5,328	1,776	0	15,288	21,692	0	1	1	1
		193.24	60	11,594.13												
17	199.875				48,574	1,080	8,880	7,104	3,552	0	20,616	27,958	0	1	1	1
		202.30	60	12,138.03												
18	204.726				60,712	1,080	10,656	8,880	5,328	0	25,944	34,768	0	1	1	1
		204.13	60	12,248.07												
19	203.543				72,961	1,080	12,432	10,656	7,104	0	31,272	41,689	0	1	1	1
		200.87	60	12,052.29												
20	198.2				85,013	1,080	14,208	12,432	8,880	0	36,600	48,413	0	1	1	1
		194.32	60	11,659.05												
21	190.435				96,672	1,080	15,984	14,208	10,656	0	41,928	54,744	0	1	1	1
		185.95	60	11,156.85												

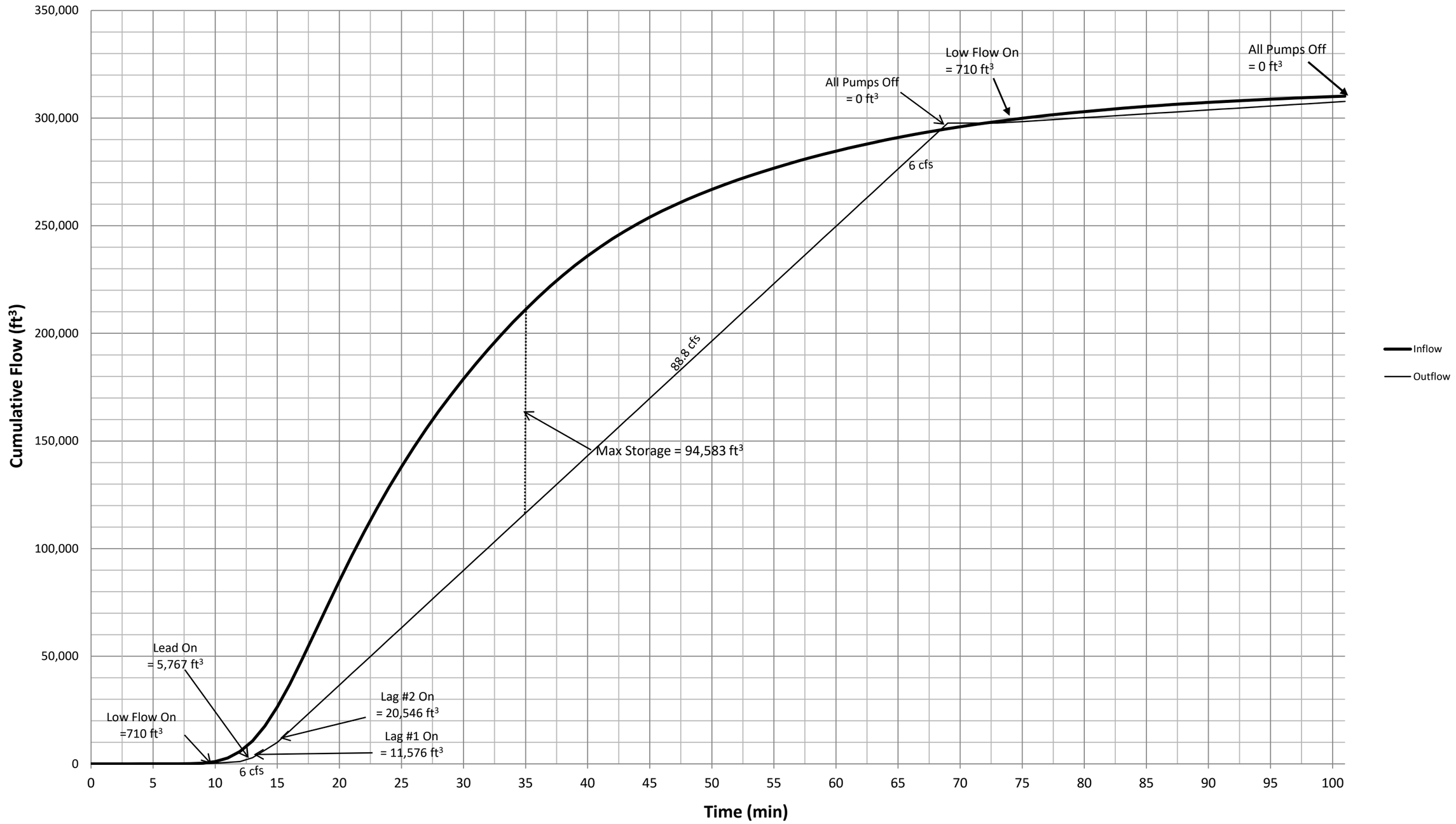
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
22	181.46				107,829	1,080	17,760	15,984	12,432	0	47,256	60,573	0	1	1	1
		176.80	60	10,608.03												
23	172.141				118,437	1,080	19,536	17,760	14,208	0	52,584	65,853	0	1	1	1
		167.60	60	10,055.85												
24	163.054				128,493	1,080	21,312	19,536	15,984	0	57,912	70,581	0	1	1	1
		158.79	60	9,527.49												
25	154.529				138,020	1,080	23,088	21,312	17,760	0	63,240	74,780	0	1	1	1
		150.55	60	9,033.27												
26	146.58				147,053	1,080	24,864	23,088	19,536	0	68,568	78,485	0	1	1	1
		142.86	60	8,571.51												
27	139.137				155,625	1,080	26,640	24,864	21,312	0	73,896	81,729	0	1	1	1
		135.63	60	8,137.80												
28	132.123				163,763	1,080	28,416	26,640	23,088	0	79,224	84,539	0	1	1	1
		128.90	60	7,734.12												
29	125.681				171,497	1,080	30,192	28,416	24,864	0	84,552	86,945	0	1	1	1
		122.77	60	7,366.05												
30	119.854				178,863	1,080	31,968	30,192	26,640	0	89,880	88,983	0	1	1	1
		117.21	60	7,032.57												
31	114.565				185,895	1,080	33,744	31,968	28,416	0	95,208	90,687	0	1	1	1
		112.12	60	6,726.99												
32	109.668				192,622	1,080	35,520	33,744	30,192	0	100,536	92,086	0	1	1	1
		107.33	60	6,440.07												
33	105.001				199,062	1,080	37,296	35,520	31,968	0	105,864	93,198	0	1	1	1
		102.68	60	6,161.07												
34	100.368				205,224	1,080	39,072	37,296	33,744	0	111,192	94,032	0	1	1	1
		97.99	60	5,879.37												
35	95.611				211,103	1,080	40,848	39,072	35,520	0	116,520	94,583	0	1	1	1
		93.15	60	5,588.76												
36	90.681				216,692	1,080	42,624	40,848	37,296	0	121,848	94,844	0	1	1	1
		88.15	60	5,288.79												
37	85.612				221,980	1,080	44,400	42,624	39,072	0	127,176	94,804	0	1	1	1
		83.07	60	4,984.38												
38	80.534				226,965	1,080	46,176	44,400	40,848	0	132,504	94,461	0	1	1	1
		78.00	60	4,680.27												
39	75.475				231,645	1,080	47,952	46,176	42,624	0	137,832	93,813	0	1	1	1
		73.03	60	4,381.68												
40	70.581				236,027	1,080	49,728	47,952	44,400	0	143,160	92,867	0	1	1	1
		68.26	60	4,095.48												
41	65.935				240,122	1,080	51,504	49,728	46,176	0	148,488	91,634	0	1	1	1
		63.72	60	3,823.26												
42	61.507				243,946	1,080	53,280	51,504	47,952	0	153,816	90,130	0	1	1	1
		59.46	60	3,567.54												
43	57.411				247,513	1,080	55,056	53,280	49,728	0	159,144	88,369	0	1	1	1
		55.52	60	3,330.96												
44	53.621				250,844	1,080	56,832	55,056	51,504	0	164,472	86,372	0	1	1	1
		51.86	60	3,111.87												
45	50.108				253,956	1,080	58,608	56,832	53,280	0	169,800	84,156	0	1	1	1
		48.51	60	2,910.36												
46	46.904				256,866	1,080	60,384	58,608	55,056	0	175,128	81,738	0	1	1	1
		45.46	60	2,727.51												
47	44.013				259,594	1,080	62,160	60,384	56,832	0	180,456	79,138	0	1	1	1
		42.72	60	2,563.14												
48	41.425				262,157	1,080	63,936	62,160	58,608	0	185,784	76,373	0	1	1	1
		40.28	60	2,416.56												

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
49	39.127				264,573	1,080	65,712	63,936	60,384	0	191,112	73,461	0	1	1	1
		38.11	60	2,286.78												
50	37.099				266,860	1,080	67,488	65,712	62,160	0	196,440	70,420	0	1	1	1
		36.19	60	2,171.67												
51	35.29				269,032	1,080	69,264	67,488	63,936	0	201,768	67,264	0	1	1	1
		34.46	60	2,067.48												
52	33.626				271,099	1,080	71,040	69,264	65,712	0	207,096	64,003	0	1	1	1
		32.86	60	1,971.45												
53	32.089				273,071	1,080	72,816	71,040	67,488	0	212,424	60,647	0	1	1	1
		31.37	60	1,882.47												
54	30.66				274,953	1,080	74,592	72,816	69,264	0	217,752	57,201	0	1	1	1
		29.99	60	1,799.43												
55	29.321				276,753	1,080	76,368	74,592	71,040	0	223,080	53,673	0	1	1	1
		28.69	60	1,721.28												
56	28.055				278,474	1,080	78,144	76,368	72,816	0	228,408	50,066	0	1	1	1
		27.45	60	1,646.97												
57	26.844				280,121	1,080	79,920	78,144	74,592	0	233,736	46,385	0	1	1	1
		26.26	60	1,575.72												
58	25.68				281,697	1,080	81,696	79,920	76,368	0	239,064	42,633	0	1	1	1
		25.12	60	1,507.44												
59	24.568				283,204	1,080	83,472	81,696	78,144	0	244,392	38,812	0	1	1	1
		24.04	60	1,442.40												
60	23.512				284,647	1,080	85,248	83,472	79,920	0	249,720	34,927	0	1	1	1
		23.01	60	1,380.39												
61	22.501				286,027	1,080	87,024	85,248	81,696	0	255,048	30,979	0	1	1	1
		22.02	60	1,320.93												
62	21.53				287,348	1,080	88,800	87,024	83,472	0	260,376	26,972	0	1	1	1
		21.06	60	1,263.63												
63	20.591				288,611	1,080	90,576	88,800	85,248	0	265,704	22,907	0	1	1	1
		20.15	60	1,209.12												
64	19.713				289,821	1,080	92,352	90,576	87,024	0	271,032	18,789	0	1	1	1
		19.27	60	1,156.32												
65	18.831				290,977	1,080	94,128	92,352	88,800	0	276,360	14,617	0	1	1	1
		18.39	60	1,103.58												
66	17.955				292,081	1,080	95,904	94,128	90,576	0	281,688	10,393	0	1	1	1
		17.52	60	1,051.41												
67	17.092				293,132	1,080	97,680	95,904	92,352	0	287,016	6,116	0	1	1	1
		16.68	60	1,000.62												
68	16.262				294,133	1,080	99,456	97,680	94,128	0	292,344	1,789	0	1	1	1
		15.87	60	952.14												
69	15.476				295,085	1,080	101,232	99,456	95,904	0	297,672	0	0	1	1	1
		15.10	60	906.24												
70	14.732				295,991	1,080	101,232	99,456	95,904	0	297,672	0	0	0	0	0
		14.38	60	862.77												
71	14.027				296,854	1,080	101,232	99,456	95,904	0	297,672	0	0	0	0	0
		13.69	60	821.67												
72	13.362				297,675	1,080	101,232	99,456	95,904	0	297,672	3	0	0	0	0
		13.05	60	783.06												
73	12.74				298,458	1,080	101,232	99,456	95,904	0	297,672	786	0	0	0	0
		12.44	60	746.67												

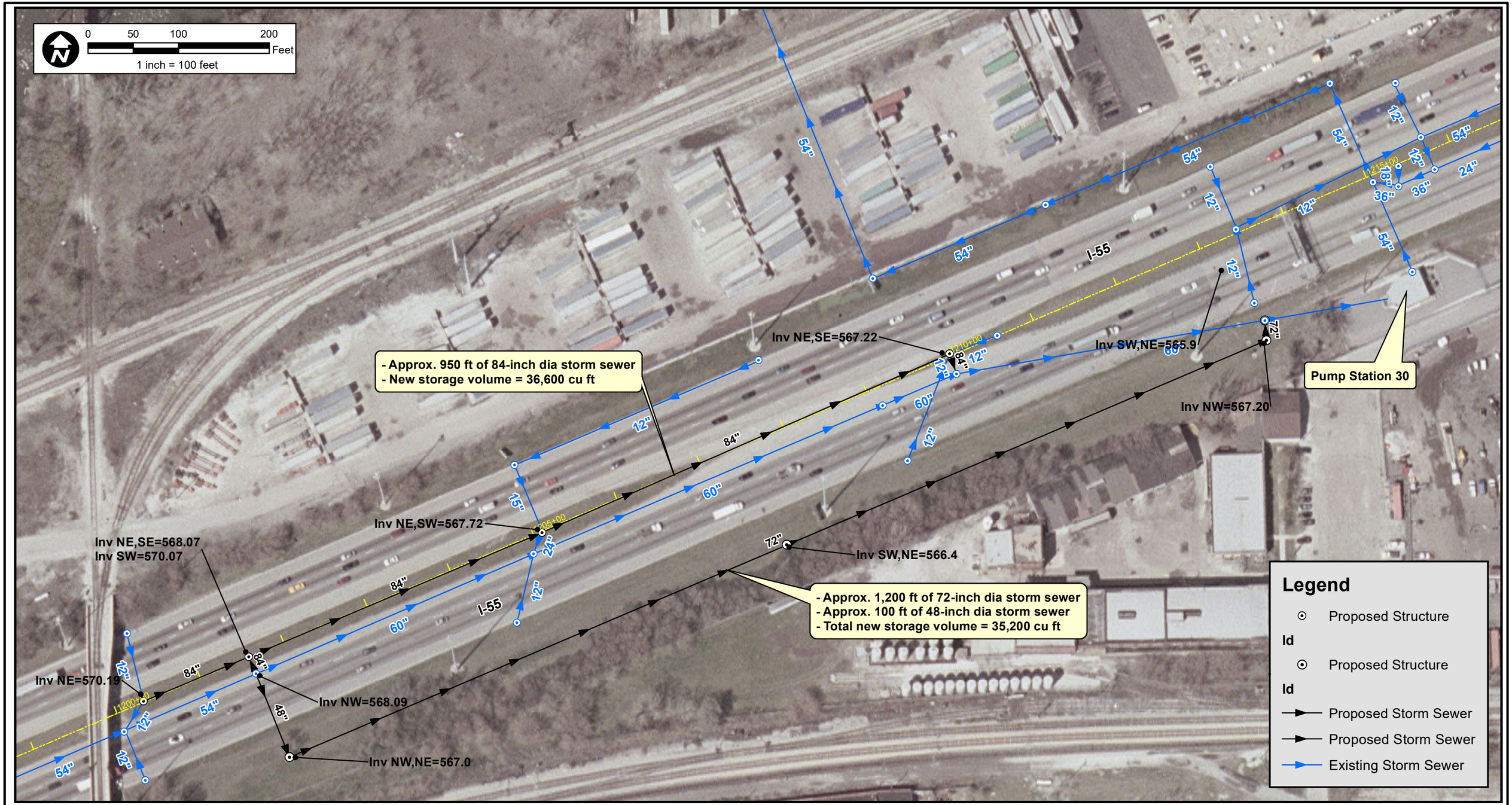
Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
74	12.149				299,205	1,440	101,232	99,456	95,904	0	298,032	1,173	1	0	0	0
		11.87	60	712.02												
75	11.585				299,917	1,800	101,232	99,456	95,904	0	298,392	1,525	1	0	0	0
		11.32	60	679.02												
76	11.049				300,596	2,160	101,232	99,456	95,904	0	298,752	1,844	1	0	0	0
		10.79	60	647.37												
77	10.53				301,244	2,520	101,232	99,456	95,904	0	299,112	2,132	1	0	0	0
		10.28	60	616.80												
78	10.03				301,860	2,880	101,232	99,456	95,904	0	299,472	2,388	1	0	0	0
		9.79	60	587.31												
79	9.547				302,448	3,240	101,232	99,456	95,904	0	299,832	2,616	1	0	0	0
		9.31	60	558.81												
80	9.08				303,006	3,600	101,232	99,456	95,904	0	300,192	2,814	1	0	0	0
		8.86	60	531.69												
81	8.643				303,538	3,960	101,232	99,456	95,904	0	300,552	2,986	1	0	0	0
		8.44	60	506.64												
82	8.245				304,045	4,320	101,232	99,456	95,904	0	300,912	3,133	1	0	0	0
		8.05	60	482.70												
83	7.845				304,527	4,680	101,232	99,456	95,904	0	301,272	3,255	1	0	0	0
		7.65	60	459.06												
84	7.457				304,987	5,040	101,232	99,456	95,904	0	301,632	3,355	1	0	0	0
		7.27	60	436.26												
85	7.085				305,423	5,400	101,232	99,456	95,904	0	301,992	3,431	1	0	0	0
		6.91	60	414.54												
86	6.733				305,837	5,760	101,232	99,456	95,904	0	302,352	3,485	1	0	0	0
		6.57	60	394.08												
87	6.403				306,231	6,120	101,232	99,456	95,904	0	302,712	3,519	1	0	0	0
		6.25	60	374.91												
88	6.094				306,606	6,480	101,232	99,456	95,904	0	303,072	3,534	1	0	0	0
		5.95	60	356.94												
89	5.804				306,963	6,840	101,232	99,456	95,904	0	303,432	3,531	1	0	0	0
		5.67	60	340.32												
90	5.54				307,304	7,200	101,232	99,456	95,904	0	303,792	3,512	1	0	0	0
		5.42	60	325.23												
91	5.301				307,629	7,560	101,232	99,456	95,904	0	304,152	3,477	1	0	0	0
		5.19	60	311.25												
92	5.074				307,940	7,920	101,232	99,456	95,904	0	304,512	3,428	1	0	0	0
		4.97	60	297.90												
93	4.856				308,238	8,280	101,232	99,456	95,904	0	304,872	3,366	1	0	0	0
		4.75	60	285.03												
94	4.645				308,523	8,640	101,232	99,456	95,904	0	305,232	3,291	1	0	0	0
		4.54	60	272.55												
95	4.44				308,796	9,000	101,232	99,456	95,904	0	305,592	3,204	1	0	0	0
		4.34	60	260.43												
96	4.241				309,056	9,360	101,232	99,456	95,904	0	305,952	3,104	1	0	0	0
		4.14	60	248.67												
97	4.048				309,305	9,720	101,232	99,456	95,904	0	306,312	2,993	1	0	0	0
		3.96	60	237.30												
98	3.862				309,542	10,080	101,232	99,456	95,904	0	306,672	2,870	1	0	0	0
		3.77	60	226.35												
99	3.683				309,768	10,440	101,232	99,456	95,904	0	307,032	2,736	1	0	0	0
		3.60	60	215.79												
100	3.51				309,984	10,800	101,232	99,456	95,904	0	307,392	2,592	1	0	0	0
		3.43	60	205.62												

Time (min)	Inflow (cfs)	Average Inflow (cfs)	Time Increment (sec)	Incremental Flow (ft^3)	Cumulative Inflow (ft^3)	Cumulative Pump Outflows (ft^3)					Total Outflow (ft^3)	Required Storage (ft^3)	On-Off Counters (1=On / 0=Off)			
						Low Flow	Lead	Lag #1	Lag#2	Stand-By			Low Flow	Lead	Lag #1	Lag #2
101	3.344				310,190	11,160	101,232	99,456	95,904	0	307,752	2,438	1	0	0	0

Proposed Conditions Mass Curve Routing
100-Year, 30-Minute Event



Section 4
Proposed B75 Alternatives Schematics and Cost Estimates



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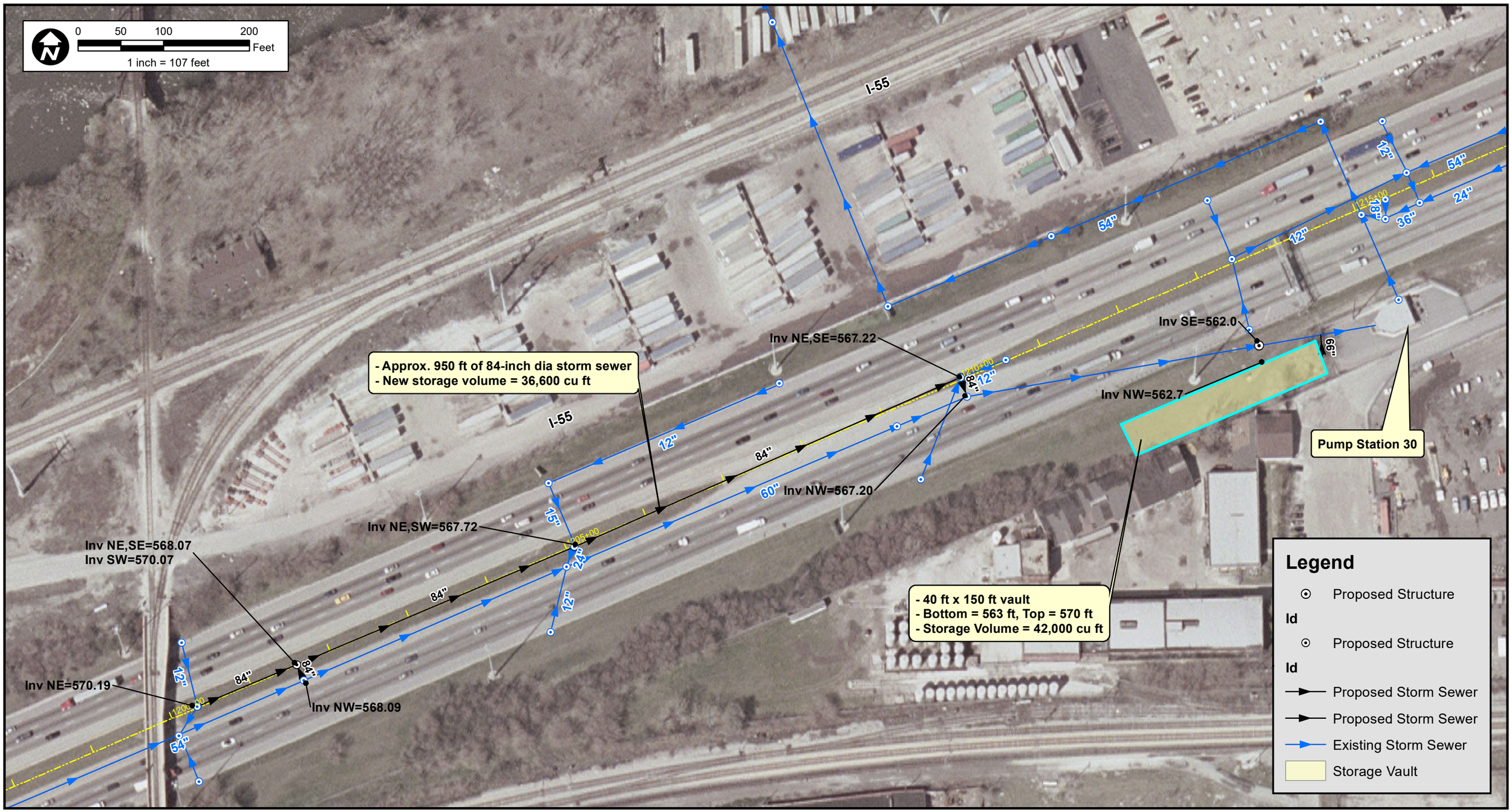
DSGN.	EMB	CHKD.	

Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road, Suite 600
Rosemont, IL 60018
(847) 823-0500 / FAX (847) 823-0520

CLIENT	Illinois Department of Transportation	PROJECT NO. 11-0203	
TITLE	B75 ALTERNATIVE 1	DATE 1/2022	
		EXHIBIT 1	



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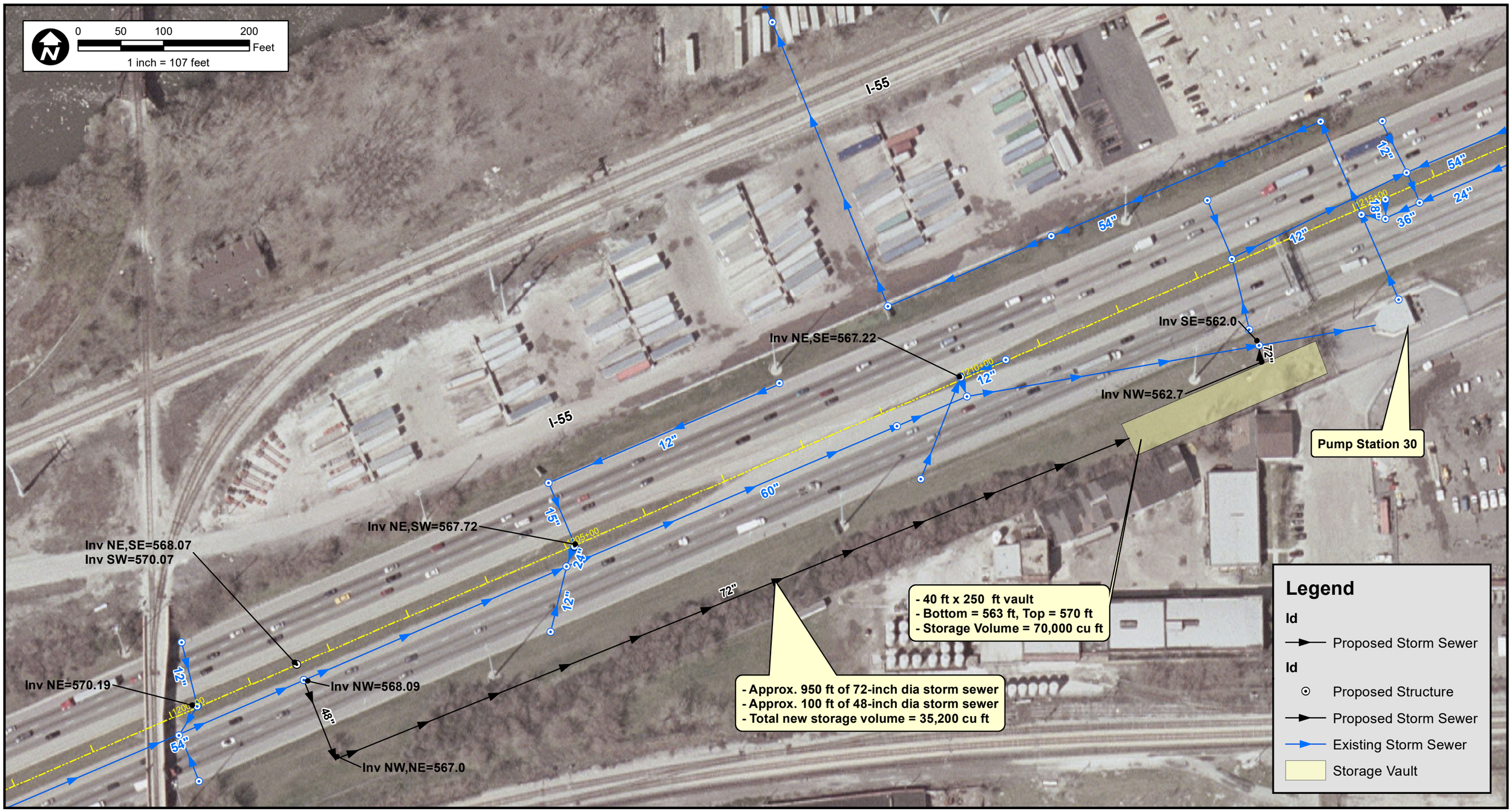
DSGN.	EMB	CHKD.	

Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road, Suite 600
Rosemont, IL 60018
(847) 823-0500 / FAX (847) 823-0520

CLIENT: Illinois Department of Transportation	PROJECT NO.: 11-0203	
TITLE: B75 ALTERNATIVE 2	DATE: 01/2022	
	EXHIBIT 2	



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DSGN.	EMB	CHKD.	

Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road, Suite 600
Rosemont, IL 60018
(847) 823-0500 / FAX (847) 823-0520

CLIENT	Illinois Department of Transportation	PROJECT NO. 11-0203	
TITLE	B75 ALTERNATIVE 3	DATE 01/2022	
		EXHIBIT 2	

PROJECT 110203; PUMP STATION 30

Estimated Conceptual Cost of B75 Alternative A - 1,013 lft of 84" RCP SS in median and 1200 lft of 72'

1.27.2022

DESCRIPTION - open cut	UNIT	QUANTITY	UNIT PRICE	COST
OPEN CUT 84" STORM SEWER. Includes trench box	FOOT	1,013	$ 700.00	$709,100
OPEN CUT 72" STORM SEWER. Includes trench box	FOOT	1,200	$ 650.00	$780,000
STORM SEWER 48" JACKED (includes cost for one boring shaft)	FOOT	100	$ 2,000.00	$200,000
TRENCH BACKFILL	FOOT	1,013	$ 350.00	$354,550
DROP SHAFT MANHOLE (17'-30'). Includes complete connections to proposed storm sewer	EACH	11	$ 10,000.00	$110,000
BACKFILL & TOPSOIL	CU FT	322,839	$ 1.75	$564,968
CONTAMINATED SOIL HAUL OFF	FOOT	2,213	$ 550.00	$1,217,150
DEWATERING	FOOT	2,213	$ 100.00	$221,300
MAINTENANCE OF TRAFFIC	LSUM	1	$ 50,000.00	$50,000
		SUBTOTAL		$4,207,068
		25% CONTINGENCY		$1,051,767
		TOTAL		$5,258,835

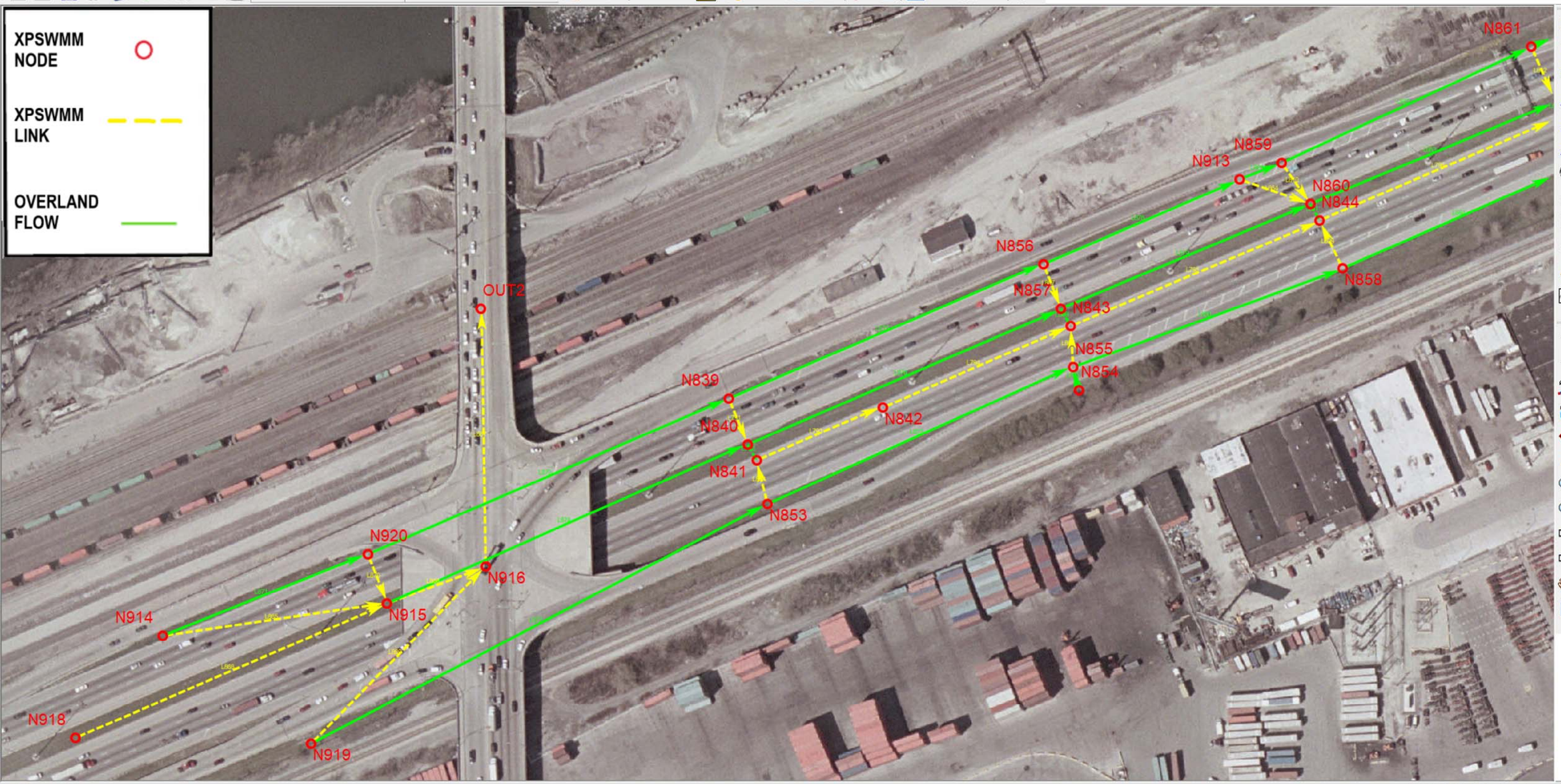
Section 5
Hydraulic Gradient Calculations and Plots

EXISTING CONDITIONS RESULTS

xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 50-30min ... Rnf San Hdr



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xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 50-30min ... Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

N932 N876 N873 N877 N921 N851 N874 N922 N875 N850 N872 N908 N909 N849 N870 N871 N923 N911 N910 N848 N867 SAG N847 N924 N864 N865 N846 N869 N861 N866 N862 N845 N863

For Help, press F1

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xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario | 50-30min | Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

OUT1 N934 N932 N873 N874 N875 N850 N872 N931 N898 N899 N904 N906 N907 N905 N903 N902 N876 N877 N921 N851 N922 N926 N879 N888 N889 N878 WET WELL N925 N893 N900 N894 N886 N896 N895 N933 N891 N892 N897 N928 N881 N882 N883 N901 N884 N890 N929

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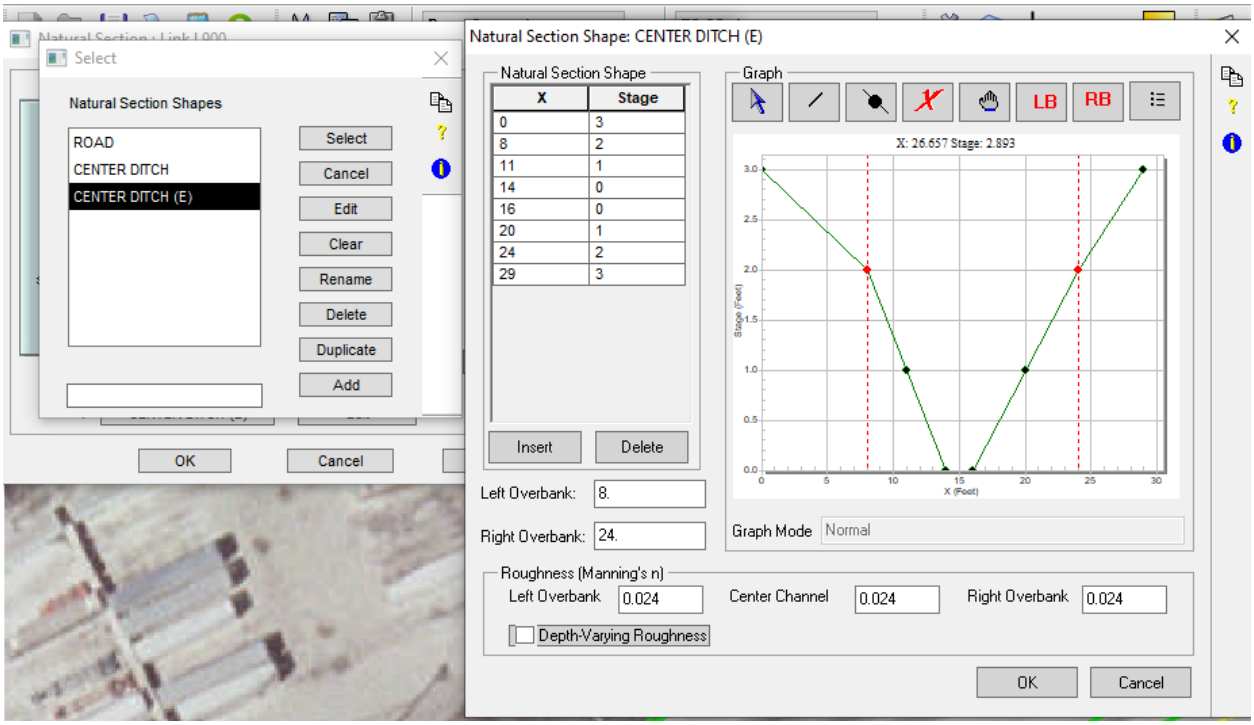
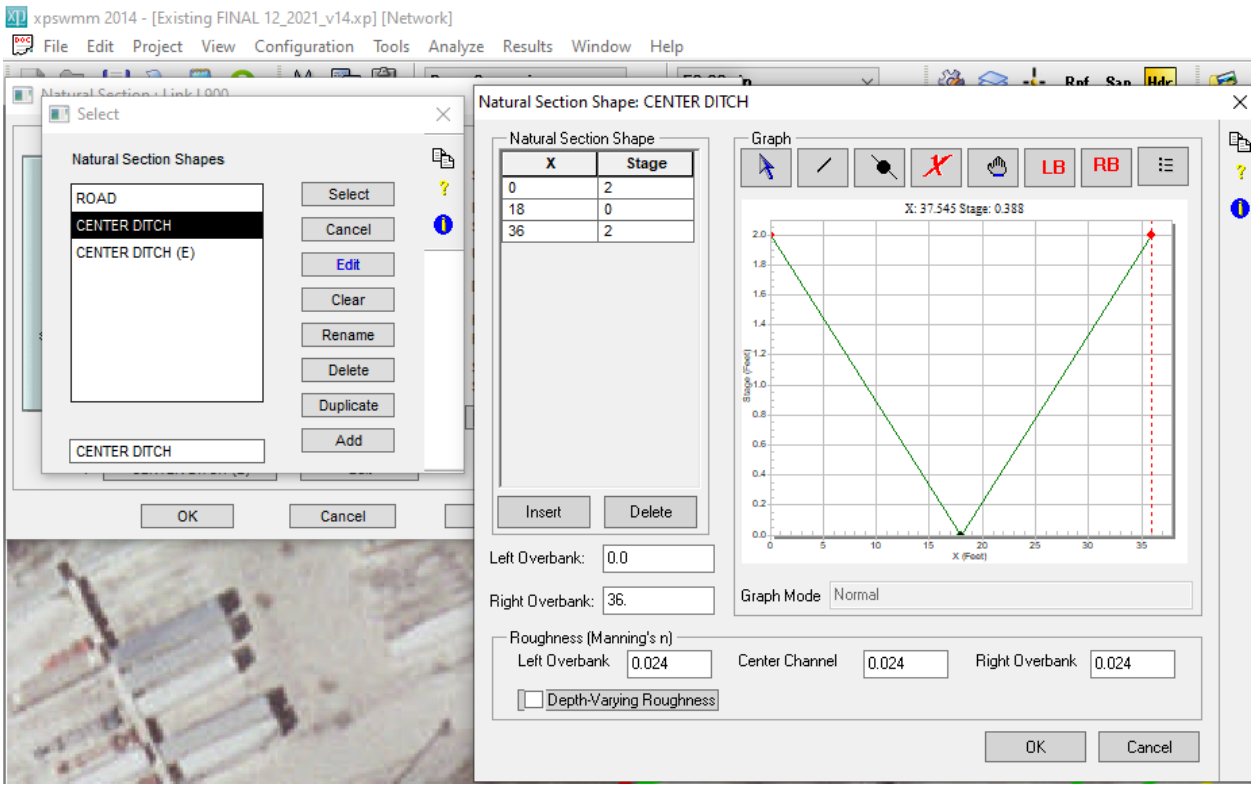
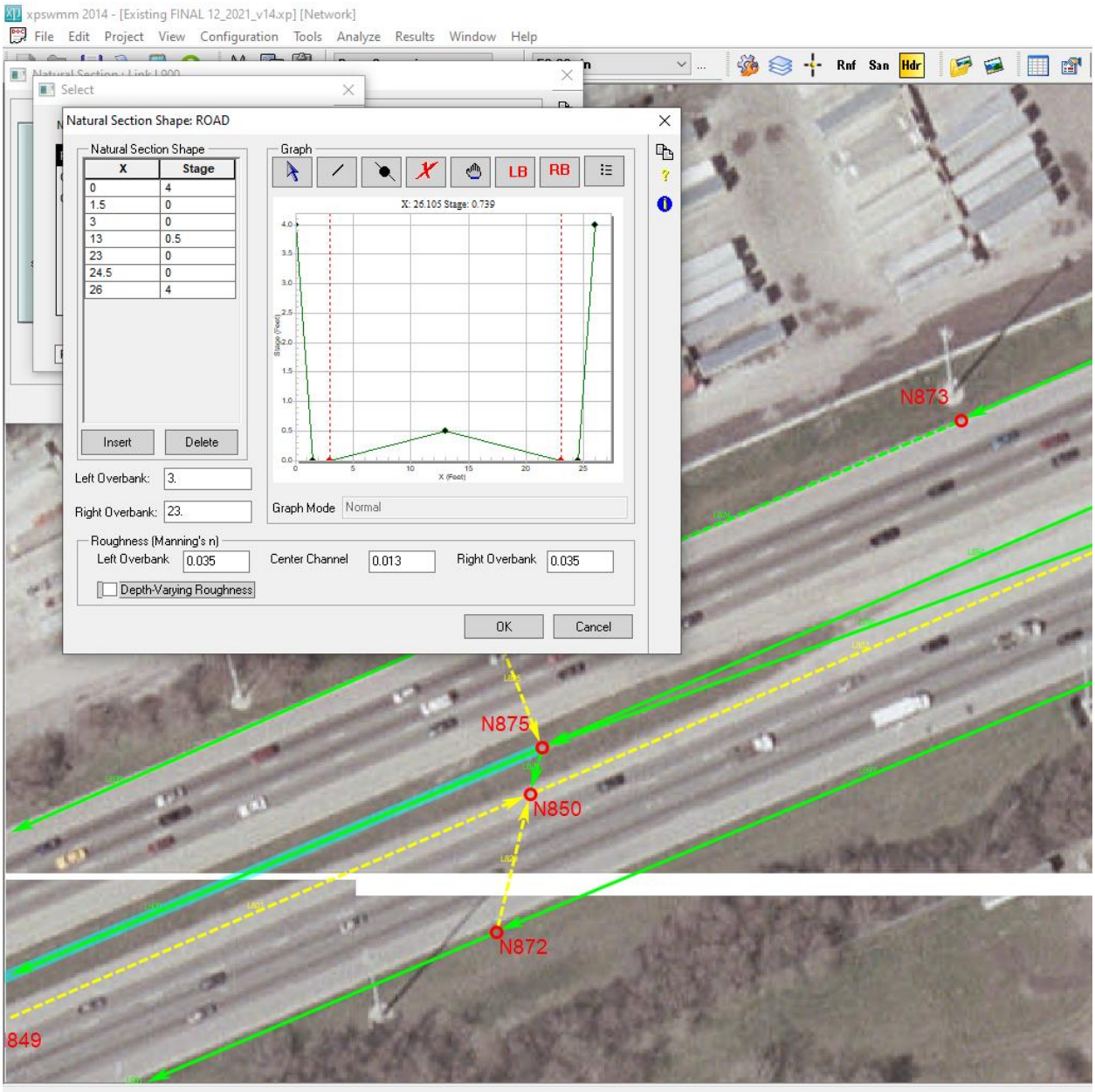
Channel Input Typicals






xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Rnf San Hdr
Select
Natural Section Shape: ROAD
Natural Section Shape
X Stage
0 4
1.5 0
3 0
13 0.5
23 0
24.5 0
26 4
Insert Delete
Graph
LB RB
X: 26.105 Stage: 0.739
Left Overbank: 3.
Right Overbank: 23.
Graph Mode Normal
Roughness (Manning's n)
Left Overbank 0.035
Center Channel 0.013
Right Overbank 0.035
Depth-Varying Roughness
OK Cancel
N873
N875
N850
N872
849

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n851 ss	50-30min	5.000	561.170	562.060	483.000	567.060	WET WELL	N851	566.170
L875	50-30min	1.000	588.610	592.800	500.000	593.800	N856	N839	589.610
n839 ss	50-30min	1.500	583.460	587.600	77.000	589.100	N840	N839	584.960
L876	50-30min	2.000	587.460	591.410	500.000	593.410	N857	N840	589.460
n840 ss	50-30min	1.500	583.010	583.210	24.000	584.710	N841	N840	584.510
n840 ol1	50-30min	1.000	593.210	591.410	24.000	592.410	N841	N840	594.210
n841 ss	50-30min	2.000	581.880	582.710	200.000	584.710	N842	N841	583.880
n842 ss	50-30min	3.000	580.610	581.130	298.000	584.130	N843	N842	583.610
n843 ss	50-30min	3.000	576.790	577.660	398.000	580.660	N844	N843	579.790
n844 ss	50-30min	3.000	573.340	573.940	386.000	576.940	N845	N844	576.340
n845 ss	50-30min	3.500	565.530	565.790	414.000	569.290	N846	N845	569.030
n846 ss	50-30min	4.000	564.270	565.330	260.000	569.330	N847	N846	568.270
n847 ss	50-30min	4.500	563.715	564.170	186.000	568.670	N910	N847	568.215
n848 ss	50-30min	4.500	563.320	563.520	266.000	568.020	N870	N848	567.820
n849 ss	50-30min	5.000	562.370	563.060	335.000	568.060	N850	N849	567.370
n850 ss	50-30min	5.000	562.112	562.370	422.000	567.370	N921	N850	567.112
Low Flow	50-30min						N878	WET WELL	
Lead	50-30min						N878	WET WELL	
Lag 1	50-30min						N878	WET WELL	
Lag 2	50-30min						N878	WET WELL	
Standby	50-30min						N878	WET WELL	
L877	50-30min	1.000	588.870	592.500	480.000	593.500	N855	N853	589.870
n853 ss	50-30min	1.500	583.010	584.440	65.000	585.940	N841	N853	584.510
n854 ss	50-30min	1.250	581.220	583.010	36.000	584.260	N855	N854	582.470
n854 ol1	50-30min	1.000	588.870	586.260	36.000	587.260	N855	N854	589.870
L880	50-30min	1.000	587.000	588.870	418.000	589.870	N858	N855	588.000
n855 ss	50-30min	1.250	578.260	579.470	61.000	580.720	N843	N855	579.510
L878	50-30min	1.000	586.320	588.610	312.000	589.610	N913	N856	587.320
n856 ss	50-30min	1.250	580.760	585.110	75.000	586.360	N857	N856	582.010
L879	50-30min	2.000	583.860	587.460	395.000	589.460	N860	N857	585.860
n857 ss	50-30min	1.500	579.010	579.410	23.000	580.910	N843	N857	580.510
n857 ol1	50-30min	1.000	589.160	587.460	23.000	588.460	N843	N857	590.160
L884	50-30min	1.000	585.940	587.000	380.000	588.000	N863	N858	586.940

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n858 ss	50-30min	1.500	574.340	576.000	85.000	577.500	N844	N858	575.840
L882	50-30min	1.000	582.260	585.940	404.000	586.940	N861	N859	583.260
n859 ss	50-30min	1.000	578.260	578.440	76.000	579.440	N860	N859	579.260
L883	50-30min	2.000	581.420	583.860	390.000	585.860	N862	N860	583.420
n860 ss	50-30min	1.750	574.090	574.610	25.000	576.360	N844	N860	575.840
n860 ol1	50-30min	1.000	586.090	583.860	25.000	584.860	N844	N860	587.090
L885	50-30min	1.000	579.030	582.260	415.000	583.260	N864	N861	580.030
n861 ss	50-30min	1.250	575.370	578.060	88.000	579.310	N862	N861	576.620
L886	50-30min	2.000	578.520	581.420	420.000	583.420	N865	N862	580.520
n862 ss	50-30min	1.500	566.600	567.320	23.000	568.820	N845	N862	568.100
n862 ol1	50-30min	1.000	583.140	581.420	22.000	582.420	N845	N862	584.140
L887	50-30min	1.000	581.520	585.940	425.000	586.940	N866	N863	582.520
n863 ss	50-30min	1.250	567.000	568.950	75.000	570.200	N845	N863	568.250
L888	50-30min	1.000	577.310	579.030	264.000	580.030	N867	N864	578.310
n864 ss	50-30min	1.000	572.370	575.220	80.000	576.220	N865	N864	573.370
L889	50-30min	2.000	576.690	578.520	264.000	580.520	SAG	N865	578.690
n865 ss	50-30min	1.500	565.800	566.620	22.000	568.120	N846	N865	567.300
n865 ol1	50-30min	1.000	579.680	578.520	22.000	579.520	N846	N865	580.680
L890	50-30min	1.000	577.400	581.520	260.000	582.520	N869	N866	578.400
n866 ss	50-30min	1.500	565.430	567.420	69.000	568.920	N846	N866	566.930
n867 ss	50-30min	1.250	571.140	572.710	78.000	573.960	SAG	N867	572.390
867 weir	50-30min						SAG	N867	
n868 ss	50-30min	1.500	564.270	565.840	27.000	567.340	N847	SAG	565.770
n868 ol1	50-30min	1.000	578.270	576.690	26.000	577.690	N847	SAG	579.270
n869 ss	50-30min	1.500	564.270	566.420	64.000	567.920	N847	N869	565.770
n870 ss	50-30min	4.500	563.210	563.320	157.000	567.820	N849	N870	567.710
L904	50-30min	1.000	578.890	582.640	320.000	583.640	N924	N871	579.890
n871 ss	50-30min	1.000	563.900	576.130	330.000	577.130	N870	N871	564.900
L901	50-30min	1.000	582.640	587.790	450.000	588.790	N871	N872	583.640
n872 ss	50-30min	1.000	562.640	581.560	82.000	582.560	N850	N872	563.640
n873 ss	50-30min	1.000	583.010	587.040	296.000	588.040	N874	N873	584.010
n873 ol	50-30min	1.000	587.790	591.870	287.000	592.870	N874	N873	588.790
L899	50-30min	1.000	582.650	587.790	475.000	588.790	N908	N874	583.650

LINK DATA

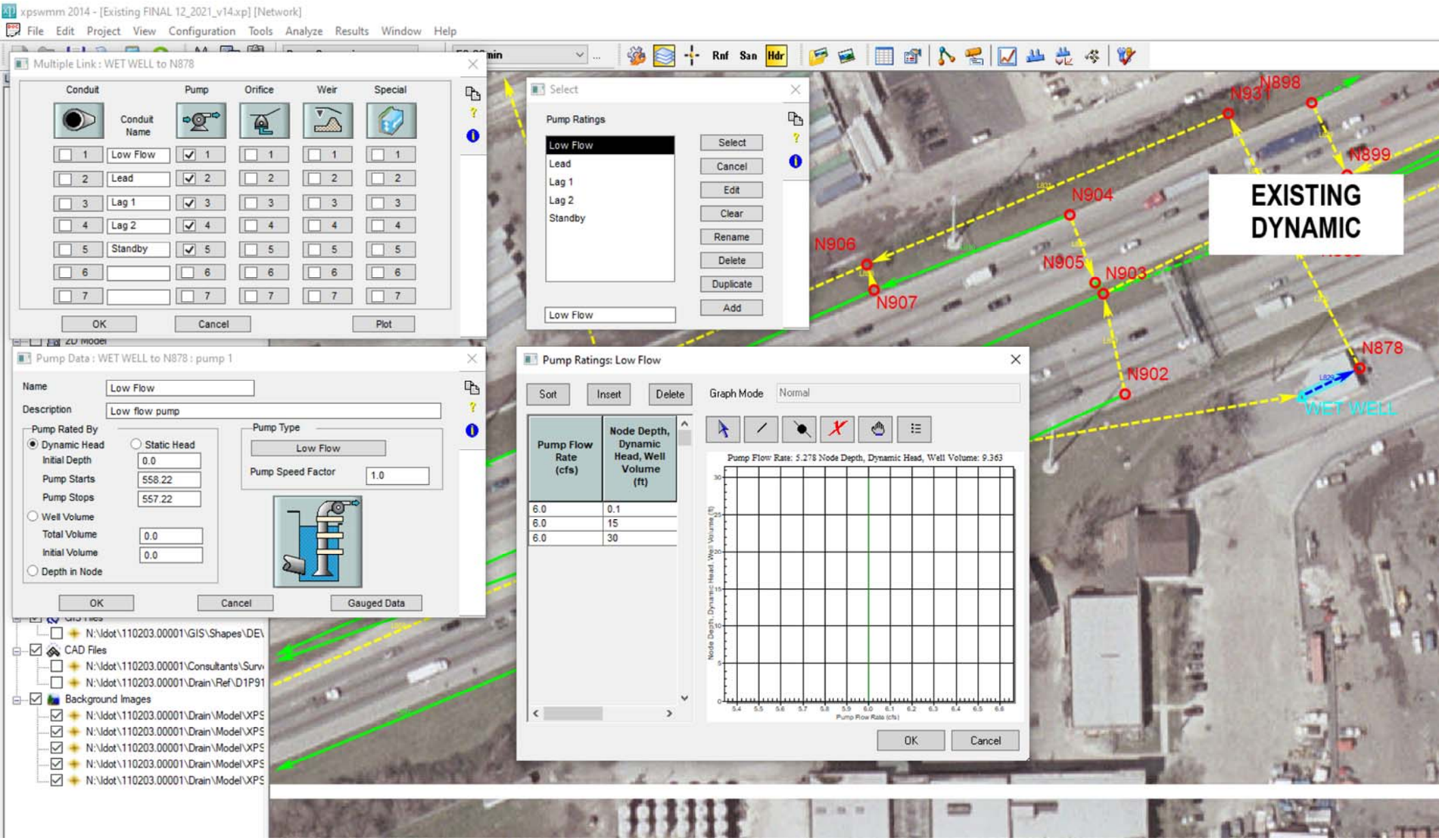
Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n874 ss	50-30min	1.250	579.210	582.980	71.000	584.230	N875	N874	580.460
L900	50-30min	3.000	580.620	585.210	477.000	588.210	N909	N875	583.620
n875 ss	50-30min	2.000	563.140	563.710	28.000	565.710	N850	N875	565.140
n875 ol1	50-30min	1.000	588.640	585.210	27.000	586.210	N850	N875	589.640
L894	50-30min	1.000	585.210	594.500	545.000	595.500	N875	N876	586.210
n876 ss	50-30min	1.000	590.370	592.060	57.000	593.060	N877	N876	591.370
n877 ss	50-30min	2.000	563.750	563.960	23.000	565.960	N851	N877	565.750
n878 ss	50-30min	4.500	585.150	585.470	123.000	589.970	N879	N878	589.650
n879ss2	50-30min	4.500	584.860	585.150	120.000	589.650	N931	N879	589.360
L933	50-30min	1.000	609.380	611.580	230.000	612.580	N928	N881	610.380
n881 ss	50-30min	1.000	606.530	606.480	87.000	607.480	N882	N881	607.530
n882 ss	50-30min	1.000	603.090	606.080	230.000	607.080	N883	N882	604.090
n882 ol	50-30min	3.000	608.510	610.780	230.000	613.780	N883	N882	611.510
n883 ol	50-30min	3.000	606.610	608.510	17.000	611.510	N901	N883	609.610
n901 ss2	50-30min	1.500	600.640	602.960	258.000	604.460	N892	N883	602.140
n885 ss	50-30min	2.000	588.210	590.190	390.000	592.190	N886	N884	590.210
n887 ss	50-30min	2.000	586.840	588.170	325.000	590.170	N888	N886	588.840
L915	50-30min	1.000	597.740	601.200	35.000	602.200	N926	N888	598.740
n888 ss	50-30min	3.000	586.610	586.840	38.000	589.840	N889	N888	589.610
n889 ss	50-30min	3.000	586.000	586.510	23.000	589.510	N879	N889	589.000
L934	50-30min	1.000	609.740	611.910	220.000	612.910	N929	N890	610.740
n890 ss	50-30min	1.000	605.980	606.860	88.000	607.860	N882	N890	606.980
n891 ss	50-30min	1.000	600.840	601.180	78.000	602.180	N892	N891	601.840
n891 weir	50-30min						N925	N891	
L924	50-30min	3.000	602.090	605.190	150.000	608.190	N900	N892	605.090
n892 ss2	50-30min	2.000	599.390	599.340	21.000	601.340	N933	N892	601.390
n893 ss	50-30min	1.000	589.180	598.500	78.000	599.500	N894	N893	590.180
L918	50-30min	2.000	597.740	602.680	280.000	604.680	N926	N894	599.740
n894 ss2	50-30min	4.500	586.920	587.380	246.000	591.880	N899	N894	591.420
n895 ss	50-30min	1.250	589.510	589.940	96.000	591.190	N886	N895	590.760
n896 ss	50-30min	1.000	589.910	598.640	87.000	599.640	N894	N896	590.910
N896 weir	50-30min						N895	N896	
n897 ss	50-30min	1.000	600.590	601.690	84.000	602.690	N892	N897	601.590

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
N897 weir	50-30min						N895	N897	
n898 ss	50-30min	1.000	590.720	595.400	75.000	596.400	N899	N898	591.720
n898 weir	50-30min						N925	N898	
L914	50-30min	1.000	597.740	601.160	40.000	602.160	N926	N899	598.740
n899 ss	50-30min	4.500	586.880	586.910	28.000	591.410	N888	N899	591.380
L923	50-30min	3.000	597.740	602.090	372.000	605.090	N926	N900	600.740
n900 ss	50-30min	1.500	589.460	589.380	23.000	590.880	N886	N900	590.960
L926	50-30min	3.000	605.440	606.610	242.000	609.610	N892	N901	608.440
n901 ss	50-30min	2.000	590.620	590.510	28.000	592.510	N884	N901	592.620
L896	50-30min	3.000	591.450	597.980	420.000	600.980	N922	N902	594.450
n902 ss	50-30min	1.000	592.100	592.980	84.000	593.980	N903	N902	593.100
L891	50-30min	3.000	592.060	596.900	293.000	599.900	N876	N903	595.060
n903 ss3	50-30min	1.500	590.070	591.650	222.000	593.150	N899	N903	591.570
L910	50-30min	1.000	595.290	598.030	207.000	599.030	N907	N904	596.290
n904 ss	50-30min	1.000	593.040	593.130	61.000	594.130	N905	N904	594.040
n905 ss	50-30min	1.000	592.000	593.040	11.000	594.040	N903	N905	593.000
n905 ol1	50-30min	1.000	596.900	598.740	11.000	599.740	N903	N905	597.900
n906 ss2	50-30min	4.500	584.350	584.541	208.000	589.041	N932	N906	588.850
L892	50-30min	1.000	591.870	595.490	335.000	596.490	N873	N907	592.870
n907 ss	50-30min	1.000	592.000	592.840	30.000	593.840	N906	N907	593.000
L906	50-30min	1.000	578.020	582.650	475.000	583.650	N923	N908	579.020
n908 ss	50-30min	1.000	576.770	578.170	90.000	579.170	N909	N908	577.770
L905	50-30min	2.000	577.310	580.620	370.000	582.620	N911	N909	579.310
n909 ss	50-30min	1.000	576.000	576.770	37.000	577.770	N870	N909	577.000
n909 ol1	50-30min	1.000	583.000	580.620	35.000	581.620	N870	N909	584.000
n910 ss	50-30min	4.500	563.520	563.715	80.000	568.215	N848	N910	568.020
L908	50-30min	2.000	576.690	577.310	191.000	579.310	SAG	N911	578.690
n911 ss	50-30min	1.000	572.000	572.660	21.000	573.660	N910	N911	573.000
n911 ol1	50-30min	1.000	578.500	577.310	22.000	578.310	N910	N911	579.500
L881	50-30min	1.000	585.940	586.320	66.000	587.320	N859	N913	586.940
n913 ss	50-30min	1.000	578.260	582.960	125.000	583.960	N860	N913	579.260
L871	50-30min	1.000	597.410	600.240	325.000	601.240	N920	N914	598.410
n914 ss	50-30min	3.000	583.350	584.390	335.000	587.390	N915	N914	586.350

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L874	50-30min	2.000	591.410	596.000	605.000	598.000	N840	N915	593.410
n915 ss	50-30min	3.000	582.958	583.350	147.000	586.350	N916	N915	585.958
n918 ss	50-30min	6.000	578.500	580.000	300.000	586.000	OUT2	N916	584.500
n918 ol	50-30min	2.000	596.325	600.980	629.000	602.980	N915	N918	598.325
918 ss	50-30min	1.000	591.901	596.430	629.000	597.430	N915	N918	592.901
L872	50-30min	1.000	590.990	597.940	750.000	598.940	N853	N919	591.990
n919 ss	50-30min	3.000	582.958	583.940	388.000	586.940	N916	N919	585.958
L873	50-30min	1.000	592.800	597.410	575.000	598.410	N839	N920	593.800
n920 ss	50-30min	1.000	590.000	592.510	80.000	593.510	N915	N920	591.000
L898	50-30min	1.000	585.210	594.500	422.000	595.500	N875	N921	586.210
n921 ss	50-30min	5.000	562.060	562.112	86.000	567.112	N851	N921	567.060
n921 ol	50-30min	1.000	594.560	593.500	86.000	594.500	N851	N921	595.560
L897	50-30min	1.000	587.790	592.500	385.000	593.500	N872	N922	588.790
n922 ss	50-30min	1.000	584.170	589.150	127.000	590.150	N921	N922	585.170
L909	50-30min	1.000	577.310	578.020	100.000	579.020	N867	N923	578.310
n923 ss	50-30min	1.000	573.000	575.010	127.000	576.010	N910	N923	574.000
L907	50-30min	1.000	577.400	578.890	210.000	579.890	N869	N924	578.400
n924 ss	50-30min	1.000	572.000	573.460	56.000	574.460	N910	N924	573.000
n893 ol	50-30min	1.000	603.440	597.000	50.000	598.000	N893	N925	604.440
n926 ss	50-30min	1.500	588.110	588.090	22.000	589.590	N889	N926	589.610
n926 ol1	50-30min	1.000	600.910	597.740	22.000	598.740	N889	N926	601.910
n903 ol	50-30min	2.000	596.900	597.740	190.000	599.740	N903	N926	598.900
n903 ss2	50-30min	1.250	591.650	590.070	222.000	591.320	N903	N926	592.900
L929	50-30min	1.000	606.300	609.380	260.000	610.380	N891	N928	607.300
n928 ss	50-30min	1.000	603.950	605.340	80.000	606.340	N883	N928	604.950
L930	50-30min	1.000	606.490	609.740	275.000	610.740	N897	N929	607.490
n929 ss	50-30min	1.000	603.310	604.690	87.000	605.690	N883	N929	604.310
n879 ss	50-30min	4.500	584.541	584.860	348.000	589.360	N906	N931	589.041
n906 ss	50-30min	4.500	583.720	584.350	255.000	588.850	N934	N932	588.220
n933 ss	50-30min	4.500	587.380	587.390	230.000	591.890	N894	N933	591.880
L942	50-30min	4.500	576.980	583.720	137.000	588.220	OUT1	N934	581.480


xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Low Flow
Pump Data : WET WELL to N878 : pump 1
Name Low Flow
Description Low flow pump
Pump Rated By
Dynamic Head
Static Head
Initial Depth 0.0
Pump Starts 558.22
Pump Stops 557.22
Well Volume
Total Volume 0.0
Initial Volume 0.0
Depth in Node
Pump Type
Low Flow
Pump Speed Factor 1.0
OK
Cancel
Gauged Data
Pump Ratings: Low Flow
Sort
Insert
Delete
Graph Mode Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
6.0 0.1
6.0 15
6.0 30
Pump Flow Rate: 5.278 Node Depth, Dynamic Head, Well Volume: 9.363
Node Depth, Dynamic Head, Well Volume (ft)
Pump Flow Rate (cfs)
OK
Cancel
N:\ldot\110203.00001\GIS\Shapes\DE\
CAD Files
N:\ldot\110203.00001\Consultants\Surv
N:\ldot\110203.00001\Drain\Ref\D1P91
Background Images
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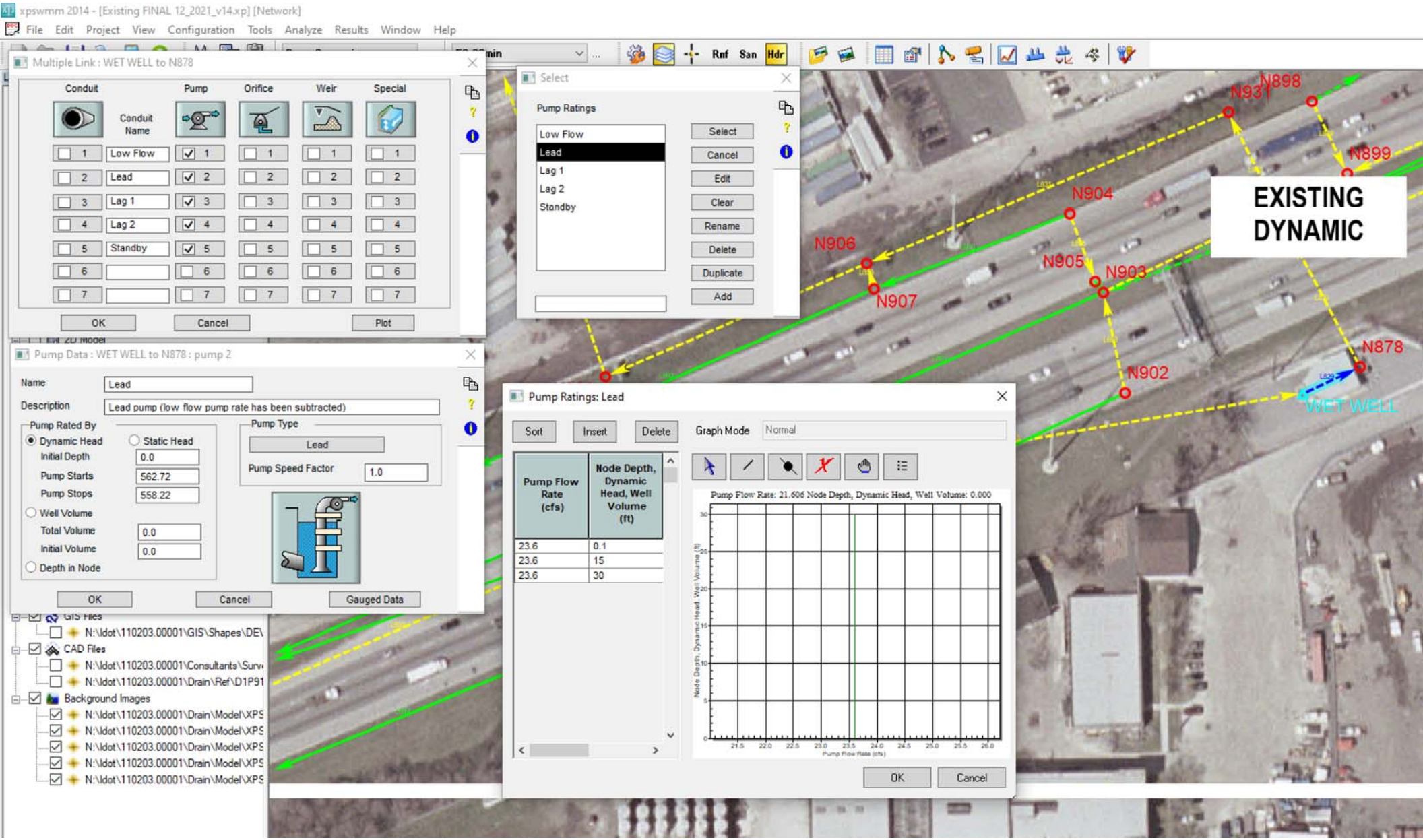
N:\ldot\110203.00001\Drain\Model\XPS
N931
N898
N899
N904
N906
N905
N903
N907
N902
N878
WET WELL
EXISTING DYNAMIC


xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 2
Name
Lead
Description
Lead pump (low flow pump rate has been subtracted)
Pump Rated By
Dynamic Head
Static Head
Initial Depth
0.0
Pump Starts
562.72
Pump Stops
558.22
Well Volume
Total Volume
0.0
Initial Volume
0.0
Depth in Node
Pump Type
Lead
Pump Speed Factor
1.0
OK
Cancel
Gauged Data
Pump Ratings: Lead
Sort
Insert
Delete
Graph Mode
Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
23.6 0.1
23.6 15
23.6 30
Pump Flow Rate: 21.606 Node Depth, Dynamic Head, Well Volume: 0.000
OK
Cancel
GIS Files
N:\ldot\110203.00001\GIS\Shapes\DE\
CAD Files
N:\ldot\110203.00001\Consultants\Surv
N:\ldot\110203.00001\Drain\Ref\D1P91
Background Images
N:\ldot\110203.00001\Drain\Model\XPS
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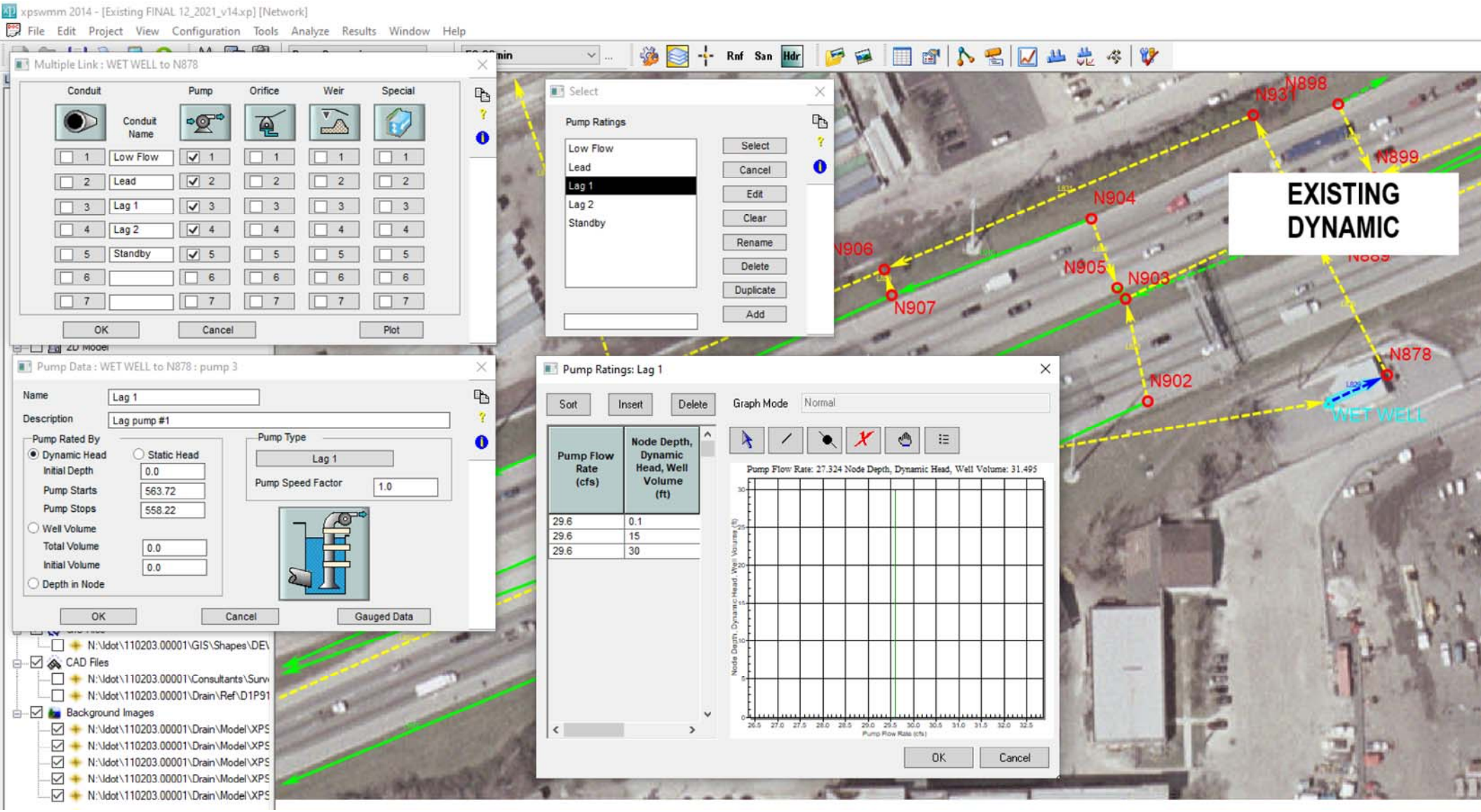
N:\ldot\110203.00001\Drain\Model\XPS
N:\ldot\110203.00001\Drain\Model\XPS
N:\ldot\110203.00001\Drain\Model\XPS
N931
N898
N899
N904
N906
N905
N903
N907
N902
N878
WET WELL
EXISTING
DYNAMIC


xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 3
Name Lag 1
Description Lag pump #1
Pump Rated By
Dynamic Head
Static Head
Initial Depth 0.0
Pump Starts 563.72
Pump Stops 558.22
Well Volume
Total Volume 0.0
Initial Volume 0.0
Depth in Node
Pump Type
Lag 1
Pump Speed Factor 1.0
OK
Cancel
Gauged Data
Pump Ratings: Lag 1
Sort
Insert
Delete
Graph Mode Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
29.6 0.1
29.6 15
29.6 30
Pump Flow Rate: 27.324 Node Depth, Dynamic Head, Well Volume: 31.495
OK
Cancel
N898
N931
N899
N904
N906
N905
N903
N907
N902
N878
WET WELL
EXISTING
DYNAMIC
N:\ldot\110203.00001\GIS\Shapes\DE\
CAD Files
N:\ldot\110203.00001\Consultants\Surv
N:\ldot\110203.00001\Drain\Ref\D1P91
Background Images
N:\ldot\110203.00001\Drain\Model\XPS
N:\ldot\110203.00001\Drain\Model\XPS
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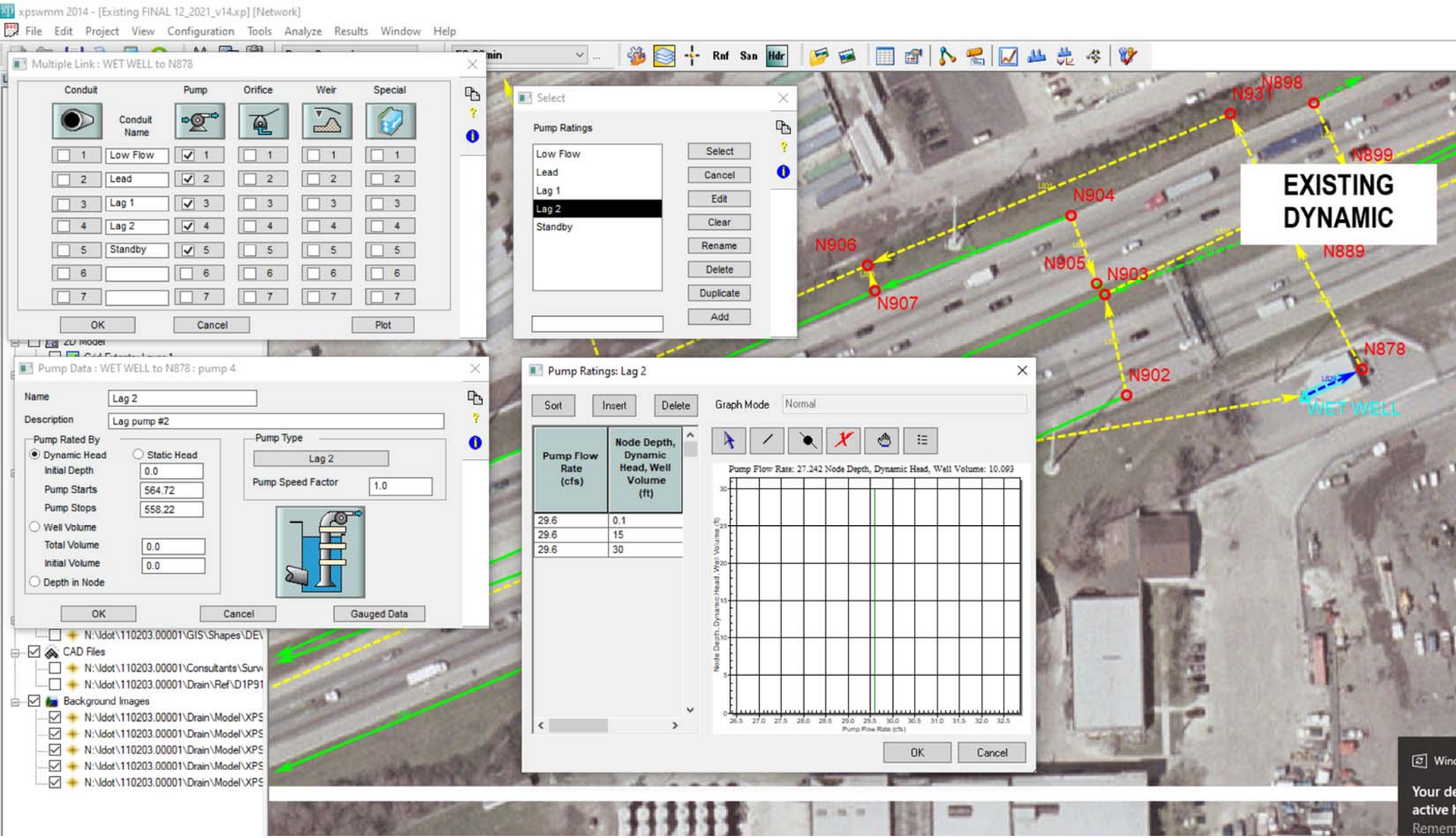
xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 4
Name
Lag 2
Description
Lag pump #2
Pump Rated By
Dynamic Head
Static Head
Initial Depth
0.0
Pump Starts
564.72
Pump Stops
558.22
Well Volume
Total Volume
0.0
Initial Volume
0.0
Depth in Node
Pump Type
Lag 2
Pump Speed Factor
1.0
OK
Cancel
Gauged Data
Pump Ratings: Lag 2
Sort
Insert
Delete
Graph Mode
Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
29.6 0.1
29.6 15
29.6 30
Pump Flow Rate: 27.242 Node Depth, Dynamic Head, Well Volume: 10.093
OK
Cancel
N898
N931
N899
N904
N906
N905
N903
N889
N907
N902
N878
WET WELL
EXISTING DYNAMIC
N:\ldot\110203.00001\GIS\Shapes\DE\
CAD Files
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N:\ldot\110203.00001\Drain\Ref\D1P91
Background Images
N:\ldot\110203.00001\Drain\Model\XPS
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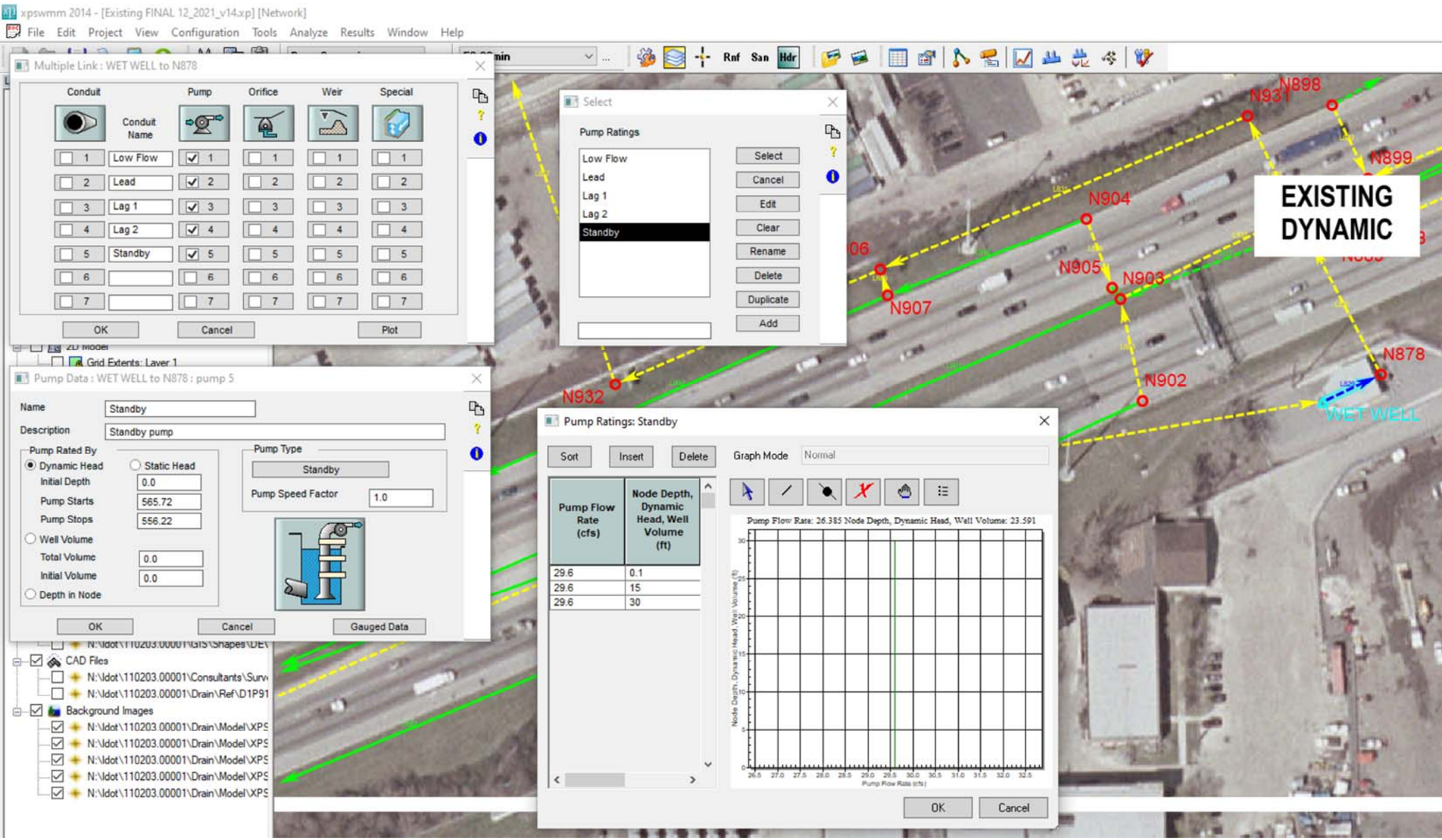
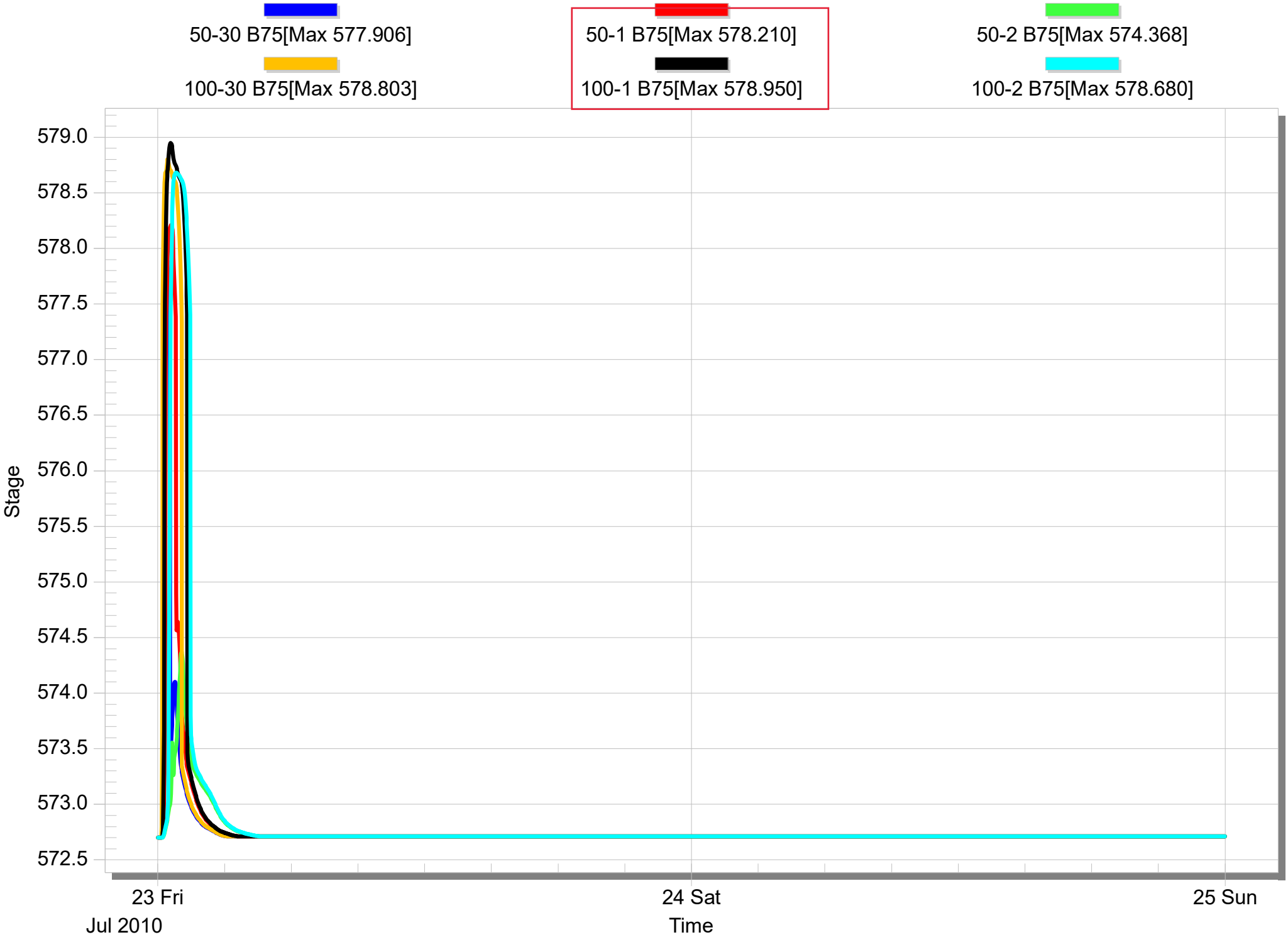

xpswmm 2014 - [Existing FINAL 12_2021_v14.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 5
Name
Standby
Description
Standby pump
Pump Rated By
Dynamic Head
Static Head
Initial Depth
0.0
Pump Starts
565.72
Pump Stops
556.22
Well Volume
Total Volume
0.0
Initial Volume
0.0
Depth in Node
Pump Type
Standby
Pump Speed Factor
1.0
OK
Cancel
Gauged Data
Pump Ratings: Standby
Sort
Insert
Delete
Graph Mode
Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
29.6 0.1
29.6 15
29.6 30
Pump Flow Rate: 26.385 Node Depth, Dynamic Head, Well Volume: 23.591
OK
Cancel
EXISTING DYNAMIC
N931
N898
N899
N904
N905
N903
N907
N902
N878
N932
WET WELL
CAD Files
Background Images

EXISTING CONDITIONS Node - N867
SAG LOCATION RIM=577.31 STATION~1195+00



EXISTING CONDITIONS
DYNAMIC RESULTS
50-YR 1 HR EVENT
60" & 54" Main Drain HGL

xpswmm 2014 - [Dynamic Long Section]

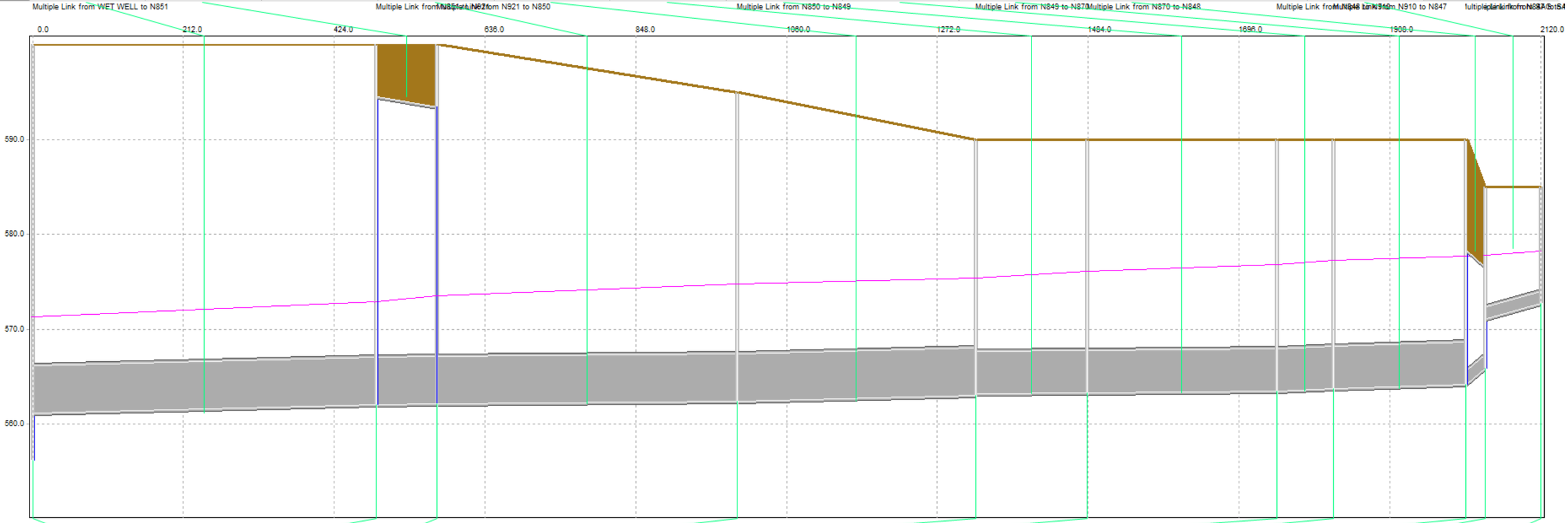
File View Window

Base Scenario | 50-1 B75 | Active Subcatchments | Close

Alternative 1
Day [0]

LINK DATA

	n851 ss	n921 ss	n921 ol	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss	n868 ss	n868 ol1	n867 ss	867 weir
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Diameter (He	5.000	5.000	1.000	5.000	5.000	4.500	4.500	4.500	4.500	1.500	1.000	1.250	
Downstream	561.170	562.060	594.560	562.112	562.370	563.210	563.320	563.520	563.715	564.270	578.270	571.140	
Upstream Inv	562.060	562.112	593.500	562.370	563.060	563.320	563.520	563.715	564.170	565.840	576.690	572.710	
Length	483.000	86.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000	27.000	26.000	78.000	
Upstream Cr	567.060	567.112	594.500	567.370	568.060	567.820	568.020	568.215	568.670	567.340	577.690	573.960	



	WET WELL	N851	N921	N850	N849	N870	N848	N910	N847	SAG	N867
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Max Water El	571.333	572.864	573.535	574.746	575.393	576.130	576.820	577.255	577.684	577.809	578.210

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

EXISTING CONDITIONS
DYNAMIC RESULTS
50-YR 1 HR EVENT

54" Outfall Storm Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

File View Window

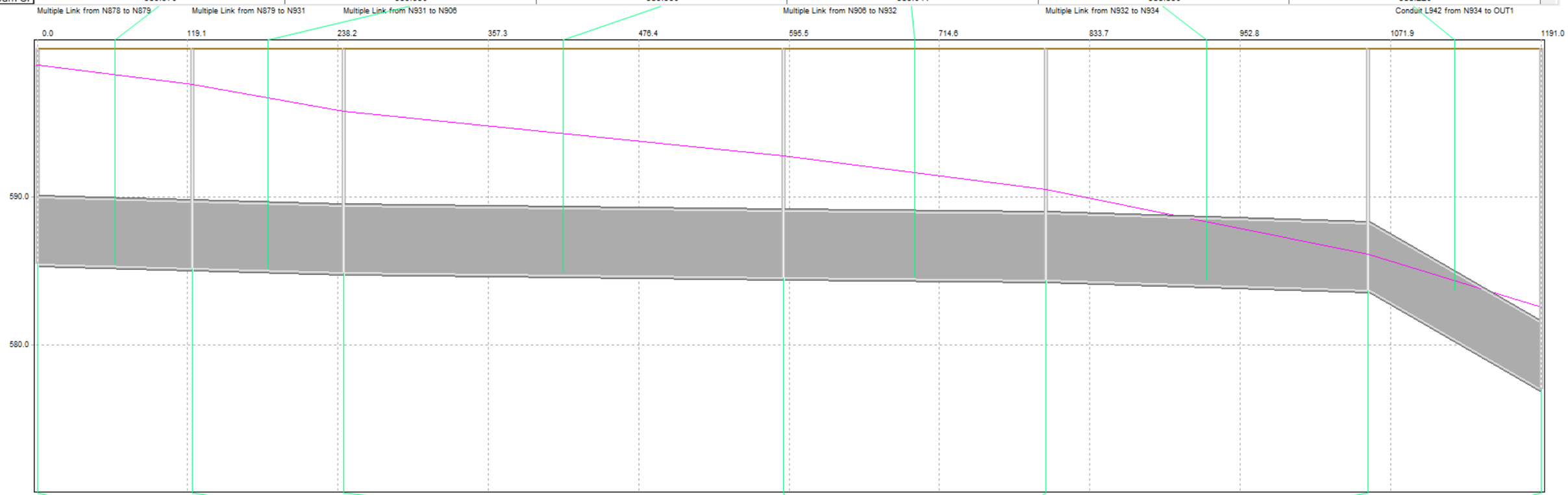
Base Scenario | 50-1 B75 | Active Subcatchments | Close

Alternative 1

Alternative 1
Day [0]

LINK DATA

	n878 ss	n879ss2	n879 ss	n906 ss2	n906 ss	L942
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Diameter (He	4.500	4.500	4.500	4.500	4.500	4.500
Downstream	585.150	584.860	584.541	584.350	583.720	576.980
Upstream Inv	585.470	585.150	584.860	584.541	584.350	583.720
Length	123.000	120.000	348.000	208.000	255.000	137.000
Upstream Cr	589.970	589.650	589.360	589.041	588.850	588.220



	N878	N879	N931	N906	N932	N934	OUT1
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Max Water El	598.825	597.547	595.765	592.785	590.511	586.123	582.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

EXISTING CONDITIONS
DYNAMIC RESULTS
100-YR 1-HR EVENT
60" & 54" Main Drain HGL

xpswmm 2014 - [Dynamic Long Section]

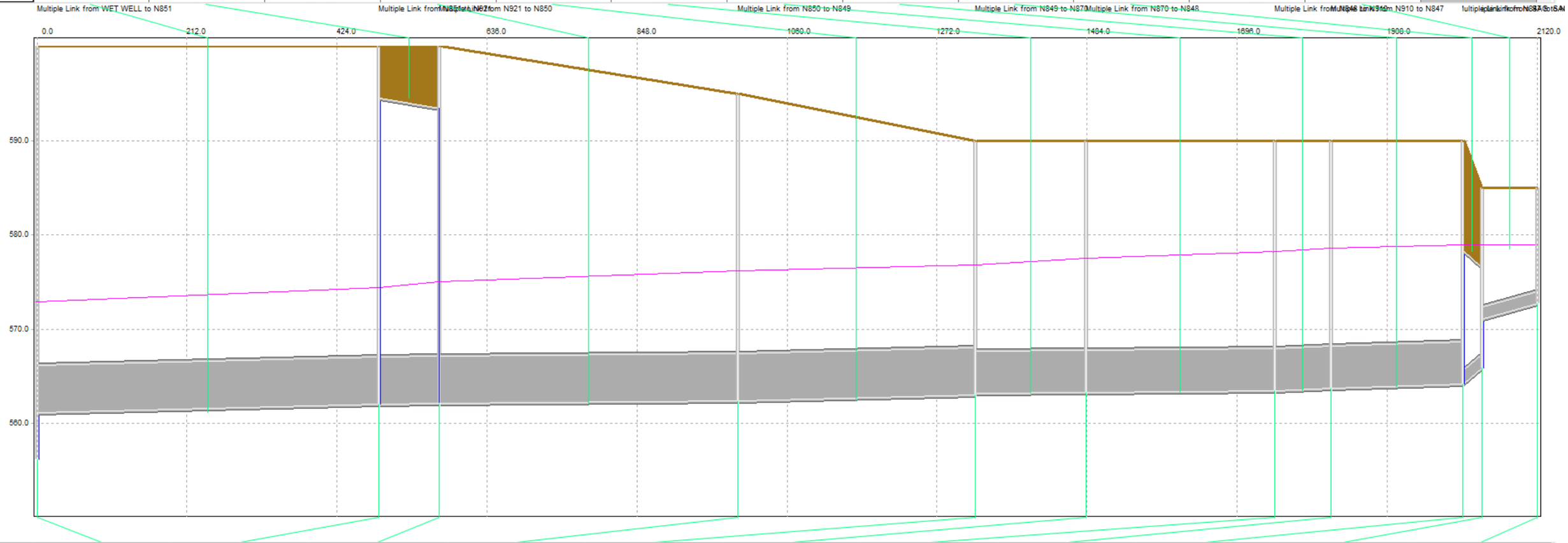
File View Window

Base Scenario | 100-1 B75 | Active Subcatchments | Close

Alternative 1
Day [8241]

LINK DATA

	n851 ss	n921 ss	n921 ol	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss	n868 ss	n868 ol1	n867 ss	867 weir
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Diameter (He	5.000	5.000	1.000	5.000	5.000	4.500	4.500	4.500	4.500	1.500	1.000	1.250	
Downstream	561.170	562.060	594.560	562.112	562.370	563.210	563.320	563.520	563.715	564.270	578.270	571.140	
Upstream Inv	562.060	562.112	593.500	562.370	563.060	563.320	563.520	563.715	564.170	565.840	576.690	572.710	
Length	483.000	86.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000	27.000	26.000	78.000	
Upstream Cr	567.060	567.112	594.500	567.370	568.060	567.820	568.020	568.215	568.670	567.340	577.690	573.960	



	WET WELL	N851	N921	N850	N849	N870	N848	N910	N847	SAG	N867
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Max Water El	572.869	574.406	575.056	576.234	576.849	577.544	578.203	578.630	578.927	578.928	578.950

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

EXISTING CONDITIONS
DYNAMIC RESULTS
100-YR 1-HR EVENT

54" Outfall Storm Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

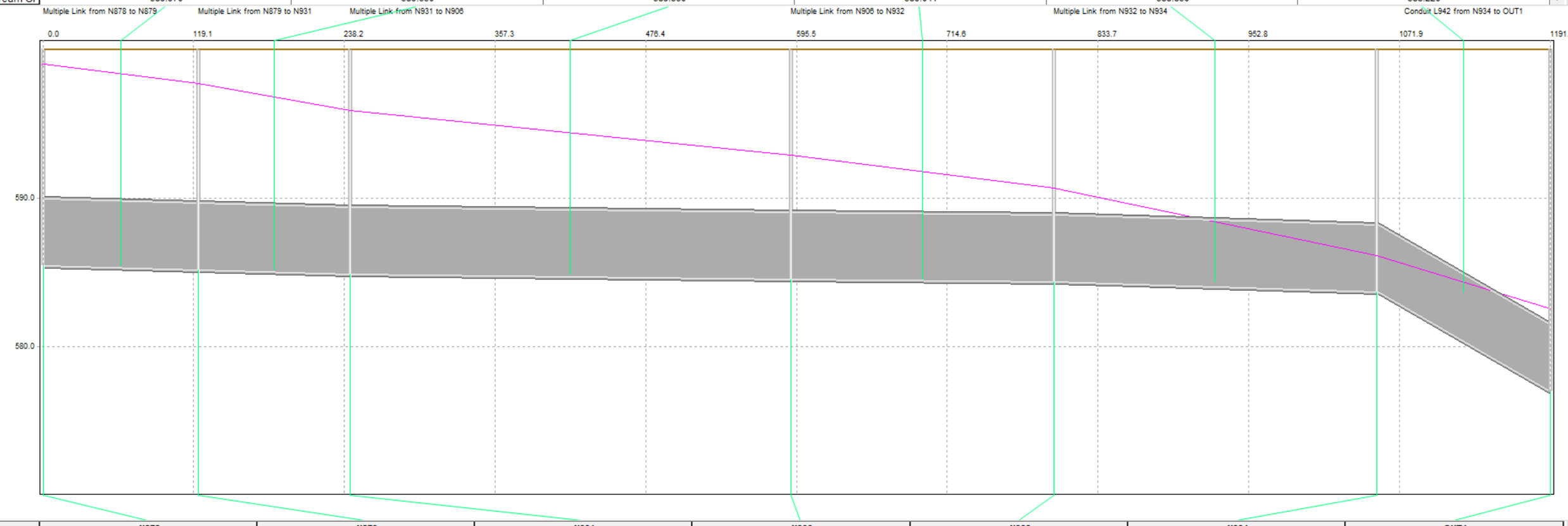
File View Window

Base Scenario | 100-1 B75 | Active Subcatchments | Close

Alternative 1
Day [0]

LINK DATA

	n878 ss	n879ss2	n879 ss	n906 ss2	n906 ss	L942
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Diameter (He	4.500	4.500	4.500	4.500	4.500	4.500
Downstream	585.150	584.860	584.541	584.350	583.720	576.980
Upstream Inv	585.470	585.150	584.860	584.541	584.350	583.720
Length	123.000	120.000	348.000	208.000	255.000	137.000
Upstream Cr	589.970	589.650	589.360	589.041	588.850	588.220



	N878	N879	N931	N906	N932	N934	OUT1
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Max Water El	598.972	597.670	595.838	592.876	590.690	586.132	582.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

EXISTING CONDITIONS
DISCONNECT
50-YR 30-MIN EVENT

Kinematic - 10' Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

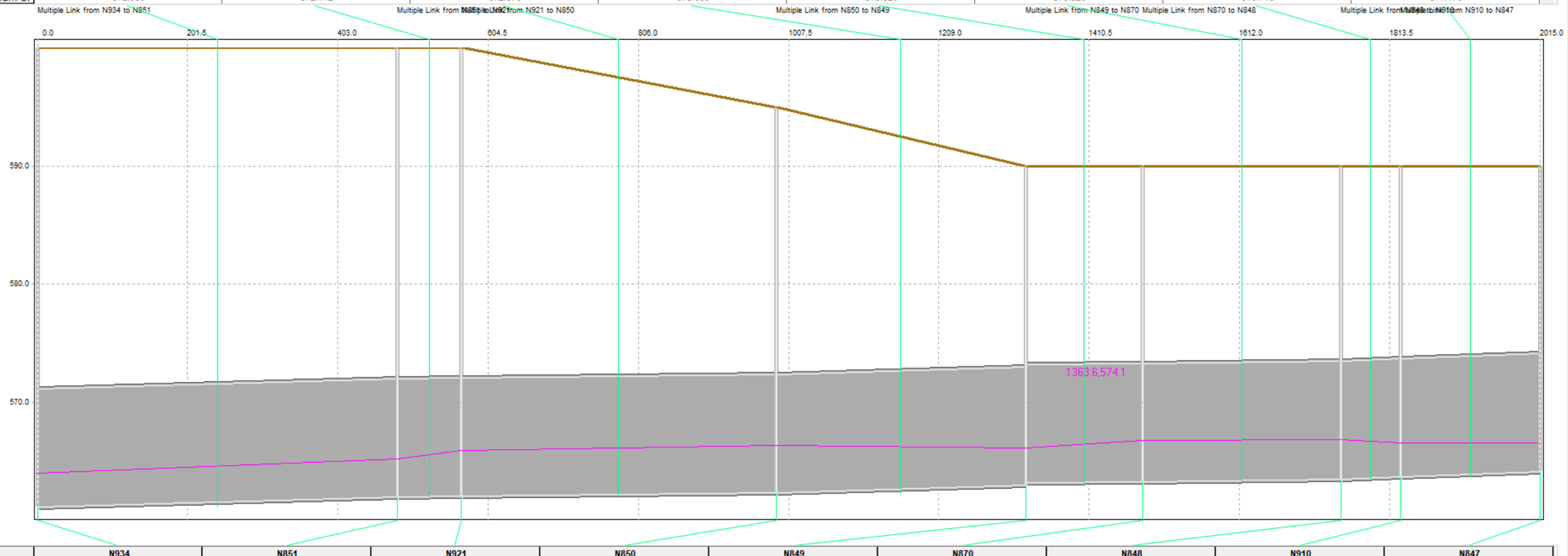
File View Window

Base Scenario | 50-30 B75 | Active Subcatchments | Close

Alternative 1
Day [432]

LINK DATA

	n851 ss	n921 ss	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Diameter (He	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Downstream	561.170	562.060	562.112	562.370	563.210	563.320	563.520	563.715
Upstream Inv	562.060	562.112	562.370	563.060	563.320	563.520	563.715	564.170
Length	483.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000
Upstream Cr	572.060	572.112	572.370	573.060	573.320	573.520	573.715	574.170



	N934	N851	N921	N850	N849	N870	N848	N910	N847
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Max Water El	564.038	565.263	565.932	566.389	566.160	566.809	566.902	566.602	566.612

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

EXISTING CONDITIONS
DISCONNECT
100-YR 30-MIN EVENT

Kinematic - 10' Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

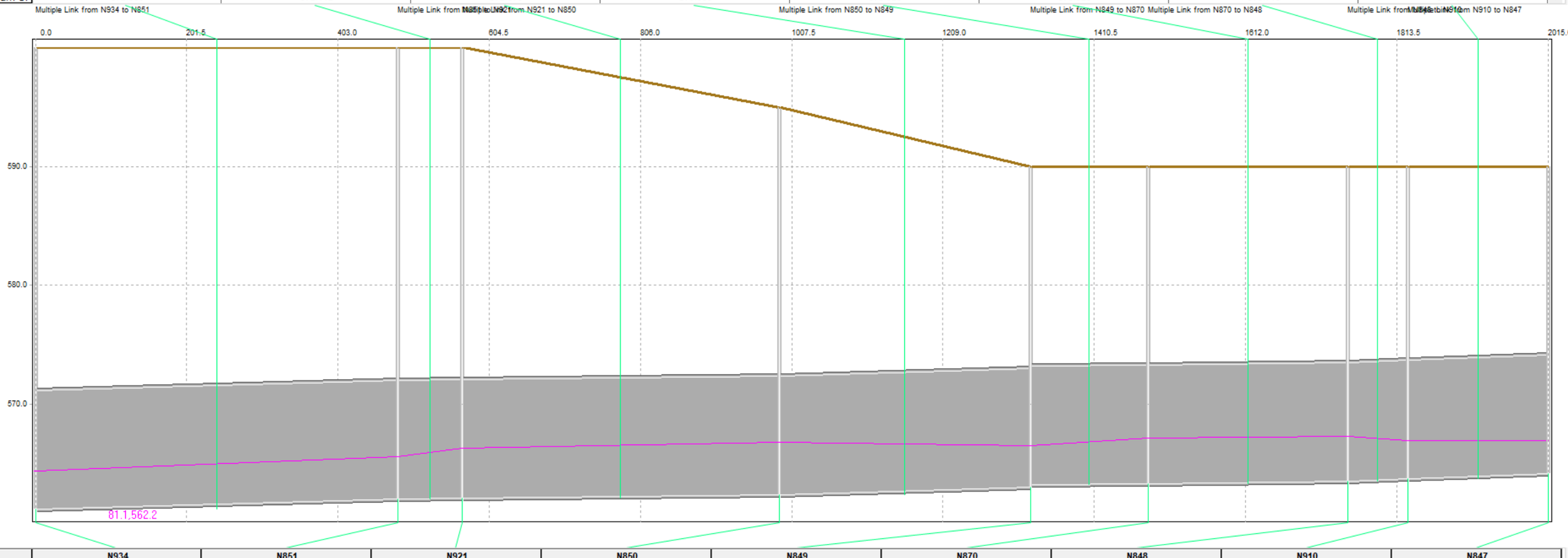
File View Window

Base Scenario | 100-30B75 | Active Subcatchments | Close

Alternative 1
Day [432]

LINK DATA

	n851 ss	n921 ss	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss
Storm	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75
Diameter (He	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Downstream	561.170	562.060	562.112	562.370	563.210	563.320	563.520	563.715
Upstream Inv	562.060	562.112	562.370	563.060	563.320	563.520	563.715	564.170
Length	483.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000
Upstream Cr	572.060	572.112	572.370	573.060	573.320	573.520	573.715	574.170



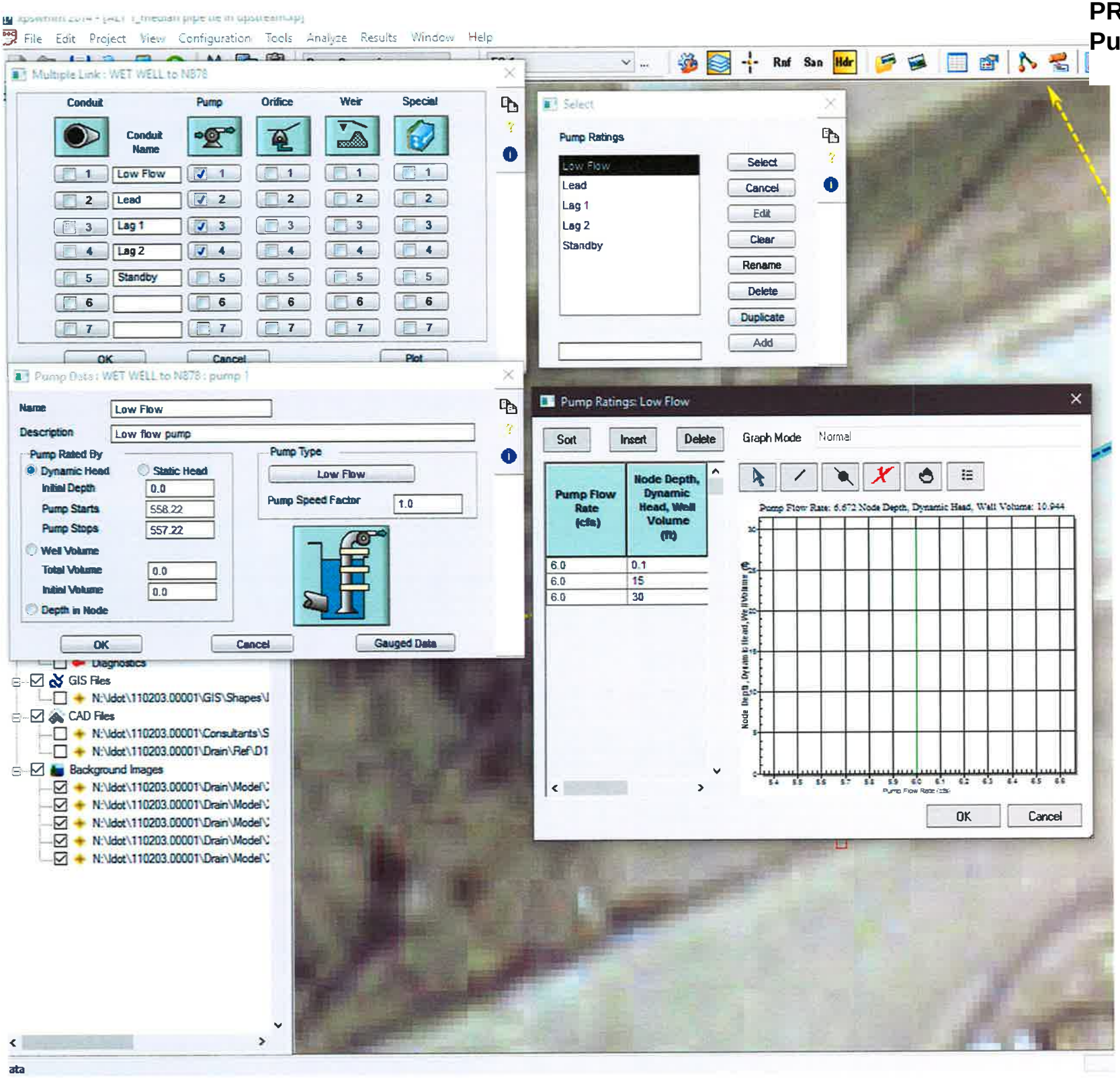
	N934	N851	N921	N850	N849	N870	N848	N910	N847
Storm	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75	100-30B75
Max Water El	564.342	565.603	566.330	566.828	566.517	567.176	567.263	566.919	566.909

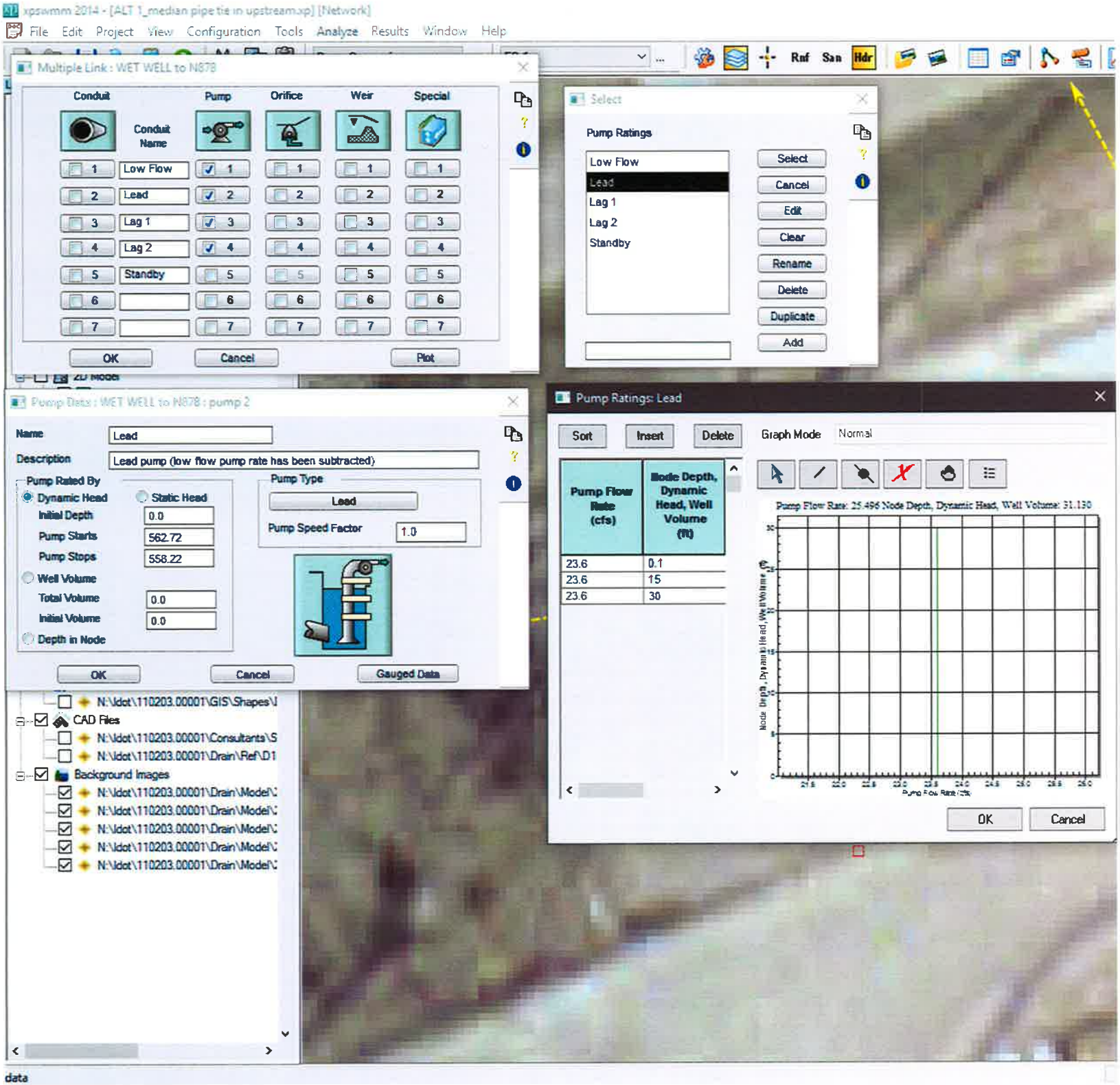
Hydrologic Parameters | Hydro | Ponding | RESULTS | output

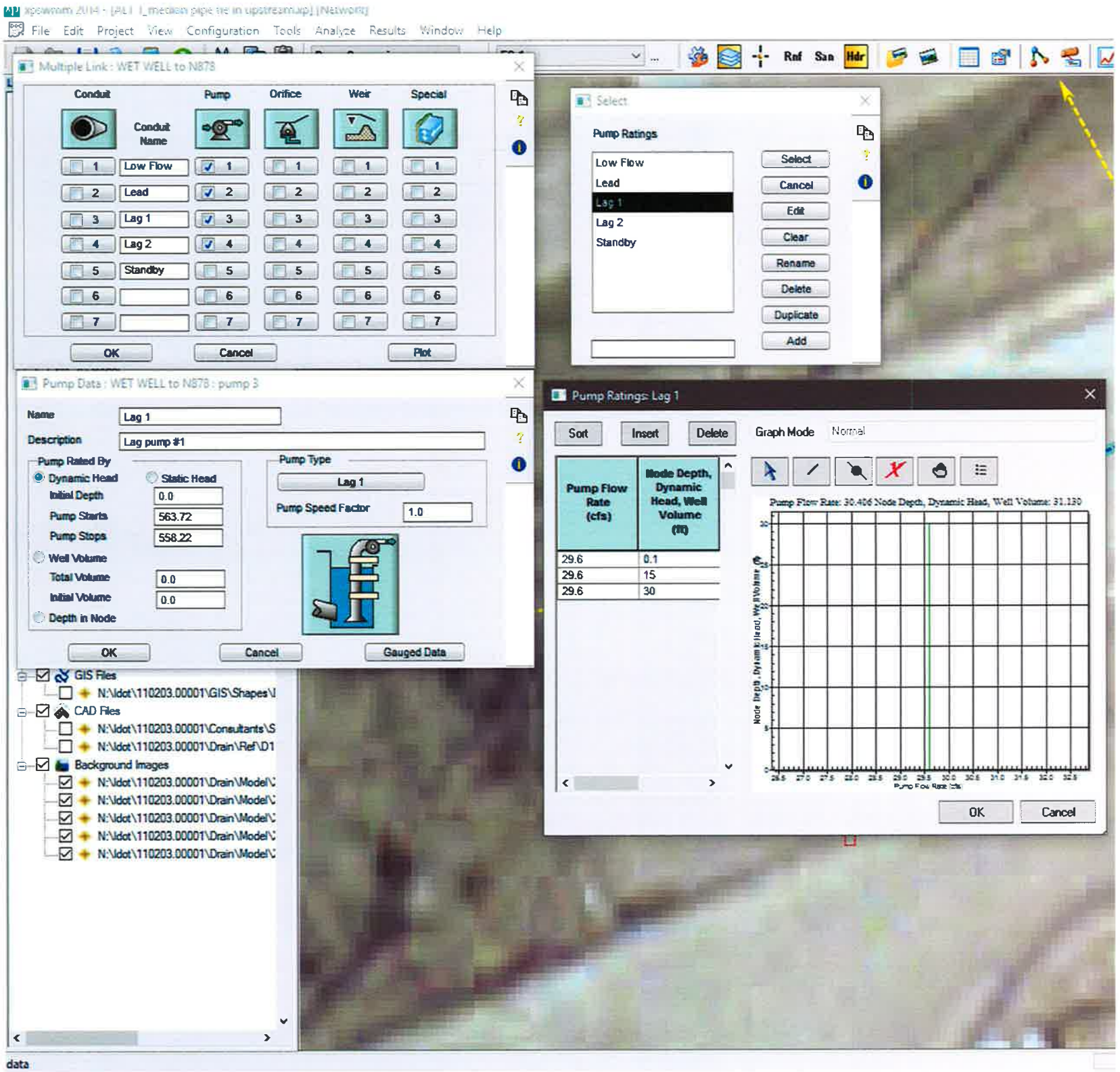
PROPOSED CONDITIONS RESULTS

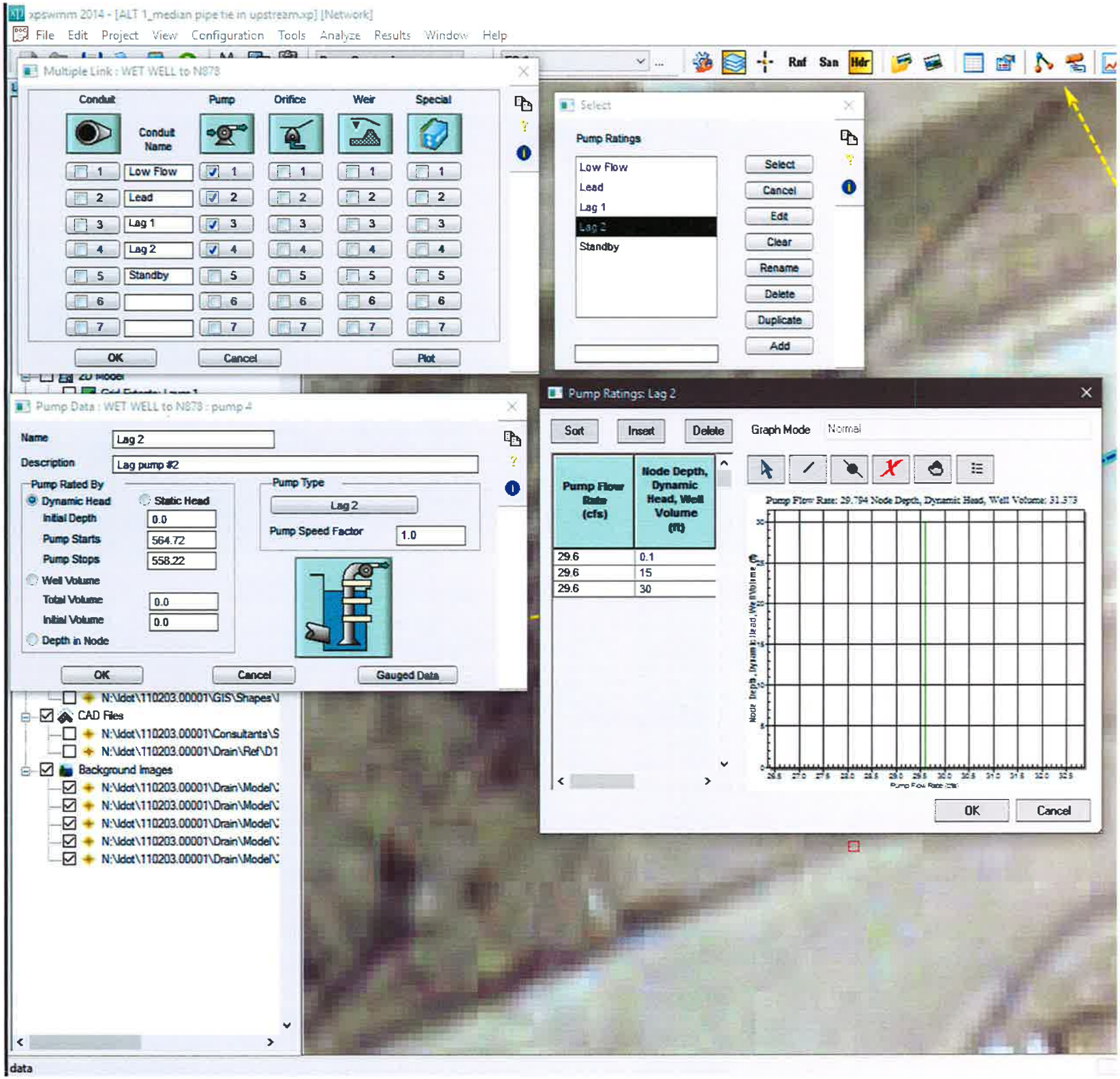
PROPOSED PUMP INPUT

PROPOSED
Pump Input



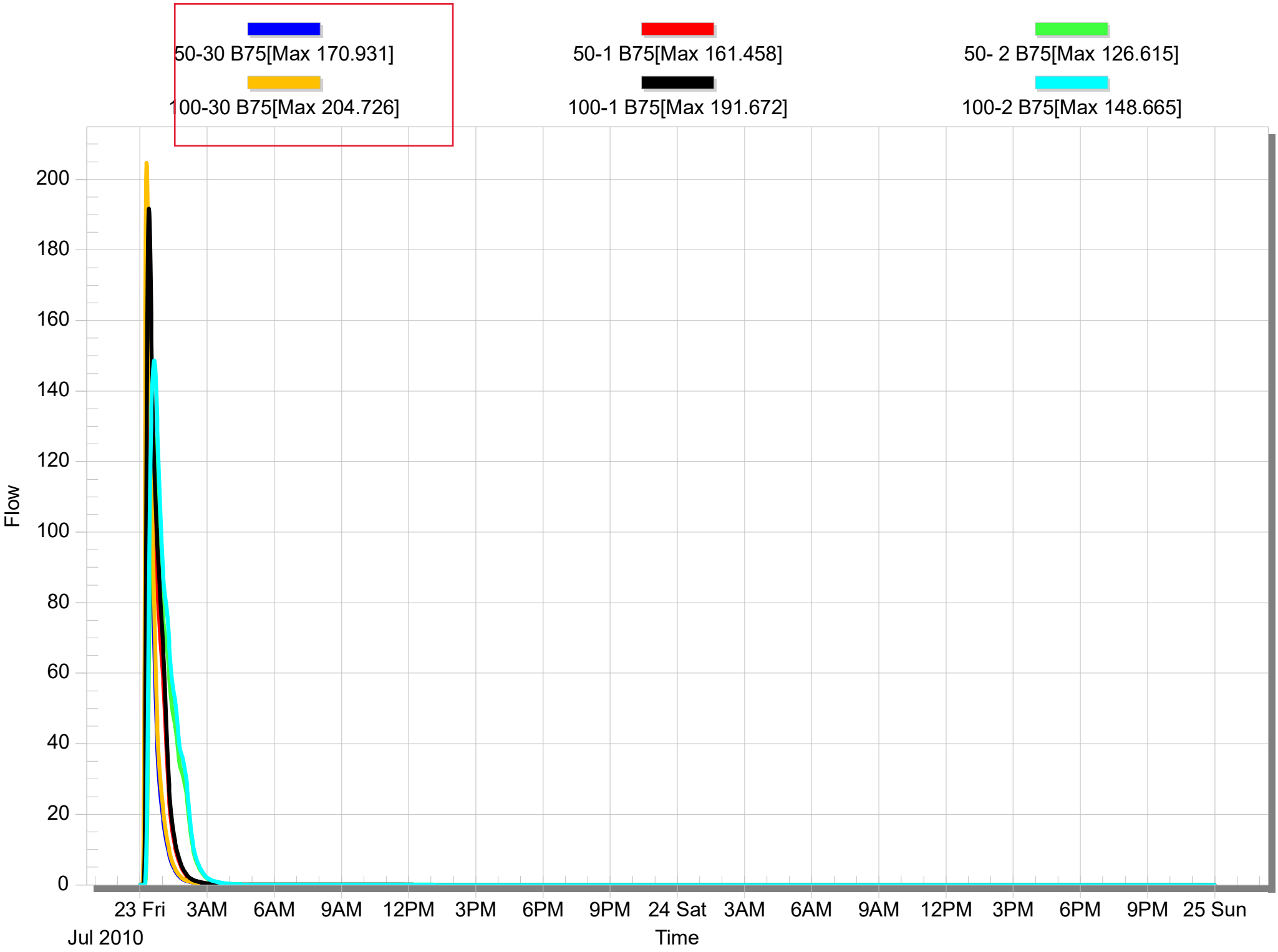

xpswmm 2014 - [ALT 1_median pipe tie in upstream.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 2
Name
Lead
Description
Lead pump (low flow pump rate has been subtracted)
Pump Rated By
Dynamic Head
Static Head
Initial Depth
0.0
Pump Starts
562.72
Pump Stops
558.22
Well Volume
Total Volume
0.0
Initial Volume
0.0
Depth in Node
Pump Type
Lead
Pump Speed Factor
1.0
OK
Cancel
Gauged Data
Pump Ratings: Lead
Sort
Insert
Delete
Graph Mode
Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
23.6 0.1
23.6 15
23.6 30
Pump Flow Rate: 25.496 Node Depth, Dynamic Head, Well Volume: 31.130
OK
Cancel
N:\dot\110203.00001\GIS\Shapes\
CAD Files
N:\dot\110203.00001\Consultants\S
N:\dot\110203.00001\Drain\Ref\D1
Background Images
N:\dot\110203.00001\Drain\Model\
data


File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 3
Name
Lag 1
Description
Lag pump #1
Pump Rated By
Dynamic Head
Static Head
Initial Depth
0.0
Pump Starts
563.72
Pump Stops
558.22
Well Volume
Total Volume
0.0
Initial Volume
0.0
Depth in Node
Pump Type
Lag 1
Pump Speed Factor
1.0
OK
Cancel
Gauged Data
Pump Ratings: Lag 1
Sort
Insert
Delete
Graph Mode
Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
29.6 0.1
29.6 15
29.6 30
Pump Flow Rate: 30.406 Node Depth, Dynamic Head, Well Volume: 31.130
OK
Cancel
GIS Files
N:\ldot\110203.00001\GIS\Shapes\I
CAD Files
N:\ldot\110203.00001\Consultants\S
N:\ldot\110203.00001\Drain\Ref\D1
Background Images
N:\ldot\110203.00001\Drain\Model\
data


xpswmm 2014 - [ALT 1_median pipe tie in upstream.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Multiple Link : WET WELL to N878
Conduit
Pump
Orifice
Weir
Special
Conduit Name
1 Low Flow
2 Lead
3 Lag 1
4 Lag 2
5 Standby
6
7
OK
Cancel
Plot
Select
Pump Ratings
Low Flow
Lead
Lag 1
Lag 2
Standby
Select
Cancel
Edit
Clear
Rename
Delete
Duplicate
Add
Pump Data : WET WELL to N878 : pump 4
Name
Lag 2
Description
Lag pump #2
Pump Rated By
Dynamic Head
Static Head
Initial Depth
0.0
Pump Starts
564.72
Pump Stops
558.22
Well Volume
Total Volume
0.0
Initial Volume
0.0
Depth in Node
Pump Type
Lag 2
Pump Speed Factor
1.0
OK
Cancel
Gauged Data
Pump Ratings: Lag 2
Sort
Insert
Delete
Graph Mode
Normal
Pump Flow Rate (cfs)
Node Depth, Dynamic Head, Well Volume (ft)
29.6 0.1
29.6 15
29.6 30
Pump Flow Rate: 29.794 Node Depth, Dynamic Head, Well Volume: 31.373
OK
Cancel
N:\ldot\110203.00001\GIS\Shapes\
CAD Files
N:\ldot\110203.00001\Consultants\S
N:\ldot\110203.00001\Drain\Ref\D1
Background Images
N:\ldot\110203.00001\Drain\Model\
data

PROPOSED B75 DISCONNECT

PROPOSED DISCONNECT B75



PROPOSED B75
CONDITIONS DISCONNECT
50-YR 30-MIN EVENT

Kinematic - 10' Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

File View Window

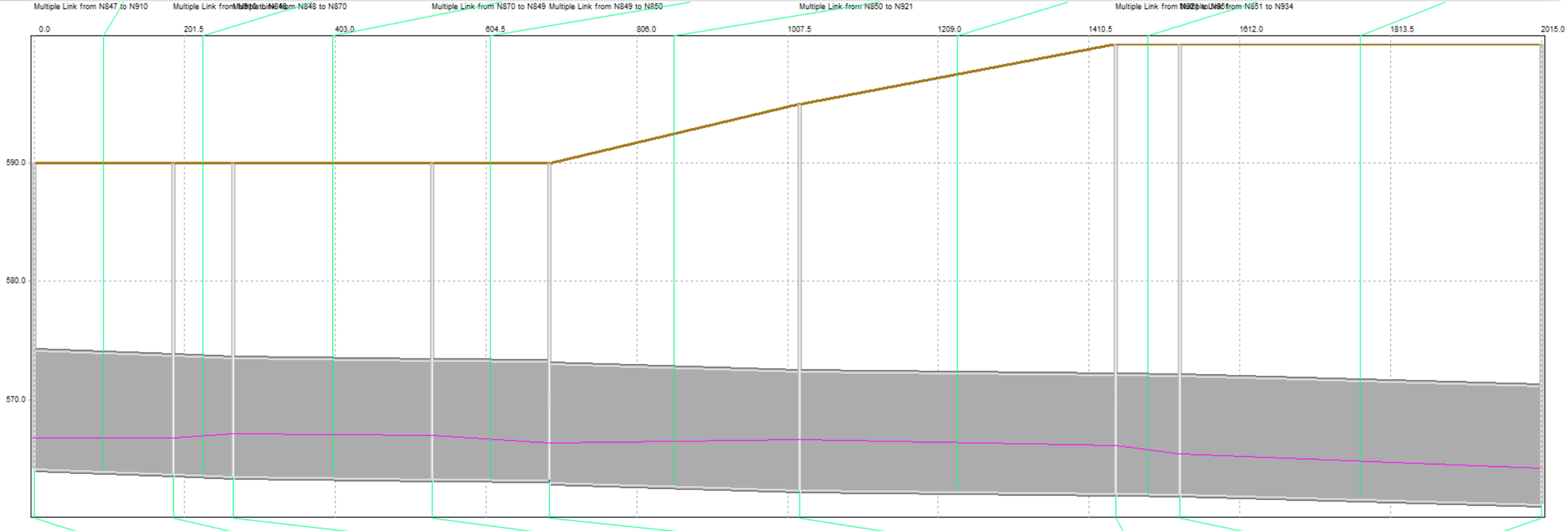
Base Scenario | 50-30 B75 | Active Subcatchments | Close

Alternative 1

Alternative 1
Day [0] Time 00:01:00 Step 6

LINK DATA

	n847 ss	n910 ss	n848 ss	n870 ss	n849 ss	n850 ss	n921 ss	n851 ss
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Diameter (He	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Downstream	563.715	563.520	563.320	563.210	562.370	562.112	562.060	561.170
Upstream Inv	564.170	563.715	563.520	563.320	563.060	562.370	562.112	562.060
Length	186.000	80.000	266.000	157.000	335.000	422.000	86.000	483.000
Upstream Cr	574.170	573.715	573.520	573.320	573.060	572.370	572.112	572.060



	N847	N910	N848	N870	N849	N850	N921	N851	N934
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Max Water El	566.798	566.800	567.128	567.038	566.379	566.651	566.165	565.467	564.218

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED B75 CONDITIONS
DISCONNECT
100-YR 30-MIN EVENT

Kinematic - 10' Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

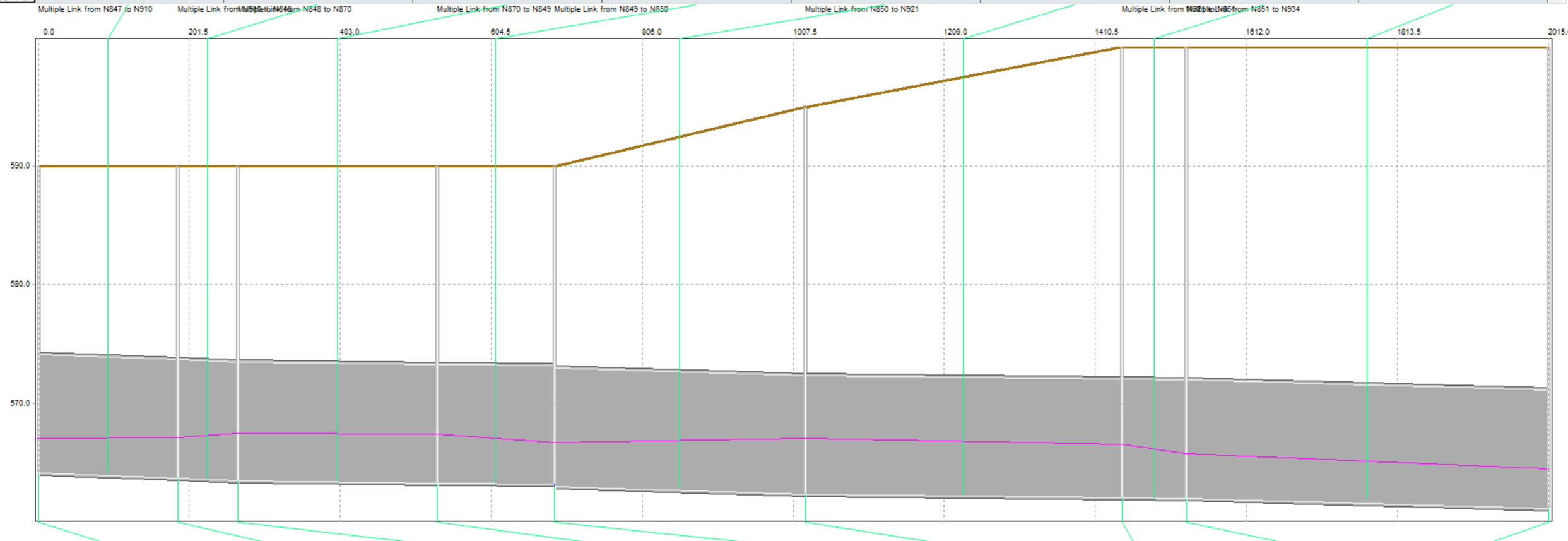
File View Window

Base Scenario | 100-30 B75 | Active Subcatchments | Close

Alternative 1
Day [0]

LINK DATA

	n847 ss	n910 ss	n848 ss	n870 ss	n849 ss	n850 ss	n921 ss	n851 ss
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Diameter (He	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
Downstream	563.715	563.520	563.320	563.210	562.370	562.112	562.060	561.170
Upstream Inv	564.170	563.715	563.520	563.320	563.060	562.370	562.112	562.060
Length	186.000	80.000	266.000	157.000	335.000	422.000	86.000	483.000
Upstream Cr	574.170	573.715	573.520	573.320	573.060	572.370	572.112	572.060



	N847	N910	N848	N870	N849	N850	N921	N851	N934
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Max Water El	567.089	567.120	567.491	567.408	566.737	567.092	566.562	565.807	564.517

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

B70 FINALIST
ALTERNATIVE A
with B75 RAINFALL

PROPOSED CONDITIONS ALT A SCHEMATIC

xpswmm 2014 - [ALT 1_median pipe tie in upstream_2x2_upsize.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario | 100-1 | Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

OUT2
N916
N920
N914
N915
N918
N919
N839
N840
N841
N853
N842
N856
N857
N843
N855
N854
N913
N859
N860
N844
N858

X=1151607.85 Y=1879102.79 HDR 1:1525.365 NUM OVR

xpswmm 2014 - [ALT 1_median pipe tie in upstream_2x2_upsize.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario | 100-1 | Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

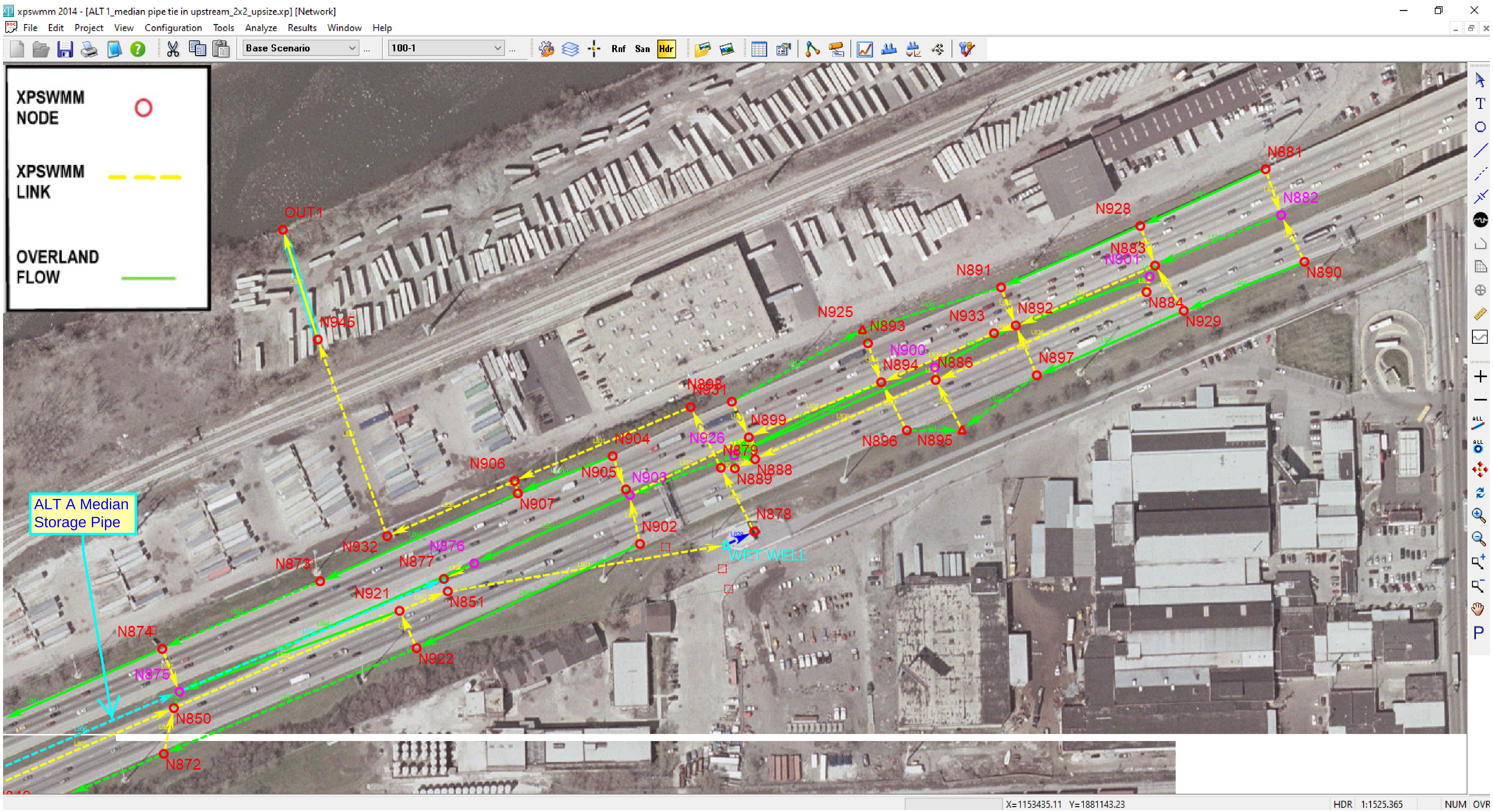
ALT A Median Storage Pipe

N867 LOW EOP

SAG

N921 N874 N875 N850 N872 N908 N949 N909 N870 N849 N871 N923 N867 N911 N910 N848 N924 N847 N864 N865 N846 N869 N866 N861 N862 N845 N863 N859 N860 N844 N858

X=1151983.90 Y=1880216.36 HDR 1:1525.365 NUM OVR


xpswmm 2014 - [ALT 1_median pipe tie in upstream_2x2_upsize.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Base Scenario
100-1
Rnf San Hdr
XPSWMM NODE
XPSWMM LINK
OVERLAND FLOW
OUT1
N945
N881
N882
N928
N883
N901
N890
N891
N884
N929
N925
N893
N933
N892
N900
N894
N886
N897
N898
N931
N899
N926
N879
N896
N895
N904
N906
N905
N903
N888
N889
N907
N902
N878
WET WELL
ALT A Median Storage Pipe
N932
N876
N873
N877
N921
N851
N874
N922
N875
N850
N872
X=1153435.11 Y=1881143.23
HDR 1:1525.365
NUM OVR

LINK DATA

Alt 1 B75

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L875	50-30min	1.000	588.610	592.800	500.000	593.800	N856	N839	589.610
n839 ss	50-30min	1.500	583.460	587.600	77.000	589.100	N840	N839	584.960
L876	50-30min	2.000	587.460	591.410	500.000	593.410	N857	N840	589.460
n840 ss	50-30min	1.500	583.010	583.210	24.000	584.710	N841	N840	584.510
n840 ol1	50-30min	1.000	593.210	591.410	24.000	592.410	N841	N840	594.210
n841 ss	50-30min	2.000	581.880	582.710	200.000	584.710	N842	N841	583.880
n842 ss	50-30min	3.000	580.610	581.130	298.000	584.130	N843	N842	583.610
n843 ss	50-30min	3.000	576.790	577.660	398.000	580.660	N844	N843	579.790
n844 ss	50-30min	3.000	573.340	573.940	386.000	576.940	N845	N844	576.340
n845 ss	50-30min	3.500	565.530	565.790	414.000	569.290	N846	N845	569.030
n846 ss	50-30min	4.000	564.270	565.330	260.000	569.330	N847	N846	568.270
n847 ss	50-30min	4.500	563.715	564.170	186.000	568.670	N910	N847	568.215
n848 ss	50-30min	4.500	563.320	563.520	266.000	568.020	N870	N848	567.820
n849 ss	50-30min	5.000	562.370	563.060	335.000	568.060	N850	N849	567.370
n849ss2	50-30min	7.000	568.067	568.087	20.000	575.087	N949	N849	575.067
n850 ss	50-30min	5.000	562.112	562.370	422.000	567.370	N921	N850	567.112
n851 ss	50-30min	5.000	561.170	562.060	483.000	567.060	WET WELL	N851	566.170
n851 ss2	50-30min	3.000	566.803	567.188	385.000	570.188	N947	N851	569.803
Low Flow	50-30min						N878	WET WELL	
Lead	50-30min						N878	WET WELL	
Lag 1	50-30min						N878	WET WELL	
Lag 2	50-30min						N878	WET WELL	
L877	50-30min	1.000	588.870	592.500	480.000	593.500	N855	N853	589.870
n853 ss	50-30min	1.500	583.010	584.440	65.000	585.940	N841	N853	584.510
n854 ss	50-30min	1.250	581.220	583.010	36.000	584.260	N855	N854	582.470
n854 ol1	50-30min	1.000	588.870	586.260	36.000	587.260	N855	N854	589.870
L880	50-30min	1.000	587.000	588.870	418.000	589.870	N858	N855	588.000
n855 ss	50-30min	1.250	578.260	579.470	61.000	580.720	N843	N855	579.510
L878	50-30min	1.000	586.320	588.610	312.000	589.610	N913	N856	587.320
n856 ss	50-30min	1.250	580.760	585.110	75.000	586.360	N857	N856	582.010
L879	50-30min	2.000	583.860	587.460	395.000	589.460	N860	N857	585.860
n857 ss	50-30min	1.500	579.010	579.410	23.000	580.910	N843	N857	580.510
n857 ol1	50-30min	1.000	589.160	587.460	23.000	588.460	N843	N857	590.160

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L884	50-30min	1.000	585.940	587.000	380.000	588.000	N863	N858	586.940
n858 ss	50-30min	1.500	574.340	576.000	85.000	577.500	N844	N858	575.840
L882	50-30min	1.000	582.260	585.940	404.000	586.940	N861	N859	583.260
n859 ss	50-30min	1.000	578.260	578.440	76.000	579.440	N860	N859	579.260
L883	50-30min	2.000	581.420	583.860	390.000	585.860	N862	N860	583.420
n860 ss	50-30min	1.750	574.090	574.610	25.000	576.360	N844	N860	575.840
n860 ol1	50-30min	1.000	586.090	583.860	25.000	584.860	N844	N860	587.090
L885	50-30min	1.000	579.030	582.260	415.000	583.260	N864	N861	580.030
n861 ss	50-30min	1.250	575.370	578.060	88.000	579.310	N862	N861	576.620
L886	50-30min	2.000	578.520	581.420	420.000	583.420	N865	N862	580.520
n862 ss	50-30min	1.500	566.600	567.320	23.000	568.820	N845	N862	568.100
n862 ol1	50-30min	1.000	583.140	581.420	22.000	582.420	N845	N862	584.140
L887	50-30min	1.000	581.520	585.940	425.000	586.940	N866	N863	582.520
n863 ss	50-30min	1.250	567.000	568.950	75.000	570.200	N845	N863	568.250
L888	50-30min	1.000	577.310	579.030	264.000	580.030	N867	N864	578.310
n864 ss	50-30min	1.000	572.370	575.220	80.000	576.220	N865	N864	573.370
L889	50-30min	2.000	576.690	578.520	264.000	580.520	SAG	N865	578.690
n865 ss	50-30min	1.500	565.800	566.620	22.000	568.120	N846	N865	567.300
n865 ol1	50-30min	1.000	579.680	578.520	22.000	579.520	N846	N865	580.680
L890	50-30min	1.000	577.400	581.520	260.000	582.520	N869	N866	578.400
n866 ss	50-30min	1.500	565.430	567.420	69.000	568.920	N846	N866	566.930
n867 ss	50-30min	1.250	571.140	572.710	78.000	573.960	SAG	N867	572.390
867 weir	50-30min						SAG	N867	
n868 ss	50-30min	1.500	564.270	565.840	27.000	567.340	N847	SAG	565.770
n868 ol1	50-30min	1.000	578.270	576.690	26.000	577.690	N847	SAG	579.270
n869 ss	50-30min	1.500	564.270	566.420	64.000	567.920	N847	N869	565.770
n870 ss	50-30min	4.500	563.210	563.320	157.000	567.820	N849	N870	567.710
n871 ss	50-30min	1.000	563.900	576.130	330.000	577.130	N870	N871	564.900
401.1	50-30min	1.000	578.890	582.640	320.000	583.640	N924	N871	579.890
n872 ss	50-30min	1.000	562.640	581.560	82.000	582.560	N850	N872	563.640
396.1	50-30min	1.000	582.640	587.790	450.000	588.790	N871	N872	583.640
n873 ss	50-30min	1.000	583.010	587.040	296.000	588.040	N874	N873	584.010
n873 ol	50-30min	1.000	587.790	591.870	287.000	592.870	N874	N873	588.790

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L899	50-30min	1.000	582.650	587.790	475.000	588.790	N908	N874	583.650
n874 ss	50-30min	1.250	579.210	582.980	71.000	584.230	N875	N874	580.460
n875 ss	50-30min	2.000	562.640	563.710	28.000	565.710	N850	N875	564.640
n875 ol1	50-30min	1.000	588.640	585.210	27.000	586.210	N850	N875	589.640
median ss	50-30min	7.000	567.223	567.715	492.000	574.715	N877	N875	574.223
L894	50-30min	1.000	585.210	594.500	545.000	595.500	N875	N876	586.210
n876 ss	50-30min	1.000	590.370	592.060	57.000	593.060	N877	N876	591.370
n877 ss	50-30min	7.000	567.200	567.223	23.000	574.223	N851	N877	574.200
n878 ss	50-30min	4.500	585.150	585.470	123.000	589.970	N879	N878	589.650
n879ss2	50-30min	4.500	584.860	585.150	120.000	589.650	N931	N879	589.360
L933	50-30min	1.000	609.380	611.580	230.000	612.580	N928	N881	610.380
n881 ss	50-30min	1.000	606.530	606.480	87.000	607.480	N882	N881	607.530
n882 ss	50-30min	1.000	603.090	606.080	230.000	607.080	N883	N882	604.090
n882 ol	50-30min	3.000	608.510	610.780	230.000	613.780	N883	N882	611.510
n883 ol	50-30min	3.000	606.610	608.510	17.000	611.510	N901	N883	609.610
n901 ss2	50-30min	1.500	600.640	602.960	258.000	604.460	N892	N883	602.140
n885 ss	50-30min	2.000	588.210	590.190	390.000	592.190	N886	N884	590.210
n887 ss	50-30min	2.000	586.840	588.170	325.000	590.170	N888	N886	588.840
L915	50-30min	1.000	597.740	601.200	35.000	602.200	N926	N888	598.740
n888 ss	50-30min	3.000	586.610	586.840	38.000	589.840	N889	N888	589.610
n889 ss	50-30min	3.000	586.000	586.510	23.000	589.510	N879	N889	589.000
L934	50-30min	1.000	609.740	611.910	220.000	612.910	N929	N890	610.740
n890 ss	50-30min	1.000	605.980	606.860	88.000	607.860	N882	N890	606.980
n891 ss	50-30min	1.000	600.840	601.180	78.000	602.180	N892	N891	601.840
n891 weir	50-30min						N925	N891	
L924	50-30min	3.000	602.090	605.190	150.000	608.190	N900	N892	605.090
n892 ss2	50-30min	2.000	599.390	599.340	21.000	601.340	N933	N892	601.390
n893 ss	50-30min	1.000	589.180	598.500	78.000	599.500	N894	N893	590.180
L918	50-30min	2.000	597.740	602.680	280.000	604.680	N926	N894	599.740
n894 ss2	50-30min	4.500	586.920	587.380	246.000	591.880	N899	N894	591.420
n895 ss	50-30min	1.250	589.510	589.940	96.000	591.190	N886	N895	590.760
n896 ss	50-30min	1.000	589.910	598.640	87.000	599.640	N894	N896	590.910
N896 weir	50-30min						N895	N896	

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n897 ss	50-30min	1.000	600.590	601.690	84.000	602.690	N892	N897	601.590
N897 weir	50-30min						N895	N897	
n898 ss	50-30min	1.000	590.720	595.400	75.000	596.400	N899	N898	591.720
n898 weir	50-30min						N925	N898	
L914	50-30min	1.000	597.740	601.160	40.000	602.160	N926	N899	598.740
n899 ss	50-30min	4.500	586.880	586.910	28.000	591.410	N888	N899	591.380
L923	50-30min	3.000	597.740	602.090	372.000	605.090	N926	N900	600.740
n900 ss	50-30min	1.500	589.460	589.380	23.000	590.880	N886	N900	590.960
L926	50-30min	3.000	605.440	606.610	242.000	609.610	N892	N901	608.440
n901 ss	50-30min	2.000	590.620	590.510	28.000	592.510	N884	N901	592.620
L896	50-30min	3.000	591.450	597.980	420.000	600.980	N922	N902	594.450
n902 ss	50-30min	1.000	592.100	592.980	84.000	593.980	N903	N902	593.100
L891	50-30min	3.000	592.060	596.900	293.000	599.900	N876	N903	595.060
n903 ss3	50-30min	1.500	590.070	591.650	222.000	593.150	N899	N903	591.570
L910	50-30min	1.000	595.290	598.030	207.000	599.030	N907	N904	596.290
n904 ss	50-30min	1.000	593.040	593.130	61.000	594.130	N905	N904	594.040
n905 ss	50-30min	1.000	592.000	593.040	11.000	594.040	N903	N905	593.000
n905 ol1	50-30min	1.000	596.900	598.740	11.000	599.740	N903	N905	597.900
n906 ss2	50-30min	4.500	584.350	584.541	208.000	589.041	N932	N906	588.850
L892	50-30min	1.000	591.870	595.490	335.000	596.490	N873	N907	592.870
n907 ss	50-30min	1.000	592.000	592.840	30.000	593.840	N906	N907	593.000
L906	50-30min	1.000	578.020	582.650	475.000	583.650	N923	N908	579.020
n908 ss	50-30min	1.000	576.770	578.170	90.000	579.170	N909	N908	577.770
L905	50-30min	2.000	577.310	580.620	370.000	582.620	N911	N909	579.310
n909 ss	50-30min	1.000	576.000	576.770	37.000	577.770	N870	N909	577.000
n909 ol1	50-30min	1.000	583.000	580.620	35.000	581.620	N870	N909	584.000
n909 ss2	50-30min	7.000	568.070	568.190	126.000	575.190	N949	N909	575.070
n910 ss	50-30min	4.500	563.520	563.715	80.000	568.215	N848	N910	568.020
L908	50-30min	2.000	576.690	577.310	191.000	579.310	SAG	N911	578.690
n911 ss	50-30min	1.000	572.000	572.660	21.000	573.660	N910	N911	573.000
n911 ol1	50-30min	1.000	578.500	577.310	22.000	578.310	N910	N911	579.500
L881	50-30min	1.000	585.940	586.320	66.000	587.320	N859	N913	586.940
n913 ss	50-30min	1.000	578.260	582.960	125.000	583.960	N860	N913	579.260

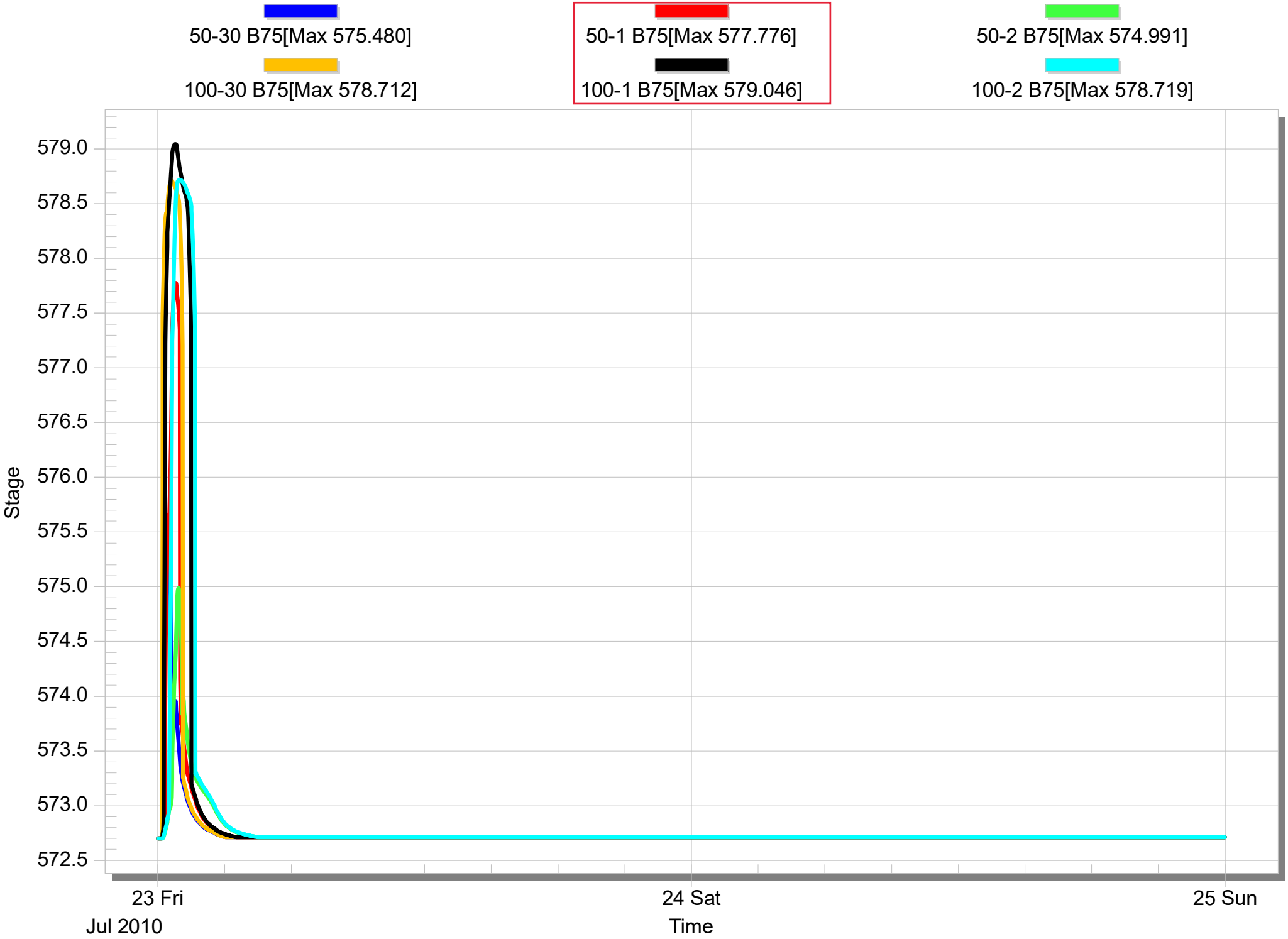
LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L871	50-30min	1.000	597.410	600.240	325.000	601.240	N920	N914	598.410
n914 ss	50-30min	3.000	583.350	584.390	335.000	587.390	N915	N914	586.350
L874	50-30min	2.000	591.410	596.000	605.000	598.000	N840	N915	593.410
n915 ss	50-30min	3.000	582.958	583.350	147.000	586.350	N916	N915	585.958
n918 ss	50-30min	6.000	578.500	580.000	300.000	586.000	OUT2	N916	584.500
n918 ol	50-30min	2.000	596.325	600.980	629.000	602.980	N915	N918	598.325
918 ss	50-30min	1.000	591.901	596.430	629.000	597.430	N915	N918	592.901
L872	50-30min	1.000	590.990	597.940	750.000	598.940	N853	N919	591.990
n919 ss	50-30min	3.000	582.958	583.940	388.000	586.940	N916	N919	585.958
L873	50-30min	1.000	592.800	597.410	575.000	598.410	N839	N920	593.800
n920 ss	50-30min	1.000	590.000	592.510	80.000	593.510	N915	N920	591.000
L898	50-30min	1.000	585.210	594.500	422.000	595.500	N875	N921	586.210
n921 ss	50-30min	5.000	562.060	562.112	86.000	567.112	N851	N921	567.060
n921 ol	50-30min	1.000	594.560	593.500	86.000	594.500	N851	N921	595.560
L952	50-30min	3.000	561.462	564.170	500.000	567.170	N946	N922	564.462
n922 ss	50-30min	1.000	584.170	589.150	127.000	590.150	N921	N922	585.170
392.1	50-30min	1.000	587.790	592.500	385.000	593.500	N872	N922	588.790
L909	50-30min	1.000	577.310	578.020	100.000	579.020	N867	N923	578.310
n923 ss	50-30min	1.000	573.000	575.010	127.000	576.010	N910	N923	574.000
n924 ss	50-30min	1.000	572.000	573.460	56.000	574.460	N910	N924	573.000
404.1	50-30min	1.000	577.400	578.890	210.000	579.890	N869	N924	578.400
n893 ol	50-30min	1.000	603.440	597.000	50.000	598.000	N893	N925	604.440
n926 ss	50-30min	1.500	588.110	588.090	22.000	589.590	N889	N926	589.610
n926 ol1	50-30min	1.000	600.910	597.740	22.000	598.740	N889	N926	601.910
n903 ol	50-30min	2.000	596.900	597.740	190.000	599.740	N903	N926	598.900
L929	50-30min	1.000	606.300	609.380	260.000	610.380	N891	N928	607.300
n928 ss	50-30min	1.000	603.950	605.340	80.000	606.340	N883	N928	604.950
L930	50-30min	1.000	606.490	609.740	275.000	610.740	N897	N929	607.490
n929 ss	50-30min	1.000	603.310	604.690	87.000	605.690	N883	N929	604.310
n879 ss	50-30min	4.500	584.350	584.860	348.000	589.360	N906	N931	588.850
n906 ss	50-30min	4.500	583.720	584.350	255.000	588.850	N945	N932	588.220
n933 ss	50-30min	4.500	587.380	587.390	230.000	591.890	N894	N933	591.880
n931 ss	50-30min	1.500	589.366	589.974	320.000	591.474	N101	N100	590.866

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n932 ss	50-30min	1.500	588.477	589.366	468.000	590.866	N102	N101	589.977
n933 ss.1	50-30min	2.000	587.688	588.477	415.000	590.477	N103	N102	589.688
n934 ss	50-30min	3.000	587.175	587.688	270.000	590.688	N104	N103	590.175
n935 ss	50-30min	3.000	587.033	587.175	75.000	590.175	N105	N104	590.033
n936 ss	50-30min	3.000	586.083	587.033	500.000	590.033	N106	N105	589.083
n937 ss	50-30min	3.000	585.203	586.083	463.000	589.083	N107	N106	588.203
n938 ss	50-30min	3.000	584.646	585.203	293.000	588.203	N108	N107	587.646
n939 ss	50-30min	3.000	584.350	584.646	156.040	587.646	N932	N108	587.350
L951	50-30min	4.500	576.980	583.720	137.000	588.220	OUT1	N945	581.480
n947 ss2	50-30min	3.000	561.170	561.270	100.000	564.270	WET WELL	N947	564.170
n849 ss2	50-30min	7.000	567.715	568.067	352.000	575.067	N875	N949	574.715

PROPOSED ALT A CONDITIONS Node - N867
SAG LOCATION RIM=577.31 STATION~1195+00



B70 FINALIST
ALTERNATIVE C
WITH B75 RAINFALL

PROPOSED CONDITIONS
ALT C SCHEMATIC

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 100-1 ... Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

OUT2
N856
N857
N843
N855
N854
N839
N842
N840
N841
N853
N920
N916
N914
N915
N918
N919

X=1149590.23 Y=1879280.37 HDR 1:1175.434 NUM OVR

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 100-1 ... Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

N908 N909 N870 N849 N950 N871 N923 N867 N911 N910 N848 N924 N847 N869 N864 N865 N846 N866 N861 N862 N845 N863 N860 N844 N858 59

N867 LOW EOP

SAG

ALT C
S. ROW
Storage Pipe

X=1152169.65 Y=1879114.05 HDR 1:1175.434 NUM OVR

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 100-1 ... Rnf San Hdr

N945 N893 N900 N894 N886 N898 N931 N899 N926 N896 N895 N904 N879 N888 N906 N905 N903 N889 N907 N878 N902 N949 N932 N876 WET WELL N873 N877 N921 N851 N874 N922 N875 N850 N872 N908 N909 N849 N870 N950 N871

ALT C
S. ROW
Storage Pipe

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

X=1153683.84 Y=1879784.42 HDR 1:1175.434 NUM OVR

LINK DATA

PROPOSED
CONDITONS ALT C

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L875	100-1	1.000	588.610	592.800	500.000	593.800	N856	N839	589.610
n839 ss	100-1	1.500	583.460	587.600	77.000	589.100	N840	N839	584.960
L876	100-1	2.000	587.460	591.410	500.000	593.410	N857	N840	589.460
n840 ss	100-1	1.500	583.010	583.210	24.000	584.710	N841	N840	584.510
n840 ol1	100-1	1.000	593.210	591.410	24.000	592.410	N841	N840	594.210
n841 ss	100-1	2.000	581.880	582.710	200.000	584.710	N842	N841	583.880
n842 ss	100-1	3.000	580.610	581.130	298.000	584.130	N843	N842	583.610
n843 ss	100-1	3.000	576.790	577.660	398.000	580.660	N844	N843	579.790
n844 ss	100-1	3.000	573.340	573.940	386.000	576.940	N845	N844	576.340
n845 ss	100-1	3.500	565.530	565.790	414.000	569.290	N846	N845	569.030
n846 ss	100-1	4.000	564.270	565.330	260.000	569.330	N847	N846	568.270
n847 ss	100-1	4.500	563.715	564.170	186.000	568.670	N910	N847	568.215
n848 ss	100-1	4.500	563.320	563.520	266.000	568.020	N870	N848	567.820
L957	100-1	4.000	565.020	566.000	100.000	570.000	N950	N849	569.020
n849 ss	100-1	5.000	562.370	563.060	335.000	568.060	N850	N849	567.370
n850 ss	100-1	5.000	562.112	562.370	422.000	567.370	N921	N850	567.112
n851 ss	100-1	5.000	561.354	562.060	383.000	567.060	N949	N851	566.354
n851 ss2	100-1	3.000	566.803	567.188	385.000	570.188	N947	N851	569.803
Low Flow	100-1						N878	WET WELL	
Lead	100-1						N878	WET WELL	
Lag 1	100-1						N878	WET WELL	
Lag 2	100-1						N878	WET WELL	
L877	100-1	1.000	588.870	592.500	480.000	593.500	N855	N853	589.870
n853 ss	100-1	1.500	583.010	584.440	65.000	585.940	N841	N853	584.510
n854 ss	100-1	1.250	581.220	583.010	36.000	584.260	N855	N854	582.470
n854 ol1	100-1	1.000	588.870	586.260	36.000	587.260	N855	N854	589.870
L880	100-1	1.000	587.000	588.870	418.000	589.870	N858	N855	588.000
n855 ss	100-1	1.250	578.260	579.470	61.000	580.720	N843	N855	579.510
L878	100-1	1.000	586.320	588.610	312.000	589.610	N913	N856	587.320
n856 ss	100-1	1.250	580.760	585.110	75.000	586.360	N857	N856	582.010
L879	100-1	2.000	583.860	587.460	395.000	589.460	N860	N857	585.860
n857 ss	100-1	1.500	579.010	579.410	23.000	580.910	N843	N857	580.510
n857 ol1	100-1	1.000	589.160	587.460	23.000	588.460	N843	N857	590.160

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L884	100-1	1.000	585.940	587.000	380.000	588.000	N863	N858	586.940
n858 ss	100-1	1.500	574.340	576.000	85.000	577.500	N844	N858	575.840
L882	100-1	1.000	582.260	585.940	404.000	586.940	N861	N859	583.260
n859 ss	100-1	1.000	578.260	578.440	76.000	579.440	N860	N859	579.260
L883	100-1	2.000	581.420	583.860	390.000	585.860	N862	N860	583.420
n860 ss	100-1	1.750	574.090	574.610	25.000	576.360	N844	N860	575.840
n860 ol1	100-1	1.000	586.090	583.860	25.000	584.860	N844	N860	587.090
L885	100-1	1.000	579.030	582.260	415.000	583.260	N864	N861	580.030
n861 ss	100-1	1.250	575.370	578.060	88.000	579.310	N862	N861	576.620
L886	100-1	2.000	578.520	581.420	420.000	583.420	N865	N862	580.520
n862 ss	100-1	1.500	566.600	567.320	23.000	568.820	N845	N862	568.100
n862 ol1	100-1	1.000	583.140	581.420	22.000	582.420	N845	N862	584.140
L887	100-1	1.000	581.520	585.940	425.000	586.940	N866	N863	582.520
n863 ss	100-1	1.250	567.000	568.950	75.000	570.200	N845	N863	568.250
L888	100-1	1.000	577.310	579.030	264.000	580.030	N867	N864	578.310
n864 ss	100-1	1.000	572.370	575.220	80.000	576.220	N865	N864	573.370
L889	100-1	2.000	576.690	578.520	264.000	580.520	SAG	N865	578.690
n865 ss	100-1	1.500	565.800	566.620	22.000	568.120	N846	N865	567.300
n865 ol1	100-1	1.000	579.680	578.520	22.000	579.520	N846	N865	580.680
L890	100-1	1.000	577.400	581.520	260.000	582.520	N869	N866	578.400
n866 ss	100-1	1.500	565.430	567.420	69.000	568.920	N846	N866	566.930
n867 ss	100-1	1.250	571.140	572.710	78.000	573.960	SAG	N867	572.390
867 weir	100-1						SAG	N867	
n868 ss	100-1	1.500	564.270	565.840	27.000	567.340	N847	SAG	565.770
n868 ol1	100-1	1.000	578.270	576.690	26.000	577.690	N847	SAG	579.270
n869 ss	100-1	1.500	564.270	566.420	64.000	567.920	N847	N869	565.770
n870 ss	100-1	4.500	563.210	563.320	157.000	567.820	N849	N870	567.710
n871 ss	100-1	1.000	563.900	576.130	330.000	577.130	N870	N871	564.900
401.1	100-1	1.000	578.890	582.640	320.000	583.640	N924	N871	579.890
n872 ss	100-1	1.000	562.640	581.560	82.000	582.560	N850	N872	563.640
396.1	100-1	1.000	582.640	587.790	450.000	588.790	N871	N872	583.640
n873 ss	100-1	1.000	583.010	587.040	296.000	588.040	N874	N873	584.010
n873 ol	100-1	1.000	587.790	591.870	287.000	592.870	N874	N873	588.790

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
L899	100-1	1.000	582.650	587.790	475.000	588.790	N908	N874	583.650
n874 ss	100-1	1.250	579.210	582.980	71.000	584.230	N875	N874	580.460
L900	100-1	3.000	580.620	585.210	477.000	588.210	N909	N875	583.620
n875 ss	100-1	2.000	562.640	563.710	28.000	565.710	N850	N875	564.640
n875 ol1	100-1	1.000	588.640	585.210	27.000	586.210	N850	N875	589.640
L894	100-1	1.000	585.210	594.500	545.000	595.500	N875	N876	586.210
n876 ss	100-1	1.000	590.370	592.060	57.000	593.060	N877	N876	591.370
n877 ss	100-1	2.000	563.750	563.960	23.000	565.960	N851	N877	565.750
n878 ss	100-1	4.500	585.150	585.470	123.000	589.970	N879	N878	589.650
n879ss2	100-1	4.500	584.860	585.150	120.000	589.650	N931	N879	589.360
L933	100-1	1.000	609.380	611.580	230.000	612.580	N928	N881	610.380
n881 ss	100-1	1.000	606.530	606.480	87.000	607.480	N882	N881	607.530
n882 ss	100-1	1.000	603.090	606.080	230.000	607.080	N883	N882	604.090
n882 ol	100-1	3.000	608.510	610.780	230.000	613.780	N883	N882	611.510
n883 ol	100-1	3.000	606.610	608.510	17.000	611.510	N901	N883	609.610
n901 ss2	100-1	1.500	600.640	602.960	258.000	604.460	N892	N883	602.140
n885 ss	100-1	2.000	588.210	590.190	390.000	592.190	N886	N884	590.210
n887 ss	100-1	2.000	586.840	588.170	325.000	590.170	N888	N886	588.840
L915	100-1	1.000	597.740	601.200	35.000	602.200	N926	N888	598.740
n888 ss	100-1	3.000	586.610	586.840	38.000	589.840	N889	N888	589.610
n889 ss	100-1	3.000	586.000	586.510	23.000	589.510	N879	N889	589.000
L934	100-1	1.000	609.740	611.910	220.000	612.910	N929	N890	610.740
n890 ss	100-1	1.000	605.980	606.860	88.000	607.860	N882	N890	606.980
n891 ss	100-1	1.000	600.840	601.180	78.000	602.180	N892	N891	601.840
n891 weir	100-1						N925	N891	
L924	100-1	3.000	602.090	605.190	150.000	608.190	N900	N892	605.090
n892 ss2	100-1	2.000	599.390	599.340	21.000	601.340	N933	N892	601.390
n893 ss	100-1	1.000	589.180	598.500	78.000	599.500	N894	N893	590.180
L918	100-1	2.000	597.740	602.680	280.000	604.680	N926	N894	599.740
n894 ss2	100-1	4.500	586.920	587.380	246.000	591.880	N899	N894	591.420
n895 ss	100-1	1.250	589.510	589.940	96.000	591.190	N886	N895	590.760
n896 ss	100-1	1.000	589.910	598.640	87.000	599.640	N894	N896	590.910
N896 weir	100-1						N895	N896	

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n897 ss	100-1	1.000	600.590	601.690	84.000	602.690	N892	N897	601.590
N897 weir	100-1						N895	N897	
n898 ss	100-1	1.000	590.720	595.400	75.000	596.400	N899	N898	591.720
n898 weir	100-1						N925	N898	
L914	100-1	1.000	597.740	601.160	40.000	602.160	N926	N899	598.740
n899 ss	100-1	4.500	586.880	586.910	28.000	591.410	N888	N899	591.380
L923	100-1	3.000	597.740	602.090	372.000	605.090	N926	N900	600.740
n900 ss	100-1	1.500	589.460	589.380	23.000	590.880	N886	N900	590.960
L926	100-1	3.000	605.440	606.610	242.000	609.610	N892	N901	608.440
n901 ss	100-1	2.000	590.620	590.510	28.000	592.510	N884	N901	592.620
L896	100-1	3.000	591.450	597.980	420.000	600.980	N922	N902	594.450
n902 ss	100-1	1.000	592.100	592.980	84.000	593.980	N903	N902	593.100
L891	100-1	3.000	592.060	596.900	293.000	599.900	N876	N903	595.060
n903 ss3	100-1	1.500	590.070	591.650	222.000	593.150	N899	N903	591.570
L910	100-1	1.000	595.290	598.030	207.000	599.030	N907	N904	596.290
n904 ss	100-1	1.000	593.040	593.130	61.000	594.130	N905	N904	594.040
n905 ss	100-1	1.000	592.000	593.040	11.000	594.040	N903	N905	593.000
n905 ol1	100-1	1.000	596.900	598.740	11.000	599.740	N903	N905	597.900
n906 ss2	100-1	4.500	584.350	584.541	208.000	589.041	N932	N906	588.850
L892	100-1	1.000	591.870	595.490	335.000	596.490	N873	N907	592.870
n907 ss	100-1	1.000	592.000	592.840	30.000	593.840	N906	N907	593.000
L906	100-1	1.000	578.020	582.650	475.000	583.650	N923	N908	579.020
n908 ss	100-1	1.000	576.770	578.170	90.000	579.170	N909	N908	577.770
L905	100-1	2.000	577.310	580.620	370.000	582.620	N911	N909	579.310
n909 ss	100-1	1.000	576.000	576.770	37.000	577.770	N870	N909	577.000
n909 ol1	100-1	1.000	583.000	580.620	35.000	581.620	N870	N909	584.000
n910 ss	100-1	4.500	563.520	563.715	80.000	568.215	N848	N910	568.020
L908	100-1	2.000	576.690	577.310	191.000	579.310	SAG	N911	578.690
n911 ss	100-1	1.000	572.000	572.660	21.000	573.660	N910	N911	573.000
n911 ol1	100-1	1.000	578.500	577.310	22.000	578.310	N910	N911	579.500
L881	100-1	1.000	585.940	586.320	66.000	587.320	N859	N913	586.940
n913 ss	100-1	1.000	578.260	582.960	125.000	583.960	N860	N913	579.260
L871	100-1	1.000	597.410	600.240	325.000	601.240	N920	N914	598.410

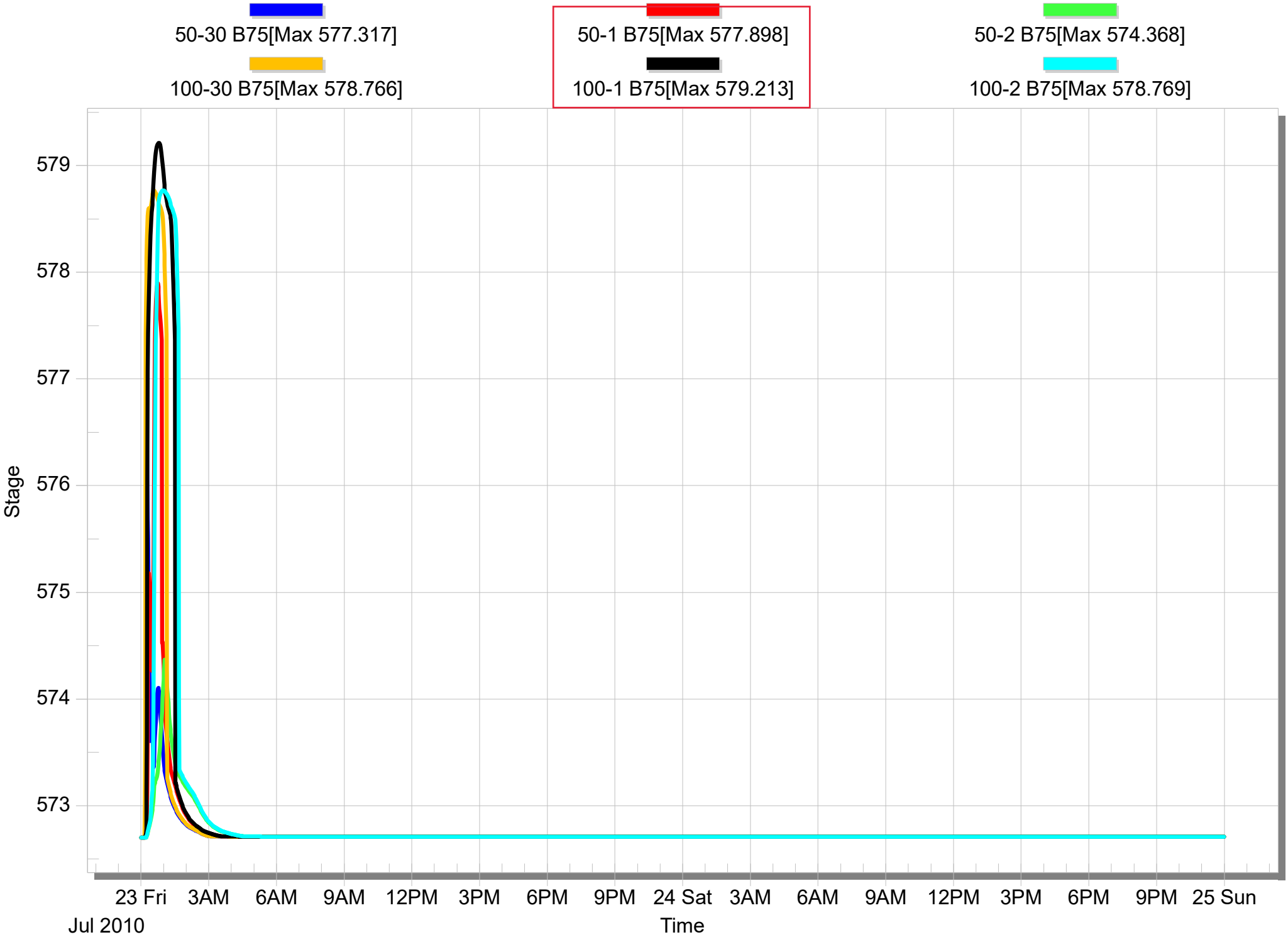
LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n914 ss	100-1	3.000	583.350	584.390	335.000	587.390	N915	N914	586.350
L874	100-1	2.000	591.410	596.000	605.000	598.000	N840	N915	593.410
n915 ss	100-1	3.000	582.958	583.350	147.000	586.350	N916	N915	585.958
n918 ss	100-1	6.000	578.500	580.000	300.000	586.000	OUT2	N916	584.500
n918 ol	100-1	2.000	596.325	600.980	629.000	602.980	N915	N918	598.325
918 ss	100-1	1.000	591.901	596.430	629.000	597.430	N915	N918	592.901
L872	100-1	1.000	590.990	597.940	750.000	598.940	N853	N919	591.990
n919 ss	100-1	3.000	582.958	583.940	388.000	586.940	N916	N919	585.958
L873	100-1	1.000	592.800	597.410	575.000	598.410	N839	N920	593.800
n920 ss	100-1	1.000	590.000	592.510	80.000	593.510	N915	N920	591.000
L898	100-1	1.000	585.210	594.500	422.000	595.500	N875	N921	586.210
n921 ss	100-1	5.000	562.060	562.112	86.000	567.112	N851	N921	567.060
n921 ol	100-1	1.000	594.560	593.500	86.000	594.500	N851	N921	595.560
L952	100-1	4.000	564.462	567.170	500.000	571.170	N949	N922	568.462
n922 ss	100-1	1.000	584.170	589.150	127.000	590.150	N921	N922	585.170
392.1	100-1	1.000	587.790	592.500	385.000	593.500	N872	N922	588.790
L909	100-1	1.000	577.310	578.020	100.000	579.020	N867	N923	578.310
n923 ss	100-1	1.000	573.000	575.010	127.000	576.010	N910	N923	574.000
n924 ss	100-1	1.000	572.000	573.460	56.000	574.460	N910	N924	573.000
404.1	100-1	1.000	577.400	578.890	210.000	579.890	N869	N924	578.400
n893 ol	100-1	1.000	603.440	597.000	50.000	598.000	N893	N925	604.440
n926 ss	100-1	1.500	588.110	588.090	22.000	589.590	N889	N926	589.610
n926 ol1	100-1	1.000	600.910	597.740	22.000	598.740	N889	N926	601.910
n903 ol	100-1	2.000	596.900	597.740	190.000	599.740	N903	N926	598.900
L929	100-1	1.000	606.300	609.380	260.000	610.380	N891	N928	607.300
n928 ss	100-1	1.000	603.950	605.340	80.000	606.340	N883	N928	604.950
L930	100-1	1.000	606.490	609.740	275.000	610.740	N897	N929	607.490
n929 ss	100-1	1.000	603.310	604.690	87.000	605.690	N883	N929	604.310
n879 ss	100-1	4.500	584.350	584.860	348.000	589.360	N906	N931	588.850
n906 ss	100-1	4.500	583.720	584.350	255.000	588.850	N945	N932	588.220
n933 ss	100-1	4.500	587.380	587.390	230.000	591.890	N894	N933	591.880
n931 ss	100-1	1.500	589.366	589.974	320.000	591.474	N101	N100	590.866
n932 ss	100-1	1.500	588.477	589.366	468.000	590.866	N102	N101	589.977

LINK DATA

Name	Storm	Diameter (Height) ft	Downstream Invert Elevation ft	Upstream Invert Elevation ft	Length ft	Upstream Crown Elevation ft	Downstream Node Name	Upstream Node Name	Downstream Crown Elevation ft
n933 ss.1	100-1	2.000	587.688	588.477	415.000	590.477	N103	N102	589.688
n934 ss	100-1	3.000	587.175	587.688	270.000	590.688	N104	N103	590.175
n935 ss	100-1	3.000	587.033	587.175	75.000	590.175	N105	N104	590.033
n936 ss	100-1	3.000	586.083	587.033	500.000	590.033	N106	N105	589.083
n937 ss	100-1	3.000	585.203	586.083	463.000	589.083	N107	N106	588.203
n938 ss	100-1	3.000	584.646	585.203	293.000	588.203	N108	N107	587.646
n939 ss	100-1	3.000	584.350	584.646	156.040	587.646	N932	N108	587.350
L951	100-1	4.500	576.980	583.720	137.000	588.220	OUT1	N945	581.480
n947 ss2	100-1	3.000	561.170	561.270	100.000	564.270	WET WELL	N947	564.170
949 ss	100-1	5.000	561.170	561.354	100.000	566.354	WET WELL	N949	566.170
L956	100-1	6.000	564.820	565.020	1200.000	571.020	N949	N950	570.820

PROPOSED ALT C CONDITIONS Node - N867
SAG LOCATION RIM=577.31 STATION~1195+00



B75 PROPOSED ALTERNATIVE 1

PROPOSED CONDITIONS ALT 1 SCHEMATIC

Row.xp] [Network]

ation Tools Analyze Results Window Help

Base Scenario ... 50-30 B75 ... Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

N8

N859

N913

N860

N844

N856

N857

N843

N858

N855

N854

N839

N840

N842

N841

N853

OUT2

N920

N916

N914

N915

N918

N919

X=1149311.19 Y=1879677.57 HDR 1:1658.891 NUM OVR

xpswmm 2014 - [Alt 1 Median and South Row.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 50-30 B75 ... Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

Alt1 Median Storage

LOW EOP N867

SAG

Alt 1 ROW Storage

N932 N873 N877 N921 N874 N875 N850 N872 N908 N949 N909 N870 N849 N950 N871 N923 N867 N911 N916 N848 N924 N847 N864 N865 N846 N869 N866 N861 N862 N845 N863 N859 N913 N860 N844 N858

X=1151312.80 Y=1879585.41 HDR 1:1658.891 NUM

xpswmm 2014 - [Alt 1 Median and South Row.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario ... 50-30 B75 ... Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

N881 N882 N928 N883 N901 N890 N891 N892 N884 N929 N925 N933 N893 N900 N894 N886 N897 N931 N899 N926 N879 N896 N895 N904 N905 N903 N888 N889 N906 N907 N902 N951 N878 WET WELL N876 N877 N873 N932 N921 N851 N874 N875 N922 N850 N872 N945

Alt1 Median Storage

Alt 1 ROW Storage

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L875	50-30 B75	1.000	588.610	592.800	500.000	593.800	N856	N839	589.610
n839 ss	50-30 B75	1.500	583.460	587.600	77.000	589.100	N840	N839	584.960
L876	50-30 B75	2.000	587.460	591.410	500.000	593.410	N857	N840	589.460
n840 ss	50-30 B75	1.500	583.010	583.210	24.000	584.710	N841	N840	584.510
n840 ol1	50-30 B75	1.000	593.210	591.410	24.000	592.410	N841	N840	594.210
n841 ss	50-30 B75	2.000	581.880	582.710	200.000	584.710	N842	N841	583.880
n842 ss	50-30 B75	3.000	580.610	581.130	298.000	584.130	N843	N842	583.610
n843 ss	50-30 B75	3.000	576.790	577.660	398.000	580.660	N844	N843	579.790
n844 ss	50-30 B75	3.000	573.340	573.940	386.000	576.940	N845	N844	576.340
n845 ss	50-30 B75	3.500	565.530	565.790	414.000	569.290	N846	N845	569.030
n846 ss	50-30 B75	4.000	564.270	565.330	260.000	569.330	N847	N846	568.270
n847 ss	50-30 B75	4.500	563.715	564.170	186.000	568.670	N910	N847	568.215
n848 ss	50-30 B75	4.500	563.320	563.520	266.000	568.020	N870	N848	567.820
L959	50-30 B75	4.000	565.020	566.000	100.000	570.000	N950	N849	569.020
n849 ss	50-30 B75	5.000	562.370	563.060	335.000	568.060	N850	N849	567.370
n849ss2	50-30 B75	7.000	568.067	568.087	20.000	575.087	N949	N849	575.067
n850 ss	50-30 B75	5.000	562.112	562.370	422.000	567.370	N921	N850	567.112
n851 ss	50-30 B75	5.000	561.354	562.060	383.000	567.060	N951	N851	566.354
n851 ss2	50-30 B75	3.000	566.803	567.188	385.000	570.188	N947	N851	569.803
Low Flow	50-30 B75						N878	WET WELL	
Lead	50-30 B75						N878	WET WELL	
Lag 1	50-30 B75						N878	WET WELL	
Lag 2	50-30 B75						N878	WET WELL	
L877	50-30 B75	1.000	588.870	592.500	480.000	593.500	N855	N853	589.870
n853 ss	50-30 B75	1.500	583.010	584.440	65.000	585.940	N841	N853	584.510
n854 ss	50-30 B75	1.250	581.220	583.010	36.000	584.260	N855	N854	582.470
n854 ol1	50-30 B75	1.000	588.870	586.260	36.000	587.260	N855	N854	589.870
L880	50-30 B75	1.000	587.000	588.870	418.000	589.870	N858	N855	588.000
n855 ss	50-30 B75	1.250	578.260	579.470	61.000	580.720	N843	N855	579.510
L878	50-30 B75	1.000	586.320	588.610	312.000	589.610	N913	N856	587.320
n856 ss	50-30 B75	1.250	580.760	585.110	75.000	586.360	N857	N856	582.010
L879	50-30 B75	2.000	583.860	587.460	395.000	589.460	N860	N857	585.860
n857 ss	50-30 B75	1.500	579.010	579.410	23.000	580.910	N843	N857	580.510
n857 ol1	50-30 B75	1.000	589.160	587.460	23.000	588.460	N843	N857	590.160
L884	50-30 B75	1.000	585.940	587.000	380.000	588.000	N863	N858	586.940
n858 ss	50-30 B75	1.500	574.340	576.000	85.000	577.500	N844	N858	575.840

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L882	50-30 B75	1.000	582.260	585.940	404.000	586.940	N861	N859	583.260
n859 ss	50-30 B75	1.000	578.260	578.440	76.000	579.440	N860	N859	579.260
L883	50-30 B75	2.000	581.420	583.860	390.000	585.860	N862	N860	583.420
n860 ss	50-30 B75	1.750	574.090	574.610	25.000	576.360	N844	N860	575.840
n860 ol1	50-30 B75	1.000	586.090	583.860	25.000	584.860	N844	N860	587.090
L885	50-30 B75	1.000	579.030	582.260	415.000	583.260	N864	N861	580.030
n861 ss	50-30 B75	1.250	575.370	578.060	88.000	579.310	N862	N861	576.620
L886	50-30 B75	2.000	578.520	581.420	420.000	583.420	N865	N862	580.520
n862 ss	50-30 B75	1.500	566.600	567.320	23.000	568.820	N845	N862	568.100
n862 ol1	50-30 B75	1.000	583.140	581.420	22.000	582.420	N845	N862	584.140
L887	50-30 B75	1.000	581.520	585.940	425.000	586.940	N866	N863	582.520
n863 ss	50-30 B75	1.250	567.000	568.950	75.000	570.200	N845	N863	568.250
L888	50-30 B75	1.000	577.310	579.030	264.000	580.030	N867	N864	578.310
n864 ss	50-30 B75	1.000	572.370	575.220	80.000	576.220	N865	N864	573.370
L889	50-30 B75	2.000	576.690	578.520	264.000	580.520	SAG	N865	578.690
n865 ss	50-30 B75	1.500	565.800	566.620	22.000	568.120	N846	N865	567.300
n865 ol1	50-30 B75	1.000	579.680	578.520	22.000	579.520	N846	N865	580.680
L890	50-30 B75	1.000	577.400	581.520	260.000	582.520	N869	N866	578.400
n866 ss	50-30 B75	1.500	565.430	567.420	69.000	568.920	N846	N866	566.930
n867 ss	50-30 B75	2.000	571.140	572.710	78.000	574.710	SAG	N867	573.140
867 weir	50-30 B75						SAG	N867	
n868 ss	50-30 B75	2.000	564.270	565.840	27.000	567.840	N847	SAG	566.270
n868 ol1	50-30 B75	1.000	578.270	576.690	26.000	577.690	N847	SAG	579.270
n869 ss	50-30 B75	1.500	564.270	566.420	64.000	567.920	N847	N869	565.770
n870 ss	50-30 B75	4.500	563.210	563.320	157.000	567.820	N849	N870	567.710
n871 ss	50-30 B75	1.000	563.900	576.130	330.000	577.130	N870	N871	564.900
401.1	50-30 B75	1.000	578.890	582.640	320.000	583.640	N924	N871	579.890
n872 ss	50-30 B75	1.000	562.640	581.560	82.000	582.560	N850	N872	563.640
396.1	50-30 B75	1.000	582.640	587.790	450.000	588.790	N871	N872	583.640
n873 ss	50-30 B75	1.000	583.010	587.040	296.000	588.040	N874	N873	584.010
n873 ol	50-30 B75	1.000	587.790	591.870	287.000	592.870	N874	N873	588.790
L899	50-30 B75	1.000	582.650	587.790	475.000	588.790	N908	N874	583.650
n874 ss	50-30 B75	1.250	579.210	582.980	71.000	584.230	N875	N874	580.460
n875 ss	50-30 B75	2.000	562.640	563.710	28.000	565.710	N850	N875	564.640
n875 ol1	50-30 B75	1.000	588.640	585.210	27.000	586.210	N850	N875	589.640
median ss	50-30 B75	7.000	567.223	567.715	492.000	574.715	N877	N875	574.223

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L894	50-30 B75	1.000	585.210	594.500	545.000	595.500	N875	N876	586.210
n876 ss	50-30 B75	1.000	590.370	592.060	57.000	593.060	N877	N876	591.370
n877 ss	50-30 B75	7.000	567.200	567.223	23.000	574.223	N851	N877	574.200
n878 ss	50-30 B75	4.500	585.150	585.470	123.000	589.970	N879	N878	589.650
n879ss2	50-30 B75	4.500	584.860	585.150	120.000	589.650	N931	N879	589.360
L933	50-30 B75	1.000	609.380	611.580	230.000	612.580	N928	N881	610.380
n881 ss	50-30 B75	1.000	606.530	606.480	87.000	607.480	N882	N881	607.530
n882 ss	50-30 B75	1.000	603.090	606.080	230.000	607.080	N883	N882	604.090
n882 ol	50-30 B75	3.000	608.510	610.780	230.000	613.780	N883	N882	611.510
n883 ol	50-30 B75	3.000	606.610	608.510	17.000	611.510	N901	N883	609.610
n901 ss2	50-30 B75	1.500	600.640	602.960	258.000	604.460	N892	N883	602.140
n885 ss	50-30 B75	2.000	588.210	590.190	390.000	592.190	N886	N884	590.210
n887 ss	50-30 B75	2.000	586.840	588.170	325.000	590.170	N888	N886	588.840
L915	50-30 B75	1.000	597.740	601.200	35.000	602.200	N926	N888	598.740
n888 ss	50-30 B75	3.000	586.610	586.840	38.000	589.840	N889	N888	589.610
n889 ss	50-30 B75	3.000	586.000	586.510	23.000	589.510	N879	N889	589.000
L934	50-30 B75	1.000	609.740	611.910	220.000	612.910	N929	N890	610.740
n890 ss	50-30 B75	1.000	605.980	606.860	88.000	607.860	N882	N890	606.980
n891 ss	50-30 B75	1.000	600.840	601.180	78.000	602.180	N892	N891	601.840
n891 weir	50-30 B75						N925	N891	
L924	50-30 B75	3.000	602.090	605.190	150.000	608.190	N900	N892	605.090
n892 ss2	50-30 B75	2.000	599.390	599.340	21.000	601.340	N933	N892	601.390
n893 ss	50-30 B75	1.000	589.180	598.500	78.000	599.500	N894	N893	590.180
L918	50-30 B75	2.000	597.740	602.680	280.000	604.680	N926	N894	599.740
n894 ss2	50-30 B75	4.500	586.920	587.380	246.000	591.880	N899	N894	591.420
n895 ss	50-30 B75	1.250	589.510	589.940	96.000	591.190	N886	N895	590.760
n896 ss	50-30 B75	1.000	589.910	598.640	87.000	599.640	N894	N896	590.910
N896 weir	50-30 B75						N895	N896	
n897 ss	50-30 B75	1.000	600.590	601.690	84.000	602.690	N892	N897	601.590
N897 weir	50-30 B75						N895	N897	
n898 ss	50-30 B75	1.000	590.720	595.400	75.000	596.400	N899	N898	591.720
n898 weir	50-30 B75						N925	N898	
L914	50-30 B75	1.000	597.740	601.160	40.000	602.160	N926	N899	598.740
n899 ss	50-30 B75	4.500	586.880	586.910	28.000	591.410	N888	N899	591.380
L923	50-30 B75	3.000	597.740	602.090	372.000	605.090	N926	N900	600.740
n900 ss	50-30 B75	1.500	589.460	589.380	23.000	590.880	N886	N900	590.960

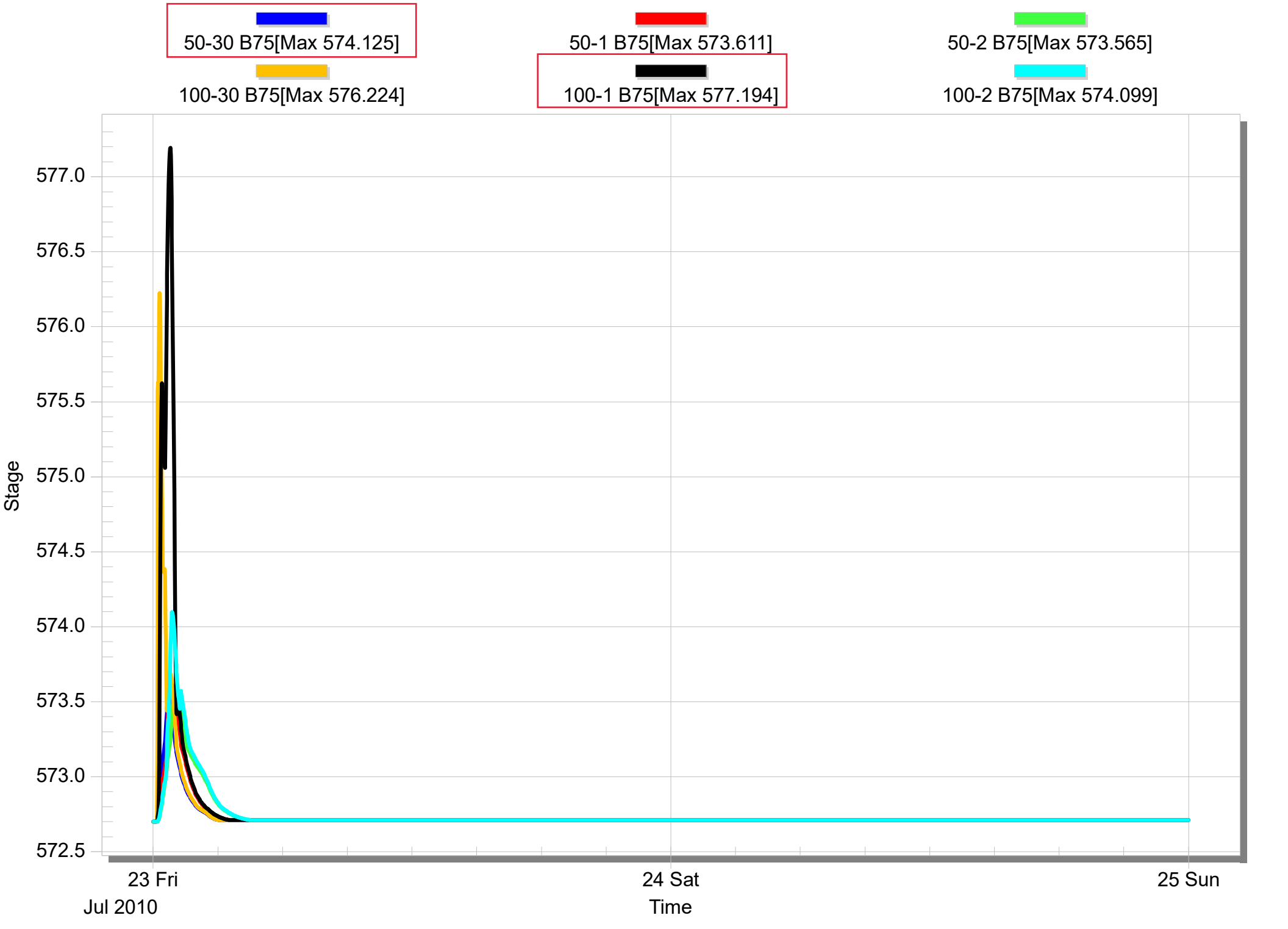
LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L926	50-30 B75	3.000	605.440	606.610	242.000	609.610	N892	N901	608.440
n901 ss	50-30 B75	2.000	590.620	590.510	28.000	592.510	N884	N901	592.620
L896	50-30 B75	3.000	591.450	597.980	420.000	600.980	N922	N902	594.450
n902 ss	50-30 B75	1.000	592.100	592.980	84.000	593.980	N903	N902	593.100
L891	50-30 B75	3.000	592.060	596.900	293.000	599.900	N876	N903	595.060
n903 ss3	50-30 B75	1.500	590.070	591.650	222.000	593.150	N899	N903	591.570
L910	50-30 B75	1.000	595.290	598.030	207.000	599.030	N907	N904	596.290
n904 ss	50-30 B75	1.000	593.040	593.130	61.000	594.130	N905	N904	594.040
n905 ss	50-30 B75	1.000	592.000	593.040	11.000	594.040	N903	N905	593.000
n905 ol1	50-30 B75	1.000	596.900	598.740	11.000	599.740	N903	N905	597.900
n906 ss2	50-30 B75	4.500	584.350	584.541	208.000	589.041	N932	N906	588.850
L892	50-30 B75	1.000	591.870	595.490	335.000	596.490	N873	N907	592.870
n907 ss	50-30 B75	1.000	592.000	592.840	30.000	593.840	N906	N907	593.000
L906	50-30 B75	1.000	578.020	582.650	475.000	583.650	N923	N908	579.020
n908 ss	50-30 B75	1.000	576.770	578.170	90.000	579.170	N909	N908	577.770
L905	50-30 B75	2.000	577.310	580.620	370.000	582.620	N911	N909	579.310
n909 ss	50-30 B75	1.000	576.000	576.770	37.000	577.770	N870	N909	577.000
n909 ol1	50-30 B75	1.000	583.000	580.620	35.000	581.620	N870	N909	584.000
n909 ss2	50-30 B75	7.000	568.070	568.190	126.000	575.190	N949	N909	575.070
n910 ss	50-30 B75	4.500	563.520	563.715	80.000	568.215	N848	N910	568.020
L908	50-30 B75	2.000	576.690	577.310	191.000	579.310	SAG	N911	578.690
n911 ss	50-30 B75	1.000	572.000	572.660	21.000	573.660	N910	N911	573.000
n911 ol1	50-30 B75	1.000	578.500	577.310	22.000	578.310	N910	N911	579.500
L881	50-30 B75	1.000	585.940	586.320	66.000	587.320	N859	N913	586.940
n913 ss	50-30 B75	1.000	578.260	582.960	125.000	583.960	N860	N913	579.260
L871	50-30 B75	1.000	597.410	600.240	325.000	601.240	N920	N914	598.410
n914 ss	50-30 B75	3.000	583.350	584.390	335.000	587.390	N915	N914	586.350
L874	50-30 B75	2.000	591.410	596.000	605.000	598.000	N840	N915	593.410
n915 ss	50-30 B75	3.000	582.958	583.350	147.000	586.350	N916	N915	585.958
n918 ss	50-30 B75	6.000	578.500	580.000	300.000	586.000	OUT2	N916	584.500
n918 ol	50-30 B75	2.000	596.325	600.980	629.000	602.980	N915	N918	598.325
918 ss	50-30 B75	1.000	591.901	596.430	629.000	597.430	N915	N918	592.901
L872	50-30 B75	1.000	590.990	597.940	750.000	598.940	N853	N919	591.990
n919 ss	50-30 B75	3.000	582.958	583.940	388.000	586.940	N916	N919	585.958
L873	50-30 B75	1.000	592.800	597.410	575.000	598.410	N839	N920	593.800
n920 ss	50-30 B75	1.000	590.000	592.510	80.000	593.510	N915	N920	591.000

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L898	50-30 B75	1.000	585.210	594.500	422.000	595.500	N875	N921	586.210
n921 ss	50-30 B75	5.000	562.060	562.112	86.000	567.112	N851	N921	567.060
n921 ol	50-30 B75	1.000	594.560	593.500	86.000	594.500	N851	N921	595.560
L952	50-30 B75	3.000	561.462	564.170	500.000	567.170	N946	N922	564.462
n922 ss	50-30 B75	1.000	584.170	589.150	127.000	590.150	N921	N922	585.170
392.1	50-30 B75	1.000	587.790	592.500	385.000	593.500	N872	N922	588.790
L909	50-30 B75	1.000	577.310	578.020	100.000	579.020	N867	N923	578.310
n923 ss	50-30 B75	1.000	573.000	575.010	127.000	576.010	N910	N923	574.000
n924 ss	50-30 B75	1.000	572.000	573.460	56.000	574.460	N910	N924	573.000
404.1	50-30 B75	1.000	577.400	578.890	210.000	579.890	N869	N924	578.400
n893 ol	50-30 B75	1.000	603.440	597.000	50.000	598.000	N893	N925	604.440
n926 ss	50-30 B75	1.500	588.110	588.090	22.000	589.590	N889	N926	589.610
n926 ol1	50-30 B75	1.000	600.910	597.740	22.000	598.740	N889	N926	601.910
n903 ol	50-30 B75	2.000	596.900	597.740	190.000	599.740	N903	N926	598.900
L929	50-30 B75	1.000	606.300	609.380	260.000	610.380	N891	N928	607.300
n928 ss	50-30 B75	1.000	603.950	605.340	80.000	606.340	N883	N928	604.950
L930	50-30 B75	1.000	606.490	609.740	275.000	610.740	N897	N929	607.490
n929 ss	50-30 B75	1.000	603.310	604.690	87.000	605.690	N883	N929	604.310
n879 ss	50-30 B75	4.500	584.350	584.860	348.000	589.360	N906	N931	588.850
n906 ss	50-30 B75	4.500	583.720	584.350	255.000	588.850	N945	N932	588.220
n933 ss	50-30 B75	4.500	587.380	587.390	230.000	591.890	N894	N933	591.880
n931 ss	50-30 B75	1.500	589.366	589.974	320.000	591.474	N101	N100	590.866
n932 ss	50-30 B75	1.500	588.477	589.366	468.000	590.866	N102	N101	589.977
n933 ss.1	50-30 B75	2.000	587.688	588.477	415.000	590.477	N103	N102	589.688
n934 ss	50-30 B75	3.000	587.175	587.688	270.000	590.688	N104	N103	590.175
n935 ss	50-30 B75	3.000	587.033	587.175	75.000	590.175	N105	N104	590.033
n936 ss	50-30 B75	3.000	586.083	587.033	500.000	590.033	N106	N105	589.083
n937 ss	50-30 B75	3.000	585.203	586.083	463.000	589.083	N107	N106	588.203
n938 ss	50-30 B75	3.000	584.646	585.203	293.000	588.203	N108	N107	587.646
n939 ss	50-30 B75	3.000	584.350	584.646	156.040	587.646	N932	N108	587.350
L951	50-30 B75	4.500	576.980	583.720	137.000	588.220	OUT1	N945	581.480
n947 ss2	50-30 B75	3.000	561.170	561.270	100.000	564.270	WET WELL	N947	564.170
n849 ss2	50-30 B75	7.000	567.715	568.067	352.000	575.067	N875	N949	574.715
L961	50-30 B75	6.000	564.820	565.020	1200.000	571.020	N951	N950	570.820
L960	50-30 B75	5.000	561.170	561.354	100.000	566.354	WET WELL	N951	566.170

PROPOSED ALT 1 CONDITIONS Node - N867
SAG LOCATION RIM=577.31 STATION~1195+00



PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50-YR 0.5 HR EVENT
60" & 54" Main Drain HGL

xpswmm 2014 - [Dynamic Long Section]

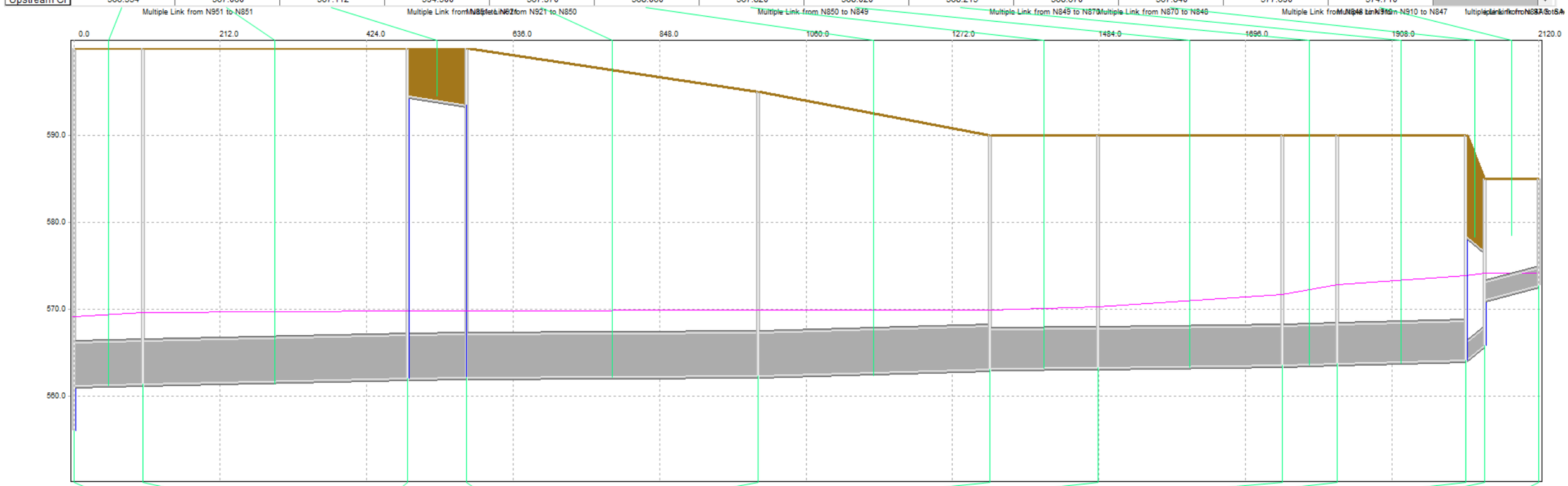
File View Window

Base Scenario | 50-30 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	L960	n851 ss	n921 ss	n921 ol	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss	n868 ss	n868 ol1	n867 ss	867 weir
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Diameter (He	5.000	5.000	5.000	1.000	5.000	5.000	4.500	4.500	4.500	4.500	2.000	1.000	2.000	
Downstream	561.170	561.354	562.060	594.560	562.112	562.370	563.210	563.320	563.520	563.715	564.270	578.270	571.140	
Upstream Inv	561.354	562.060	562.112	593.500	562.370	563.060	563.320	563.520	563.715	564.170	565.840	576.690	572.710	
Length	100.000	383.000	86.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000	27.000	26.000	78.000	
Upstream Cr	566.354	567.060	567.112	594.500	567.370	568.060	567.820	568.020	568.215	568.670	567.840	577.690	574.710	



	WET WELL	N951	N851	N921	N850	N849	N870	N848	N910	N847	SAG	N867
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Max Water El	569.141	569.570	569.759	569.801	569.858	569.889	570.275	571.709	572.822	573.890	574.127	574.159

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50 YR 0.5 HR EVENT
Median Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

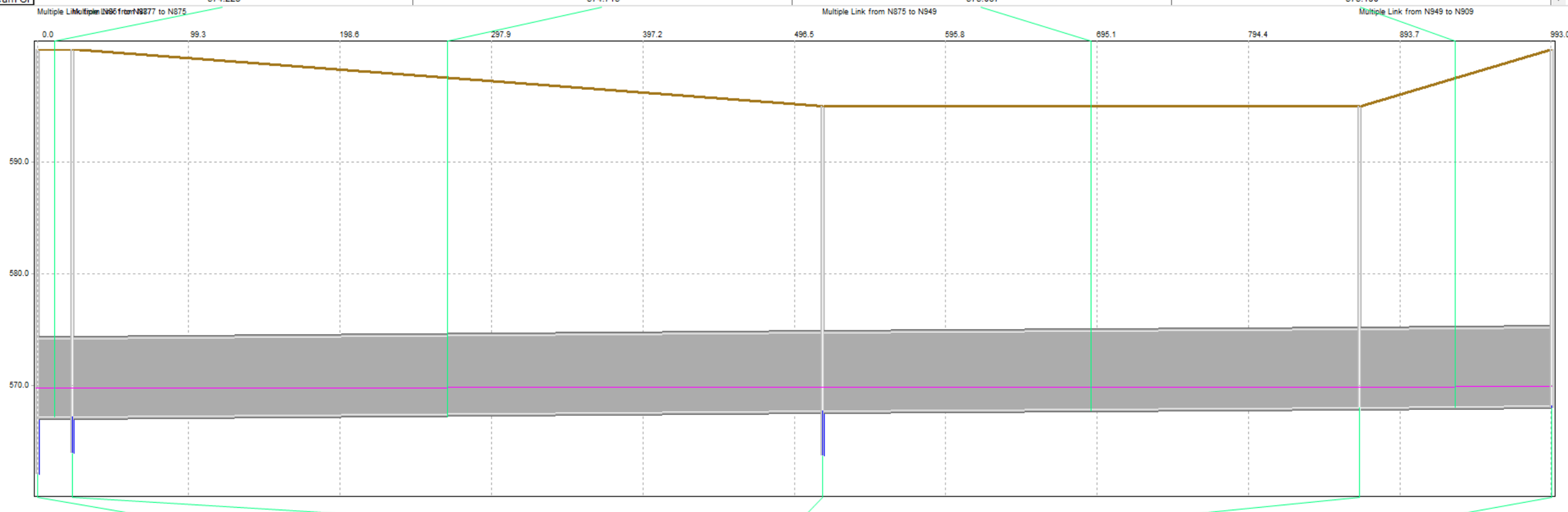
File View Window

Base Scenario | 50-30 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	n877 ss	median ss	n849 ss2	n909 ss2
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Diameter (He	7.000	7.000	7.000	7.000
Downstream	567.200	567.223	567.715	568.070
Upstream Inv	567.223	567.715	568.067	568.190
Length	23.000	492.000	352.000	126.000
Upstream Cr	574.223	574.715	575.067	575.190



	N851	N877	N875	N949	N909
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Max Water El	569.759	569.802	569.867	569.888	569.907

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50 YR 0.5 HR EVENT
South ROW Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

File View Window

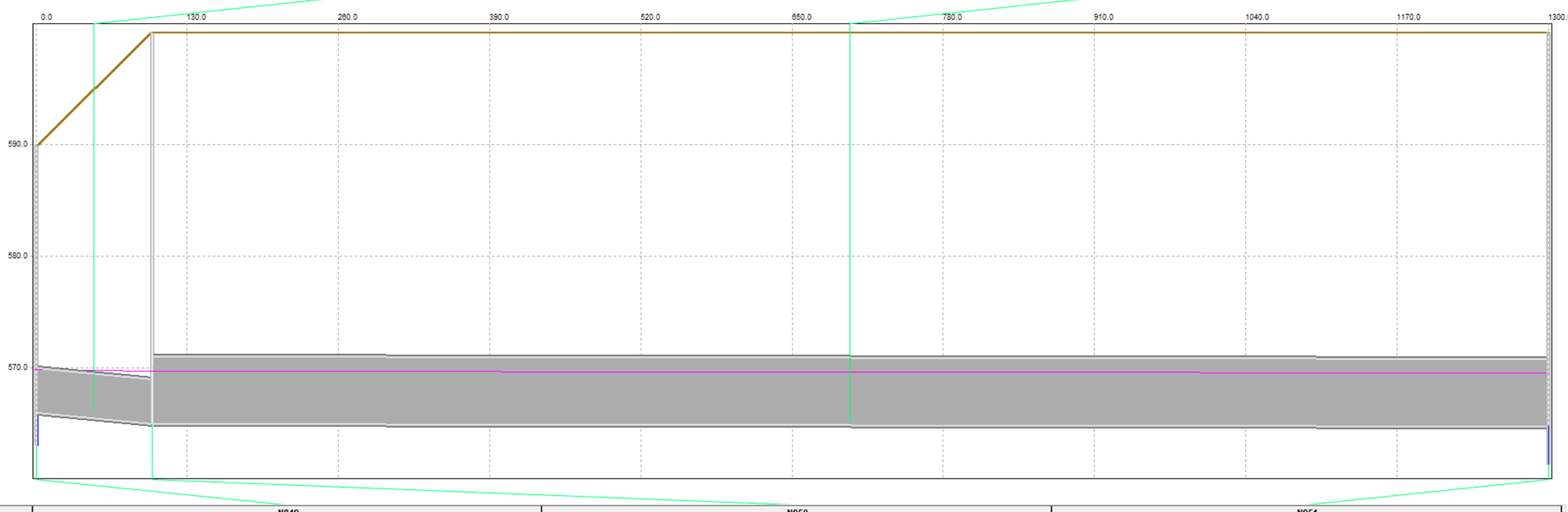
Base Scenario | 50-30 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	L959	L961
Storm	50-30 B75	50-30 B75
Diameter (He	4.000	6.000
Downstream	565.020	564.820
Upstream Inv	566.000	565.020
Length	100.000	1200.000
Upstream Cr	570.000	571.020

Conduit L961 from N950 to N951



	N849	N950	N951
Storm	50-30 B75	50-30 B75	50-30 B75
Max Water El	569.889	569.710	569.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50 YR 0.5 HR EVENT
54" Outfall Storm Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

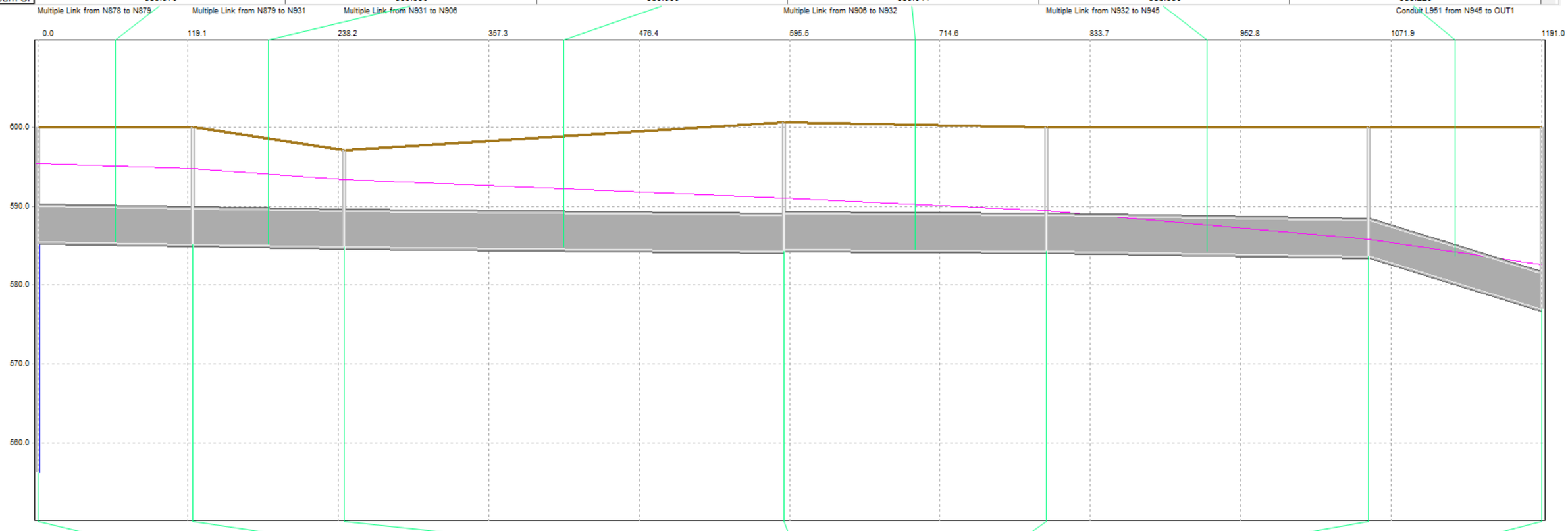
File View Window

Base Scenario | 50-30 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	n878 ss	n879ss2	n879 ss	n906 ss2	n906 ss	L951
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Diameter (He	4.500	4.500	4.500	4.500	4.500	4.500
Downstream	585.150	584.860	584.350	584.350	583.720	576.980
Upstream Inv	585.470	585.150	584.860	584.541	584.350	583.720
Length	123.000	120.000	348.000	208.000	255.000	137.000
Upstream Cr	589.970	589.650	589.360	589.041	588.850	588.220



	N878	N879	N931	N906	N932	N945	OUT1
Storm	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75	50-30 B75
Max Water El	595.470	594.733	593.362	591.083	589.452	585.799	582.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50-YR 1 HR EVENT
60" & 54" Main Drain HGL

xpswmm 2014 - [Dynamic Long Section]

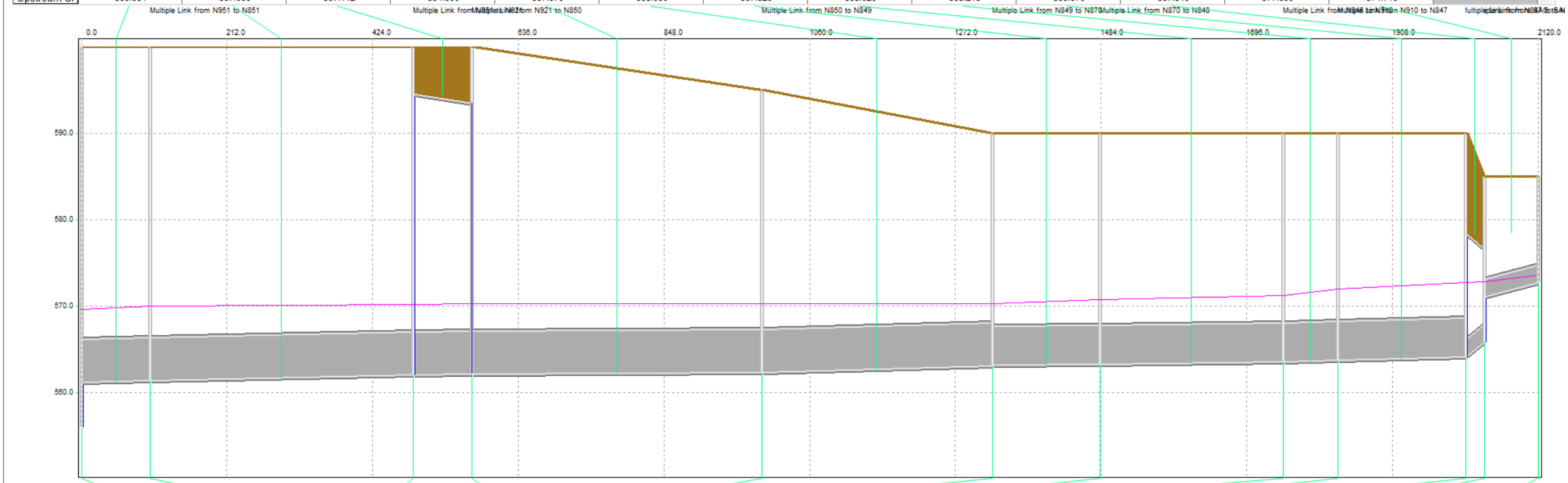
File View Window

Base Scenario | 50-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	L960	n851 ss	n921 ss	n921 ol	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss	n868 ss	n868 ol1	n867 ss	867 weir
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Diameter (He	5.000	5.000	5.000	1.000	5.000	5.000	4.500	4.500	4.500	4.500	2.000	1.000	2.000	
Downstream	561.170	561.354	562.060	594.560	562.112	562.370	563.210	563.320	563.520	563.715	564.270	578.270	571.140	
Upstream Inv	561.354	562.060	562.112	593.500	562.370	563.060	563.320	563.520	563.715	564.170	565.840	576.690	572.710	
Length	100.000	383.000	86.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000	27.000	26.000	78.000	
Upstream Cr	566.354	567.060	567.112	594.500	567.370	568.060	567.820	568.020	568.215	568.670	567.840	577.690	574.710	



	WET WELL	N951	N851	N921	N850	N849	N870	N848	N910	N847	SAG	N867
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Max Water El	569.569	569.999	570.199	570.236	570.286	570.316	570.706	571.214	571.979	572.687	572.794	573.611

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50 YR 1 HR EVENT
Median Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

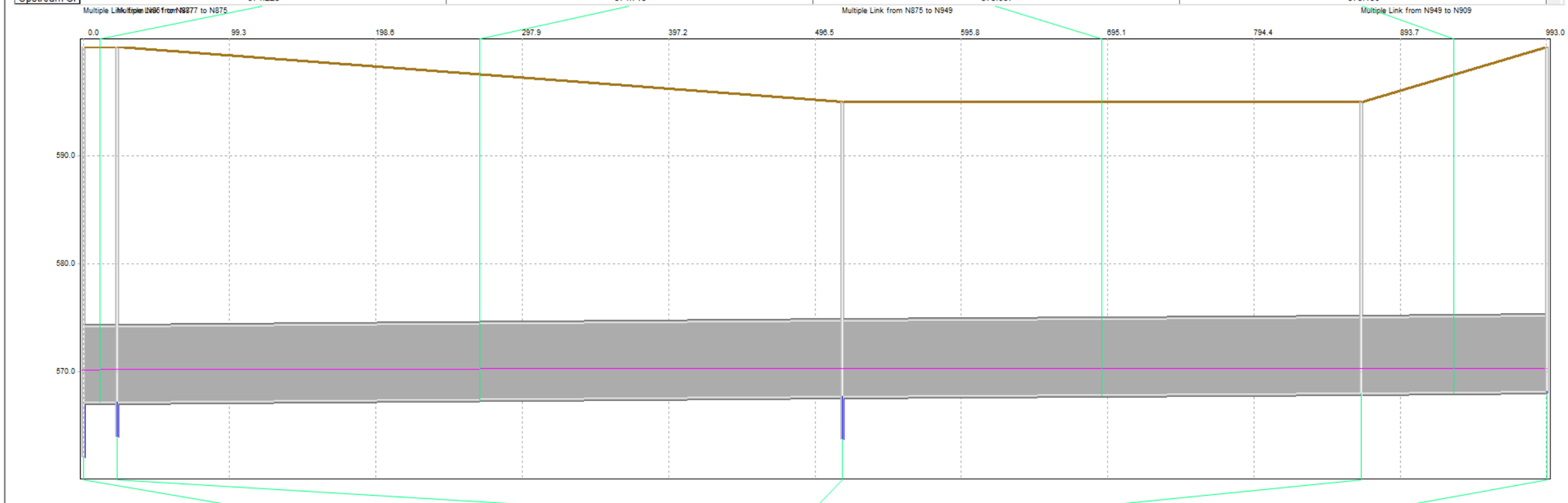
File View Window

Base Scenario | 50-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	n877 ss	median ss	n849 ss2	n909 ss2
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Diameter (He	7.000	7.000	7.000	7.000
Downstream	567.200	567.223	567.715	568.070
Upstream Inv	567.223	567.715	568.067	568.190
Length	23.000	492.000	352.000	126.000
Upstream Cr	574.223	574.715	575.067	575.190



	N851	N877	N875	N949	N909
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Max Water El	570.199	570.235	570.288	570.312	570.320

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50 YR 1 HR EVENT
South ROW Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

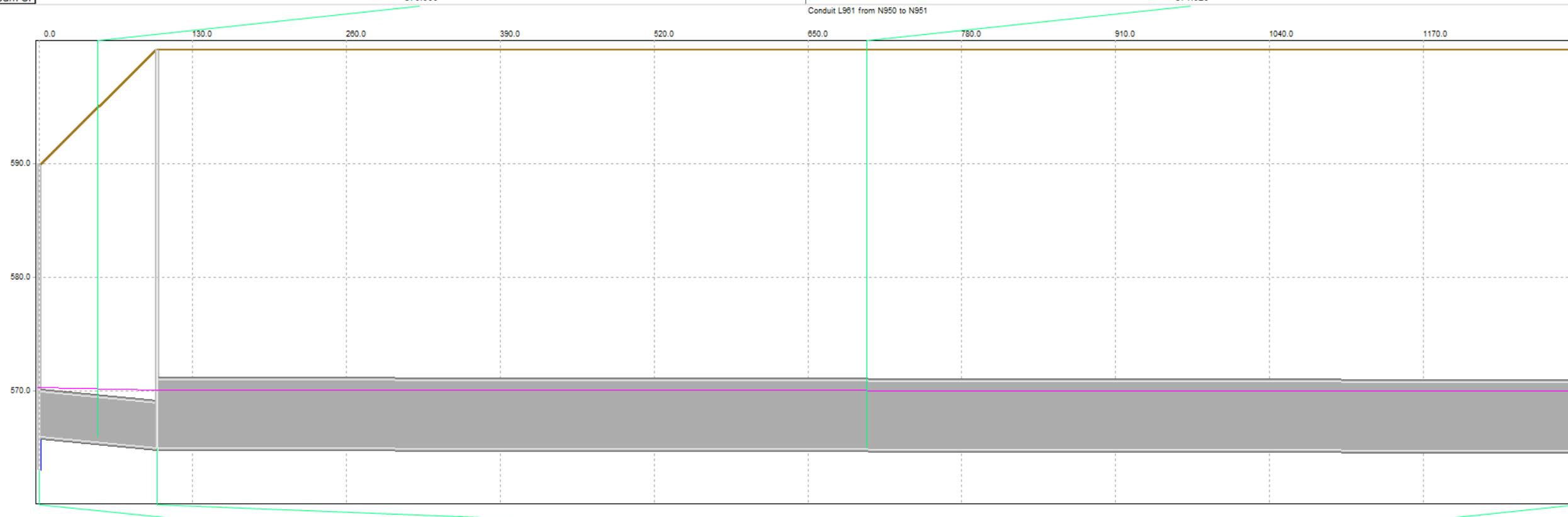
File View Window

Base Scenario | 50-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	L959	L961
Storm	50-1 B75	50-1 B75
Diameter (He	4.000	6.000
Downstream	565.020	564.820
Upstream Inv	566.000	565.020
Length	100.000	1200.000
Upstream Cr	570.000	571.020



	N849	N950	N951
Storm	50-1 B75	50-1 B75	50-1 B75
Max Water El	570.316	570.119	569.999

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
50 YR 1 HR EVENT
54" Outfall Storm Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

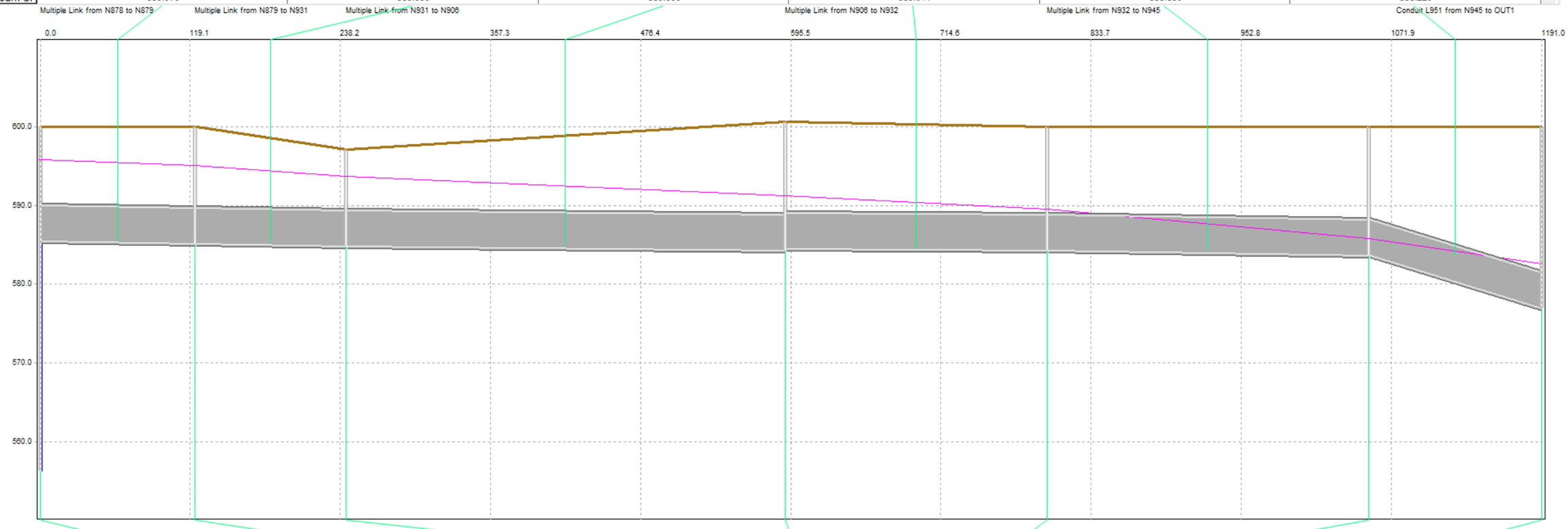
File View Window

Base Scenario | 50-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	n878 ss	n879ss2	n879 ss	n906 ss2	n906 ss	L951
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Diameter (He	4.500	4.500	4.500	4.500	4.500	4.500
Downstream	585.150	584.860	584.350	584.350	583.720	576.980
Upstream Inv	585.470	585.150	584.860	584.541	584.350	583.720
Length	123.000	120.000	348.000	208.000	255.000	137.000
Upstream Cr	589.970	589.650	589.360	589.041	588.850	588.220



	N878	N879	N931	N906	N932	N945	OUT1
Storm	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75	50-1 B75
Max Water El	595.811	595.080	593.676	591.263	589.559	585.844	582.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
ALT 1

DYNAMIC RESULTS
100-YR 0.5-HR EVENT
60" & 54" Main Drain HGL

xpswmm 2014 - [Dynamic Long Section]

File View Window

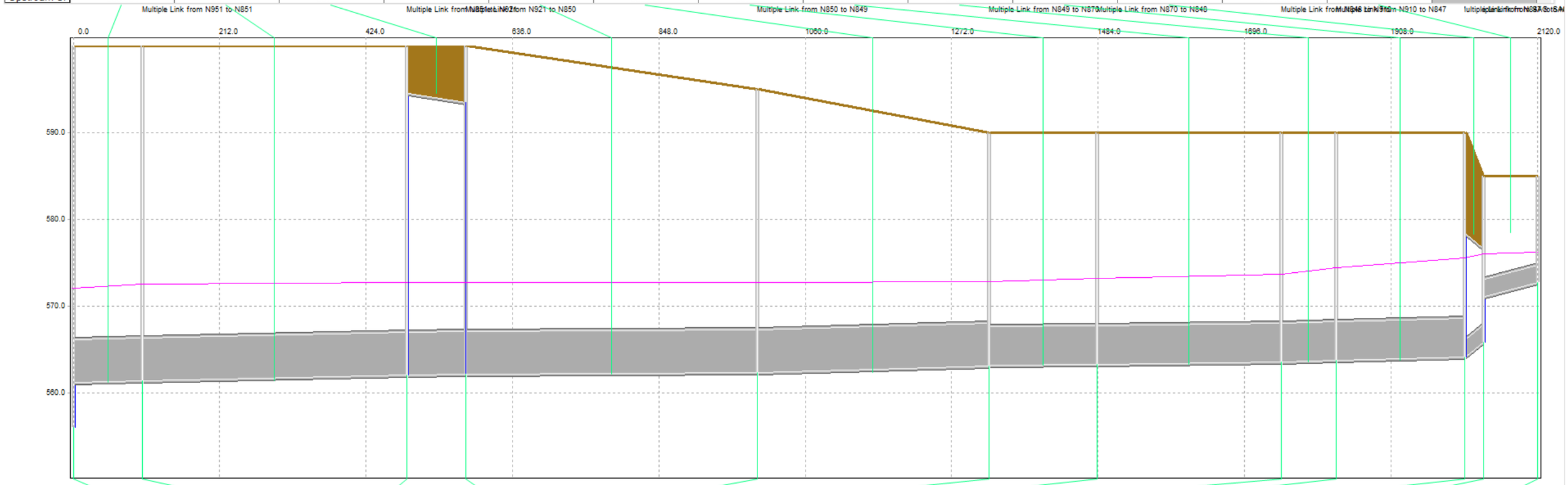
Base Scenario | 100-30 B75 | Active Subcatchments | Close

Finalist Alternative A

Finalist Alternative A
Day [0] Time 00:01:00 Step 6

LINK DATA

	L960	n851 ss	n921 ss	n921 ol	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss	n868 ss	n868 ol1	n867 ss	867 weir
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Diameter (He	5.000	5.000	5.000	1.000	5.000	5.000	4.500	4.500	4.500	4.500	2.000	1.000	2.000	
Downstream	561.170	561.354	562.060	594.560	562.112	562.370	563.210	563.320	563.520	563.715	564.270	578.270	571.140	
Upstream Inv	561.354	562.060	562.112	593.500	562.370	563.060	563.320	563.520	563.715	564.170	565.840	576.690	572.710	
Length	100.000	383.000	86.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000	27.000	26.000	78.000	
Upstream Cr	566.354	567.060	567.112	594.500	567.370	568.060	567.820	568.020	568.215	568.670	567.840	577.690	574.710	



	WET WELL	N951	N851	N921	N850	N849	N870	N848	N910	N847	SAG	N867
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Max Water El	572.079	572.505	572.733	572.750	572.770	572.782	573.173	573.632	574.477	575.590	576.036	576.226

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
100-YR 0.5 HR EVENT
Median Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

File View Window

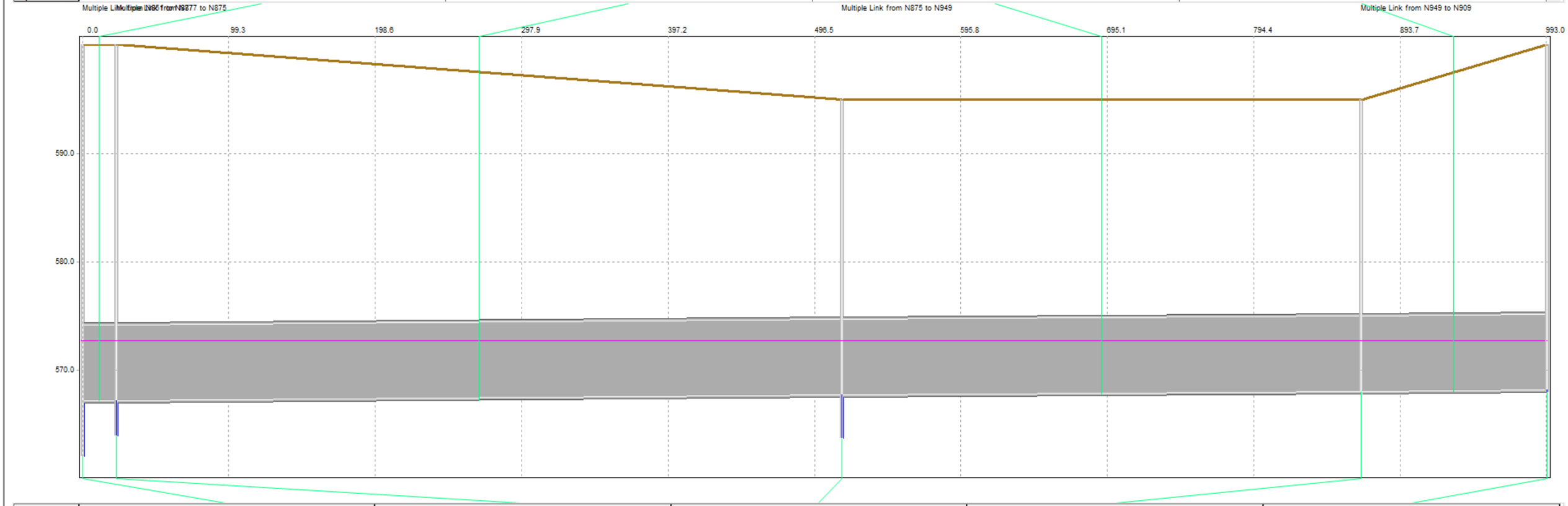
Base Scenario | 100-30 B75 | Active Subcatchments | Close

Finalist Alternative A

Finalist Alternative A
Day [0] Time 00:01:00 Step 6

LINK DATA

	n877 ss	median ss	n849 ss2	n909 ss2
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Diameter (He	7.000	7.000	7.000	7.000
Downstream	567.200	567.223	567.715	568.070
Upstream Inv	567.223	567.715	568.067	568.190
Length	23.000	492.000	352.000	126.000
Upstream Cr	574.223	574.715	575.067	575.190



	N851	N877	N875	N949	N909
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Max Water El	572.733	572.752	572.769	572.776	572.776

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
100 YR 0.5 HR EVENT
South ROW Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

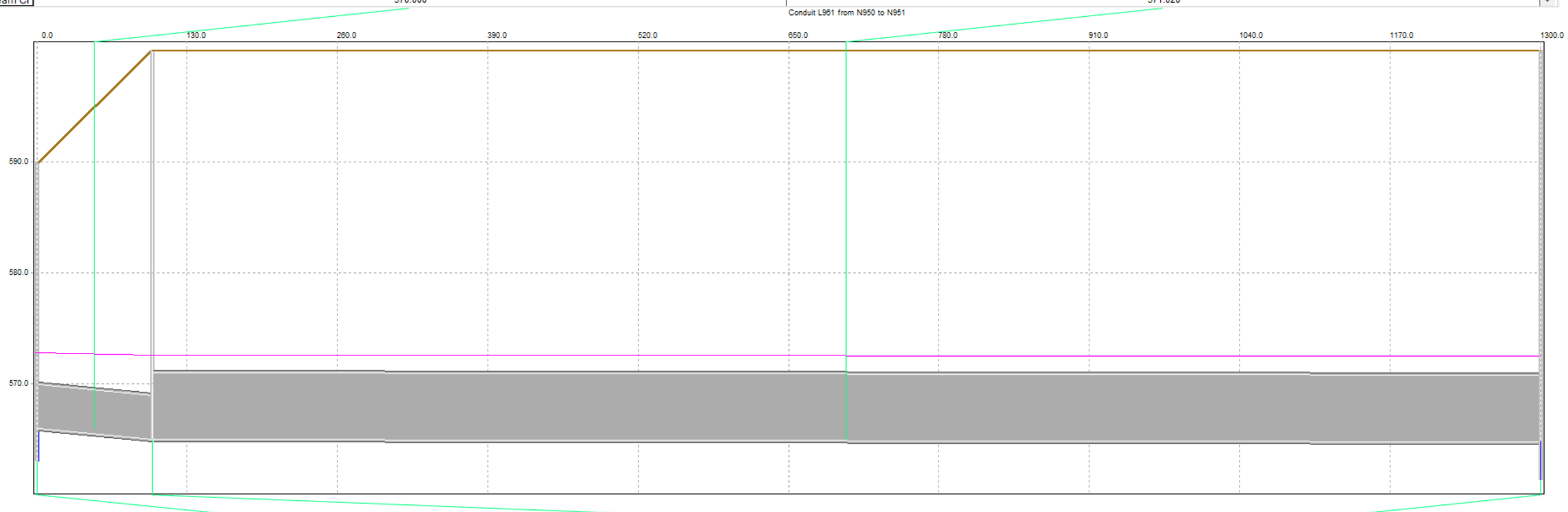
File View Window

Base Scenario | 100-30 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0] Time 00:01:00 Step 6

LINK DATA

	L959	L961
Storm	100-30 B75	100-30 B75
Diameter (He	4.000	6.000
Downstream	565.020	564.820
Upstream Inv	566.000	565.020
Length	100.000	1200.000
Upstream Cr	570.000	571.020



	N849	N950	N951
Storm	100-30 B75	100-30 B75	100-30 B75
Max Water El	572.782	572.604	572.505

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
100-YR 0.5 HR EVENT

54" Outfall Storm Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

File View Window

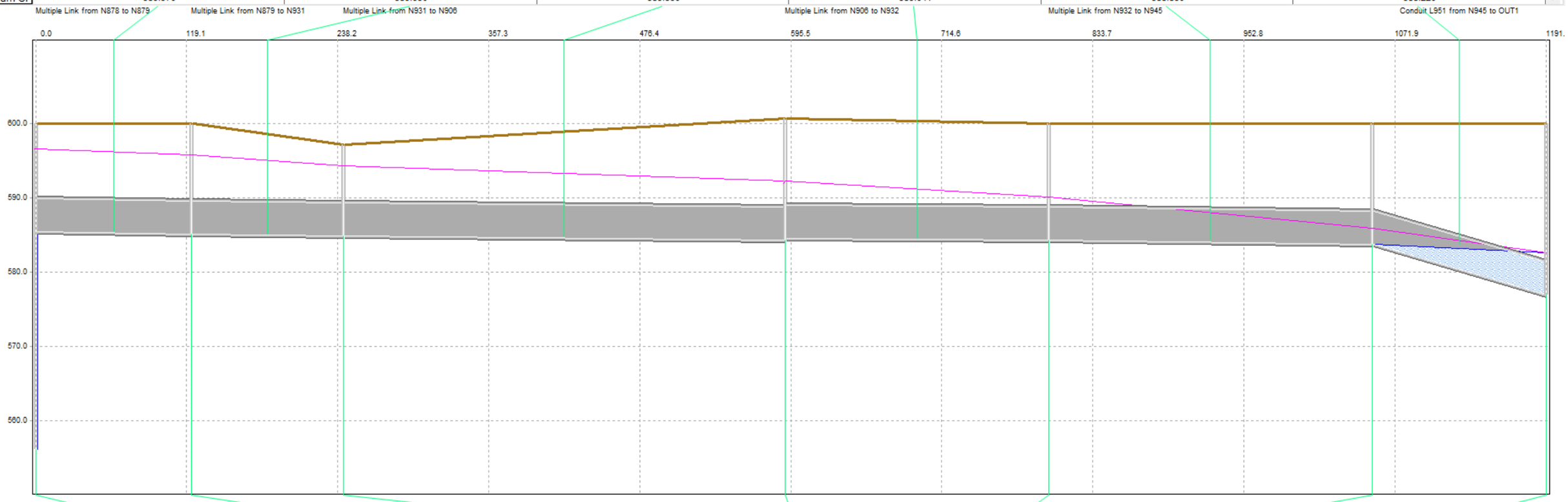
Base Scenario | 100-30 B75 | Active Subcatchments | Close

Finalist Alternative A

Finalist Alternative A
Day [0] Time 00:01:00 Step 6

LINK DATA

	n878 ss	n879ss2	n879 ss	n906 ss2	n906 ss	L951
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Diameter (He	4.500	4.500	4.500	4.500	4.500	4.500
Downstream	585.150	584.860	584.350	584.350	583.720	576.980
Upstream Inv	585.470	585.150	584.860	584.541	584.350	583.720
Length	123.000	120.000	348.000	208.000	255.000	137.000
Upstream Cr	589.970	589.650	589.360	589.041	588.850	588.220



	N878	N879	N931	N906	N932	N945	OUT1
Storm	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75	100-30 B75
Max Water El	596.503	595.766	594.266	591.905	590.094	585.931	582.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
ALT 1

DYNAMIC RESULTS
100-YR 1-HR EVENT
60" & 54" Main Drain HGL

xpswmm 2014 - [Dynamic Long Section]

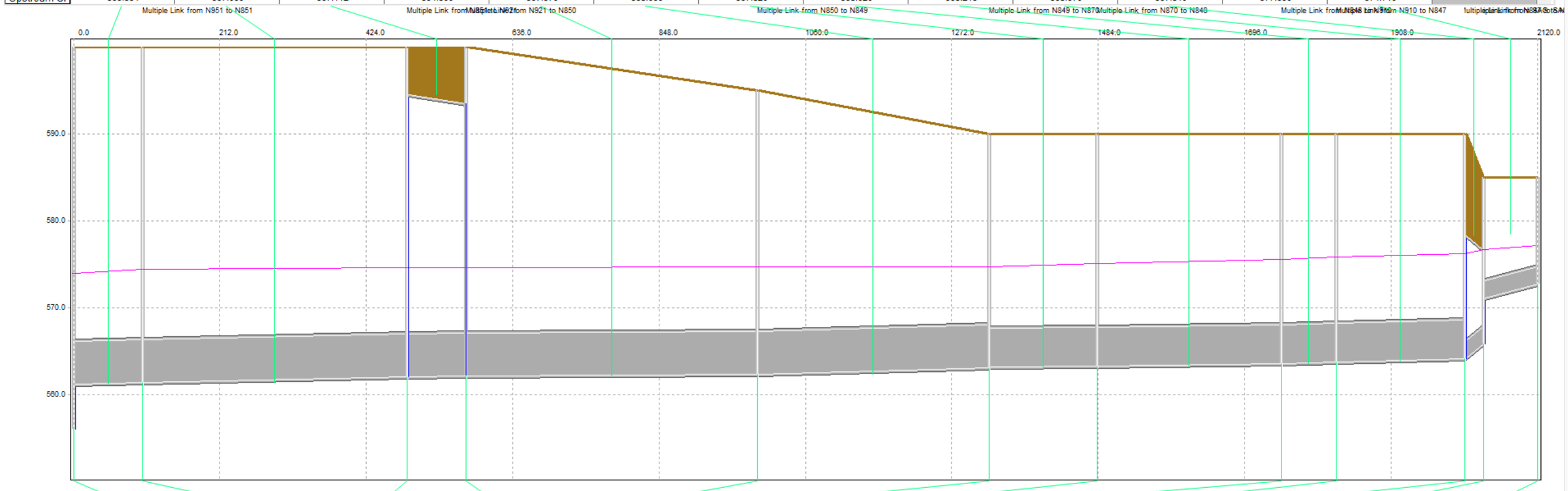
File View Window

Base Scenario | 100-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	L960	n851 ss	n921 ss	n921 ol	n850 ss	n849 ss	n870 ss	n848 ss	n910 ss	n847 ss	n868 ss	n868 ol1	n867 ss	867 weir
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Diameter (He	5.000	5.000	5.000	1.000	5.000	5.000	4.500	4.500	4.500	4.500	2.000	1.000	2.000	
Downstream	561.170	561.354	562.060	594.560	562.112	562.370	563.210	563.320	563.520	563.715	564.270	578.270	571.140	
Upstream Inv	561.354	562.060	562.112	593.500	562.370	563.060	563.320	563.520	563.715	564.170	565.840	576.690	572.710	
Length	100.000	383.000	86.000	86.000	422.000	335.000	157.000	266.000	80.000	186.000	27.000	26.000	78.000	
Upstream Cr	566.354	567.060	567.112	594.500	567.370	568.060	567.820	568.020	568.215	568.670	567.840	577.690	574.710	



	WET WELL	N951	N851	N921	N850	N849	N870	N848	N910	N847	SAG	N867
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Max Water El	573.987	574.412	574.641	574.657	574.677	574.690	575.092	575.554	575.875	576.183	576.661	577.198

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
100-YR 1 HR EVENT
Median Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

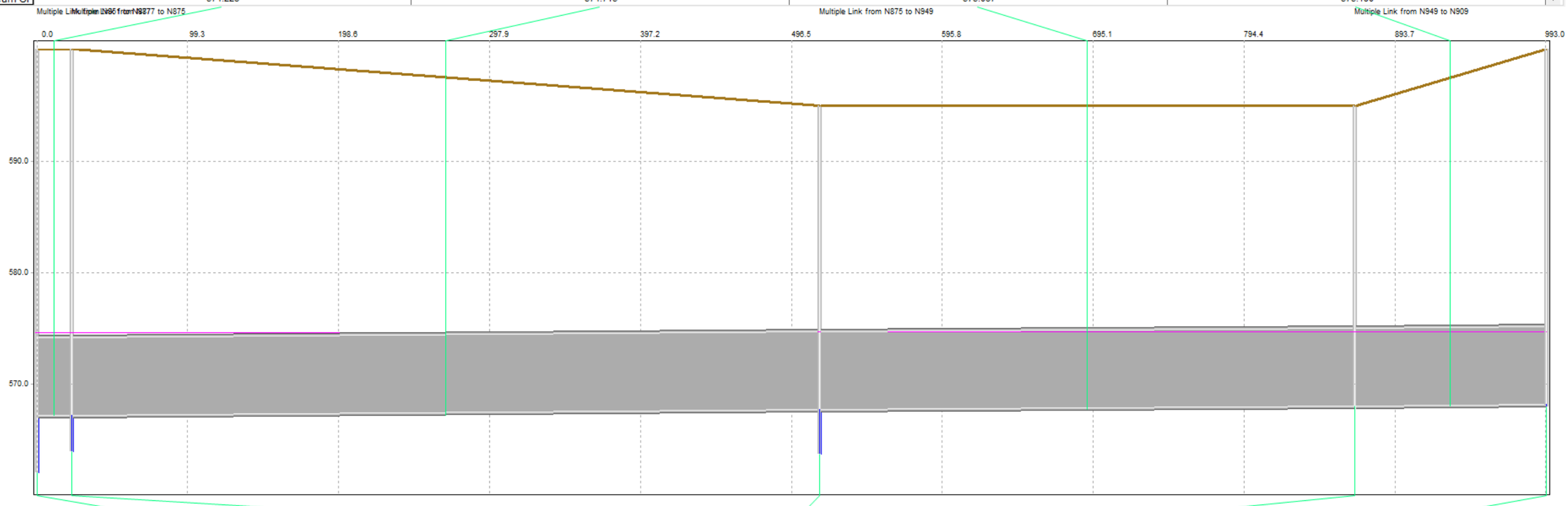
File View Window

Base Scenario | 100-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	n877 ss	median ss	n849 ss2	n909 ss2
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Diameter (He	7.000	7.000	7.000	7.000
Downstream	567.200	567.223	567.715	568.070
Upstream Inv	567.223	567.715	568.067	568.190
Length	23.000	492.000	352.000	126.000
Upstream Cr	574.223	574.715	575.067	575.190



	N851	N877	N875	N949	N909
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Max Water El	574.641	574.655	574.676	574.685	574.686

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
100 YR 1 HR EVENT
South ROW Storage Pipe

xpswmm 2014 - [Dynamic Long Section]

File View Window

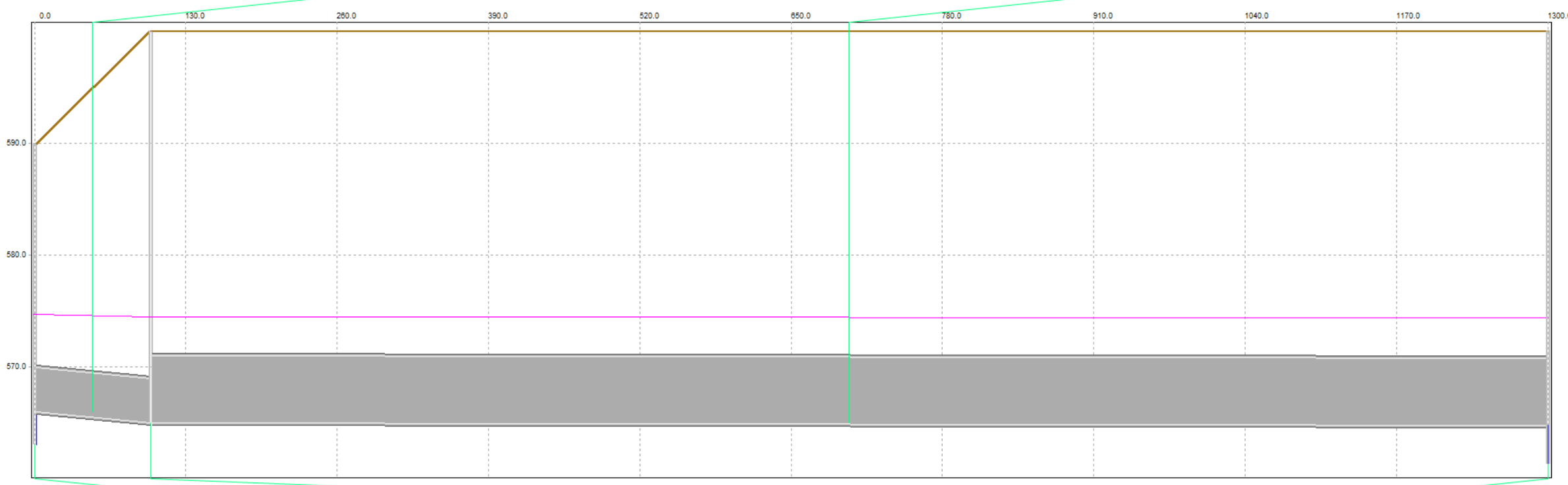
Base Scenario | 100-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	L959	L961
Storm	100-1 B75	100-1 B75
Diameter (He	4.000	6.000
Downstream	565.020	564.820
Upstream Inv	566.000	565.020
Length	100.000	1200.000
Upstream Cr	570.000	571.020

Conduit L961 from N950 to N951



	N849	N950	N951
Storm	100-1 B75	100-1 B75	100-1 B75
Max Water El	574.690	574.515	574.412

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

PROPOSED CONDITIONS
Alt 1

DYNAMIC RESULTS
100-YR 1 HR EVENT
54" Outfall Storm Sewer HGL

xpswmm 2014 - [Dynamic Long Section]

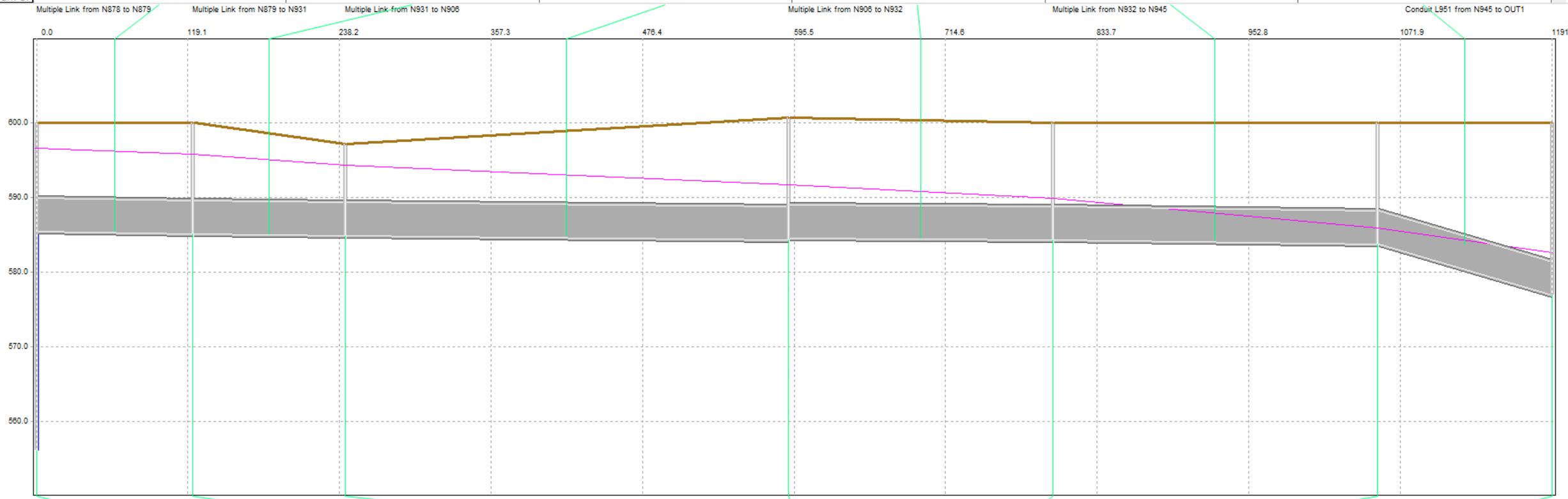
File View Window

Base Scenario | 100-1 B75 | Active Subcatchments | Close

Finalist Alternative A
Day [0]

LINK DATA

	n878 ss	n879ss2	n879 ss	n906 ss2	n906 ss	L951
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Diameter (He	4.500	4.500	4.500	4.500	4.500	4.500
Downstream	585.150	584.860	584.350	584.350	583.720	576.980
Upstream Inv	585.470	585.150	584.860	584.541	584.350	583.720
Length	123.000	120.000	348.000	208.000	255.000	137.000
Upstream Cr	589.970	589.650	589.360	589.041	588.850	588.220

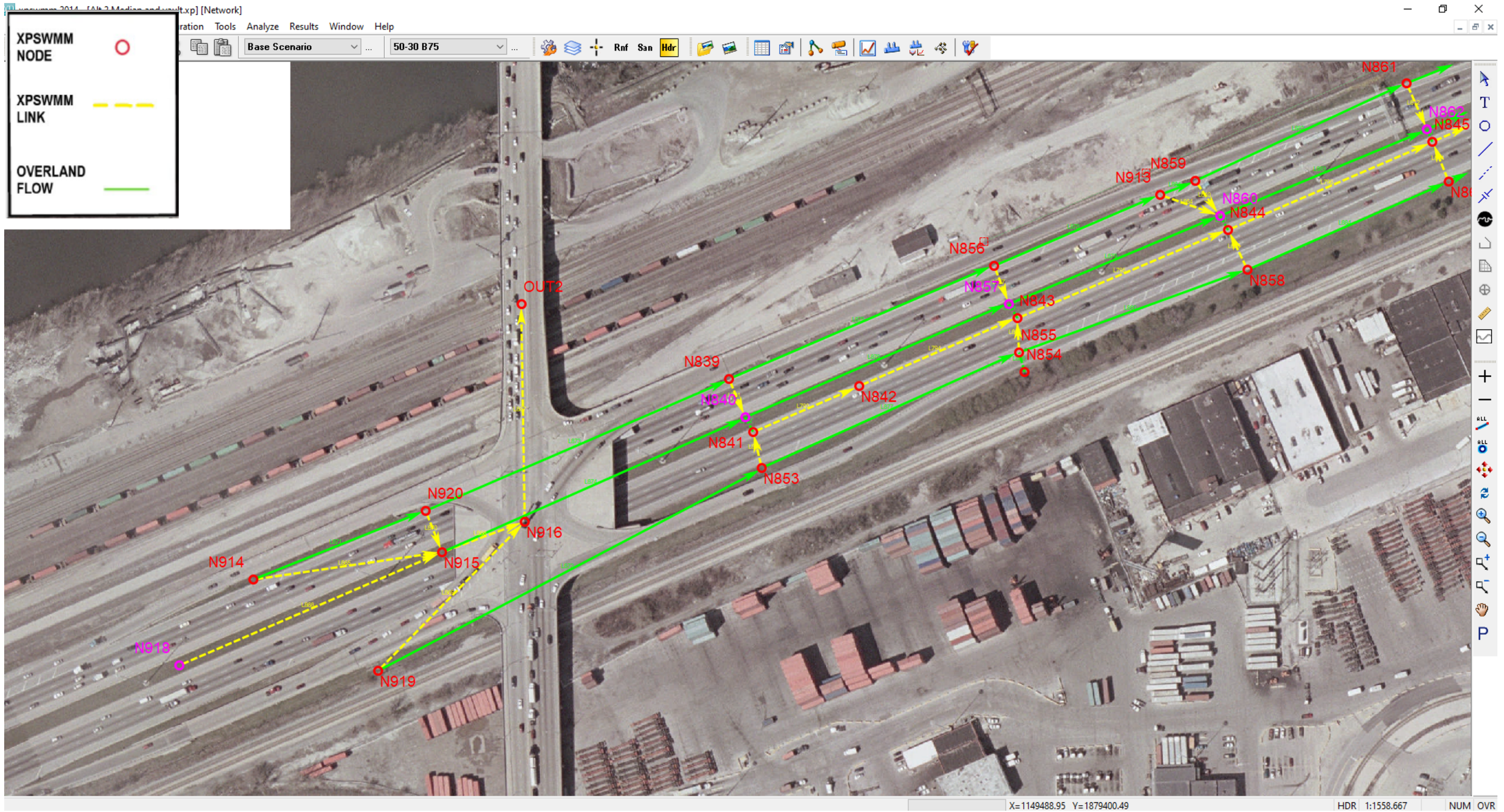


	N878	N879	N931	N906	N932	N945	OUT1
Storm	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75	100-1 B75
Max Water El	596.527	595.800	594.258	591.679	589.819	585.918	582.570

Hydrologic Parameters | Hydro | Ponding | RESULTS | output

B75 PROPOSED ALTERNATIVE 2

PROPOSED CONDITIONS ALT 2 SCHEMATIC



xpswmm 2014 - [Alt 2 Median and vault.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario | 50-30 B75 | Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

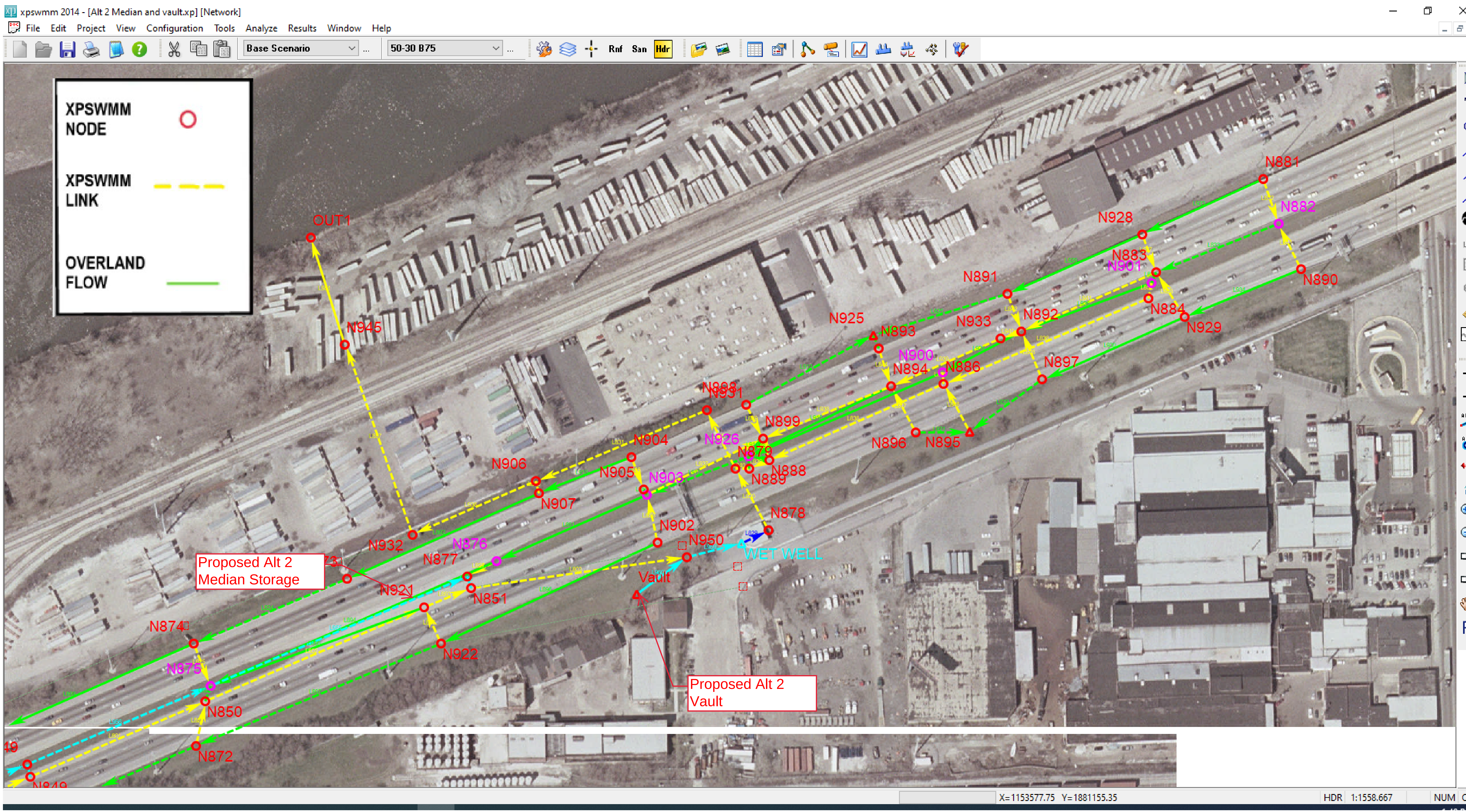
N867 LOW EOP

SAG

Proposed Alt 2 Median Storage

N874 N875 N850 N872 N908 N949 N909 N849 N870 N871 N923 N867 N911 N916 N848 N924 N864 N847 N865 N846 N869 N861 N862 N845 N866 N859 N915 N860 N844 N863 N858

X=1151595.59 Y=1880190.65 HDR 1:1558.667 NUM OV



xpswmm 2014 - [Alt 2 Median and vault.xp] [Network]
File Edit Project View Configuration Tools Analyze Results Window Help
Base Scenario
50-30 B75
XPSWMM NODE
XPSWMM LINK
OVERLAND FLOW
OUT1
N945
N881
N882
N928
N883
N901
N890
N891
N884
N929
N925
N893
N933
N892
N900
N894
N886
N897
N898
N931
N899
N926
N896
N895
N904
N879
N906
N905
N903
N888
N889
N907
N878
N902
N932
N950
N876
WET WELL
N877
Proposed Alt 2 Median Storage
N921
Vault
N851
N874
N922
N875
Proposed Alt 2 Vault
N850
N872
X=1153577.75 Y=1881155.35
HDR 1:1558.667
NUM

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L875	50-30 B75	1.000	588.610	592.800	500.000	593.800	N856	N839	589.610
n839 ss	50-30 B75	1.500	583.460	587.600	77.000	589.100	N840	N839	584.960
L876	50-30 B75	2.000	587.460	591.410	500.000	593.410	N857	N840	589.460
n840 ss	50-30 B75	1.500	583.010	583.210	24.000	584.710	N841	N840	584.510
n840 ol1	50-30 B75	1.000	593.210	591.410	24.000	592.410	N841	N840	594.210
n841 ss	50-30 B75	2.000	581.880	582.710	200.000	584.710	N842	N841	583.880
n842 ss	50-30 B75	3.000	580.610	581.130	298.000	584.130	N843	N842	583.610
n843 ss	50-30 B75	3.000	576.790	577.660	398.000	580.660	N844	N843	579.790
n844 ss	50-30 B75	3.000	573.340	573.940	386.000	576.940	N845	N844	576.340
n845 ss	50-30 B75	3.500	565.530	565.790	414.000	569.290	N846	N845	569.030
n846 ss	50-30 B75	4.000	564.270	565.330	260.000	569.330	N847	N846	568.270
n847 ss	50-30 B75	4.500	563.715	564.170	186.000	568.670	N910	N847	568.215
n848 ss	50-30 B75	4.500	563.320	563.520	266.000	568.020	N870	N848	567.820
n849 ss	50-30 B75	5.000	562.370	563.060	335.000	568.060	N850	N849	567.370
n849ss2	50-30 B75	7.000	568.067	568.087	20.000	575.087	N949	N849	575.067
n850 ss	50-30 B75	5.000	562.112	562.370	422.000	567.370	N921	N850	567.112
n851 ss	50-30 B75	5.000	561.354	562.060	383.000	567.060	N950	N851	566.354
n851 ss2	50-30 B75	3.000	566.803	567.188	385.000	570.188	N947	N851	569.803
Low Flow	50-30 B75						N878	WET WELL	
Lead	50-30 B75						N878	WET WELL	
Lag 1	50-30 B75						N878	WET WELL	
Lag 2	50-30 B75						N878	WET WELL	
L877	50-30 B75	1.000	588.870	592.500	480.000	593.500	N855	N853	589.870
n853 ss	50-30 B75	1.500	583.010	584.440	65.000	585.940	N841	N853	584.510
n854 ss	50-30 B75	1.250	581.220	583.010	36.000	584.260	N855	N854	582.470
n854 ol1	50-30 B75	1.000	588.870	586.260	36.000	587.260	N855	N854	589.870
L880	50-30 B75	1.000	587.000	588.870	418.000	589.870	N858	N855	588.000
n855 ss	50-30 B75	1.250	578.260	579.470	61.000	580.720	N843	N855	579.510
L878	50-30 B75	1.000	586.320	588.610	312.000	589.610	N913	N856	587.320
n856 ss	50-30 B75	1.250	580.760	585.110	75.000	586.360	N857	N856	582.010
L879	50-30 B75	2.000	583.860	587.460	395.000	589.460	N860	N857	585.860
n857 ss	50-30 B75	1.500	579.010	579.410	23.000	580.910	N843	N857	580.510
n857 ol1	50-30 B75	1.000	589.160	587.460	23.000	588.460	N843	N857	590.160
L884	50-30 B75	1.000	585.940	587.000	380.000	588.000	N863	N858	586.940
n858 ss	50-30 B75	1.500	574.340	576.000	85.000	577.500	N844	N858	575.840
L882	50-30 B75	1.000	582.260	585.940	404.000	586.940	N861	N859	583.260

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n859 ss	50-30 B75	1.000	578.260	578.440	76.000	579.440	N860	N859	579.260
L883	50-30 B75	2.000	581.420	583.860	390.000	585.860	N862	N860	583.420
n860 ss	50-30 B75	1.750	574.090	574.610	25.000	576.360	N844	N860	575.840
n860 ol1	50-30 B75	1.000	586.090	583.860	25.000	584.860	N844	N860	587.090
L885	50-30 B75	1.000	579.030	582.260	415.000	583.260	N864	N861	580.030
n861 ss	50-30 B75	1.250	575.370	578.060	88.000	579.310	N862	N861	576.620
L886	50-30 B75	2.000	578.520	581.420	420.000	583.420	N865	N862	580.520
n862 ss	50-30 B75	1.500	566.600	567.320	23.000	568.820	N845	N862	568.100
n862 ol1	50-30 B75	1.000	583.140	581.420	22.000	582.420	N845	N862	584.140
L887	50-30 B75	1.000	581.520	585.940	425.000	586.940	N866	N863	582.520
n863 ss	50-30 B75	1.250	567.000	568.950	75.000	570.200	N845	N863	568.250
L888	50-30 B75	1.000	577.310	579.030	264.000	580.030	N867	N864	578.310
n864 ss	50-30 B75	1.000	572.370	575.220	80.000	576.220	N865	N864	573.370
L889	50-30 B75	2.000	576.690	578.520	264.000	580.520	SAG	N865	578.690
n865 ss	50-30 B75	1.500	565.800	566.620	22.000	568.120	N846	N865	567.300
n865 ol1	50-30 B75	1.000	579.680	578.520	22.000	579.520	N846	N865	580.680
L890	50-30 B75	1.000	577.400	581.520	260.000	582.520	N869	N866	578.400
n866 ss	50-30 B75	1.500	565.430	567.420	69.000	568.920	N846	N866	566.930
n867 ss	50-30 B75	2.000	571.140	572.710	78.000	574.710	SAG	N867	573.140
867 weir	50-30 B75						SAG	N867	
n868 ss	50-30 B75	2.500	564.270	565.840	27.000	568.340	N847	SAG	566.770
n868 ol1	50-30 B75	1.000	578.270	576.690	26.000	577.690	N847	SAG	579.270
n869 ss	50-30 B75	1.500	564.270	566.420	64.000	567.920	N847	N869	565.770
n870 ss	50-30 B75	4.500	563.210	563.320	157.000	567.820	N849	N870	567.710
n871 ss	50-30 B75	1.000	563.900	576.130	330.000	577.130	N870	N871	564.900
401.1	50-30 B75	1.000	578.890	582.640	320.000	583.640	N924	N871	579.890
n872 ss	50-30 B75	1.000	562.640	581.560	82.000	582.560	N850	N872	563.640
396.1	50-30 B75	1.000	582.640	587.790	450.000	588.790	N871	N872	583.640
n873 ss	50-30 B75	1.000	583.010	587.040	296.000	588.040	N874	N873	584.010
n873 ol	50-30 B75	1.000	587.790	591.870	287.000	592.870	N874	N873	588.790
L899	50-30 B75	1.000	582.650	587.790	475.000	588.790	N908	N874	583.650
n874 ss	50-30 B75	1.250	579.210	582.980	71.000	584.230	N875	N874	580.460
n875 ss	50-30 B75	2.000	562.640	563.710	28.000	565.710	N850	N875	564.640
n875 ol1	50-30 B75	1.000	588.640	585.210	27.000	586.210	N850	N875	589.640
median ss	50-30 B75	7.000	567.223	567.715	492.000	574.715	N877	N875	574.223
L894	50-30 B75	1.000	585.210	594.500	545.000	595.500	N875	N876	586.210

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n876 ss	50-30 B75	1.000	590.370	592.060	57.000	593.060	N877	N876	591.370
n877 ss	50-30 B75	7.000	567.200	567.223	23.000	574.223	N851	N877	574.200
n878 ss	50-30 B75	4.500	585.150	585.470	123.000	589.970	N879	N878	589.650
n879ss2	50-30 B75	4.500	584.860	585.150	120.000	589.650	N931	N879	589.360
L933	50-30 B75	1.000	609.380	611.580	230.000	612.580	N928	N881	610.380
n881 ss	50-30 B75	1.000	606.530	606.480	87.000	607.480	N882	N881	607.530
n882 ss	50-30 B75	1.000	603.090	606.080	230.000	607.080	N883	N882	604.090
n882 ol	50-30 B75	3.000	608.510	610.780	230.000	613.780	N883	N882	611.510
n883 ol	50-30 B75	3.000	606.610	608.510	17.000	611.510	N901	N883	609.610
n901 ss2	50-30 B75	1.500	600.640	602.960	258.000	604.460	N892	N883	602.140
n885 ss	50-30 B75	2.000	588.210	590.190	390.000	592.190	N886	N884	590.210
n887 ss	50-30 B75	2.000	586.840	588.170	325.000	590.170	N888	N886	588.840
L915	50-30 B75	1.000	597.740	601.200	35.000	602.200	N926	N888	598.740
n888 ss	50-30 B75	3.000	586.610	586.840	38.000	589.840	N889	N888	589.610
n889 ss	50-30 B75	3.000	586.000	586.510	23.000	589.510	N879	N889	589.000
L934	50-30 B75	1.000	609.740	611.910	220.000	612.910	N929	N890	610.740
n890 ss	50-30 B75	1.000	605.980	606.860	88.000	607.860	N882	N890	606.980
n891 ss	50-30 B75	1.000	600.840	601.180	78.000	602.180	N892	N891	601.840
n891 weir	50-30 B75						N925	N891	
L924	50-30 B75	3.000	602.090	605.190	150.000	608.190	N900	N892	605.090
n892 ss2	50-30 B75	2.000	599.390	599.340	21.000	601.340	N933	N892	601.390
n893 ss	50-30 B75	1.000	589.180	598.500	78.000	599.500	N894	N893	590.180
L918	50-30 B75	2.000	597.740	602.680	280.000	604.680	N926	N894	599.740
n894 ss2	50-30 B75	4.500	586.920	587.380	246.000	591.880	N899	N894	591.420
n895 ss	50-30 B75	1.250	589.510	589.940	96.000	591.190	N886	N895	590.760
n896 ss	50-30 B75	1.000	589.910	598.640	87.000	599.640	N894	N896	590.910
N896 weir	50-30 B75						N895	N896	
n897 ss	50-30 B75	1.000	600.590	601.690	84.000	602.690	N892	N897	601.590
N897 weir	50-30 B75						N895	N897	
n898 ss	50-30 B75	1.000	590.720	595.400	75.000	596.400	N899	N898	591.720
n898 weir	50-30 B75						N925	N898	
L914	50-30 B75	1.000	597.740	601.160	40.000	602.160	N926	N899	598.740
n899 ss	50-30 B75	4.500	586.880	586.910	28.000	591.410	N888	N899	591.380
L923	50-30 B75	3.000	597.740	602.090	372.000	605.090	N926	N900	600.740
n900 ss	50-30 B75	1.500	589.460	589.380	23.000	590.880	N886	N900	590.960
L926	50-30 B75	3.000	605.440	606.610	242.000	609.610	N892	N901	608.440

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n901 ss	50-30 B75	2.000	590.620	590.510	28.000	592.510	N884	N901	592.620
L896	50-30 B75	3.000	591.450	597.980	420.000	600.980	N922	N902	594.450
n902 ss	50-30 B75	1.000	592.100	592.980	84.000	593.980	N903	N902	593.100
L891	50-30 B75	3.000	592.060	596.900	293.000	599.900	N876	N903	595.060
n903 ss3	50-30 B75	1.500	590.070	591.650	222.000	593.150	N899	N903	591.570
L910	50-30 B75	1.000	595.290	598.030	207.000	599.030	N907	N904	596.290
n904 ss	50-30 B75	1.000	593.040	593.130	61.000	594.130	N905	N904	594.040
n905 ss	50-30 B75	1.000	592.000	593.040	11.000	594.040	N903	N905	593.000
n905 ol1	50-30 B75	1.000	596.900	598.740	11.000	599.740	N903	N905	597.900
n906 ss2	50-30 B75	4.500	584.350	584.541	208.000	589.041	N932	N906	588.850
L892	50-30 B75	1.000	591.870	595.490	335.000	596.490	N873	N907	592.870
n907 ss	50-30 B75	1.000	592.000	592.840	30.000	593.840	N906	N907	593.000
L906	50-30 B75	1.000	578.020	582.650	475.000	583.650	N923	N908	579.020
n908 ss	50-30 B75	1.000	576.770	578.170	90.000	579.170	N909	N908	577.770
L905	50-30 B75	2.000	577.310	580.620	370.000	582.620	N911	N909	579.310
n909 ss	50-30 B75	1.000	576.000	576.770	37.000	577.770	N870	N909	577.000
n909 ol1	50-30 B75	1.000	583.000	580.620	35.000	581.620	N870	N909	584.000
n909 ss2	50-30 B75	7.000	568.070	568.190	126.000	575.190	N949	N909	575.070
n910 ss	50-30 B75	4.500	563.520	563.715	80.000	568.215	N848	N910	568.020
L908	50-30 B75	2.000	576.690	577.310	191.000	579.310	SAG	N911	578.690
n911 ss	50-30 B75	1.000	572.000	572.660	21.000	573.660	N910	N911	573.000
n911 ol1	50-30 B75	1.000	578.500	577.310	22.000	578.310	N910	N911	579.500
L881	50-30 B75	1.000	585.940	586.320	66.000	587.320	N859	N913	586.940
n913 ss	50-30 B75	1.000	578.260	582.960	125.000	583.960	N860	N913	579.260
L871	50-30 B75	1.000	597.410	600.240	325.000	601.240	N920	N914	598.410
n914 ss	50-30 B75	3.000	583.350	584.390	335.000	587.390	N915	N914	586.350
L874	50-30 B75	2.000	591.410	596.000	605.000	598.000	N840	N915	593.410
n915 ss	50-30 B75	3.000	582.958	583.350	147.000	586.350	N916	N915	585.958
n918 ss	50-30 B75	6.000	578.500	580.000	300.000	586.000	OUT2	N916	584.500
n918 ol	50-30 B75	2.000	596.325	600.980	629.000	602.980	N915	N918	598.325
918 ss	50-30 B75	1.000	591.901	596.430	629.000	597.430	N915	N918	592.901
L872	50-30 B75	1.000	590.990	597.940	750.000	598.940	N853	N919	591.990
n919 ss	50-30 B75	3.000	582.958	583.940	388.000	586.940	N916	N919	585.958
L873	50-30 B75	1.000	592.800	597.410	575.000	598.410	N839	N920	593.800
n920 ss	50-30 B75	1.000	590.000	592.510	80.000	593.510	N915	N920	591.000
L898	50-30 B75	1.000	585.210	594.500	422.000	595.500	N875	N921	586.210

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n921 ss	50-30 B75	5.000	562.060	562.112	86.000	567.112	N851	N921	567.060
n921 ol	50-30 B75	1.000	594.560	593.500	86.000	594.500	N851	N921	595.560
L952	50-30 B75	3.000	561.462	564.170	500.000	567.170	N946	N922	564.462
n922 ss	50-30 B75	1.000	584.170	589.150	127.000	590.150	N921	N922	585.170
392.1	50-30 B75	1.000	587.790	592.500	385.000	593.500	N872	N922	588.790
L909	50-30 B75	1.000	577.310	578.020	100.000	579.020	N867	N923	578.310
n923 ss	50-30 B75	1.000	573.000	575.010	127.000	576.010	N910	N923	574.000
n924 ss	50-30 B75	1.000	572.000	573.460	56.000	574.460	N910	N924	573.000
404.1	50-30 B75	1.000	577.400	578.890	210.000	579.890	N869	N924	578.400
n893 ol	50-30 B75	1.000	603.440	597.000	50.000	598.000	N893	N925	604.440
n926 ss	50-30 B75	1.500	588.110	588.090	22.000	589.590	N889	N926	589.610
n926 ol1	50-30 B75	1.000	600.910	597.740	22.000	598.740	N889	N926	601.910
n903 ol	50-30 B75	2.000	596.900	597.740	190.000	599.740	N903	N926	598.900
L929	50-30 B75	1.000	606.300	609.380	260.000	610.380	N891	N928	607.300
n928 ss	50-30 B75	1.000	603.950	605.340	80.000	606.340	N883	N928	604.950
L930	50-30 B75	1.000	606.490	609.740	275.000	610.740	N897	N929	607.490
n929 ss	50-30 B75	1.000	603.310	604.690	87.000	605.690	N883	N929	604.310
n879 ss	50-30 B75	4.500	584.350	584.860	348.000	589.360	N906	N931	588.850
n906 ss	50-30 B75	4.500	583.720	584.350	255.000	588.850	N945	N932	588.220
n933 ss	50-30 B75	4.500	587.380	587.390	230.000	591.890	N894	N933	591.880
n931 ss	50-30 B75	1.500	589.366	589.974	320.000	591.474	N101	N100	590.866
n932 ss	50-30 B75	1.500	588.477	589.366	468.000	590.866	N102	N101	589.977
n933 ss.1	50-30 B75	2.000	587.688	588.477	415.000	590.477	N103	N102	589.688
n934 ss	50-30 B75	3.000	587.175	587.688	270.000	590.688	N104	N103	590.175
n935 ss	50-30 B75	3.000	587.033	587.175	75.000	590.175	N105	N104	590.033
n936 ss	50-30 B75	3.000	586.083	587.033	500.000	590.033	N106	N105	589.083
n937 ss	50-30 B75	3.000	585.203	586.083	463.000	589.083	N107	N106	588.203
n938 ss	50-30 B75	3.000	584.646	585.203	293.000	588.203	N108	N107	587.646
n939 ss	50-30 B75	3.000	584.350	584.646	156.040	587.646	N932	N108	587.350
L951	50-30 B75	4.500	576.980	583.720	137.000	588.220	OUT1	N945	581.480
n947 ss2	50-30 B75	3.000	561.170	561.270	100.000	564.270	WET WELL	N947	564.170
n849 ss2	50-30 B75	7.000	567.715	568.067	352.000	575.067	N875	N949	574.715
New Pipe1	50-30 B75	5.000	561.170	561.354	100.000	566.354	WET WELL	N950	566.170
L960	50-30 B75	5.000	562.000	562.681	75.000	567.681	N950	Vault	567.000

PROPOSED ALT 2 CONDITIONS Node - N867
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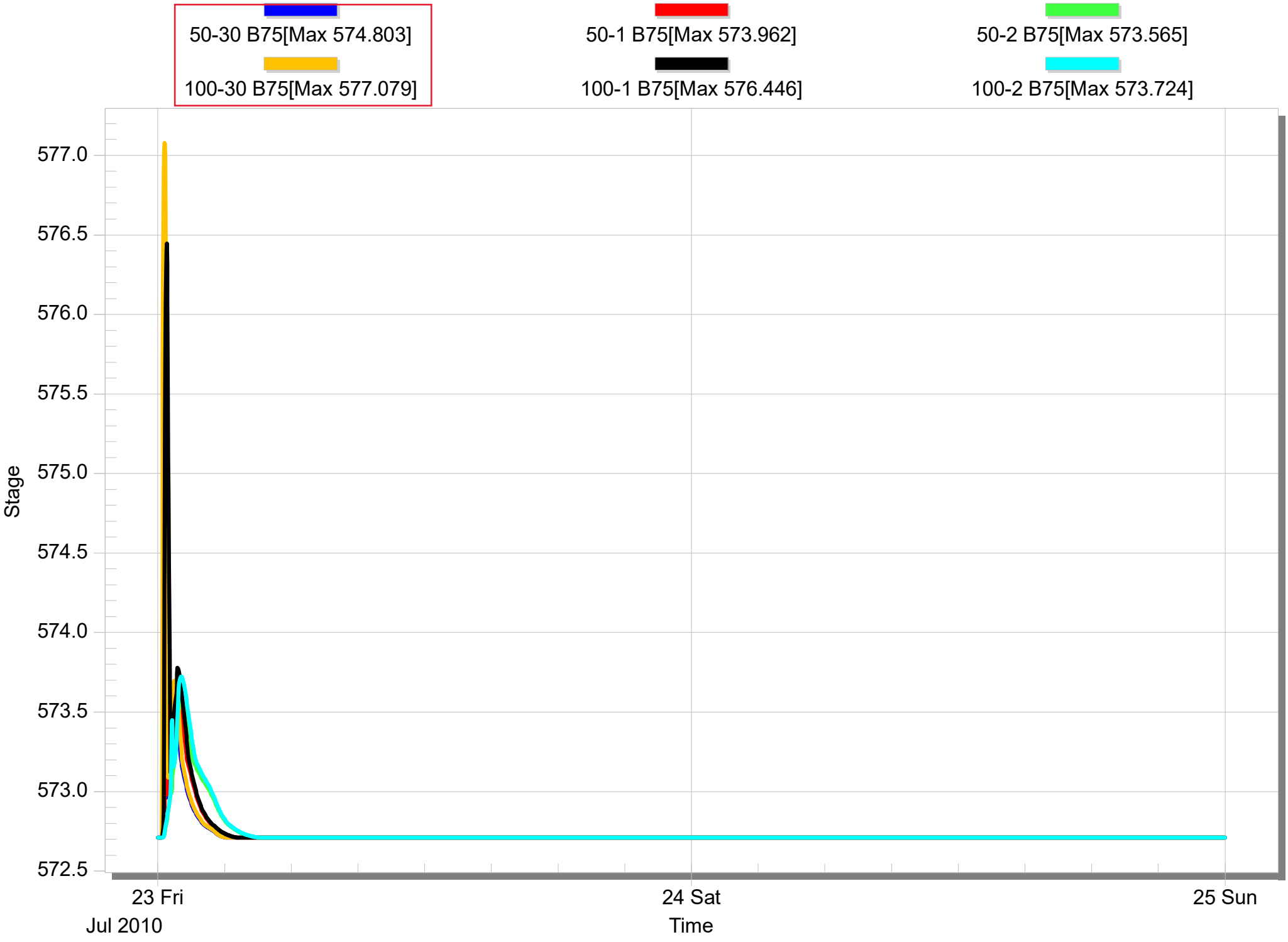
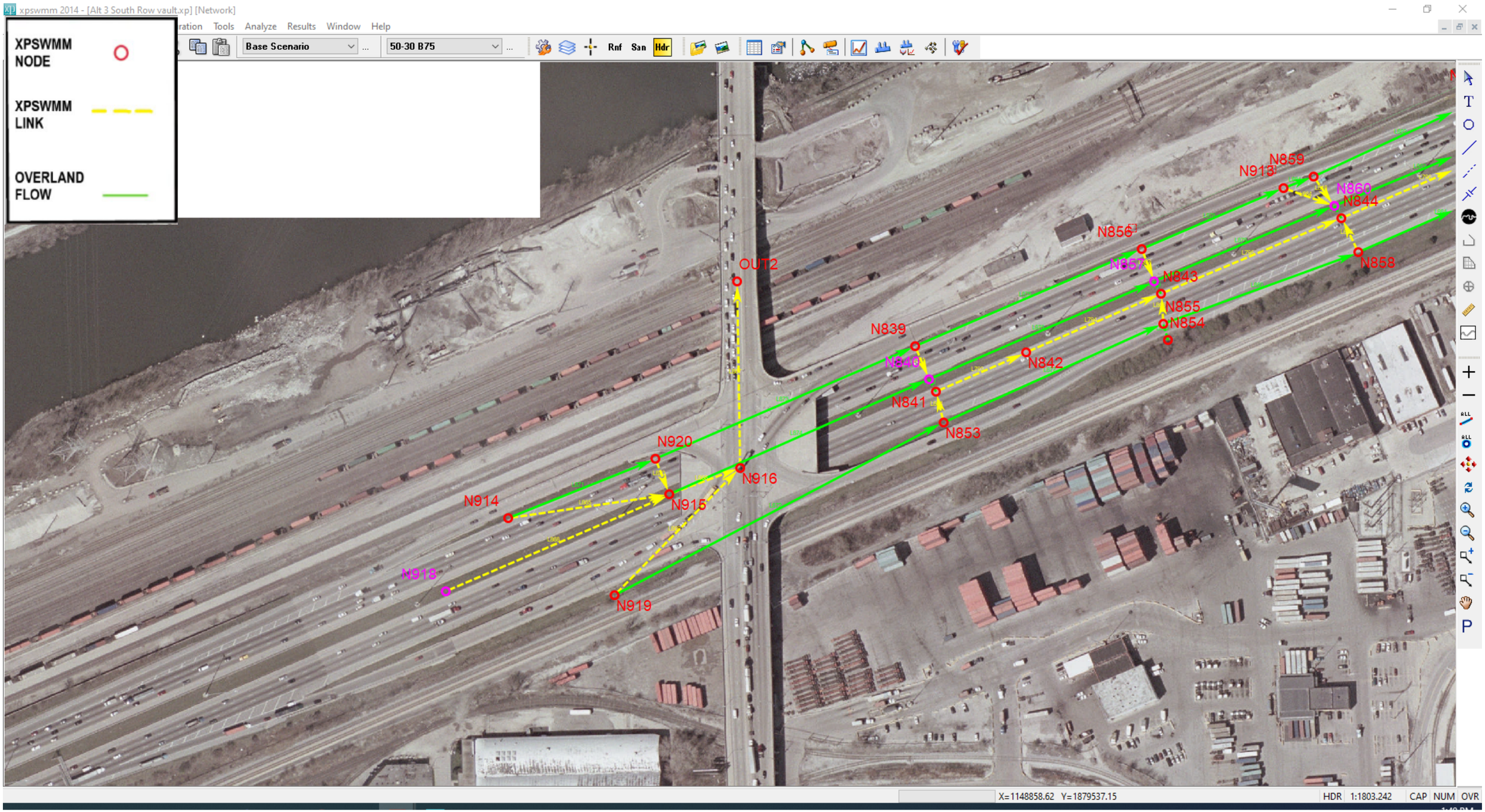


B75 PROPOSED ALTERNATIVE 3

PROPOSED CONDITIONS ALT 3 SCHEMATIC



xpswmm 2014 - [Alt 3 South Row vault.xp] [Network]

File Edit Project View Configuration Tools Analyze Results Window Help

Base Scenario | 50-30 B75 | Rnf San Hdr

XPSWMM NODE

XPSWMM LINK

OVERLAND FLOW

LOW EOP N867

PROPOSED ALT 3 ROW STORAGE

SAG

N873 N921 N874 N875 N850 N872 N908 N909 N870 N849 N950 N871 N923 N867 N911 N910 N848 N924 N864 N847 N865 N846 N869 N866 N861 N862 N845 N863 N859 N915 N860 N844 N858 N856 N857 N843 N855 N854 N842

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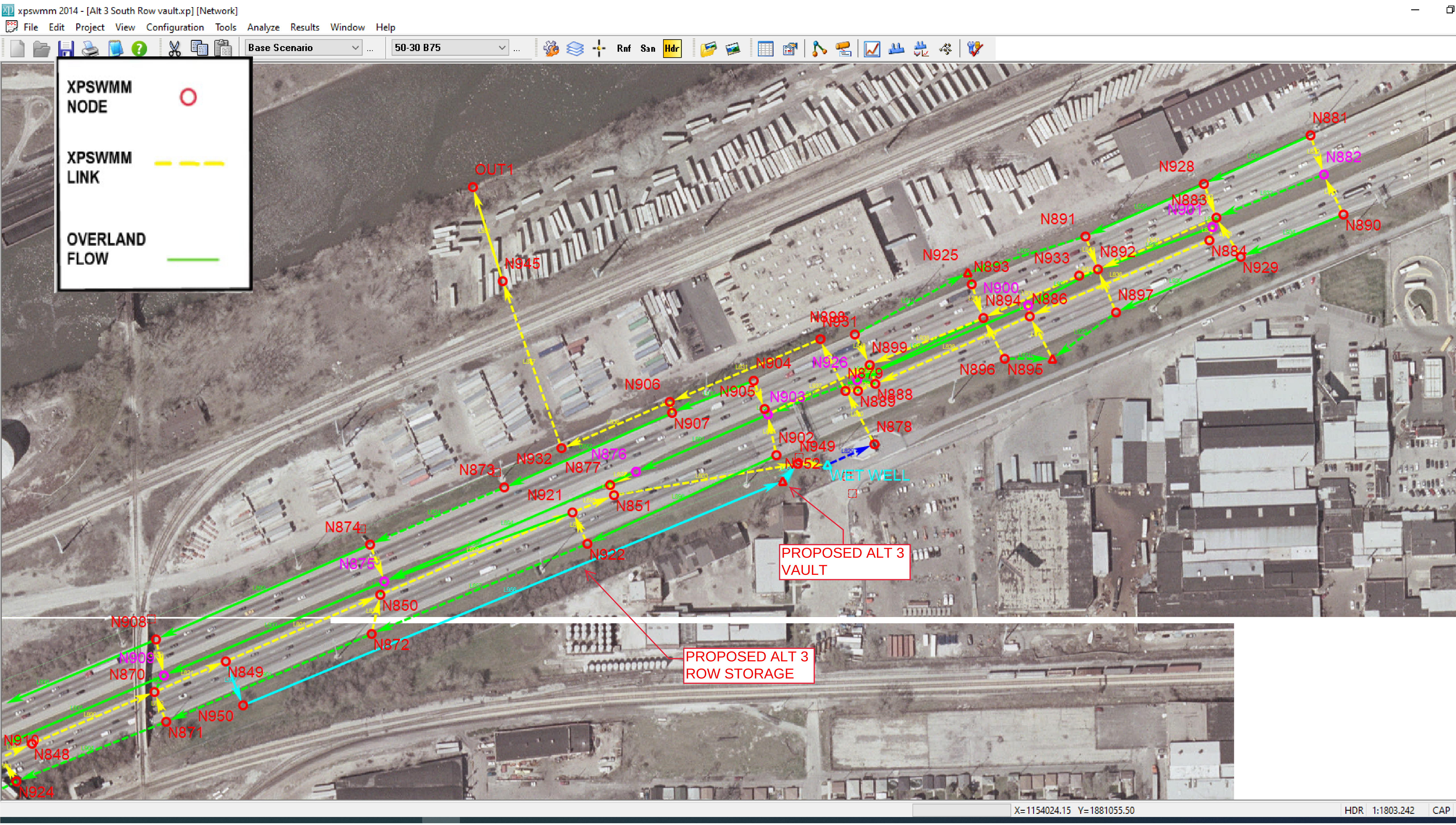
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OUT1
N945
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HDR 1:1803.242 CAP

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
L875	50-30 B75	1.000	588.610	592.800	500.000	593.800	N856	N839	589.610
n839 ss	50-30 B75	1.500	583.460	587.600	77.000	589.100	N840	N839	584.960
L876	50-30 B75	2.000	587.460	591.410	500.000	593.410	N857	N840	589.460
n840 ss	50-30 B75	1.500	583.010	583.210	24.000	584.710	N841	N840	584.510
n840 ol1	50-30 B75	1.000	593.210	591.410	24.000	592.410	N841	N840	594.210
n841 ss	50-30 B75	2.000	581.880	582.710	200.000	584.710	N842	N841	583.880
n842 ss	50-30 B75	3.000	580.610	581.130	298.000	584.130	N843	N842	583.610
n843 ss	50-30 B75	3.000	576.790	577.660	398.000	580.660	N844	N843	579.790
n844 ss	50-30 B75	3.000	573.340	573.940	386.000	576.940	N845	N844	576.340
n845 ss	50-30 B75	3.500	565.530	565.790	414.000	569.290	N846	N845	569.030
n846 ss	50-30 B75	4.000	564.270	565.330	260.000	569.330	N847	N846	568.270
n847 ss	50-30 B75	4.500	563.715	564.170	186.000	568.670	N910	N847	568.215
n848 ss	50-30 B75	4.500	563.320	563.520	266.000	568.020	N870	N848	567.820
L957	50-30 B75	4.000	565.020	566.000	100.000	570.000	N950	N849	569.020
n849 ss	50-30 B75	5.000	562.370	563.060	335.000	568.060	N850	N849	567.370
n850 ss	50-30 B75	5.000	562.112	562.370	422.000	567.370	N921	N850	567.112
n851 ss	50-30 B75	5.000	561.354	562.060	383.000	567.060	N949	N851	566.354
n851 ss2	50-30 B75	3.000	566.803	567.188	385.000	570.188	N947	N851	569.803
Low Flow	50-30 B75						N878	WET WELL	
Lead	50-30 B75						N878	WET WELL	
Lag 1	50-30 B75						N878	WET WELL	
Lag 2	50-30 B75						N878	WET WELL	
L877	50-30 B75	1.000	588.870	592.500	480.000	593.500	N855	N853	589.870
n853 ss	50-30 B75	1.500	583.010	584.440	65.000	585.940	N841	N853	584.510
n854 ss	50-30 B75	1.250	581.220	583.010	36.000	584.260	N855	N854	582.470
n854 ol1	50-30 B75	1.000	588.870	586.260	36.000	587.260	N855	N854	589.870
L880	50-30 B75	1.000	587.000	588.870	418.000	589.870	N858	N855	588.000
n855 ss	50-30 B75	1.250	578.260	579.470	61.000	580.720	N843	N855	579.510
L878	50-30 B75	1.000	586.320	588.610	312.000	589.610	N913	N856	587.320
n856 ss	50-30 B75	1.250	580.760	585.110	75.000	586.360	N857	N856	582.010
L879	50-30 B75	2.000	583.860	587.460	395.000	589.460	N860	N857	585.860
n857 ss	50-30 B75	1.500	579.010	579.410	23.000	580.910	N843	N857	580.510
n857 ol1	50-30 B75	1.000	589.160	587.460	23.000	588.460	N843	N857	590.160
L884	50-30 B75	1.000	585.940	587.000	380.000	588.000	N863	N858	586.940
n858 ss	50-30 B75	1.500	574.340	576.000	85.000	577.500	N844	N858	575.840
L882	50-30 B75	1.000	582.260	585.940	404.000	586.940	N861	N859	583.260

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n859 ss	50-30 B75	1.000	578.260	578.440	76.000	579.440	N860	N859	579.260
L883	50-30 B75	2.000	581.420	583.860	390.000	585.860	N862	N860	583.420
n860 ss	50-30 B75	1.750	574.090	574.610	25.000	576.360	N844	N860	575.840
n860 ol1	50-30 B75	1.000	586.090	583.860	25.000	584.860	N844	N860	587.090
L885	50-30 B75	1.000	579.030	582.260	415.000	583.260	N864	N861	580.030
n861 ss	50-30 B75	1.250	575.370	578.060	88.000	579.310	N862	N861	576.620
L886	50-30 B75	2.000	578.520	581.420	420.000	583.420	N865	N862	580.520
n862 ss	50-30 B75	1.500	566.600	567.320	23.000	568.820	N845	N862	568.100
n862 ol1	50-30 B75	1.000	583.140	581.420	22.000	582.420	N845	N862	584.140
L887	50-30 B75	1.000	581.520	585.940	425.000	586.940	N866	N863	582.520
n863 ss	50-30 B75	1.250	567.000	568.950	75.000	570.200	N845	N863	568.250
L888	50-30 B75	1.000	577.310	579.030	264.000	580.030	N867	N864	578.310
n864 ss	50-30 B75	1.000	572.370	575.220	80.000	576.220	N865	N864	573.370
L889	50-30 B75	2.000	576.690	578.520	264.000	580.520	SAG	N865	578.690
n865 ss	50-30 B75	1.500	565.800	566.620	22.000	568.120	N846	N865	567.300
n865 ol1	50-30 B75	1.000	579.680	578.520	22.000	579.520	N846	N865	580.680
L890	50-30 B75	1.000	577.400	581.520	260.000	582.520	N869	N866	578.400
n866 ss	50-30 B75	1.500	565.430	567.420	69.000	568.920	N846	N866	566.930
n867 ss	50-30 B75	2.500	571.140	572.710	78.000	575.210	SAG	N867	573.640
867 weir	50-30 B75						SAG	N867	
n868 ss	50-30 B75	2.500	564.270	565.840	27.000	568.340	N847	SAG	566.770
n868 ol1	50-30 B75	1.000	578.270	576.690	26.000	577.690	N847	SAG	579.270
n869 ss	50-30 B75	1.500	564.270	566.420	64.000	567.920	N847	N869	565.770
n870 ss	50-30 B75	4.500	563.210	563.320	157.000	567.820	N849	N870	567.710
n871 ss	50-30 B75	1.000	563.900	576.130	330.000	577.130	N870	N871	564.900
401.1	50-30 B75	1.000	578.890	582.640	320.000	583.640	N924	N871	579.890
n872 ss	50-30 B75	1.000	562.640	581.560	82.000	582.560	N850	N872	563.640
396.1	50-30 B75	1.000	582.640	587.790	450.000	588.790	N871	N872	583.640
n873 ss	50-30 B75	1.000	583.010	587.040	296.000	588.040	N874	N873	584.010
n873 ol	50-30 B75	1.000	587.790	591.870	287.000	592.870	N874	N873	588.790
L899	50-30 B75	1.000	582.650	587.790	475.000	588.790	N908	N874	583.650
n874 ss	50-30 B75	1.250	579.210	582.980	71.000	584.230	N875	N874	580.460
L900	50-30 B75	3.000	580.620	585.210	477.000	588.210	N909	N875	583.620
n875 ss	50-30 B75	2.000	562.640	563.710	28.000	565.710	N850	N875	564.640
n875 ol1	50-30 B75	1.000	588.640	585.210	27.000	586.210	N850	N875	589.640
L894	50-30 B75	1.000	585.210	594.500	545.000	595.500	N875	N876	586.210

LINK DATA

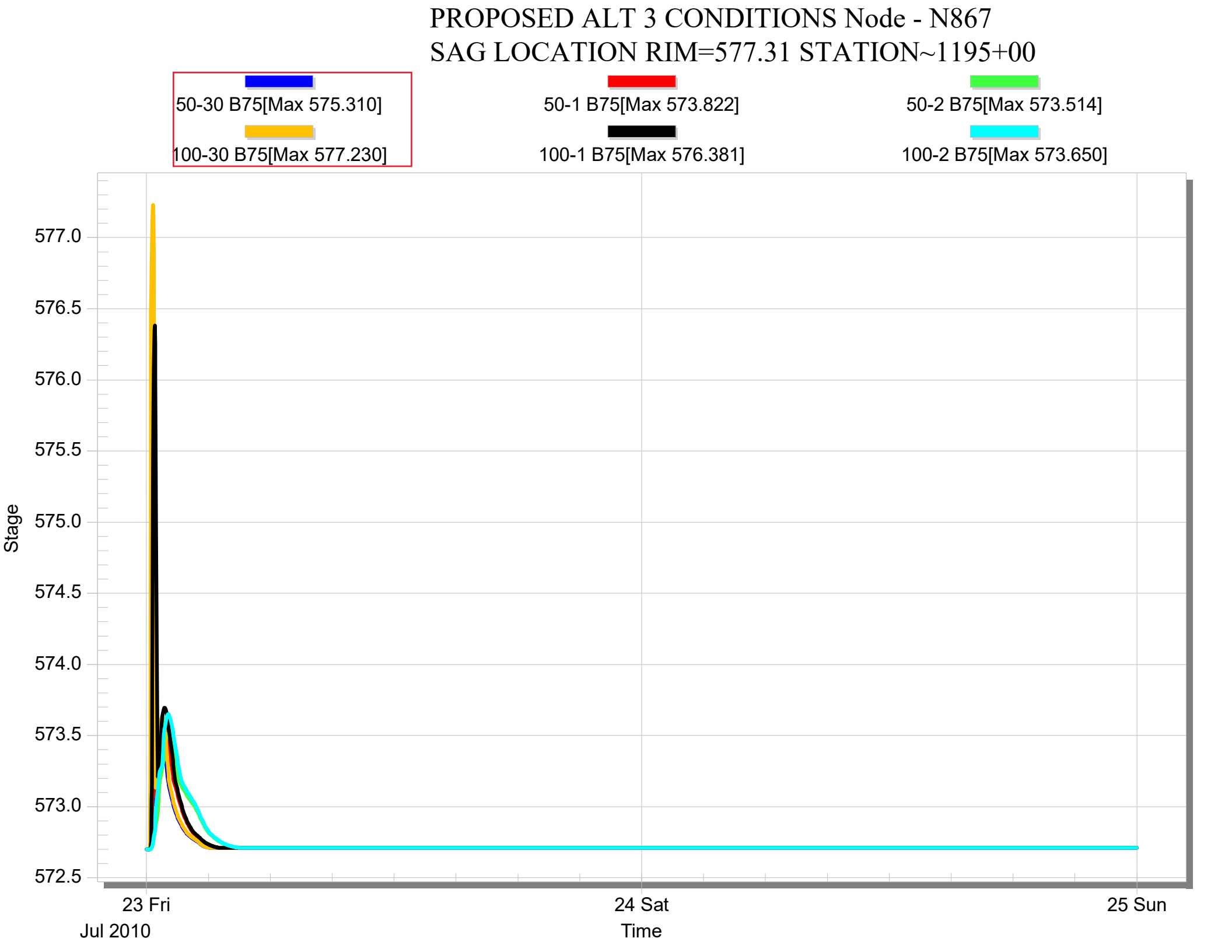
Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n876 ss	50-30 B75	1.000	590.370	592.060	57.000	593.060	N877	N876	591.370
n877 ss	50-30 B75	2.000	563.750	563.960	23.000	565.960	N851	N877	565.750
n878 ss	50-30 B75	4.500	585.150	585.470	123.000	589.970	N879	N878	589.650
n879ss2	50-30 B75	4.500	584.860	585.150	120.000	589.650	N931	N879	589.360
L933	50-30 B75	1.000	609.380	611.580	230.000	612.580	N928	N881	610.380
n881 ss	50-30 B75	1.000	606.530	606.480	87.000	607.480	N882	N881	607.530
n882 ss	50-30 B75	1.000	603.090	606.080	230.000	607.080	N883	N882	604.090
n882 ol	50-30 B75	3.000	608.510	610.780	230.000	613.780	N883	N882	611.510
n883 ol	50-30 B75	3.000	606.610	608.510	17.000	611.510	N901	N883	609.610
n901 ss2	50-30 B75	1.500	600.640	602.960	258.000	604.460	N892	N883	602.140
n885 ss	50-30 B75	2.000	588.210	590.190	390.000	592.190	N886	N884	590.210
n887 ss	50-30 B75	2.000	586.840	588.170	325.000	590.170	N888	N886	588.840
L915	50-30 B75	1.000	597.740	601.200	35.000	602.200	N926	N888	598.740
n888 ss	50-30 B75	3.000	586.610	586.840	38.000	589.840	N889	N888	589.610
n889 ss	50-30 B75	3.000	586.000	586.510	23.000	589.510	N879	N889	589.000
L934	50-30 B75	1.000	609.740	611.910	220.000	612.910	N929	N890	610.740
n890 ss	50-30 B75	1.000	605.980	606.860	88.000	607.860	N882	N890	606.980
n891 ss	50-30 B75	1.000	600.840	601.180	78.000	602.180	N892	N891	601.840
n891 weir	50-30 B75						N925	N891	
L924	50-30 B75	3.000	602.090	605.190	150.000	608.190	N900	N892	605.090
n892 ss2	50-30 B75	2.000	599.390	599.340	21.000	601.340	N933	N892	601.390
n893 ss	50-30 B75	1.000	589.180	598.500	78.000	599.500	N894	N893	590.180
L918	50-30 B75	2.000	597.740	602.680	280.000	604.680	N926	N894	599.740
n894 ss2	50-30 B75	4.500	586.920	587.380	246.000	591.880	N899	N894	591.420
n895 ss	50-30 B75	1.250	589.510	589.940	96.000	591.190	N886	N895	590.760
n896 ss	50-30 B75	1.000	589.910	598.640	87.000	599.640	N894	N896	590.910
N896 weir	50-30 B75						N895	N896	
n897 ss	50-30 B75	1.000	600.590	601.690	84.000	602.690	N892	N897	601.590
N897 weir	50-30 B75						N895	N897	
n898 ss	50-30 B75	1.000	590.720	595.400	75.000	596.400	N899	N898	591.720
n898 weir	50-30 B75						N925	N898	
L914	50-30 B75	1.000	597.740	601.160	40.000	602.160	N926	N899	598.740
n899 ss	50-30 B75	4.500	586.880	586.910	28.000	591.410	N888	N899	591.380
L923	50-30 B75	3.000	597.740	602.090	372.000	605.090	N926	N900	600.740
n900 ss	50-30 B75	1.500	589.460	589.380	23.000	590.880	N886	N900	590.960
L926	50-30 B75	3.000	605.440	606.610	242.000	609.610	N892	N901	608.440

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n901 ss	50-30 B75	2.000	590.620	590.510	28.000	592.510	N884	N901	592.620
L896	50-30 B75	3.000	591.450	597.980	420.000	600.980	N922	N902	594.450
n902 ss	50-30 B75	1.000	592.100	592.980	84.000	593.980	N903	N902	593.100
L891	50-30 B75	3.000	592.060	596.900	293.000	599.900	N876	N903	595.060
n903 ss3	50-30 B75	1.500	590.070	591.650	222.000	593.150	N899	N903	591.570
L910	50-30 B75	1.000	595.290	598.030	207.000	599.030	N907	N904	596.290
n904 ss	50-30 B75	1.000	593.040	593.130	61.000	594.130	N905	N904	594.040
n905 ss	50-30 B75	1.000	592.000	593.040	11.000	594.040	N903	N905	593.000
n905 ol1	50-30 B75	1.000	596.900	598.740	11.000	599.740	N903	N905	597.900
n906 ss2	50-30 B75	4.500	584.350	584.541	208.000	589.041	N932	N906	588.850
L892	50-30 B75	1.000	591.870	595.490	335.000	596.490	N873	N907	592.870
n907 ss	50-30 B75	1.000	592.000	592.840	30.000	593.840	N906	N907	593.000
L906	50-30 B75	1.000	578.020	582.650	475.000	583.650	N923	N908	579.020
n908 ss	50-30 B75	1.000	576.770	578.170	90.000	579.170	N909	N908	577.770
L905	50-30 B75	2.000	577.310	580.620	370.000	582.620	N911	N909	579.310
n909 ss	50-30 B75	1.000	576.000	576.770	37.000	577.770	N870	N909	577.000
n909 ol1	50-30 B75	1.000	583.000	580.620	35.000	581.620	N870	N909	584.000
n910 ss	50-30 B75	4.500	563.520	563.715	80.000	568.215	N848	N910	568.020
L908	50-30 B75	2.000	576.690	577.310	191.000	579.310	SAG	N911	578.690
n911 ss	50-30 B75	1.000	572.000	572.660	21.000	573.660	N910	N911	573.000
n911 ol1	50-30 B75	1.000	578.500	577.310	22.000	578.310	N910	N911	579.500
L881	50-30 B75	1.000	585.940	586.320	66.000	587.320	N859	N913	586.940
n913 ss	50-30 B75	1.000	578.260	582.960	125.000	583.960	N860	N913	579.260
L871	50-30 B75	1.000	597.410	600.240	325.000	601.240	N920	N914	598.410
n914 ss	50-30 B75	3.000	583.350	584.390	335.000	587.390	N915	N914	586.350
L874	50-30 B75	2.000	591.410	596.000	605.000	598.000	N840	N915	593.410
n915 ss	50-30 B75	3.000	582.958	583.350	147.000	586.350	N916	N915	585.958
n918 ss	50-30 B75	6.000	578.500	580.000	300.000	586.000	OUT2	N916	584.500
n918 ol	50-30 B75	2.000	596.325	600.980	629.000	602.980	N915	N918	598.325
918 ss	50-30 B75	1.000	591.901	596.430	629.000	597.430	N915	N918	592.901
L872	50-30 B75	1.000	590.990	597.940	750.000	598.940	N853	N919	591.990
n919 ss	50-30 B75	3.000	582.958	583.940	388.000	586.940	N916	N919	585.958
L873	50-30 B75	1.000	592.800	597.410	575.000	598.410	N839	N920	593.800
n920 ss	50-30 B75	1.000	590.000	592.510	80.000	593.510	N915	N920	591.000
L898	50-30 B75	1.000	585.210	594.500	422.000	595.500	N875	N921	586.210
n921 ss	50-30 B75	5.000	562.060	562.112	86.000	567.112	N851	N921	567.060

LINK DATA

Name	Storm	Diameter (Hei	Downstream I	Upstream Inve	Length	Upstream Cro	Downstream	Upstream Nod	Downstream
n921 ol	50-30 B75	1.000	594.560	593.500	86.000	594.500	N851	N921	595.560
L952	50-30 B75	4.000	564.462	567.170	500.000	571.170	N949	N922	568.462
n922 ss	50-30 B75	1.000	584.170	589.150	127.000	590.150	N921	N922	585.170
392.1	50-30 B75	1.000	587.790	592.500	385.000	593.500	N872	N922	588.790
L909	50-30 B75	1.000	577.310	578.020	100.000	579.020	N867	N923	578.310
n923 ss	50-30 B75	1.000	573.000	575.010	127.000	576.010	N910	N923	574.000
n924 ss	50-30 B75	1.000	572.000	573.460	56.000	574.460	N910	N924	573.000
404.1	50-30 B75	1.000	577.400	578.890	210.000	579.890	N869	N924	578.400
n893 ol	50-30 B75	1.000	603.440	597.000	50.000	598.000	N893	N925	604.440
n926 ss	50-30 B75	1.500	588.110	588.090	22.000	589.590	N889	N926	589.610
n926 ol1	50-30 B75	1.000	600.910	597.740	22.000	598.740	N889	N926	601.910
n903 ol	50-30 B75	2.000	596.900	597.740	190.000	599.740	N903	N926	598.900
L929	50-30 B75	1.000	606.300	609.380	260.000	610.380	N891	N928	607.300
n928 ss	50-30 B75	1.000	603.950	605.340	80.000	606.340	N883	N928	604.950
L930	50-30 B75	1.000	606.490	609.740	275.000	610.740	N897	N929	607.490
n929 ss	50-30 B75	1.000	603.310	604.690	87.000	605.690	N883	N929	604.310
n879 ss	50-30 B75	4.500	584.350	584.860	348.000	589.360	N906	N931	588.850
n906 ss	50-30 B75	4.500	583.720	584.350	255.000	588.850	N945	N932	588.220
n933 ss	50-30 B75	4.500	587.380	587.390	230.000	591.890	N894	N933	591.880
n931 ss	50-30 B75	1.500	589.366	589.974	320.000	591.474	N101	N100	590.866
n932 ss	50-30 B75	1.500	588.477	589.366	468.000	590.866	N102	N101	589.977
n933 ss.1	50-30 B75	2.000	587.688	588.477	415.000	590.477	N103	N102	589.688
n934 ss	50-30 B75	3.000	587.175	587.688	270.000	590.688	N104	N103	590.175
n935 ss	50-30 B75	3.000	587.033	587.175	75.000	590.175	N105	N104	590.033
n936 ss	50-30 B75	3.000	586.083	587.033	500.000	590.033	N106	N105	589.083
n937 ss	50-30 B75	3.000	585.203	586.083	463.000	589.083	N107	N106	588.203
n938 ss	50-30 B75	3.000	584.646	585.203	293.000	588.203	N108	N107	587.646
n939 ss	50-30 B75	3.000	584.350	584.646	156.040	587.646	N932	N108	587.350
L951	50-30 B75	4.500	576.980	583.720	137.000	588.220	OUT1	N945	581.480
n947 ss2	50-30 B75	3.000	561.170	561.270	100.000	564.270	WET WELL	N947	564.170
949 ss	50-30 B75	5.000	561.170	561.354	100.000	566.354	WET WELL	N949	566.170
L956	50-30 B75	6.000	564.820	565.020	875.000	571.020	N952	N950	570.820
L958	50-30 B75	6.000	562.000	562.680	75.000	568.680	N949	N952	568.000


PROPOSED ALT 3 CONDITIONS Node - N867
SAG LOCATION RIM=577.31 STATION~1195+00
50-30 B75[Max 575.310]
50-1 B75[Max 573.822]
50-2 B75[Max 573.514]
100-30 B75[Max 577.230]
100-1 B75[Max 576.381]
100-2 B75[Max 573.650]
577.0
576.5
576.0
575.5
575.0
574.5
574.0
573.5
573.0
572.5
Stage
23 Fri
Jul 2010
24 Sat
Time
25 Sun

Section 6
CD