OFF-SITE SEWER SYSTEM ANALYSIS FOR THE FOX POINT FARMS PROJECT IN THE CITY OF ENCINITAS

June 30, 2020

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Job No. 1080-001

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June 30, 2020 1080-001

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Attention: Sean Kilkenny, Project Manager

Subject: Off-Site Sewer System Analysis for the Fox Point Farms Project in the City of Encinitas

INTRODUCTION

This letter-report provides an analysis of the existing City of Encinitas sewer system which will serve the Fox Point Farms project. The analysis evaluates off-site gravity sewers, pump stations, and treatment facilities which will serve the Fox Point Farms project.

PROJECT OVERVIEW

The Fox Point Farms project is located in the City of Encinitas at the northwest corner of Quail Gardens Drive and Leucadia Boulevard. The property has been used as a plant nursery historically. Figure 1 presents a vicinity map showing the subject property in the context of the City's existing sewer system.

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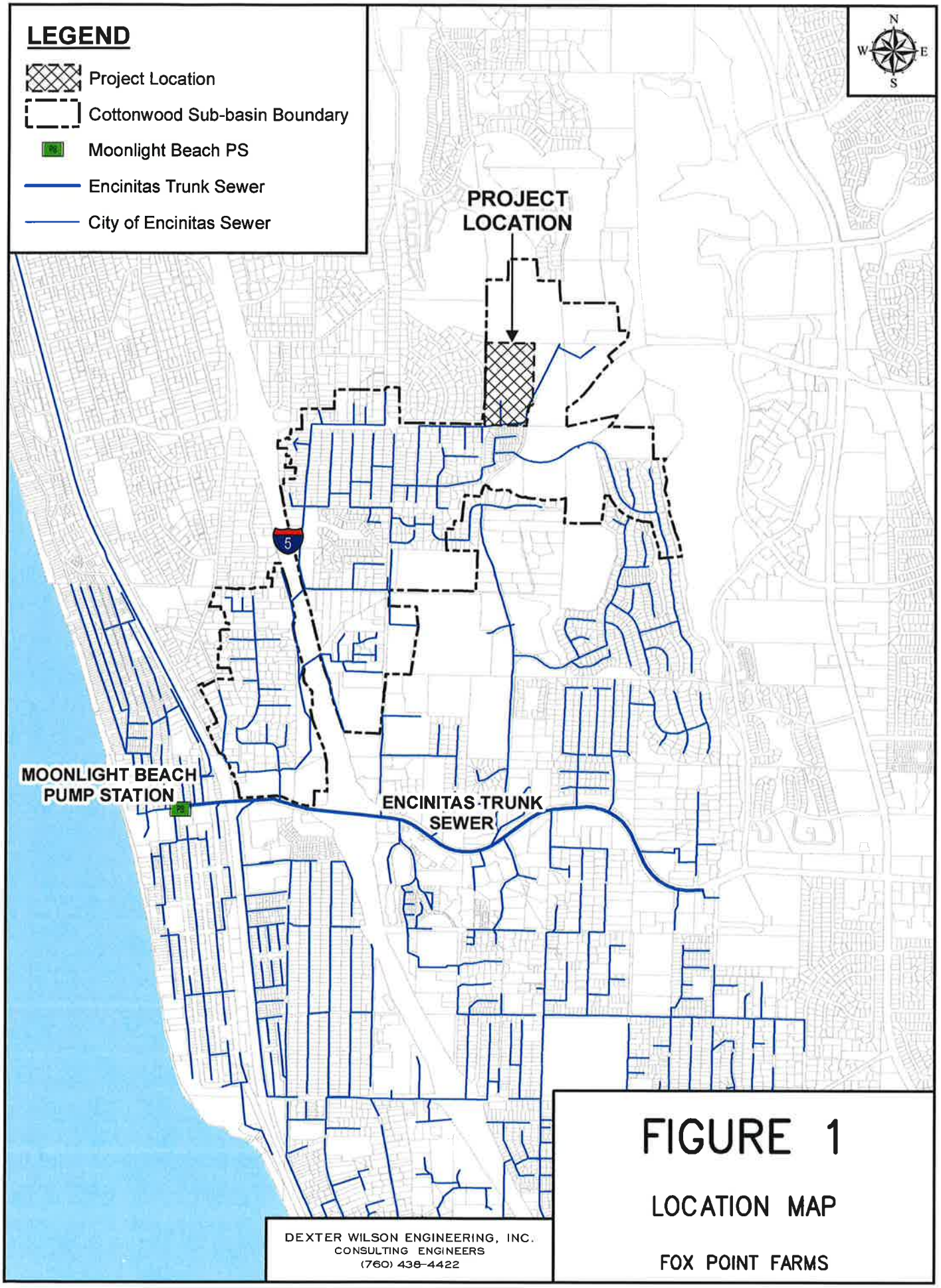

FIGURE 1

LOCATION MAP

FOX POINT FARMS

DEXTER WILSON ENGINEERING, INC.
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Date Saved: 7/1/2020 9:34:30 AM
Document Path: \\artic\GIS\10800001\$Figures\2020-06-24_Figure 1 Location Map.mxd

CITY OF ENCINITAS SEWER SYSTEM

The City of Encinitas Public Works Department oversees the Encinitas Sanitary Division and the Cardiff Sanitary Division of the City of Encinitas' (City) sewer system. The Encinitas Sanitary Division generally serves the northern portion of the City's sewer service area, while the Cardiff Sanitary Division serves the southern and eastern portions of the City's sewer service area. The Leucadia Wastewater District provides sewer services within the City boundary as well.

The majority of the flow within the Encinitas Sanitary Division flows to the Encinitas Trunk Sewer in Encinitas Boulevard and then west to the Moonlight Beach Pump Station. The far western portion of the Encinitas Sanitary Division flows directly into the Moonlight Beach Pump Station. The Encinitas Trunk Sewer and Moonlight Beach Pump Station are both shown in Figure 1. The Fox Point Farms project is located within the drainage area of the Encinitas Trunk Sewer and the Moonlight Beach Pump Station.

The Encinitas Trunk Sewer begins west of Balour Drive as 8-inch and 12-inch sewer, flowing west along Encinitas Boulevard, and then transitioning to 15-inch at Cottonwood Creek Park prior to terminating at the Moonlight Beach Pump Station. There are multiple junctions along the Encinitas Trunk Sewer picking up areas north and south of Encinitas Boulevard.

At Cottonwood Creek Park, a 15-inch junction from the north ties in to the Encinitas Trunk Sewer, generally serving the areas east and west of the Interstate 5 freeway, west of Saxony Road, and north of Puebla Street. This sub-basin of the Encinitas Trunk Sewer will serve the Fox Point Farms project and is discussed throughout this report as the Cottonwood Sub-basin.

Note that the first three segments of the Encinitas Trunk Sewer downstream of the Cottonwood Sub-basin (segments 43, 44, and 45 in Attachment B) are identified as 12-inch diameter in some City information, and 15-inch in others. The diameter should be verified by the City. The remainder of the downstream Encinitas Trunk Sewer is 15-inch, transitioning to 18-inch at the Moonlight Beach Pump Station.

WASTEWATER FLOW RATES

The following sections describe existing wastewater flows, Fox Point Farms wastewater flows, and projected ultimate wastewater flows. The evaluation of these flows in the relevant City infrastructure components follows the presentation of wastewater flows.

Existing Wastewater Flows in the Encinitas Sanitary Division

The existing average dry weather flow (ADWF), peak dry weather flow (PDWF), and peak wet weather (PWWF) rates in the Encinitas Sanitary Division system are as provided in Table 1.

The City is in the process of updating its Sewer Master Plan and provided Existing ADWF and PDWF for our use in preparing this analysis as summarized below. ADWF for residential areas is based on SANDAG Series 13 Data (2020 Forecast). Non-residential flow rates are based on a 5-year average of water meter data with a percentage returned to sewer.

TABLE 1
SANITARY DIVISION EXISTING FLOW RATES ENCINITAS

Location	ADWF, mgd[1]	PDWF, mgd[1]	PWWF[2] Addition, mgd	PWWF, mgd[1]
Cottonwood Sub-basin	0.09	0.15	0.14	0.29
Encinitas Trunk Sewer	0.54	1.05	0.56	1.61
Moonlight Beach Pump Station	0.69	1.13	0.70	1.83

[1] Source: City of Encinitas Draft Sewer Master Plan Update via NV5 Model Transfer May 27, 2020.
[2] Source: City of Encinitas 2011 Sewer Master Plan.

Fox Point Farms Wastewater Flows

Table 2 presents the Average Dry Weather Flow (ADWF) and Peak Dry Weather Flow (PDWF) anticipated to be generated by the Fox Point Farms project in this analysis. Flow projections are based on the City's Sewer Master Plan plus the addition of a 16.6% factor of safety.

TABLE 2
FOX POINT FARMS AVERAGE DRY WEATHER FLOW

Land Use	Quantity[1]	ADWF Generation Rate[2]	ADWF, gpd
Multi-Family Residential	250 Units	175 gpd/unit	43,750
Recreation Center	10,000 SF	95 gpd/sq ft of building	950
Restaurant	3,500 SF	95 gpd/sq ft of building	333
Barn	3,000 SF	95 gpd/sq ft of building	285
Agricultural	5.5 Acres	0 gpd/ac	0
TOTAL			**45,318 gpd** **0.045 mgd**

[1] *Sewer System Analysis for the Fox Point Farms Project* dated March 20, 2020 prepared by Dexter Wilson Engineering, Inc.
[2] ADWF from 2011 Master Plan + 16.6% Factor of Safety.

Ultimate Wastewater Flows in the Encinitas Sanitary Division

Projections of ultimate wastewater flows are based on the addition of Fox Point Farms flows to existing flows as well as other planned future developments anticipated within the Encinitas Sanitary Division. Additional detail to support development of this table can be found in Attachment A.

TABLE 3
ENCINITAS SANITARY DIVISION ULTIMATE FLOW PROJECTIONS

Cottonwood Sub-basin	**Flow**	**% of Total Moonlight Beach PS Ultimate ADWF**
Existing ADWF	0.09 mgd	
Additional ADWF		
09. Echter Property (Fox Point Farms)	0.045 mgd	16.7%
AD31. Meyer Proposal	0.030 mgd	11.1%
Other	0.025 mgd	9.3%
Total	*0.100 mgd*	*37.0%*
Cottonwood Ultimate ADWF	***0.190 mgd***	
Encinitas Trunk Sewer	**Flow**	**% of Total Ultimate**
Existing ADWF	0.54 mgd	
Additional ADWF		
Cottonwood Sub-basin	0.100 mgd	37.0%
05. Encinitas Blvd & Quail Garden	0.021 mgd	7.8%
12. Sunshine Gardens	0.015 mgd	5.6%
AD2 (a, b, c). Baldwin & Sons	0.051 mgd	18.9%
Other	0.013 mgd	4.8%
Total	*0.200 mgd*	*74.1%*
Encinitas TS Ultimate ADWF	***0.740 mgd***	
Moonlight Beach Pump Station	**Flow**	**% of Total Ultimate**
Existing ADWF	0.690 mgd	
Additional ADWF		
Encinitas Trunk Sewer	0.200 mgd	74.1%
AD14. Harrison Sites	0.006 mgd	2.2%
Other	0.064 mgd	23.7%
Total	*0.270 mgd*	*100%*
Moonlight Beach PS Ultimate ADWF	***0.960 mgd***	

[1]Total Additional Ultimate ADWF is 0.27 mgd over Existing ADWF.

Summary of Wastewater Flows

Table 4 below summarizes the flows described above that are utilized in this analysis.

TABLE 4
SUMMARY OF ADWF, PDWF, AND PWWF FOR THE FOX POINT FARMS ANALYSIS

Location	Existing			Existing + Fox Point Farms			Ultimate		
	ADWF	PDWF	PWWF	ADWF	PDWF	PWWF	ADWF	PDWF	PWWF
Cottonwood Sub-basin	0.09	0.15	0.29	0.13	0.21	0.35	0.19	0.31	0.45
Encinitas Trunk Sewer	0.54	1.05	1.61	0.58	0.95	1.51	0.74	1.22	1.78
Moonlight Beach Pump Station	0.69	1.13	1.83	0.74 [1]	1.21	1.91	0.96 [2]	1.57	2.27

All flows in mgd.
[1]Fox Point Farms represents 6.1% of this flow.
[2]Fox Point Farms represents 4.6% of this flow.

OFF-SITE INFRASTRUCTURE FLOW EVALUATION

The following sections will describe Fox Point Farms impact to City facilities in the Existing and Ultimate conditions. Each of the following will be analyzed independently: Cottonwood Sub-basin, Encinitas Trunk Sewer, Moonlight Beach Pump Station, and downstream facilities.

For Peak Wet Weather Flow (PWWF), the current Sewer Master Plan PWWF of 0.7 mgd was distributed upstream into the basin based on pipeline length. This analysis follows the same methodology of the 2011 Sewer Master Plan. As such, 0.14 mgd is contributed by the Cottonwood Sub-basin in both the 2011 Sewer Master Plan and this analysis as well.

The 2011 Sewer Master Plan identified the need for replacement when the maximum depth to diameter ratio (d/D) exceeds 0.90 under PWWF conditions. Because the 2011 Sewer Master Plan focused primarily on the downstream, regional Encinitas Trunk Sewer, it is acceptable, and a common public agency practice, to utilize a d/D replacement criteria of 0.75

during PWWF for the upstream local gravity sewer analysis. As such, for this analysis, replacement criteria are set as outlined in Table 5 below.

TABLE 5
DEPTH TO DIAMETER (d/D) REPLACEMENT CRITERIA

Pipeline Size	Flow Condition	
	Peak Dry Weather Flow (PDWF)	Peak Wet Weather Flow (PWWF)
≤ 12 inch	0.50	0.75
> 12 inch	0.75	0.90

Cottonwood Sub-basin Analysis

A computerized hydraulic model was prepared to evaluate the impact of the addition of Fox Point Farms wastewater flows to the existing gravity sewer system from the project site through the Cottonwood Sub-basin to determine if existing pipelines require capacity upgrades when comparing projected flows to replacement criteria. The hydraulic model was loaded with Existing and Ultimate average and peak dry and wet wastewater flows.

The maximum ratio of depth to diameter (d/D) under Existing PDWF is 0.328 and the maximum d/D under Existing PWWF is 0.421, therefore, sufficient capacity exists.

With the addition of the Fox Point Farms project to Existing PDWF, the maximum d/D is 0.436 and the maximum d/D under PWWF is 0.572. Therefore, sufficient capacity exists in the existing system to serve the Fox Point Farms project.

Under the Ultimate PDWF condition (including the Fox Point Farms project and others), the maximum d/D is 0.517 and the maximum d/D under PWWF is 0.654. The d/D exceeds the PDWF replacement criteria in one 8-inch pipeline stretch (segment 31 in Attachment B). Note that the exceedance in this stretch is 0.517 in comparison to the replacement criteria of 0.5; an exceedance of less than 5%. The City could address this in several ways. First, they could accept the exceedance since sufficient capacity exists under wet weather conditions.

Second, because the exceedance is minimal and occurs near Ultimate buildout of the sub-basin, actual flows could be monitored to determine if the projected flows do in fact materialize and increase as projected. Third, replacement of the pipeline would be added to the City's capital improvement program and paid for by a combination of existing users' sewer service charges and future users' fair share of connection fees.

Detailed results of the hydraulic analysis are provided in Attachment B.

Encinitas Trunk Sewer Analysis

The hydraulic analyses determine that the maximum d/D under Existing PDWF is 0.533 and the maximum d/D under PWWF is 0.764; therefore, sufficient capacity exists.

With the addition of Fox Point Farms Project to Existing PDWF, the maximum d/D is 0.560 and the maximum under PWWF is 0.800; therefore, sufficient capacity exists.

Under the Ultimate PDWF condition, (including the Fox Point Farms project and others), the maximum d/D is 0.649. The maximum d/D under PWWF exceeds capacity in two stretches of 12-inch pipeline in Encinitas Boulevard, west of where the Cottonwood Sub-basin connects to the Encinitas Trunk Sewer (segments 43 and 44 in Attachment B). Note that the size of these two pipeline stretches (and a third segment 45) should be confirmed as City documents/data conflict. If the pipelines are confirmed to be 15-inch, as some sources indicate, the maximum d/D in the Encinitas Trunk Sewer would be 0.450 under PDWF condition and 0.571 under PWWF condition. Outside of these two pipeline stretches, the maximum PWWF d/D is 0.748, and are below the maximum d/D for replacement.

If the 12-inch piping is confirmed to be 12-inch, the City could address this in several ways. The City could work to mitigate the inflow and infiltration coming into this basin with the installation of flow domes. These devices, placed underneath manhole lids, keep surface/street rainwater flows from entering the sanitary sewer. The City could also implement an active inflow and infiltration program by conducting flow monitoring smoke testing to further reduce inflow. These steps in concert with additional flow monitoring to determine the appropriate time to replace the pipeline. Lastly, as a final option, replacement of the pipeline would be added to the City's capital improvement program and paid for by a

combination of existing users' sewer service charges and future users' fair share of connection fees. Note that in the event replacement of segments 43 and 44 are necessary, these stretches of sewer appear to be within the existing Encinitas Boulevard ROW, and any construction associated with replacement thereto would be temporary and would be performed in accordance with an approved Improvement Plan including implementation of all BMPs, including a SWPPP, and a Traffic Control Plan.

Moonlight Beach Pump Station Analysis

Flows from the Encinitas Trunk Sewer terminate at the Moonlight Beach Pump Station, located at the intersection of "B" street (western terminus of Encinitas Boulevard) and Third Street. Per the 2011 Master Plan, the existing pump station consists of three, 60 hp pumps, with variable speed motors, each capable of pumping 1,000 gpm. The station has a duty pumping capacity of 2,000 gpm (2.9 mgd). The station's emergency storage basin is 180,000 gallons and was sized to provide storage for two hours based on peak ultimate flow conditions.

The 2011 Master Plan identified improvements for the pump station; however, none of the improvements were capacity related.

Existing Flows. As described previously, the City's determination of Existing ADWF at the station is 0.69 mgd and the estimated Existing PWWF is 1.83 mgd. At a capacity of 2.9 mgd, the existing Moonlight Beach Pump Station is sufficient to accommodate Existing flows.

Existing Flows Plus Fox Point Farms. Based on Existing flow rates and those anticipated in the Fox Point Farms project, the projected PWWF is anticipated to be 1.91 mgd. At a capacity of 2.9 mgd, the existing Moonlight Beach Pump Station is sufficient to accommodate Existing flows plus those anticipated to be generated by the Fox Point Farms project.

Ultimate Flows. Based on Existing flow rates, those anticipated by the Fox Point Farms project, and anticipated Ultimate flows, the projected PWWF is anticipated to be 2.27 mgd. At a capacity of 2.9 mgd, the existing Moonlight Beach Pump Station is sufficient to accommodate ultimate buildout peak wet weather flows.

Sean Kilkenny
June 30, 2020

Analysis of Facilities Downstream of the Moonlight Beach Pump Station

The Moonlight Beach Pump Station 14-inch PVC forcemain discharges approximately 13,800 feet north into the Batiquitos Influent Gravity Sewer at the intersection of Highway 101 and La Costa Avenue, just upstream of the Bataquitos Pump Station (which is jointly owned by the City of Encinitas and Leucadia Wastewater District). The Leucadia Wastewater District's Leucadia Pump Station forcemains discharge to the Batiquitos Gravity Sewer. The Batiquitos Gravity Sewer discharges to the Batiquitos Pump Station wet well where flow combines with other Leucadia Wastewater District flows. City of Encinitas and Leucadia Wastewater District flows are then pumped via two forcemains to the Lanikai Gravity Sewer (jointly owned by the City of Encinitas and Leucadia Wastewater District) and Occidental Gravity Sewer (jointly owned by the City of Encinitas, Leucadia Wastewater District, and City of Carlsbad) prior to treatment at the Encina Water Pollution Control Facility.

Because sufficient capacity exists within the existing Moonlight Beach Pump Station to serve the Fox Point Farms project under Existing and Ultimate conditions, sufficient capacity exists in the downstream gravity sewer conveyance and treatment facilities described above, and as documented in the 2011 Sewer Master Plan and the Leucadia Wastewater District's 2018 Asset Management Plan Update.

Dexter Wilson Engineering, Inc.

Natalie Fraschetti, P.E.

REGISTERED PROFESSIONAL ENGINEER
NATALIE J. FRASCHETTI
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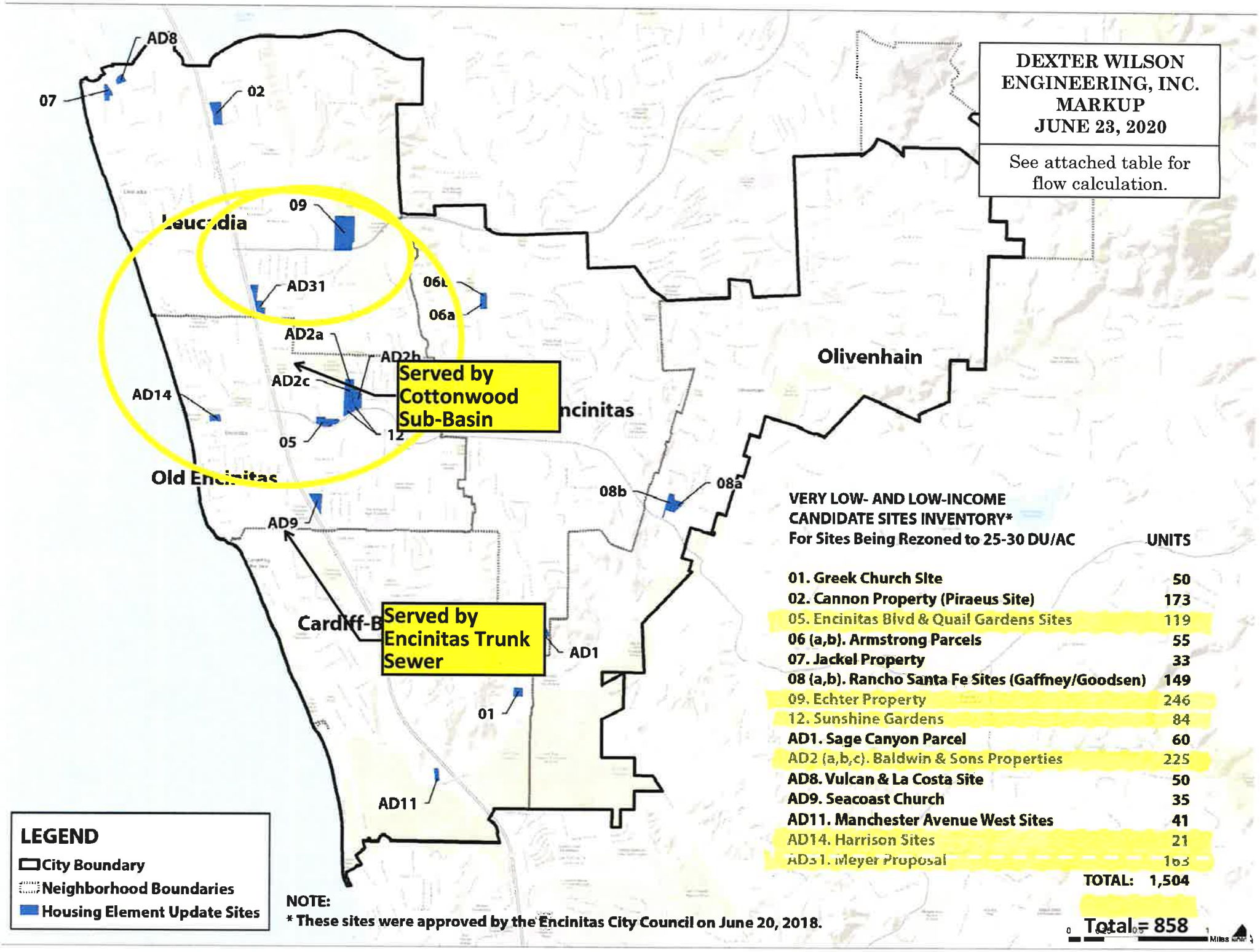
EXP. 12/31/20
CIVIL
STATE OF CALIFORNIA

NF:ps:ah

Attachments

ATTACHMENT A

CITY HOUSING ELEMENT HOME SITES



VERY LOW- AND LOW-INCOME CANDIDATE SITES INVENTORY* For Sites Being Rezoned to 25-30 DU/AC	UNITS
01. Greek Church Site	50
02. Cannon Property (Piraeus Site)	173
05. Encinitas Blvd & Quail Gardens Sites	119
06 (a,b). Armstrong Parcels	55
07. Jackel Property	33
08 (a,b). Rancho Santa Fe Sites (Gaffney/Goodsen)	149
09. Echter Property	246
12. Sunshine Gardens	84
AD1. Sage Canyon Parcel	60
AD2 (a,b,c). Baldwin & Sons Properties	225
AD8. Vulcan & La Costa Site	50
AD9. Seacoast Church	35
AD11. Manchester Avenue West Sites	41
AD14. Harrison Sites	21
AD31. Meyer Proposal	163
TOTAL:	1,504

CITY HOUSING ELEMENT ESTIMATES OF FLOW AND MODELED FLOW IN THE ENCINITAS SANITARY DIVISION			
Site	**Units**	**ADWF*, gpd**	**ADWF**, gpd**
05. Encinitas Blvd & Quail Gardens Sites	119	20,825	21,327
09. Echter Property (Fox Point Farms)	246	43,050	45,318
12. Sunshine Gardens	84	14,700	14,864
AD2 (a, b, c). Baldwin & Sons Properties	225	39,375	51,055
AD14. Harrison Sites	21	3,675	5,816
AD31. Meyer Proposal	163	28,525	30,375
TOTAL	**858**	**150,150**	**168,759**

*Average Dry Weather Flow (ADWF) based on 175 gpd/EDU.
**Modeling ADWF.

ATTACHMENT B

MODELING RESULTS

Modeled Pipelines

		ID	From ID	To ID	Diameter (in)	Length (ft)	Slope
1	☐	14590SMAIN	3139SMANHL	2779SMANHL	8.000	311.990	0.007
2	☐	14593SMAIN	2779SMANHL	3137SMANHL	8.000	258.930	0.002
3	☐	16500SMAIN	3137SMANHL	3136SMANHL	8.000	30.018	0.049
4	☐	16499SMAIN	3136SMANHL	2788SMANHL	8.000	264.458	0.049
5	☐	13194SMAIN	2788SMANHL	2789SMANHL	8.000	400.706	0.090
6	☐	13195SMAIN	2789SMANHL	2785SMANHL	8.000	326.209	0.075
7	☐	13192SMAIN	2785SMANHL	2781SMANHL	8.000	350.000	0.004
8	☐	13189SMAIN	2781SMANHL	2782SMANHL	8.000	222.524	0.004
9	☐	13190SMAIN	2782SMANHL	2783SMANHL	8.000	168.700	0.067
10	☐	13191SMAIN	2783SMANHL	2784SMANHL	8.000	199.004	0.022
11	☐	16404SMAIN	2784SMANHL	3748SMANHL	8.000	135.528	0.053
12	☐	16405SMAIN	3748SMANHL	2808SMANHL	8.000	254.811	0.053
13	☐	13216SMAIN	2808SMANHL	2807SMANHL	8.000	290.115	0.004
14	☐	13778SMAIN	2807SMANHL	3206SMANHL	8.000	330.506	0.040
15	☐	13780SMAIN	3206SMANHL	3207SMANHL	8.000	250.720	0.006
16	☐	13777SMAIN	3207SMANHL	2812SMANHL	8.000	324.333	0.032
17	☐	13220SMAIN	2812SMANHL	2797SMANHL	8.000	186.368	0.007
18	☐	13204SMAIN	2797SMANHL	2796SMANHL	8.000	327.518	0.034
19	☐	13212SMAIN	2796SMANHL	2805SMANHL	8.000	208.900	0.006
20	☐	13213SMAIN	2805SMANHL	2802SMANHL	8.000	372.403	0.004
21	☐	13227SMAIN	2802SMANHL	2816SMANHL	8.000	328.278	0.030
22	☐	13228SMAIN	2816SMANHL	2817SMANHL	8.000	351.153	0.004
23	☐	13725SMAIN	2817SMANHL	3168SMANHL	8.000	233.170	0.004
24	☐	13724SMAIN	3168SMANHL	3167SMANHL	8.000	256.730	0.008
25	☐	13723SMAIN	3167SMANHL	3166SMANHL	8.000	135.370	0.025
26	☐	13734SMAIN	3166SMANHL	3176SMANHL	8.000	295.713	0.040
27	☐	13733SMAIN	3176SMANHL	3175SMANHL	8.000	259.780	0.039
28	☐	13732SMAIN	3175SMANHL	3174SMANHL	8.000	105.092	0.005
29	☐	13731SMAIN	3174SMANHL	3173SMANHL	8.000	131.730	0.004
30	☐	13730SMAIN	3173SMANHL	3172SMANHL	8.000	175.000	0.056
31	☐	13738SMAIN	3172SMANHL	3177SMANHL	8.000	584.810	0.003
32	☐	13739SMAIN	3177SMANHL	3178SMANHL	10.000	263.971	0.002
33	☐	13740SMAIN	3178SMANHL	3179SMANHL	10.000	231.317	0.002
34	☐	13741SMAIN	3179SMANHL	3180SMANHL	10.000	127.167	0.003
35	☐	13742SMAIN	3180SMANHL	3181SMANHL	10.000	314.388	0.013
36	☐	13743SMAIN	3181SMANHL	3183SMANHL	10.000	185.900	0.110
37	☐	13744SMAIN	3183SMANHL	3184SMANHL	10.000	371.642	0.020
38	☐	13745SMAIN	3184SMANHL	3185SMANHL	10.000	186.900	0.003
39	☐	14102SMAIN	3185SMANHL	2739SMANHL	10.000	76.817	0.011
40	☐	16398SMAIN	2739SMANHL	3747SMANHL	15.000	101.935	0.018
41	☐	16399SMAIN	3747SMANHL	2895SMANHL	15.000	338.183	0.018
42	☐	14164SMAIN	2895SMANHL	2894SMANHL	15.000	32.862	0.007
43	☐	14162SMAIN	2894SMANHL	3279SMANHL	12.000	85.341	0.004
44	☐	14115SMAIN	3279SMANHL	3278SMANHL	12.000	295.132	0.003
45	☐	14114SMAIN	3278SMANHL	3277SMANHL	12.000	350.847	0.004
46	☐	16395SMAIN	3277SMANHL	3746SMANHL	15.000	204.334	0.036
47	☐	16396SMAIN	3746SMANHL	3281SMANHL	15.000	205.686	0.036
48	☐	16401SMAIN	3281SMANHL	2698SMANHL	15.000	62.264	0.006
49	☐	12958SMAIN	2698SMANHL	2702SMANHL	15.000	294.879	0.064
50	☐	16402SMAIN	2702SMANHL	3285SMANHL	15.000	55.011	0.228
51	☐	18428SMAIN	3285SMANHL	4046SMANHL	18.000	26.150	0.012
52	☐	18429SMAIN	4046SMANHL	STOR_10	18.000	24.345	0.129

← Cottonwood Sub-basin

← Encinitas Trunk Sewer

← Moonlight Beach Pump Station

Manhole Modeling Data - Ultimate Dry Weather

		ID (Char)	DIAMETER (Num)	RIM_ELEV (Num)	LOAD1 (Num)	TYPE1 (Num)	PATTERN1 (Char)
1	☐	2698SMANHL	48.000	42.560	0.003	1: Peakable Base	MOONLIGHTWEEKEND
2	☐	2702SMANHL	48.000	22.900	0.002	1: Peakable Base	MOONLIGHTWEEKEND
3	☐	2739SMANHL	48.000	66.880	0.000	1: Peakable Base	MOONLIGHTWEEKEND
4	☐	2779SMANHL	60.000	314.400	0.000	1: Peakable Base	MOONLIGHTWEEKEND
5	☐	2781SMANHL	48.000	241.500	0.000	1: Peakable Base	MOONLIGHTWEEKEND
6	☐	2782SMANHL	48.000	233.410	0.000	1: Peakable Base	MOONLIGHTWEEKEND
7	☐	2783SMANHL	48.000	247.100	0.000	1: Peakable Base	MOONLIGHTWEEKEND
8	☐	2784SMANHL	48.000	217.990	0.000	1: Peakable Base	MOONLIGHTWEEKEND
9	☐	2785SMANHL	48.000	233.000	0.000	1: Peakable Base	MOONLIGHTWEEKEND
10	☐	2788SMANHL	60.000	297.516	0.000	1: Peakable Base	MOONLIGHTWEEKEND
11	☐	2789SMANHL	60.000	260.060	0.000	1: Peakable Base	MOONLIGHTWEEKEND
12	☐	2796SMANHL	48.000	159.100	0.001	1: Peakable Base	MOONLIGHTWEEKEND
13	☐	2797SMANHL	48.000	173.350	0.000	1: Peakable Base	MOONLIGHTWEEKEND
14	☐	2802SMANHL	48.000	162.650	0.001	1: Peakable Base	MOONLIGHTWEEKEND
15	☐	2805SMANHL	48.000	160.190	0.001	1: Peakable Base	MOONLIGHTWEEKEND
16	☐	2807SMANHL	48.000	200.340	0.000	1: Peakable Base	MOONLIGHTWEEKEND
17	☐	2808SMANHL	48.000	195.300	0.000	1: Peakable Base	MOONLIGHTWEEKEND
18	☐	2812SMANHL	48.000	170.500	0.000	1: Peakable Base	MOONLIGHTWEEKEND
19	☐	2816SMANHL	48.000	145.950	0.002	1: Peakable Base	MOONLIGHTWEEKEND
20	☐	2817SMANHL	48.000	156.550	0.003	1: Peakable Base	MOONLIGHTWEEKEND
21	☐	2894SMANHL	60.000	66.830	0.001	1: Peakable Base	MOONLIGHTWEEKEND
22	☐	2895SMANHL	60.000	60.060	0.001	1: Peakable Base	MOONLIGHTWEEKEND
23	☐	3136SMANHL	60.000	309.390	0.000	1: Peakable Base	MOONLIGHTWEEKEND
24	☐	3137SMANHL	60.000	311.460	0.000	1: Peakable Base	MOONLIGHTWEEKEND
25	☐	3139SMANHL	60.000	317.450	0.070	1: Peakable Base	MOONLIGHTWEEKEND
26	☐	3166SMANHL	48.000	160.360	0.001	1: Peakable Base	MOONLIGHTWEEKEND
27	☐	3167SMANHL	48.000	153.973	0.046	1: Peakable Base	MOONLIGHTWEEKEND
28	☐	3168SMANHL	48.000	151.640	0.001	1: Peakable Base	MOONLIGHTWEEKEND
29	☐	3172SMANHL	48.000	108.960	0.000	1: Peakable Base	MOONLIGHTWEEKEND
30	☐	3173SMANHL	48.000	119.840	0.000	1: Peakable Base	MOONLIGHTWEEKEND
31	☐	3174SMANHL	48.000	116.940	0.000	1: Peakable Base	MOONLIGHTWEEKEND
32	☐	3175SMANHL	48.000	115.090	0.001	1: Peakable Base	MOONLIGHTWEEKEND
33	☐	3176SMANHL	48.000	128.300	0.000	1: Peakable Base	MOONLIGHTWEEKEND
34	☐	3177SMANHL	48.000	106.880	0.000	1: Peakable Base	MOONLIGHTWEEKEND
35	☐	3178SMANHL	48.000	108.230	0.000	1: Peakable Base	MOONLIGHTWEEKEND
36	☐	3179SMANHL	48.000	109.680	0.000	1: Peakable Base	MOONLIGHTWEEKEND
37	☐	3180SMANHL	48.000	100.330	0.000	1: Peakable Base	MOONLIGHTWEEKEND
38	☐	3181SMANHL	48.000	96.130	0.000	1: Peakable Base	MOONLIGHTWEEKEND
39	☐	3183SMANHL	48.000	79.680	0.001	1: Peakable Base	MOONLIGHTWEEKEND
40	☐	3184SMANHL	48.000	66.190	0.002	1: Peakable Base	MOONLIGHTWEEKEND
41	☐	3185SMANHL	48.000	65.720	0.000	1: Peakable Base	MOONLIGHTWEEKEND
42	☐	3206SMANHL	48.000	182.000	0.001	1: Peakable Base	MOONLIGHTWEEKEND
43	☐	3207SMANHL	48.000	181.400	0.001	1: Peakable Base	MOONLIGHTWEEKEND
44	☐	3277SMANHL	60.000	58.190	0.002	1: Peakable Base	MOONLIGHTWEEKEND
45	☐	3278SMANHL	60.000	69.460	0.002	1: Peakable Base	MOONLIGHTWEEKEND
46	☐	3279SMANHL	48.000	70.470	0.001	1: Peakable Base	MOONLIGHTWEEKEND
47	☐	3281SMANHL	48.000	45.416	0.002	1: Peakable Base	MOONLIGHTWEEKEND
48	☐	3285SMANHL	48.000	31.690	0.000	1: Peakable Base	MOONLIGHTWEEKEND
49	☐	3746SMANHL	6.000	47.520	0.001	1: Peakable Base	MOONLIGHTWEEKEND
50	☐	3747SMANHL	60.000	69.080	0.001	1: Peakable Base	MOONLIGHTWEEKEND
51	☐	3748SMANHL	6.000	214.950	0.000	1: Peakable Base	MOONLIGHTWEEKEND
52	☐	4046SMANHL	60.000	22.250	0.001	1: Peakable Base	MOONLIGHTWEEKEND
53	☐	STOR_10	1,000,000,000.000	3.740	0.000	1: Peakable Base	MOONLIGHTWEEKEND

Manhole Modeling Data - Ultimate Wet Weather

		ID (Char)	DIAMETER (Num)	RIM_ELEV (Num)	LOAD1 (Num)	TYPE1 (Num)	PATTERN1 (Char)	LOAD2 (Num)	TYPE2 (Num)	PATTERN2 (Char)
1	☐	2698SMANHL	48.000	42.560	0.003	1: Peakable Base	MOONLIGHTWEEKEND	0.015	0: Unpeakable	
2	☐	2702SMANHL	48.000	22.900	0.002	1: Peakable Base	MOONLIGHTWEEKEND			
3	☐	2739SMANHL	48.000	66.880	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.040	0: Unpeakable	
4	☐	2779SMANHL	60.000	314.400	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.024	0: Unpeakable	
5	☐	2781SMANHL	48.000	241.500	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
6	☐	2782SMANHL	48.000	233.410	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
7	☐	2783SMANHL	48.000	247.100	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.000	0: Unpeakable	
8	☐	2784SMANHL	48.000	217.990	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.055	0: Unpeakable	
9	☐	2785SMANHL	48.000	233.000	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
10	☐	2788SMANHL	60.000	297.516	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
11	☐	2789SMANHL	60.000	260.060	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
12	☐	2796SMANHL	48.000	159.100	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
13	☐	2797SMANHL	48.000	173.350	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.022	0: Unpeakable	
14	☐	2802SMANHL	48.000	162.650	0.001	1: Peakable Base	MOONLIGHTWEEKEND	0.024	0: Unpeakable	
15	☐	2805SMANHL	48.000	160.190	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
16	☐	2807SMANHL	48.000	200.340	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
17	☐	2808SMANHL	48.000	195.300	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
18	☐	2812SMANHL	48.000	170.500	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
19	☐	2816SMANHL	48.000	145.950	0.002	1: Peakable Base	MOONLIGHTWEEKEND			
20	☐	2817SMANHL	48.000	156.550	0.003	1: Peakable Base	MOONLIGHTWEEKEND			
21	☐	2894SMANHL	60.000	66.830	0.001	1: Peakable Base	MOONLIGHTWEEKEND	0.480	0: Unpeakable	
22	☐	2895SMANHL	60.000	60.060	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
23	☐	3136SMANHL	60.000	309.390	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
24	☐	3137SMANHL	60.000	311.460	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
25	☑	3139SMANHL	60.000	317.450	0.070	1: Peakable Base	MOONLIGHTWEEKEND	0.000	0: Unpeakable	
26	☐	3166SMANHL	48.000	160.360	0.001	1: Peakable Base	MOONLIGHTWEEKEND	0.024	0: Unpeakable	
27	☐	3167SMANHL	48.000	153.973	0.046	1: Peakable Base	MOONLIGHTWEEKEND			
28	☐	3168SMANHL	48.000	151.640	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
29	☐	3172SMANHL	48.000	108.960	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
30	☐	3173SMANHL	48.000	119.840	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
31	☐	3174SMANHL	48.000	116.940	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
32	☐	3175SMANHL	48.000	115.090	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
33	☐	3176SMANHL	48.000	128.300	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
34	☐	3177SMANHL	48.000	106.880	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.028	0: Unpeakable	
35	☐	3178SMANHL	48.000	108.230	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
36	☐	3179SMANHL	48.000	109.680	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
37	☐	3180SMANHL	48.000	100.330	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
38	☐	3181SMANHL	48.000	96.130	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
39	☐	3183SMANHL	48.000	79.680	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
40	☐	3184SMANHL	48.000	66.190	0.002	1: Peakable Base	MOONLIGHTWEEKEND			
41	☐	3185SMANHL	48.000	65.720	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
42	☐	3206SMANHL	48.000	182.000	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
43	☐	3207SMANHL	48.000	181.400	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
44	☐	3277SMANHL	60.000	58.190	0.002	1: Peakable Base	MOONLIGHTWEEKEND			
45	☐	3278SMANHL	60.000	69.460	0.002	1: Peakable Base	MOONLIGHTWEEKEND	0.139	0: Unpeakable	
46	☐	3279SMANHL	48.000	70.470	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
47	☐	3281SMANHL	48.000	45.416	0.002	1: Peakable Base	MOONLIGHTWEEKEND			
48	☐	3285SMANHL	48.000	31.690	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.217	0: Unpeakable	
49	☐	3746SMANHL	6.000	47.520	0.001	1: Peakable Base	MOONLIGHTWEEKEND	0.015	0: Unpeakable	
50	☐	3747SMANHL	60.000	69.080	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
51	☐	3748SMANHL	6.000	214.950	0.000	1: Peakable Base	MOONLIGHTWEEKEND			
52	☐	4046SMANHL	60.000	22.250	0.001	1: Peakable Base	MOONLIGHTWEEKEND			
53	☐	STOR_10	1,000,000,000.000	3.740	0.000	1: Peakable Base	MOONLIGHTWEEKEND	0.000	0: Unpeakable	

DEXTER WILSON ENGINEERING INC.
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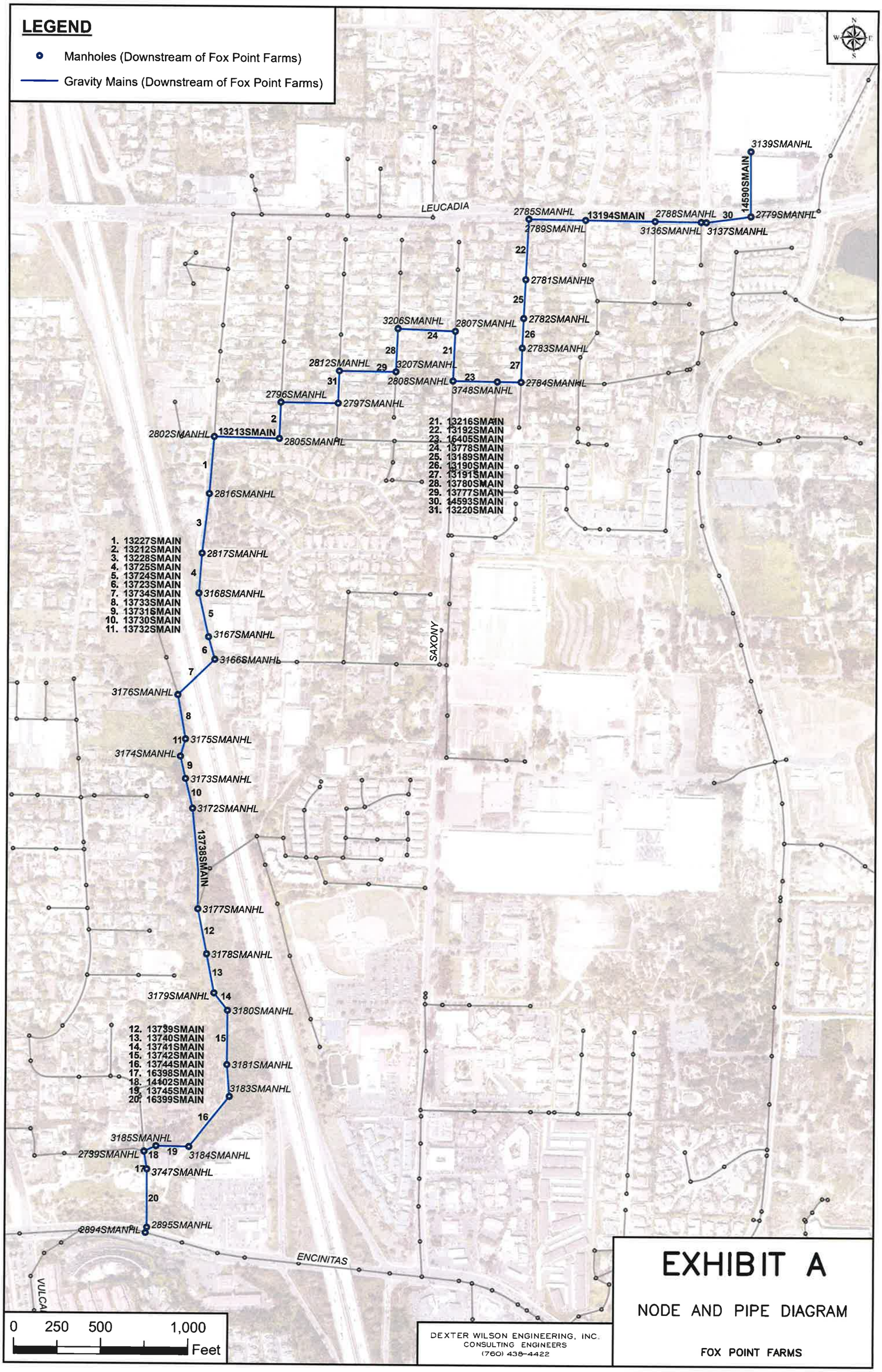

DEXTER WILSON ENGINEERING, INC.
CONSULTING ENGINEERS
(760) 438-4422

EXHIBIT A

NODE AND PIPE DIAGRAM

FOX POINT FARMS

Existing Dry Weather EPS Results

	ID	From ID	To ID	Maximum Flow (cfs)	Maximum Flow Time (hour)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q	Maximum Critical Depth (ft)
1	14590SMAIN	3139SMANHL	2779SMANHL	0.003	08:49 hr	0.046	0.069	0.008	0.003	0.023
2	14593SMAIN	2779SMANHL	3137SMANHL	0.012	09:09 hr	0.067	0.100	0.683	0.021	0.050
3	16500SMAIN	3137SMANHL	3136SMANHL	0.013	09:05 hr	0.033	0.050	1.953	0.005	0.050
4	16499SMAIN	3136SMANHL	2788SMANHL	0.013	09:12 hr	0.033	0.050	1.951	0.005	0.051
5	13194SMAIN	2788SMANHL	2789SMANHL	0.013	09:12 hr	0.029	0.044	0.036	0.003	0.051
6	13195SMAIN	2789SMANHL	2785SMANHL	0.013	09:10 hr	0.044	0.067	0.035	0.004	0.050
7	13192SMAIN	2785SMANHL	2781SMANHL	0.013	09:18 hr	0.060	0.090	0.817	0.017	0.051
8	13189SMAIN	2781SMANHL	2782SMANHL	0.013	09:19 hr	0.060	0.090	0.816	0.017	0.051
9	13190SMAIN	2782SMANHL	2783SMANHL	0.013	09:16 hr	0.035	0.053	0.036	0.004	0.051
10	13191SMAIN	2783SMANHL	2784SMANHL	0.013	09:18 hr	0.045	0.068	0.036	0.007	0.051
11	16404SMAIN	2784SMANHL	3748SMANHL	0.035	09:23 hr	0.052	0.078	2.707	0.013	0.084
12	16405SMAIN	3748SMANHL	2808SMANHL	0.035	09:22 hr	0.074	0.111	0.096	0.012	0.084
13	13216SMAIN	2808SMANHL	2807SMANHL	0.035	09:22 hr	0.098	0.146	1.106	0.046	0.085
14	13778SMAIN	2807SMANHL	3206SMANHL	0.037	09:24 hr	0.073	0.110	0.102	0.015	0.087
15	13780SMAIN	3206SMANHL	3207SMANHL	0.039	09:24 hr	0.091	0.137	1.343	0.040	0.089
16	13777SMAIN	3207SMANHL	2812SMANHL	0.041	09:28 hr	0.078	0.117	0.113	0.019	0.091
17	13220SMAIN	2812SMANHL	2797SMANHL	0.044	09:26 hr	0.095	0.143	1.412	0.044	0.094
18	13204SMAIN	2797SMANHL	2796SMANHL	0.049	09:26 hr	0.086	0.129	0.137	0.022	0.100
19	13212SMAIN	2796SMANHL	2805SMANHL	0.053	09:27 hr	0.112	0.168	0.148	0.055	0.104
20	13213SMAIN	2805SMANHL	2802SMANHL	0.055	09:30 hr	0.120	0.180	1.277	0.070	0.106
21	13227SMAIN	2802SMANHL	2816SMANHL	0.085	09:21 hr	0.121	0.182	0.239	0.041	0.133
22	13228SMAIN	2816SMANHL	2817SMANHL	0.088	09:20 hr	0.153	0.229	0.247	0.115	0.135
23	13725SMAIN	2817SMANHL	3168SMANHL	0.091	09:22 hr	0.156	0.235	1.456	0.121	0.137
24	13724SMAIN	3168SMANHL	3167SMANHL	0.093	09:21 hr	0.133	0.200	1.854	0.087	0.138
25	13723SMAIN	3167SMANHL	3166SMANHL	0.093	09:25 hr	0.101	0.151	2.300	0.049	0.139
26	13734SMAIN	3166SMANHL	3176SMANHL	0.122	09:20 hr	0.103	0.155	0.343	0.050	0.159
27	13733SMAIN	3176SMANHL	3175SMANHL	0.133	09:17 hr	0.140	0.210	0.372	0.055	0.166
28	13732SMAIN	3175SMANHL	3174SMANHL	0.134	09:17 hr	0.181	0.271	0.378	0.153	0.168
29	13731SMAIN	3174SMANHL	3173SMANHL	0.135	09:19 hr	0.189	0.283	1.646	0.175	0.168
30	13730SMAIN	3173SMANHL	3172SMANHL	0.135	09:18 hr	0.153	0.229	0.380	0.047	0.168
31	13738SMAIN	3172SMANHL	3177SMANHL	0.136	09:25 hr	0.219	0.328	0.383	0.215	0.169
32	13739SMAIN	3177SMANHL	3178SMANHL	0.186	09:24 hr	0.233	0.280	1.218	0.171	0.186
33	13740SMAIN	3178SMANHL	3179SMANHL	0.186	09:25 hr	0.235	0.282	1.465	0.174	0.186
34	13741SMAIN	3179SMANHL	3180SMANHL	0.187	09:27 hr	0.227	0.272	1.545	0.162	0.186
35	13742SMAIN	3180SMANHL	3181SMANHL	0.187	09:28 hr	0.153	0.184	2.706	0.074	0.186
36	13743SMAIN	3181SMANHL	3183SMANHL	0.187	09:28 hr	0.115	0.138	0.337	0.026	0.187
37	13744SMAIN	3183SMANHL	3184SMANHL	0.189	09:30 hr	0.186	0.223	0.341	0.061	0.188
38	13745SMAIN	3184SMANHL	3185SMANHL	0.193	09:31 hr	0.236	0.283	1.511	0.175	0.189
39	14102SMAIN	3185SMANHL	2739SMANHL	0.193	09:32 hr	0.163	0.196	2.547	0.084	0.189
40	16398SMAIN	2739SMANHL	3747SMANHL	0.214	09:30 hr	0.136	0.109	2.714	0.025	0.178
41	16399SMAIN	3747SMANHL	2895SMANHL	0.215	09:32 hr	0.167	0.133	0.173	0.025	0.179
42	14164SMAIN	2895SMANHL	2894SMANHL	0.216	09:33 hr	0.314	0.251	0.173	0.040	0.180
43	14162SMAIN	2894SMANHL	3279SMANHL	0.913	09:24 hr	0.442	0.442	1.128	0.394	0.401
44	14115SMAIN	3279SMANHL	3278SMANHL	0.915	09:27 hr	0.492	0.492	1.129	0.438	0.401
45	14114SMAIN	3278SMANHL	3277SMANHL	1.242	09:33 hr	0.533	0.533	2.909	0.556	0.470
46	16395SMAIN	3277SMANHL	3746SMANHL	1.244	09:34 hr	0.269	0.215	1.001	0.101	0.440
47	16396SMAIN	3746SMANHL	3281SMANHL	1.264	09:34 hr	0.345	0.276	1.017	0.103	0.444
48	16401SMAIN	3281SMANHL	2698SMANHL	1.267	09:34 hr	0.423	0.339	3.449	0.247	0.444
49	12958SMAIN	2698SMANHL	2702SMANHL	1.294	09:35 hr	0.237	0.190	7.956	0.079	0.449
50	16402SMAIN	2702SMANHL	3285SMANHL	1.316	09:34 hr	0.279	0.223	1.059	0.043	0.453
51	18428SMAIN	3285SMANHL	4046SMANHL	1.699	09:34 hr	0.387	0.258	4.682	0.146	0.490
52	18429SMAIN	4046SMANHL	STOR_10	1.700	09:34 hr	0.217	0.144	10.756	0.045	0.490

Existing Wet Weather EPS Results

		ID	From ID	To ID	Maximum Flow (cfs)	Maximum Flow Time (hour)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q
1	☐	14590SMAIN	3139SMANHL	2779SMANHL	0.003	08:49 hr	0.068	0.102	0.008	0.003
2	☐	14593SMAIN	2779SMANHL	3137SMANHL	0.036	09:09 hr	0.112	0.167	0.945	0.061
3	☐	16500SMAIN	3137SMANHL	3136SMANHL	0.037	09:05 hr	0.054	0.082	2.707	0.014
4	☐	16499SMAIN	3136SMANHL	2788SMANHL	0.037	09:12 hr	0.055	0.082	2.705	0.014
5	☐	13194SMAIN	2788SMANHL	2789SMANHL	0.037	09:12 hr	0.048	0.072	0.104	0.010
6	☐	13195SMAIN	2789SMANHL	2785SMANHL	0.037	09:14 hr	0.074	0.111	0.104	0.011
7	☐	13192SMAIN	2785SMANHL	2781SMANHL	0.037	09:18 hr	0.100	0.149	1.127	0.048
8	☐	13189SMAIN	2781SMANHL	2782SMANHL	0.037	09:19 hr	0.099	0.149	1.127	0.048
9	☐	13190SMAIN	2782SMANHL	2783SMANHL	0.037	09:16 hr	0.058	0.087	0.104	0.012
10	☐	13191SMAIN	2783SMANHL	2784SMANHL	0.037	09:18 hr	0.079	0.118	0.104	0.020
11	☐	16404SMAIN	2784SMANHL	3748SMANHL	0.114	09:23 hr	0.092	0.138	3.898	0.041
12	☐	16405SMAIN	3748SMANHL	2808SMANHL	0.114	09:22 hr	0.132	0.198	0.322	0.041
13	☐	13216SMAIN	2808SMANHL	2807SMANHL	0.114	09:22 hr	0.174	0.261	1.572	0.149
14	☐	13778SMAIN	2807SMANHL	3206SMANHL	0.116	09:24 hr	0.127	0.191	0.328	0.048
15	☐	13780SMAIN	3206SMANHL	3207SMANHL	0.118	09:24 hr	0.157	0.236	1.873	0.122
16	☐	13777SMAIN	3207SMANHL	2812SMANHL	0.120	09:28 hr	0.132	0.197	0.339	0.055
17	☐	13220SMAIN	2812SMANHL	2797SMANHL	0.123	09:26 hr	0.158	0.237	1.927	0.124
18		13204SMAIN	2797SMANHL	2796SMANHL	0.150	09:26 hr	0.148	0.222	0.427	0.067
19	☐	13212SMAIN	2796SMANHL	2805SMANHL	0.154	09:27 hr	0.191	0.286	0.438	0.161
20	☐	13213SMAIN	2805SMANHL	2802SMANHL	0.156	09:30 hr	0.202	0.303	1.738	0.200
21	☐	13227SMAIN	2802SMANHL	2816SMANHL	0.210	09:21 hr	0.191	0.286	0.597	0.101
22	☐	13228SMAIN	2816SMANHL	2817SMANHL	0.213	09:20 hr	0.241	0.362	0.605	0.278
23	☐	13725SMAIN	2817SMANHL	3168SMANHL	0.216	09:22 hr	0.244	0.366	1.866	0.286
24	☐	13724SMAIN	3168SMANHL	3167SMANHL	0.218	09:21 hr	0.205	0.308	2.381	0.205
25	☐	13723SMAIN	3167SMANHL	3166SMANHL	0.218	09:25 hr	0.153	0.229	3.612	0.115
26	☐	13734SMAIN	3166SMANHL	3176SMANHL	0.271	09:20 hr	0.152	0.227	0.770	0.112
27	☐	13733SMAIN	3176SMANHL	3175SMANHL	0.282	09:17 hr	0.206	0.310	0.799	0.117
28	☐	13732SMAIN	3175SMANHL	3174SMANHL	0.283	09:17 hr	0.269	0.404	0.804	0.323
29	☐	13731SMAIN	3174SMANHL	3173SMANHL	0.284	09:19 hr	0.280	0.421	2.030	0.369
30	☐	13730SMAIN	3173SMANHL	3172SMANHL	0.284	09:18 hr	0.227	0.340	0.807	0.100
31	☐	13738SMAIN	3172SMANHL	3177SMANHL	0.285	09:25 hr	0.320	0.481	0.810	0.450
32	☐	13739SMAIN	3177SMANHL	3178SMANHL	0.363	09:24 hr	0.331	0.397	0.659	0.333
33	☐	13740SMAIN	3178SMANHL	3179SMANHL	0.363	09:25 hr	0.335	0.401	1.770	0.339
34	☐	13741SMAIN	3179SMANHL	3180SMANHL	0.364	09:27 hr	0.322	0.386	1.867	0.316
35	☐	13742SMAIN	3180SMANHL	3181SMANHL	0.364	09:28 hr	0.213	0.256	3.296	0.143
36	☐	13743SMAIN	3181SMANHL	3183SMANHL	0.364	09:28 hr	0.159	0.191	0.662	0.050
37	☐	13744SMAIN	3183SMANHL	3184SMANHL	0.366	09:30 hr	0.262	0.314	0.666	0.117
38	☐	13745SMAIN	3184SMANHL	3185SMANHL	0.370	09:31 hr	0.333	0.399	1.816	0.336
39	☐	14102SMAIN	3185SMANHL	2739SMANHL	0.370	09:32 hr	0.226	0.271	3.084	0.161
40	☐	16398SMAIN	2739SMANHL	3747SMANHL	0.431	09:30 hr	0.190	0.152	3.643	0.050
41	☐	16399SMAIN	3747SMANHL	2895SMANHL	0.432	09:32 hr	0.283	0.227	0.349	0.050
42	☐	14164SMAIN	2895SMANHL	2894SMANHL	0.433	09:33 hr	0.492	0.393	0.350	0.080
43	☐	14162SMAIN	2894SMANHL	3279SMANHL	1.610	09:24 hr	0.628	0.628	2.329	0.694
44	☐	14115SMAIN	3279SMANHL	3278SMANHL	1.612	09:27 hr	0.705	0.705	2.017	0.771
45	☐	14114SMAIN	3278SMANHL	3277SMANHL	2.078	09:33 hr	0.764	0.764	3.226	0.931
46	☐	16395SMAIN	3277SMANHL	3746SMANHL	2.080	09:34 hr	0.348	0.279	1.682	0.170
47	☐	16396SMAIN	3746SMANHL	3281SMANHL	2.115	09:34 hr	0.454	0.363	1.711	0.172
48	☐	16401SMAIN	3281SMANHL	2698SMANHL	2.118	09:34 hr	0.560	0.448	3.970	0.413
49		12958SMAIN	2698SMANHL	2702SMANHL	2.160	09:35 hr	0.306	0.245	9.254	0.131
50	☐	16402SMAIN	2702SMANHL	3285SMANHL	2.182	09:34 hr	0.360	0.288	1.764	0.071
51	☐	18428SMAIN	3285SMANHL	4046SMANHL	2.782	09:34 hr	0.499	0.333	5.396	0.239
52	☐	18429SMAIN	4046SMANHL	STOR_10	2.783	09:34 hr	0.275	0.184	12.472	0.074

Existing plus Fox Point Dry Weather EPS Results

	ID	From ID	To ID	Maximum Flow (cfs)	Maximum Flow Time (hour)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q
1	14590SMAIN	3139SMANHL	2779SMANHL	0.115	09:02 hr	0.179	0.269	0.327	0.117
2	14593SMAIN	2779SMANHL	3137SMANHL	0.124	09:04 hr	0.206	0.310	1.348	0.208
3	16500SMAIN	3137SMANHL	3136SMANHL	0.125	09:04 hr	0.098	0.147	3.904	0.046
4	16499SMAIN	3136SMANHL	2788SMANHL	0.125	09:05 hr	0.098	0.147	3.900	0.047
5	13194SMAIN	2788SMANHL	2789SMANHL	0.125	09:07 hr	0.086	0.129	0.352	0.034
6	13195SMAIN	2789SMANHL	2785SMANHL	0.125	09:07 hr	0.134	0.200	0.351	0.038
7	13192SMAIN	2785SMANHL	2781SMANHL	0.125	09:10 hr	0.182	0.273	1.605	0.163
8	13189SMAIN	2781SMANHL	2782SMANHL	0.125	09:13 hr	0.182	0.273	1.602	0.163
9	13190SMAIN	2782SMANHL	2783SMANHL	0.125	09:13 hr	0.103	0.155	0.346	0.040
10	13191SMAIN	2783SMANHL	2784SMANHL	0.125	09:14 hr	0.119	0.178	2.932	0.069
11	16404SMAIN	2784SMANHL	3748SMANHL	0.146	09:15 hr	0.104	0.156	4.172	0.053
12	16405SMAIN	3748SMANHL	2808SMANHL	0.146	09:16 hr	0.148	0.222	0.404	0.053
13	13216SMAIN	2808SMANHL	2807SMANHL	0.147	09:18 hr	0.198	0.297	1.674	0.192
14	13778SMAIN	2807SMANHL	3206SMANHL	0.149	09:19 hr	0.142	0.213	0.408	0.061
15	13780SMAIN	3206SMANHL	3207SMANHL	0.151	09:21 hr	0.178	0.267	1.993	0.156
16	13777SMAIN	3207SMANHL	2812SMANHL	0.152	09:22 hr	0.146	0.219	0.419	0.070
17	13220SMAIN	2812SMANHL	2797SMANHL	0.155	09:24 hr	0.178	0.268	2.046	0.157
18	13204SMAIN	2797SMANHL	2796SMANHL	0.161	09:26 hr	0.151	0.226	0.443	0.072
19	13212SMAIN	2796SMANHL	2805SMANHL	0.165	09:27 hr	0.194	0.292	0.454	0.172
20	13213SMAIN	2805SMANHL	2802SMANHL	0.167	09:30 hr	0.209	0.314	1.759	0.214
21	13227SMAIN	2802SMANHL	2816SMANHL	0.197	09:31 hr	0.182	0.274	0.545	0.095
22	13228SMAIN	2816SMANHL	2817SMANHL	0.200	09:34 hr	0.232	0.349	0.555	0.261
23	13725SMAIN	2817SMANHL	3168SMANHL	0.203	09:37 hr	0.236	0.354	1.825	0.268
24	13724SMAIN	3168SMANHL	3167SMANHL	0.204	09:38 hr	0.198	0.298	2.329	0.193
25	13723SMAIN	3167SMANHL	3166SMANHL	0.205	09:39 hr	0.148	0.222	3.532	0.108
26	13734SMAIN	3166SMANHL	3176SMANHL	0.233	09:39 hr	0.140	0.210	0.653	0.096
27	13733SMAIN	3176SMANHL	3175SMANHL	0.243	09:40 hr	0.190	0.285	0.682	0.101
28	13732SMAIN	3175SMANHL	3174SMANHL	0.245	09:41 hr	0.247	0.371	0.688	0.280
29	13731SMAIN	3174SMANHL	3173SMANHL	0.245	09:41 hr	0.259	0.388	1.948	0.319
30	13730SMAIN	3173SMANHL	3172SMANHL	0.246	09:42 hr	0.209	0.314	0.693	0.086
31	13738SMAIN	3172SMANHL	3177SMANHL	0.247	09:47 hr	0.291	0.436	0.699	0.389
32	13739SMAIN	3177SMANHL	3178SMANHL	0.295	09:50 hr	0.297	0.356	1.346	0.271
33	13740SMAIN	3178SMANHL	3179SMANHL	0.295	09:52 hr	0.299	0.359	1.675	0.276
34	13741SMAIN	3179SMANHL	3180SMANHL	0.295	09:52 hr	0.288	0.345	1.767	0.256
35	13742SMAIN	3180SMANHL	3181SMANHL	0.296	09:55 hr	0.192	0.230	3.110	0.117
36	13743SMAIN	3181SMANHL	3183SMANHL	0.296	09:54 hr	0.144	0.173	0.542	0.041
37	13744SMAIN	3183SMANHL	3184SMANHL	0.298	09:56 hr	0.236	0.283	0.546	0.096
38	13745SMAIN	3184SMANHL	3185SMANHL	0.301	09:58 hr	0.298	0.357	1.721	0.273
39	14102SMAIN	3185SMANHL	2739SMANHL	0.302	09:57 hr	0.204	0.245	2.915	0.131
40	16398SMAIN	2739SMANHL	3747SMANHL	0.321	09:56 hr	0.165	0.132	3.298	0.037
41	16399SMAIN	3747SMANHL	2895SMANHL	0.323	09:59 hr	0.196	0.157	0.263	0.037
42	14164SMAIN	2895SMANHL	2894SMANHL	0.324	09:58 hr	0.342	0.274	0.264	0.060
43	14162SMAIN	2894SMANHL	3279SMANHL	1.015	09:27 hr	0.472	0.472	1.263	0.437
44	14115SMAIN	3279SMANHL	3278SMANHL	1.016	09:29 hr	0.522	0.522	1.269	0.486
45	14114SMAIN	3278SMANHL	3277SMANHL	1.345	09:36 hr	0.560	0.560	2.968	0.602
46	16395SMAIN	3277SMANHL	3746SMANHL	1.347	09:37 hr	0.280	0.224	1.090	0.110
47	16396SMAIN	3746SMANHL	3281SMANHL	1.367	09:37 hr	0.360	0.288	1.106	0.111
48	16401SMAIN	3281SMANHL	2698SMANHL	1.369	09:38 hr	0.441	0.353	3.530	0.267
49	12958SMAIN	2698SMANHL	2702SMANHL	1.396	09:38 hr	0.246	0.197	8.149	0.085
50	16402SMAIN	2702SMANHL	3285SMANHL	1.419	09:37 hr	0.289	0.231	1.147	0.046
51	18428SMAIN	3285SMANHL	4046SMANHL	1.801	09:35 hr	0.399	0.266	4.767	0.155
52	18429SMAIN	4046SMANHL	STOR_10	1.803	09:35 hr	0.223	0.149	10.959	0.048

Existing plus Fox Point Wet Weather EPS Results

	ID	From ID	To ID	Maximum Flow (cfs)	Maximum Flow Time (hour)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q
1	14590SMAIN	3139SMANHL	2779SMANHL	0.115	09:02 hr	0.189	0.284	0.327	0.117
2	14593SMAIN	2779SMANHL	3137SMANHL	0.148	09:04 hr	0.226	0.340	1.417	0.248
3	16500SMAIN	3137SMANHL	3136SMANHL	0.149	09:04 hr	0.107	0.160	4.116	0.055
4	16499SMAIN	3136SMANHL	2788SMANHL	0.149	09:05 hr	0.107	0.160	4.112	0.055
5	13194SMAIN	2788SMANHL	2789SMANHL	0.149	09:07 hr	0.093	0.140	0.420	0.041
6	13195SMAIN	2789SMANHL	2785SMANHL	0.149	09:07 hr	0.146	0.219	0.420	0.045
7	13192SMAIN	2785SMANHL	2781SMANHL	0.149	09:10 hr	0.199	0.299	1.689	0.194
8	13189SMAIN	2781SMANHL	2782SMANHL	0.149	09:13 hr	0.199	0.299	1.687	0.194
9	13190SMAIN	2782SMANHL	2783SMANHL	0.149	09:13 hr	0.113	0.169	0.415	0.048
10	13191SMAIN	2783SMANHL	2784SMANHL	0.149	09:14 hr	0.129	0.194	3.093	0.083
11	16404SMAIN	2784SMANHL	3748SMANHL	0.225	09:15 hr	0.128	0.193	4.758	0.081
12	16405SMAIN	3748SMANHL	2808SMANHL	0.225	09:16 hr	0.186	0.278	0.630	0.081
13	13216SMAIN	2808SMANHL	2807SMANHL	0.226	09:18 hr	0.248	0.372	1.896	0.295
14	13778SMAIN	2807SMANHL	3206SMANHL	0.228	09:19 hr	0.177	0.265	0.635	0.093
15	13780SMAIN	3206SMANHL	3207SMANHL	0.230	09:21 hr	0.221	0.332	2.255	0.238
16	13777SMAIN	3207SMANHL	2812SMANHL	0.231	09:22 hr	0.181	0.272	0.645	0.107
17	13220SMAIN	2812SMANHL	2797SMANHL	0.234	09:24 hr	0.221	0.331	2.308	0.236
18	13204SMAIN	2797SMANHL	2796SMANHL	0.262	09:26 hr	0.194	0.292	0.733	0.117
19	13212SMAIN	2796SMANHL	2805SMANHL	0.266	09:27 hr	0.252	0.377	0.743	0.277
20	13213SMAIN	2805SMANHL	2802SMANHL	0.268	09:30 hr	0.269	0.404	2.012	0.344
21	13227SMAIN	2802SMANHL	2816SMANHL	0.322	09:31 hr	0.238	0.357	0.903	0.155
22	13228SMAIN	2816SMANHL	2817SMANHL	0.325	09:34 hr	0.303	0.455	0.914	0.424
23	13725SMAIN	2817SMANHL	3168SMANHL	0.328	09:37 hr	0.307	0.460	2.082	0.433
24	13724SMAIN	3168SMANHL	3167SMANHL	0.329	09:38 hr	0.255	0.383	2.667	0.311
25	13723SMAIN	3167SMANHL	3166SMANHL	0.330	09:39 hr	0.188	0.282	4.063	0.174
26	13734SMAIN	3166SMANHL	3176SMANHL	0.382	09:39 hr	0.179	0.269	1.080	0.157
27	13733SMAIN	3176SMANHL	3175SMANHL	0.392	09:40 hr	0.246	0.369	1.109	0.163
28	13732SMAIN	3175SMANHL	3174SMANHL	0.394	09:41 hr	0.324	0.486	1.115	0.450
29	13731SMAIN	3174SMANHL	3173SMANHL	0.394	09:41 hr	0.338	0.508	2.210	0.513
30	13730SMAIN	3173SMANHL	3172SMANHL	0.395	09:42 hr	0.273	0.410	1.119	0.138
31	13738SMAIN	3172SMANHL	3177SMANHL	0.396	09:47 hr	0.382	0.572	1.126	0.624
32	13739SMAIN	3177SMANHL	3178SMANHL	0.472	09:50 hr	0.384	0.461	0.861	0.433
33	13740SMAIN	3178SMANHL	3179SMANHL	0.472	09:52 hr	0.387	0.465	1.901	0.441
34	13741SMAIN	3179SMANHL	3180SMANHL	0.472	09:52 hr	0.372	0.446	2.007	0.410
35	13742SMAIN	3180SMANHL	3181SMANHL	0.473	09:55 hr	0.244	0.292	3.561	0.186
36	13743SMAIN	3181SMANHL	3183SMANHL	0.473	09:54 hr	0.182	0.218	0.867	0.065
37	13744SMAIN	3183SMANHL	3184SMANHL	0.475	09:56 hr	0.302	0.362	0.871	0.152
38	13745SMAIN	3184SMANHL	3185SMANHL	0.478	09:58 hr	0.384	0.461	1.948	0.434
39	14102SMAIN	3185SMANHL	2739SMANHL	0.479	09:57 hr	0.258	0.310	3.327	0.208
40	16398SMAIN	2739SMANHL	3747SMANHL	0.538	09:56 hr	0.212	0.170	3.906	0.063
41	16399SMAIN	3747SMANHL	2895SMANHL	0.540	09:59 hr	0.309	0.247	0.440	0.062
42	14164SMAIN	2895SMANHL	2894SMANHL	0.541	09:58 hr	0.519	0.415	0.441	0.100
43	14162SMAIN	2894SMANHL	3279SMANHL	1.712	09:27 hr	0.658	0.658	2.329	0.738
44	14115SMAIN	3279SMANHL	3278SMANHL	1.713	09:29 hr	0.740	0.740	2.157	0.820
45	14114SMAIN	3278SMANHL	3277SMANHL	2.181	09:36 hr	0.800	0.800	3.239	0.977
46	16395SMAIN	3277SMANHL	3746SMANHL	2.183	09:37 hr	0.358	0.286	1.771	0.178
47	16396SMAIN	3746SMANHL	3281SMANHL	2.218	09:37 hr	0.466	0.373	1.799	0.181
48	16401SMAIN	3281SMANHL	2698SMANHL	2.220	09:38 hr	0.575	0.460	4.022	0.433
49	12958SMAIN	2698SMANHL	2702SMANHL	2.262	09:38 hr	0.313	0.251	9.388	0.138
50	16402SMAIN	2702SMANHL	3285SMANHL	2.285	09:37 hr	0.368	0.294	1.853	0.074
51	18428SMAIN	3285SMANHL	4046SMANHL	2.884	09:35 hr	0.508	0.339	5.454	0.248
52	18429SMAIN	4046SMANHL	STOR_10	2.886	09:35 hr	0.280	0.187	12.616	0.076

Ultimate Dry Weather EPS Results

		ID	From ID	To ID	Maximum Flow (cfs)	Maximum Flow Time (hour)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q
1	☐	14590SMAIN	3139SMANHL	2779SMANHL	0.115	09:02 hr	0.179	0.269	0.327	0.117
2	☐	14593SMAIN	2779SMANHL	3137SMANHL	0.124	09:04 hr	0.206	0.310	1.348	0.208
3	☐	16500SMAIN	3137SMANHL	3136SMANHL	0.125	09:04 hr	0.098	0.147	3.904	0.046
4	☐	16499SMAIN	3136SMANHL	2788SMANHL	0.125	09:05 hr	0.098	0.147	3.900	0.047
5	☐	13194SMAIN	2788SMANHL	2789SMANHL	0.125	09:07 hr	0.086	0.129	0.352	0.034
6	☐	13195SMAIN	2789SMANHL	2785SMANHL	0.125	09:07 hr	0.134	0.200	0.351	0.038
7	☐	13192SMAIN	2785SMANHL	2781SMANHL	0.125	09:10 hr	0.182	0.273	1.605	0.163
8	☐	13189SMAIN	2781SMANHL	2782SMANHL	0.125	09:13 hr	0.182	0.273	1.602	0.163
9	☐	13190SMAIN	2782SMANHL	2783SMANHL	0.125	09:13 hr	0.103	0.155	0.346	0.040
10	☐	13191SMAIN	2783SMANHL	2784SMANHL	0.125	09:14 hr	0.119	0.178	2.932	0.069
11	☐	16404SMAIN	2784SMANHL	3748SMANHL	0.148	09:14 hr	0.105	0.157	4.186	0.053
12	☐	16405SMAIN	3748SMANHL	2808SMANHL	0.148	09:16 hr	0.149	0.223	0.409	0.053
13	☐	13216SMAIN	2808SMANHL	2807SMANHL	0.149	09:18 hr	0.199	0.299	1.680	0.194
14	☐	13778SMAIN	2807SMANHL	3206SMANHL	0.150	09:19 hr	0.143	0.214	0.413	0.062
15	☐	13780SMAIN	3206SMANHL	3207SMANHL	0.153	09:21 hr	0.179	0.268	1.999	0.158
16	☐	13777SMAIN	3207SMANHL	2812SMANHL	0.154	09:22 hr	0.147	0.220	0.423	0.071
17	☐	13220SMAIN	2812SMANHL	2797SMANHL	0.157	09:24 hr	0.179	0.269	2.052	0.158
18	☐	13204SMAIN	2797SMANHL	2796SMANHL	0.163	09:26 hr	0.152	0.227	0.448	0.073
19	☐	13212SMAIN	2796SMANHL	2805SMANHL	0.167	09:27 hr	0.195	0.293	0.459	0.174
20	☐	13213SMAIN	2805SMANHL	2802SMANHL	0.168	09:30 hr	0.210	0.316	1.763	0.216
21	☐	13227SMAIN	2802SMANHL	2816SMANHL	0.213	09:31 hr	0.190	0.285	0.591	0.102
22	☐	13228SMAIN	2816SMANHL	2817SMANHL	0.216	09:34 hr	0.242	0.364	0.601	0.282
23	☐	13725SMAIN	2817SMANHL	3168SMANHL	0.221	09:36 hr	0.247	0.370	1.868	0.292
24	☐	13724SMAIN	3168SMANHL	3167SMANHL	0.222	09:38 hr	0.207	0.311	2.384	0.210
25	☐	13723SMAIN	3167SMANHL	3166SMANHL	0.293	09:38 hr	0.177	0.266	3.918	0.155
26	☐	13734SMAIN	3166SMANHL	3176SMANHL	0.321	09:37 hr	0.164	0.246	0.902	0.132
27	☐	13733SMAIN	3176SMANHL	3175SMANHL	0.332	09:38 hr	0.224	0.336	0.932	0.138
28	☐	13732SMAIN	3175SMANHL	3174SMANHL	0.333	09:37 hr	0.293	0.439	0.937	0.380
29	☐	13731SMAIN	3174SMANHL	3173SMANHL	0.334	09:39 hr	0.307	0.461	2.113	0.434
30	☐	13730SMAIN	3173SMANHL	3172SMANHL	0.334	09:39 hr	0.247	0.371	0.939	0.117
31	☐	13738SMAIN	3172SMANHL	3177SMANHL	0.335	09:46 hr	0.345	0.517	1.835	0.529
32	☐	13739SMAIN	3177SMANHL	3178SMANHL	0.384	09:39 hr	0.341	0.410	1.476	0.352
33	☐	13740SMAIN	3178SMANHL	3179SMANHL	0.384	09:45 hr	0.345	0.414	1.798	0.358
34	☐	13741SMAIN	3179SMANHL	3180SMANHL	0.384	09:41 hr	0.331	0.398	1.898	0.333
35	☐	13742SMAIN	3180SMANHL	3181SMANHL	0.384	09:48 hr	0.219	0.263	3.354	0.151
36	☐	13743SMAIN	3181SMANHL	3183SMANHL	0.385	09:46 hr	0.164	0.197	0.703	0.053
37	☐	13744SMAIN	3183SMANHL	3184SMANHL	0.387	09:45 hr	0.270	0.324	0.708	0.124
38	☐	13745SMAIN	3184SMANHL	3185SMANHL	0.390	09:47 hr	0.342	0.411	1.846	0.354
39	☐	14102SMAIN	3185SMANHL	2739SMANHL	0.390	09:49 hr	0.232	0.279	3.139	0.170
40	☐	16398SMAIN	2739SMANHL	3747SMANHL	0.412	09:43 hr	0.186	0.149	3.589	0.048
41	☐	16399SMAIN	3747SMANHL	2895SMANHL	0.414	09:45 hr	0.246	0.197	0.337	0.048
42	☐	14164SMAIN	2895SMANHL	2894SMANHL	0.415	09:46 hr	0.420	0.336	0.338	0.077
43	☐	14162SMAIN	2894SMANHL	3279SMANHL	1.331	09:24 hr	0.553	0.553	1.651	0.574
44	☐	14115SMAIN	3279SMANHL	3278SMANHL	1.333	09:27 hr	0.607	0.607	1.656	0.638
45	☐	14114SMAIN	3278SMANHL	3277SMANHL	1.684	09:32 hr	0.649	0.649	3.115	0.755
46	☐	16395SMAIN	3277SMANHL	3746SMANHL	1.687	09:33 hr	0.313	0.251	1.358	0.138
47	☐	16396SMAIN	3746SMANHL	3281SMANHL	1.716	09:33 hr	0.405	0.324	1.382	0.140
48	☐	16401SMAIN	3281SMANHL	2698SMANHL	1.719	09:34 hr	0.499	0.399	3.751	0.335
49	☐	12958SMAIN	2698SMANHL	2702SMANHL	1.756	09:34 hr	0.276	0.221	8.703	0.107
50	☐	16402SMAIN	2702SMANHL	3285SMANHL	1.779	09:33 hr	0.326	0.261	1.431	0.058
51	☐	18428SMAIN	3285SMANHL	4046SMANHL	2.312	09:33 hr	0.453	0.302	5.115	0.198
52	☐	18429SMAIN	4046SMANHL	STOR_10	2.314	09:33 hr	0.252	0.168	11.791	0.061

Ultimate Wet Weather EPS Results

	ID	From ID	To ID	Maximum Flow (cfs)	Maximum Flow Time (hour)	Maximum Adjusted Depth (ft)	Maximum Adjusted d/D	Maximum Adjusted Velocity (ft/s)	Maximum q/Q
1	14590SMAIN	3139SMANHL	2779SMANHL	0.115	09:02 hr	0.189	0.284	0.327	0.117
2	14593SMAIN	2779SMANHL	3137SMANHL	0.148	09:04 hr	0.226	0.340	1.417	0.248
3	16500SMAIN	3137SMANHL	3136SMANHL	0.149	09:04 hr	0.107	0.160	4.116	0.055
4	16499SMAIN	3136SMANHL	2788SMANHL	0.149	09:05 hr	0.107	0.160	4.112	0.055
5	13194SMAIN	2788SMANHL	2789SMANHL	0.149	09:07 hr	0.093	0.140	0.420	0.041
6	13195SMAIN	2789SMANHL	2785SMANHL	0.149	09:07 hr	0.146	0.219	0.420	0.045
7	13192SMAIN	2785SMANHL	2781SMANHL	0.149	09:10 hr	0.199	0.299	1.689	0.194
8	13189SMAIN	2781SMANHL	2782SMANHL	0.149	09:13 hr	0.199	0.299	1.687	0.194
9	13190SMAIN	2782SMANHL	2783SMANHL	0.149	09:13 hr	0.113	0.169	0.415	0.048
10	13191SMAIN	2783SMANHL	2784SMANHL	0.149	09:14 hr	0.129	0.194	3.093	0.083
11	16404SMAIN	2784SMANHL	3748SMANHL	0.227	09:14 hr	0.129	0.193	4.768	0.082
12	16405SMAIN	3748SMANHL	2808SMANHL	0.227	09:16 hr	0.186	0.280	0.635	0.082
13	13216SMAIN	2808SMANHL	2807SMANHL	0.228	09:18 hr	0.249	0.374	1.900	0.297
14	13778SMAIN	2807SMANHL	3206SMANHL	0.229	09:19 hr	0.178	0.266	0.639	0.094
15	13780SMAIN	3206SMANHL	3207SMANHL	0.232	09:21 hr	0.222	0.333	2.259	0.239
16	13777SMAIN	3207SMANHL	2812SMANHL	0.233	09:22 hr	0.182	0.273	0.650	0.107
17	13220SMAIN	2812SMANHL	2797SMANHL	0.236	09:24 hr	0.221	0.332	2.313	0.238
18	13204SMAIN	2797SMANHL	2796SMANHL	0.264	09:26 hr	0.195	0.293	0.737	0.117
19	13212SMAIN	2796SMANHL	2805SMANHL	0.268	09:27 hr	0.252	0.379	0.748	0.279
20	13213SMAIN	2805SMANHL	2802SMANHL	0.269	09:30 hr	0.270	0.406	2.016	0.346
21	13227SMAIN	2802SMANHL	2816SMANHL	0.338	09:31 hr	0.244	0.366	0.949	0.162
22	13228SMAIN	2816SMANHL	2817SMANHL	0.341	09:34 hr	0.312	0.468	0.959	0.446
23	13725SMAIN	2817SMANHL	3168SMANHL	0.346	09:36 hr	0.316	0.474	2.110	0.457
24	13724SMAIN	3168SMANHL	3167SMANHL	0.347	09:38 hr	0.263	0.394	2.705	0.328
25	13723SMAIN	3167SMANHL	3166SMANHL	0.418	09:38 hr	0.213	0.319	4.343	0.220
26	13734SMAIN	3166SMANHL	3176SMANHL	0.470	09:37 hr	0.199	0.299	1.329	0.194
27	13733SMAIN	3176SMANHL	3175SMANHL	0.481	09:38 hr	0.276	0.413	1.358	0.200
28	13732SMAIN	3175SMANHL	3174SMANHL	0.482	09:37 hr	0.365	0.547	1.364	0.550
29	13731SMAIN	3174SMANHL	3173SMANHL	0.483	09:39 hr	0.383	0.575	2.318	0.628
30	13730SMAIN	3173SMANHL	3172SMANHL	0.483	09:39 hr	0.309	0.463	1.366	0.169
31	13738SMAIN	3172SMANHL	3177SMANHL	0.484	09:46 hr	0.436	0.654	1.996	0.764
32	13739SMAIN	3177SMANHL	3178SMANHL	0.561	09:39 hr	0.424	0.509	1.021	0.514
33	13740SMAIN	3178SMANHL	3179SMANHL	0.561	09:45 hr	0.428	0.514	1.984	0.524
34	13741SMAIN	3179SMANHL	3180SMANHL	0.561	09:41 hr	0.410	0.492	2.097	0.487
35	13742SMAIN	3180SMANHL	3181SMANHL	0.561	09:48 hr	0.266	0.320	3.736	0.221
36	13743SMAIN	3181SMANHL	3183SMANHL	0.562	09:46 hr	0.198	0.238	1.028	0.077
37	13744SMAIN	3183SMANHL	3184SMANHL	0.564	09:45 hr	0.332	0.398	1.032	0.181
38	13745SMAIN	3184SMANHL	3185SMANHL	0.567	09:47 hr	0.424	0.509	2.034	0.515
39	14102SMAIN	3185SMANHL	2739SMANHL	0.567	09:49 hr	0.282	0.339	3.488	0.247
40	16398SMAIN	2739SMANHL	3747SMANHL	0.629	09:43 hr	0.229	0.183	4.089	0.073
41	16399SMAIN	3747SMANHL	2895SMANHL	0.631	09:45 hr	0.358	0.286	0.514	0.073
42	14164SMAIN	2895SMANHL	2894SMANHL	0.632	09:46 hr	0.601	0.481	0.514	0.117
43	14162SMAIN	2894SMANHL	3279SMANHL	2.028	09:24 hr	0.748	0.748	2.538	0.874
44	14115SMAIN	3279SMANHL	3278SMANHL	2.030	09:27 hr	1.000	1.000	2.543	0.971
45	14114SMAIN	3278SMANHL	3277SMANHL	2.520	09:32 hr	1.000	1.000	3.240	1.129
46	16395SMAIN	3277SMANHL	3746SMANHL	2.523	09:33 hr	0.385	0.308	2.039	0.206
47	16396SMAIN	3746SMANHL	3281SMANHL	2.567	09:33 hr	0.505	0.404	2.075	0.209
48	16401SMAIN	3281SMANHL	2698SMANHL	2.570	09:34 hr	0.626	0.501	4.172	0.501
49	12958SMAIN	2698SMANHL	2702SMANHL	2.622	09:34 hr	0.338	0.270	9.784	0.159
50	16402SMAIN	2702SMANHL	3285SMANHL	2.645	09:33 hr	0.399	0.319	2.137	0.086
51	18428SMAIN	3285SMANHL	4046SMANHL	3.395	09:33 hr	0.555	0.370	5.701	0.291
52	18429SMAIN	4046SMANHL	STOR_10	3.397	09:33 hr	0.304	0.203	13.223	0.090