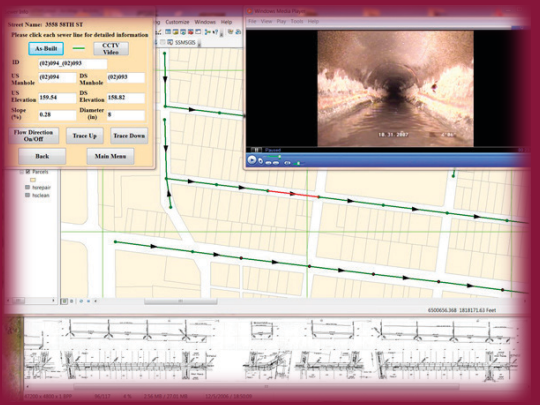
Hall & Foreman

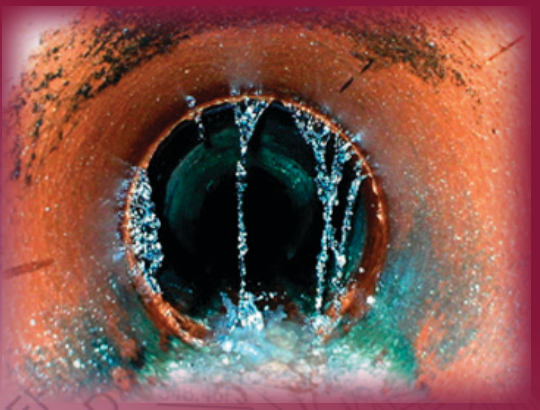
A Division of David Evans and Associates, Inc.

FINAL REPORT
Professional Services to Update Sewer System Management Plan

for the City of Norwalk

June 30, 2015





City of NORWALK

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EXECUTIVE SUMMARY

ES.1 Background

The City of Norwalk is bordered by Downey on the northwest, Bellflower on the southwest, Cerritos and Artesia on the south, and Santa Fe Springs on the north and east. The City encompasses approximately 9.7 square miles and serves approximately 106-thousand residents currently. The City was incorporated in August 1957.

The City provides sanitary wastewater conveyance for all 6,258 acres of land inside the City boundaries. The City operates its wastewater collection system under the jurisdiction of the Los Angeles Regional Water Quality Control Board, the State Water Resources Control Board, and the U.S. Environmental Protection Agency.

The City's goal is to develop a comprehensive sewer master plan that accomplishes the following three main objectives:

- Developing a GIS based sewer map and modernizing its sewer system mapping by scanning and creating digital copies of its existing sewer maps
- Identifying areas of current system capacity and structural deficiencies, if any, and areas of necessary upgrades or new systems based upon future growth and development as anticipated by the General Plan
- Identifying a timeframe, based on priority, and the cost of maintaining, repairing, replacing, upgrading, and installing of new sewer system improvements based upon the growth forecast and condition, age, and capacity of existing sewer lines

ES.2 Collection System Descriptions

The City through its Public Works Department owns, operates, and maintains a sanitary sewer collection system including approximately 164 miles (865,000 linear feet) of City sewers with sewer pipe sizes varying in diameters from 6 inches to 18 inches, of which 93% are 8-inch pipes. The collection system also includes three lift stations, with approximately 162 feet of force main that were subsequently upgraded between 1991 and 2008. Through the years, the City has continued to construct new sewers to meet new City development and redevelopment needs and to replace aged sewers as required.

The land use in the City is predominantly residential land use at 48% of the total service area while the remaining land uses include 7.5% commercial, 4.7% industrial, 7.2% institutional, 2.9% hospital, and 30% streets and open space. Of the residential land use categories, low-density is predominant at 88% of the total residential land use.

General Criteria

Establishing performance standards is an important part of evaluating existing wastewater collection systems, as it forms the basis for system analysis and system improvement recommendations. These standards include methodology for estimating wastewater design flows and minimum design standards for the collection system pipes.

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Average wastewater flows can be reasonably estimated from flow monitoring data as well as land use and their corresponding unit flow factors. Peaking factors are needed for estimating peak dry weather and peak wet weather flows. Peak wet weather flows also include an allowance for inflow / infiltration (I/I). Collection system design standards include minimum pipe size, minimum flow velocity, and depth of flow to pipe diameter ratio. Finally, facility useful lives are needed for adequately scheduling replacement of the aging infrastructure.

Sewer Design Criteria
Design criteria are established to ensure that the wastewater collection system can operate effectively under all flow conditions. Each pipe segment must be capable of carrying peak flows without surcharging the system. Low flows must be conveyed at a velocity that will prevent solids from settling and blocking the system. At a minimum, all pipes should be 8 inches or larger in diameter and the velocity of flow should be greater than 2 feet per second at average flow. This velocity will prevent deposition of solids in the sewer. A velocity of 3 feet per second is desired at peak dry weather flow, to re-suspend any materials that may have already settled in the pipe.

Sewer Basin Boundaries
For this study, H&F utilized the same sewer basin boundaries as the ones developed in its 2009 master plan report for easy comparison for any changed conditions. There are a total of four basins developed for this project.

Capacity Analysis
As part of the project, a detailed hydraulic model was developed for the entire City sewer collection system and the hydraulic model was calibrated against flow monitoring data that was measured at five strategic locations in January 2015.

Model runs were performed to simulate peak dry weather flow conditions and the model results were used to identify hydraulic capacity deficiencies within the City sewer collection system. The hydraulic capacity deficiencies were evaluated using depth to diameter ratios (d/D) criteria under peak dry weather flow conditions. In the analysis, the maximum allowable d/D ratio is set to 0.50 for sewers 15 inches in diameter or smaller and 0.64 for sewers 18 inches in diameter or greater. The selected d/D criteria are consistent with industry standards. At these d/D ratios, the sewer pipes would have additional capacity of about 50% for the smaller pipes and 25% for the larger pipes to convey inflow and infiltration (I&I) if any.

The total length of the hydraulically deficient sewers is about 3,400 feet or 0.4 percent of the entire collection system.

ES.4 CCTV Inspection & Condition Assessment

The vast majority of sewers in the City are constructed of vitrified clay pipe (VCP), and of which were constructed prior to 1960 and have been in service for over 55 years. The City has been conducting its own CCTV inspection over the years. Hall & Foreman obtained the DVD and reports for the year 2013-2014 fiscal year and reviewed approximately 170,000 linear feet of this CCTV work. The sewer CCTV inspections were conducted to identify and rate defects of the aging City sewers.

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As part of this project, the 2014 CCTV inspection reports and the videotapes were reviewed; sewer defects were rated for severity; sewers with significant structural defects were prioritized for rehabilitation or replacement; and the recommended projects were included in the Capital Improvement Program.

Sewer structural defects include cracked pipe, broken pipe, offset joints, and unauthorized service connections (break-in taps). Sewer operation and maintenance (O&M) defects including heavy roots and grease deposits can lead to sewer blockages that can then lead to overflows. Sewer defects can undermine the integrity of the sewer system infrastructure; can allow wastewater to exfiltrate into the soil and groundwater; and can allow excessive rainwater in the form of inflow and infiltration to enter the sewer leading to potential overflow conditions.

Recommended sewer repairs include all sewers with at least a Category 4 defect or a Category 5 defect (per NASSCO standards and PACP reporting) or with a significant number of a Category 3 defect. Within the CIP time frame of 10 years, sewer repairs for category 5 defects should be prioritized first. These defects are typically holes, missing pieces of pipe, severely offset joints exposing the pipe to elements, etc. A Category 4 defect is a severe fracture or breaking of the pipe that could become a Category 5 defect in the near future, or it can be a severe offset joint. A Category 3 defect is multiple cracking at a location in the pipe. Multiple cracking can continue to spread, i.e. deteriorate, over time.

ES.5 Recommended Capital Improvement Program

The primary goal of the Capital Improvement Program (CIP) is to provide the City with a long-range planning tool for implementing its sewer infrastructure improvements in an orderly manner, and providing a basis for financing of these improvements. To accomplish this goal, the program is phased based upon the implementation cost of the facilities, the quantity of work the City can reasonably administer each year, and the funds available for these projects. The needed capital improvements were identified as a result of assessment of the system through hydraulic capacity analyses and physical CCTV inspections.

The capital improvement projects were selected primarily with consideration of the health and safety of the public and protection of the environment by minimizing the possibility of overflows.

The highest priority has been assigned to the projects that will help alleviate known maintenance problems and line segments that have been shown through CCTV to be hydraulically deficient. The second priority has been assigned to projects identified by hydraulic evaluations and modeling with existing capacity deficiencies.

The recommended 10-year Sewer Capital Improvement Program is shown in Table ES-1. The total estimated cost for implementing this 10-year CIP is **$25,076,553**. This total is comprised of several components; namely the cost to upsize hydraulically deficient lines ($1,350,135), as identified through hydraulic modeling, the cost to replace structurally deficient lines ($4,348,500), as identified through CCTV inspection, complete City's CCTV inspection ($658,000), manhole inspection study ($100,000), sewer manhole repair ($300,000), SCADA master plan and upgrade ($50,000), SCADA sewer infrastructure ($150,000), inflow and infiltration study ($100,000), lift stations upgrade ($20,000), plus cost for engineering design and escalation. In addition, based on the discussions with the City, the projected sewer rehabilitation

cost of about $17.5 M for the non-CCTV'd sewers was developed and included in the total cost of $25,076,553.

This projection was based on the ratio of recommended lines for rehabilitation to the total line segments reviewed by H&F, multiplied by the remaining footage in City's sewer system that needs to be televised. Unit costs were estimated based upon recent bid information for similar projects in the Southern California area, and include a factor for contingencies. The final estimated cost was calculated based on the CCTV lengths obtained from the CCTV inspection reports, provided by the City. Moreover, 3% yearly inflation rate was factored into the cost estimate for fiscal year 2018/2019 and beyond.

The recommended CIP has been based upon the best information currently available. It should be updated as new information becomes available from sources such as CCTV inspections and from maintenance crew observations. The project priorities may be adjusted to take advantage of concurrent construction such as street paving projects or adjacent infrastructure work.

Table ES-1
Recommended 10-year CIP

CAPITAL PROJECT	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	TOTALS
Sewer Manhole Inspection Study	100,000											100,000
Sewer Manhole Repair	100,000	200,000										300,000
CCTV of Sewer Lines	200,000	200,000	258,000									658,000
SCADA Sewer Study (Master Plan)	50,000											50,000
SCADA Sewer Infrastructure (CMMS)		150,000										150,000
Inflow & Infiltration (I&I Study)	100,000											100,000
Sewer Lift Station Upgrade		20,000										20,000
Engineering Design for Sewer Line Segment Rehab Projects (Based on the new SMP)	65,000	95,000	51,233	52,770	54,353	55,984	57,663	59,393	61,175	63,010		615,581
Construction Estimate for Sewer Line Segment Rehab Projects (Based on the new SMP)	585,000	855,000	461,096	474,929	489,177	503,853	518,968	534,537	550,573	567,090		5,540,225
Engineering Design for Sewer Line Segments Rehab (Projected Structural Deficiency)			197,279	203,198	209,294	215,573	222,040	228,701	235,562	242,629		1,754,275
Construction Estimate for Sewer Line Segments Rehab (Projected Structural Deficiency)				1,775,515	1,828,780	1,883,643	1,940,153	1,998,357	2,058,308	2,120,057	2,183,659	15,788,473
Total Capital Expenses	1,200,000	1,520,000	967,609	2,506,412	2,581,604	2,659,052	2,738,824	2,820,988	2,905,618	2,992,787	2,183,659	25,076,553

CHAPTER 1 – INTRODUCTION

1.0 Introduction

Norwalk is a suburban city in Los Angeles County, California. Founded in the late 19th century, Norwalk was incorporated as a city in 1957. It is located 17 miles (27 km) southeast of downtown Los Angeles. The population was 105,549 at the 2010 census, up from 103,298 at the 2000 census. It is the 64th most populous city in California.

The City of Norwalk (City) through its Public Works Department owns, operates, and maintains a sanitary sewer collection system with approximately 164 miles (865,000 linear feet) of City sewers with sewer pipe sizes varying in diameter from 6 inches to 18 inches. There are also three lift stations and approximately 160 linear feet of force mains in the system. The operating sewers date back to the 1920s with the majority of City sewers constructed in the 1950s during the largest City growth phase. Through the years, the City has continued to construct new sewers to meet new City development and redevelopment needs and to replace aged sewers as required. The City upgraded all three lift stations between 1991 and 2008.

The City provides sanitary wastewater conveyance for all 6,258 acres of land inside the City boundaries. The predominant land use in the City is residential land use at 48% of the total land use (3,025 acres) that is made up of low-density, medium-density, and high-density residential land use categories. Of the residential land use categories, low-density is predominant at 88% of the total residential land use.

Although the City is almost fully developed, re-development projects are ongoing and planned. The City has identified the San Antonio Village as a proposed Neighborhood Revitalization Strategy Area (NRSA). Improvements to this area include housing and neighborhood development, infrastructure, public safety, code enforcement, zoning and land use, and economic development. With respect to sewer capacity, the project developer is responsible for upgrading sewer mains to hold increased sewage. As a result there is or will be sufficient sewer capacity to accommodate the incremental increase in housing units.

The City operates its wastewater collection system under the jurisdiction of the Los Angeles Regional Water Quality Control Board, the State Water Resources Control Board, and the U.S. Environmental Protection Agency.

The City contracted with Hall & Foreman to prepare a Sewer System Master Plan, which is presented herein.

1.1 Objectives of Master Plan

The objectives of the Master Plan are as follows:

- Document City land use, existing and future City re-development projects, and develop a City GIS land use map in order to estimate wastewater generation across the City relating to the various land use types in the City, and then allocate wastewater generation in the City's hydraulic model of their wastewater collection system.

- Document historical City population growth and housing, and document future City population and housing estimates in order to estimate wastewater generation across the City consistent with typical per-capital and per-household wastewater generation.

- The City's sewer system base maps was reviewed and updated to reflect correct pipe attribute data.

- Through the review of as-built drawings, atlas maps, and other records develop a horizontal and vertical Geographic Information System (GIS) representation of the City's collection system populating the GIS database with collection system attribute data including sewer diameters, sewer lengths, sewer invert elevations, sewer slopes, sewer construction materials, sewer installation dates, manhole invert elevations, manhole rim elevations, manhole diameters and other connecting collection appurtenances.

- Through the GIS data, characterize the quantities and locations of sewers by diameter, material of construction, and installation year.

- Conduct temporary sewer flow monitoring at four locations in the City for two consecutive weeks in order to characterize average and peak wastewater flows across the City, develop unit wastewater generation by land use types, and on a per-capita basis, and input flows into the City's hydraulic model of their wastewater collection system.

- Document current strategies and methods to rehabilitate sanitary sewer infrastructure components and develop planning-level unit costs for these rehabilitation methods in order develop project costs in the recommended Capital Improvement Program.

- Review Closed Circuit Television (CCTV) inspection reports and videotapes in order to identify structural and operation and maintenance defects; rate defects; and then incorporate recommended improvements into the Capital Improvement Program.

- Utilize state-of-the-art hydraulic analysis software in conjunction with City sewer system GIS to develop a hydraulic model of the City's sanitary sewer system in order to evaluate hydraulic system performance and identify hydraulic deficiencies.

- Establish sanitary sewer analysis criteria for maximum depth of flow in the pipe, minimum pipe velocity at peak dry-weather flow, minimum pipe slope, and pipe friction factors.

- Based on the hydraulic deficiencies identified, develop hydraulic capacity improvement projects for incorporation into the recommended Capital Improvement Program.

- Conduct the Master Plan work in consideration of SSMP requirements

- Based on project evaluations, investigations, and hydraulic analyses recommend project improvements, develop planning-level project cost estimates, and implement the projects into a scheduled 10-year Capital Improvement Program.

1.2 Definitions and Abbreviations

This section contains definitions and abbreviations commonly used throughout this report.

CHAPTER 1 – INTRODUCTION

Infiltration (as defined by USEPA) - the water entering a sewer system and service connections from the ground through such means as, but not limited to, defective pipes, pipe joints, service connections, service laterals, or manhole walls.

Inflow (as defined by USEPA) - the water discharged into a sewer system, including service connections, from such sources as roof leaders; cellar, yard, and area drains; foundation drains; cooling water discharges; drains from springs and swampy areas; manhole covers; cross connections from storm sewers, combined sewers, or catch basins; storm waters; surface runoff; or drainage.

Excessive Infiltration and Inflow (I/I) - the extraneous clean water that enters the sanitary sewer system which can be eliminated on a cost-effective basis.

Minimum Monitored Flow - wastewater flow during dry-weather/low groundwater periods. Includes wastewater flow from water consumption and permanent infiltration.

Base Flow - wastewater flow exclusive of infiltration or inflow. Generally determined from water records during months when most of the water consumption is returned to the wastewater collection system.

Base Flow Peaking Factor - the ratio between peak hourly flow rate and average daily flow.

Permanent Infiltration - the difference between minimum monitored flow (dry-weather/low groundwater) and base flow as determined from water billing records. Assumed to occur 365 days per year.

Peak Infiltration - the maximum extraneous flow that enters the wastewater collection system during high groundwater conditions after the inflow effects of a rain event have ended.

Total Peak Infiltration - the sum of peak infiltration and permanent infiltration.

Relief Sewer - a new sewer required to transport projected flows during a design storm event without surcharge.

gpd - gallons per day.

gpd/ac - gallons per day per acre

mgd - million gallons per day.

O&M cost - operation and maintenance cost.

CHAPTER 1 – INTRODUCTION

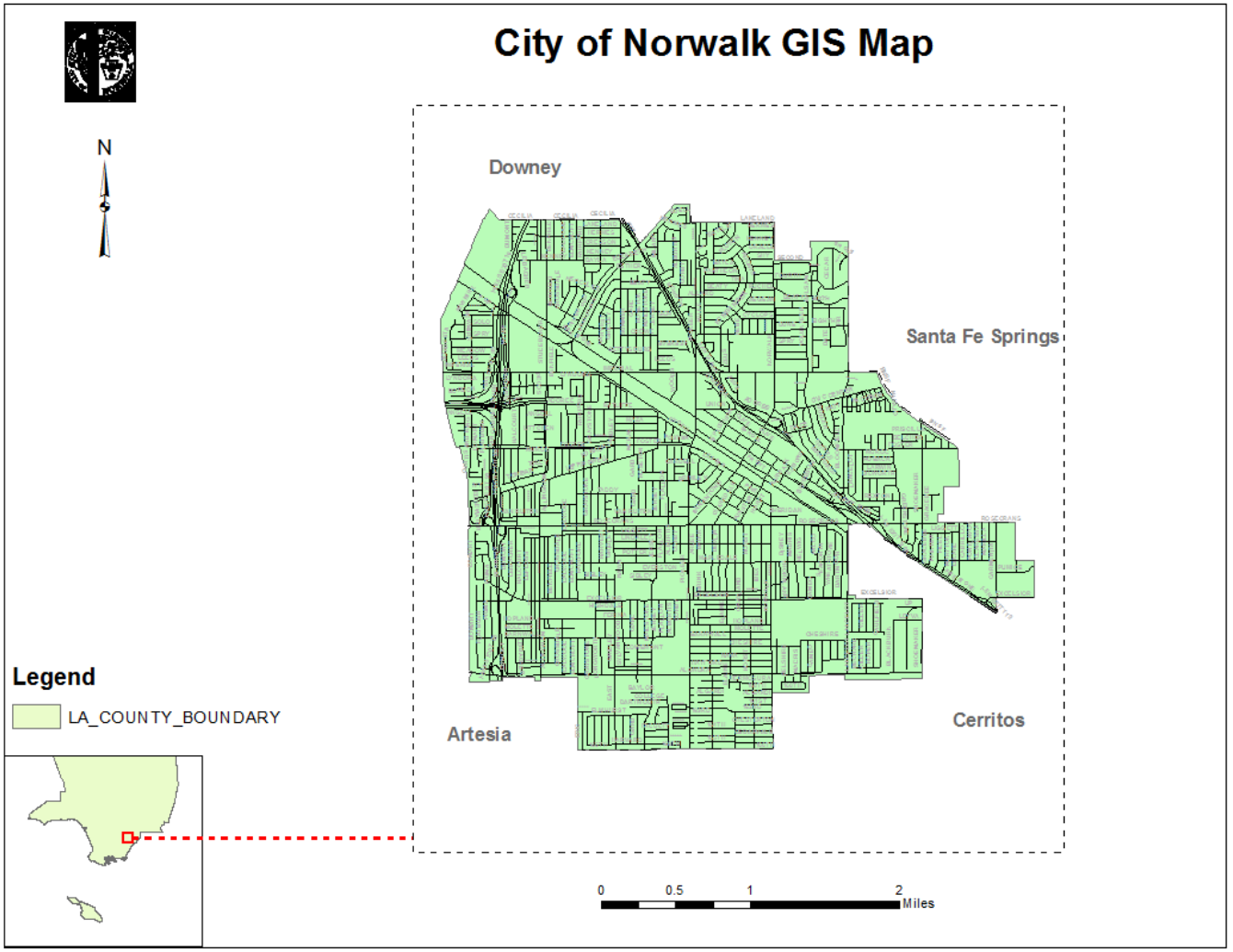


Exhibit 1 – Norwalk Locational GIS Map

2 – LAND USE, POPULATION

1.3 Project Start-Up Activities

Existing sanitary sewer maps were requested for defining sewer tributary areas (basins). City provided H&F with a digital copy of its sanitary sewer system in Autocad format. H&F imported the Autocad file into ArcGIS and digitized all sanitary sewer lines and manholes. H&F also populated the database with attributes for all sanitary sewer lines and manholes.

H&F delineated basins for flow monitoring activities and assigned basin numbers accordingly. . H&F utilized the City's numbering system as they appeared on the Autocad drawing and added the basin number in front of the manhole identification number (ID). The combination of basin numbers and manhole ID uniquely identify each manhole in the sewer system. The initial basin boundaries were determined, for comparison purposes, utilizing the same basin boundaries as the ones City had done in its last master plan. The outfall locations were later confirmed by field inspection during the flow meter installation. During the master plan project, the study area was divided into four basins. Each manhole number was preceded by the corresponding basin number.

1.4 System Review, Research, & Database Design

In this phase H&F performed a comprehensive research of all available documents related to this project. We gathered all available as-builts, and plan and profiles for the City's sewer system. H&F used City's atlas maps in conjunction with the City's as-builts where needed, to digitize the sewer lines and build the GIS database attributes.

1.5 Database / Data Dictionary Design

The database dictionary or a schema serves two important purposes. First it identifies all features and their associated attributes for data extraction. Second it identifies the source documents from which, information for the features and attributes should be extracted from. For this project, most of the attributes were extracted from the City provided Autocad file and gaps were filled in using City's as-built maps. To develop the hydraulic model, several attributes including line segment diameter, length, material as well as manhole invert elevations and ground elevation data were needed. In addition to these attributes additional attributes were built into the final database design. The database design also includes the design for ArcGIS themes for the GIS system.

1.6 Development of GIS Sewer Map and Sewer Database

Utilizing the documents mentioned herein, H&F digitized all sanitary sewer line segments within the City's boundary. We also digitized Los Angeles County Sanitation District's (LACSD) trunk sewer lines within the City limits. This was done to account for connection points where City lines are tributary to LACSD's lines. Map sheets were edge matched such that common lines and arcs between adjacent polygons exactly coincide without overlaps. Also, lines between adjacent sheets were matched to coincide at the endpoints. Once the digitizing task was completed H&F technicians started the work on data extraction and data entry of the needed attributes for the GIS database. These attributes were extracted based on the database design described earlier. Next, H&F proceeded with populating the database with sewer attribute features.

2 – LAND USE, POPULATION

2.0 City Land Use

The City provides sanitary wastewater conveyance for all 6,258 acres of land inside the City boundaries. City land use presented herein is based on the City's current General Plan map. As shown in Table 2-1 and on Figure 2-1, the predominant land use in the City is residential land use at approximately 48% of the total land use (3,025 acres) that is made up of low-density residential, medium-density residential, and high-density residential land use categories. Of the residential land use categories, low-density residential is predominant at 88% of the total residential land use.

Table 2-1

City Land Use

Land Use Category	Acres	% Total Land Use
Residential		
Low Density Residential	2,615.1	41.8%
Medium Residential	32.0	0.5%
High Density Residential	331.3	5.3%
Subtotal	3,025.7	47.6%
Commercial	467.6	7.5%
Industrial		
Light Industrial	155.8	2.5%
Heavy Industrial	139.6	2.2%
Subtotal	295.4	4.7%
Institutional		
Institutional/Public Facility/School	435.9	7.0%
Church	12.4	0.2%
Subtotal	448.3	7.2%
Hospitals		
LD Residential Hospital	155.5	2.5%
Commercial Hospital	15.1	0.4%
Subtotal	170.7	2.9%
Other		
LD Residential Fuel Storage Facility	47.3	0.8%
Open Space	74.8	1.2%
Streets	1,775.9	28.3%
Subtotal	1,850.7	30.3%
Total	6,258.3	100%

2 – LAND USE, POPULATION

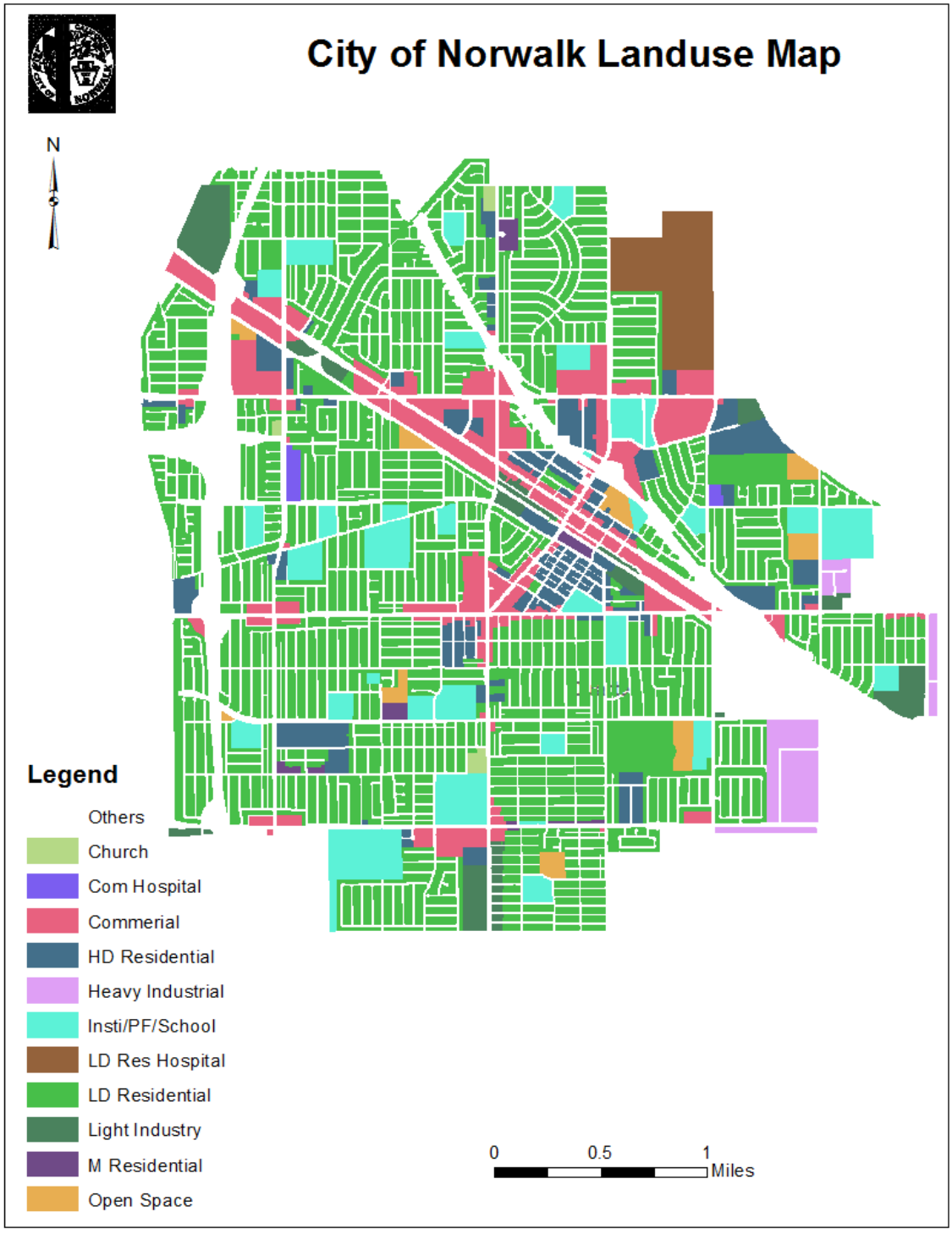


Exhibit 2-1
City Land Use Map

2 – LAND USE, POPULATION

Low-density land use is spread out across the City. High-density land uses are located in spots throughout the City, but is predominant just to the north and south of Firestone Boulevard. There are 468 acres of commercial land distributed across the City (7.5% of total City land use), but predominant along and just to the north and south of Firestone Boulevard.

Light-industrial land use is also concentrated in the vicinity of Firestone Boulevard and there are three areas zoned for heavy-industrial land use in the southeast part of the City. Industrial land uses represent approximately 5% of total City land use. Land zoned for institutional, public facilities and schools are primarily schools and are located throughout the City. There are hospitals located in land uses zoned for both low-density residential and commercial.

The City of Norwalk also provides sanitary wastewater conveyance for portions of Santa Fe Springs (148 acres) at the northern and southeastern boundaries to the City.

2.1 Future Redevelopment

The City has set forth on the following plans to redevelop parts of the City:

2.1.1 San Antonio Village Neighborhood Revitalization Strategy Area Plan

In order to better serve the needs of specific area of the city, the City of Norwalk has identified the San Antonio Village as a proposed Neighborhood Revitalization Strategy Area (NRSA).The San Antonio Village strategy area covers much of the central section of the city, including area south of Imperial Highway, north of Mapledale Street, east of Gridley Road, and west of the 5 Freeway. The area coincides with the following U.S. Census tracts: 5520, 5521, 5522, and 5528.

Improvements to this area include housing and neighborhood development, infrastructure, public safety, code enforcement, zoning and land use, and economic development.

Redevelopment will involve the demolition and removal of vacant/dilapidated structures, the rehabilitation of existing housing already occupied by low and moderate income families, and the rehab/restoration of existing housing and the development of new housing for middle and higher income families.

With respect to sewer capacity, the Public Services Department requires an individual assessment of capacity at exact site locations. If the capacity is insufficient to support the proposed development, the project developer is responsible for upgrading sewer mains to hold increased sewage. As a result there is or will be sufficient sewer capacity to accommodate the incremental increase in housing units. The City also has instituted a sewer plan to repair and replace outdated sewer infrastructure.

2.2 City Population and Housing Characteristics

Historical population and housing was obtained from census data and from State Department of Finance data. As shown in Table 2-2 and on Figure 2-2, the City's population increased from 94,279 in 1990 to 103,298 in 2000, which was an average annual increase of 0.92%. The

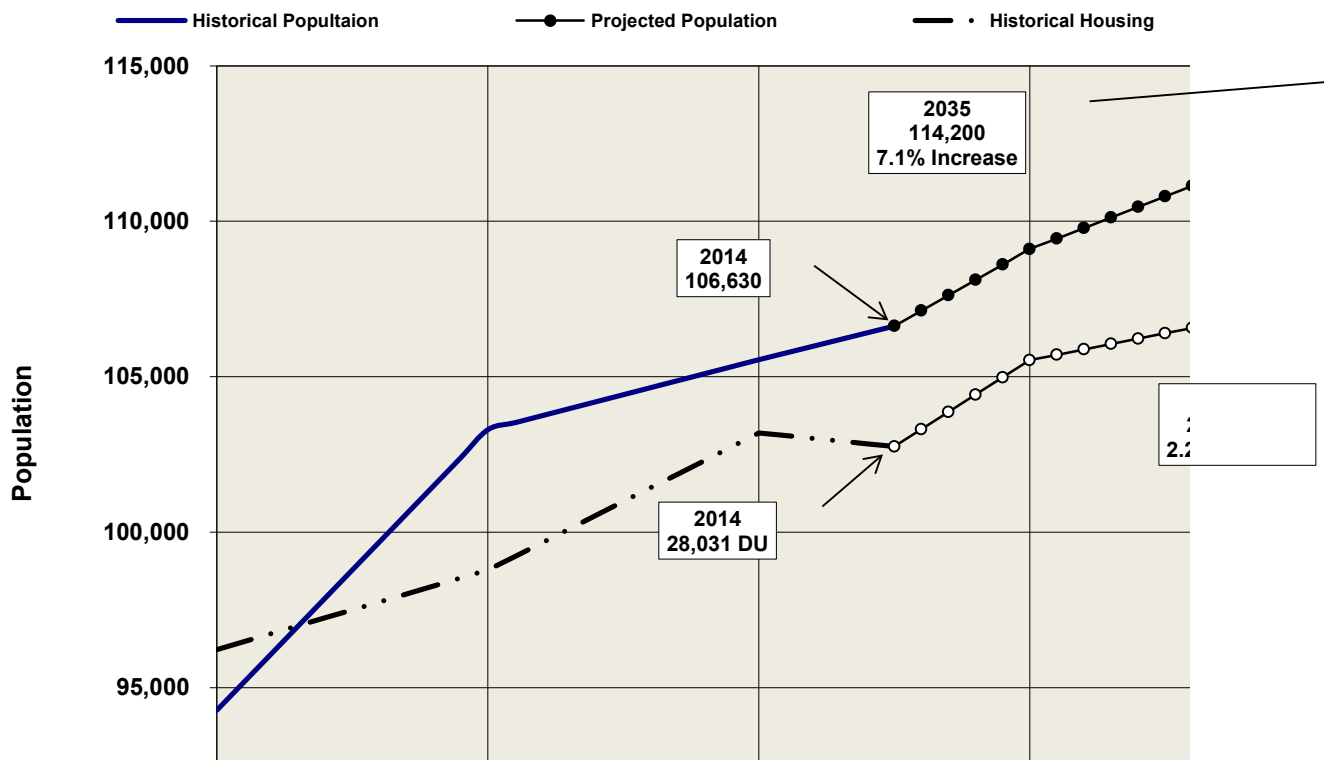
population grew at a lesser annual rate of 0.22% between 2000 and 2010 as the City approached full development. The City's population was 106,630 as of January 2014.

Table 2-2
Historical and Projected City Population and Housing (1990 - 2035)

	Historical City Population and Housing				Projected[(a)]			
	1990	2000	2010	2014	2020	2025	2030	2035
Population	94,279	103,298	105,549	106,630	109,100	110,800	112,500	114,200
Annual % Increase	-	0.92%	0.22%	0.26%	0.38%	0.31%	0.30%	0.30%
Total Dwelling Units	27,247	27,554	28,083	28,031	28,364	28,468	28,571	28,674
Annual % Increase	-	0.11%	0.19%	-0.05%	0.20%	0.07%	0.07%	0.07%
Vacant Dwelling Units	901	667	953	952	964	968	971	975
% Vacant	3.31%	2.42%	3.39%	3.40%	3.40%	3.40%	3.40%	3.40%
Population/Occ. DU	3.58	3.84	3.89	3.94	3.98	4.03	4.08	4.12

a) From Southern California Association of Governments, 2012 Regional Transportation Plan Growth Forecast.
b) Vacant dwelling units for 2020 - 2035 assumed equal to 3.40% consistent with 2010-2013 vacancy %.

Figure 2-2. City Historical/Projected Population & Housing



Housing grew at an annual rate of 0.11% between 1990 and 20000, but grew at a higher rate of 0.19% between 2000 and 2010. There were 28,031 dwelling units in the City as of January 2014. The number of vacant dwelling units increased from 667 in 2000 (2.42% vacancy) to 952 (3.40% vacancy) in 2014. The number of people per occupied dwelling unit (population density) has increased from 3.58 in 1990 to 3.94 in 2014.

Projected population and housing for the City in 5-year increments through 2035 was provided by the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan Growth Forecast.

As shown in Table 2-2 and on Figure 2-2, the City's population is projected to increase to 114,200 by the year 2035, which is an average annual increase of 0.32% and a total increase of 7.1% relative to January 2014. New housing is projected to increase by 2.2% (relative to 2014) to 28,674 dwelling units in 2035. Assuming that vacancy will remain at 3.40%, the City's population density would increase to approximately 4.1 people by the year 2035.

2.3 Sanitary Sewer Characteristics

There are approximately 164 miles of City sewers in the City's sanitary sewer collection system including 16 siphons, with sewer pipe sizes varying in diameter from 6 inches to 18 inches.

2 – LAND USE, POPULATION

There are also three lift stations and approximately 160 linear feet of force mains. The City's collection system is shown on Figure 2-3.

As shown in Table 2-3, most of the City sewers are 8 inches in diameter and are made of vitrified clay pipe (VCP). There are approximately 3,600 manholes in the City's collection system. The newer manholes are made of concrete, with the older manholes constructed of brick. All flow from the City's sewer system discharges to the trunk sewers owned by the LACSD.

Table 2-3
Sewer Diameters and Lengths

Sewer Diameter (in)	Length (ft)	Length (mile)	% Total Sewer Length
6	511	0.10	0.06
8	807,659	152.97	93.42
10	16,490	3.12	1.91
12	22,925	4.34	2.65
15	16,817	3.19	1.95
18	104	0.02	0.01
Total	**864,507**	**163.7**	**100.00**

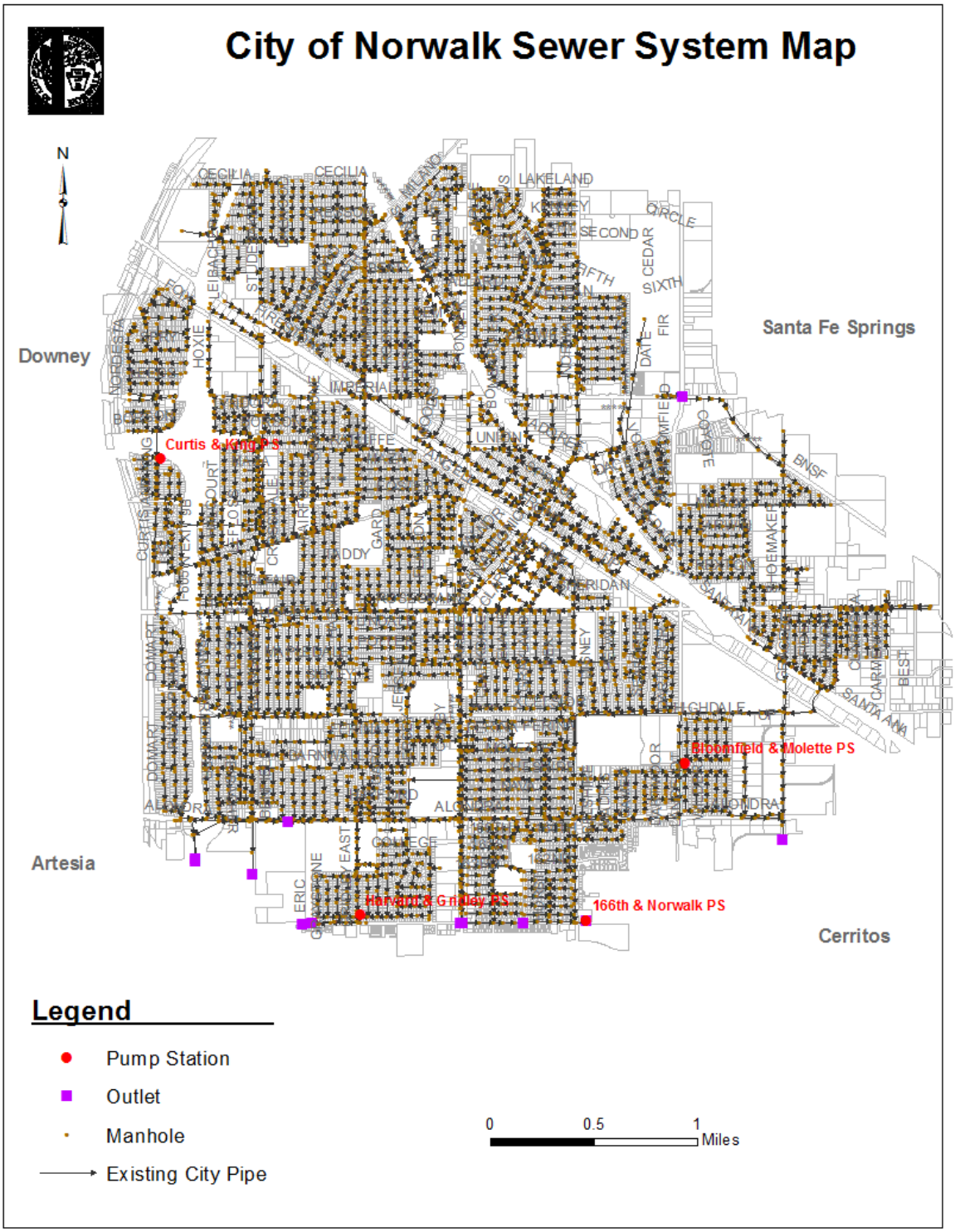


Exhibit 2-3
City of Norwalk Sanitary Sewer System

2.3.1 Lift Stations

There are three lift stations in the City collection system:

Curtis & King Lift Station

The Curtis & King Lift Station, which is located at Curtis & King Road, pumps wastewater from a small tributary area located in the northwest area of the City. The tributary area for the lift station consists primarily of low-density residential housing. The lift station pumps the flow into the sewer collection system via a short 6-inch force main. The lift station was upgraded with dry-pit submersible vortex pumps, an ultrasonic level transducer, back-up float switches, and a pump control panel in 2008.

Harvard & Gridley Lift Station

The Harvard & Gridley Lift Station, which is located at the intersection of Harvard Drive and Gridley Road, pumps wastewater from a small tributary area in the southern portion of the City. The tributary area for the lift station consists of primarily low-density residential housing. The lift station pumps the flow into the sewer collection system via a short 6-inch force main. The lift station was rehabilitated in 1997 with the construction/installation of a 8-foot diameter wet well; two slide-rail submersible vortex pumps; a valve vault containing a discharge check and isolation valves; a force main bypass connection; and a new 6-inch ductile iron force main.

Bloomfield and Molette Lift Station

The Bloomfield and Molette Lift Station, which is located at the intersection of Bloomfield Avenue and Molette Street, pumps wastewater from a small tributary area in the southeast corner of the City. The tributary area for the lift station consists of primarily low-density residential housing. The lift station pumps the flow into the sewer collection system via a short 6-inch forcemain. The lift station drywell was converted to a wetwell in 1999.

CHAPTER 3 – FLOW MONITORING

3.0 Project Flow Monitoring

Temporary sewer flow monitoring was conducted at 4 locations to meter wastewater flows in the City for 29 consecutive days from January 6, 2015 through February 3, 2015. Hourly flow data for each metering site for the 29-day flow monitoring period is included in the Appendix. The flow monitoring period included the Martin Luther King Holiday on Monday January 19th and the Super Bowl on Sunday February 1st. As would be expected, the wastewater flows were not typical of wastewater flows normally encountered on a Monday or a Sunday and were not used to develop diurnal wastewater flows for hydraulic model analysis.

Typical weekday dry-weather (no rainfall) wastewater flows with heavy residential influence peak in the morning between 7 to 9 a.m. and again in the evening between 7 and 9 p.m. Weekend dry-weather flows can have similar peaks as on weekdays, but the time to peak typically is lagged approximately four hours in the morning from 7 to 9 a.m. to 11 a.m. to 1 p.m. and has an inconsistent, dampened peak flow in the evening. For Norwalk, the peak flow occurred at approximately 9 p.m. on weekdays and at approximately 12 p.m. on weekends for the 4 basins metered. The weekend peak flows were slightly higher than the weekday peak flows.

It is more difficult to accurately model weekend flows because it is difficult to accurately model commercial, public and some industrial land uses as it is not known what businesses, offices and workplaces are open and which ones are closed and/or operating with lower wastewater generation relative to wastewater generated on weekdays. On normal weekdays, all land uses are generating wastewater and at more quantifiable flow rates. Also, wastewater flows are higher where businesses are fully operating. It is now common for people to have Fridays or every other Friday off, and Friday flows are now not typical of weekday flows occurring on Monday through Thursday. Accordingly, Friday flows were not used to develop diurnal wastewater flows for hydraulic model analysis.

To account for the higher but lagged weekend wastewater peak flows, the hourly weekend flows were moved 9 hours latter (rolled down) to coincide with the weekday evening peak flows that were greater than the morning weekday peak flows. Representative weekday and weekend flows were then averaged to develop composite diurnal flows with slightly higher peaking factors. Flow data used to develop hydrographs for analysis in the hydraulic model for Meter Basin Nos. 1, 2, 3 and 4 are shown in Tables 3-1 through 3-4, respectively. The flows and peaking factors are shown graphically on Figures 3-1 through 3-4, respectively.

Peak flows were adjusted slightly higher than the average peak flows to take into account peak flows that occurred on individual days. The peaking factor (peak hourly flow/average hourly flow) was calculated to be 1.64 to 1.65 for Meter Basin Nos. 1, 3 and 4 and was calculated to be 1.59 for Meter Basin No. 2.

It is common for significant rainfall events to occur during January and February in Southern California. However, no significant rainfall occurred during the flow monitoring period (5 days of rain totaling 0.24 inches with a max of 0.15 inches occurring on January 26th. The small rainfall

totals had little to no effect on normal dry-weather flows. However, January 26th was not used or needed to develop normal dry-weather flows and was not used.

Without any significant rainfall, only dry-weather flows were measured and evaluated in the hydraulic model (Chapter 6). Peak wet-weather flows are accounted for by designing sewers to carry peak-dry weather flows at maximum sewer flow depth over diameter (d/D) ratios. The remainder of the pipe flow area is reserved to carry wet weather flow on top of peak dry-weather flow.

3.01 Meter Basin No. 1

Meter Basin No. 1 is located in the northwest corner of the City and totals 260 acres of which 65% is low density residential land use with another 1% being high density residential. As such, the flow monitoring data is indicative of residential flow patterns and peaking factors. As shown in Table 3-1 and on Figure 3-1, the flows consistently peaked at 8:00 p.m. (1.65 peaking factor) with a second peak occurring from 7 a.m. to 8 a.m. (1.16 peaking factor) which is common for residential wastewater flow. The higher evening peak flows are accentuated because the higher weekend peak flows were rolled down 9 hours to match the weekday evening peak flows and because the peak flows were adjusted slightly higher than the average peak flows to take into account peak flows that occurred on individual days.

The midday flows are slightly higher than midday flows occurring for residential only land use because 23% of the land use is commercial and light industrial land uses, which have higher more constant flows throughout the day as does the 10% of land use that is categorized as institutional/ public facility/ school. Land use for Meter Basin No. 1 is shown in Table 3-5.

3.02 Meter Basin No. 2

Meter Basin No. 2 is also located in the northwest corner of the City, just to the south Meter Basin No. 1. The basin totals 229 acres of which 70% is residential land use. As overall make-up of residential versus non-residential land use is very similar to Meter Basin No. 1, the flow pattern and hourly flow factors are also similar. The hourly flows for Meter No. 2 is shown in Table 3-2. The diurnal pattern for Meter No. 2 is shown in Figure 2. Land use for Meter Basin No. 2 is shown in Table 3-5.

3.03 Meter Basin No. 3

Meter Basin No. 3 is located in the south/central part of the City and totals 229 acres of which 78% is residential land use (71% low density, 3% medium, and 4% high density). As overall make-up of residential versus non-residential land use is very similar to Meter Basin Nos. 1 and 2, the flow pattern and hourly flow factors are also similar. The hourly flows for Meter No. 3 is shown in Table 3-3. The diurnal pattern for Meter No. 3 is shown in Figure 3.Land use for Meter Basin No. 3 is shown in Table 3-5.

3.04 Meter Basin No. 4

At 35 acres, Meter Basin No. 4 is much smaller than the other three basins that range from 229 to 290 acres. It was specifically selected to isolate high-density residential land use, which is 73% of the total land use. The other three basins provide good data for developing unit waste-

CHAPTER 3 – FLOW MONITORING

Table 3-1. Meter Basin No. 1 Hourly Flows (mgd) - Weekdays & Weekends[a]

	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	17-Jan	18-Jan	20-Jan	21-Jan	22-Jan	Average	
	Sat	Sun	Mon	Tue	Wed	Thu	Sat	Sun	Tue	Wed	Thu		
1 am	0.38	0.46	0.13	0.14	0.13	0.14	0.48	0.46	0.13	0.11	0.11	0.24	
2 am	0.44	0.47	0.11	0.10	0.10	0.10	0.47	0.42	0.09	0.09	0.08	0.22	
3 am	0.46	0.47	0.10	0.10	0.09	0.10	0.44	0.43	0.09	0.08	0.07	0.22	
4 am	0.38	0.44	0.11	0.11	0.10	0.12	0.43	0.39	0.09	0.08	0.07	0.21	
5 am	0.37	0.46	0.15	0.15	0.16	0.18	0.39	0.39	0.13	0.13	0.12	0.24	
6 am	0.35	0.43	0.27	0.27	0.29	0.30	0.35	0.32	0.26	0.23	0.22	0.30	
7 am	0.31	0.37	0.39	0.38	0.43	0.42	0.34	0.28	0.38	0.36	0.35	0.36	
8 am	0.31	0.28	0.37	0.39	0.43	0.40	0.28	0.21	0.34	0.36	0.34	0.34	
9 am	0.24	0.18	0.33	0.33	0.35	0.38	0.22	0.11	0.34	0.30	0.28	0.28	
10 am	0.18	0.17	0.37	0.38	0.41	0.37	0.14	0.16	0.33	0.31	0.30	0.28	
11 am	0.14	0.14	0.39	0.35	0.37	0.36	0.10	0.11	0.30	0.31	0.31	0.26	
12 pm	0.12	0.14	0.37	0.36	0.39	0.31	0.09	0.09	0.30	0.29	0.30	0.25	
1 pm	0.12	0.14	0.36	0.38	0.35	0.34	0.10	0.08	0.30	0.31	0.28	0.25	
2 pm	0.12	0.12	0.42	0.34	0.33	0.33	0.11	0.08	0.29	0.31	0.29	0.25	
3 pm	0.14	0.14	0.40	0.32	0.31	0.32	0.14	0.11	0.27	0.28	0.26	0.25	
4 pm	0.24	0.19	0.40	0.37	0.34	0.35	0.23	0.20	0.29	0.30	0.29	0.29	
5 pm	0.37	0.29	0.37	0.40	0.36	0.35	0.35	0.29	0.32	0.32	0.33	0.34	
6 pm	0.46	0.38	0.43	0.40	0.41	0.40	0.46	0.43	0.36	0.39	0.36	0.41	
7 pm	0.54	0.53	0.49	0.44	0.46	0.40	0.48	0.54	0.38	0.42	0.41	0.46	**Use**
8 pm	0.57	**0.58**	**0.49**	**0.48**	**0.48**	**0.43**	**0.52**	0.53	**0.44**	**0.43**	**0.44**	**0.49**	**0.52**
9 pm	**0.62**	0.54	0.45	0.46	0.47	0.42	0.51	**0.57**	0.43	0.42	0.41	0.48	
10 pm	0.55	0.52	0.43	0.41	0.40	0.37	0.46	0.56	0.35	0.38	0.37	0.44	
11 pm	0.52	0.51	0.31	0.31	0.31	0.29	0.47	**0.57**	0.23	0.25	0.27	0.37	
12 am	0.39	0.49	0.20	0.21	0.20	0.17	0.46	0.55	0.17	0.16	0.17	0.29	
Avg	**0.35**	**0.35**	**0.33**	**0.32**	**0.32**	**0.31**	**0.33**	**0.33**	**0.28**	**0.28**	**0.27**	**0.31**	
Peak	**0.62**	**0.58**	**0.49**	**0.48**	**0.48**	**0.43**	**0.52**	**0.57**	**0.44**	**0.43**	**0.44**	**0.50**	
PF	**1.78**	**1.65**	**1.52**	**1.52**	**1.51**	**1.40**	**1.55**	**1.74**	**1.60**	**1.56**	**1.65**	**1.59**	

a) Weekend flows rolled down 9 hours to match weekday peak flow. Friday flows not used due to lower evening peak flows differing from other weekday flows. MLK Holiday 1-19 not used due to changed flow pattern relative to typical weekday flow.

CHAPTER 3 – FLOW MONITORING

Table 3-2. Meter Basin No. 2 Hourly Flows (mgd) - Weekdays & Weekends[a]

	12-Jan	13-Jan	14-Jan	15-Jan	17-Jan	18-Jan	20-Jan	21-Jan	22-Jan	24-Jan	25-Jan		
	Mon	Tue	Wed	Thu	Sat	Sun	Tue	Wed	Thu	Sat	Sun	Average	
1 am	0.21	0.23	0.21	0.24	0.46	0.40	0.22	0.22	0.24	0.46	0.47	0.30	
2 am	0.14	0.15	0.15	0.16	0.46	0.41	0.15	0.15	0.17	0.46	0.46	0.26	
3 am	0.10	0.11	0.10	0.11	0.41	0.38	0.10	0.12	0.14	0.45	0.42	0.22	
4 am	0.08	0.09	0.09	0.09	0.43	0.39	0.09	0.09	0.11	0.45	0.45	0.21	
5 am	0.08	0.09	0.10	0.10	0.39	0.38	0.09	0.10	0.10	0.41	0.45	0.21	
6 am	0.16	0.15	0.13	0.15	0.37	0.38	0.15	0.16	0.16	0.39	0.46	0.24	
7 am	0.27	0.28	0.26	0.28	0.35	0.39	0.27	0.28	0.29	0.36	0.43	0.31	
8 am	0.38	0.41	0.39	0.43	0.33	0.34	0.38	0.40	0.42	0.34	0.40	0.38	
9 am	0.39	0.39	0.40	0.39	0.29	0.30	0.40	0.41	0.39	0.31	0.33	0.36	
10 am	0.33	0.33	0.33	0.35	0.22	0.23	0.34	0.40	0.35	0.25	0.25	0.31	
11 am	0.35	0.35	0.37	0.36	0.16	0.19	0.36	0.38	0.36	0.19	0.18	0.30	
12 pm	0.36	0.37	0.36	0.35	0.13	0.14	0.34	0.39	0.39	0.14	0.15	0.28	
1 pm	0.37	0.36	0.33	0.35	0.11	0.11	0.37	0.36	0.38	0.11	0.11	0.27	
2 pm	0.40	0.35	0.34	0.34	0.10	0.10	0.35	0.36	0.37	0.10	0.09	0.26	
3 pm	0.37	0.36	0.35	0.33	0.12	0.10	0.37	0.35	0.37	0.13	0.09	0.27	
4 pm	0.37	0.32	0.33	0.32	0.14	0.14	0.34	0.38	0.35	0.15	0.14	0.27	
5 pm	0.39	0.35	0.36	0.34	0.21	0.19	0.36	0.38	0.39	0.23	0.19	0.31	
6 pm	0.39	0.42	0.41	0.38	0.34	0.28	0.40	0.43	0.38	0.36	0.32	0.37	
7 pm	0.41	0.45	0.43	0.38	0.43	0.42	0.47	0.46	0.42	0.46	0.43	0.43	
8 pm	0.46	0.45	0.48	0.40	0.50	0.50	0.44	0.47	0.46	0.49	0.52	0.47	**Use**
9 pm	**0.46**	**0.49**	**0.49**	0.42	**0.55**	**0.52**	**0.49**	**0.47**	0.47	0.54	0.54	0.50	**0.525**
10 pm	0.45	0.46	0.48	**0.46**	0.53	0.51	**0.49**	**0.48**	**0.49**	**0.56**	**0.56**	0.50	
11 pm	0.41	0.42	0.42	0.38	0.52	0.51	0.42	0.45	0.42	0.54	0.52	0.46	
12 am	0.33	0.31	0.32	0.31	0.51	0.45	0.32	0.34	0.33	0.52	0.51	0.39	
Avg	**0.32**	**0.32**	**0.32**	**0.31**	**0.34**	**0.32**	**0.32**	**0.33**	**0.33**	**0.35**	**0.35**	**0.33**	
Peak	**0.46**	**0.49**	**0.49**	**0.46**	**0.55**	**0.52**	**0.49**	**0.48**	**0.49**	**0.56**	**0.56**	**0.51**	
PF	**1.45**	**1.54**	**1.55**	**1.50**	**1.65**	**1.60**	**1.54**	**1.42**	**1.47**	**1.60**	**1.57**	**1.54**	

a) Weekend flows rolled down 9 hours to match weekday peak flow. Friday flows not used due to lower evening peak flows differing from other weekday flows. MLK Holiday 1-19 not used due to changed flow pattern relative to typical weekday flow.

Table 3-3. Meter Basin No. 3 Hourly Flows (mgd) - Weekdays & Weekends[(a)]

	12-Jan	13-Jan	14-Jan	15-Jan	17-Jan	18-Jan	20-Jan	21-Jan	22-Jan	24-Jan	25-Jan	Average	
	Mon	Tue	Wed	Thu	Sat	Sun	Tue	Wed	Thu	Sat	Sun		
1 am	0.14	0.15	0.14	0.15	0.33	0.31	0.14	0.15	0.16	0.16	0.16	0.18	
2 am	0.09	0.10	0.09	0.10	0.32	0.31	0.08	0.11	0.09	0.10	0.12	0.14	
3 am	0.07	0.07	0.07	0.07	0.30	0.32	0.06	0.08	0.06	0.08	0.09	0.12	
4 am	0.06	0.06	0.05	0.06	0.30	0.30	0.06	0.07	0.05	0.07	0.08	0.11	
5 am	0.07	0.07	0.07	0.07	0.29	0.30	0.07	0.06	0.06	0.06	0.06	0.11	
6 am	0.11	0.10	0.11	0.11	0.29	0.28	0.11	0.11	0.11	0.07	0.06	0.13	
7 am	0.19	0.20	0.21	0.21	0.27	0.27	0.22	0.21	0.21	0.09	0.09	0.20	
8 am	0.30	0.30	0.33	0.33	0.23	0.25	0.31	0.30	0.31	0.15	0.14	0.27	
9 am	0.30	0.29	0.28	0.30	0.20	0.20	0.28	0.30	0.30	0.27	0.24	0.27	
10 am	0.27	0.28	0.27	0.26	0.16	0.15	0.27	0.30	0.26	0.35	0.33	0.26	
11 am	0.28	0.26	0.26	0.27	0.10	0.12	0.25	0.28	0.27	0.31	0.32	0.25	
12 pm	0.27	0.27	0.24	0.25	0.07	0.08	0.25	0.27	0.25	0.29	0.29	0.23	
1 pm	0.29	0.24	0.26	0.24	0.06	0.07	0.27	0.28	0.26	0.33	0.31	0.24	
2 pm	0.26	0.24	0.26	0.23	0.06	0.05	0.25	0.27	0.24	0.31	0.34	0.23	
3 pm	0.27	0.23	0.23	0.26	0.06	0.05	0.26	0.23	0.24	0.29	**0.38**	0.23	
4 pm	0.26	0.23	0.22	0.21	0.08	0.08	0.23	0.25	0.24	0.27	0.35	0.22	
5 pm	0.24	0.23	0.23	0.25	0.15	0.14	0.23	0.24	0.26	0.26	0.33	0.23	
6 pm	0.26	0.26	0.25	0.26	0.25	0.23	0.27	0.29	0.26	0.22	0.30	0.26	
7 pm	0.31	0.29	0.29	0.30	0.34	0.31	0.31	0.33	0.31	0.19	0.22	0.29	
8 pm	**0.35**	**0.34**	0.33	0.32	**0.39**	0.37	0.35	0.33	0.31	0.37	**0.38**	**0.35**	**Use**
9 pm	0.33	**0.34**	**0.34**	0.34	0.37	**0.38**	**0.37**	0.34	**0.33**	**0.38**	0.36	**0.35**	**0.375**
10 pm	0.33	**0.34**	0.33	**0.35**	0.35	**0.38**	0.34	**0.35**	**0.33**	**0.38**	0.35	**0.35**	
11 pm	0.32	0.31	0.30	0.30	0.37	0.33	0.31	0.31	0.31	0.35	0.32	0.32	
12 am	0.23	0.23	0.24	0.22	0.34	0.31	0.22	0.23	0.24	0.31	0.32	0.26	
Avg	**0.23**	**0.23**	**0.23**	**0.23**	**0.24**	**0.23**	**0.23**	**0.24**	**0.23**	**0.24**	**0.25**	**0.23**	
Peak	**0.35**	**0.34**	**0.34**	**0.35**	**0.39**	**0.38**	**0.37**	**0.35**	**0.33**	**0.38**	**0.38**	**0.36**	
PF	**1.49**	**1.51**	**1.51**	**1.53**	**1.63**	**1.64**	**1.60**	**1.48**	**1.45**	**1.63**	**1.52**	**1.54**	

a) Weekend flows rolled down 9 hours to match weekday peak flow. Friday flows not used due to lower evening peak flows differing from other weekday flows. MLK Holiday 1-19 not used due to changed flow pattern relative to typical weekday flow.

Table 3-4. Meter Basin No. 4 Hourly Flows (mgd) - Weekdays & Weekends[a]

	12-Jan Mon	13-Jan Tue	14-Jan Wed	15-Jan Thu	17-Jan Sat	18-Jan Sun	20-Jan Tue	21-Jan Wed	22-Jan Thu	24-Jan Sat	25-Jan Sun	Average	
1 am	0.03	0.03	0.03	0.05	0.08	0.08	0.04	0.05	0.04	0.09	0.09	0.05	
2 am	0.02	0.02	0.03	0.03	0.08	0.09	0.04	0.03	0.03	0.10	0.08	0.04	
3 am	0.03	0.02	0.02	0.03	0.08	0.09	0.04	0.02	0.03	0.09	0.08	0.04	
4 am	0.03	0.02	0.02	0.03	0.07	0.09	0.03	0.03	0.03	0.09	0.09	0.04	
5 am	0.03	0.03	0.04	0.03	0.06	0.09	0.04	0.04	0.04	0.08	0.09	0.04	
6 am	0.05	0.06	0.06	0.05	0.06	0.08	0.06	0.05	0.06	0.08	0.10	0.05	
7 am	0.08	0.08	0.08	0.08	0.04	0.06	0.08	0.07	0.09	0.08	0.11	0.07	
8 am	0.09	0.09	0.11	0.10	0.03	0.04	0.11	0.11	**0.12**	0.06	0.09	0.09	
9 am	0.08	0.09	0.09	0.08	0.03	0.03	0.08	0.08	0.09	0.05	0.05	0.08	
10 am	0.09	0.09	0.08	0.08	0.02	0.03	0.08	0.07	0.07	0.06	0.04	0.08	
11 am	0.08	0.09	0.07	0.07	0.02	0.02	0.08	0.08	0.07	0.03	0.03	0.08	
12 pm	0.07	0.08	0.08	0.07	0.03	0.02	0.08	0.08	0.08	0.03	0.03	0.08	
1 pm	0.07	0.08	0.07	0.08	0.03	0.02	0.09	0.09	0.07	0.03	0.02	0.08	
2 pm	0.08	0.09	0.07	0.08	0.04	0.03	0.08	0.08	0.08	0.03	0.03	0.08	
3 pm	0.07	0.09	0.08	0.08	0.06	0.05	0.09	0.09	0.08	0.04	0.03	0.08	
4 pm	0.08	0.09	0.07	0.07	0.08	0.07	0.07	0.07	0.08	0.04	0.04	0.08	
5 pm	0.10	0.09	0.09	0.08	0.09	0.08	0.09	0.09	0.09	0.09	0.07	0.09	
6 pm	**0.11**	0.10	0.10	0.10	0.09	0.09	0.09	0.11	0.10	0.10	0.09	0.10	
7 pm	0.10	**0.11**	0.09	0.09	0.09	**0.10**	0.11	0.10	0.11	0.11	0.10	0.10	**Use**
8 pm	**0.11**	**0.11**	0.10	0.11	**0.10**	0.08	**0.12**	**0.12**	0.11	0.11	**0.11**	0.11	**0.12**
9 pm	0.09	**0.11**	**0.12**	**0.12**	**0.10**	0.07	0.11	0.11	**0.12**	0.11	0.10	0.10	
10 pm	0.08	0.10	0.11	**0.12**	0.08	**0.10**	**0.12**	0.10	0.11	**0.12**	0.09	0.10	
11 pm	0.06	0.08	0.09	0.08	0.08	0.09	0.08	0.08	0.08	0.11	0.09	0.08	
12 am	0.05	0.06	0.07	0.06	0.08	0.08	0.06	0.07	0.06	0.09	0.09	0.06	
Avg	**0.07**	**0.07**	**0.07**	**0.07**	**0.06**	**0.07**	**0.08**	**0.08**	**0.08**	**0.08**	**0.07**	**0.07**	
Peak	**0.11**	**0.11**	**0.12**	**0.12**	**0.10**	**0.10**	**0.12**	**0.12**	**0.12**	**0.12**	**0.11**	**0.11**	
PF	**1.60**	**1.50**	**1.68**	**1.59**	**1.62**	**1.46**	**1.61**	**1.58**	**1.55**	**1.57**	**1.51**	**1.57**	

a) Weekend flows rolled down 9 hours to match weekday peak flow. Friday flows not used due to lower evening peak flows differing from other weekday flows. MLK Holiday 1-19 not used due to changed flow pattern relative to typical weekday flow.

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Figure 3-1. Meter Basin No. 1 Average Hourly Flows

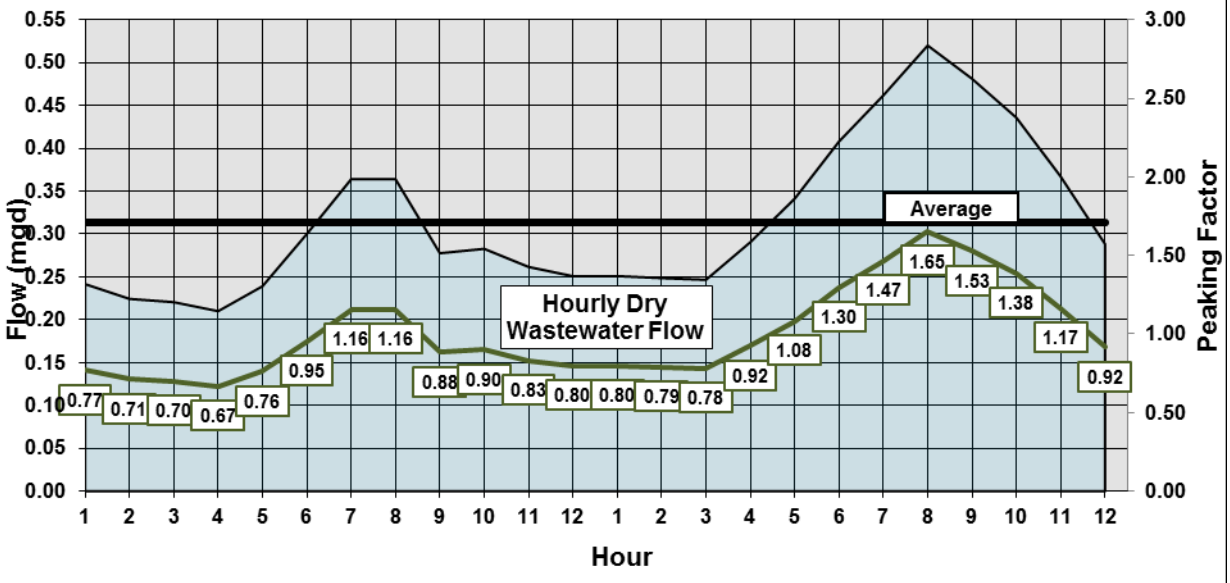

Figure 3-2. Meter Basin No. 2 Average Hourly Flows

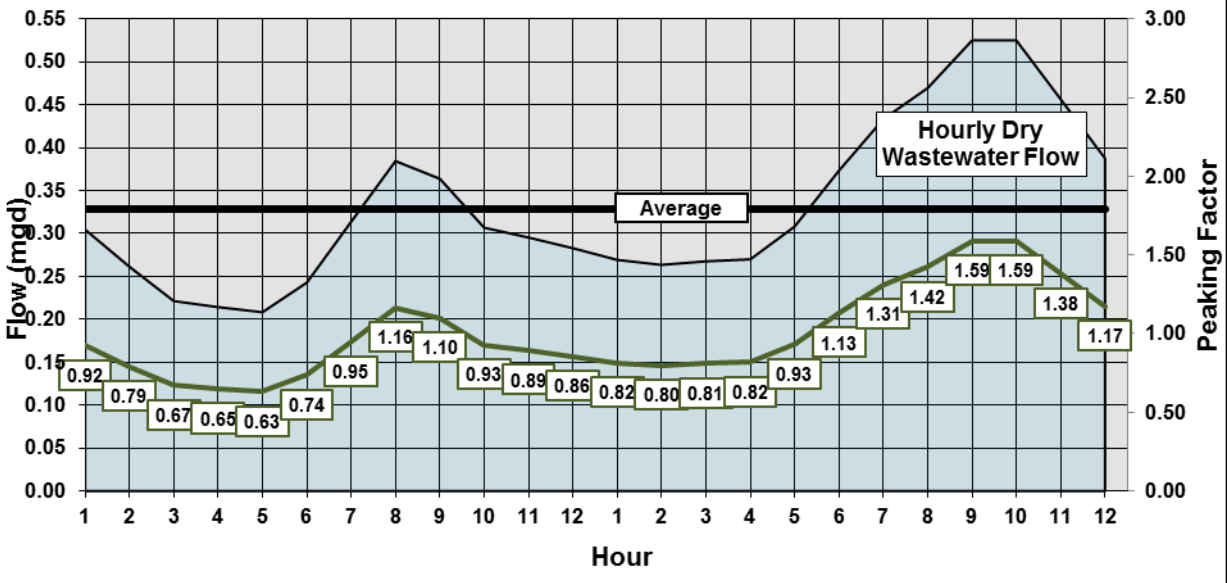

Figure 3-3. Meter Basin No. 3 Average Hourly Flows

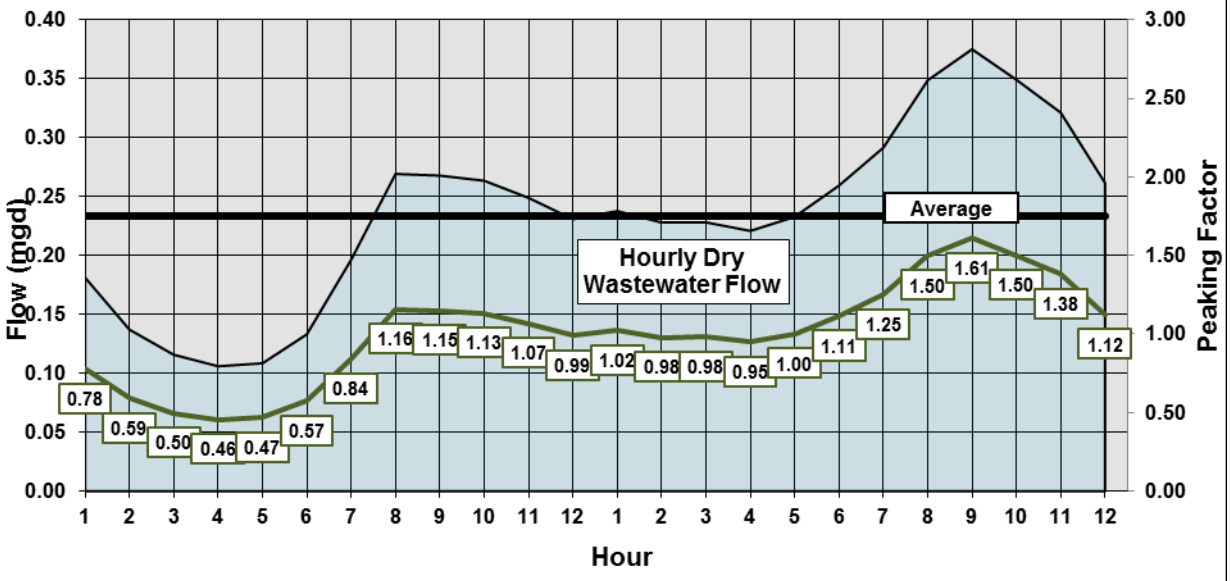

Figure 3-4. Meter Basin No. 4 Average Hourly Flows

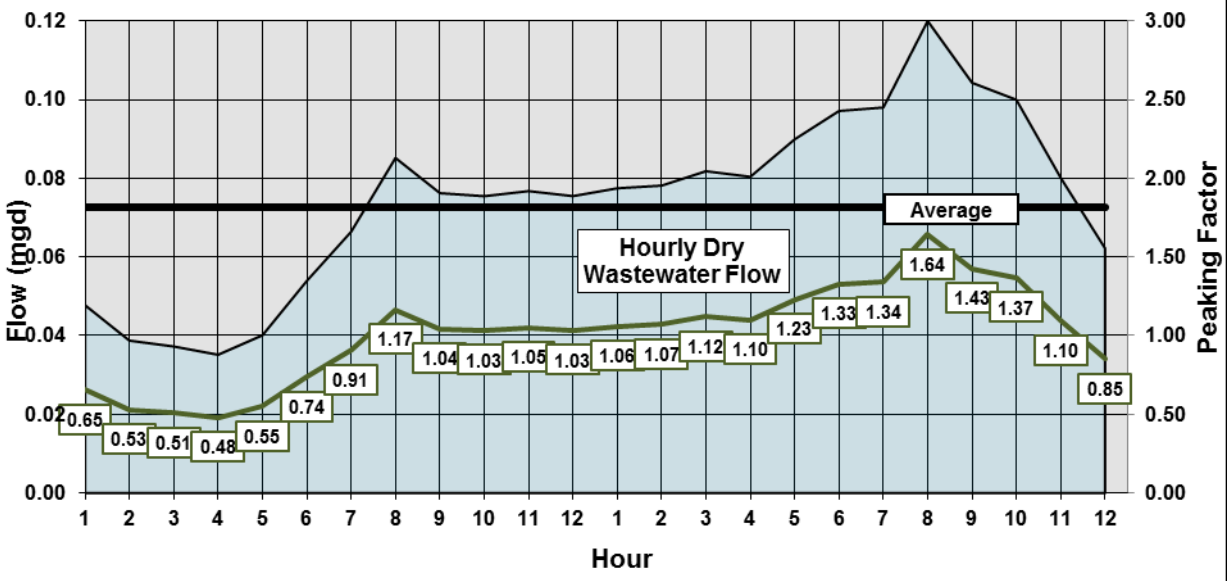

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Table 3-5 Meter Basin Land Use Wastewater Generation Factor Calibration

Meter Basin	Land Use Category	Acres	Unit WW Factor (gpad)	WW Flow (gpd)	Variance from Field (%)
M1	HD Residential	3.63	2,300	8,349	-
	M Residential	0.00	1,600	-	-
	LD Residential	170.40	1,150	195,960	-
	Commercial	11.51	1,500	17,265	-
	Light Industrial	48.14	1,500	72,210	-
	Inst/PF/School	26.33	550	14,482	-
Total	-	260.01	1,186	308,266	-2%
Field	-	-	-	313,000	-
M2	HD Residential	20.41	2,300	46,943	-
	M Residential	0.00	1,600	-	-
	LD Residential	181.16	1,150	208,334	-
	Commercial	65.57	1,500	98,355	-
	Light Industrial	4.76	1,500	7,140	-
	Inst/PF/School	10.20	550	5,610	-
	Church	2.13	550	1,172	-
	Hospital	0.52	1,800	936	-
	Open Space	4.78	-	-	-
Total	-	289.53	1,273	368,490	12%
Field	-	-	-	329,000	-
M3	HD Residential	9.91	2,300	22,793	-
	M Residential	5.94	1,600	9,504	-
	LD Residential	163.75	1,150	88,313	-
	Commercial	2.38	1,500	3,570	-
	Light Industrial	0.00	1,500	-	-
	Inst/PF/School	38.50	550	1,175	-
	Open Space	8.36	-	-	-
Total	-	228.84	1,072	245,355	5%
Field	-	-		233,000	-
M4	HD Residential	25.68	2,300	59,064	-
	M Residential	0.84	1,600	1,344	-
	LD Residential	1.47	1,150	1,691	-
	Commercial	7.43	1,500	1,145	-
Total	-	35.42	2,068	73,244	0%
Field	-	-	-	73,000	-

water generation for low density residential land use, which is the major land use type in the City and Basin No. 4 provides data for developing unit wastewater generation for high density residential land use. And taken together, sufficient information is available to develop unit wastewater generation for medium residential land use. As shown in Table 3-4 and Figure 3-4, hourly wastewater flows for the high density residential basin is similar to the hourly factors for the three low-density basins; primarily for the morning and evening peaking hours. The midday hourly factors are slightly higher because Basin No. 4 has the highest percentage of commercial land use at 29%. Land use for Meter Basin No. 4 is shown in Table 3-5.

3.1 Meter Basin Land Use Wastewater Generation Factor Calibration

Unit dry-weather wastewater generation factors (gallons per day per acre (gpd/ac)) were applied to land use categories in each of the four meter basins. The factors were then balanced to best match calculated flows with actual average flows metered for each basin. The wastewater generation factors are average values for that type of land use. The land uses and associated calibrated wastewater generation factors as well as the variance of calculated average flow from metered average flow is shown in Table 3-5 for each meter basin.

3.2 Existing (Year 2015) Average Dry-Weather Wastewater Flows

Based on the dry-weather flow meter results and wastewater generation factor calibration, existing (Year 2015) average dry-weather wastewater flows were developed for the City's wastewater system by applying unit-wastewater-generation factors to all land uses in the City as shown in Table 3-5. An existing average dry-weather wastewater flow of 5.54 million gallons per day (mgd) is calculated for the City as shown in Table 3-6.

As discussed in Chapter 6, the City's land use map was used as a base map in the development of the hydraulic model of the City's sanitary sewer system. Unit wastewater generation factors were applied to the land use map to develop average wastewater flows in the hydraulic model.

3.3 Ultimate (Year 2035) Average Dry-Weather Wastewater Flows

Ultimate, average dry-weather wastewater flow for the City was estimated by increasing the residential unit-wastewater-generation factors by 7% to reflect the projected population increase for the City by the year 2035 (relative to the year 2014). Based on these modifications and holding other variables constant relative to the existing system, the year 2035 (Ultimate System) average-day wastewater flow for the City is estimated at 5.81 mgd as shown in Table 3-7, which is an increase of approximately 5% relative to the existing system flow.

3.4 Peaking Factors and Dry-Weather Flow Hydrograph

As discussed in Section 3.0, weekday dry-weather (no rainfall) wastewater flows with heavy residential influence peaked in the morning between 7 to 9 a.m. and again in the evening between 7 and 9 p.m. (the largest peak). Weekend dry-weather flows had slightly larger "morning" peaks that occurred approximately four hours later at 11 a.m. to 1 p.m. relative to the

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Table 3-6. Existing Wastewater Generation Factors and Average Flows

Land Use Category	Acres	Wastewater Generation Factor (gpd/ac)	Flow (gpd)
Residential			
Low Density Residential	2,615.1	1,150	3,007,365
Medium Residential	32.0	1,600	51,200
High Density Residential	331.3	2,300	761,875
Subtotal	2,978.4	1,283	3,820,440
Commercial	467.6	1,500	701,370
Industrial			
Light Industrial	155.8	1,500	233,670
Heavy Industrial	139.6	1,500	209,460
Subtotal	295.4	1,500	443,130
Institutional			
Institutional/Public Facility/School	435.9	550	239,729
Church	12.4	550	6,809
Subtotal	448.3	550	246,538
Hospitals			
LD Residential Hospital	155.5	1,800	279,972
Commercial Hospital	15.1	1,800	27,216
Subtotal	170.7	1,800	307,188
Other			
LD Resident. Fuel Storage Facility	47.3	500	23,650
Open Space	74.8	-	-
Streets	1,775.9	-	-
Subtotal	1,898.0	13	23,650
Total	6,258.2	886	5,542,316

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Table 3-7. Ultimate Wastewater Generation Factors and Average Flows

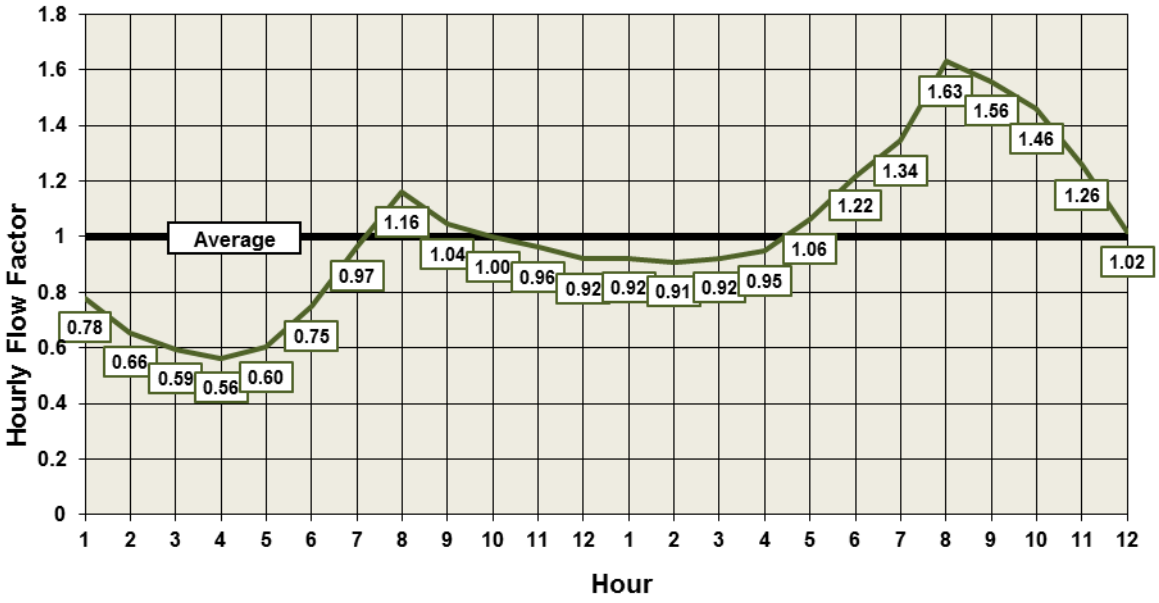
Land Use Category	Acres	Wastewater Generation Factor[(a)] (gpd/ac)	Flow (gpd)
Residential			
Low Density Residential	2,615.1	1,231	3,217,881
Medium Residential	32.0	1,712	54,784
High Density Residential	331.3	2,461	815,206
Subtotal	2,978.4	1,373	4,087,871
Commercial	467.6	1,500	701,370
Industrial			
Light Industrial	155.8	1,500	233,670
Heavy Industrial	139.6	1,500	209,460
Subtotal	295.4	1,500	443,130
Institutional			
Institutional/Public Facility/School	435.9	550	239,729
Church	12.4	550	6,809
Subtotal	448.3	550	246,538
Hospitals			
LD Residential Hospital	155.5	1,800	279,972
Commercial Hospital	15.1	1,800	27,216
Subtotal	170.7	1,800	307,188
Other			
LD Resident. Fuel Storage Facility	47.3	500	23,650
Open Space	74.8	-	-
Streets	1,775.9	-	-
Subtotal	1,898.0	12	23,650
Total	6,258.2	928	5,809,746

(a) Ultimate System residential unit wastewater generation factors were calculated by multiplying Existing System residential unit wastewater generation factors by the estimated year 2035 population increase of 7.0%

weekday "morning" peak flows. To account for the higher but lagged weekend wastewater peak flows, the hourly weekend flows were moved 9 hours latter (rolled down) to coincide with the weekday evening peak flows that were greater than the morning weekday peak flows. Representative weekday and weekend flows were then averaged to develop composite diurnal flows with slightly higher peaking factors.

Residential land use as a percentage of total land use for Meter Basin Nos. 1, 2, 3 and 4 was 67%, 70%, 79% and 75%, respectively, which is very similar for the residential land use percentage for the entire City (75%). As the residential to non-residential land use ratio for the four meter basins were similar, the hourly flow factors were also similar. A composite hourly unit dry-weather flow hydrograph (hourly flow factors relative to an average flow factor of 1.0) was developed to input into the hydraulic model to develop hourly flows including peak-hour flows in the model. The composite hydrograph, which is shown on Figure 3-5, is a composite of the 4 meter basins and also a composite of approximately 75% residential and 25% non-residential land use.

Figure 3-5. Composite Dry-Weather Flow Hydrograph[(a)]



a) Composite of four meter basins and also composite of approximately 75% residential and 25% non-residential land use.

Table 3-8 lists the location of the four flow meters and Figure 3-6 shows the locations of the flow meters.

Table 3-8
FLOW MONITORING LOCATIONS

Basin ID	Manhole No.	Probe Location	Pipe Diameter (in)
1	B1-NW1210	Incoming pipe	15
2	B2-NW5322	Incoming pipe	15
3	B3-NW6349	Incoming pipe	15
4	B4-NW9024	Incoming pipe	8

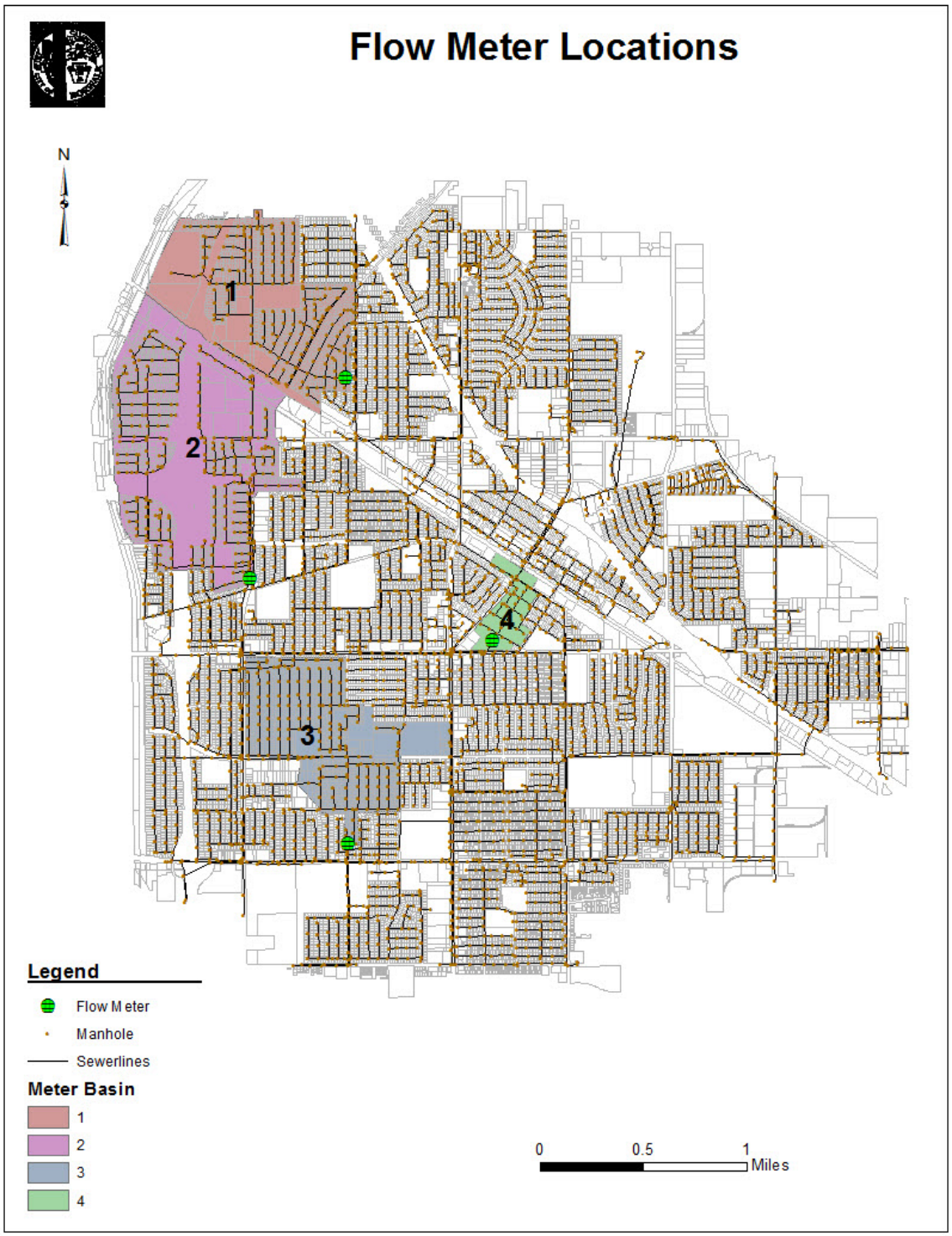


Figure 3-6
Flow Meter Locations

CHAPTER 4 – REHABILITATION METHODS

4.0 Overview

Aged and defective sanitary sewers should be replaced periodically as part of an on-going investigation and rehabilitation program to both ensure structural integrity of infrastructure components and to help prevent wet-weather inflow and infiltration (I/I) into the collection system through system defects such as cracked and broken pipe. This chapter discusses various strategies and methods to rehabilitate sanitary sewers and develops planning-level unit costs that will be used in this Master Plan to develop project costs in the recommended Capital Improvement Program.

4.1 Sanitary Sewer Rehabilitation Methods

Sewers need rehabilitation if they are in a deteriorated condition and/or they need additional hydraulic capacity. In the past, the most common construction approach to rehabilitating a sewer for either reason was sewer replacement via open cut excavation. However, over the past 30 years, sewer rehabilitation via trenchless technology has become more practical and less expensive than traditional open cut excavation if the sewer is only in a deteriorated condition, i.e. does not need increased hydraulic capacity. There are also several trenchless methods now available that are also more practical and in some cases less expensive when the sewer also needs increased hydraulic capacity.

With trenchless technology, the surface and ground depth in the vicinity of a sewer to be rehabilitated is significantly less disturbed compared with open cut excavation. Sewer rehabilitation via trenchless technology avoids most conflicts with adjacent and crossing utilities and pipelines, and also avoids most surface disruptions to traffic, property, and the surrounding environment in general. Most trenchless technologies utilize the existing sewer as a host pipe and utilize existing manholes to conduct the rehabilitation. In some cases, pits must be excavated to accommodate a trenchless technology.

These trenchless technologies are less expensive than sewer replacement via open cut excavation. However, in utilizing the existing sewer as a host pipe, the sewer diameter is decreased, not increased. The new sewer lining might offer slightly better capacity resulting from less pipe friction, but because a slime layer eventually builds up on any sewer pipe surface, this increased capacity might not be significant.

4.1.1 Sewer Rehabilitation via Pipe Replacement

In order to increase hydraulic capacity significantly, the sewer can be replaced with a new larger sewer either by open cut excavation and/or bore and jack construction, or a new sewer can be constructed parallel to the existing sewer by either of these same two construction methods. Open cut excavation causes disruptions to the surface environment. As an alternative, bore and jack construction can be employed where two pits are excavated (a bore pit and a receiving pit), a steel casing is bored and jacked between the two pits, and the sewer is grouted inside the casing. The only excavation occurs at the bore pit and the receiving pit.

However, bore and jack construction is significantly more expensive than open cut excavation. For example, as average planning estimates, it might cost approximately $200/linear foot (lf) to construct a 12-inch sewer by open cut excavation (including traffic control and pavement replacement, but not including project mobilization, flow bypassing, and lateral reconnection)

and approximately $1,000/lf to construct the same 12-inch sewer by bore and jack construction. Because of the high cost, open cut excavation is typically employed. However, bore and jack construction is used to go below major road intersections where traffic cannot be disrupted, and below major surface obstructions such as railroad tracks, freeways, etc.

Directional drilling and micro-tunneling can also provide for trenchless construction of a new sewer. However, both methods are more expensive than bore and jack construction, and their benefits such as directional change are not needed to construct a sewer below a road or intersection in most cases.

In order to increase hydraulic capacity, the existing sewer can be replaced with a larger sewer, or a new sewer can be constructed in parallel with the existing sewer, which remains in service. If the existing sewer is also in a deteriorated condition and requires rehabilitation anyway, then it will be recommended in the Master Plan that the existing sewer be replaced with a new sewer. If the existing sewer is in good condition with very few defects and is relatively young, then it will be recommended in the Master Plan that the existing sewer be kept in service and a new parallel sewer be constructed in order to increase hydraulic capacity.

City sewers are mostly constructed in VCP, which is considered a sturdy sewer pipe material. However, any sewer constructed prior to 1950 will be recommended for replacement regardless of condition if the sewer requires additional hydraulic capacity.

Flow bypassing at an upstream manhole is required when replacing an existing sewer. Also, existing laterals must be serviced by a temporary pipeline while the new sewer is set in the trench and bedded. The existing laterals are connected as soon as a new sewer segment is bedded. An advantage to constructing a parallel sewer (relief sewer) is that the existing sewer is kept in service while the relief sewer is being constructed. Less flow bypassing is required. Additionally, sewer laterals on the side of the existing sewer away from the parallel sewer can remain connected to the existing sewer, or if they are to be connected to the new sewer, the connections can be made after the new sewer has been constructed.

Pipe Bursting

Another trenchless alternative for constructing a larger sewer is pipe bursting. Pipe bursting can be less expensive and faster than open cut construction. Pipe bursting is accomplished by pulling a bursting device through the existing pipe. This device by virtue of its size or its radial expansion ability shatters the old pipe and forces the fragments into the surrounding soil. The new pipe is attached to the bursting device and is thus pulled into place as the device advances. An advantage of pipe bursting compared with other trenchless pipe rehabilitation is that the existing pipe can be upgraded with a completely new pipe of equal diameter or greater, thus maintaining or increasing the capacity of the line being rehabilitated. Also, the pipe is a complete structural replacement that functions independently of the original line. Flow bypassing is required with pipe bursting because the existing pipe is being replaced.

Installations are either continuous or sectional. In continuous installations, pipe materials such as high-density polyethylene (HDPE), PVC, and steel are connected or fused to form continuous strings of pipe. These strings are then installed over a length longer than the length

of one individual pipe segment. In sectional installations, individual pipe sections are installed one section at a time. Continuous installation is preferred over sectional replacement, as it minimizes the stoppage of the product line during the burst, and requires less equipment to perform the installation.

A continuous installation is divided into lengths of pipe segments that the bursting equipment being used can burst based on the geometry and layout of the existing pipe being replaced. The length that can be burst is highly dependent on the type of pipe being burst, degree of upsize, soil conditions, and geometry of the original installation. Access pits are excavated on each end of the pipe to be replaced. The pipe-bursting machine that pulls the bursting head is located in the machine pit. The new or product pipe and bursting head are inserted into the existing or host pipe at the insertion pit, which is located at the other end of the pipe.

Machine pits are typically 12-feet long by 6 to 8-feet wide, but can vary in size depending on the size and type of the pipe bursting equipment used. The insertion pit has a flat section and a sloped section that runs from the bottom of the pit to the ground surface. The length of the flat section is typically 12 times the outside diameter of the replacement pipe and the length of the sloped section is typically 2.5 times the depth.

Sections of the product pipe are fused or connected for a continuous installation. The end of the product string is attached to the bursting head, which is attached to the drive rod string, which is attached to the bursting machine in the machine pit. The bursting machine then pulls the drive string. As the bursting head advances, the host pipe is burst and the product line is simultaneously installed. Other bursting methods employ a pneumatic bursting head that "hammers" the pipe forward rather than being pulled. The static bursting system or pneumatic pipe bursting system employed must be capable of delivering the required bursting forces necessary to fragment the existing pipe, push the broken pieces into the ground and simultaneously install the new HDPE replacement pipe.

The bursting force and equipment capacity of the pipe bursting equipment is a function of the replacement section, which is the length of pipe to be bursted and replaced between the machine pit and the installation pit. Longer replacement sections require larger-capacity equipment. The length of the replacement section is also a function of the geometry of the existing pipe to be replaced. Pipe bursting can accommodate only gradual horizontal curves. A replacement section must be terminated at a tight bend.

The depth of cover is important in pipe bursting especially when the existing pipe lies below an asphalt road because the bursting head can cause an upheaval (surface hump) of the asphalt surface if there is insufficient cover. The potential for upheaval is also a function of soil density. Less dense (softer) soils can absorb more of the uplifted soil and pipe fragments and this decreases the upheaval potential. The potential for upheaval is greater for ground covers less than 4 feet. This is typically not an issue with sanitary sewers as they are usually installed deeper than 4 feet.

Minor surface upheaval can be rectified by rolling down the hump with an adequately-sized road roller on a relatively hot day. Where the potential for upheaval exists, the Contractor can drill a

relief bore hole above the host pipe to absorb the soil displacement caused by the bursting head, but this adds construction cost.

The sections of the HDPE pipe are fused together and the entire length of replacement pipe for a given replacement section is strung out directly behind the installation pit, i.e. a 300 lf replacement section would have 300 feet of pipe strung out behind the installation pit. Traffic control would be required for the installation pit and the pipe layout area behind the pit as well as at the machine pit. One lane of traffic or a bike lane would need to be closed down in these work areas.

Pipe installed within a steel casing via bore and jacked construction cannot be replaced through pipe bursting because the steel casing does not allow sufficient space for pipe fragmentation. Concrete encasement may also preclude pipe bursting for that specific pipe segment depending on the thickness of the encasement. Utilities that are too close to the bursting "sphere of influence" would need to be relocated prior to bursting. Also, sewer laterals would have to be removed within the sphere of influence, and then reconstructed and connected to the new sewer.

For straight runs, pipe bursting can be implemented as a continuous installation through existing manholes. The manholes would then need to be rehabilitated and sealed after the bursting is complete. Pipe bursting can be more cost effective than open cut excavation, if you have long sections of straight sewers that can accommodate long continuous installations. Often times pipe bursting can be faster than open cut construction because there is significantly less excavation and pavement replacement. Pipe bursting could conceivably be 20 to 25% faster than open cut construction depending on actual conditions.

However, if the sewer segments are in residential areas with many lateral connections, then the length of installation must be shortened, which adds construction time and cost. The shortened installation length and the cost to dig up and reconstruct laterals in the area of influence typically make open-cut excavation more cost effective in residential areas with many sewer laterals.

Earth Tool Company and Miller Pipeline Corp. are two of the manufacturers of pipe bursting equipment on the market. Earth Tool Company manufacturers Hammerhead™ moles and various pipe-bursting products that are marketed through Vermeer dealerships located throughout the United States and internationally. Miller Pipeline Corp. manufactures the XPANDIT pipe bursting system.

4.1.2 Sewer Rehabilitation via Trenchless Technology using Existing Pipe as Host

Cured-in-Place lining, segmental sliplining, spiral wound sliplining, and tight-fit lining are trenchless technologies that utilize the existing pipe as a host pipe in the pipe rehabilitation process. The liner of each of these systems can provide complete structural support, i.e. assume all dead, live, and construction loads as well as any surcharge pressures, independent of any structural support remaining in the host pipe. All of these technologies are typically less expensive than sewer replacement via open-cut excavation and via pipe bursting. However, the pipe flow area is reduced to some degree by a reduction in pipe diameter with each of these technologies.

With each of these trenchless technologies, the surface and ground depth in the vicinity of a sewer to be rehabilitated is significantly less disturbed compared with open cut excavation. These technologies avoids most conflicts with adjacent and crossing utilities and pipelines, and also avoids most surface disruptions to traffic, property, and the surrounding environment in general. Some of these trenchless technologies utilize existing manholes to conduct the rehabilitation. In some cases, pits must be excavated to accommodate liner insertion into the host pipe.

LACSD utilizes all of these trenchless technologies to a certain extent and have developed detailed specifications for each. These technologies are described as follows:

Cured-in-Place Pipe Lining

In the Cured-in-place pipe (CIPP) lining process, a liner composed of a fabric reconstruction tube impregnated with a thermosetting resin is inserted into the pipe to be repaired through an existing manhole, an excavated pit, or another entry point. The tube is either winched or inverted into place with water pressure. Injected steam or hot water cures the resin and shapes the tube into the form of the existing pipe. Application of heat hardens the resin after a few hours, forming a jointless inner pipe surface. The rehabilitation liner serves to repair the deteriorated structure of the existing pipe.

The lining process requires no excavation if existing manholes are available as insertion pits. The process can accommodate pipe bends up to 90 degrees. The pipe requires careful cleaning and video inspection prior to installation. Flow bypassing is required with CIPP because the existing pipe is rehabilitated.

Service laterals remain connected to the host pipe during the rehabilitation process, but the laterals are out of service until openings can be cut through the CIPP lining at the connection points. A camera with a cutting device is run through the lined pipe to reopen the laterals remotely. Dimples occur in the CIPP lining prior to curing that indicate the lateral connection points. With some other trenchless technologies such as sliplining with a rigid lining material, dimples do not occur, and the lateral locations must be surveyed as part of the pre-work video inspection in order to map out the lateral locations. This makes lateral connection more efficient for CIPP relative to these other trenchless methods.

Several companies have developed CIPP systems and these systems vary in material type, coating type and method of construction. Most of the fabrics are made of woven or non-woven (needle punched) polyester. Other materials such as fiberglass are sometimes incorporated into the fabric as reinforcement. Tubes are typically layered with at least one fabric layer and another layer which is impermeable to the flow of the liquid resin.

The resin is typically unsaturated polyester. Vinyl ester and epoxy resins are sometimes used for better corrosion resistance or for unusual thermal conditions. The composition of the resin material can be varied to meet specific design conditions. Fabric tubes are manufactured to be the same size or slightly smaller than the inner diameter of the existing pipe to be rehabilitated. The saturated fabric stretches to conform to the inner surface of the pipe. Some mechanical bonding of the resin to the inner pipe surface does occur. The structural performance of the

liner depends on the thickness of the liner as well as upon the condition of the existing pipe to a certain extent.

Insituform Technologies Inc., Nu Flow Technologies, Inc., Inliner Technologies, are some of the CIPP manufacturers on the market. As an example, Insituform installations have been accomplished in pipe sizes up to 108 inches. Insitupipe is a gravity CIPP lining system manufactured by Insituform that is designed to accommodate specific pipe conditions and structural requirements. The thickness of the Insitupipe varies from 0.12 to 1.59 inches as required by each project. The physical characteristics of the finished Insitupipe are largely a function of the resin system used.

Resin systems used in the Insituform process are unsaturated polyesters, vinyl esters, and epoxies. The resin is specifically designed on a project-by-project basis and the type selected is dependent on pipe function and condition among other factors.

Traditional Segmental Sliplining

In the traditional segmental sliplining process, a polyethylene or PVC liner of a slightly smaller diameter is inserted into an existing pipeline and the annulus between the two pipes is grouted to form one unified pipe. Sliplining can be used if the host pipe does not have excessive joint settlements, severe misalignments, or large deformations. The host pipe should be relatively straight between the insertion pit and the receiving manhole. The new pipe can form a continuous watertight pipe within the existing pipe after installation.

In segmental sliplining, individual sections of pipe (typically 15-feet in length) are pushed into the host pipe at insertion pits that are strategically located at points along the host pipeline alignment. The liner pipe is inserted fully rounded into the host pipe, with new segments added on and pushed through as needed. Pushes approaching 3,000 feet of pipe have been reported. The pipe liner segments are typically joined with tongue and groove joints. Lap joints are used with some liners. After the new pipe is positioned in place, the annular space is grouted.

It is necessary for the host pipe to reasonably straight and reasonably round, as slip liners are not pliable inserts. Some adaptation to bends in the pipe is possible through the use of short segments. Also, the liner can be deflected up to 2 degrees at each joint. However, sliplining is more practical for straight pipe segments.

An insertion pit must be excavated large enough to accommodate the pipe segment being inserted. An insertion pit on the order of 20 feet long by 8 feet wide by the depth of the host pipe is required to insert 15-foot pipe segments. The need for excavated insertion pits is a disadvantage compared with other technologies that are able to utilize existing manholes for liner insertion, i.e. spiral wound sliplining, cured-in-place liners, and fold and form liners.

The annulus space between the host pipe and the liner pipe represents a loss of hydraulic capacity for the pipe. As a potential offset to this lost hydraulic capacity, the newer and smoother sewer lining would offer less friction than the existing sewer pipe surface, but because a slime layer eventually builds up on any sewer pipe surface, increased capacity due to a smoother pipe surface might not be significant. However, sliplining an existing VCP sewer

would eliminate headloss associated with the VCP pipe joints as the slipline would have nearly seamless joints.

An advantage for sliplining relative to CIPP, is that sliplining can take place with flow in the existing pipe, whereas CIPP requires damming of an upstream manhole and/or flow bypassing to ensure that the existing pipe is free of all flow. For sliplining to occur with flow in the pipe, the maximum low depth in the existing pipe should not exceed approximately 30% of the pipe diameter.

Service laterals remain connected to the host pipe during the rehabilitation process, but the laterals are out of service until openings can be cut through the CIPP lining at the connection points. A camera with a cutting device is run through the lined pipe to reopen the laterals remotely. The lateral locations must be surveyed as part of the pre-work video inspection in order to map out the lateral locations.

Lamson Vylon Pipe (PVC), Hobas (RMP), and Polypipe (PE) are some of the slipline manufacturers on the market. For example, Lamson Vylon Pipe manufactures a PVC slipliner pipe with an I-beam profile wall and gasketed joints rated for 11 psi. The pipe is available in diameters ranging from 21 to 48 inches. The standard pipe length is 15 feet. Lamson Vylon Pipe also manufactures a PVC slipliner pipe called “The Insider”. The pipe is available in diameters ranging from 12 to 18 inches. The joint is a flush joint system with elastomeric seals. The pipe is very similar to SDR 35 pipe. The pipe is not pressure rated and it is suitable only for gravity-flow.

Spiral-Wound Sliplining

In spiral-wound sliplining a winding machine helically winds a PVC strip into a tube which is simultaneously propelled directly into the existing host pipe. The spiral wound PVC pipe liner is composed of an extruded PVC profile strip with dual male and female locking elements on opposite sides of the strip. The profile strips have a ribbed design and range in width from 3.35 to 4.96 inches, which translates to a large number of joints. The profile strip, which is stored on a spool, is fed into an existing manhole via a winding machine. The winding machine forms the profile strip into a spiral pipe of a specified fixed diameter by sealing the male and female locking elements.

There is an expandable pipe liner version in which the pipe liner is expanded radially until the liner contacts the host pipe. This version is primarily applicable to sewers less than 24 inches in diameter. In the second version, the pipe liner remains a fixed diameter less than the inside diameter of the host pipe and grout is injected to fill the annulus between the two pipes. This second version, which can incorporate a steel reinforcing strip, is primarily applicable to sewers greater than 24 inches in diameter.

In the expansion version, after the liner is fully expanded, sealant is applied to the ends of the pipe. As discussed below, service connections are re-established similar to segmental sliplining. However, the ribbed profile of the spiral wound pipe liner creates small voids around the circumference of the connection that must be sealed.

In the fixed-diameter version, a secondary lock for the sliplined machine spiral wound PVC pipe liner remains intact in order to hold the pipe liner at a fixed diameter. The profile strips have a higher stiffness than the strips used for the expansion version. The maximum outside diameter of the fixed-diameter liner is limited to 2 inches less than the inside diameter of the existing pipe to ensure proper placement of grout.

An advantage of spiral-wound sliplining relative to segmental sliplining is that the liner can be inserted at existing manholes. The tube or liner is made in one continuous length from manhole to manhole. Unlike segmental sliplining, spiral-wound sliplining can accommodate pipe bends and more severe pipe deformations due to the flexible nature of the winding process.

Service laterals remain connected to the host pipe during the rehabilitation process, but the laterals are plugged and out of service until openings can be cut through the lining at the connection points. A camera with a cutting device is run through the lined pipe to reopen the laterals remotely. The lateral locations must be surveyed as part of the pre-work video inspection in order to map out the lateral locations.

Like segmental sliplining, spiral-wound sliplining can take place with flow in the existing pipe. For sliplining to occur with flow in the pipe, the maximum low depth in the existing pipe should not exceed approximately 30% of the pipe diameter.

Danby of North America, Inc. (Twin Lock) and PipeTec, Inc. (Rib-Loc) are two of the spiral-wound sliplining companies.

Tight-Fit Lining

A roll-down, die-reduction, or a folded-pipe lining process are similar trenchless technologies that are all included under a “tight-fit” classification by AWWA. In the tight-fit technologies, HDPE of a diameter either slightly greater or approximately the same diameter as the host pipe is reduced in diameter or deformed by mechanical means so that it can then be pulled through the host pipe. The HDPE pipe then expands naturally or is expanded to nearly its original diameter to fit tightly within the inside diameter of the host pipe. In contrast to segmental sliplining and fixed-diameter spiral-wound sliplining, these processes minimize the loss of inside diameter and eliminate the need for grouting as no annular space is left between the HDPE and the host pipe.

The equipment to perform the “roll-down” method consists of winching equipment used to pull the HDPE through the existing pipe and a roll-down box (a series of mechanical rollers) that physically rolls the outside diameter of the HDPE down to provide clearance to the inside diameter of the host pipe. Once rolled down, the HDPE is maintained under tension to prevent expansion as it is winched through the host pipe. When the entire run is installed, tension is released and the HDPE gradually returns to its original outside diameter and is a close fit to the host pipe.

The HDPE pipe is typically oversized by approximately 10% relative to the inside diameter of the host pipe because the original diameter is sometimes not achieved in the subsequent expansion, i.e. the HDPE sometimes expands to a diameter that is slightly less than its original diameter.

Factory produced lengths of HDPE are delivered to the jobsite, where they are fusion welded together to produce the full length of pipe for a specific installation or "pull". An entrance pit is excavated at the beginning of the rehabilitation area. A pit width of at least 5' is required. The length is generally 4 times the depth to invert, and may taper to grade away from the pipe. The length is to allow the stiff HDPE pipe to transition from surface elevation to centerline of pipe.

A receiving pit is excavated at the termination point. This pit length is typically in the 10 to15 foot range. The winching equipment is set up at the receiving end and the roll down box is located at the entrance pit. The winch line is run through the pipe to connect the HDPE pipe to the winching equipment. The HDPE pipe is pulled through the roll down box and into the host pipe by the winch, with the line under continuous tension to maintain size and clearance with the host pipe. Once the line is installed, tension is released and the HDPE pipe gradually resumes its original outside diameter, which is in close fit with the host pipe.

The length of an installation pull is dependent on the geometry of the host pipe. The HDPE pipe can usually be pulled through horizontal curves on the order of 5 to 7 degrees. However, depending on where the curve occurs in the pull, the condition and material of the host pipe, and other factors, larger curves up to 22 degrees have been achieved in some installations. A run must be terminated and a pit located at bends that cannot be pulled. Also there is a maximum length of straight pipe that can be pulled. Pulls up to 1,500 lf have been accomplished. Project cost and construction time increase as the number of pits required on a project increases.

A "die-reduction" lining method is very similar to roll-down with the exception that the HDPE pipe is pulled through a static reduction die instead of mechanical rollers. United Pipeline Services, which is a wholly owned subsidiary of Insituform Technologies, Inc., is one of the companies that perform roll-down pipe rehabilitation (Tite Liner). Swagelining is a patented die-reduction lining method. ARB, Inc. Constructors is a company that performs pipe rehabilitation using Swagelining.

The fold-and-formed lining process is similar in concept to the other tight-fit lining systems. In the fold-and-formed pipe (FFP) lining process, a folded thermoplastic relining product is inserted into the pipe to be repaired through an existing manhole or another entry point. The thermoplastic material, typically extruded PVC or high density polyethylene pipe (HDPE), is folded into a U-shape to produce a smaller net-cross-sectional area so it can be more easily inserted into the existing pipeline.

After the plastic-liner pipe is inserted, hot water or steam is applied to expand the liner pipe into a snug fit with the host pipe (rounding). The liner is then gradually cooled while held in place by internal pressure. As it cools, the liner pipe interlocks with the irregularities of the host pipe. Although tight, mechanical bonding between the liner and the host pipe does not occur.

Subcoil as developed by Subterra is a folded-liner pipe in which the HDPE pipe is factory folded and held in a heart shape by restraints. The folded liner pipe is then inserted into the existing host pipe. Once inserted, the folded-pipe liner is pressurized to snap the restraints allowing it to revert back to its original circular shape. The expanded HDPE pipe then forms a tight fit with

the host pipe. Doty Brothers is a company that performs pipe rehabilitation using the Subterra folded liner pipe. Kinsel Industries, which is a wholly owned subsidiary of Insituform Technologies, Inc., also installs a folded-pipe liner called Close Fit.

All of these tight-fit lining systems are similar to segmental sliplining in that 1) it is necessary for the host pipe to reasonably straight and reasonably round, as the liners are not pliable inserts, 2) an insertion pit must be excavated large enough to accommodate the pipe segment being inserted, 3) lining can take place with flow in the existing pipe, and 4) service laterals remain connected to the host pipe during the rehabilitation process, but the laterals are out of service until openings can be cut through the lining via a camera with a cutting device.

These processes are typically a little more expensive than traditional segmental sliplining. However, there is less loss in hydraulic capacity as a result of a reduction in pipe diameter.

Suitability of Trenchless Technologies
LACSD typically rehabilitates sewers greater than 48-inches in diameter by sliplining with segmented plastic pipe and then grouting the annulus between the pipes because 1) these large sewers carries large flows and flow bypassing is not practical in most cases, and 2) a loss in diameter is not as significant with these larger pipes. LACSD typically rehabilitates sewers between 27 and 42 inches in diameter by CIPP or sliplining. The advantage to using CIPP is that it has minimal impact on capacity. Traditional segmental sliplining begins to negatively impact sewer capacity in these pipe sizes.

For sewers 24 inches and smaller, LACSD typically utilize CIPP, the expansion-version spiral-wound sliplining, and any of the tight-fit lining systems.

LACSD has reported troubles with wrinkles and folds using CIPP on larger diameter sewers, but no such troubles using CIPP on smaller diameter sewers. Tight-fit lining systems can typically be installed more quickly than CIPP and has better quality control in terms of material properties than CIPP liner. However, CIPP can be less expensive than a tight-fit technology and offers advantages such as more efficient re-establishment of service laterals. Traditional segmental sliplining can be less expensive than the CIPP or tight-fit lining technologies on a given project. However, segmental sliplining results in a greater loss in pipe diameter.

Given the specific conditions of a given sewer rehabilitation project, several of these trenchless technologies could be effective and price competitive on the same project. Some technologies might be excluded on a specific project, if a reduction in pipe diameter cannot be tolerated, if flow bypassing is not practical, or because of specific deformations of the existing sewer among other factors to consider in the design process.

4.1.3 Other Types of Sewer Repairs
Often times a sewer segment will be in overall good condition with the exception of severe defects that occur at a specific location or several locations along the segment. These point defects include broken pipe, severe cracking, or other damage that occurs within a limited length of pipe, i.e. approximately 5 linear feet or less. If there are a limited number of these spot defects, then it is more economical to excavate and repair these specific locations rather than to

replace the entire sewer segment. If there are four or more such locations in a 300 or 400 lf sewer segment, then it becomes more practical to replace the segment.

Because CIPP forms against the existing pipe wall, most point defects need to be repaired prior to lining the sewer. Most point repairs also need to be made in front of spiral wound sliplining. If the damage is not overly severe, then sometimes these repairs do not need to be made in front of segmental sliplining and possibly some types of tight-fit lining systems. However, if a sewer is collapsed at a point, then this repair will need to be made prior to any lining method.

Unauthorized sewer lateral connections (also referred to as break-in taps) are often discovered when a sewer is videotaped. As opposed to factory taps, unauthorized taps are often crudely hammered into the sewer. Wet-weather infiltration can enter the sewer via the unsealed and often cracked periphery of the connection. Sometimes these unauthorized connections were made to collect storm water from house roof drains and other area drains. In these cases, they become a major source of wet-weather inflow. Wet-weather inflow and infiltration can overflow and surcharge a sewer and can lead to sewer overflows.

The connection could also prove to be some type of chemical or hazardous waste drain. In rehabilitating these unauthorized connections, the lateral pipe should to be smoke tested to see what it is connected to. If it is found to be connected to storm drain or some other inappropriate drain, then the lateral should be disconnected and the sewer should be plugged and repaired at the point of connection. The owner of the inappropriate drain should then be required to reroute the discharge to an appropriate receiving connection. If connected to a sanitary sewer, the connection can be reconnected, sealed and repaired as required to block infiltration into the sewer.

4.2 Sewer Replacement & Rehabilitation Unit Costs

Planning level unit construction cost estimates for sewer replacement and rehabilitation are shown in Table 4-1. These unit costs will be used to develop planning level project cost estimates to develop Capital Improvement Program costs for this Master Plan. These unit costs do not include project mobilization, which will need to be added to project cost estimates. Project mobilization is estimated at 5 to 10% of the total project construction cost depending on the size and complexity of the project. All sewer rehabilitation and replacement unit costs shown in Table 4-1 include re-establishment of service laterals. Costs for all rehabilitation methods include heavy sewer cleaning and pre and post rehabilitation sewer videotaping.

Design-level cost estimates will need to be developed to refine project costs based on project conditions determined during the design phase of each project. For example, soil conditions determined in the design phase might preclude pipe bursting as a possible sewer replacement alternative. Flow conditions might make CIPP less attractive as a rehabilitation method if extensive flow bypassing is required, etc.

CHAPTER 4 – REHABILITATION METHODS

Table 4-1. Unit Construction Costs for Sewer Replacement or Rehabilitation[a]

Replacement or Rehabilitation Method	Unit Costs per Sewer Diameter (in)				
	8"	10"	12"	15"	18"
CIPP[b]	$55/lf	$62/lf	$68/lf	$105/lf	$140/lf
CIPP (bypass)	$3	$4	$5	$10	$15
Segmental Slipline[b][c][d]	$70/lf	$78/lf	$85/lf	$110/lf	$145/lf
Expansion Spiral Wound Slipline[b][c]	$75/lf	$83/lf	$90/lf	$115/lf	$150/lf
Tight-Fit Lining[b][c][d]	$75/lf	$83/lf	$90/lf	$115/lf	$150/lf
Rehab Break-in Tap	$7,000/ea	$7,000/ea	$7,000/ea	$7,000/ea	$7,000/ea
Sewer Point Repair	$7,000/ea	$7,000/ea	$7,000/ea	$7,000/ea	$7,000/ea
Pipe Bursting[b][d]	$165/lf	$180/lf	$215/lf	$250/lf	$300/lf
Open-Cut Sewer Replacement[b]	$150/lf	$175/lf	$195/lf	$220/lf	$240/lf
Open-Cut Parallel Sewer[b]	$130/lf	$155/lf	$175/lf	$200/lf	$220/lf
Bypass for Pipe Bursting or Open-Cut Replace	$3/lf	$4/lf	$5/lf	$10/lf	$15/lf
Open-Cut Pavement Replacement	$13/lf	$14/lf	$15/lf	$16/lf	$17/lf
Open-Cut Traffic Control	$3/lf	$4/lf	$5/lf	$5/lf	$5/lf
Bore and Jack[e]	$800/lf	$900/lf	$1,000/lf	$1,200/lf	$1,500/lf

a) Not including project mobilization, which is estimated at 5 to 10% of total project construction cost
b) Including re-establishment of service laterals
c) Estimated that flow bypassing will not be necessary as construction work will be done during low flow periods with flow in the pipe
d) Includes installation pit excavation, pavement replacement and traffic control
e) Includes installation and receiving pit excavation, pavement replacement and traffic control

For planning purposes, it is estimated that CIPP is slightly less expensive than the other trenchless technologies for rehabilitating 8-inch, 10-inch and 12-inch sewers especially if flow bypassing can be limited by low flows or possibly eliminated if damming an upstream manhole during installation and curing is possible. It is also estimated that segmental sliplining is slightly less expensive than expansion spiral-wound sliplining or tight-fit sliplining. The slightly higher cost could be warranted if a reduction in pipe diameter cannot be tolerated.

CHAPTER 4 – REHABILITATION METHODS

It is estimated that segmental sliplining and even spiral-wound sliplining or tight-fit sliplining can become more cost effective relative to CIPP for sewer diameters greater than 12 inches if extensive flow bypassing is required. Expansion spiral-wound sliplining and tight-fit lining are estimated to be more expensive than segmental sliplining at all diameters. However, these two methods or CIPP might be required if the reduction in diameter resulting from segmental sliplining cannot be tolerated.

Construction conditions as determined in the design phase might preclude a rehabilitation method from inclusion in the contract bid. However, it would be appropriate to include as many of these rehabilitation methods in a competitive bid as warranted if there are no fatal flaws with the rehabilitation method specific to the project. In a competitive bid environment, any of the viable rehabilitation methods could conceivably end up having a lower cost.

The costs to excavate and make point repairs for breaks, severe misalignment, severe cracking, or other damage that occurs within a limited length of pipe, i.e. approximately 5 linear feet or less, are also shown in Table 4-1. If there are four or more such locations in a 300 or 400 lf sewer segment, then it typically becomes more cost effective to replace the segment. Point repairs will need to be made prior to conducting lining rehabilitation depending on the severity of the defect and the type of rehabilitation method used.

The costs to smoke test an unauthorized lateral connection (break-in tap) and then repair and seal the sewer at the point of connection are shown in Table 4-1. It is assumed that the cost to reroute an unauthorized lateral connection to an appropriate receiving location will be burdened by the owner of the unauthorized lateral connection.

For planning purposes, it is estimated that pipe bursting has the same unit cost as sewer replacement by open-cut excavation. However, the unit costs for pipe bursting includes installation pit excavation, pavement replacement, and traffic control, whereas pavement replacement and traffic control are additional costs for sewer replacement by open-cut excavation as shown in Table 4-1. Flow bypassing is an additional cost for both sewer replacement by open cut excavation and pipe bursting in Table 4-1.

The cost to construct a parallel sewer is estimated to be less expensive than the cost to construct a replacement sewer of the same size. In constructing a parallel sewer, the need to perform bypass pumping is greatly reduced and in some cases might be eliminated altogether. Additionally, sewer laterals on the side of the existing sewer away from the parallel sewer can remain connected to the existing sewer, or if they are to be connected to the new sewer, the connections can be made after the new sewer has been constructed. Sewer laterals on the side of the existing sewer where the parallel sewer is being constructed will typically need to be connected to the new sewer at the end of each work day. The estimated cost to employ bore and jack construction to go below major road intersections and major surface obstructions such as railroad tracks, freeways, etc., are also shown in Table 4-1.

CHAPTER 5 – CCTV INSPECTION

5.0 Overview

City of Norwalk has been performing its own CCTV inspection for a number of years. As part of this project, H&F obtained the latest (at the time) CCTV files (Fiscal Year 2013/2014) and reports from the City so that it could develop a prioritized matrix of structural defects for a portion of the City's collection system. This portion included performing review and coding updates, if needed, of approximately 173,000 linear feet or 32 miles of City sewers videotaped using closed circuit television (CCTV), which is 20% of the City's total collection system (164 miles). The sewer CCTV inspections were conducted by the City to identify and rate defects. As part of the Sewer Master Plan, the sewer videotapes were reviewed; sewer defects were rated for severity; sewers with significant structural defects were prioritized for rehabilitation or replacement; and the recommended projects were included in the Capital Improvement Program, which is discussed in Chapter 7. Sewers reviewed as part of this project are shown on Exhibit 5-1. It should be noted that H&F also requested and obtained an Autocad map from the City showing lines that were CCTV'd. However, the manhole numbering system on this map was completely different than the ones on the previous Autocad map obtained for digitizing and hydraulic modeling. We had to spend some time identifying and developing a cross reference table between the 2013-2014 CCTV Autocad map and the GIS database.

Sewer structural defects include cracked pipe, broken pipe, offset joints, and unauthorized service connections (break-in taps). Sewer operation and maintenance (O&M) defects including heavy roots and grease deposits can lead to sewer blockages that can then lead to overflows. Sewer defects can undermine the integrity of the sewer system infrastructure; can allow wastewater to exfiltrate into the soil and groundwater; and can allow excessive rainwater in the form of inflow and infiltration to enter the sewer leading to potential overflow conditions.

5.1 Sewer CCTV Inspections

The Pipeline Assessment and Certification (PACP) assessment and rating system developed by the National Association of Sewer Service Companies (NASSCO) was used to assess and categorize sewer defects. NASSCO is a non-profit trade association consisting of contractors, manufacturers/ suppliers and professionals (engineers, cities, etc.) involved with many sewer technologies. The PACP Condition Rating System provides condition ratings for sewer structural defects, and operation and maintenance defects. Grades are assigned for each category based on the grading criteria shown in Table 5-1.

CHAPTER 5 – CCTV INSPECTION

Table 5-1
Sewer Defect Grade Descriptions

Defects Grade	Description
5 – Severe	Severe defects requiring immediate attention
4 – Heavy	Defects that will become Grade 5 in the near future
3 – Moderate	Defects that will continue to deteriorate
2 – Fair	Defects that have not begun to deteriorate
1 – Light	Minor defects

The Pipe Defects Rating is the addition of all grade defect occurrences multiplied by their respective grade levels for a given pipe segment (a pipe segment is the length of sewer pipe between two manholes). For example, a pipe with four Grade 5 occurrences, three Grade 3 occurrences, and three Grade 1 defects with no other defects found would have a Pipe Defects Rating of 32. The Pipe Defects Rating Index is the Pipe Defects Rating divided by the total number of defect occurrences. In the example above, the Pipe Defects Rating Index would be 3.2 (32 divided by 10). The Pipe Defects Quick Rating is the number of occurrences of the two highest grades. In the above example, the Pipe Defects Quick Rating would be 5(4) 3(3).

The PACP continuous defect feature is used to denote where long portions of a sewer pipe are affected by the same defect, without the user having to repetitively enter point defects. The equivalent number of uninterrupted and joint repeating continuous defects is converted to equivalent point defects by dividing the length of the continuous defect by 5. For example, a 250-foot-long continuous defect, Grade 3, would equate to 50 equivalent Grade 3 point defects.

The sewers were rated separately for structural defects and O&M defects. Both were sorted by highest Pipe Defects Rating.

5.1.1 Sewer Structural Defects

The vast majority of sewers in the City are constructed of VCP, and a majority of City sewers were constructed prior to 1960 and have been in service for over 55 years. Primarily due to age, many sewers were found to have significant structural defects that need to be rectified either by rehabilitation or replacement within the 10-year CIP. In terms of a structural defect, a category 5 defect can be a broken pipe where the soil is visible through the hole in the pipe, or it can be collapsed pipe, or it can be a severe offset joint where the flow way in the pipe is reduced by over 50%. Any category 5 defect is recommended for repair or replacement within the 10-year CIP as a high priority project.

A category 4 defect is a severe fracture or breaking of the pipe that could become a category 5 defect in the near future, or it can be a severe offset joint. A lone category 4 defect or a segment with several category defects was typically not recommended for rehabilitation within the 5-year CIP, but a sewer segment with multiple category 4 defects was recommended for rehabilitation

or replacement, especially if they were occurring in conjunction with multiple category 3 and 2 defects.

A category 3 defect is multiple cracking at a location in the pipe. Multiple cracking can continue to spread, i.e. deteriorate, over time. A pipe segment with many and/or recurring category 3 defects is recommended for rehabilitation. A category 2 defect is s a single deep crack where the sides of the crack have separated. A type 1 defect is a single hairline crack that has not separated. Type 2 and Type 1 and many do not need to be repaired in the 10-year CIP, and most likely, will not require attention for 10 years or more.

Sewer segments recommended for rehabilitation or replacement within the 10-year CIP are shown on Exhibit 5-1 and are listed in Table 5-2. The defects to be repaired are associated with videotaped sewer segments totaling 45,732 linear feet (8.7 miles), which is the total length of sewer segments videotaped and not the length of sewer defects themselves.

It is more economical to rehabilitate a sewer by installing a liner such as a cured-in-place pipe (CIPP) liner or a polyethylene or PVC slip-liner than to replace the sewer segment with a new sewer segment, as the lining can be installed via trenchless technology and costs from $55 to $90/linear foot (lf) for 8 to 12-inch pipe compared with $185 to $235/lf for the same diameter range including the costs to excavate, trench, replace pavement, and implement traffic control. A sewer segment (with an average length of 300 lf) could have one or two Category 5 defects or severe Category 4 defects with the remaining sewer segment having only insignificant defects. Considering the age of the sewer, in some cases, it might be cost effective to implement excavated spot repairs (where only the small length of defective sewer is replaced). However, spot repairs are relatively expensive at approximately $7,000 each, and it is usually only cost effective to implement one, and in some cases, two spot repairs on a segment rather than to line the sewer if the point defects can be lined. If the pipe is not collapsed or severely deformed, and a liner can still be implemented with structural integrity and without impeding on the pipe flow area, it is usually better to just line the entire segment, especially if the segment has other defects and is aged.

If a pipe has significant number of Category 3, 4 and 5 defects, and is of significant age, it is better to replace the sewer even if the sewer can still be lined considering the remaining useful life of the sewer segment.

All of the Category 4 and 5 sewer defects were closely evaluated and it was determined that all of these defects could be lined for rehabilitation. Accordingly, no rehabilitation by means of constructing point repairs are recommended.

A total of 6,665 lf (1.3 miles) of sewer segments had significant defects that warrant replacement of the sewer. Lining rehabilitation is recommended for the remaining 37,926 lf (7.2 miles) of videotaped sewer segments warranting rehabilitation.

The recommended phasing and costs for CIP sewer repair projects are presented in Chapter 7.

There are also sewers in the system with defects that are moderately severe, but not severe enough to warrant repair in the 10-year CIP at this time. These sewer segments should be

monitored via subsequent videotaping to see if the defects or segments worsen to the point of needing rehabilitation or replacement. These sewer segments are shown in Table 5-3.

CHAPTER 5 – CCTV INSPECTION

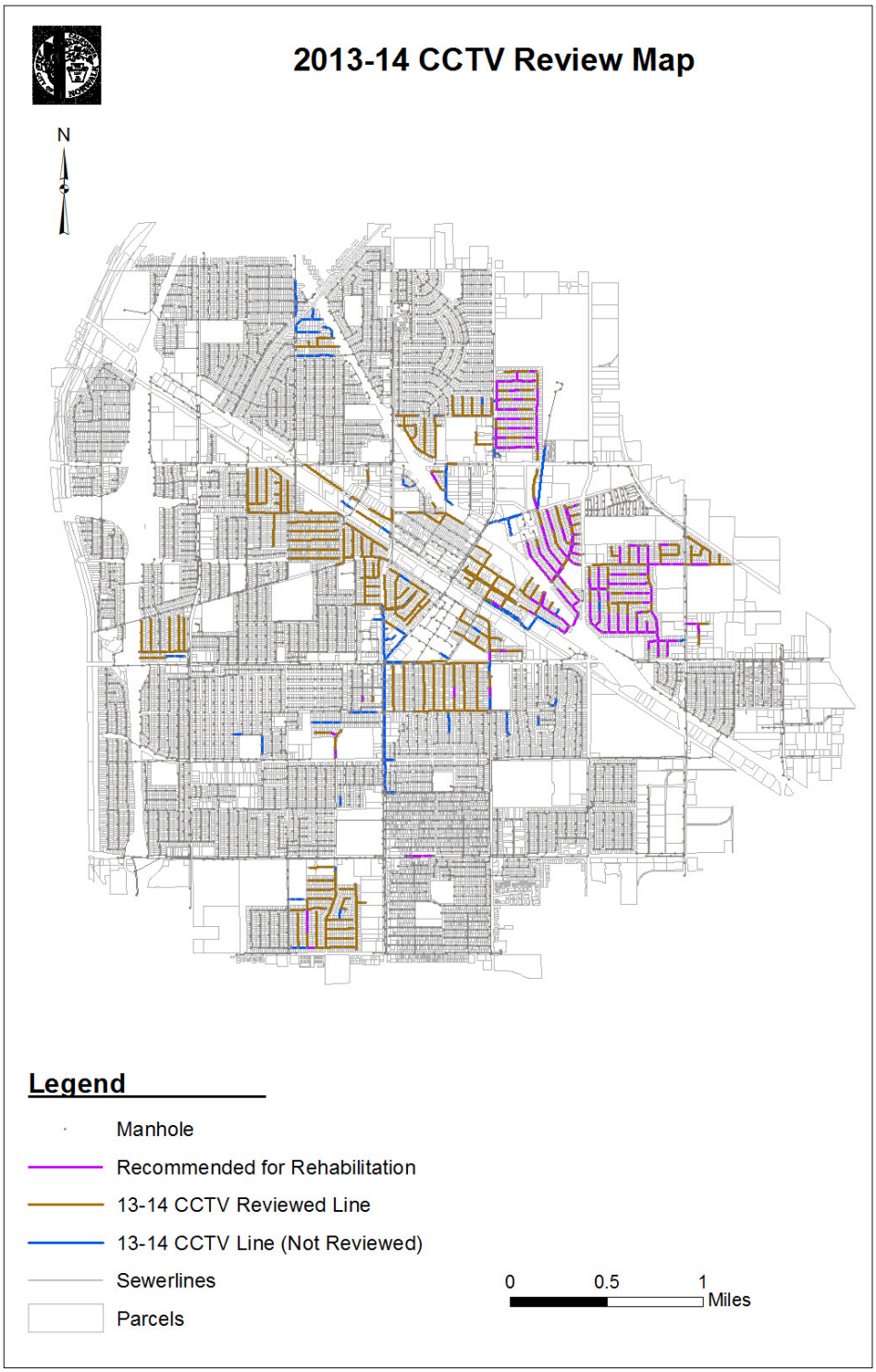


Exhibit 5-1
Structural Defects Recommended for Rehabilitation

CHAPTER 5 – CCTV INSPECTION

Table 5-2. Recommended Sewer Rehabilitation

Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW2212_B5-NW2216	Belfair St	336	10	**465**	4(77)3(82)	133		**77**	Line Entire Segment
B5-NW2396_B5-NW1813	Silver Bow Ave	271	8	**378**	5(2)4(4)	141	**2**	**4**	Line Entire Segment
B5-NW1823_B5-NW1822	Markdale Ave	357	8	**336**	5(1)4(5)	118	**1**	**5**	Line Entire Segment
B5-NW2169_B5-NW2168	Greenstone Ave	340	8	**322**	5(1)4(77)	100	**1**	**77**	Line Entire Segment
B5-NW1835_B5-NW1836	Firestone Blvd	301	15	**291**	4(67)3(7)	84		**67**	Replace Entire Segment
B5-NW1732_B5-NW1728	Norwalk Blvd	256	8	**287**	5(6)4(57)	85	**6**	**57**	Line Entire Segment
B5-NW1821_B5-NW1820	Markdale Ave	333	8	**282**	4(5)3(107)	93		**5**	Line Entire Segment
B5-NW1806_B5-NW2396	Volunteer Ave	323	8	**280**	4(1)3(77)	108		**1**	Line Entire Segment
B5-NW1733_B5-NW1732	Gettysburg Dr	333	8	**275**	4(3)3(57)	111		**3**	Line Entire Segment
B5-NW1834_B5-NW1833	Easement	215	12	**263**	4(47)3(37)	74		**47**	Line Entire Segment
B5-NW1808_B5-NW1807	Volunteer Ave	329	8	**263**	3(72)2(47)	101			Replace Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[a]
B5-NW2175_B5-NW9129	Stanstead Ave	269	8	**257**	5(2)3(67)	99	**2**		Line Entire Segment
B5-NW7178_B5-NW6706	Alondra Blvd	358	8	**257**	4(2)3(87)	91		**2**	Line Entire Segment
B5-NW2192_B5-NW2165	Rexton St	260	8	**256**	5(1)4(17)	90	**1**	**17**	Line Entire Segment
B5-NW2182_B5-NW2183	Bechard Ave	283	8	**253**	5(1)4(67)	70	**1**	**67**	Line Entire Segment
B5-NW9129_B5-NW2184	Rexton St	203	8	**253**	5(2)4(22)	84	**2**	**22**	Line Entire Segment
B5-NW1813_B5-NW2401	Silver Bow Ave	241	8	**253**	4(1)3(97)	85		**1**	Replace Entire Segment
B5-NW2208_B5-NW2212	Belfair St	269	10	**252**	4(62)3(17)	67		**62**	Replace Entire Segment
B5-NW2184_B5-NW2185	Rexton St	263	8	**250**	3(72)2(37)	98			Line Entire Segment
B5-NW1809_B5-NW1808	Volunteer Ave	354	8	**250**	3(77)2(27)	92			Line Entire Segment
B5-NW1774_B5-NW1775	Dante St	280	8	**249**	5(4)4(42)	83	**4**	**42**	Line Entire Segment
B5-NW1811_B5-NW1812	Zhistle Ave	338	8	**244**	4(2)3(77)	93		**2**	Line Entire Segment
B5-NW1717_B5-NW1713	Norwalk Blvd	263	8	**240**	4(5)3(52)	95		**5**	Line Entire Segment

CHAPTER 5 – CCTV INSPECTION

Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW1831_B5-NW1832	Sproul St	234	8	**238**	4(12)3(37)	118		**12**	Line Entire Segment
B5-NW2100_B5-NW2107	Foster Rd	333	8	**235**	5(1)4(2)	85	**1**	**2**	Line Entire Segment
B5-NW2165_B5-NW2167	Rexton St	296	8	**234**	3(72)2(27)	87			Replace Entire Segment
B5-NW2190_B5-NW2189	Roper Ave	284	8	**230**	5(2)4(57)	64	**2**	**57**	Line Entire Segment
B5-NW1828_B5-NW1818	Markdale Ave	297	8	**228**	4(67)00	57		**67**	Line Entire Segment
B5-NW1705_B5-NW1707	Aegean St	317	8	**226**	4(1)3(57)	89		**1**	Line Entire Segment
B5-NW1812_B5-NW1813	Zhistle Ave	343	8	**223**	3(62)2(37)	86			Line Entire Segment
B5-NW2167_B5-NW2168	Rexton St	277	8	**223**	5(1)3(77)	78	**1**		Line Entire Segment
B5-NW1724_B5-NW1728	Norwalk Blvd	277	8	**218**	5(2)3(67)	79	**2**		Line Entire Segment
B5-NW1708_B5-NW1709	Norwalk Blvd	263	8	**217**	5(2)3(62)	83	**2**		Line Entire Segment
B5-NW2091_B5-NW2095	Greenstone Ave	288	8	**215**	3(62)2(37)	82			Replace Entire Segment
B5-NW2168_B5-NW2208	Greenstone Ave	241	10	**215**	3(62)2(32)	82			Replace Entire Segment

CHAPTER 5 – CCTV INSPECTION

Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[a]
B5-NW1791_B5-NW2031	Silver Bow Ave	245	8	**212**	5(4)4(2)	76	**4**	**2**	Line Entire Segment
B5-NW2150_B5-NW2159	Greenstone Ave	264	8	**210**	4(1)3(82)	71		**1**	Replace Entire Segment
B5-NW1818_B5-NW1819	Markdale Ave	271	8	**208**	4(62)00	52		**62**	Line Entire Segment
B5-NW2147_B5-NW2146	Hoback St	334	8	**208**	4(4)3(72)	70		**4**	Line Entire Segment
B5-NW1807_B5-NW1806	Volunteer Ave	326	8	**205**	3(72)2(8)	73			Line Entire Segment
B5-NW2183_B5-NW2184	Bechard Ave	257	8	**203**	5(1)4(37)	58	**1**	**37**	Line Entire Segment
B5-NW1716_B5-NW1715	Cyclops St	353	8	**203**	3(82)1(2)	69			Line Entire Segment
B5-NW1702_B5-NW1701	Volunteer Ave	350	8	**200**	3(52)2(37)	79			Line Entire Segment
B5-NW1736_B5-NW1731	Volunteer Ave	349	8	**197**	4(1)3(72)	68		**1**	Line Entire Segment
B5-NW1824_B5-NW1825	Zhistle Ave	275	8	**196**	3(67)2(12)	73			Line Entire Segment
B5-NW1703_B5-NW1704	Volunteer Ave	321	8	**196**	5(2)4(1)	64	**2**	**1**	Line Entire Segment
B5-NW2398_B5-NW1814	Silver Bow Ave	335	8	**194**	5(1)4(2)	64	**1**	**2**	Line Entire Segment

CHAPTER 5 – CCTV INSPECTION

Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW1718_B5-NW1717	Dune St	295	8	**194**	3(67)2(8)	70			Line Entire Segment
B5-NW1817_B5-NW1818	Zhistle Ave	250	8	**193**	5(2)3(57)	77	**2**		Line Entire Segment
B5-NW2186_B5-NW2185	Wilder Ave	257	8	**192**	4(52)3(1)	53		**52**	Line Entire Segment
B5-NW1704_B5-NW1731	Volunteer Ave	307	8	**191**	4(2)3(72)	63		**2**	Line Entire Segment
B5-NW1822_B5-NW1821	Markdale Ave	307	8	**190**	5(1)4(1)	63	**1**	**1**	Line Entire Segment
B5-NW1867_B5-NW1866	Silver Bow Ave	269	8	**190**	5(3)4(32)	59	**3**	**32**	Line Entire Segment
B5-NW2164_B5-NW2165	Caulfield Ave	256	8	**188**	5(1)4(37)	51	**1**	**37**	Line Entire Segment
B5-NW1729_B5-NW1728	Everest St	255	8	**186**	5(2)4(2)	73	**2**	**2**	Line Entire Segment
B5-NW1827_B5-NW1828	Markdale Ave	294	8	**185**	4(8)3(62)	59		**8**	Line Entire Segment
B5-NW1782_B5-NW2394	Silver Bow Ave	256	8	**183**	4(1)3(57)	67		**1**	Line Entire Segment
B5-NW2173_B5-NW2174	Stanstead Ave	228	8	**182**	4(17)3(12)	71		**17**	Line Entire Segment
B5-NW2187_B5-NW2186	Wilder Ave	283	8	**180**	5(3)4(3)	57	**3**	**3**	Line Entire Segment

CHAPTER 5 – CCTV INSPECTION

Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW2149_B5-NW2150	Greenstone Ave	172	8	**179**	5(2)4(1)	69	**2**	**1**	Line Entire Segment
B5-NW1801_B5-NW1802	Goller St	358	8	**177**	4(6)3(62)	57		**6**	Line Entire Segment
B5-NW2170_B5-NW2169	Greenstone Ave	201	8	**175**	3(47)2(27)	71			Line Entire Segment
B5-NW9125_B5-NW1811	Zhistle Ave	188	8	**173**	4(1)3(37)	71		**1**	Line Entire Segment
B5-NW1826_B5-NW1817	Zhistle Ave	320	8	**173**	3(52)2(22)	66			Line Entire Segment
B5-NW2137_B5-NW2148	Hoback St	358	8	**172**	5(1)3(57)	62	**1**		Line Entire Segment
B5-NW2209_B5-NW2208	Belfair St	260	8	**172**	5(1)4(1)	63	**1**	**1**	Line Entire Segment
B5-NW2092_B5-NW2097	Caulfield Ave	280	8	**169**	4(8)3(27)	65		**8**	Line Entire Segment
B5-NW2189_B5-NW2192	Roper Ave	256	8	**169**	3(62)2(8)	59			Line Entire Segment
B5-NW1711_B5-NW1710	Allard St	348	8	**168**	4(1)3(62)	58		**1**	Line Entire Segment
B5-NW1700_B5-NW1701	Volunteer Ave	350	8	**167**	4(1)3(62)	56		**1**	Line Entire Segment
B5-NW1839_B5-NW1830	Sproul St	259	8	**166**	3(62)2(4)	58			Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW2162_B5-NW2161	Mansa Dr	290	8	**165**	3(67)00	55			Line Entire Segment
B5-NW1830_B5-NW1831	Sproul St	250	8	**165**	4(2)3(57)	57		**2**	Line Entire Segment
B5-NW1722_B5-NW1721	Crewe St	309	8	**165**	4(1)3(62)	55		**1**	Line Entire Segment
B5-NW2116_B5-NW2109	Foster Rd	528	8	**164**	2(97)00	82			Line Entire Segment
B5-NW1698_B5-NW1706	Aegean St	277	8	**164**	3(52)2(17)	61			Line Entire Segment
B5-NW2185_B5-NW2192	Rexton St	256	8	**163**	5(1)4(1)	58	**1**	**1**	Line Entire Segment
B5-NW1731_B5-NW1730	Everest St	340	8	**162**	4(3)3(4)	76		**3**	Line Entire Segment
B5-NW1820_B5-NW2400	Markdale Ave	323	8	**161**	4(4)3(47)	59		**4**	Line Entire Segment
B5-NW2087_B5-NW2088	Priscilla St	259	8	**161**	3(62)2(1)	54			Line Entire Segment
B5-NW1854_B5-NW2404	Sproul St	316	8	**159**	3(47)2(12)	62			Line Entire Segment
B5-NW2107_B5-NW2108	Foster Rd	357	8	**157**	4(1)3(62)	52		**1**	Line Entire Segment
B5-NW1709_B5-NW1713	Norwalk Blvd	260	8	**156**	5(1)4(4)	63	**1**	**4**	Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW2132_B5-NW2133	Easement	256	8	**154**	4(1)3(57)	51		**1**	Line Entire Segment
B5-NW2177_B5-NW2176	Lancelot Ave	201	8	**154**	4(12)3(42)	48		**12**	Line Entire Segment
B5-NW2176_B5-NW2175	Lancelot Ave	206	8	**154**	5(1)4(42)	39	**1**	**42**	Line Entire Segment
B5-NW1804_B5-NW1803	Goller Ave	181	8	**151**	4(4)3(42)	54		**4**	Line Entire Segment
B5-NW2214_B5-NW2213	Ben Nevis Ave	239	8	**149**	4(27)3(17)	43		**27**	Line Entire Segment
B5-NW1706_B5-NW1705	Aegean St	300	8	**148**	4(1)3(37)	57		**1**	Line Entire Segment
B5-NW2140_B5-NW2141	Muroc St	332	8	**144**	4(1)3(52)	52		**1**	Line Entire Segment
B5-NW1832_B5-NW1835	Sproul St	193	12	**144**	4(42)00	36		**42**	Line Entire Segment
B5-NW2124_B5-NW2125	Wilder Ave	265	8	**144**	3(52)2(3)	49			Line Entire Segment
B5-NW1859_B5-NW1860	Front St	265	8	**144**	3(57)1(3)	50			Line Entire Segment
B5-NW1707_B5-NW1708	Aegean St	246	8	**144**	4(1)3(52)	51		**1**	Line Entire Segment
B5-NW2031_B5-NW1802	Silver Bow Ave	178	8	**144**	5(1)4(1)	53	**1**	**1**	Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW2105_B5-NW2106	Priscilla St	250	8	**143**	3(32)2(32)	57			Line Entire Segment
B5-NW2206_B5-NW2204	Gracebee Ave	307	8	**142**	2(87)00	71			Line Entire Segment
B5-NW1735_B5-NW1734	Gettysburg Dr	336	8	**142**	4(32)3(2)	40		**32**	Line Entire Segment
B5-NW1805_B5-NW1804	Goller Ave	197	8	**142**	3(42)2(17)	54			Line Entire Segment
B5-NW1784_B5-NW1782	Silver Bow Ave	257	8	**140**	3(47)2(6)	54			Line Entire Segment
B5-NW2138_B5-NW2137	Bechard Ave	234	8	**139**	4(1)3(52)	48		**1**	Line Entire Segment
B5-NW1777_B5-NW1775	Silver Bow Ave	249	8	**139**	4(1)3(37)	53		**1**	Line Entire Segment
B5-NW6446_B5-NW6447	McRae Ave	360	8	**138**	3(52)00	46			Line Entire Segment
B5-NW2204_B5-NW2203	Tom White Wy	357	8	**138**	3(4)2(72)	68			Line Entire Segment
B5-NW1714_B5-NW1713	Cyclops St	202	8	**138**	4(3)3(17)	59		**1**	Line Entire Segment
B5-NW2179_B5-NW2178	Lancelot Ave	340	8	**137**	5(1)3(52)	47	**1**		Line Entire Segment
B5-NW6859_B5-NW6898	Norwalk Blvd	337	8	**135**	3(42)2(12)	51			Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW6705_B5-NW6706	Alondra Blvd	178	8	**132**	4(32)2(6)	36		**32**	Line Entire Segment
B5-NW2211_B5-NW2208	Greenstone Ave	204	8	**132**	5(1)4(37)	33	**1**	**37**	Line Entire Segment
B5-NW2210_B5-NW2209	Mayport Ave	231	8	**131**	4(27)3(3)	41		**27**	Line Entire Segment
B5-NW2133_B5-NW2136	Easement	241	8	**129**	4(1)3(42)	46		**1**	Line Entire Segment
B5-NW2174_B5-NW2175	Stanstead Ave	156	8	**127**	5(3)4(32)	32	**3**	**32**	Line Entire Segment
B5-NW1787_B5-NW1788	Silver Bow Ave	257	8	**126**	3(42)2(5)	45			Line Entire Segment
B5-NW1696_B5-NW1695	Beaty St	280	8	**126**	3(37)2(17)	47			Line Entire Segment
B5-NW6405_B5-NW6446	McRae Ave	361	8	**121**	3(42)2(8)	43			Line Entire Segment
B5-NW1819_B5-NW1834	Easement	139	12	**118**	5(1)4(27)	33	**1**	**27**	Line Entire Segment
B5-NW2088_B5-NW2092	Caulfield Ave	272	8	**117**	5(1)4(3)	41	**1**	**3**	Line Entire Segment
B5-NW1843_B5-NW1841	Firestone Blvd	179	8	**117**	4(2)3(42)	40		**2**	Line Entire Segment
B3-NW6085_B3-NW6086	Jersey Ave	186	8	**116**	4(3)3(27)	54		**3**	Replace Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW1783_B5-NW9126	Anabella St	205	8	**111**	3(42)00	37			Line Entire Segment
B5-NW1790_B5-NW1791	Silver Bow Ave	245	8	**109**	4(3)3(32)	38		**3**	Line Entire Segment
B5-NW2163_B5-NW2164	Caulfield Ave	176	8	**104**	5(1)4(22)	27	**1**	**22**	Line Entire Segment
B5-NW6439_B5-NW6452	Harvard Dr	258	8	**102**	3(37)00	34			Line Entire Segment
B5-NW1727_B5-NW1726	Spry St	338	8	**102**	4(8)3(22)	33		**8**	Line Entire Segment
B5-NW6704_B5-NW6705	Alondra Blvd	208	8	**101**	4(17)3(1)	35		**17**	Line Entire Segment
B5-NW2166_B5-NW2167	Mayport Ave	320	8	**99**	4(12)3(17)	30		**12**	Line Entire Segment
B5-NW1797_B5-NW1798	Goller St	300	8	**96**	4(3)3(32)	31		**3**	Line Entire Segment
B5-NW2180_B5-NW2181	Bechard Ave	310	8	**95**	5(1)4(12)	29	**1**	**12**	Line Entire Segment
B5-NW2148_B5-NW2147	Hoback St	343	8	**95**	5(1)4(3)	40	**1**	**3**	Line Entire Segment
B5-NW2215_B5-NW2211	Greenstone Ave	262	8	**94**	5(2)4(17)	25	**2**	**17**	Line Entire Segment
B5-NW1778_B5-NW1779	Alarka St	199	8	**91**	5(1)4(7)	33	**1**	**7**	Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B3-NW6084_B3-NW6085	Jersey Ave	135	8	**89**	5(1)4(3)	44	**1**	**3**	Line Entire Segment
B5-NW1726_B5-NW1725	Spry St	309	8	**87**	5(5)4(3)	32	**5**	**3**	Line Entire Segment
B5-NW2151_B5-NW2150	Larwin Rd	254	8	**86**	4(3)3(27)	28		**3**	Line Entire Segment
B5-NW6708_B5-NW7178	Alondra Blvd	228	8	**86**	5(1)4(1)	39	**1**	**1**	Line Entire Segment
B5-NW2095_B5-NW2096	Greenstone Ave	258	8	**108**	5(5)4(4)	42	**5**	**4**	Line Entire Segment
B5-NW1798_B5-NW1799	Goller St	299	8	**81**	5(1)4(22)	20	**1**	**22**	Line Entire Segment
B5-NW2213_B5-NW2212	Ben Nevis Ave	230	8	**79**	4(22)3(1)	20		**22**	Line Entire Segment
B5-NW2153_B5-NW2152	Larwin Rd	268	8	**77**	4(6)3(17)	25		**6**	Line Entire Segment
B5-NW2134_B5-NW2133	Lancelot Ave	256	8	**75**	5(2)4(2)	25	**2**	**2**	Line Entire Segment
B5-NW2160_B5-NW2170	Greenstone Ave	86	8	**62**	5(2)4(7)	19	**2**	**4**	Line Entire Segment
B5-NW1776_B5-NW1777	Dare St	213	8	**60**	5(2)4(7)	17	**2**	**7**	Line Entire Segment
B5-NW1694_B5-NW1705	Markdale Ave	253	8	**57**	5(1)3(6)	24	**1**		Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW5012_B5-NW5014	Sheridan St	360	8	**50**	5(1)4(1)	23	**1**	**1**	Line Entire Segment
B3-NW6080_B3-NW6079	Sibley St	293	8	**50**	5(1)4(2)	22	**1**	**2**	Line Entire Segment
B5-NW1745_B5-NW1746	Zeus Ave	299	8	**49**	4(12)3(3)	13		**12**	Line Entire Segment
B5-NW1794_B5-NW1793	Avonlea Ave	350	8	**44**	5(2)4(2)	14	**2**	**2**	Line Entire Segment
B5-NW2135_B5-NW2134	Lancelot Ave	297	8	**41**	4(8)3(3)	11		**8**	Line Entire Segment
B5-NW2142_B5-NW2143	Muroc St	333	8	**41**	4(4)3(7)	14		**4**	Line Entire Segment
B5-NW9134_B5-NW1718	Dune St	359	8	**39**	5(1)4(1)	15	**1**	**1**	Line Entire Segment
B5-NW1721_B5-NW1720	Crewe St	331	8	**39**	5(1)4(1)	12	**1**	**1**	Line Entire Segment
B5-NW2146_B5-NW2145	Hoback St	132	8	**38**	5(1)4(1)	13	**1**	**1**	Line Entire Segment
B5-NW1734_B5-NW1733	Gettysburg Dr	296	8	**38**	5(1)4(3)	12	**1**	**3**	Line Entire Segment
B5-NW1885_B5-NW1857	Firestone Blvd	76	8	**31**	5(1)4(1)	13	**1**	**1**	Line Entire Segment
B5-NW2125_B5-NW2126	Wilder Ave	251	8	**29**	4(5)3(3)	8		**5**	Line Entire Segment

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Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW2158_B5-NW2159	Dilworth St	261	8	**28**	4(5)3(2)	8		**5**	Line Entire Segment
B5-NW2152_B5-NW2151	Larwin Rd	274	8	**28**	5(1)4(4)	8	**1**	**4**	Line Entire Segment
B5-NW2131_B5-NW2132	Stanstead Ave	256	8	**28**	5(1)4(1)	12	**1**	**1**	Line Entire Segment
B5-NW2172_B5-NW2173	Stanstead Ave	337	8	**24**	5(1)4(2)	9	**1**	**2**	Line Entire Segment
B5-NW2089_B5-NW2088	Priscilla St	83	8	**20**	5(2)4(1)	5	**2**	**1**	Line Entire Segment
B5-NW6766_B5-NW6767	Alburtis Ave	217	8	**17**	5(1)2(6)	7	**1**		Line Entire Segment
B5-NW5016_B5-NW5075	Norwalk Blvd	237	8	**17**	5(1)3(2)	6	**1**		Line Entire Segment
B5-NW1766_B5-NW1765	Volunteer Ave	357	8	**17**	5(1)4(1)	5	**1**	**1**	Line Entire Segment
B5-NW2096_B5-NW2100	Foster Rd	260	8	**91**	5(2)4(9)3(17)	26	**2**	**9**	Line Entire Segment
B5-NW2096_B5-NW2143	Greenstone Ave	269	8	**13**	5(1)4(2)	3	**1**	**2**	Line Entire Segment
B5-NW2403_B5-NW2404	Silver Bow Ave	25	8	**11**	5(1)4(1)	3	**1**	**1**	Line Entire Segment
B5-NW1866_B5-NW1839	Sproul St	251	8	**11**	5(1)3(1)	5	**1**		Line Entire Segment

CHAPTER 5 – CCTV INSPECTION

Pipe ID	Street	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick Rating	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation[(a)]
B5-NW6874_B5-NW6895	Grayland Ave	332	8	**7**	5(1)2(1)	2	**1**		Line Entire Segment

Total Length recommended for rehabilitation = 45,732

CHAPTER 5 – CCTV INSPECTION

Table 5-3. Recommended Sewers to Monitor

Pipe ID	Streeet	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation
B5-NW6436_B5-NW6437	Harvard Dr	282	8		3(27)2(22)	46			Monitor Only
B5-NW2145_B5-NW2149	Greenstone Ave	156	8	**101**	3(37)2(4)	35			Monitor Only
B5-NW1712_B5-NW1711	Allard St	301	8	**98**	3(27)2(12)	37			Monitor Only
B5-NW6438_B5-NW6439	Harvard Dr	254	8	**96**	3(37)00	32			Monitor Only
B5-NW9126_B5-NW1784	Anabella St	176	8	**93**	3(32)1(3)	33			Monitor Only
B5-NW6856_B5-NW6859	Norwalk Blvd	222	8	**88**	3(32)1(1)	30			Monitor Only
B5-NW1814_B5-NW2399	Silver Bow Ave	271	8	**88**	3(22)2(12)	34			Monitor Only
B5-NW2109_B5-NW2108	Foster Rd	164	8	**85**	3(27)2(6)	31			Monitor Only
B5-NW1849_B5-NW1854	Sproul St	261	8	**85**	3(32)2(1)	30			Monitor Only
B5-NW6437_B5-NW6438	Harvard Dr	288	8	**81**	3(17)2(17)	33			Monitor Only
B5-NW2207_B5-NW2206	Gracebee Ave	310	8	**76**	3(22)2(9)	29			Monitor Only
B5-NW6413_B5-NW6412	Easement	129	8	**72**	3(27)00	24			Monitor Only
B5-NW2395_B5-NW1779	Silver Bow Ave	248	8	**70**	4(2)3(5)	31		**2**	Monitor Only
B5-NW2404_B5-NW1841	Silver Bow Ave	262	8	**67**	3(22)2(2)	23			Monitor Only
B5-NW1775_B5-NW1803	Silver Bow Ave	188	8	**63**	4(2)3(2)	29		**2**	Monitor Only
B5-NW2130_B5-NW2131	Stanstead Ave	293	8	**58**	4(1)3(17)	19		**1**	Monitor Only

CHAPTER 5 – CCTV INSPECTION

Pipe ID	Streeet	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation
B5-NW2188_B5-NW2187	Wilder Ave	127	8	**58**	3(22)1(1)	20			Monitor Only
B5-NW2162_B5-NW2163	Caulfield Ave	127	8	**57**	3(22)00	19			Monitor Only
B5-NW1719_B5-NW9134	Dune St	333	8	**54**	3(12)2(7)	21			Monitor Only
B5-NW1779_B5-NW1777	Silver Bow Ave	249	8	**53**	4(1)3(5)	23		**1**	Monitor Only
B5-NW1800_B5-NW1801	Goller St	176	8	**53**	4(3)3(12)	17		**3**	Monitor Only
B5-NW6396_B5-NW6397	Dartmouth Dr	268	8	**52**	3(17)1(1)	18			Monitor Only
B5-NW1710_B5-NW1709	Allard St	349	8	**50**	4(1)3(7)	21		**1**	Monitor Only
B5-NW1810_B5-NW9125	Thistle Ave	268	8	**50**	4(2)3(12)	18		**2**	Monitor Only
B5-NW1789_B5-NW1790	Silver Bow Ave	244	8	**48**	4(3)3(8)	17		**3**	Monitor Only
B5-NW1725_B5-NW1724	Spry St	332	8	**48**	4(2)3(6)	19		**2**	Monitor Only
B5-NW2143_B5-NW2145	Greenstone Ave	224	8	**46**	4(2)3(9)	17		**2**	Monitor Only
B5-NW1802_B5-NW2396	Silver Bow Ave	276	8	**43**	4(2)3(12)	14		**2**	Monitor Only
B5-NW1667_B5-NW1666	Bombardier Ave	357	8	**39**	3(12)2(3)	14			Monitor Only
B5-NW6412_B5-NW6435	Flallon Ave	280	8	**39**	3(12)00	13			Monitor Only
B5-NW2093_B5-NW2087	Roper Ave	241	8	**39**	3(12)00	13			Monitor Only
B5-NW2006_B5-NW1843	Firestone Blvd	298	8	**38**	3(12)1(2)	14			Monitor Only

Pipe ID	Streeet	Sewer CCTV Length (ft)	Pipe Dia (in)	Pipe Defects Rating	Pipe Defects Quick	Total Number Defects	No 5s	No 4s	Recommended Rehabilitation
B5-NW1803_B5-NW2397	Silver Bow Ave	214	8	**36**	4(1)3(12)	12		**1**	Monitor Only
B5-NW1793_B5-NW1792	Avonlea Ave	108	8	**34**	4(2)3(2)	14		**2**	Monitor Only
B5-NW1786_B5-NW1787	Silver Bow Ave	90	8	**34**	3(12)1(1)	12			Monitor Only
B5-NW1730_B5-NW1729	Everest St	257	8	**33**	4(2)3(5)	12		**2**	Monitor Only
B5-NW2127_B5-NW2126	Foster Rd	218	8	**28**	3(9)1(1)	10			Monitor Only

5.1.2 Sewer Break-In Taps

Factory manufactured sewer laterals are professionally installed when the sewer is constructed or sometimes after a sewer is constructed to receive sanitary wastewater from buildings. Sometimes laterals are connected to a sewer without City authorization and discovered only as a result of video inspection of the sewer. As opposed to factory connections, these "break-in taps" are often crudely hammered into a sewer. Wet-weather infiltration can enter the sewer via the unsealed and often cracked periphery of the connection. Sometimes these break-in taps were made to collect storm water from house roof drains and other area drains. In these cases, they become a major source of wet-weather inflow.

PACP does not categorize break-in taps as structural defects, but rather as "constructional" defects. However, break-in taps are included as a separate column in the structural defects summary table in the Appendix. Sewer segments discovered to have break-in taps are recommended for smoke testing in order to determine the source of the connection and to determine if storm water is being routed into the sewer. Storm water connections need to be disconnected and then rerouted to a nearby storm drain. The sewer pipe will then need to be sealed.

Even if the lateral is determined to convey appropriate sanitary wastewater, the connection will still need to be reconstructed. Break-in taps were typically not constructed per City standards that stipulate a wye fitting for the connection. As a result, water jetting from sewer cleaning can shoot up the lateral connection. It is recommended that new, sealed City standard lateral connections be constructed at these break-in tap locations.

Only 5 active break-in taps were discovered, which is a very small number, considering 32.9 miles of videotaped sewers were reviewed. Three of the break-in taps occur on two pipes

scheduled for rehabilitation due to other defects. These two pipes will be replaced to also repair the break-in taps. The estimated costs to smoke test these sewer segments and then reconstruct the connections as part of the 10-year CIP are presented in Chapter 7.

CHAPTER 5 – CCTV INSPECTION

Table 5-5. Sewers with Break-in Taps

Pipe No.	Street	Location
32a-78-32a-3	Ben Nevis Ave	Tap Break-in Active @ 82.9'
37-60-37-59	Grayland Ave	Tap Break-in Active @ 73.7'

5.1.3 Sewer System Operation and Maintenance Defects

O&M defects include roots and fats oil and grease deposits (FOG). Roots occur at pipe joints and at lateral connections. As part of the sewer CCTV conducted for the project, sewers were cleaned in front of the sewer videotaping. However, sewers with different magnitudes of root growth and FOG were still evident. Sewers with high, moderate, or light root growth or FOG are shown on Figure 5-3. “High” is primarily category 4 and 5 defects; “Moderate” is primarily category 3 defects or a high number of category 2 defects; and “Light” is primarily category 2 defects. Category 1 defects are not shown on Figure 5-3, but could be categorized as “Very Light”.

CHAPTER 6 – HYDRAULIC MODELING/CAPACITY ANALYSIS

6.0 Chapter Overview

This chapter analyzes and describes the following components of the sewer master plan:

1. Model Development – The data and the process for the citywide hydraulic model development
2. Planning Criteria – The criteria for evaluating the citywide sewer hydraulic capacities
3. Deficiency Analysis – The analysis to identify citywide sewer capacity deficiencies
4. Recommended Capacity Improvements – The proposed citywide hydraulic capacity improvements to mitigate the identified sewer capacity deficiencies

6.1 Hydraulic Model Development

A flowchart that shows the hydraulic model development processes is shown on Exhibit 6-1.

Hydraulic Model Software

InfoSewer (Version 7.6, Service Pack 1, Update 2) software as manufactured by Innovyze was used to develop the hydraulic model of City's sanitary sewer system in order to evaluate hydraulic performance, identify hydraulic deficiencies and recommend system improvements. The computation engine of InfoSewer is capable of performing simulations in both steady state and extended period modes and generating backwater hydraulic profiles. For this project, extended period simulation and backwater analysis were performed using InfoSewer to better mimic hydraulic conditions in the system.

Sewer Network Development

A Geographic Information System (GIS) database was developed from the Autocad drawing provided by the City. The existing sewer network and the physical sewer data including pipe invert elevations, manhole rim elevations, pipe diameters, pipe lengths and pipe materials were imported directly from the developed geodatabase into the hydraulic model. The sewer geometry data was adjusted where necessary inside the hydraulic model to resolve connectivity issues. Other adjustments were made as required to accurately represent City's collection system in the hydraulic model. The developed hydraulic model includes all City gravity sewers from 6-inch to 18-inch pipes excluding all service laterals. City's three lift stations were also included in the GIS for accurate modelling purposes. Table 6-1 shows the summary of the City sewers broken down by diameters as represented in the developed hydraulic model. As shown in the table, the majority of City sewers are 8-inch pipes, accounting for over 93% of City sewers.

CHAPTER 6 – HYDRAULIC MODELING/CAPACITY ANALYSIS

Table 6-1
Summary of Modeled Gravity Sewers by Diameters

Sewer Diameter (in)	Length (ft)	Length (mile)	% Total Sewer Length
6	511	0.10	0.1
8	800,068	151.53	93.7
10	16,321	3.09	1.9
12	21,913	4.15	2.6
15	14,981	2.84	1.8
18	30	0.01	0.0
Total	**853,825**	**161.7**	**100.0**

CHAPTER 6 – HYDRAULIC MODELING/CAPACITY ANALYSIS

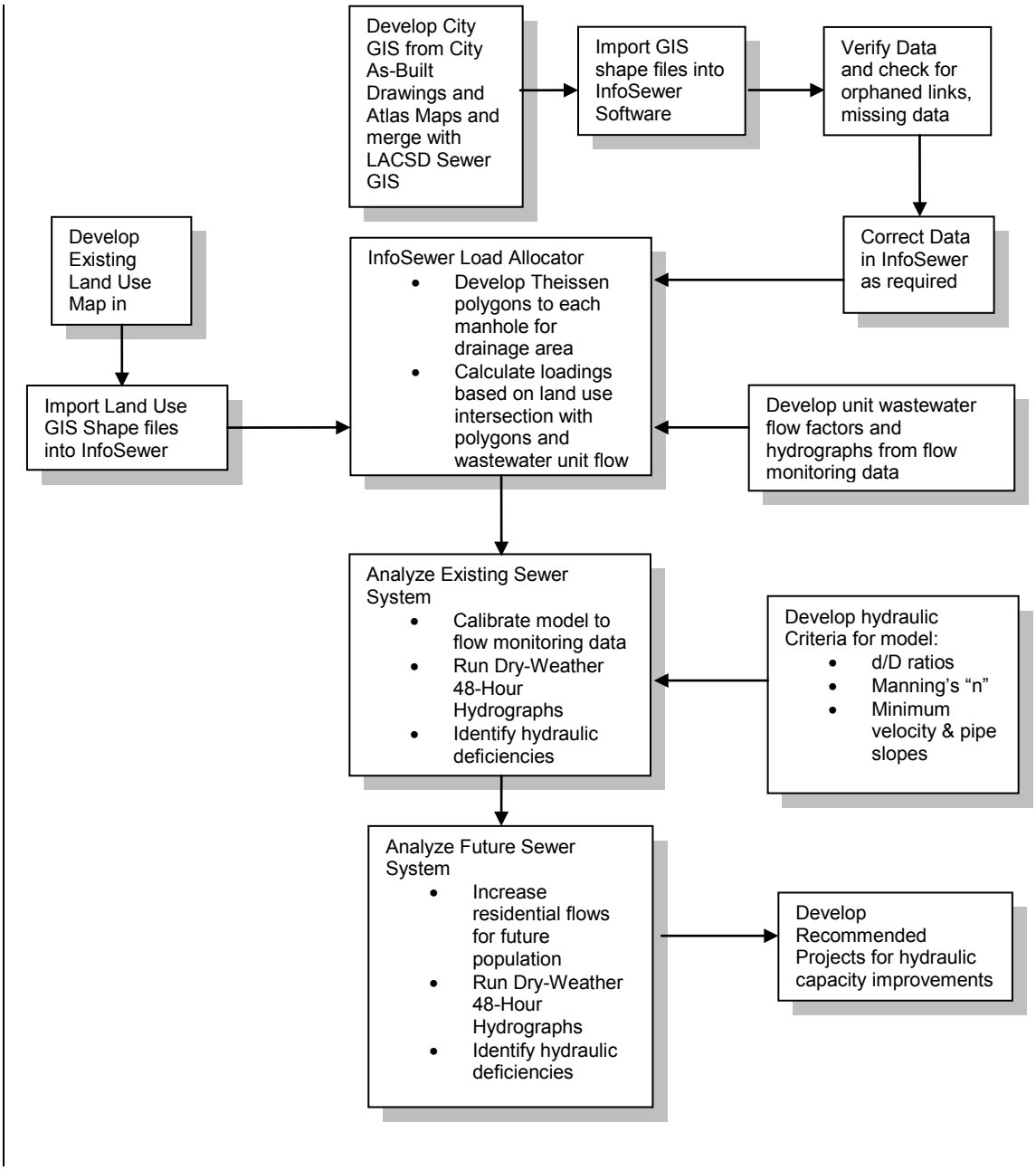

Exhibit 6-1
Hydraulic Model Flowchart

Wastewater Flow Development
Dry weather flow components consist of the base sanitary flow (BSF) and the groundwater infiltration (GWI). For the modeling purpose, the average dry weather flow (ADWF) is defined as the combined flow of BSF and GWI. In order to simulate the hydraulic conditions in the City wastewater collection system, ADWF needs to be estimated and loaded into the model at model nodes. This section will discuss how the average dry weather flow was developed and distributed in the hydraulic model.

Average Dry Weather Flow Development
As part of the project, flow monitoring was conducted by SFE Global Inc. for 32 consecutive days from January 8, 2015 through February 2, 2015. Temporary flow meters were strategically installed at five locations to capture distinctive wastewater flow characteristics. During the flow monitoring period, insignificant rain (less than 0.1 inch) was recorded and its influence on flow is minimal. The flow monitoring data forms the basis for the development of average dry weather flow.

During the flow development process, each land use category was assigned a unique so called wastewater generation factor or land use duty factor representing quantities of average wastewater flow production per unit area. These unit factors were calibrated to match the metered flow data in a basin-by-basin basis. Based on the calibrated wastewater generation factors, the average dry weather flow was developed for each land use category by multiplying the corresponding land use coverage area.

Refer to Chapter 3 for details on the development and calibration of the wastewater generation factors and the average dry weather flow.

Projected Future Flow
Because most of the City is already built out, no significant increases in future flows are projected. As discussed in Chapter 2, the City's population was 106,630 as of January 2014 and it is projected to increase to 114,200 by the year of 2035, which is a total increase of 7.1% relative to January 2014. In order to account for the uncertainty in sizes and locations of future re-development projects, reserved hydraulic capacity was considered in the analysis.

Flow Distribution
The Load Allocation Module of the InfoSewer software was used to distribute the developed wastewater flows to each manhole in the model. The program generates a Thiessen polygon for each manhole in the model and calculates and assigns contributing wastewater flow based on the tributary land use types and areas with the Thiessen polygon.

Diurnal Pattern Development
In order to mimic hydraulic conditions for a typical weekday, wastewater flow variations were simulated using a diurnal pattern that was developed based on the flow monitoring data. Figure 6-2 shows the developed diurnal 24-hour pattern that was used in the hydraulic model. As discussed in Chapter 2, the City land use is primarily residential at 3,025 acres (48%), while the remaining land uses include 7.5% commercial, 4.7% industrial, 7.2% institutional, 2.9% hospital,

30% others including streets. The developed diurnal pattern reaches its peak at about 8pm in the evening with the secondary peak in the morning at about 8am.

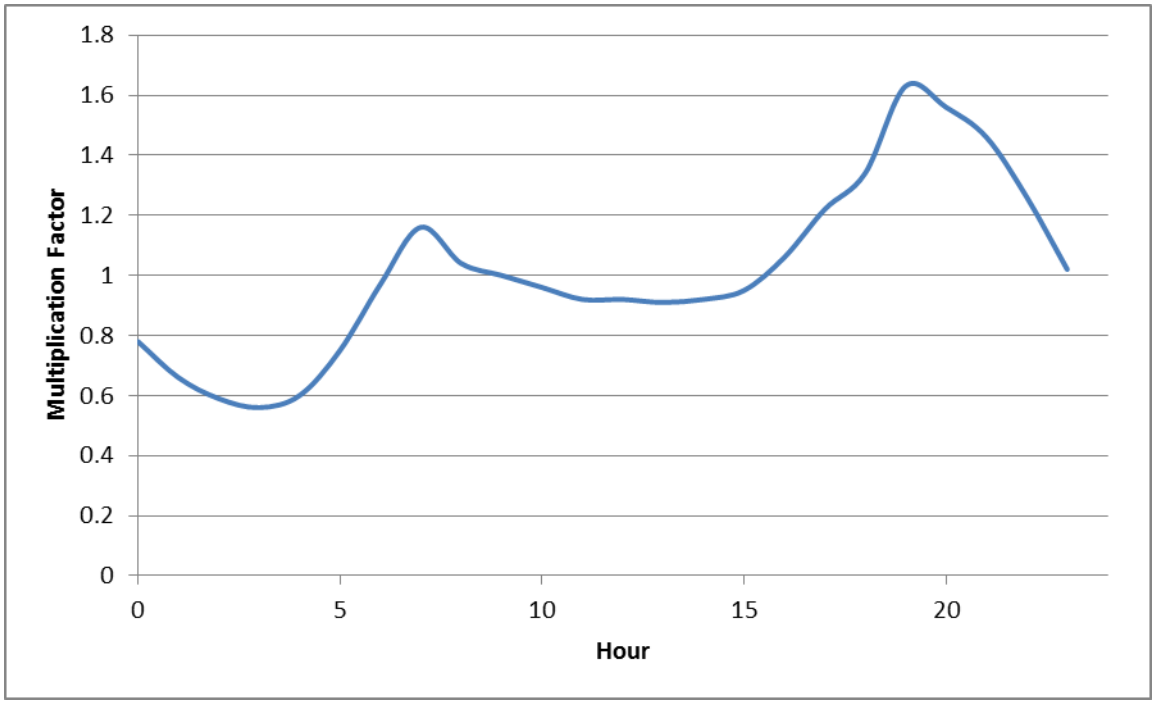

Figure 6-2
Diurnal Pattern Developed from Flow Monitoring Data

6.2 Analysis Criteria

Recommended guidelines and criteria to be used in evaluating the collection system with the hydraulic model was then developed including depth over diameter (d/D) ratios, sewer friction coefficients, and minimum velocities and slopes. The City's existing sewer system was analyzed for hydraulic performance and hydraulic deficiencies were identified. Projects were then developed to address hydraulic deficiencies in the system.

Sanitary sewer analysis criteria were established for maximum depth of flow in the pipe under peak dry weather flow (PDWF), minimum pipe velocity, minimum pipe slope, and pipe friction factors.

6.2.1 Depth over Diameter (d/D) Ratios

When it rains, rain water in the form of inflow and infiltration (I/I) enters the sewer system via openings in the system. This results in wet-weather peak flows that can occur on top of dry-weather peak flows. Peak wet-weather flows (PWWF) are accounted for by designing sewers to carry peak-dry weather flows at maximum sewer flow depth over diameter (d/D) ratios. The remainder of the pipe flow area is reserved to carry wet weather flow on top of peak dry-weather

flow. In evaluating sewer capacity as part of this Master Plan, the maximum d/D ratio to carry peak dry-weather flow will be 0.50 for sewers 15 inches in diameter or smaller and will be 0.64 for sewers 18 inches in diameter or greater as shown in Table 6-2. This d/D criterion is consistent with industry standards.

Table 6-2. Peak Dry-Weather Flow Depth/Pipe Diameter (d/D)

Pipe Size (in)	Maximum Depth/Diameter (d/D)
6 to 15	0.50
18 and larger	0.64

Recommended guidelines and criteria to be used in evaluating the collection system with the hydraulic model was then developed including depth over diameter (d/D) ratios, sewer friction coefficients, and minimum velocities and slopes. The design capacity of collection lines are established in the model as previously mentioned and summarized as follows. Lines will be considered over- capacity if they cannot convey the peak dry weather flow using 50 percent of actual capacity (for pipes 15 inches and smaller) and 64 percent of actual capacity (for pipes 18 inches and larger) based on the hydraulic criteria. The remaining 25 percent capacity is allocated for Infiltration and Inflow, Reserve Capacity Contingency and variations in flows.

To minimize the potential for wastewater overflows, the system is sized using the hydraulic model to convey peak dry weather flow (PDWF) plus a contingency for groundwater/seawater infiltration and rainfall dependent inflow , commonly referred to as Infiltration and Inflow (I&I).

6.2.2 Minimum Velocity

From an operational perspective, a minimum peak flow velocity of 2 feet per second at is desirable to scour the line and prevent significant solids deposition. Lines in the system that do not develop adequate cleansing velocity (flat lines, low spots, or lines with low flows) need to be given priority status in the City's line cleaning program. Every attempt was made to utilize data from as-builts for the modeling. However, because of lack of available as-builts, extrapolation was utilized to calculate missing inverts and slopes.

6.2.3 Minimum Pipe Slopes

Minimum pipe slope by pipe diameter is shown in Table 6-3. These are typical of minimum pipe slopes used by other agencies and cities to help ensure adequate pipe capacities. Minimum slope is a construction standard that helps ensure that d/D ratios and other hydraulic criteria are met. Pipes that have slopes less than the minimum will have higher flow depths and lower velocities at normal flows and are more likely to surcharge at high flows.

Table 6-3. Minimum Slopes for Sanitary Sewers

Pipe Diameter (inches)	Slope (ft/ft)
8	0.0040
10	0.0032
12	0.0024
15	0.0016
18	0.0014
21	0.0012
24	0.0010
27 and larger	0.0008

6.2.4 Pipe Friction Factors

Friction occurs when a liquid flows over a pipe surface. The friction resists and retards the flow and causes the flow depth to increase. The magnitude of the resistance depends on the pipe material, the types of pipe joints, and the age of the pipe. Pipes generally become rougher with age. Bell and spigot joints associated with vitrified clay pipe (VCP) have more friction than joints that are more seamless such as a plastic slipline.

Friction for sewer pipe is typically measured using Manning's "n" coefficients. Friction increases with higher n values. PVC and other plastics such as high-density polyethylene (HDPE) are very smooth and do not degrade much over time. New, these plastics have an n value of approximately 0.009, and the n value increases to only 0.010 after 20 years. The material is associated with trenchless pipe rehabilitation such as cured-in-place (CIPP) pipe and plastic sliplines have similar n values.

VCP is less smooth and also degrades more over time. The bell and spigot joints of VCP also contribute to a higher friction coefficient. New, VCP (including the joints) has an n value of approximately 0.011 and the n value increases to 0.013 after 20 years.

However, the actual pipe material might not be completely relevant in determining actual pipe friction. Some research studies have shown that a slime layer eventually builds up on any municipal sanitary sewer pipe surface and that the slime layer effectively becomes the pipe surface. These studies have indicated that the average Manning's n value for any sewer pipe material with a slime layer is 0.013. The pipes evaluated for the City are generally 60-80 years old. To be conservative, a Manning's n value of 0.015 was used to hydraulically evaluate all existing sewers in this Master Plan.

CHAPTER 6 – HYDRAULIC MODELING/CAPACITY ANALYSIS

6.3 System Capacity Deficiencies

In order to determine the adequacies of the existing City sewers for conveying the peak dry weather flow, simulations were performed to identify locations of hydraulic capacity deficiencies in the system. All hydraulically deficient segments as well as structurally deficient segments are shown in Exhibit 6-3.

Overall, the model identified 11 line segments that have depth-diameter ratios higher than 0.5 for 15-inch and below or 0.64 for 18-inch and above. The identified deficient line segments are 8-inch, 10-inch, and 12-inch.

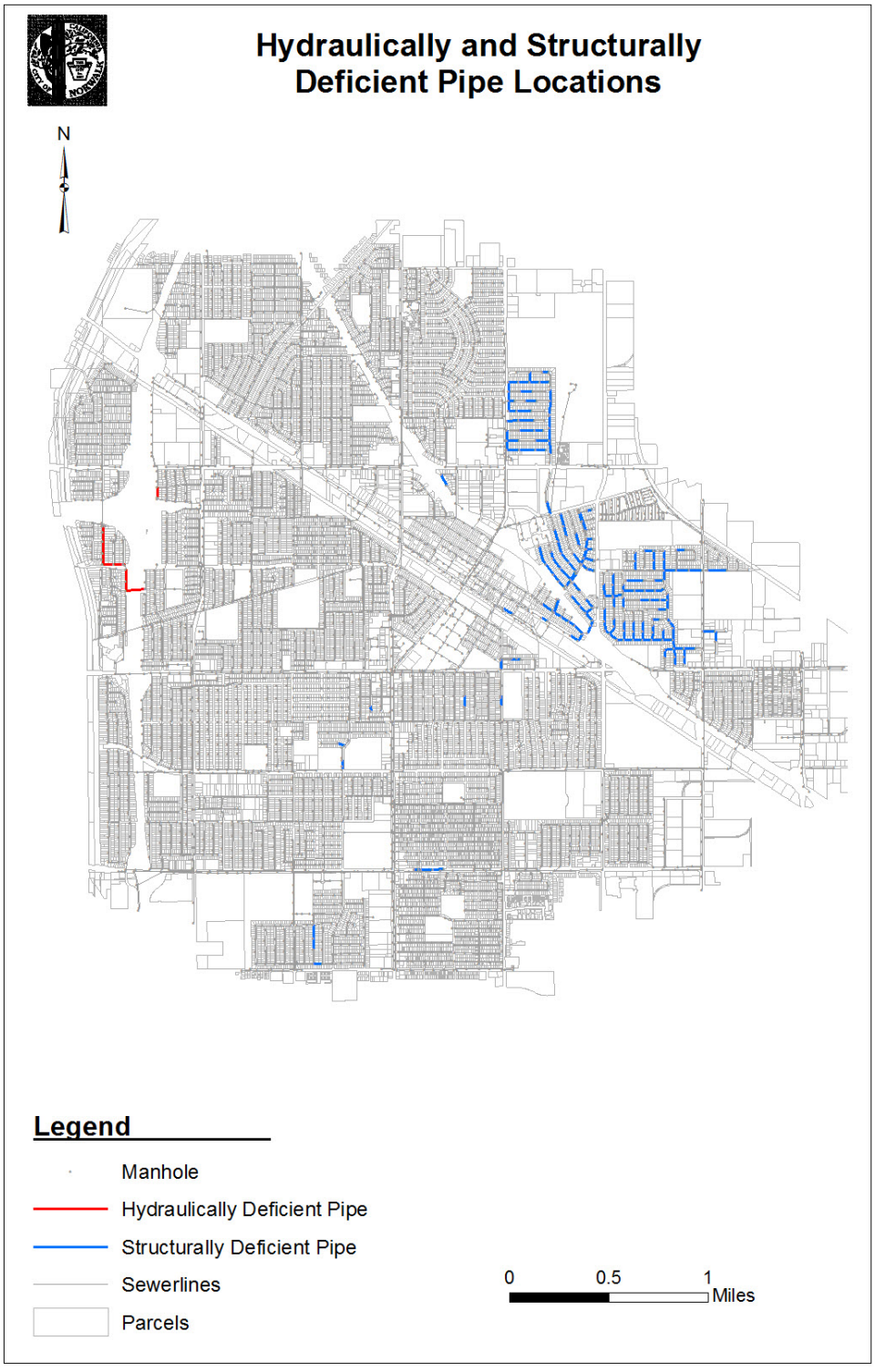

Exhibit 6-3
Hydraulically and Structurally Deficient Line Segments

6.4 Recommended Capacity Improvements & Structural Improvements

Several model runs were performed to determined appropriate and optimized improvements to address the identified capacity deficiencies. The proposed line segments were sized to convey the predicted peak dry weather flow with capacity reserve for both I&I and contingency.

Based on the results of the hydraulic analysis and CCTV inspection, recommended improvement projects addressing both are shown in Exhibit 6-4. These projects have sewer pipe segments that exceed d/D criteria. There are several relief sewers that were proposed as part of the design.

A project is a run of sewer segments that ultimately discharge to a larger sewer. Some intermediate or downstream segments might not have a d/D hydraulic deficiency. However, it is not good engineering practice to improve an upstream segment while leaving a downstream segment the same. Therefore all segments in a run are recommended to either be replaced with a larger sewer or paralleled with a second sewer. A total of approximately 3,400 feet of sewers are recommended for hydraulic improvement. A total of just over 45,000 linear feet of sewers are recommended for structural improvement.

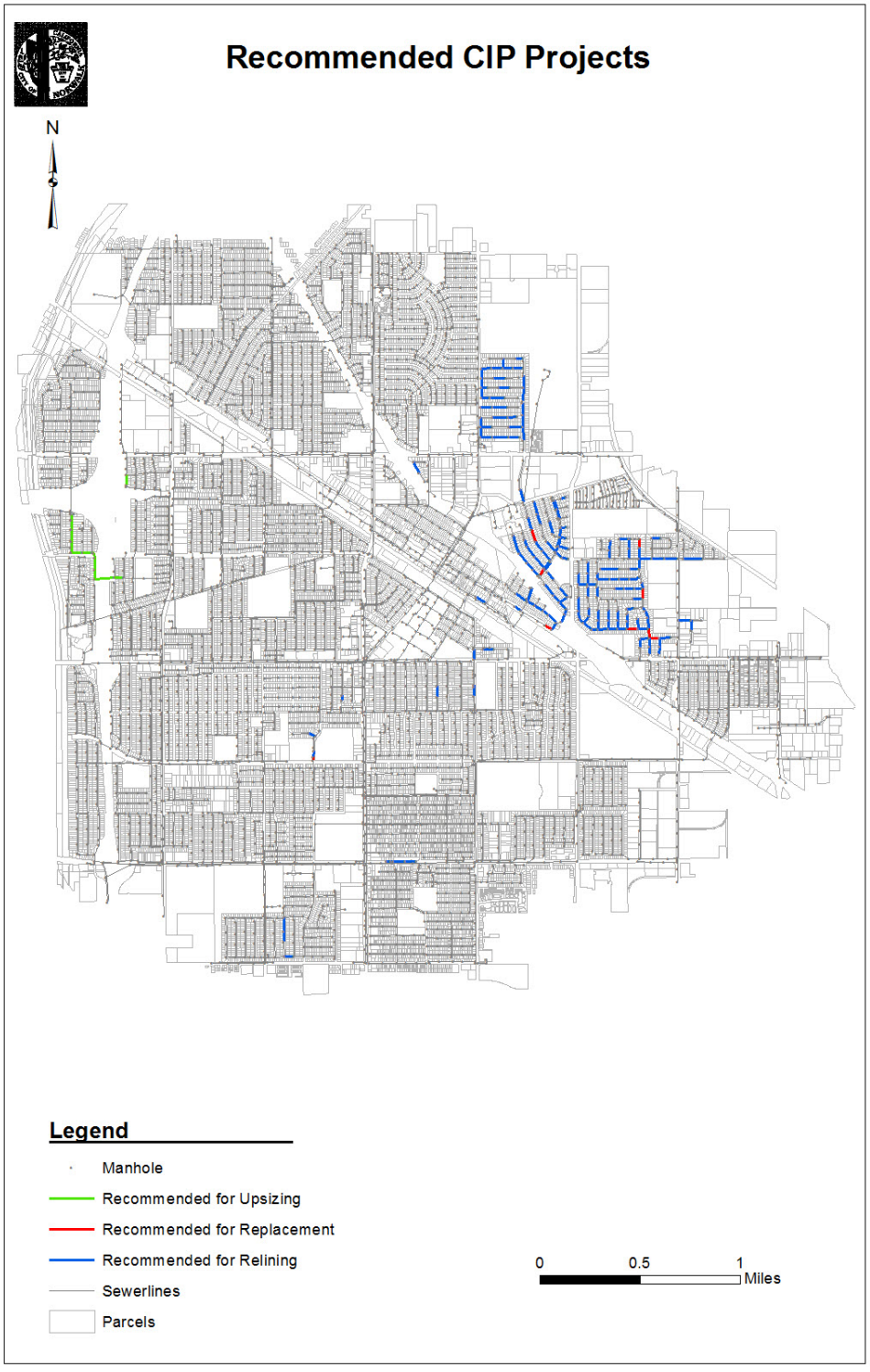

Exhibit 6-4
Recommended Capital Improvement

CHAPTER 7 – CIP DEVELOPMENT/COST ANALYSIS

7.0 Overview

Capital costs were estimated for all projects recommended in previous chapters of the sewer system master plan. The projects were prioritized consistent with the severity of a deficiency and were allocated to a recommended 10-year Sewer Capital Improvement Program (CIP) schedule.

7.1 Recommended Projects

Brief description and estimated capital costs of recommended projects are provided below. Construction costs were estimated assuming 10% for project mobilization, 10% for engineering design and using a 25% construction contingency. Capital costs were developed as 50% of construction costs to account for technical, legal, and administrative costs associated with a project.

7.1.1 Sewer Rehabilitation

Severe structural defects associated with sewers totaling over 45,000 feet were identified. These severe defects warrant repair within the 10-year CIP. There were 168 line segments that fit this category.

Recommended sewer repairs include all sewers with at least a Category 4 defect or a Category 5 defect (per NASSCO standards and PACP reporting) or with a significant number of a Category 3 defect. Within the CIP time frame of 10 years, sewer repairs for category 5 defects should be prioritized first. These defects are typically holes, missing pieces of pipe, severely offset joints exposing the pipe to elements, etc. A Category 4 defect is a severe fracture or breaking of the pipe that could become a Category 5 defect in the near future, or it can be a severe offset joint. A Category 3 defect is multiple cracking at a location in the pipe. Multiple cracking can continue to spread, i.e. deteriorate, over time.

The capital cost to implement sewer rehabilitation for structurally deficient pipes is estimated at $4.35 million dollars.

7.1.2 Additional Sewer CCTV

As part of the Master Plan, approximately 174,000 linear feet of City's CCTV'd sewers were reviewed. This is 20 percent of the City's total collection system, which is 865,095 linear feet. The sewer CCTV was conducted to identify defects, structural deficiency, and then incorporate recommended improvements into the CIP.

It is recommended that the City perform CCTV on the remaining system for the next three years out of its 10-Year CIP to achieve 100% completion, i.e. in fiscal years 2015/2016, 2016/2017, and 2017/2018. The unit cost for the CCTV inspection, including two pass cleaning, was estimated at one dollar per linear foot. The annual budget was estimated to be $200,000 for the first two years to inspect 200,000 feet of sewers per year and $258,000 for the third year to inspect the remaining sewers. The purpose of this task is to identify additional sewer defects that need rehabilitation, and then include the rehabilitation of defective sewers as projects in a revised/expanded CIP.

7.1.3 Manhole Investigations

Manholes are structural cornerstones of the collection system and should be inspected periodically and rehabilitated or replaced as required to ensure collection system structural integrity. Manholes can exhibit wall cracking, damaged/corroded frames and lids, corroded and damaged ladders, and damaged benches, among other defects. Consequently, defective or poorly located manholes are primary sources of sewer system inflow and infiltration.

Infiltration via rain-induced groundwater percolation can enter the sewer system through openings/cracks in manhole walls. Manholes can also receive excessive surface runoff (inflow) because of their location in or adjacent to surface drainage such as in or near street gutters or because they are located in confined and/or recessed areas that make the manhole act as a surface drain.

There are approximately 3,683 manholes in the City's sewer system. It is recommended that the City inspect these manholes to quantify additional I/I sources for rehabilitation. Once the manhole investigation project is done, it will identify additional needed funding to include the rehabilitation or replacement of defective manholes as projects in a revised/expanded CIP.

7.1.4 Sewer Capacity Projects

The City's existing and future sewer systems were analyzed for hydraulic performance and hydraulic deficiencies were identified. Projects were then developed to address hydraulic deficiencies in the system. Overall, the hydraulic model identified 11 line segments that have depth to diameter ratios higher than 0.5 for 15-inch and below or 0.64 for 18-inch and above.

The total capital cost of the hydraulic improvement projects is estimated at $1,350,135. The total capital cost for structural improvement projects is estimated at $ $4,348,500 in year 2015 dollars. The Grand Total for sewer system rehabilitation is then estimated at $5,698,635. The sewer costs were based on open-cut excavation. There are also a series of relief pipes recommended to be paralleled with the original sewer. There are pros and cons for any of these methods and the decision to replace or parallel a sewer should be decided during the design process. For this report, open-cut pipe replacement is assumed. Exhibit 7-1 shows the hydraulically and structurally deficient pipes.

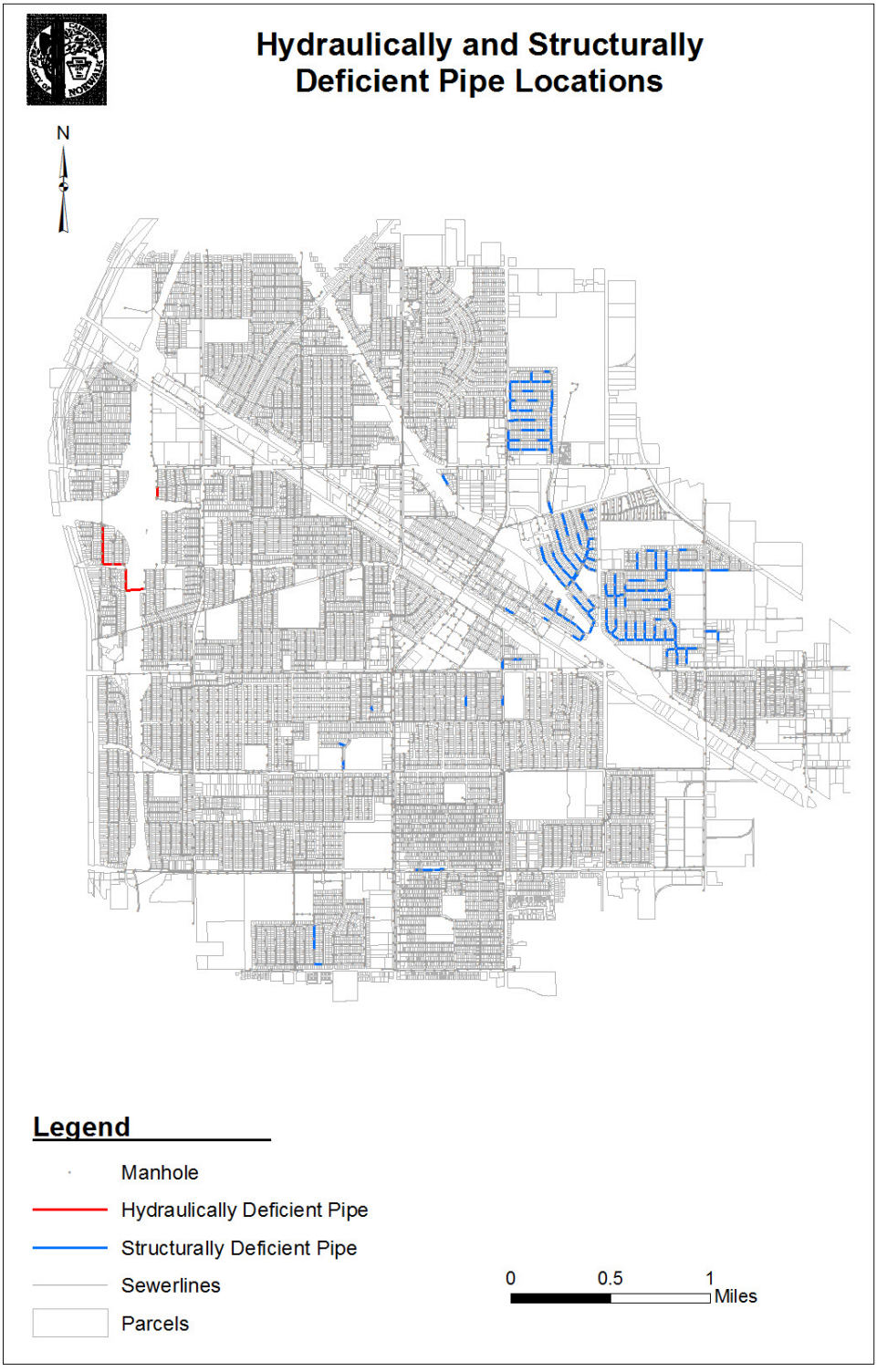

Exhibit 7-1
Hydraulically and Structurally Deficient Line Segments

CHAPTER 7 – CIP DEVELOPMENT/COST ANALYSIS

7.2 Recommended Capital Improvement Program

The recommended 10-year Sewer Capital Improvement Program is shown in Table 7-1. As shown in Table 7-1, the total cost of $25,076,553 is comprised of several components; namely the cost to upsize hydraulically deficient lines ($1,350,135), as identified through hydraulic modeling, the cost to replace structurally deficient lines ($4,348,500), as identified through CCTV inspection, complete City's CCTV inspection ($658,000), manhole inspection study ($100,000), sewer manhole repair ($300,000), SCADA master plan and upgrade ($50,000), SCADA sewer infrastructure ($150,000), inflow and infiltration study ($100,000), lift stations upgrade ($20,000), plus cost for engineering design and escalation. In addition, based on the discussions with the City, the projected sewer rehabilitation cost of about $17.5 M for the non-CCTV'd sewers was developed and included in the total cost of $25,076,553.

This projection was based on the ratio of recommended lines for rehabilitation to the total line segments reviewed by H&F, multiplied by the remaining footage in City's sewer system that needs to be televised. Unit costs were estimated based upon recent bid information for similar projects in the Southern California area, and include a factor for contingencies. The final estimated cost was calculated based on the CCTV lengths obtained from the CCTV inspection reports, provided by the City. Moreover, 3% yearly inflation rate was factored into the cost estimate for fiscal year 2018/2019 and beyond.

Table 7-1. Recommended 10-Year Capital Improvement Program

CAPITAL PROJECT	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	TOTALS
Sewer Manhole Inspection Study	100,000											100,000
Sewer Manhole Repair	100,000	200,000										300,000
CCTV of Sewer Lines	200,000	200,000	258,000									658,000
SCADA Sewer Study (Master Plan)	50,000											50,000
SCADA Sewer Infrastructure (CMMS)		150,000										150,000
Inflow & Infiltration (I&I Study)	100,000											100,000
Sewer Lift Station Upgrade		20,000										20,000
Engineering Design for Sewer Line Segment Rehab Projects (Based on the new SMP)	65,000	95,000	51,233	52,770	54,353	55,984	57,663	59,393	61,175	63,010		615,581
Construction Estimate for Sewer Line Segment Rehab Projects (Based on the new SMP)	585,000	855,000	461,096	474,929	489,177	503,853	518,968	534,537	550,573	567,090		5,540,225
Engineering Design for Sewer Line Segments Rehab (Projected Structural Deficiency)			197,279	203,198	209,294	215,573	222,040	228,701	235,562	242,629		1,754,275
Construction Estimate for Sewer Line Segments Rehab (Projected Structural Deficiency)				1,775,515	1,828,780	1,883,643	1,940,153	1,998,357	2,058,308	2,120,057	2,183,659	15,788,473
Total Capital Expenses	1,200,000	1,520,000	967,609	2,506,412	2,581,604	2,659,052	2,738,824	2,820,988	2,905,618	2,992,787	2,183,659	25,076,553

The recommended CIP has been based upon the best information currently available. It should be updated as new information becomes available from sources such as CCTV inspections and from maintenance crew observations. The project priorities may be adjusted to take advantage of concurrent construction such as street paving projects or adjacent infrastructure work.

Please note that in addition to the sewer rehabilitation costs mentioned earlier, the WDR program requires other elements so that the City will be compliant. These include implementing a Computerized work order or Maintenance Management System (CMMS), completing manhole

inspections, and performing engineering design for the aforementioned sewer rehab projects. We have added those elements to the final CIP shown here.

APPENDIX A – Map Exhibits

City of Downey

City of Santa Fe Springs

City of Artesia

City of Cerritos

Legend

- Pump Station
- Manhole
- Hydraulically Deficient Pipe
- Structurally Deficient Pipe
- LACSD
- Norwalk
- Private
- CityBrdy

N

0 2,000 4,000 6,000 Feet

Hall & Foreman
A Division of David Evans and Associates, Inc.

Hydraulically and Structurally Deficient Pipe Locations

City of Downey

City of Santa Fe Springs

City of Artesia

City of Cerritos

Legend

- Pump Station
- Manhole
- Recommended for Upsizing
- Recommended for Replacement
- Recommended for Relining
- LACSD
- Norwalk
- Private
- Streets
- CityBrdy

N

0 2,000 4,000 6,000 Feet

Hall & Foreman
A Division of David Evans and Associates, Inc.

Recommended CIP Projects

APPENDIX B - InfoSewer Model Runs

Norwalk Wastewater Hydraulic Model

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1		B1-NW1000_B1-NW1003	B1-NW1000	B1-NW1003	2.1969	0.5832	0.0589
2		B1-NW1001_B1-NW1003	B1-NW1001	B1-NW1003	0.7155	0.0045	0.0859
3		B1-NW1003_B1-NW1015	B1-NW1003	B1-NW1015	7.8946	0.6359	0.1333
4		B1-NW1004_B1-NW1005	B1-NW1004	B1-NW1005	0.8011	0.0049	0.0999
5		B1-NW1005_B1-NW2014	B1-NW1005	B1-NW2014	1.4391	0.0092	0.4508
6		B1-NW1006_B1-NW1007	B1-NW1006	B1-NW1007	1.0611	0.0066	0.0502
7		B1-NW1007_B1-NW1009	B1-NW1007	B1-NW1009	2.0306	0.5045	0.0620
8		B1-NW1008_B1-NW1009	B1-NW1008	B1-NW1009	0.4535	0.6493	0.0494
9		B1-NW1009_B1-NW1010	B1-NW1009	B1-NW1010	3.3541	0.0214	0.1006
10		B1-NW1010_B1-NW2028	B1-NW1010	B1-NW2028	6.9891	0.0446	0.1357
11		B1-NW1011_B1-NW1010	B1-NW1011	B1-NW1010	2.4957	0.6026	0.0632
12		B1-NW1012_B1-NW1011	B1-NW1012	B1-NW1011	1.1214	0.0069	0.0517
13		B1-NW1013_B1-NW1014	B1-NW1013	B1-NW1014	1.4210	0.0090	0.0694
14		B1-NW1014_B1-NW2028	B1-NW1014	B1-NW2028	3.4354	0.5444	0.0840
15		B1-NW1015_B1-NW1016	B1-NW1015	B1-NW1016	12.7951	0.0817	0.1497
16		B1-NW1016_B1-NW1017	B1-NW1016	B1-NW1017	14.3108	0.0913	0.2803
17		B1-NW1017_B1-NW1018	B1-NW1017	B1-NW1018	69.3398	0.4426	0.4202
18		B1-NW1018_B1-NW1019	B1-NW1018	B1-NW1019	72.9282	0.4655	0.4674
19		B1-NW1019_B1-NW1020	B1-NW1019	B1-NW1020	73.8779	0.9513	0.4966
20		B1-NW1020_B1-NW1023	B1-NW1020	B1-NW1023	75.3979	1.2140	0.4183
21		B1-NW1021_B1-NW1022	B1-NW1021	B1-NW1022	1.8579	0.0116	0.0561
22		B1-NW1022_B1-NW1023	B1-NW1022	B1-NW1023	2.8392	0.6997	0.0793
23		B1-NW1023_B1-NW2027	B1-NW1023	B1-NW2027	80.1426	1.3741	0.3990
24		B1-NW1024_B1-NW1107	B1-NW1024	B1-NW1107	164.1026	1.0938	0.3354
25		B1-NW1025_B1-NW1024	B1-NW1025	B1-NW1024	36.7736	1.0834	0.2690
26		B1-NW1026_B1-NW1025	B1-NW1026	B1-NW1025	28.3740	0.1811	0.2534
27		B1-NW1027_B1-NW1024	B1-NW1027	B1-NW1024	32.0530	0.1309	0.2638
28		B1-NW1028_B1-NW1027	B1-NW1028	B1-NW1027	30.8995	0.8909	0.1993
29		B1-NW1029_B1-NW1028	B1-NW1029	B1-NW1028	29.6917	0.8211	0.2052
30		B1-NW1030_B1-NW1029	B1-NW1030	B1-NW1029	28.8497	0.1179	0.1941
31		B1-NW1031_B1-NW1032	B1-NW1031	B1-NW1032	0.9882	0.0062	0.0565
32		B1-NW1032_B1-NW1033	B1-NW1032	B1-NW1033	2.5774	0.0164	0.0757
33		B1-NW1033_B1-NW1034	B1-NW1033	B1-NW1034	3.7213	0.0238	0.0896
34		B1-NW1034_B1-NW1035	B1-NW1034	B1-NW1035	5.2937	0.0338	0.1039
35		B1-NW1035_B1-NW1025	B1-NW1035	B1-NW1025	6.8664	0.7290	0.1103
36		B1-NW1036_B1-NW1026	B1-NW1036	B1-NW1026	6.6410	0.7891	0.1022
37		B1-NW1037_B1-NW1036	B1-NW1037	B1-NW1036	5.0925	0.5898	0.1040
38		B1-NW1038_B1-NW1037	B1-NW1038	B1-NW1037	3.5408	0.0226	0.0899
39		B1-NW1039_B1-NW1038	B1-NW1039	B1-NW1038	2.5837	0.0165	0.0729
40		B1-NW1040_B1-NW1039	B1-NW1040	B1-NW1039	1.1548	0.0072	0.0583
41		B1-NW1041_B1-NW1042	B1-NW1041	B1-NW1042	1.9196	0.5307	0.0574
42		B1-NW1042_B1-NW1043	B1-NW1042	B1-NW1043	2.6072	0.0166	0.0578
43		B1-NW1043_B1-NW1018	B1-NW1043	B1-NW1018	3.2325	0.6619	0.1013
44		B1-NW1044_B1-NW1046	B1-NW1044	B1-NW1046	1.3335	0.0084	0.0618
45		B1-NW1045_B1-NW1047	B1-NW1045	B1-NW1047	1.5095	0.0095	0.0653
46		B1-NW1046_B1-NW1048	B1-NW1046	B1-NW1048	2.8494	0.0182	0.0785
47		B1-NW1047_B1-NW1049	B1-NW1047	B1-NW1049	3.0241	0.0193	0.0847
48		B1-NW1048_B1-NW1051	B1-NW1048	B1-NW1051	4.3234	0.0276	0.0909
49		B1-NW1049_B1-NW1052	B1-NW1049	B1-NW1052	4.5063	0.0288	0.0983
50		B1-NW1051_B1-NW1054	B1-NW1051	B1-NW1054	5.3044	0.0339	0.1072
51		B1-NW1052_B1-NW1055	B1-NW1052	B1-NW1055	5.4781	0.0350	0.1158
52		B1-NW1054_B1-NW1057	B1-NW1054	B1-NW1057	6.9849	0.6462	0.1212
53		B1-NW1055_B1-NW1058	B1-NW1055	B1-NW1058	7.1239	0.5810	0.1322
54		B1-NW1057_B1-NW1059	B1-NW1057	B1-NW1059	8.5701	0.8662	0.1141
55		B1-NW1058_B1-NW1060	B1-NW1058	B1-NW1060	8.8252	0.0563	0.1302
56		B1-NW1059_B1-NW1026	B1-NW1059	B1-NW1026	20.2213	0.1291	0.2174

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
57		B1-NW1060_B1-NW1059	B1-NW1060	B1-NW1059	10.1107	0.0645	0.1649
58		B1-NW1099_B1-NW1100	B1-NW1099	B1-NW1100	2.1071	0.0131	0.0766
59		B1-NW1100_B1-NW1101	B1-NW1100	B1-NW1101	6.8445	0.0437	0.1203
60		B1-NW1101_B1-NW1106	B1-NW1101	B1-NW1106	16.0421	0.1024	0.1847
61		B1-NW1102_B1-NW1101	B1-NW1102	B1-NW1101	6.6908	0.0427	0.1349
62		B1-NW1103_B1-NW1102	B1-NW1103	B1-NW1102	4.2001	0.0268	0.1020
63		B1-NW1104_B1-NW1105	B1-NW1104	B1-NW1105	2.5953	0.0160	0.0718
64		B1-NW1105_B1-NW1106	B1-NW1105	B1-NW1106	6.5284	1.0050	0.0857
65		B1-NW1106_B1-NW1108	B1-NW1106	B1-NW1108	25.3861	0.1620	0.3596
66		B1-NW1107_B1-NW1108	B1-NW1107	B1-NW1108	167.7441	1.3862	0.3756
67		B1-NW1108_B1-NW1110	B1-NW1108	B1-NW1110	196.0228	1.8547	0.3400
68		B1-NW1110_B1-NW1111	B1-NW1110	B1-NW1111	197.8211	1.4618	0.3395
69		B1-NW1111_B1-NW1112	B1-NW1111	B1-NW1112	199.7164	1.8501	0.3453
70		B1-NW1112_B1-NW1113	B1-NW1112	B1-NW1113	202.6446	0.3679	0.3037
71		B1-NW1113_B1-NW1114	B1-NW1113	B1-NW1114	203.4663	1.1742	0.3522
72		B1-NW1114_B1-NW1127	B1-NW1114	B1-NW1127	211.1564	0.8396	0.3441
73		B1-NW1115_B1-NW1114	B1-NW1115	B1-NW1114	5.7865	0.8266	0.0901
74		B1-NW1116_B1-NW1115	B1-NW1116	B1-NW1115	4.1622	0.0266	0.0873
75		B1-NW1117_B1-NW1116	B1-NW1117	B1-NW1116	2.2168	0.0139	0.0724
76		B1-NW1118_B1-NW1121	B1-NW1118	B1-NW1121	2.4441	0.0154	0.0744
77		B1-NW1119_B1-NW1122	B1-NW1119	B1-NW1122	2.3219	0.0148	0.0727
78		B1-NW1120_B1-NW1123	B1-NW1120	B1-NW1123	2.1397	0.0134	0.0675
79		B1-NW1121_B1-NW1124	B1-NW1121	B1-NW1124	4.1772	0.0266	0.0867
80		B1-NW1122_B1-NW1125	B1-NW1122	B1-NW1125	3.9868	0.0254	0.0993
81		B1-NW1123_B1-NW1130	B1-NW1123	B1-NW1130	3.2209	0.0205	0.0803
82		B1-NW1124_B1-NW1125	B1-NW1124	B1-NW1125	5.3738	0.7413	0.0923
83		B1-NW1125_B1-NW1126	B1-NW1125	B1-NW1126	10.4261	0.0665	0.1317
84		B1-NW1126_B1-NW1127	B1-NW1126	B1-NW1127	11.9438	0.8932	0.1403
85		B1-NW1127_B1-NW1128	B1-NW1127	B1-NW1128	225.6481	0.4097	0.3636
86		B1-NW1128_B1-NW1131	B1-NW1128	B1-NW1131	266.5315	0.7114	0.3832
87		B1-NW1129_B1-NW1128	B1-NW1129	B1-NW1128	6.7393	0.0430	0.4032
88		B1-NW1130_B1-NW1129	B1-NW1130	B1-NW1129	4.9939	0.0319	0.0920
89		B1-NW1131_B1-NW1198	B1-NW1131	B1-NW1198	285.9211	0.5191	0.4075
90		B1-NW1132_B1-NW1131	B1-NW1132	B1-NW1131	18.2195	1.0381	0.1693
91		B1-NW1133_B1-NW1132	B1-NW1133	B1-NW1132	16.5530	0.7600	0.1634
92		B1-NW1134_B1-NW1133	B1-NW1134	B1-NW1133	15.0031	0.9474	0.1572
93		B1-NW1135_B1-NW1134	B1-NW1135	B1-NW1134	13.4523	0.7176	0.1540
94		B1-NW1136_B1-NW1135	B1-NW1136	B1-NW1135	1.0396	0.4876	0.0402
95		B1-NW1137_B1-NW1135	B1-NW1137	B1-NW1135	0.7924	0.3497	0.0419
96		B1-NW1138_B1-NW1135	B1-NW1138	B1-NW1135	10.8555	0.0693	0.1421
97		B1-NW1139_B1-NW1138	B1-NW1139	B1-NW1138	9.0916	0.0580	0.1314
98		B1-NW1140_B1-NW1139	B1-NW1140	B1-NW1139	4.2249	0.0270	0.1125
99		B1-NW1141_B1-NW1140	B1-NW1141	B1-NW1140	0.4423	0.2126	0.0648
100		B1-NW1142_B1-NW1140	B1-NW1142	B1-NW1140	2.5580	0.4461	0.0787
101		B1-NW1143_B1-NW1142	B1-NW1143	B1-NW1142	0.7440	0.0046	0.0575
102		B1-NW1144_B1-NW1139	B1-NW1144	B1-NW1139	2.9436	0.4798	0.0824
103		B1-NW1145_B1-NW1144	B1-NW1145	B1-NW1144	2.0872	0.0133	0.0715
104		B1-NW1146_B1-NW1145	B1-NW1146	B1-NW1145	1.1219	0.0070	0.0538
105		B1-NW1147_B1-NW1148	B1-NW1147	B1-NW1148	0.8017	0.0051	0.0511
106		B1-NW1148_B1-NW1149	B1-NW1148	B1-NW1149	2.0149	0.0128	0.0679
107		B1-NW1149_B1-NW1150	B1-NW1149	B1-NW1150	3.2562	0.5972	0.0761
108		B1-NW1150_B1-NW1162	B1-NW1150	B1-NW1162	9.3618	0.0598	0.1470
109		B1-NW1151_B1-NW1150	B1-NW1151	B1-NW1150	5.8376	0.0373	0.1154
110		B1-NW1152_B1-NW1151	B1-NW1152	B1-NW1151	4.9402	0.0315	0.0944
111		B1-NW1153_B1-NW9138	B1-NW1153	B1-NW9138	3.7312	0.0238	0.0951
112		B1-NW1154_B1-NW1153	B1-NW1154	B1-NW1153	2.7163	0.0173	0.0761

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
113		B1-NW1155_B1-NW1154	B1-NW1155	B1-NW1154	2.4284	0.5656	0.0647
114		B1-NW1156_B1-NW1157	B1-NW1156	B1-NW1157	1.2378	0.0077	0.0619
115		B1-NW1157_B1-NW1158	B1-NW1157	B1-NW1158	2.6289	0.0168	0.0831
116		B1-NW1158_B1-NW1159	B1-NW1158	B1-NW1159	3.4515	0.2512	0.1022
117		B1-NW1159_B1-NW1160	B1-NW1159	B1-NW1160	4.1352	0.4212	0.1135
118		B1-NW1160_B1-NW1161	B1-NW1160	B1-NW1161	4.7964	0.5476	0.1050
119		B1-NW1161_B1-NW1163	B1-NW1161	B1-NW1163	5.8392	0.0373	0.1071
120		B1-NW1162_B1-NW1164	B1-NW1162	B1-NW1164	10.0680	0.0643	0.1683
121		B1-NW1163_B1-NW1165	B1-NW1163	B1-NW1165	7.1973	0.5540	0.1171
122		B1-NW1164_B1-NW9137	B1-NW1164	B1-NW9137	11.2351	0.6091	0.1752
123		B1-NW1165_B1-NW1166	B1-NW1165	B1-NW1166	8.4555	0.7786	0.1216
124		B1-NW1166_B1-NW1195	B1-NW1166	B1-NW1195	9.8449	0.9187	0.1205
125		B1-NW1175_B1-NW1210	B1-NW1175	B1-NW1210	4.5312	0.9913	0.0675
126		B1-NW1176_B1-NW1175	B1-NW1176	B1-NW1175	2.8948	0.6233	0.0682
127		B1-NW1177_B1-NW1190	B1-NW1177	B1-NW1190	0.8696	0.1521	0.0786
128		B1-NW1178_B1-NW1190	B1-NW1178	B1-NW1190	0.9504	0.5043	0.0371
129		B1-NW1179_B1-NW1180	B1-NW1179	B1-NW1180	0.9912	0.3170	0.0483
130		B1-NW1180_B1-NW1181	B1-NW1180	B1-NW1181	2.1049	0.0134	0.0686
131		B1-NW1181_B1-NW1182	B1-NW1181	B1-NW1182	3.7778	0.0241	0.0914
132		B1-NW1182_B1-NW1183	B1-NW1182	B1-NW1183	5.7788	0.0369	0.1085
133		B1-NW1183_B1-NW1184	B1-NW1183	B1-NW1184	7.7167	0.0493	0.1224
134		B1-NW1184_B1-NW1185	B1-NW1184	B1-NW1185	9.7520	0.0622	0.1665
135		B1-NW1185_B1-NW1206	B1-NW1185	B1-NW1206	12.1445	0.5242	0.2054
136		B1-NW1186_B1-NW1187	B1-NW1186	B1-NW1187	0.8622	0.0054	0.0478
137		B1-NW1187_B1-NW1188	B1-NW1187	B1-NW1188	2.1822	0.0139	0.0599
138		B1-NW1188_B1-NW1189	B1-NW1188	B1-NW1189	3.1123	0.0199	0.0762
139		B1-NW1189_B1-NW1190	B1-NW1189	B1-NW1190	4.4539	0.0284	0.0952
140		B1-NW1190_B1-NW1193	B1-NW1190	B1-NW1193	6.8313	0.0436	0.1036
141		B1-NW1191_B1-NW1192	B1-NW1191	B1-NW1192	1.1313	0.0071	0.0520
142		B1-NW1192_B1-NW1176	B1-NW1192	B1-NW1176	2.3282	0.0148	0.0621
143		B1-NW1193_B1-NW1194	B1-NW1193	B1-NW1194	7.7645	0.0496	0.1130
144		B1-NW1194_B1-NW1208	B1-NW1194	B1-NW1208	9.6609	0.8950	0.1211
145		B1-NW1195_B1-NW1206	B1-NW1195	B1-NW1206	313.9512	1.3938	0.4282
146		B1-NW1198_B1-NW1195	B1-NW1198	B1-NW1195	300.1694	1.3340	0.4274
147		B1-NW1199_B1-NW1198	B1-NW1199	B1-NW1198	1.3236	0.3499	0.2604
148		B1-NW1200_B1-NW1195	B1-NW1200	B1-NW1195	3.0196	0.0192	0.4037
149		B1-NW1201_B1-NW1199	B1-NW1201	B1-NW1199	0.5159	0.0033	0.0453
150		B1-NW1202_B1-NW1200	B1-NW1202	B1-NW1200	1.9944	0.3686	0.0757
151		B1-NW1203_B1-NW2358	B1-NW1203	B1-NW2358	4.1896	0.3436	0.0953
152		B1-NW1204_B1-NW1203	B1-NW1204	B1-NW1203	1.7364	0.3131	0.0788
153		B1-NW1205_B1-NW1203	B1-NW1205	B1-NW1203	1.6603	0.0104	0.0680
154		B1-NW1206_B1-NW1207	B1-NW1206	B1-NW1207	330.6541	0.7095	0.4286
155		B1-NW1207_B1-NW1208	B1-NW1207	B1-NW1208	332.3842	1.3888	0.4483
156		B1-NW1208_B1-NW1209	B1-NW1208	B1-NW1209	351.7067	1.0927	0.4424
157		B1-NW1209_B1-NW1210	B1-NW1209	B1-NW1210	356.6733	1.2077	0.4487
158		B1-NW1223_B1-NW1224	B1-NW1223	B1-NW1224	3.1749	0.0203	0.0957
159		B1-NW1224_B1-NW1225	B1-NW1224	B1-NW1225	5.6370	0.0360	0.1433
160		B1-NW1225_B1-NW1226	B1-NW1225	B1-NW1226	6.5051	0.3496	0.1763
161		B1-NW1226_B1-NW1227	B1-NW1226	B1-NW1227	7.8805	0.0503	0.1261
162		B1-NW1227_B1-NW1208	B1-NW1227	B1-NW1208	8.6693	0.7313	0.1292
163		B1-NW1228_B1-NW1209	B1-NW1228	B1-NW1209	1.2007	0.6059	0.0382
164		B1-NW1231_B1-NW1210	B1-NW1231	B1-NW1210	1.1282	0.6891	0.0335
165		B1-NW1234_B1-NW1209	B1-NW1234	B1-NW1209	3.2299	0.8860	0.0580
166		B1-NW1235_B1-NW1234	B1-NW1235	B1-NW1234	1.7368	0.0110	0.0536
167		B1-NW1236_B1-NW1235	B1-NW1236	B1-NW1235	0.6790	0.3945	0.0395
168		B1-NW1237_B1-NW1206	B1-NW1237	B1-NW1206	3.1050	0.6136	0.0723

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
169		B1-NW1238_B1-NW1237	B1-NW1238	B1-NW1237	1.8534	0.0116	0.0642
170		B1-NW1240_B1-NW1241	B1-NW1240	B1-NW1241	5.9438	0.0379	0.1243
171		B1-NW1241_B1-NW1242	B1-NW1241	B1-NW1242	9.8863	0.0631	0.1501
172		B1-NW1242_B1-NW1243	B1-NW1242	B1-NW1243	13.5907	0.0867	0.1734
173		B1-NW1243_B1-NW1244	B1-NW1243	B1-NW1244	16.3849	0.8131	0.1863
174		B1-NW1244_B1-NW1245	B1-NW1244	B1-NW1245	17.2725	1.0024	0.1671
175		B1-NW1245_B1-NW1246	B1-NW1245	B1-NW1246	18.1209	0.1157	0.1913
176		B1-NW1246_B1-NW1247	B1-NW1246	B1-NW1247	20.6164	0.6398	0.2297
177		B1-NW1247_B1-NW1248	B1-NW1247	B1-NW1248	28.8643	0.7651	0.2462
178		B1-NW1248_B1-NW1128	B1-NW1248	B1-NW1128	32.7007	1.0424	0.2543
179		B1-NW1994_B1-NW1017	B1-NW1994	B1-NW1017	54.2361	0.3462	0.3090
180		B1-NW1995_B1-NW1994	B1-NW1995	B1-NW1994	39.6622	1.3164	0.2471
181		B1-NW2010_B1-NW9136	B1-NW2010	B1-NW9136	10.0763	0.0643	0.1566
182		B1-NW2011_B1-NW2012	B1-NW2011	B1-NW2012	15.6846	0.8435	0.1762
183		B1-NW2012_B1-NW2013	B1-NW2012	B1-NW2013	17.3977	1.0273	0.1651
184		B1-NW2013_B1-NW2014	B1-NW2013	B1-NW2014	18.4052	0.5071	0.1630
185		B1-NW2014_B1-NW2015	B1-NW2014	B1-NW2015	20.5834	0.9514	0.1958
186		B1-NW2015_B1-NW2016	B1-NW2015	B1-NW2016	21.8450	1.0629	0.1889
187		B1-NW2016_B1-NW2017	B1-NW2016	B1-NW2017	23.3470	0.9131	0.1899
188		B1-NW2017_B1-NW1030	B1-NW2017	B1-NW1030	27.8717	0.7584	0.1713
189		B1-NW2018_B1-NW2017	B1-NW2018	B1-NW2017	4.2129	0.7088	0.0807
190		B1-NW2019_B1-NW2018	B1-NW2019	B1-NW2018	0.6887	0.3884	0.0356
191		B1-NW2020_B1-NW2018	B1-NW2020	B1-NW2018	2.5775	0.0164	0.0722
192		B1-NW2021_B1-NW2020	B1-NW2021	B1-NW2020	0.4293	0.3174	0.0297
193		B1-NW2022_B1-NW2020	B1-NW2022	B1-NW2020	1.6050	0.0102	0.0579
194		B1-NW2023_B1-NW2022	B1-NW2023	B1-NW2022	0.6380	0.3981	0.0403
195		B1-NW2027_B1-NW1024	B1-NW2027	B1-NW1024	94.6468	1.4968	0.3051
196		B1-NW2028_B1-NW9146	B1-NW2028	B1-NW9146	11.7813	0.0752	0.1581
197		B1-NW2358_B1-NW1247	B1-NW2358	B1-NW1247	5.8871	0.0376	0.1741
198		B1-NW2433_B1-NW1155	B1-NW2433	B1-NW1155	1.5235	0.0095	0.0589
199		B1-NW9097_B1-NW2018	B1-NW9097	B1-NW2018	0.6792	0.4047	0.0342
200		B1-NW9098_B1-NW9097	B1-NW9098	B1-NW9097	0.0000	0.0000	0.0169
201		B1-NW9103_B1-NW1015	B1-NW9103	B1-NW1015	0.3183	0.4295	0.0789
202		B1-NW9114_B1-NW2016	B1-NW9114	B1-NW2016	0.6045	0.7049	0.0259
203		B1-NW9116_B1-NW1179	B1-NW9116	B1-NW1179	0.2309	0.0015	0.0342
204		B1-NW9136_B1-NW2011	B1-NW9136	B1-NW2011	13.1314	0.0838	0.1734
205		B1-NW9137_B1-NW1198	B1-NW9137	B1-NW1198	12.3810	0.8800	0.2972
206		B1-NW9138_B1-NW1152	B1-NW9138	B1-NW1152	4.4069	0.5282	0.1016
207		B1-NW9146_B1-NW2027	B1-NW9146	B1-NW2027	13.1453	0.0839	0.2724
208		B2-HF1011_B2-NW5873	B2-HF1011	B2-NW5873	0.4972	0.0031	0.0477
209		B2-HF1012_B2-NW9079	B2-HF1012	B2-NW9079	0.5083	0.0032	0.0448
210		B2-HF1013_B2-NW9080	B2-HF1013	B2-NW9080	0.3787	0.0024	0.0377
211		B2-NW5310_B2-NW5311	B2-NW5310	B2-NW5311	51.3833	0.7836	0.3158
212		B2-NW5311_B2-NW5316	B2-NW5311	B2-NW5316	54.1625	0.6936	0.3341
213		B2-NW5312_B2-NW5311	B2-NW5312	B2-NW5311	2.3811	0.7666	0.0520
214		B2-NW5313_B2-NW5312	B2-NW5313	B2-NW5312	1.3554	0.0085	0.0495
215		B2-NW5314_B2-NW5315	B2-NW5314	B2-NW5315	0.8154	0.0050	0.0403
216		B2-NW5315_B2-NW5316	B2-NW5315	B2-NW5316	1.6997	0.6556	0.0461
217		B2-NW5316_B2-NW5317	B2-NW5316	B2-NW5317	56.0796	1.2024	0.3683
218		B2-NW5317_B2-NW5318	B2-NW5317	B2-NW5318	503.8802	1.8310	0.4821
219		B2-NW5318_B2-NW5322	B2-NW5318	B2-NW5322	500.5601	1.8269	0.4961
220		B2-NW5319_B2-NW5318	B2-NW5319	B2-NW5318	2.0791	0.5527	0.2672
221		B2-NW5320_B2-NW5319	B2-NW5320	B2-NW5319	0.9959	0.0062	0.0449
222		B2-NW5321_B2-NW5322	B2-NW5321	B2-NW5322	3.0143	0.4549	0.2081
223		B2-NW5391_B2-NW5392	B2-NW5391	B2-NW5392	1.1354	0.0071	0.0710
224		B2-NW5392_B2-NW5393	B2-NW5392	B2-NW5393	5.6467	0.0360	0.1035

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
225		B2-NW5393_B2-NW5394	B2-NW5393	B2-NW5394	6.5660	0.0419	0.1110
226		B2-NW5394_B2-NW5395	B2-NW5394	B2-NW5395	7.5315	0.7727	0.1505
227		B2-NW5395_B2-NW5400	B2-NW5395	B2-NW5400	323.7876	1.3837	0.5905
228		B2-NW5396_B2-NW5395	B2-NW5396	B2-NW5395	341.0240	1.6612	0.5276
229		B2-NW5397_B2-NW5396	B2-NW5397	B2-NW5396	349.4857	1.5599	0.5713
230		B2-NW5398_B2-NW5397	B2-NW5398	B2-NW5397	367.4303	2.2147	0.4762
231		B2-NW5399_B2-NW5398	B2-NW5399	B2-NW5398	380.9823	1.7412	0.5659
232		B2-NW5400_B2-NW5401	B2-NW5400	B2-NW5401	318.6071	1.8493	0.4912
233		B2-NW5401_B2-NW5402	B2-NW5401	B2-NW5402	313.5962	1.7209	0.3619
234		B2-NW5402_B2-NW5403	B2-NW5402	B2-NW5403	318.6983	1.6225	0.3751
235		B2-NW5403_B2-NW5404	B2-NW5403	B2-NW5404	311.5362	1.4834	0.3823
236		B2-NW5404_B2-NW5317	B2-NW5404	B2-NW5317	305.5458	1.3227	0.3857
237		B2-NW5405_B2-NW5406	B2-NW5405	B2-NW5406	0.5405	0.0034	0.0418
238		B2-NW5406_B2-NW5400	B2-NW5406	B2-NW5400	1.2858	0.0082	0.3916
239		B2-NW5407_B2-NW5401	B2-NW5407	B2-NW5401	2.4607	0.0070	0.2414
240		B2-NW5408_B2-NW5402	B2-NW5408	B2-NW5402	10.8710	0.7347	0.1742
241		B2-NW5409_B2-NW5407	B2-NW5409	B2-NW5407	1.0187	0.0029	0.0379
242		B2-NW5410_B2-NW5408	B2-NW5410	B2-NW5408	9.2231	0.0589	0.1425
243		B2-NW5411_B2-NW5410	B2-NW5411	B2-NW5410	8.6677	0.6904	0.1345
244		B2-NW5425_B2-NW7347	B2-NW5425	B2-NW7347	2.1537	0.0137	0.1796
245		B2-NW5426_B2-NW5425	B2-NW5426	B2-NW5425	0.9585	0.0060	0.0562
246		B2-NW5428_B2-NW5321	B2-NW5428	B2-NW5321	1.6851	0.0106	0.0684
247		B2-NW5473_B2-NW5474	B2-NW5473	B2-NW5474	1.3359	0.5106	0.0462
248		B2-NW5474_B2-NW5392	B2-NW5474	B2-NW5392	3.4287	0.0219	0.0888
249		B2-NW5475_B2-NW5474	B2-NW5475	B2-NW5474	1.1166	0.0071	0.0624
250		B2-NW5476_B2-NW5475	B2-NW5476	B2-NW5475	0.5704	0.0036	0.0382
251		B2-NW5488_B2-NW5489	B2-NW5488	B2-NW5492	114.7275	0.3255	0.2849
252		B2-NW5490_B2-NW5489	B2-NW5490	B2-NW5492	2.3400	0.6904	0.0552
253		B2-NW5491_B2-NW5490	B2-NW5491	B2-NW5490	0.6820	0.0044	0.0529
254		B2-NW5492_B2-NW5495	B2-NW5492	B2-NW5495	123.2682	0.9973	0.3002
255		B2-NW5493_B2-NW5492	B2-NW5493	B2-NW5492	5.0332	0.5849	0.1037
256		B2-NW5494_B2-NW5493	B2-NW5494	B2-NW5493	2.7670	0.0171	0.0810
257		B2-NW5495_B2-NW5496	B2-NW5495	B2-NW5496	126.7296	1.3945	0.3047
258		B2-NW5496_B2-NW5497	B2-NW5496	B2-NW5497	129.3367	1.7169	0.2530
259		B2-NW5497_B2-NW9218	B2-NW5497	B2-NW5515	150.1650	1.5286	0.3224
260		B2-NW5498_B2-NW9082	B2-NW5498	B2-NW9082	0.8780	0.4460	0.0382
261		B2-NW5499_B2-NW9083	B2-NW5499	B2-NW9083	6.7020	0.0428	0.0789
262		B2-NW5500_B2-NW5499	B2-NW5500	B2-NW5499	6.5593	0.6276	0.1185
263		B2-NW5501_B2-NW5500	B2-NW5501	B2-NW5500	2.5944	0.5236	0.0713
264		B2-NW5502_B2-NW5500	B2-NW5502	B2-NW5500	2.2047	0.0141	0.0947
265		B2-NW5503_B2-NW5504	B2-NW5503	B2-NW5504	1.1439	0.8634	0.0659
266		B2-NW5504_B2-NW5512	B2-NW5504	B2-NW5512	6.4735	0.0413	0.1282
267		B2-NW5505_B2-NW5504	B2-NW5505	B2-NW5504	4.2548	0.0271	0.0946
268		B2-NW5506_B2-NW5505	B2-NW5506	B2-NW5505	2.2076	0.0138	0.0705
269		B2-NW5507_B2-NW5509	B2-NW5507	B2-NW5509	1.5050	0.0094	0.0561
270		B2-NW5508_B2-NW5510	B2-NW5508	B2-NW5510	0.7153	0.0045	0.0361
271		B2-NW5509_B2-NW5512	B2-NW5509	B2-NW5512	2.8732	0.6651	0.0650
272		B2-NW5510_B2-NW9081	B2-NW5510	B2-NW9081	1.1818	0.0075	0.0398
273		B2-NW5511_B2-NW5497	B2-NW5511	B2-NW5497	12.4991	0.0798	0.3045
274		B2-NW5512_B2-NW5511	B2-NW5512	B2-NW5511	10.5712	0.7208	0.1495
275		B2-NW5513_B2-NW5514	B2-NW5513	B2-NW5514	68.2879	2.1872	0.2671
276		B2-NW5513_B2-NW5533	B2-NW5513	B2-NW5533	453.0560	2.1079	1.0000
277		B2-NW5514_B2-NW5532	B2-NW5514	B2-NW5532	68.2961	1.3201	0.3602
278		B2-NW5515_B2-NW9086	B2-NW5515	B2-NW9086	156.1432	2.3556	0.2432
279		B2-NW5516_B2-NW9206	B2-NW5516	B2-NW9206	5.8744	0.0375	0.0708
280		B2-NW5517_B2-NW5516	B2-NW5517	B2-NW5516	5.5912	1.1308	0.0712

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
281		B2-NW5518_B2-NW5517	B2-NW5518	B2-NW5517	2.0196	0.4821	0.0635
282		B2-NW5519_B2-NW5520	B2-NW5519	B2-NW5520	1.6430	0.4528	0.0576
283		B2-NW5520_B2-NW5517	B2-NW5520	B2-NW5517	2.7577	0.0176	0.0722
284		B2-NW5520_B2-NW5521	B2-NW5520	B2-NW5521	0.0000	0.0000	0.0000
285		B2-NW5521_B2-NW5523	B2-NW5521	B2-NW5523	2.6607	0.0170	0.0835
286		B2-NW5522_B2-NW5521	B2-NW5522	B2-NW5521	1.7388	0.4732	0.0581
287		B2-NW5523_B2-NW5524	B2-NW5523	B2-NW5524	4.0647	0.0259	0.1057
288		B2-NW5524_B2-NW5525	B2-NW5524	B2-NW5525	6.5285	0.0417	0.2195
289		B2-NW5525_B2-NW5526	B2-NW5525	B2-NW5526	64.5321	1.1572	0.3666
290		B2-NW5526_B2-NW5527	B2-NW5526	B2-NW5527	64.6966	2.0478	0.2511
291		B2-NW5527_B2-NW5537	B2-NW5527	B2-NW5537	405.1604	1.8079	0.5916
292		B2-NW5528_B2-NW5525	B2-NW5528	B2-NW5525	61.6650	1.1229	0.3602
293		B2-NW5529_B2-NW5527	B2-NW5529	B2-NW5527	387.9039	1.7383	1.0000
294		B2-NW5530_B2-NW5528	B2-NW5530	B2-NW5528	64.1074	1.1714	0.3659
295		B2-NW5531_B2-NW5529	B2-NW5531	B2-NW5529	413.8013	2.2195	0.6890
296		B2-NW5532_B2-NW5530	B2-NW5532	B2-NW5530	67.4273	1.1997	0.3775
297		B2-NW5533_B2-NW5531	B2-NW5533	B2-NW5531	432.4029	2.0689	0.7848
298		B2-NW5534_B2-NW5535	B2-NW5534	B2-NW5535	0.3561	0.2561	0.0482
299		B2-NW5535_B2-NW5536	B2-NW5535	B2-NW5536	1.3031	0.0083	0.0730
300		B2-NW5536_B2-NW5399	B2-NW5536	B2-NW5399	3.1303	0.5811	0.0872
301		B2-NW5537_B2-NW5399	B2-NW5537	B2-NW5399	391.9873	0.8291	0.5641
302		B2-NW5538_B2-NW5811	B2-NW5538	B2-NW5811	0.8284	0.4329	0.0375
303		B2-NW5539_B2-NW5811	B2-NW5539	B2-NW5811	1.7360	0.1970	0.0658
304		B2-NW5540_B2-NW5541	B2-NW5540	B2-NW5541	3.3594	0.3524	0.1113
305		B2-NW5541_B2-NW5537	B2-NW5541	B2-NW5537	5.2684	0.6209	0.1028
306		B2-NW5550_B2-NW5552	B2-NW5550	B2-NW5552	5.1780	0.0331	0.1243
307		B2-NW5551_B2-NW5553	B2-NW5551	B2-NW5553	58.6917	0.3746	0.3627
308		B2-NW5552_B2-NW5554	B2-NW5552	B2-NW5554	10.3241	0.0659	0.1552
309		B2-NW5553_B2-NW5557	B2-NW5553	B2-NW5557	64.5687	0.4121	0.4157
310		B2-NW5554_B2-NW5555	B2-NW5554	B2-NW5555	14.1661	0.0904	0.1624
311		B2-NW5555_B2-NW5556	B2-NW5555	B2-NW5556	15.1129	0.0965	0.1762
312		B2-NW5556_B2-NW5557	B2-NW5556	B2-NW5557	16.4359	0.1049	0.3055
313		B2-NW5557_B2-NW7355	B2-NW5557	B2-NW7355	81.2553	0.5186	0.4430
314		B2-NW5558_B2-NW7355	B2-NW5558	B2-NW7355	12.8481	0.0820	0.3038
315		B2-NW5559_B2-NW5558	B2-NW5559	B2-NW5558	10.7448	0.7683	0.1447
316		B2-NW5560_B2-NW5559	B2-NW5560	B2-NW5559	3.9461	0.0250	0.1136
317		B2-NW5561_B2-NW5562	B2-NW5561	B2-NW5562	99.3161	1.6938	0.4006
318		B2-NW5562_B2-NW5563	B2-NW5562	B2-NW5563	99.3375	1.2361	0.4126
319		B2-NW5563_B2-NW5850	B2-NW5563	B2-NW5850	100.6679	1.0296	0.4460
320		B2-NW5564_B2-NW5565	B2-NW5564	B2-NW5565	1.9439	0.0214	0.0631
321		B2-NW5565_B2-NW5566	B2-NW5565	B2-NW5566	2.8171	0.0319	0.0940
322		B2-NW5566_B2-NW5567	B2-NW5566	B2-NW5567	3.7834	0.3107	0.0873
323		B2-NW5567_B2-NW5568	B2-NW5567	B2-NW5568	4.2286	0.0270	0.1050
324		B2-NW5568_B2-NW5569	B2-NW5568	B2-NW5569	5.5165	0.5155	0.1204
325		B2-NW5569_B2-NW5570	B2-NW5569	B2-NW5570	8.2915	0.0529	0.1351
326		B2-NW5570_B2-NW5574	B2-NW5570	B2-NW5574	10.4646	0.7455	0.1451
327		B2-NW5571_B2-NW5569	B2-NW5571	B2-NW5569	1.5306	0.0097	0.0904
328		B2-NW5572_B2-NW5570	B2-NW5572	B2-NW5570	1.3058	0.4274	0.0513
329		B2-NW5573_B2-NW5575	B2-NW5573	B2-NW5575	11.8331	0.7227	0.1613
330		B2-NW5574_B2-NW5573	B2-NW5574	B2-NW5573	11.0284	0.0704	0.1481
331		B2-NW5575_B2-NW5576	B2-NW5575	B2-NW5576	16.2181	0.7716	0.1687
332		B2-NW5576_B2-NW5579	B2-NW5576	B2-NW5579	16.4811	0.1052	0.1938
333		B2-NW5577_B2-NW5575	B2-NW5577	B2-NW5575	3.5619	0.0227	0.1261
334		B2-NW5578_B2-NW5577	B2-NW5578	B2-NW5577	1.9406	0.0123	0.0751
335		B2-NW5579_B2-NW5676	B2-NW5579	B2-NW5676	24.3658	0.1555	0.2197
336		B2-NW5580_B2-NW5579	B2-NW5580	B2-NW5579	6.7938	0.5288	0.1359

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
337		B2-NW5581_B2-NW5580	B2-NW5581	B2-NW5580	4.2558	0.0272	0.1075
338		B2-NW5582_B2-NW5581	B2-NW5582	B2-NW5581	2.5632	0.0164	0.0859
339		B2-NW5583_B2-NW5582	B2-NW5583	B2-NW5582	0.8164	0.0052	0.0586
340		B2-NW5662_B2-NW5663	B2-NW5662	B2-NW5663	1.8726	0.0117	0.1374
341		B2-NW5663_B2-NW5665	B2-NW5663	B2-NW5665	29.0009	0.1851	0.2340
342		B2-NW5664_B2-NW5665	B2-NW5664	B2-NW5665	1.8350	0.5350	0.0553
343		B2-NW5665_B2-NW5667	B2-NW5665	B2-NW5667	31.4793	0.7197	0.2548
344		B2-NW5666_B2-NW5667	B2-NW5666	B2-NW5667	1.8809	0.5415	0.0558
345		B2-NW5667_B2-NW5670	B2-NW5667	B2-NW5670	33.9695	1.0418	0.2614
346		B2-NW5668_B2-NW5669	B2-NW5668	B2-NW5669	1.4429	0.0090	0.0507
347		B2-NW5669_B2-NW5670	B2-NW5669	B2-NW5670	2.5939	0.5879	0.0982
348		B2-NW5670_B2-NW5673	B2-NW5670	B2-NW5673	36.8172	0.8634	0.2343
349		B2-NW5671_B2-NW5672	B2-NW5671	B2-NW5672	1.5139	0.0094	0.0502
350		B2-NW5672_B2-NW5673	B2-NW5672	B2-NW5673	2.5096	0.6661	0.0720
351		B2-NW5673_B2-NW5675	B2-NW5673	B2-NW5675	39.6607	1.3817	0.2388
352		B2-NW5674_B2-NW5675	B2-NW5674	B2-NW5675	11.1896	0.0714	0.2420
353		B2-NW5675_B2-NW5310	B2-NW5675	B2-NW5310	51.3828	1.1011	0.3384
354		B2-NW5676_B2-NW5663	B2-NW5676	B2-NW5663	26.4140	1.0031	0.2247
355		B2-NW5722_B2-NW5723	B2-NW5722	B2-NW5723	17.0081	0.9893	0.1662
356		B2-NW5723_B2-NW5724	B2-NW5723	B2-NW5724	21.8535	0.1395	0.1766
357		B2-NW5724_B2-NW5734	B2-NW5724	B2-NW5734	23.2118	0.1482	0.2101
358		B2-NW5725_B2-NW5726	B2-NW5725	B2-NW5726	0.6903	0.0043	0.0463
359		B2-NW5726_B2-NW5727	B2-NW5726	B2-NW5727	1.9402	0.0124	0.0643
360		B2-NW5727_B2-NW5728	B2-NW5727	B2-NW5728	3.4217	0.6624	0.0733
361		B2-NW5728_B2-NW5742	B2-NW5728	B2-NW5742	14.3220	0.0914	0.1858
362		B2-NW5729_B2-NW5728	B2-NW5729	B2-NW5728	10.0092	0.0639	0.1537
363		B2-NW5730_B2-NW5729	B2-NW5730	B2-NW5729	9.4698	0.0603	0.1109
364		B2-NW5731_B2-NW5730	B2-NW5731	B2-NW5730	8.9719	0.8063	0.1237
365		B2-NW5732_B2-NW5733	B2-NW5732	B2-NW5733	0.8810	0.0055	0.0551
366		B2-NW5733_B2-NW5734	B2-NW5733	B2-NW5734	2.8995	0.5556	0.0783
367		B2-NW5734_B2-NW5735	B2-NW5734	B2-NW5735	27.8567	0.9881	0.2357
368		B2-NW5735_B2-NW5737	B2-NW5735	B2-NW5737	30.0777	0.1920	0.2726
369		B2-NW5736_B2-NW5735	B2-NW5736	B2-NW5735	1.1994	0.0074	0.1432
370		B2-NW5737_B2-NW5738	B2-NW5737	B2-NW5738	30.7816	0.8049	0.2929
371		B2-NW5738_B2-NW5758	B2-NW5738	B2-NW5758	32.1097	0.8515	0.2565
372		B2-NW5739_B2-NW5740	B2-NW5739	B2-NW5740	1.1611	0.0073	0.0665
373		B2-NW5740_B2-NW5741	B2-NW5740	B2-NW5741	3.3661	0.0215	0.0938
374		B2-NW5741_B2-NW5742	B2-NW5741	B2-NW5742	6.0208	0.6927	0.1044
375		B2-NW5742_B2-NW5791	B2-NW5742	B2-NW5791	21.2343	0.1355	0.2171
376		B2-NW5745_B2-NW5746	B2-NW5745	B2-NW5746	0.0000	0.0000	0.0000
377		B2-NW5746_B2-NW5747	B2-NW5746	B2-NW5747	0.0000	0.0000	0.0365
378		B2-NW5747_B2-NW5748	B2-NW5747	B2-NW5748	2.5241	0.0160	0.1040
379		B2-NW5748_B2-NW5749	B2-NW5748	B2-NW5749	9.4607	0.0604	0.1556
380		B2-NW5749_B2-NW5750	B2-NW5749	B2-NW5750	17.2323	0.1100	0.1857
381		B2-NW5750_B2-NW5751	B2-NW5750	B2-NW5751	22.5840	0.1441	0.2281
382		B2-NW5751_B2-NW5752	B2-NW5751	B2-NW5752	25.0139	0.7687	0.2610
383		B2-NW5752_B2-NW5753	B2-NW5752	B2-NW5753	26.2558	1.0539	0.2161
384		B2-NW5753_B2-NW5838	B2-NW5753	B2-NW5838	26.4722	0.2390	0.2026
385		B2-NW5754_B2-NW5755	B2-NW5754	B2-NW5755	1.2785	0.0080	0.0631
386		B2-NW5755_B2-NW9078	B2-NW5755	B2-NW9078	2.8461	0.0182	0.0743
387		B2-NW5756_B2-NW5757	B2-NW5756	B2-NW5757	4.1581	0.5994	0.0994
388		B2-NW5757_B2-NW5766	B2-NW5757	B2-NW5766	40.1807	1.1225	0.2794
389		B2-NW5758_B2-NW5757	B2-NW5758	B2-NW5757	35.2279	0.2249	0.2732
390		B2-NW5759_B2-NW5758	B2-NW5759	B2-NW5758	1.7797	0.3972	0.0869
391		B2-NW5760_B2-NW5761	B2-NW5760	B2-NW5761	0.9243	0.0058	0.0530
392		B2-NW5761_B2-NW5763	B2-NW5761	B2-NW5763	3.2591	0.0208	0.0879

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
393		B2-NW5762_B2-NW5761	B2-NW5762	B2-NW5761	1.7575	0.0110	0.0606
394		B2-NW5763_B2-NW5764	B2-NW5763	B2-NW5764	4.6845	0.0299	0.1128
395		B2-NW5764_B2-NW5765	B2-NW5764	B2-NW5765	6.0892	0.0389	0.2173
396		B2-NW5765_B2-NW5767	B2-NW5765	B2-NW5767	49.0878	0.3133	0.3218
397		B2-NW5766_B2-NW5765	B2-NW5766	B2-NW5765	41.6010	1.3014	0.2577
398		B2-NW5767_B2-NW5770	B2-NW5767	B2-NW5770	54.3892	0.3472	0.3394
399		B2-NW5768_B2-NW5767	B2-NW5768	B2-NW5767	3.4113	0.6360	0.0752
400		B2-NW5769_B2-NW5768	B2-NW5769	B2-NW5768	1.3205	0.0082	0.0606
401		B2-NW5770_B2-NW5773	B2-NW5770	B2-NW5773	59.1897	0.3778	0.3585
402		B2-NW5771_B2-NW5770	B2-NW5771	B2-NW5770	3.0313	0.6233	0.0704
403		B2-NW5772_B2-NW5771	B2-NW5772	B2-NW5771	1.1864	0.0074	0.0572
404		B2-NW5773_B2-NW5776	B2-NW5773	B2-NW5776	64.5223	1.2267	0.3695
405		B2-NW5774_B2-NW5773	B2-NW5774	B2-NW5773	3.1668	0.6236	0.0725
406		B2-NW5775_B2-NW5774	B2-NW5775	B2-NW5774	1.4178	0.0088	0.0587
407		B2-NW5776_B2-NW5777	B2-NW5776	B2-NW5777	65.4082	1.2735	0.3614
408		B2-NW5777_B2-NW5488	B2-NW5777	B2-NW5488	66.4796	1.2927	0.3634
409		B2-NW5778_B2-NW5488	B2-NW5778	B2-NW5488	46.9740	0.1919	0.3089
410		B2-NW5779_B2-NW5778	B2-NW5779	B2-NW5778	3.1233	0.4229	0.1607
411		B2-NW5780_B2-NW5779	B2-NW5780	B2-NW5779	1.1150	0.0070	0.0656
412		B2-NW5781_B2-NW5778	B2-NW5781	B2-NW5778	42.8724	1.3372	0.2582
413		B2-NW5782_B2-NW5781	B2-NW5782	B2-NW5781	3.0354	0.5821	0.0738
414		B2-NW5783_B2-NW5782	B2-NW5783	B2-NW5782	1.1304	0.0070	0.0580
415		B2-NW5784_B2-NW5781	B2-NW5784	B2-NW5781	38.9110	1.2932	0.2469
416		B2-NW5785_B2-NW5784	B2-NW5785	B2-NW5784	4.1546	0.6303	0.0917
417		B2-NW5786_B2-NW5785	B2-NW5786	B2-NW5785	1.9751	0.0126	0.0739
418		B2-NW5787_B2-NW5784	B2-NW5787	B2-NW5784	33.8820	0.2163	0.2452
419		B2-NW5789_B2-NW9076	B2-NW5789	B2-NW9076	31.4729	0.6487	0.2584
420		B2-NW5790_B2-NW5789	B2-NW5790	B2-NW5789	28.9082	0.7457	0.2361
421		B2-NW5791_B2-NW5806	B2-NW5791	B2-NW5806	27.0152	0.1724	0.2332
422		B2-NW5792_B2-NW5791	B2-NW5792	B2-NW5791	4.6204	0.5535	0.1016
423		B2-NW5793_B2-NW5792	B2-NW5793	B2-NW5792	1.3832	0.0087	0.0771
424		B2-NW5794_B2-NW5795	B2-NW5794	B2-NW5795	0.9740	0.0061	0.0517
425		B2-NW5795_B2-NW5796	B2-NW5795	B2-NW5796	1.7301	0.0110	0.0792
426		B2-NW5796_B2-NW5797	B2-NW5796	B2-NW5797	4.5036	0.0287	0.1145
427		B2-NW5797_B2-NW5798	B2-NW5797	B2-NW5798	7.8638	0.0502	0.1456
428		B2-NW5798_B2-NW5799	B2-NW5798	B2-NW5799	11.7863	0.0752	0.1823
429		B2-NW5799_B2-NW5800	B2-NW5799	B2-NW5800	21.0036	0.9054	0.2056
430		B2-NW5800_B2-NW5801	B2-NW5800	B2-NW5801	25.5880	1.1254	0.2027
431		B2-NW5801_B2-NW5804	B2-NW5801	B2-NW5804	26.6152	0.2977	0.1992
432		B2-NW5802_B2-NW5801	B2-NW5802	B2-NW5801	0.5262	0.3306	0.0385
433		B2-NW5803_B2-NW5804	B2-NW5803	B2-NW5804	0.9336	0.0059	0.1004
434		B2-NW5804_B2-NW5876	B2-NW5804	B2-NW5876	28.7549	1.2623	0.2030
435		B2-NW5805_B2-NW5551	B2-NW5805	B2-NW5551	40.2410	0.2568	0.2946
436		B2-NW5806_B2-NW5790	B2-NW5806	B2-NW5790	28.1776	0.9799	0.2391
437		B2-NW5807_B2-NW5786	B2-NW5807	B2-NW5786	0.2116	0.0013	0.0403
438		B2-NW5809_B2-NW5539	B2-NW5809	B2-NW5539	1.4485	0.0091	0.0569
439		B2-NW5811_B2-NW5540	B2-NW5811	B2-NW5540	2.6370	0.0168	0.0897
440		B2-NW5838_B2-NW5839	B2-NW5838	B2-NW5839	27.6836	0.1767	0.2659
441		B2-NW5839_B2-NW5840	B2-NW5839	B2-NW5840	28.1282	0.6630	0.3157
442		B2-NW5840_B2-NW5841	B2-NW5840	B2-NW5841	28.7800	0.1837	0.4243
443		B2-NW5841_B2-NW7350	B2-NW5841	B2-NW5851	144.5335	1.5755	0.5674
444		B2-NW5842_B2-NW5841	B2-NW5842	B2-NW5841	115.3258	1.4812	0.4976
445		B2-NW5843_B2-NW5842	B2-NW5843	B2-NW5842	1.9976	0.6000	0.1970
446		B2-NW5844_B2-NW5843	B2-NW5844	B2-NW5843	0.6661	0.0041	0.0362
447		B2-NW5845_B2-NW5847	B2-NW5845	B2-NW5847	0.6402	0.0040	0.0344
448		B2-NW5846_B2-NW5848	B2-NW5846	B2-NW5848	0.6028	0.0037	0.0372

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
449		B2-NW5847_B2-NW5849	B2-NW5847	B2-NW5849	1.8243	0.6078	0.1933
450		B2-NW5848_B2-NW5850	B2-NW5848	B2-NW5850	2.2162	0.0141	0.2558
451		B2-NW5849_B2-NW5842	B2-NW5849	B2-NW5842	110.9128	1.1438	0.4953
452		B2-NW5850_B2-NW5849	B2-NW5850	B2-NW5849	106.2395	0.9129	0.4770
453		B2-NW5851_B2-NW5852	B2-NW5851	B2-NW5852	145.0290	0.7871	0.3211
454		B2-NW5852_B2-NW5853	B2-NW5852	B2-NW5853	145.0424	1.3418	0.3456
455		B2-NW5853_B2-NW5854	B2-NW5853	B2-NW5854	145.0708	0.9264	0.3516
456		B2-NW5854_B2-NW7340	B2-NW5854	B2-NW7340	145.1785	1.2791	0.3582
457		B2-NW5855_B2-NW5861	B2-NW5855	B2-NW5861	0.9013	0.0055	0.0493
458		B2-NW5856_B2-NW5862	B2-NW5856	B2-NW5862	1.7936	0.0114	0.0705
459		B2-NW5857_B2-NW5856	B2-NW5857	B2-NW5856	0.9190	0.0059	0.0533
460		B2-NW5858_B2-NW5857	B2-NW5858	B2-NW5857	0.3696	0.0024	0.0379
461		B2-NW5859_B2-NW5858	B2-NW5859	B2-NW5858	0.2360	0.0015	0.0262
462		B2-NW5860_B2-NW5859	B2-NW5860	B2-NW5859	0.2042	0.2053	0.0219
463		B2-NW5861_B2-NW5863	B2-NW5861	B2-NW5863	2.4524	0.0156	0.0770
464		B2-NW5862_B2-NW5864	B2-NW5862	B2-NW5864	3.3796	0.0216	0.0909
465		B2-NW5863_B2-NW5865	B2-NW5863	B2-NW5865	4.1375	0.0264	0.0929
466		B2-NW5864_B2-NW5866	B2-NW5864	B2-NW5866	4.9945	0.0319	0.1057
467		B2-NW5865_B2-NW5867	B2-NW5865	B2-NW5867	5.6223	0.0359	0.1123
468		B2-NW5866_B2-NW5868	B2-NW5866	B2-NW5868	6.6527	0.0425	0.1226
469		B2-NW5867_B2-NW5411	B2-NW5867	B2-NW5411	7.2785	0.0465	0.1302
470		B2-NW5868_B2-NW5869	B2-NW5868	B2-NW5869	8.4890	0.6762	0.1343
471		B2-NW5869_B2-NW5674	B2-NW5869	B2-NW5674	9.7628	0.0623	0.1399
472		B2-NW5870_B2-NW5409	B2-NW5870	B2-NW5409	0.0037	0.0000	0.0164
473		B2-NW5871_B2-NW5872	B2-NW5871	B2-NW5872	1.6558	0.0103	0.0626
474		B2-NW5872_B2-NW7356	B2-NW5872	B2-NW7356	2.9192	0.0186	0.2755
475		B2-NW5873_B2-NW5850	B2-NW5873	B2-NW5850	1.9250	0.0123	0.2623
476		B2-NW5876_B2-NW5805	B2-NW5876	B2-NW5805	31.3198	0.7177	0.2176
477		B2-NW7337_B2-NW7338	B2-NW7337	B2-NW7338	148.0661	1.2914	0.3609
478		B2-NW7338_B2-NW7339	B2-NW7338	B2-NW7339	148.1427	1.3194	0.3554
479		B2-NW7339_B2-NW5317	B2-NW7339	B2-NW5317	148.2528	1.3222	0.3550
480		B2-NW7340_B2-NW7341	B2-NW7340	B2-NW7341	145.9322	0.8710	0.3473
481		B2-NW7341_B2-NW7342	B2-NW7341	B2-NW7342	146.6327	1.3121	0.3531
482		B2-NW7342_B2-NW7343	B2-NW7342	B2-NW7343	146.8188	1.3162	0.3537
483		B2-NW7343_B2-NW7344	B2-NW7343	B2-NW7344	146.9519	1.3026	0.3541
484		B2-NW7344_B2-NW7345	B2-NW7344	B2-NW7345	147.2800	1.2944	0.3553
485		B2-NW7345_B2-NW7346	B2-NW7345	B2-NW7346	147.6154	1.3128	0.3558
486		B2-NW7346_B2-NW7337	B2-NW7346	B2-NW7337	147.8887	0.4195	0.3575
487		B2-NW7347_B2-NW5428	B2-NW7347	B2-NW5428	0.0000	0.0000	0.0000
488		B2-NW7355_B2-NW7356	B2-NW7355	B2-NW7356	94.4417	1.0066	0.4702
489		B2-NW7356_B2-NW5561	B2-NW7356	B2-NW5561	97.7601	1.3304	0.4756
490		B2-NW7357_B2-NW5722	B2-NW7357	B2-NW5722	10.6849	0.7208	0.1464
491		B2-NW9076_B2-NW5787	B2-NW9076	B2-NW5787	33.4958	0.9722	0.2718
492		B2-NW9077_B2-NW5783	B2-NW9077	B2-NW5783	0.0297	0.0000	0.0211
493		B2-NW9078_B2-NW5756	B2-NW9078	B2-NW5756	3.4837	0.3081	0.0799
494		B2-NW9079_B2-NW5849	B2-NW9079	B2-NW5849	1.6749	0.3445	0.2017
495		B2-NW9080_B2-NW5842	B2-NW9080	B2-NW5842	1.3863	0.4015	0.1978
496		B2-NW9081_B2-NW5511	B2-NW9081	B2-NW5511	1.6182	0.0103	0.0829
497		B2-NW9082_B2-NW9083	B2-NW9082	B2-NW9083	1.0595	1.1343	0.0232
498		B2-NW9083_B2-NW9084	B2-NW9083	B2-NW9084	7.7616	0.9643	0.0991
499		B2-NW9084_B2-NW9204	B2-NW9084	B2-NW5497	8.1065	0.0517	0.2708
500		B2-NW9206_B2-NW5515	B2-NW9206	B2-NW5515	5.9665	0.0381	0.2270
501		B3-NW5941_B3-NW5949	B3-NW5941	B3-NW5949	10.7149	0.0684	0.1905
502		B3-NW5942_B3-NW5941	B3-NW5942	B3-NW5941	9.7615	0.6599	0.1504
503		B3-NW5943_B3-NW5942	B3-NW5943	B3-NW5942	7.9888	0.0510	0.1377
504		B3-NW5944_B3-NW5943	B3-NW5944	B3-NW5943	6.4781	0.0413	0.1206

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
505		B3-NW5945_B3-NW5944	B3-NW5945	B3-NW5944	5.1112	0.0326	0.1060
506		B3-NW5946_B3-NW5945	B3-NW5946	B3-NW5945	4.0102	0.0256	0.0935
507		B3-NW5947_B3-NW5946	B3-NW5947	B3-NW5946	2.4455	0.0156	0.0823
508		B3-NW5948_B3-NW5947	B3-NW5948	B3-NW5947	1.0586	0.0066	0.0600
509		B3-NW5949_B3-NW5950	B3-NW5949	B3-NW5950	28.2212	0.1801	0.2612
510		B3-NW5950_B3-NW5951	B3-NW5950	B3-NW5951	41.4316	0.2644	0.3168
511		B3-NW5951_B3-NW5952	B3-NW5951	B3-NW5952	58.1742	0.3713	0.3666
512		B3-NW5952_B3-NW6153	B3-NW5952	B3-NW6153	100.7971	0.2859	0.2826
513		B3-NW5953_B3-NW5949	B3-NW5953	B3-NW5949	16.0916	0.8069	0.1850
514		B3-NW5954_B3-NW5953	B3-NW5954	B3-NW5953	13.7551	0.5571	0.1769
515		B3-NW5955_B3-NW5954	B3-NW5955	B3-NW5954	11.8276	0.0755	0.1576
516		B3-NW5956_B3-NW5955	B3-NW5956	B3-NW5955	10.3939	0.6589	0.1572
517		B3-NW5957_B3-NW5956	B3-NW5957	B3-NW5956	9.5163	0.0607	0.1485
518		B3-NW5958_B3-NW5957	B3-NW5958	B3-NW5957	7.8214	0.0499	0.1335
519		B3-NW5959_B3-NW5960	B3-NW5959	B3-NW5960	4.7240	0.0302	0.1007
520		B3-NW5960_B3-NW5958	B3-NW5960	B3-NW5958	5.9573	0.0380	0.1169
521		B3-NW5961_B3-NW5959	B3-NW5961	B3-NW5959	4.3286	0.0276	0.0931
522		B3-NW5962_B3-NW5961	B3-NW5962	B3-NW5961	1.2443	0.0078	0.0723
523		B3-NW5963_B3-NW5961	B3-NW5963	B3-NW5961	1.5087	0.0096	0.0721
524		B3-NW5964_B3-NW5963	B3-NW5964	B3-NW5963	0.7253	0.3775	0.0424
525		B3-NW5965_B3-NW5966	B3-NW5965	B3-NW5966	3.0104	0.0192	0.0817
526		B3-NW5966_B3-NW5967	B3-NW5966	B3-NW5967	4.0172	0.0256	0.0906
527		B3-NW5967_B3-NW5968	B3-NW5967	B3-NW5968	4.3091	0.1952	0.1002
528		B3-NW5968_B3-NW5976	B3-NW5968	B3-NW5976	4.9877	0.0318	0.1139
529		B3-NW5969_B3-NW5950	B3-NW5969	B3-NW5950	11.6312	0.7660	0.1531
530		B3-NW5970_B3-NW5969	B3-NW5970	B3-NW5969	9.6223	0.0614	0.1416
531		B3-NW5971_B3-NW5970	B3-NW5971	B3-NW5970	7.9856	0.0510	0.1244
532		B3-NW5972_B3-NW5971	B3-NW5972	B3-NW5971	6.2237	0.0397	0.1144
533		B3-NW5973_B3-NW5972	B3-NW5973	B3-NW5972	4.8189	0.0308	0.1007
534		B3-NW5974_B3-NW5973	B3-NW5974	B3-NW5973	3.0226	0.0193	0.0852
535		B3-NW5975_B3-NW5974	B3-NW5975	B3-NW5974	1.2758	0.0080	0.0654
536		B3-NW5976_B3-NW5977	B3-NW5976	B3-NW5977	7.1163	0.4875	0.1253
537		B3-NW5977_B3-NW5978	B3-NW5977	B3-NW5978	8.9182	0.0569	0.1354
538		B3-NW5978_B3-NW5979	B3-NW5978	B3-NW5979	10.3322	0.0659	0.1475
539		B3-NW5979_B3-NW5980	B3-NW5979	B3-NW5980	12.1072	0.0773	0.1543
540		B3-NW5980_B3-NW5981	B3-NW5980	B3-NW5981	13.6599	0.0872	0.1732
541		B3-NW5981_B3-NW5951	B3-NW5981	B3-NW5951	15.6670	0.7012	0.2006
542		B3-NW5982_B3-NW5952	B3-NW5982	B3-NW5952	41.5183	1.0315	0.3039
543		B3-NW5983_B3-NW5982	B3-NW5983	B3-NW5982	39.1369	0.9193	0.2768
544		B3-NW5984_B3-NW5983	B3-NW5984	B3-NW5983	8.2130	0.0524	0.1839
545		B3-NW5985_B3-NW5984	B3-NW5985	B3-NW5984	6.4305	0.0410	0.1147
546		B3-NW5986_B3-NW5985	B3-NW5986	B3-NW5985	5.0172	0.0320	0.1012
547		B3-NW5987_B3-NW5986	B3-NW5987	B3-NW5986	3.2244	0.0206	0.0845
548		B3-NW5988_B3-NW5987	B3-NW5988	B3-NW5987	1.2018	0.0075	0.0638
549		B3-NW5990_B3-NW5983	B3-NW5990	B3-NW5983	29.3974	0.7342	0.2468
550		B3-NW5991_B3-NW5990	B3-NW5991	B3-NW5990	8.4367	0.7998	0.1192
551		B3-NW5992_B3-NW5991	B3-NW5992	B3-NW5991	6.6617	0.0425	0.1164
552		B3-NW5993_B3-NW5992	B3-NW5993	B3-NW5992	5.2376	0.0334	0.1034
553		B3-NW5994_B3-NW5993	B3-NW5994	B3-NW5993	3.4258	0.0219	0.0872
554		B3-NW5995_B3-NW5994	B3-NW5995	B3-NW5994	1.4488	0.0091	0.0675
555		B3-NW5996_B3-NW5997	B3-NW5996	B3-NW5997	1.4099	0.0089	0.0688
556		B3-NW5997_B3-NW5998	B3-NW5997	B3-NW5998	3.3718	0.0215	0.0893
557		B3-NW5998_B3-NW5999	B3-NW5998	B3-NW5999	5.1697	0.0330	0.1062
558		B3-NW5999_B3-NW6000	B3-NW5999	B3-NW6000	6.5939	0.0421	0.1198
559		B3-NW6000_B3-NW6001	B3-NW6000	B3-NW6001	8.3721	0.7598	0.1228
560		B3-NW6001_B3-NW5990	B3-NW6001	B3-NW5990	19.5790	0.1250	0.2204

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
561		B3-NW6002_B3-NW6001	B3-NW6002	B3-NW6001	9.7380	0.0622	0.1576
562		B3-NW6003_B3-NW6002	B3-NW6003	B3-NW6002	8.9805	0.3864	0.2058
563		B3-NW6004_B3-NW6003	B3-NW6004	B3-NW6003	6.9768	0.0445	0.1643
564		B3-NW6005_B3-NW6004	B3-NW6005	B3-NW6004	5.8061	0.0371	0.1142
565		B3-NW6006_B3-NW6005	B3-NW6006	B3-NW6005	3.7365	0.0238	0.0984
566		B3-NW6007_B3-NW6006	B3-NW6007	B3-NW6006	1.5096	0.0096	0.0746
567		B3-NW6008_B3-NW6009	B3-NW6008	B3-NW6009	1.4071	0.0087	0.0620
568		B3-NW6009_B3-NW6010	B3-NW6009	B3-NW6010	3.4695	0.0221	0.0809
569		B3-NW6010_B3-NW6011	B3-NW6010	B3-NW6011	5.3854	0.0344	0.1137
570		B3-NW6011_B3-NW6024	B3-NW6011	B3-NW6024	16.7712	0.7337	0.1724
571		B3-NW6012_B3-NW6011	B3-NW6012	B3-NW6011	0.6986	0.0044	0.0651
572		B3-NW6013_B3-NW6011	B3-NW6013	B3-NW6011	9.6581	0.0616	0.1645
573		B3-NW6014_B3-NW6013	B3-NW6014	B3-NW6013	0.3791	0.2538	0.0318
574		B3-NW6015_B3-NW6013	B3-NW6015	B3-NW6013	8.1197	0.0518	0.1348
575		B3-NW6016_B3-NW6015	B3-NW6016	B3-NW6015	6.4875	0.5468	0.1112
576		B3-NW6017_B3-NW6016	B3-NW6017	B3-NW6016	4.6143	0.0295	0.1061
577		B3-NW6018_B3-NW6017	B3-NW6018	B3-NW6017	2.9842	0.0190	0.0860
578		B3-NW6019_B3-NW6018	B3-NW6019	B3-NW6018	0.5029	0.4470	0.0466
579		B3-NW6020_B3-NW6018	B3-NW6020	B3-NW6018	1.9050	0.0122	0.0658
580		B3-NW6021_B3-NW6020	B3-NW6021	B3-NW6020	0.7575	0.0048	0.0524
581		B3-NW6022_B3-NW6023	B3-NW6022	B3-NW6023	0.8271	0.0052	0.0558
582		B3-NW6023_B3-NW5965	B3-NW6023	B3-NW5965	2.1736	0.0139	0.0745
583		B3-NW6024_B3-NW6025	B3-NW6024	B3-NW6025	18.4126	0.1175	0.1842
584		B3-NW6025_B3-NW6026	B3-NW6025	B3-NW6026	19.6680	0.9174	0.1945
585		B3-NW6026_B3-NW6032	B3-NW6026	B3-NW6032	20.3513	0.7419	0.1907
586		B3-NW6027_B3-NW6028	B3-NW6027	B3-NW6028	0.8082	0.0050	0.0478
587		B3-NW6028_B3-NW6029	B3-NW6028	B3-NW6029	2.4703	0.0158	0.0663
588		B3-NW6029_B3-NW6030	B3-NW6029	B3-NW6030	3.6652	0.0234	0.1441
589		B3-NW6030_B3-NW6039	B3-NW6030	B3-NW6039	27.4694	0.1753	0.2287
590		B3-NW6031_B3-NW6030	B3-NW6031	B3-NW6030	0.6076	0.6457	0.1249
591		B3-NW6032_B3-NW6030	B3-NW6032	B3-NW6030	22.0222	1.0182	0.1957
592		B3-NW6033_B3-NW6034	B3-NW6033	B3-NW6034	1.1233	0.0070	0.1169
593		B3-NW6034_B3-NW6035	B3-NW6034	B3-NW6035	7.7868	0.3486	0.2002
594		B3-NW6035_B3-NW6036	B3-NW6035	B3-NW6036	9.1490	0.6350	0.1477
595		B3-NW6036_B3-NW6037	B3-NW6036	B3-NW6037	4.7419	0.6413	0.0936
596		B3-NW6036_B3-NW6039	B3-NW6036	B3-NW6039	5.1806	0.7006	0.0936
597		B3-NW6037_B3-NW6038	B3-NW6037	B3-NW6038	7.2773	0.5768	0.1826
598		B3-NW6038_B3-NW6273	B3-NW6038	B3-NW6273	41.8082	1.2110	0.2722
599		B3-NW6039_B3-NW6038	B3-NW6039	B3-NW6038	33.5115	1.1438	0.2422
600		B3-NW6078_B3-NW6079	B3-NW6078	B3-NW6079	2.1775	0.0138	0.1030
601		B3-NW6079_B3-NW6082	B3-NW6079	B3-NW6082	8.8649	0.6641	0.1355
602		B3-NW6080_B3-NW6079	B3-NW6080	B3-NW6079	5.6785	0.7130	0.0984
603		B3-NW6081_B3-NW6080	B3-NW6081	B3-NW6080	3.4501	0.0220	0.0938
604		B3-NW6082_B3-NW6083	B3-NW6082	B3-NW6083	9.5145	0.0607	0.1427
605		B3-NW6083_B3-NW6084	B3-NW6083	B3-NW6084	11.3319	0.3548	0.1540
606		B3-NW6084_B3-NW6085	B3-NW6084	B3-NW6085	12.5645	0.0802	0.1644
607		B3-NW6085_B3-NW6086	B3-NW6085	B3-NW6086	13.5659	0.7647	0.1705
608		B3-NW6086_B3-NW6313	B3-NW6086	B3-NW6313	13.8874	0.0886	0.1819
609		B3-NW6147_B3-NW6148	B3-NW6147	B3-NW6148	0.4373	0.0028	0.0475
610		B3-NW6148_B3-NW6149	B3-NW6148	B3-NW6149	2.9878	0.0191	0.0788
611		B3-NW6149_B3-NW6150	B3-NW6149	B3-NW6150	5.2633	0.0336	0.2799
612		B3-NW6150_B3-NW6272	B3-NW6150	B3-NW6272	108.6220	1.1602	0.3113
613		B3-NW6151_B3-NW6150	B3-NW6151	B3-NW6150	102.9612	1.0596	0.3198
614		B3-NW6152_B3-NW6151	B3-NW6152	B3-NW6151	102.4318	0.5886	0.3075
615		B3-NW6153_B3-NW6152	B3-NW6153	B3-NW6152	101.5222	1.0997	0.3082
616		B3-NW6159_B3-NW9164	B3-NW6159	B3-NW9164	3.7440	0.0238	0.1179

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
617		B3-NW6264_B3-NW6310	B3-NW6264	B3-NW6310	29.6410	0.1892	0.3670
618		B3-NW6265_B3-NW6264	B3-NW6265	B3-NW6264	4.3233	0.7719	0.0775
619		B3-NW6266_B3-NW6265	B3-NW6266	B3-NW6265	1.9657	0.0122	0.0654
620		B3-NW6267_B3-NW6264	B3-NW6267	B3-NW6264	23.7347	0.1515	0.2236
621		B3-NW6268_B3-NW6267	B3-NW6268	B3-NW6267	22.8270	0.7548	0.2477
622		B3-NW6269_B3-NW6268	B3-NW6269	B3-NW6268	18.0622	0.3955	0.3331
623		B3-NW6270_B3-NW6269	B3-NW6270	B3-NW6269	3.6851	0.0235	0.2111
624		B3-NW6271_B3-NW6270	B3-NW6271	B3-NW6270	2.4276	0.0153	0.0774
625		B3-NW6272_B3-NW6273	B3-NW6272	B3-NW6273	109.0396	1.2300	0.2993
626		B3-NW6273_B3-NW6275	B3-NW6273	B3-NW6275	151.0290	0.4284	0.3376
627		B3-NW6275_B3-NW6278	B3-NW6275	B3-NW6278	159.9036	1.0820	0.4364
628		B3-NW6276_B3-NW6275	B3-NW6276	B3-NW6275	8.2098	0.0524	0.3957
629		B3-NW6277_B3-NW6276	B3-NW6277	B3-NW6276	4.1453	0.0260	0.1082
630		B3-NW6278_B3-NW6279	B3-NW6278	B3-NW6279	164.2763	0.4659	0.3922
631		B3-NW6279_B3-NW6285	B3-NW6279	B3-NW6285	168.6976	1.1309	0.4395
632		B3-NW6280_B3-NW6279	B3-NW6280	B3-NW6279	3.5057	0.7407	0.0691
633		B3-NW6281_B3-NW6280	B3-NW6281	B3-NW6280	1.4849	0.0092	0.0587
634		B3-NW6282_B3-NW6283	B3-NW6282	B3-NW6283	1.5200	0.0094	0.0602
635		B3-NW6283_B3-NW6284	B3-NW6283	B3-NW6284	3.5926	0.5910	0.1593
636		B3-NW6284_B3-NW6286	B3-NW6284	B3-NW6286	174.0603	1.0849	0.3519
637		B3-NW6285_B3-NW6284	B3-NW6285	B3-NW6284	169.5347	0.4808	0.3258
638		B3-NW6286_B3-NW6299	B3-NW6286	B3-NW6299	175.6034	1.5470	0.3583
639		B3-NW6287_B3-NW6300	B3-NW6287	B3-NW6300	3.9969	0.6619	0.0815
640		B3-NW6288_B3-NW6301	B3-NW6288	B3-NW6301	3.7948	0.6450	0.0801
641		B3-NW6289_B3-NW6302	B3-NW6289	B3-NW6302	3.7338	0.6489	0.0789
642		B3-NW6290_B3-NW6303	B3-NW6290	B3-NW6303	3.7299	0.6386	0.0797
643		B3-NW6291_B3-NW6287	B3-NW6291	B3-NW6287	2.7401	0.0175	0.0734
644		B3-NW6292_B3-NW6288	B3-NW6292	B3-NW6288	2.5103	0.0160	0.0715
645		B3-NW6293_B3-NW6289	B3-NW6293	B3-NW6289	2.4174	0.0154	0.0707
646		B3-NW6294_B3-NW6290	B3-NW6294	B3-NW6290	2.4162	0.0154	0.0704
647		B3-NW6295_B3-NW6291	B3-NW6295	B3-NW6291	1.1557	0.0072	0.0550
648		B3-NW6296_B3-NW6292	B3-NW6296	B3-NW6292	0.9272	0.0058	0.0519
649		B3-NW6297_B3-NW6293	B3-NW6297	B3-NW6293	0.7829	0.0049	0.0497
650		B3-NW6298_B3-NW6294	B3-NW6298	B3-NW6294	1.0334	0.0064	0.0515
651		B3-NW6299_B3-NW6310	B3-NW6299	B3-NW6310	177.5993	0.5038	0.4147
652		B3-NW6300_B3-NW6309	B3-NW6300	B3-NW6309	5.7126	0.8544	0.1142
653		B3-NW6301_B3-NW6308	B3-NW6301	B3-NW6308	5.4887	1.0638	0.0733
654		B3-NW6302_B3-NW6307	B3-NW6302	B3-NW6307	5.4559	0.9889	0.0767
655		B3-NW6303_B3-NW6306	B3-NW6303	B3-NW6306	5.4620	0.9454	0.0791
656		B3-NW6304_B3-NW6305	B3-NW6304	B3-NW6305	17.9480	0.6585	0.1656
657		B3-NW6305_B3-NW6306	B3-NW6305	B3-NW6306	18.5552	0.1184	0.1843
658		B3-NW6306_B3-NW6307	B3-NW6306	B3-NW6307	24.9197	0.1591	0.2130
659		B3-NW6307_B3-NW6308	B3-NW6307	B3-NW6308	31.2702	0.1996	0.2370
660		B3-NW6308_B3-NW6309	B3-NW6308	B3-NW6309	38.1646	1.2582	0.2483
661		B3-NW6309_B3-NW6355	B3-NW6309	B3-NW6355	44.6388	1.6568	0.2283
662		B3-NW6310_B3-NW6355	B3-NW6310	B3-NW6355	208.2268	0.5906	0.4031
663		B3-NW6311_B3-NW6304	B3-NW6311	B3-NW6304	16.6585	0.7109	0.1608
664		B3-NW6312_B3-NW6311	B3-NW6312	B3-NW6311	15.8144	0.9278	0.1659
665		B3-NW6313_B3-NW6312	B3-NW6313	B3-NW6312	14.6377	0.6681	0.1975
666		B3-NW6314_B3-NW6278	B3-NW6314	B3-NW6278	3.7301	0.7646	0.1115
667		B3-NW6315_B3-NW6314	B3-NW6315	B3-NW6314	2.8822	0.6552	0.0658
668		B3-NW6316_B3-NW6315	B3-NW6316	B3-NW6315	2.0259	0.0129	0.0613
669		B3-NW6317_B3-NW6316	B3-NW6317	B3-NW6316	0.8729	0.0054	0.0483
670		B3-NW6350_B3-NW6349	B3-NW6350	B3-NW6349	2.0911	0.0133	0.3390
671		B3-NW6351_B3-NW6350	B3-NW6351	B3-NW6350	1.0956	0.0069	0.0605
672		B3-NW6352_B3-NW6349	B3-NW6352	B3-NW6349	257.9270	1.3145	0.3859

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
673		B3-NW6353_B3-NW6352	B3-NW6353	B3-NW6352	256.6098	1.2347	0.4028
674		B3-NW6354_B3-NW6353	B3-NW6354	B3-NW6353	255.3758	1.1198	0.4321
675		B3-NW6355_B3-NW6354	B3-NW6355	B3-NW6354	253.7235	0.6724	0.4054
676		B3-NW7291_B3-NW7292	B3-NW7291	B3-NW7292	2.0197	0.0129	0.0762
677		B3-NW7292_B3-NW7296	B3-NW7292	B3-NW7296	4.3464	0.0277	0.0976
678		B3-NW7293_B3-NW7292	B3-NW7293	B3-NW7292	1.0781	0.0068	0.0694
679		B3-NW7294_B3-NW7291	B3-NW7294	B3-NW7291	0.7982	0.0050	0.0526
680		B3-NW7295_B3-NW6034	B3-NW7295	B3-NW6034	6.1483	0.0392	0.1489
681		B3-NW7296_B3-NW7295	B3-NW7296	B3-NW7295	5.8338	0.6673	0.1049
682		B3-NW9038_B3-NW6352	B3-NW9038	B3-NW6352	0.5125	0.4869	0.0251
683		B3-NW9164_B3-NW6269	B3-NW9164	B3-NW6269	13.0271	0.0832	0.2439
684		B4-NW5034_B4-NW5035	B4-NW5034	B4-NW5035	1.9315	0.0123	0.0782
685		B4-NW5035_B4-NW5037	B4-NW5035	B4-NW5037	6.6041	0.0422	0.1044
686		B4-NW5036_B4-NW5035	B4-NW5036	B4-NW5035	0.8972	0.0056	0.0683
687		B4-NW5037_B4-NW5051	B4-NW5037	B4-NW5051	8.4735	0.0541	0.1225
688		B4-NW5040_B4-NW5041	B4-NW5040	B4-NW5041	1.4961	0.0093	0.0581
689		B4-NW5041_B4-NW5042	B4-NW5041	B4-NW5042	2.5500	0.5919	0.0649
690		B4-NW5042_B4-NW5044	B4-NW5042	B4-NW5044	8.1852	0.0522	0.1076
691		B4-NW5043_B4-NW5042	B4-NW5043	B4-NW5042	2.4610	0.0154	0.0843
692		B4-NW5044_B4-NW5045	B4-NW5044	B4-NW5045	10.7836	1.1636	0.1091
693		B4-NW5045_B4-NW9023	B4-NW5045	B4-NW9023	56.9483	0.3635	0.3147
694		B4-NW5046_B4-NW5045	B4-NW5046	B4-NW5045	22.2386	1.1807	0.1778
695		B4-NW5047_B4-NW5046	B4-NW5047	B4-NW5046	19.8667	0.1268	0.1724
696		B4-NW5048_B4-NW5047	B4-NW5048	B4-NW5047	2.3860	0.7669	0.0517
697		B4-NW5049_B4-NW5047	B4-NW5049	B4-NW5047	1.6452	0.5541	0.0503
698		B4-NW5050_B4-NW5047	B4-NW5050	B4-NW5047	14.8311	0.0947	0.1561
699		B4-NW5051_B4-NW5050	B4-NW5051	B4-NW5050	12.6531	0.0808	0.1388
700		B4-NW5052_B4-NW5051	B4-NW5052	B4-NW5051	0.7910	0.5864	0.0295
701		B4-NW5053_B4-NW5051	B4-NW5053	B4-NW5051	2.1930	0.5865	0.0586
702		B4-NW5054_B4-NW5055	B4-NW5054	B4-NW5055	1.3083	0.0082	0.0906
703		B4-NW5055_B4-NW5056	B4-NW5055	B4-NW5056	13.5821	0.0867	0.1419
704		B4-NW5056_B4-NW5057	B4-NW5056	B4-NW5057	13.9679	0.0892	0.1465
705		B4-NW5057_B4-NW5058	B4-NW5057	B4-NW5058	15.4048	0.0983	0.1556
706		B4-NW5058_B4-NW5059	B4-NW5058	B4-NW5059	15.9835	0.2773	0.1678
707		B4-NW5059_B4-NW5060	B4-NW5059	B4-NW5060	16.8675	0.9467	0.1710
708		B4-NW5060_B4-NW5061	B4-NW5060	B4-NW5061	17.9517	0.8463	0.1742
709		B4-NW5061_B4-NW5062	B4-NW5061	B4-NW5062	19.2598	0.9660	0.1849
710		B4-NW5062_B4-NW5045	B4-NW5062	B4-NW5045	22.9337	0.1464	0.2467
711		B4-NW5063_B4-NW5062	B4-NW5063	B4-NW5062	1.1891	0.4044	0.0500
712		B4-NW5064_B4-NW9024	B4-NW5064	B4-NW9024	70.2672	0.4485	0.3565
713		B4-NW5065_B4-NW5064	B4-NW5065	B4-NW5064	5.0672	0.7464	0.0883
714		B4-NW5066_B4-NW5065	B4-NW5066	B4-NW5065	1.7019	0.0107	0.0722
715		B4-NW5067_B4-NW5064	B4-NW5067	B4-NW5064	5.3496	1.0624	0.0721
716		B4-NW5068_B4-NW5067	B4-NW5068	B4-NW5067	2.1365	0.0135	0.0646
717		B4-NW9023_B4-NW5064	B4-NW9023	B4-NW5064	58.8085	0.3754	0.3276
718		B4-NW9024_B4-NW5079	B4-NW9024	B4-NW5079	75.3051	1.3892	0.3778
719		B4-NW9104_B4-NW9105	B4-NW9104	B4-NW9105	5.4425	0.4856	0.1243
720		B4-NW9105_B4-NW9106	B4-NW9105	B4-NW9106	7.6562	0.0489	0.1198
721		B4-NW9106_B4-NW9107	B4-NW9106	B4-NW9107	10.1550	0.0648	0.1365
722		B4-NW9107_B4-NW5055	B4-NW9107	B4-NW5055	12.1584	0.8890	0.1425
723		B5-F00000_B5-M10124	B5-F00000	B5-M10124	2,978.0866	1.1151	0.3978
724		B5-HF1000_B5-NW1534	B5-HF1000	B5-NW1534	28.1673	0.0799	0.2631
725		B5-HF1001_B5-HF1000	B5-HF1001	B5-HF1000	28.0753	1.4883	0.1681
726		B5-HF1002_B5-M15011	B5-HF1002	B5-M15011	27.8285	1.7010	0.1612
727		B5-HF1003_B5-NW9102	B5-HF1003	B5-NW9102	7.0253	0.0443	0.1032
728		B5-HF1004_B5-V00018	B5-HF1004	DUMMY_OUTLET	87.8861	0.8635	0.3308

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
729		B5-HF1005_B5-HF1004	B5-HF1005	B5-HF1004	87.8861	0.2493	0.3075
730		B5-HF1006_B5-M14864	B5-HF1006	B5-M14864	0.0000	0.0000	0.0060
731		B5-HF1007_B5-NW9145	B5-HF1007	B5-NW9145	3.4250	0.0215	0.0804
732		B5-HF1008_B5-NW1896	B5-HF1008	B5-NW1896	7.9017	0.0504	0.1136
733		B5-HF1009_B5-HF1005	B5-HF1009	B5-HF1005	87.8862	0.2493	0.1858
734		B5-HF1010_B5-NW6769	B5-HF1010	B5-NW6769	1.0506	0.0067	0.0670
735		B5-HF1014_B5-NW1612	B5-HF1014	B5-NW1612	0.7112	0.0044	0.0434
736		B5-M02181_B5-M02180	B5-M02181	B5-M02180	1,289.9761	1.5514	1.0000
737		B5-M02182_B5-M02181	B5-M02182	B5-M02181	1,312.1248	1.6339	1.0000
738		B5-M02183_B5-M02182	B5-M02183	B5-M02182	1,333.0196	1.6593	1.0000
739		B5-M02184_B5-M02183	B5-M02184	B5-M02183	1,346.3592	1.6892	1.0000
740		B5-M02185_B5-M02184	B5-M02185	B5-M02184	1,359.9405	2.4676	0.9810
741		B5-M02186_B5-M02185	B5-M02186	B5-M02185	980.0357	2.1104	0.8082
742		B5-M02187_B5-M02186	B5-M02187	B5-M02186	979.1750	2.0877	0.6441
743		B5-M02188_B5-M02187	B5-M02188	B5-M02187	978.1804	2.1671	0.5518
744		B5-M02189_B5-M02188	B5-M02189	B5-M02188	977.1081	2.1599	0.5505
745		B5-M02191_B5-NW6401	B5-M02191	B5-NW6401	973.7769	1.2276	0.4235
746		B5-M02192_B5-M02191	B5-M02192	B5-M02191	970.7781	1.7600	0.6560
747		B5-M02193_B5-M02192	B5-M02193	B5-M02192	968.0897	1.2197	0.6273
748		B5-M02194_B5-M02193	B5-M02194	B5-M02193	965.9897	1.5539	0.7313
749		B5-M02195_B5-M02194	B5-M02195	B5-M02194	965.5310	1.2158	0.7007
750		B5-M02196_B5-M02195	B5-M02196	B5-M02195	964.8697	1.6817	0.6793
751		B5-M02198_B5-NW9037	B5-M02198	B5-NW9037	947.3642	1.6786	0.6694
752		B5-M02199_B5-M02198	B5-M02199	B5-M02198	946.4316	1.6749	0.6700
753		B5-M02200_B5-M02199	B5-M02200	B5-M02199	945.7383	1.6697	0.6714
754		B5-M02201_B5-M02200	B5-M02201	B5-M02200	943.2463	1.2747	0.6660
755		B5-M02202_B5-M02201	B5-M02202	B5-M02201	939.2220	1.6833	0.6627
756		B5-M02203_B5-M02202	B5-M02203	B5-M02202	937.3325	1.6537	0.6720
757		B5-M02204_B5-M02203	B5-M02204	B5-M02203	936.5549	1.6469	0.6740
758		B5-M02205_B5-M02204	B5-M02205	B5-M02204	936.4142	1.3206	0.6710
759		B5-M02206_B5-M02205	B5-M02206	B5-M02205	935.6064	1.3608	0.6611
760		B5-M02207_B5-M02206	B5-M02207	B5-M02206	934.5182	1.6774	0.6616
761		B5-M02208_B5-M02207	B5-M02208	B5-M02207	932.5868	1.6663	0.6643
762		B5-M02209_B5-M02208	B5-M02209	B5-M02208	931.8041	1.6607	0.6660
763		B5-M02210_B5-M02209	B5-M02210	B5-M02209	930.6059	1.5856	0.6934
764		B5-M02213_B5-M02212	B5-M02213	B5-NW7197	768.5281	1.3856	0.6592
765		B5-M02214_B5-M02213	B5-M02214	B5-M02213	768.0404	1.1244	0.6552
766		B5-M02215_B5-M02214	B5-M02215	B5-M02214	767.0099	1.3402	0.6779
767		B5-M02216_B5-M02215	B5-M02216	B5-M02215	763.4203	0.9621	0.6591
768		B5-M02217_B5-M02216	B5-M02217	B5-M02216	759.5166	1.3449	0.6697
769		B5-M02223_B5-NW6876	B5-M02223	B5-NW6876	409.0793	0.5154	0.3720
770		B5-M02224_B5-M02223	B5-M02224	B5-M02223	407.0396	2.2398	0.2772
771		B5-M02225_B5-M02224	B5-M02225	B5-M02224	405.3713	2.2637	0.2770
772		B5-M08245_B5-M10154	B5-M08245	B5-M10154	1.5857	0.0006	0.0110
773		B5-M08246_B5-M08245	B5-M08246	B5-M08245	1.2580	0.0005	0.0054
774		B5-M08247_B5-M08246	B5-M08247	B5-M08246	0.7337	0.0000	0.0000
775		B5-M08248_B5-M08247	B5-M08248	B5-M08247	0.2652	0.0000	0.0000
776		B5-M09961_B5-M09960	B5-M09961	B5-M09960	201.7598	1.2134	0.0503
777		B5-M09964_B5-NW6176	B5-M09964	B5-NW6176	2,959.3160	2.8004	0.4182
778		B5-M09965_B5-M09964	B5-M09965	B5-M09964	2,959.4501	1.4340	0.4125
779		B5-M09967_B5-NW6167	B5-M09967	B5-NW6167	2,923.8925	2.7527	0.4199
780		B5-M09968_B5-M09967	B5-M09968	B5-M09967	2,923.9804	1.0930	0.4049
781		B5-M09972_B5-NW5936	B5-M09972	B5-NW5936	2,818.9658	2.6848	0.4161
782		B5-M09973_B5-M09972	B5-M09973	B5-M09972	2,819.2248	2.3683	0.4121
783		B5-M09974_B5-M09973	B5-M09974	B5-M09973	2,819.7883	1.4887	0.4033
784		B5-M09975_B5-M09974	B5-M09975	B5-M09974	2,821.5740	2.3732	0.3943

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
785		B5-M09976_B5-M09975	B5-M09976	B5-M09975	2,822.1023	2.8263	0.4006
786		B5-M09977_B5-M09976	B5-M09977	B5-M09976	2,823.2697	2.8088	0.4026
787		B5-M09978_B5-M09977	B5-M09978	B5-M09977	2,825.3551	1.2018	0.3882
788		B5-M09979_B5-M10157	B5-M09979	B5-M10157	2,225.1639	1.5947	0.4188
789		B5-M09980_B5-M09979	B5-M09980	B5-M09979	601.2153	0.7579	0.5545
790		B5-M09981_B5-M09980	B5-M09981	B5-M09980	599.0753	2.2813	0.3649
791		B5-M09984_B5-NW7332	B5-M09984	B5-NW7332	562.4523	0.7086	0.4875
792		B5-M09989_B5-NW7328	B5-M09989	B5-NW7328	521.4416	0.6573	0.4772
793		B5-M09990_B5-NW7327	B5-M09990	B5-NW7327	457.5541	1.5594	0.3971
794		B5-M09991_B5-M09990	B5-M09991	B5-M09990	457.4429	1.3550	0.4414
795		B5-M09992_B5-M09991	B5-M09992	B5-M09991	457.4485	0.5766	0.4186
796		B5-M09993_B5-M09992	B5-M09993	B5-M09992	456.5754	1.1410	0.3916
797		B5-M09994_B5-M09993	B5-M09994	B5-M09993	455.5837	1.1881	0.4869
798		B5-M09995_B5-M09994	B5-M09995	B5-M09994	454.5018	0.5723	0.4152
799		B5-M09997_B5-NW5144	B5-M09997	B5-NW5144	422.7673	0.5320	0.3778
800		B5-M10001_B5-M10000	B5-M10001	B5-M10000	403.4334	1.2804	0.4189
801		B5-M10002_B5-M10001	B5-NW7314	B5-M10001	403.3914	0.5086	0.4055
802		B5-M10003_B5-M23648	B5-M10003	B5-M23648	725.2797	0.9144	0.5042
803		B5-M10004_B5-M10003	B5-M10004	B5-M10003	725.2374	1.8140	0.5032
804		B5-M10007_B5-NW5006	B5-M10007	B5-NW5006	718.9324	1.5786	0.5583
805		B5-M10008_B5-M10007	B5-M10008	B5-M10007	717.2190	1.5182	0.5753
806		B5-M10010_B5-NW7312	B5-M10010	B5-NW7312	703.7640	0.8873	0.5313
807		B5-M10012_B5-NW5002	B5-M10012	B5-NW5002	696.6052	1.7212	0.5081
808		B5-M10015_B5-NW9025	B5-M10015	B5-NW9025	681.1149	1.7510	0.4924
809		B5-M10018_B5-NW2405	B5-M10018	B5-NW2405	478.7507	1.7257	0.3807
810		B5-M10020_B5-NW1875	B5-M10020	B5-NW1875	469.9559	0.5923	0.3829
811		B5-M10021_B5-M10020	B5-M10021	B5-M10020	468.2496	0.5903	0.3067
812		B5-M10022_B5-M10021	B5-M10022	B5-M10021	467.8482	2.0601	0.4309
813		B5-M10023_B5-M10022	B5-M10023	B5-M10022	467.3710	2.0459	0.4328
814		B5-M10024_B5-M10023	B5-M10024	B5-M10023	467.0203	1.2723	0.4256
815		B5-M10025_B5-M10024	B5-M10025	B5-M10024	467.0086	1.8065	0.4757
816		B5-M10026_B5-M10025	B5-M10026	B5-M10025	466.8170	0.8923	0.4275
817		B5-M10027_B5-M10026	B5-M10027	B5-M10026	465.6123	2.0340	0.3307
818		B5-M10028_B5-M10027	B5-M10028	B5-M10027	465.6138	1.3276	0.4545
819		B5-M10033_B5-M10032	B5-M10033	B5-M10032	6,473.2270	2.1638	0.3463
820		B5-M10034_B5-M10033	B5-M10034	B5-M10033	6,486.2888	1.7033	0.4145
821		B5-M10035_B5-M10034	B5-M10035	B5-M10034	3,118.3121	0.8310	0.3576
822		B5-M10036_B5-M10035	B5-M10036	B5-M10035	3,117.4259	1.8288	0.2879
823		B5-M10037_B5-M10036	B5-M10037	B5-M10036	3,118.9355	1.6703	0.3077
824		B5-M10037_B5-NW6441	B5-M10037	B5-NW6441	15.7450	0.0021	0.0393
825		B5-M10038_B5-M10037	B5-M10038	B5-M10037	600.2969	0.0841	0.1761
826		B5-M10039_B5-M10139	B5-M10039	B5-M10139	81.1076	0.0126	0.0506
827		B5-M10040_B5-M10039	B5-M10040	B5-M10039	80.9398	0.7401	0.0470
828		B5-M10041_B5-M10040	B5-M10041	B5-M10040	80.8074	0.6905	0.0492
829		B5-M10042_B5-M10041	B5-M10042	B5-M10041	80.7082	0.5335	0.0483
830		B5-M10046_B5-NW7210	B5-M10046	B5-NW7210	2,553.4059	1.6515	0.3179
831		B5-M10047_B5-M10046	B5-M10047	B5-M10046	2,555.0535	1.7830	0.3067
832		B5-M10048_B5-M10047	B5-M10048	B5-M10047	2,556.5104	1.4989	0.3412
833		B5-M10049_B5-M10048	B5-M10049	B5-M10048	2,557.7724	1.4568	0.3481
834		B5-M10050_B5-M10049	B5-M10050	B5-M10049	2,558.3517	1.7121	0.3214
835		B5-M10055_B5-M10050	B5-M10055	B5-M10050	2,559.4192	1.1074	0.4289
836		B5-M10056_B5-M10055	B5-M10056	B5-M10055	2,563.2851	0.4528	0.3834
837		B5-M10058_B5-NW7179	B5-M10058	B5-NW7179	2,561.8351	1.1268	0.2861
838		B5-M10059_B5-M10058	B5-M10059	B5-M10058	2,562.8394	1.7913	0.3003
839		B5-M10061_B5-NW7175	B5-M10061	B5-NW7175	2,510.2024	0.4359	0.2947
840		B5-M10062_B5-M10061	B5-M10062	B5-M10061	2,510.9567	1.5894	0.3214

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
841		B5-M10064_B5-M10034	B5-M10064	B5-M10034	5,681.0520	10.8136	0.5762
842		B5-M10122_B5-M23080	B5-M10122	B5-M23080	2,975.3969	1.7412	0.4175
843		B5-M10123_B5-M10122	B5-M10123	B5-M10122	2,975.3327	1.7312	0.4195
844		B5-M10124_B5-M10123	B5-M10124	B5-M10123	2,976.1306	1.6977	0.4256
845		B5-M10125_B5-F00000	B5-M10125	B5-F00000	2,978.0991	1.1362	0.2553
846		B5-M10139_B5-M09961	B5-M10139	B5-M09961	201.7673	1.1973	0.0508
847		B5-M10141_B5-M10155	B5-M10141	B5-M10155	2.7017	0.0010	0.2383
848		B5-M10141_B5-M23084	B5-M10141	B5-M23084	7.8064	0.0029	0.1569
849		B5-M10142_B5-M10141	B5-M10142	B5-M10141	10.1162	0.4531	0.1401
850		B5-M10143_B5-M10142	B5-M10143	B5-M10142	9.1303	0.0034	0.0474
851		B5-M10144_B5-M10143	B5-M10144	B5-M10143	8.5068	0.5372	0.0283
852		B5-M10145_B5-M10144	B5-M10145	B5-M10144	7.6469	0.0029	0.0225
853		B5-M10146_B5-M10145	B5-M10146	B5-M10145	7.2383	0.0027	0.0325
854		B5-M10147_B5-M10146	B5-M10147	B5-M10146	6.5991	0.3363	0.0208
855		B5-M10148_B5-M10147	B5-M10148	B5-M10147	4.7192	0.0018	0.0190
856		B5-M10149_B5-M10148	B5-M10149	B5-M10148	4.7100	0.0018	0.0165
857		B5-M10150_B5-M10149	B5-M10150	B5-M10149	3.7074	0.4900	0.0141
858		B5-M10151_B5-M10150	B5-M10151	B5-M10150	2.8241	0.0011	0.0132
859		B5-M10152_B5-M10151	B5-M10152	B5-M10151	1.9290	0.0007	0.0120
860		B5-M10154_B5-M10152	B5-M10154	B5-M10152	1.7858	0.0007	0.0115
861		B5-M10155_B5-M10125	B5-M10155	B5-M10125	2,978.1511	5.5015	0.2567
862		B5-M10157_B5-M09978	B5-M10157	B5-M09978	2,825.7601	2.5503	0.4332
863		B5-M10158_B5-M10157	B5-M10158	B5-M10157	658.3966	0.4664	0.4703
864		B5-M10159_B5-M10158	B5-M10159	B5-M10158	658.1650	1.2387	0.3344
865		B5-M10160_B5-M10159	B5-M10160	B5-M10159	657.7763	1.6898	0.3895
866		B5-M10161_B5-M10160	B5-M10161	B5-M10160	657.4043	1.6850	0.3901
867		B5-M10162_B5-M10161	B5-M10162	B5-M10161	657.0837	1.6741	0.3890
868		B5-M10163_B5-M10162	B5-M10163	B5-M10162	656.7448	1.6850	0.3899
869		B5-M10164_B5-M10163	B5-M10164	B5-M10163	656.4312	1.6136	0.4024
870		B5-M10165_B5-M10164	B5-M10165	B5-M10164	655.9072	1.1341	0.3858
871		B5-M10166_B5-M10165	B5-M10166	B5-M10165	655.1139	1.5870	0.4070
872		B5-M10167_B5-M10166	B5-M10167	B5-M10166	654.6327	1.4865	0.4272
873		B5-M10168_B5-M10167	B5-M10168	B5-M10167	654.2547	0.9623	0.3823
874		B5-M10169_B5-NW5142	B5-M10000	B5-NW5142	403.4961	1.4462	0.3824
875		B5-M10171_B5-M10170	B5-M10171	B5-M10168	654.0452	1.3505	0.3334
876		B5-M10172_B5-M10171	B5-M10172	B5-M10171	653.5875	1.6939	0.3870
877		B5-M10173_B5-M10172	B5-M10173	B5-M10172	651.6999	1.3223	0.3830
878		B5-M10174_B5-M10173	B5-M10174	B5-M10173	649.8126	0.8146	0.3510
879		B5-M10175_B5-M10174	B5-M10175	B5-M10174	648.7862	2.1291	0.3252
880		B5-M10176_B5-M10175	B5-M10176	B5-M10175	647.7891	1.6008	0.3196
881		B5-M10177_B5-NW7269	B5-M10177	B5-NW7269	645.5457	0.6456	0.3266
882		B5-M10178_B5-M10177	B5-M10178	B5-M10177	645.1299	2.1690	0.3196
883		B5-M10180_B5-M10179	B5-M10180	B5-NW9244	341.3324	0.6197	0.3584
884		B5-M10181_B5-M10180	B5-M10181	B5-M10180	340.8882	2.3597	0.3084
885		B5-M10182_B5-M10181	B5-M10182	B5-M10181	340.2224	1.8066	0.3495
886		B5-M10182_B5-NW102	B5-M10182	B5-NW102	252.9132	0.4591	0.4305
887		B5-M14428_B5-M09979	B5-M14428	B5-M09979	1,520.2592	0.6602	0.3153
888		B5-M14429_B5-M14428	B5-M14429	B5-M14428	1,520.4035	3.6857	0.1535
889		B5-M14430_B5-M14429	B5-M14430	B5-M14429	1,520.4864	2.6099	0.3076
890		B5-M14431_B5-M14430	B5-M14431	B5-M14430	1,521.6606	2.3094	0.2928
891		B5-M14441_B5-NW5252	B5-M14441	B5-NW5252	890.1148	2.0946	0.2476
892		B5-M14445_B5-NW5249	B5-M14445	B5-NW5249	879.7587	0.3987	0.2388
893		B5-M14449_B5-NW5548	B5-M14449	B5-NW5548	854.9919	2.0513	0.2442
894		B5-M14454_B5-NW5545	B5-M14454	B5-NW5545	789.1089	2.0939	0.2274
895		B5-M14455_B5-M14454	B5-M14455	B5-M14454	786.3463	1.5972	0.2253
896		B5-M14456_B5-M14455	B5-M14456	B5-M14455	783.2542	2.0044	0.2333

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
897		B5-M14462_B5-NW1417	B5-M14462	B5-NW1417	583.1641	1.8983	0.1971
898		B5-M14463_B5-M14462	B5-M14463	B5-M14462	582.5690	1.8902	0.1971
899		B5-M14465_B5-NW9115	B5-M14465	B5-NW9115	215.5711	0.1208	0.1531
900		B5-M14466_B5-M14465	B5-M14466	B5-M14465	214.7594	1.6810	0.1218
901		B5-M14467_B5-M14466	B5-M14467	B5-M14466	214.7183	1.2784	0.1501
902		B5-M14476_B5-NW1086	B5-M14476	B5-NW1086	0.4445	0.0002	0.0083
903		B5-M14477_B5-M14476	B5-M14477	B5-M14476	0.1362	0.0000	0.0000
904		B5-M14478_B5-M14477	B5-M14478	B5-M14477	0.0000	0.0000	0.0000
905		B5-M14584_B5-NW2336	B5-M14584	B5-NW2336	333.9899	2.2473	0.3149
906		B5-M14586_B5-NW2217	B5-M14586	B5-NW2217	154.7583	0.7215	0.2928
907		B5-M14589_B5-NW2203	B5-M14589	B5-NW2203	114.5150	0.2079	0.2085
908		B5-M14590_B5-M14589	B5-M14590	B5-M14589	107.1728	0.1946	0.1970
909		B5-M14591_B5-M14590	B5-M14591	B5-M14590	104.0806	1.1793	0.1875
910		B5-M14592_B5-M14591	B5-M14592	B5-M14591	99.8762	0.8230	0.1824
911		B5-M14594_B5-NW2108	B5-M14594	B5-NW2108	40.4596	0.0735	0.1463
912		B5-M14596_B5-M14888	B5-M14596	B5-M14888	0.0000	0.0000	0.0737
913		B5-M14597_B5-M14596	B5-M14597	B5-M14596	0.0000	0.0000	0.0000
914		B5-M14599_B5-M14597	B5-M14599	B5-M14597	0.0000	0.0000	0.0000
915		B5-M14605_B5-M14864	B5-M14605	B5-M14864	4.1366	0.3190	0.0457
916		B5-M14607_B5-M14867	B5-M14607	B5-M14867	0.0000	0.0000	0.0000
917		B5-M14679_B5-NW103	B5-M14679	B5-NW103	592.9088	2.9763	0.3904
918		B5-M14680_B5-M14679	B5-M14680	B5-M14679	591.6331	2.3701	0.4632
919		B5-M14681_B5-M14680	B5-M14681	B5-M14680	588.5680	1.7101	0.5987
920		B5-M14682_B5-M14681	B5-M14682	B5-M14681	583.5082	1.0592	0.5609
921		B5-M14683_B5-M14682	B5-M14683	B5-M14682	577.0912	1.9754	0.5230
922		B5-M14684_B5-M14683	B5-M14684	B5-M14683	571.8072	1.9605	0.5228
923		B5-M14685_B5-M14684	B5-M14685	B5-M14684	571.0274	1.5390	0.4980
924		B5-M14688_B5-NW1686	B5-M14688	B5-NW1686	500.3741	1.9618	0.4709
925		B5-M14864_B5-M15022	B5-M14864	B5-M15022	8.7714	0.3754	0.0218
926		B5-M14866_B5-M14864	B5-M14866	B5-M14864	4.6214	0.0017	0.0236
927		B5-M14867_B5-M14605	B5-M14867	B5-M14605	0.0000	0.0000	0.0228
928		B5-M14867_B5-M14866	B5-M14867	B5-M14866	0.0000	0.0000	0.0134
929		B5-M14868_B5-M14866	B5-M14868	B5-M14866	0.0000	0.0000	0.0098
930		B5-M14888_B5-M14594	B5-M14888	B5-M14594	39.8268	1.0923	0.1178
931		B5-M14889_B5-M14888	B5-M14889	B5-M14888	39.7018	0.6038	0.1113
932		B5-M14890_B5-M14889	B5-M14890	B5-M14889	39.6587	0.0367	0.1016
933		B5-M14891_B5-M14890	B5-M14891	B5-M14890	39.6074	0.4013	0.0865
934		B5-M14892_B5-M14891	B5-M14892	B5-M14891	39.6074	0.8604	0.0873
935		B5-M14893_B5-M14892	B5-M14893	B5-M14892	38.4400	0.8193	0.0916
936		B5-M14894_B5-M14893	B5-M14894	B5-M14893	37.9934	1.1869	0.0841
937		B5-M14896_B5-M20570	B5-M14896	B5-M20570	35.4449	0.0447	0.0810
938		B5-M14898_B5-M14896	B5-M14898	B5-M14896	34.3462	1.0692	0.0843
939		B5-M14899_B5-M14898	B5-M14899	B5-M14898	31.1999	0.0393	0.0808
940		B5-M14900_B5-M14899	B5-M14900	B5-M14899	24.6714	0.6869	0.1166
941		B5-M14901_B5-M14900	B5-M14901	B5-M14900	18.1811	0.0229	0.0821
942		B5-M14988_B5-M10062	B5-M14988	B5-M10062	319.7089	0.2230	0.3160
943		B5-M14990_B5-M14988	B5-M14990	B5-M14988	316.6113	0.0446	0.2761
944		B5-M14993_B5-NW6935	B5-M14993	B5-NW6935	252.8882	1.0349	0.1102
945		B5-M14994_B5-M14993	B5-M14994	B5-M14993	254.1282	0.7222	0.1089
946		B5-M14995_B5-M14994	B5-M14995	B5-M14994	261.3710	0.7058	0.1169
947		B5-M14997_B5-M14995	B5-M14997	B5-M14995	269.0208	0.8390	0.1040
948		B5-M14998_B5-M14997	B5-M14998	B5-M14997	270.7343	0.8889	0.1005
949		B5-M14999_B5-NW9089	B5-M14999	B5-NW9089	72.4965	0.0128	0.1065
950		B5-M15000_B5-M14999	B5-M15000	B5-M14999	72.3160	0.5582	0.0715
951		B5-M15001_B5-M15000	B5-M15001	B5-M15000	69.0585	0.0122	0.0531
952		B5-M15003_B5-M15164	B5-M15003	B5-M15164	192.0762	0.9562	0.0773

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
953		B5-M15004_B5-M15003	B5-M15004	B5-M15003	191.2244	0.8601	0.0828
954		B5-M15005_B5-M15004	B5-M15005	B5-M15004	191.0160	0.7096	0.0942
955		B5-M15006_B5-M15005	B5-M15006	B5-M15005	190.7462	0.0338	0.0881
956		B5-M15007_B5-M15006	B5-M15007	B5-M15006	184.7663	0.7875	0.0859
957		B5-M15008_B5-M15007	B5-M15008	B5-M15007	175.7645	0.0311	0.0827
958		B5-M15008_B5-M15467	B5-M15008	B5-M15467	250.3164	1.1911	0.0796
959		B5-M15009_B5-M15008	B5-M15009	B5-M15008	425.9873	0.8595	0.1430
960		B5-M15010_B5-M15009	B5-M15010	B5-M15009	426.0434	0.5334	0.1372
961		B5-M15011_B5-M15010	B5-M15011	B5-M15010	426.0843	0.4359	0.1219
962		B5-M15012_B5-M15011	B5-M15012	B5-M15011	372.1201	0.9333	0.1232
963		B5-M15014_B5-NW2246	B5-M15014	B5-NW2246	350.0282	0.5617	0.1305
964		B5-M15015_B5-M15014	B5-M15015	B5-M15014	10.8410	0.0025	0.0817
965		B5-M15016_B5-M15015	B5-M15016	B5-M15015	9.0633	0.4264	0.0204
966		B5-M15017_B5-M15016	B5-M15017	B5-M15016	8.8016	0.4061	0.0207
967		B5-M15018_B5-M15017	B5-M15018	B5-M15017	8.7714	0.3285	0.0195
968		B5-M15019_B5-M15018	B5-M15019	B5-M15018	8.7713	0.3478	0.0229
969		B5-M15020_B5-M15019	B5-M15020	B5-M15019	8.7714	0.2951	0.0222
970		B5-M15021_B5-M15020	B5-M15021	B5-M15020	8.7714	0.3177	0.0212
971		B5-M15022_B5-M15021	B5-M15022	B5-M15021	8.7714	0.0020	0.0208
972		B5-M15025_B5-NW2314	B5-M15025	B5-NW2314	0.0000	0.0000	0.0077
973		B5-M15026_B5-M15180	B5-M15026	B5-M15180	0.0000	0.0000	0.0000
974		B5-M15147_B5-M10038	B5-M15147	B5-M10038	357.8686	1.0972	0.0915
975		B5-M15148_B5-M15147	B5-M15148	B5-M15147	357.6142	0.6351	0.1328
976		B5-M15149_B5-M15148	B5-M15149	B5-M15148	357.3673	0.6345	0.1329
977		B5-M15150_B5-M15149	B5-M15150	B5-M15149	355.5931	0.6258	0.1324
978		B5-M15151_B5-M15150	B5-M15151	B5-M15150	352.9706	0.6229	0.1443
979		B5-M15152_B5-M15151	B5-M15152	B5-M15151	351.9076	0.4983	0.1431
980		B5-M15153_B5-M15152	B5-M15153	B5-M15152	351.4674	0.6326	0.1412
981		B5-M15154_B5-M15153	B5-M15154	B5-M15153	350.4896	0.6281	0.1429
982		B5-M15155_B5-M15154	B5-M15155	B5-M15154	350.3122	0.4898	0.1416
983		B5-M15156_B5-M15155	B5-M15156	B5-M15155	350.1594	0.6369	0.1414
984		B5-M15157_B5-M15156	B5-M15157	B5-M15156	349.3759	0.4091	0.1231
985		B5-M15158_B5-M15157	B5-M15158	B5-M15157	349.2713	0.9564	0.1069
986		B5-M15159_B5-M15158	B5-M15159	B5-M15158	349.1040	0.7506	0.1056
987		B5-M15162_B5-NW7168	B5-M15162	B5-NW7168	194.7755	0.0306	0.0954
988		B5-M15163_B5-M15162	B5-M15163	B5-M15162	185.4368	0.5440	0.0804
989		B5-M15164_B5-M15001	B5-M15164	B5-M15001	66.4135	0.4524	0.0625
990		B5-M15164_B5-M15163	B5-M15164	B5-M15163	181.8670	0.0285	0.0673
991		B5-M15165_B5-M15164	B5-M15165	B5-M15164	55.5469	0.0087	0.0510
992		B5-M15166_B5-M15165	B5-M15166	B5-M15165	55.2617	0.5789	0.0432
993		B5-M15167_B5-M15166	B5-M15167	B5-M15166	54.4252	0.5597	0.0429
994		B5-M15168_B5-M15167	B5-M15168	B5-M15167	52.5169	0.5157	0.0406
995		B5-M15169_B5-M15168	B5-M15169	B5-M15168	52.5169	0.6471	0.0386
996		B5-M15170_B5-M15169	B5-M15170	B5-M15169	52.5170	0.6315	0.0386
997		B5-M15171_B5-M15170	B5-M15171	B5-M15170	52.5169	0.6513	0.0384
998		B5-M15172_B5-M15171	B5-M15172	B5-M15171	51.8528	0.6448	0.0383
999		B5-M15173_B5-M15172	B5-M15173	B5-M15172	48.0594	0.5007	0.0376
1000		B5-M15174_B5-M15173	B5-M15174	B5-M15173	46.7283	0.6043	0.0368
1001		B5-M15176_B5-NW2307	B5-M15176	B5-NW2307	35.2225	0.0055	0.0285
1002		B5-M15177_B5-NW9147	B5-M15177	B5-NW9147	26.2010	0.0041	0.0260
1003		B5-M15178_B5-NW2312	B5-M15178	B5-NW2312	8.2227	0.0013	0.0200
1004		B5-M15179_B5-M15178	B5-M15179	B5-M15178	7.8546	0.0012	0.0159
1005		B5-M15180_B5-M15025	B5-M15180	B5-M15025	0.0000	0.0000	0.0000
1006		B5-M15425_B5-M14988	B5-M15425	B5-M14988	3.0938	0.0010	0.2130
1007		B5-M15426_B5-M15425	B5-M15426	B5-M15425	2.6977	0.0008	0.0108
1008		B5-M15427_B5-M15426	B5-M15427	B5-M15426	1.0423	0.0003	0.0052

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1009		B5-M15450_B5-M14901	B5-M15450	B5-M14901	18.1811	0.5676	0.0842
1010		B5-M15451_B5-M15450	B5-M15451	B5-M15450	14.1493	0.0257	0.0850
1011		B5-M15452_B5-M15451	B5-M15452	B5-M15451	6.6753	0.0188	0.0735
1012		B5-M15455_B5-M15485	B5-M15455	B5-M15485	459.4617	2.3574	0.0757
1013		B5-M15456_B5-NW7039	B5-M15456	B5-NW7039	450.7532	0.0799	0.0734
1014		B5-M15457_B5-M15456	B5-M15457	B5-M15456	450.7539	2.5032	0.0718
1015		B5-M15458_B5-M15457	B5-M15458	B5-M15457	450.7564	0.0799	0.0716
1016		B5-M15459_B5-M15458	B5-M15459	B5-M15458	450.7575	2.5032	0.0718
1017		B5-M15461_B5-NW7038	B5-M15461	B5-NW7038	354.1786	1.8439	0.0750
1018		B5-M15462_B5-M15461	B5-M15462	B5-M15461	349.4326	1.7307	0.0775
1019		B5-M15463_B5-M15462	B5-M15463	B5-M15462	341.8810	0.0606	0.0767
1020		B5-M15464_B5-M15463	B5-M15464	B5-M15463	334.6420	0.0593	0.0741
1021		B5-M15465_B5-M15464	B5-M15465	B5-M15464	293.2764	1.4087	0.0721
1022		B5-M15466_B5-M15465	B5-M15466	B5-M15465	285.9580	1.4312	0.0770
1023		B5-M15467_B5-M15466	B5-M15467	B5-M15466	255.4510	0.0452	0.0707
1024		B5-M20570_B5-M14894	B5-M20570	B5-M14894	37.9218	1.1892	0.0840
1025		B5-M23079_B5-M23078	B5-M23079	B5-M23078	1,385.9550	1.4426	0.3892
1026		B5-M23080_B5-M10121	B5-M23080	B5-M10121	1,590.1986	1.4381	0.3030
1027		B5-M23080_B5-M23079	B5-M23080	B5-M23079	1,386.2138	1.4562	0.3871
1028		B5-M23081_B5-M23080	B5-M23081	B5-M23080	1.6242	0.0006	0.3000
1029		B5-M23082_B5-M23081	B5-M23082	B5-M23081	1.6242	0.1432	0.1928
1030		B5-M23083_B5-M23082	B5-M23083	B5-M23082	1.2496	0.0005	0.1382
1031		B5-M23084_B5-M23083	B5-M23084	B5-M23083	0.6825	0.0003	0.1000
1032		B5-M23084_B5-NW7222	B5-M23084	B5-NW7222	7.1331	0.0027	0.0965
1033		B5-M23648_B5-NW7314	B5-M23648	B5-NW7314	725.8312	1.7860	0.5097
1034		B5-NW102_B5-M10028	B5-NW102	B5-M10028	465.6362	0.5871	0.4228
1035		B5-NW103_B5-M10182	B5-NW103	B5-M10182	593.1394	3.0604	0.3771
1036		B5-NW1050_B5-NW1053	B5-NW1050	B5-NW1053	2.1680	0.0138	0.0689
1037		B5-NW1053_B5-NW1056	B5-NW1053	B5-NW1056	3.0645	0.0196	0.0822
1038		B5-NW1056_B5-NW1062	B5-NW1056	B5-NW1062	4.1438	0.5982	0.0895
1039		B5-NW1061_B5-NW1062	B5-NW1061	B5-NW1062	0.6601	0.0042	0.0604
1040		B5-NW1062_B5-NW1078	B5-NW1062	B5-NW1078	5.4926	0.3497	0.0726
1041		B5-NW1063_B5-NW1064	B5-NW1063	B5-NW1064	1.0318	0.0064	0.0598
1042		B5-NW1064_B5-NW1065	B5-NW1064	B5-NW1065	3.0654	0.4091	0.0961
1043		B5-NW1065_B5-NW1070	B5-NW1065	B5-NW1070	19.4001	0.1238	0.1980
1044		B5-NW1066_B5-NW1065	B5-NW1066	B5-NW1065	3.3794	0.0215	0.0917
1045		B5-NW1067_B5-NW1066	B5-NW1067	B5-NW1066	1.0165	0.0063	0.0505
1046		B5-NW1068_B5-NW1069	B5-NW1068	B5-NW1069	1.0681	0.0067	0.0589
1047		B5-NW1069_B5-NW1070	B5-NW1069	B5-NW1070	3.1487	0.0201	0.1463
1048		B5-NW1070_B5-NW1075	B5-NW1070	B5-NW1075	28.2459	0.1803	0.2363
1049		B5-NW1071_B5-NW1070	B5-NW1071	B5-NW1070	3.9171	0.0250	0.1430
1050		B5-NW1072_B5-NW1071	B5-NW1072	B5-NW1071	1.4730	0.0090	0.0547
1051		B5-NW1073_B5-NW1074	B5-NW1073	B5-NW1074	1.2941	0.0081	0.0640
1052		B5-NW1074_B5-NW1075	B5-NW1074	B5-NW1075	3.3481	0.5801	0.0791
1053		B5-NW1075_B5-NW1080	B5-NW1075	B5-NW1080	37.3917	1.1994	0.2531
1054		B5-NW1076_B5-NW1075	B5-NW1076	B5-NW1075	3.9764	0.0253	0.1608
1055		B5-NW1077_B5-NW1076	B5-NW1077	B5-NW1076	1.4823	0.0091	0.0553
1056		B5-NW1078_B5-NW1079	B5-NW1078	B5-NW1079	6.5649	0.0268	0.0901
1057		B5-NW1079_B5-NW1080	B5-NW1079	B5-NW1080	8.5414	0.0349	0.1649
1058		B5-NW1080_B5-NW1081	B5-NW1080	B5-NW1081	47.7798	1.1196	0.2305
1059		B5-NW1081_B5-NW1082	B5-NW1081	B5-NW1082	50.1834	0.2050	0.2396
1060		B5-NW1082_B5-NW1083	B5-NW1082	B5-NW1083	51.0770	1.0562	0.2518
1061		B5-NW1083_B5-NW1084	B5-NW1083	B5-NW1084	54.2593	0.0304	0.0663
1062		B5-NW1084_B5-NW1169	B5-NW1084	B5-NW1169	74.7265	0.9803	0.0874
1063		B5-NW1085_B5-NW1084	B5-NW1085	B5-NW1084	19.9601	0.2322	0.2429
1064		B5-NW1086_B5-NW1083	B5-NW1086	B5-NW1083	3.1030	0.0017	0.0309

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1065		B5-NW1087_B5-NW1086	B5-NW1087	B5-NW1086	2.5759	0.3378	0.0898
1066		B5-NW1088_B5-NW1087	B5-NW1088	B5-NW1087	1.1212	0.4709	0.0435
1067		B5-NW1089_B5-NW1088	B5-NW1089	B5-NW1088	1.1002	0.2690	0.0422
1068		B5-NW1090_B5-NW1089	B5-NW1090	B5-NW1089	0.8357	0.0051	0.0339
1069		B5-NW1093_B5-NW1094	B5-NW1093	B5-NW1094	0.5867	0.0036	0.0325
1070		B5-NW1094_B5-NW1087	B5-NW1094	B5-NW1087	1.2784	0.0082	0.0442
1071		B5-NW1097_B5-NW1065	B5-NW1097	B5-NW1065	10.9531	0.0699	0.1611
1072		B5-NW1098_B5-NW1050	B5-NW1098	B5-NW1050	1.0438	0.0065	0.0525
1073		B5-NW1167_B5-NW1291	B5-NW1167	B5-NW1291	7.9249	0.0506	0.1247
1074		B5-NW1168_B5-NW1169	B5-NW1168	B5-NW1169	14.0524	0.3776	0.1820
1075		B5-NW1169_B5-NW9141	B5-NW1169	B5-NW9141	89.6606	0.0502	0.0707
1076		B5-NW1170_B5-NW1403	B5-NW1170	B5-NW1403	0.0972	0.0006	0.0265
1077		B5-NW1172_B5-NW1405	B5-NW1172	B5-NW1405	1.5718	0.5426	0.0496
1078		B5-NW1173_B5-NW1172	B5-NW1173	B5-NW1172	0.7047	0.5097	0.0376
1079		B5-NW1174_B5-NW1412	B5-NW1174	B5-NW1412	3.8920	0.0248	0.0844
1080		B5-NW1210_B5-NW1211	B1-NW1210	B5-NW1211	363.1476	1.5039	0.4514
1081		B5-NW1211_B5-NW9115	B5-NW1211	B5-NW9115	365.7551	2.8045	0.2865
1082		B5-NW1213_B5-NW1214	B5-NW1213	B5-NW1214	0.4935	0.0031	0.0306
1083		B5-NW1214_B5-NW1215	B5-NW1214	B5-NW1215	1.1454	0.0073	0.0923
1084		B5-NW1215_B5-NW1417	B5-NW1215	B5-NW1417	18.7134	1.2496	0.1517
1085		B5-NW1216_B5-NW1215	B5-NW1216	B5-NW1215	4.7012	0.0300	0.1358
1086		B5-NW1217_B5-NW1216	B5-NW1217	B5-NW1216	2.2183	0.0142	0.1028
1087		B5-NW1218_B5-NW1215	B5-NW1218	B5-NW1215	12.5902	0.0804	0.1480
1088		B5-NW1219_B5-NW1218	B5-NW1219	B5-NW1218	11.2973	0.0721	0.1425
1089		B5-NW1220_B5-NW1219	B5-NW1220	B5-NW1219	5.9838	0.0382	0.1187
1090		B5-NW1221_B5-NW1220	B5-NW1221	B5-NW1220	1.6124	0.0102	0.0736
1091		B5-NW1222_B5-NW1221	B5-NW1222	B5-NW1221	0.7774	0.0049	0.0418
1092		B5-NW1229_B5-NW1230	B5-NW1229	B5-NW1230	0.6888	0.3938	0.0411
1093		B5-NW1230_B5-NW1220	B5-NW1230	B5-NW1220	1.5445	0.4939	0.0522
1094		B5-NW1232_B5-NW1233	B5-NW1232	B5-NW1233	1.0971	0.0068	0.0436
1095		B5-NW1233_B5-NW1219	B5-NW1233	B5-NW1219	2.3362	0.0149	0.0934
1096		B5-NW1249_B5-NW1250	B5-NW1249	B5-NW1250	4.5109	0.0288	0.1041
1097		B5-NW1250_B5-NW1251	B5-NW1250	B5-NW1251	6.1810	0.0395	0.1222
1098		B5-NW1251_B5-NW1252	B5-NW1251	B5-NW1252	8.0663	0.0515	0.1317
1099		B5-NW1252_B5-NW1253	B5-NW1252	B5-NW1253	9.5778	0.0611	0.1558
1100		B5-NW1253_B5-NW1257	B5-NW1253	B5-NW1257	16.1424	0.6829	0.1781
1101		B5-NW1254_B5-NW9124	B5-NW1254	B5-NW9124	4.3549	0.0278	0.1023
1102		B5-NW1255_B5-NW1254	B5-NW1255	B5-NW1254	3.4101	0.0218	0.0946
1103		B5-NW1256_B5-NW1255	B5-NW1256	B5-NW1255	1.2864	0.0081	0.0701
1104		B5-NW1257_B5-NW1258	B5-NW1257	B5-NW1258	17.2963	0.1104	0.1949
1105		B5-NW1258_B5-NW1318	B5-NW1258	B5-NW1318	18.9603	0.8059	0.2076
1106		B5-NW1259_B5-NW1261	B5-NW1259	B5-NW1261	0.4223	0.2740	0.0372
1107		B5-NW1260_B5-NW1261	B5-NW1260	B5-NW1261	1.0967	0.0068	0.0451
1108		B5-NW1261_B5-NW1262	B5-NW1261	B5-NW1262	1.7062	0.0109	0.0573
1109		B5-NW1262_B5-NW1317	B5-NW1262	B5-NW1317	2.4745	0.0158	0.0702
1110		B5-NW1263_B5-NW1264	B5-NW1263	B5-NW1264	5.0912	0.0325	0.1116
1111		B5-NW1264_B5-NW1267	B5-NW1264	B5-NW1267	10.8400	0.0692	0.1466
1112		B5-NW1265_B5-NW1266	B5-NW1265	B5-NW1266	0.4607	0.0029	0.0353
1113		B5-NW1266_B5-NW1264	B5-NW1266	B5-NW1264	1.1451	0.0073	0.0818
1114		B5-NW1267_B5-NW1271	B5-NW1267	B5-NW1271	13.9616	0.7801	0.1716
1115		B5-NW1268_B5-NW1267	B5-NW1268	B5-NW1267	1.9231	0.0123	0.1152
1116		B5-NW1269_B5-NW1268	B5-NW1269	B5-NW1268	0.5885	0.0037	0.0465
1117		B5-NW1270_B5-NW1271	B5-NW1270	B5-NW1271	1.3595	0.0084	0.1026
1118		B5-NW1271_B5-NW1272	B5-NW1271	B5-NW1272	16.8006	0.1072	0.1784
1119		B5-NW1272_B5-NW1279	B5-NW1272	B5-NW1279	18.2348	0.6633	0.2039
1120		B5-NW1273_B5-NW1274	B5-NW1273	B5-NW1274	1.5906	0.0099	0.0803

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1121		B5-NW1274_B5-NW1280	B5-NW1274	B5-NW1280	7.4065	0.0473	0.1274
1122		B5-NW1275_B5-NW1274	B5-NW1275	B5-NW1274	4.8334	0.6212	0.0969
1123		B5-NW1276_B5-NW1275	B5-NW1276	B5-NW1275	3.4007	0.0217	0.0901
1124		B5-NW1277_B5-NW1276	B5-NW1277	B5-NW1276	1.7974	0.0114	0.0719
1125		B5-NW1278_B5-NW1277	B5-NW1278	B5-NW1277	0.9587	0.0060	0.0499
1126		B5-NW1279_B5-NW1282	B5-NW1279	B5-NW1282	22.8763	0.9188	0.2160
1127		B5-NW1280_B5-NW1281	B5-NW1280	B5-NW1281	9.3612	0.0598	0.1436
1128		B5-NW1281_B5-NW1321	B5-NW1281	B5-NW1321	10.9419	0.7437	0.1498
1129		B5-NW1282_B5-NW1283	B5-NW1282	B5-NW1283	24.2641	0.3449	0.2217
1130		B5-NW1283_B5-NW1327	B5-NW1283	B5-NW1327	26.8025	0.9596	0.2342
1131		B5-NW1284_B5-NW1328	B5-NW1284	B5-NW1328	1.4260	0.4140	0.0551
1132		B5-NW1285_B5-NW1264	B5-NW1285	B5-NW1264	3.6206	0.3555	0.1164
1133		B5-NW1286_B5-NW1287	B5-NW1286	B5-NW1287	2.0757	0.0129	0.0787
1134		B5-NW1287_B5-NW1289	B5-NW1287	B5-NW1289	4.8495	0.5935	0.1001
1135		B5-NW1288_B5-NW1287	B5-NW1288	B5-NW1287	0.6606	0.3878	0.0345
1136		B5-NW1289_B5-NW1167	B5-NW1289	B5-NW1167	6.8279	0.0436	0.0902
1137		B5-NW1291_B5-NW1168	B5-NW1291	B5-NW1168	12.7439	0.9779	0.1378
1138		B5-NW1292_B5-NW1291	B5-NW1292	B5-NW1291	3.7153	0.0237	0.0972
1139		B5-NW1293_B5-NW1292	B5-NW1293	B5-NW1292	1.4688	0.0091	0.0531
1140		B5-NW1295_B5-NW1170	B5-NW1295	B5-NW1170	0.0472	0.0003	0.0074
1141		B5-NW1296_B5-NW9141	B5-NW1296	B5-NW9141	10.5249	0.4651	0.1616
1142		B5-NW1297_B5-NW1296	B5-NW1297	B5-NW1296	9.5684	0.9064	0.1193
1143		B5-NW1298_B5-NW1297	B5-NW1298	B5-NW1297	1.5957	0.0099	0.0775
1144		B5-NW1299_B5-NW1297	B5-NW1299	B5-NW1297	6.8580	0.9056	0.0951
1145		B5-NW1300_B5-NW1299	B5-NW1300	B5-NW1299	3.5687	0.0228	0.0850
1146		B5-NW1301_B5-NW1300	B5-NW1301	B5-NW1300	2.0655	0.0131	0.0695
1147		B5-NW1302_B5-NW1301	B5-NW1302	B5-NW1301	0.0172	0.0000	0.0000
1148		B5-NW1303_B5-NW1301	B5-NW1303	B5-NW1301	1.2521	0.0077	0.0516
1149		B5-NW1304_B5-NW1303	B5-NW1304	B5-NW1303	1.0769	0.4958	0.0406
1150		B5-NW1305_B5-NW1304	B5-NW1305	B5-NW1304	1.0420	0.0065	0.0356
1151		B5-NW1306_B5-NW1299	B5-NW1306	B5-NW1299	2.1683	0.0138	0.0678
1152		B5-NW1307_B5-NW1306	B5-NW1307	B5-NW1306	0.4097	0.0025	0.0346
1153		B5-NW1308_B5-NW1402	B5-NW1308	B5-NW1402	114.0332	0.4658	0.2891
1154		B5-NW1309_B5-NW1308	B5-NW1309	B5-NW1308	113.6843	1.5657	0.3373
1155		B5-NW1310_B5-NW1309	B5-NW1310	B5-NW1309	112.7821	1.5403	0.3394
1156		B5-NW1311_B5-NW1310	B5-NW1311	B5-NW1310	111.9263	1.5261	0.3398
1157		B5-NW1312_B5-NW1311	B5-NW1312	B5-NW1311	111.0239	1.5037	0.3415
1158		B5-NW1313_B5-NW1312	B5-NW1313	B5-NW1312	109.8445	1.1858	0.3371
1159		B5-NW1314_B5-NW1313	B5-NW1314	B5-NW1313	109.7266	1.5349	0.3325
1160		B5-NW1315_B5-NW1316	B5-NW1315	B5-NW1316	26.3866	0.1684	0.2474
1161		B5-NW1316_B5-NW1314	B5-NW1316	B5-NW1314	41.9767	1.1618	0.2812
1162		B5-NW1317_B5-NW1315	B5-NW1317	B5-NW1315	3.3997	0.6686	0.0726
1163		B5-NW1318_B5-NW1319	B5-NW1318	B5-NW1319	20.4681	1.0688	0.1798
1164		B5-NW1319_B5-NW1315	B5-NW1319	B5-NW1315	22.4056	0.1430	0.1917
1165		B5-NW1320_B5-NW1319	B5-NW1320	B5-NW1319	1.0221	0.0063	0.1008
1166		B5-NW1321_B5-NW1322	B5-NW1321	B5-NW1322	12.3989	0.0791	0.1495
1167		B5-NW1322_B5-NW1323	B5-NW1322	B5-NW1323	13.8917	0.8688	0.1587
1168		B5-NW1323_B5-NW1316	B5-NW1323	B5-NW1316	15.0461	0.9798	0.1543
1169		B5-NW1324_B5-NW1314	B5-NW1324	B5-NW1314	53.5043	0.2186	0.2891
1170		B5-NW1325_B5-NW1324	B5-NW1325	B5-NW1324	52.0355	1.0758	0.2519
1171		B5-NW1326_B5-NW1325	B5-NW1326	B5-NW1325	30.3220	1.0355	0.2422
1172		B5-NW1327_B5-NW1326	B5-NW1327	B5-NW1326	28.3765	0.1811	0.2339
1173		B5-NW1328_B5-NW1283	B5-NW1328	B5-NW1283	2.1200	0.5162	0.0659
1174		B5-NW1329_B5-NW1330	B5-NW1329	B5-NW1330	0.5452	0.0034	0.0484
1175		B5-NW1330_B5-NW1331	B5-NW1330	B5-NW1331	1.8845	0.0120	0.0686
1176		B5-NW1331_B5-NW1332	B5-NW1331	B5-NW1332	3.1558	0.5733	0.0766

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1177		B5-NW1332_B5-NW1325	B5-NW1332	B5-NW1325	11.3149	0.0722	0.2291
1178		B5-NW1333_B5-NW1332	B5-NW1333	B5-NW1332	6.1382	0.0392	0.1215
1179		B5-NW1334_B5-NW1333	B5-NW1334	B5-NW1333	4.0226	0.0257	0.0930
1180		B5-NW1335_B5-NW1334	B5-NW1335	B5-NW1334	2.9589	0.2129	0.1441
1181		B5-NW1336_B5-NW1325	B5-NW1336	B5-NW1325	9.0468	0.6630	0.1423
1182		B5-NW1337_B5-NW1343	B5-NW1337	B5-NW1343	0.8575	0.0053	0.0488
1183		B5-NW1338_B5-NW1344	B5-NW1338	B5-NW1344	0.8969	0.0056	0.0503
1184		B5-NW1339_B5-NW1345	B5-NW1339	B5-NW1345	0.9289	0.0058	0.0503
1185		B5-NW1340_B5-NW1346	B5-NW1340	B5-NW1346	1.0351	0.0064	0.0524
1186		B5-NW1341_B5-NW1342	B5-NW1341	B5-NW1342	0.0790	0.0005	0.0473
1187		B5-NW1342_B5-NW9142	B5-NW1342	B5-NW9142	1.3748	0.2169	0.0843
1188		B5-NW1343_B5-NW1347	B5-NW1343	B5-NW1347	2.2340	0.0142	0.0693
1189		B5-NW1344_B5-NW1348	B5-NW1344	B5-NW1348	2.3601	0.0151	0.0690
1190		B5-NW1345_B5-NW1349	B5-NW1345	B5-NW1349	2.4069	0.0153	0.0674
1191		B5-NW1346_B5-NW1350	B5-NW1346	B5-NW1350	2.5671	0.0164	0.0700
1192		B5-NW1347_B5-NW1351	B5-NW1347	B5-NW1351	3.9982	0.0255	0.0849
1193		B5-NW1348_B5-NW1352	B5-NW1348	B5-NW1352	4.2005	0.0268	0.0967
1194		B5-NW1349_B5-NW1353	B5-NW1349	B5-NW1353	4.2548	0.0272	0.1071
1195		B5-NW1350_B5-NW1354	B5-NW1350	B5-NW1354	4.4355	0.0283	0.0964
1196		B5-NW1351_B5-NW1365	B5-NW1351	B5-NW1365	5.1397	0.0328	0.0998
1197		B5-NW1352_B5-NW1366	B5-NW1352	B5-NW1366	5.4573	0.5071	0.1209
1198		B5-NW1353_B5-NW1367	B5-NW1353	B5-NW1367	5.5314	0.3975	0.1442
1199		B5-NW1354_B5-NW1368	B5-NW1354	B5-NW1368	5.6536	0.5286	0.1204
1200		B5-NW1355_B5-NW1369	B5-NW1355	B5-NW1369	7.2064	0.0460	0.1189
1201		B5-NW1356_B5-NW1355	B5-NW1356	B5-NW1355	6.3695	0.6400	0.1146
1202		B5-NW1357_B5-NW1356	B5-NW1357	B5-NW1356	2.8011	0.5681	0.0711
1203		B5-NW1358_B5-NW1357	B5-NW1358	B5-NW1357	1.4710	0.0094	0.0618
1204		B5-NW1359_B5-NW1358	B5-NW1359	B5-NW1358	1.2245	0.0078	0.0502
1205		B5-NW1360_B5-NW1359	B5-NW1360	B5-NW1359	1.1389	0.4347	0.0462
1206		B5-NW1361_B5-NW1359	B5-NW1361	B5-NW1359	0.1013	0.0006	0.0325
1207		B5-NW1362_B5-NW1363	B5-NW1362	B5-NW1363	1.2197	0.0076	0.1010
1208		B5-NW1363_B5-NW1314	B5-NW1363	B5-NW1314	13.6844	0.7706	0.1706
1209		B5-NW1364_B5-NW1363	B5-NW1364	B5-NW1363	12.4049	0.2968	0.1494
1210		B5-NW1365_B5-NW1377	B5-NW1365	B5-NW1377	6.7514	0.0431	0.1147
1211		B5-NW1366_B5-NW1378	B5-NW1366	B5-NW1378	7.0410	0.0449	0.1091
1212		B5-NW1367_B5-NW1379	B5-NW1367	B5-NW1379	7.1169	0.0454	0.1187
1213		B5-NW1368_B5-NW1380	B5-NW1368	B5-NW1380	7.3577	0.5528	0.1210
1214		B5-NW1369_B5-NW1370	B5-NW1369	B5-NW1370	10.9158	0.0697	0.1600
1215		B5-NW1370_B5-NW1376	B5-NW1370	B5-NW1376	16.5159	0.8540	0.1811
1216		B5-NW1371_B5-NW1370	B5-NW1371	B5-NW1370	4.0023	0.6216	0.0852
1217		B5-NW1372_B5-NW1371	B5-NW1372	B5-NW1371	1.9287	0.0121	0.0730
1218		B5-NW1373_B5-NW1374	B5-NW1373	B5-NW1374	0.1413	0.0009	0.0337
1219		B5-NW1374_B5-NW1375	B5-NW1374	B5-NW1375	0.5057	0.0032	0.0539
1220		B5-NW1375_B5-NW1369	B5-NW1375	B5-NW1369	2.4347	0.6763	0.0575
1221		B5-NW1376_B5-NW1381	B5-NW1376	B5-NW1381	17.4874	0.1116	0.1957
1222		B5-NW1377_B5-NW1419	B5-NW1377	B5-NW1419	8.6065	0.7618	0.1250
1223		B5-NW1378_B5-NW1383	B5-NW1378	B5-NW1383	8.6408	0.0552	0.1951
1224		B5-NW1379_B5-NW1382	B5-NW1379	B5-NW1382	8.7737	0.0560	0.1849
1225		B5-NW1380_B5-NW1381	B5-NW1380	B5-NW1381	9.1027	0.8350	0.1219
1226		B5-NW1381_B5-NW1382	B5-NW1381	B5-NW1382	27.0834	0.1729	0.2333
1227		B5-NW1382_B5-NW1383	B5-NW1382	B5-NW1383	36.4726	1.2276	0.2447
1228		B5-NW1383_B5-NW1421	B5-NW1383	B5-NW1421	46.4906	0.8747	0.2811
1229		B5-NW1384_B5-NW1385	B5-NW1384	B5-NW1385	0.7693	0.3040	0.0751
1230		B5-NW1385_B5-NW1336	B5-NW1385	B5-NW1336	6.9127	0.0441	0.1269
1231		B5-NW1386_B5-NW1385	B5-NW1386	B5-NW1385	5.3866	0.0344	0.1091
1232		B5-NW1387_B5-NW1386	B5-NW1387	B5-NW1386	2.0674	0.0131	0.0863

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1233		B5-NW1388_B5-NW1364	B5-NW1388	B5-NW1364	12.0088	0.6928	0.1678
1234		B5-NW1389_B5-NW1388	B5-NW1389	B5-NW1388	11.7245	0.0748	0.1566
1235		B5-NW1390_B5-NW1389	B5-NW1390	B5-NW1389	2.4424	0.5166	0.0691
1236		B5-NW1391_B5-NW1389	B5-NW1391	B5-NW1389	9.0421	0.0577	0.1420
1237		B5-NW1392_B5-NW1391	B5-NW1392	B5-NW1391	4.6613	0.6378	0.0928
1238		B5-NW1393_B5-NW1392	B5-NW1393	B5-NW1392	3.9863	0.5306	0.0926
1239		B5-NW1394_B5-NW1393	B5-NW1394	B5-NW1393	1.3297	0.0085	0.0762
1240		B5-NW1395_B5-NW1391	B5-NW1395	B5-NW1391	4.0416	0.0258	0.1158
1241		B5-NW1396_B5-NW1395	B5-NW1396	B5-NW1395	2.3807	0.7224	0.0541
1242		B5-NW1397_B5-NW1395	B5-NW1397	B5-NW1395	1.5916	0.0100	0.0742
1243		B5-NW1398_B5-NW1400	B5-NW1398	B5-NW1400	0.7036	0.4251	0.0340
1244		B5-NW1399_B5-NW1398	B5-NW1399	B5-NW1398	0.5088	0.2907	0.0321
1245		B5-NW1400_B5-NW1333	B5-NW1400	B5-NW1333	1.0077	0.4451	0.0640
1246		B5-NW1401_B5-NW1168	B5-NW1401	B5-NW1168	0.6231	0.0039	0.0755
1247		B5-NW1402_B5-M14467	B5-NW1402	B5-M14467	214.5621	1.0070	0.1451
1248		B5-NW1403_B5-NW1172	B5-NW1403	B5-NW1172	0.8207	0.0052	0.0439
1249		B5-NW1404_B5-NW1408	B5-NW1404	B5-NW1408	1.6774	0.0107	0.0547
1250		B5-NW1405_B5-NW1211	B5-NW1405	B5-NW1211	2.2565	0.0144	0.2920
1251		B5-NW1406_B5-NW1404	B5-NW1406	B5-NW1404	0.9696	0.0060	0.0466
1252		B5-NW1408_B5-NW1409	B5-NW1408	B5-NW1409	2.7489	0.0175	0.0663
1253		B5-NW1409_B5-NW1174	B5-NW1409	B5-NW1174	3.3783	0.0216	0.0786
1254		B5-NW1412_B5-NW1413	B5-NW1412	B5-NW1413	4.5253	0.6727	0.0877
1255		B5-NW1413_B5-NW1415	B5-NW1413	B5-NW1415	5.0873	0.5920	0.0871
1256		B5-NW1415_B5-NW1416	B5-NW1415	B5-NW1416	5.8542	0.0374	0.1658
1257		B5-NW1416_B5-NW1417	B5-NW1416	B5-NW1417	74.2506	2.2242	0.1941
1258		B5-NW1417_B5-NW2429	B5-NW1417	B5-NW2429	674.2754	2.3967	0.2148
1259		B5-NW1418_B5-NW1416	B5-NW1418	B5-NW1416	67.5735	1.3880	0.3490
1260		B5-NW1419_B5-NW1420	B5-NW1419	B5-NW1420	9.9698	0.0636	0.1321
1261		B5-NW1420_B5-NW1418	B5-NW1420	B5-NW1418	11.5297	0.8746	0.1389
1262		B5-NW1421_B5-NW1422	B5-NW1421	B5-NW1422	48.4513	0.7783	0.2940
1263		B5-NW1422_B5-NW1418	B5-NW1422	B5-NW1418	51.7706	0.3304	0.3253
1264		B5-NW1424_B5-NW1428	B5-NW1424	B5-NW1428	1.0689	0.0066	0.0559
1265		B5-NW1425_B5-NW1429	B5-NW1425	B5-NW1429	0.9304	0.0058	0.0532
1266		B5-NW1426_B5-NW1427	B5-NW1426	B5-NW1427	0.7599	0.0047	0.0804
1267		B5-NW1427_B5-NW1437	B5-NW1427	B5-NW1437	9.1876	0.0586	0.1666
1268		B5-NW1428_B5-NW1449	B5-NW1428	B5-NW1449	2.9551	0.0189	0.0783
1269		B5-NW1429_B5-NW1450	B5-NW1429	B5-NW1450	2.7793	0.0177	0.0772
1270		B5-NW1430_B5-NW1427	B5-NW1430	B5-NW1427	6.9452	0.6423	0.1213
1271		B5-NW1431_B5-NW1430	B5-NW1431	B5-NW1430	4.4509	0.0284	0.1066
1272		B5-NW1432_B5-NW1431	B5-NW1432	B5-NW1431	2.0011	0.0128	0.0804
1273		B5-NW1433_B5-NW1432	B5-NW1433	B5-NW1432	0.1547	0.0309	0.0718
1274		B5-NW1433_B5-NW1434	B5-NW1433	B5-NW1434	2.9064	0.0185	0.0916
1275		B5-NW1434_B5-NW1435	B5-NW1434	B5-NW1435	5.8896	0.0376	0.1166
1276		B5-NW1435_B5-NW1436	B5-NW1435	B5-NW1436	7.5028	0.0479	0.1309
1277		B5-NW1436_B5-NW1437	B5-NW1436	B5-NW1437	9.4387	0.7069	0.1401
1278		B5-NW1437_B5-NW1438	B5-NW1437	B5-NW1438	20.3706	0.1300	0.2165
1279		B5-NW1438_B5-NW1441	B5-NW1438	B5-NW1441	27.6504	0.1765	0.2419
1280		B5-NW1439_B5-NW1438	B5-NW1439	B5-NW1438	5.9437	0.7806	0.0954
1281		B5-NW1440_B5-NW1439	B5-NW1440	B5-NW1439	4.4071	0.0278	0.0910
1282		B5-NW1441_B5-NW1446	B5-NW1441	B5-NW1446	31.3280	1.0087	0.2525
1283		B5-NW1442_B5-NW1441	B5-NW1442	B5-NW1441	2.6838	0.7142	0.0589
1284		B5-NW1443_B5-NW1442	B5-NW1443	B5-NW1442	1.8038	0.0113	0.0537
1285		B5-NW1444_B5-NW1445	B5-NW1444	B5-NW1445	1.2712	0.0080	0.0548
1286		B5-NW1445_B5-NW1446	B5-NW1445	B5-NW1446	1.8287	0.0117	0.1758
1287		B5-NW1446_B5-NW1447	B5-NW1446	B5-NW1447	33.6111	0.8715	0.2947
1288		B5-NW1447_B5-NW1448	B5-NW1447	B5-NW1448	40.9105	1.2219	0.2663

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1289		B5-NW1448_B5-NW1453	B5-NW1448	B5-NW1453	49.2917	0.3210	0.3420
1290		B5-NW1449_B5-NW1451	B5-NW1449	B5-NW1451	4.7648	0.0304	0.0983
1291		B5-NW1450_B5-NW1452	B5-NW1450	B5-NW1452	4.6885	0.0299	0.0985
1292		B5-NW1451_B5-NW1448	B5-NW1451	B5-NW1448	7.8506	0.0501	0.1820
1293		B5-NW1452_B5-NW1447	B5-NW1452	B5-NW1447	6.5137	0.0416	0.1886
1294		B5-NW1453_B5-NW1461	B5-NW1453	B5-NW1461	68.2264	1.0591	0.4300
1295		B5-NW1454_B5-NW1453	B5-NW1454	B5-NW1453	18.0345	0.7783	0.2054
1296		B5-NW1455_B5-NW1454	B5-NW1455	B5-NW1454	15.8075	0.1009	0.1946
1297		B5-NW1456_B5-NW1455	B5-NW1456	B5-NW1455	12.7068	0.0811	0.1703
1298		B5-NW1457_B5-NW1456	B5-NW1457	B5-NW1456	12.6749	0.5938	0.1452
1299		B5-NW1458_B5-NW1457	B5-NW1458	B5-NW1457	8.2374	0.0526	0.1299
1300		B5-NW1459_B5-NW1458	B5-NW1459	B5-NW1458	7.3572	0.6369	0.1269
1301		B5-NW1460_B5-NW1459	B5-NW1460	B5-NW1459	2.6232	0.0167	0.1228
1302		B5-NW1461_B5-NW1935	B5-NW1461	B5-NW1935	71.6946	1.1908	0.4086
1303		B5-NW1462_B5-NW1461	B5-NW1462	B5-NW1461	2.2379	0.4503	0.1238
1304		B5-NW1464_B5-NW2429	B5-NW1464	B5-NW2429	19.9606	0.2905	0.4517
1305		B5-NW1466_B5-M14456	B5-NW1466	B5-M14456	779.7040	1.2430	0.2285
1306		B5-NW1467_B5-NW1468	B5-NW1467	B5-NW1468	0.5365	0.0034	0.0461
1307		B5-NW1468_B5-NW1475	B5-NW1468	B5-NW1475	1.4982	0.0096	0.0655
1308		B5-NW1469_B5-NW1470	B5-NW1469	B5-NW1470	0.8205	0.0052	0.0557
1309		B5-NW1470_B5-NW1474	B5-NW1470	B5-NW1474	2.0884	0.0133	0.0781
1310		B5-NW1471_B5-NW1470	B5-NW1471	B5-NW1470	0.5103	0.0033	0.0512
1311		B5-NW1472_B5-NW1471	B5-NW1472	B5-NW1471	0.2606	0.0016	0.0303
1312		B5-NW1473_B5-NW1474	B5-NW1473	B5-NW1474	0.9143	0.0058	0.0672
1313		B5-NW1474_B5-NW1477	B5-NW1474	B5-NW1477	3.6627	0.0234	0.1042
1314		B5-NW1475_B5-NW1476	B5-NW1475	B5-NW1476	2.4891	0.0159	0.0782
1315		B5-NW1476_B5-NW1477	B5-NW1476	B5-NW1477	3.1179	0.0199	0.1011
1316		B5-NW1477_B5-NW9133	B5-NW1477	B5-NW9133	7.3289	0.6918	0.1196
1317		B5-NW1478_B5-NW1522	B5-NW1478	B5-NW1522	11.5985	0.8765	0.1393
1318		B5-NW1479_B5-NW9133	B5-NW1479	B5-NW9133	2.9550	0.0189	0.1040
1319		B5-NW1480_B5-NW1479	B5-NW1480	B5-NW1479	1.8563	0.0118	0.0667
1320		B5-NW1481_B5-NW1480	B5-NW1481	B5-NW1480	0.5128	0.0032	0.0447
1321		B5-NW1482_B5-NW1483	B5-NW1482	B5-NW1483	0.4333	0.0027	0.0424
1322		B5-NW1483_B5-NW1484	B5-NW1483	B5-NW1484	1.3521	0.4145	0.0538
1323		B5-NW1484_B5-NW1485	B5-NW1484	B5-NW1485	2.7024	0.2180	0.0770
1324		B5-NW1485_B5-NW1486	B5-NW1485	B5-NW1486	3.2501	0.5644	0.0790
1325		B5-NW1486_B5-NW1487	B5-NW1486	B5-NW1487	3.4568	0.2714	0.0818
1326		B5-NW1487_B5-NW1494	B5-NW1487	B5-NW1494	5.2506	0.0335	0.1250
1327		B5-NW1488_B5-NW1487	B5-NW1488	B5-NW1487	1.6366	0.5944	0.0479
1328		B5-NW1489_B5-NW1484	B5-NW1489	B5-NW1484	0.9915	0.2773	0.0596
1329		B5-NW1490_B5-NW1489	B5-NW1490	B5-NW1489	0.4162	0.0026	0.0376
1330		B5-NW1491_B5-NW1492	B5-NW1491	B5-NW1492	0.8301	0.0051	0.0493
1331		B5-NW1492_B5-NW1493	B5-NW1492	B5-NW1493	2.4792	0.0158	0.0663
1332		B5-NW1493_B5-NW1494	B5-NW1493	B5-NW1494	3.5327	0.7518	0.0688
1333		B5-NW1494_B5-NW1503	B5-NW1494	B5-NW1503	12.1761	0.0777	0.1664
1334		B5-NW1495_B5-NW1496	B5-NW1495	B5-NW1496	2.1814	0.2802	0.0700
1335		B5-NW1496_B5-NW1494	B5-NW1496	B5-NW1494	2.9250	0.5771	0.0724
1336		B5-NW1497_B5-NW1495	B5-NW1497	B5-NW1495	1.3859	0.0088	0.0640
1337		B5-NW1498_B5-NW1497	B5-NW1498	B5-NW1497	0.5549	0.0035	0.0467
1338		B5-NW1499_B5-NW1500	B5-NW1499	B5-NW1500	1.0048	0.0063	0.0593
1339		B5-NW1500_B5-NW1501	B5-NW1500	B5-NW1501	2.2610	0.3992	0.0749
1340		B5-NW1501_B5-NW1502	B5-NW1501	B5-NW1502	2.9931	0.2875	0.0813
1341		B5-NW1502_B5-NW1503	B5-NW1502	B5-NW1503	4.0858	0.6153	0.0870
1342		B5-NW1503_B5-NW1504	B5-NW1503	B5-NW1504	17.7281	0.9121	0.1817
1343		B5-NW1504_B5-NW1505	B5-NW1504	B5-NW1505	18.4992	0.1181	0.1767
1344		B5-NW1505_B5-NW1523	B5-NW1505	B5-NW1523	24.0393	0.1534	0.2241

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1345		B5-NW1506_B5-NW1505	B5-NW1506	B5-NW1505	4.6175	0.0295	0.1426
1346		B5-NW1507_B5-NW1506	B5-NW1507	B5-NW1506	3.4885	0.0223	0.0906
1347		B5-NW1508_B5-NW1507	B5-NW1508	B5-NW1507	2.5896	0.0165	0.0834
1348		B5-NW1509_B5-NW1508	B5-NW1509	B5-NW1508	1.1235	0.0071	0.0644
1349		B5-NW1510_B5-NW1511	B5-NW1510	B5-NW1511	1.2548	0.0078	0.0576
1350		B5-NW1511_B5-NW1512	B5-NW1511	B5-NW1512	2.8843	0.0184	0.0762
1351		B5-NW1512_B5-NW1513	B5-NW1512	B5-NW1513	4.5484	0.0290	0.1002
1352		B5-NW1513_B5-NW1516	B5-NW1513	B5-NW1516	9.4278	0.9274	0.1162
1353		B5-NW1514_B5-NW1513	B5-NW1514	B5-NW1513	3.3359	0.5669	0.0801
1354		B5-NW1515_B5-NW1514	B5-NW1515	B5-NW1514	1.2499	0.0078	0.0642
1355		B5-NW1516_B5-NW1517	B5-NW1516	B5-NW1517	10.0622	0.3562	0.1162
1356		B5-NW1517_B5-NW1518	B5-NW1517	B5-NW1518	10.3739	0.0662	0.1886
1357		B5-NW1518_B5-NW1571	B5-NW1518	B5-NW1571	42.2717	0.2698	0.2621
1358		B5-NW1519_B5-NW1518	B5-NW1519	B5-NW1518	31.0406	0.9947	0.2533
1359		B5-NW1520_B5-NW1519	B5-NW1520	B5-NW1519	29.2922	0.7206	0.2392
1360		B5-NW1521_B5-NW1520	B5-NW1521	B5-NW1520	27.5396	1.0408	0.2254
1361		B5-NW1522_B5-NW9208	B5-NW1522	B5-NW9208	19.7507	1.0351	0.1794
1362		B5-NW1523_B5-NW2458	B5-NW1523	B5-NW2458	24.4934	0.7677	0.2574
1363		B5-NW1524_B5-NW1525	B5-NW1524	B5-NW1525	55.4855	0.3542	0.3445
1364		B5-NW1525_B5-NW1526	B5-NW1525	B5-NW1526	70.7037	0.9237	0.3839
1365		B5-NW1526_B5-NW1531	B5-NW1526	B5-NW1531	78.4272	1.3831	0.3907
1366		B5-NW1527_B5-NW1528	B5-NW1527	B5-NW1528	1.2081	0.0075	0.0545
1367		B5-NW1528_B5-NW1529	B5-NW1528	B5-NW1529	2.6661	0.0170	0.0732
1368		B5-NW1529_B5-NW1530	B5-NW1529	B5-NW1530	4.2023	0.0268	0.0877
1369		B5-NW1530_B5-NW9214	B5-NW1530	B5-NW9214	5.3669	0.0343	0.0996
1370		B5-NW1531_B5-NW2453	B5-NW1531	B5-NW2453	84.9897	0.3472	0.3317
1371		B5-NW1532_B5-NW1533	B5-NW1532	B5-NW1533	95.7384	1.2924	0.3423
1372		B5-NW1533_B5-NW1534	B5-NW1533	B5-NW1534	98.0724	1.5111	0.3109
1373		B5-NW1534_B5-M14695	B5-NW1534	B5-NW2450	198.4521	1.4660	0.4084
1374		B5-NW1535_B5-NW1566	B5-NW1535	B5-NW1566	3.4264	0.0218	0.0864
1375		B5-NW1536_B5-NW1565	B5-NW1536	B5-NW1565	8.2947	0.9338	0.1060
1376		B5-NW1537_B5-NW1564	B5-NW1537	B5-NW1564	6.3096	0.9724	0.0856
1377		B5-NW1538_B5-NW1549	B5-NW1538	B5-NW1549	14.4465	1.1498	0.1344
1378		B5-NW1539_B5-NW1548	B5-NW1539	B5-NW1548	4.3854	0.0279	0.0866
1379		B5-NW1540_B5-NW1547	B5-NW1540	B5-NW1547	2.2711	0.0145	0.0665
1380		B5-NW1541_B5-NW1546	B5-NW1541	B5-NW1546	2.0350	0.0130	0.0610
1381		B5-NW1542_B5-NW1543	B5-NW1542	B5-NW1543	0.2846	0.0018	0.0267
1382		B5-NW1543_B5-NW1544	B5-NW1543	B5-NW1544	0.6522	0.0042	0.0343
1383		B5-NW1544_B5-NW1545	B5-NW1544	B5-NW1545	0.9708	0.4883	0.0385
1384		B5-NW1545_B5-NW1554	B5-NW1545	B5-NW1554	5.8692	0.0375	0.0972
1385		B5-NW1546_B5-NW1545	B5-NW1546	B5-NW1545	3.5112	0.0224	0.0722
1386		B5-NW1547_B5-NW1554	B5-NW1547	B5-NW1554	3.9414	0.7416	0.0748
1387		B5-NW1548_B5-NW1553	B5-NW1548	B5-NW1553	5.9850	0.8170	0.0930
1388		B5-NW1549_B5-NW1550	B5-NW1549	B5-NW1550	15.7005	0.1002	0.1436
1389		B5-NW1550_B5-NW1556	B5-NW1550	B5-NW1556	35.5021	0.2266	0.2269
1390		B5-NW1551_B5-NW1550	B5-NW1551	B5-NW1550	19.1233	0.8496	0.2013
1391		B5-NW1552_B5-NW1551	B5-NW1552	B5-NW1551	18.5723	0.2101	0.1910
1392		B5-NW1553_B5-NW1552	B5-NW1553	B5-NW1552	18.3156	0.8794	0.1906
1393		B5-NW1554_B5-NW1553	B5-NW1554	B5-NW1553	11.4552	0.0731	0.1541
1394		B5-NW1555_B5-NW2458	B5-NW1555	B5-NW2458	5.2280	0.6076	0.1037
1395		B5-NW1556_B5-NW9228	B5-NW1556	B5-NW9228	35.7961	0.2529	0.3373
1396		B5-NW1557_B5-NW1541	B5-NW1557	B5-NW1541	0.6307	0.0039	0.0401
1397		B5-NW1558_B5-NW1540	B5-NW1558	B5-NW1540	0.7106	0.0044	0.0416
1398		B5-NW1559_B5-NW1539	B5-NW1559	B5-NW1539	2.9590	0.0182	0.0635
1399		B5-NW1560_B5-NW1538	B5-NW1560	B5-NW1538	12.4271	0.0783	0.1315
1400		B5-NW1561_B5-NW1537	B5-NW1561	B5-NW1537	4.2584	0.0263	0.0787

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1401		B5-NW1562_B5-NW1536	B5-NW1562	B5-NW1536	6.4908	0.0403	0.0957
1402		B5-NW1563_B5-NW1535	B5-NW1563	B5-NW1535	1.3440	0.0082	0.0497
1403		B5-NW1564_B5-NW1998	B5-NW1564	B5-NW1998	7.7052	0.0492	0.1311
1404		B5-NW1565_B5-NW9212	B5-NW1565	B5-NW9212	9.6708	0.5403	0.1124
1405		B5-NW1566_B5-NW1526	B5-NW1566	B5-NW1526	6.4673	0.4958	0.1994
1406		B5-NW1566_B5-NW9226	B5-NW1566	B5-NW9226	9.1440	0.9361	0.1131
1407		B5-NW1567_B5-NW1568	B5-NW1567	B5-NW1568	3.6797	0.0235	0.0925
1408		B5-NW1568_B5-NW1569	B5-NW1568	B5-NW1569	4.8395	0.0309	0.1061
1409		B5-NW1569_B5-NW1570	B5-NW1569	B5-NW1570	6.0051	0.0383	0.1161
1410		B5-NW1570_B5-NW9216	B5-NW1570	B5-NW9216	7.1449	0.0456	0.1268
1411		B5-NW1571_B5-NW1576	B5-NW1571	B5-NW1576	42.7426	0.2728	0.2821
1412		B5-NW1572_B5-NW2368	B5-NW1572	B5-NW2368	63.4058	0.4047	0.3627
1413		B5-NW1573_B5-NW1574	B5-NW1573	B5-NW1574	9.0910	0.0580	0.1424
1414		B5-NW1574_B5-NW1575	B5-NW1574	B5-NW1575	10.8289	0.7313	0.1505
1415		B5-NW1575_B5-NW1572	B5-NW1575	B5-NW1572	12.1883	0.8426	0.1481
1416		B5-NW1576_B5-NW1577	B5-NW1576	B5-NW1577	49.4103	1.2633	0.2977
1417		B5-NW1577_B5-NW1572	B5-NW1577	B5-NW1572	50.2724	0.3209	0.3094
1418		B5-NW1578_B5-NW1579	B5-NW1578	B5-NW1579	1.3384	0.0084	0.0681
1419		B5-NW1579_B5-NW1580	B5-NW1579	B5-NW1580	3.4394	0.0220	0.0928
1420		B5-NW1580_B5-NW1576	B5-NW1580	B5-NW1576	5.4608	0.6456	0.1025
1421		B5-NW1581_B5-NW1521	B5-NW1581	B5-NW1521	0.7824	0.0050	0.1376
1422		B5-NW1582_B5-NW1584	B5-NW1582	B5-NW1584	0.9617	0.0059	0.0472
1423		B5-NW1583_B5-NW1585	B5-NW1583	B5-NW1585	0.7451	0.0047	0.0436
1424		B5-NW1584_B5-NW1586	B5-NW1584	B5-NW1586	2.3668	0.0151	0.0686
1425		B5-NW1585_B5-NW1587	B5-NW1585	B5-NW1587	1.7736	0.0113	0.0604
1426		B5-NW1586_B5-NW1592	B5-NW1586	B5-NW1592	3.6785	0.6653	0.0768
1427		B5-NW1587_B5-NW1588	B5-NW1587	B5-NW1588	3.1114	0.0199	0.0701
1428		B5-NW1588_B5-NW1589	B5-NW1588	B5-NW1589	4.3904	0.9087	0.0701
1429		B5-NW1589_B5-NW1590	B5-NW1589	B5-NW1590	3.1484	0.9408	0.1100
1430		B5-NW1589_B5-NW2370	B5-NW1589	B5-NW2370	2.5347	0.0162	0.0478
1431		B5-NW1590_B5-NW1603	B5-NW1590	B5-NW1603	77.8011	0.4966	0.3961
1432		B5-NW1591_B5-NW1590	B5-NW1591	B5-NW1590	73.8266	0.4712	0.3205
1433		B5-NW1592_B5-NW1591	B5-NW1592	B5-NW1591	2.3719	0.7351	0.0994
1434		B5-NW1592_B5-NW2368	B5-NW1592	B5-NW2368	1.3631	0.0087	0.2213
1435		B5-NW1592_B5-NW2369	B5-NW1592	B5-NW2369	0.4911	0.0031	0.0522
1436		B5-NW1593_B5-NW1594	B5-NW1593	B5-NW1594	1.2314	0.0077	0.0575
1437		B5-NW1594_B5-NW1595	B5-NW1594	B5-NW1595	2.9715	0.6450	0.0679
1438		B5-NW1595_B5-NW1596	B5-NW1595	B5-NW1596	4.3739	0.0279	0.2003
1439		B5-NW1596_B5-NW1591	B5-NW1596	B5-NW1591	70.4735	1.5407	0.3335
1440		B5-NW1597_B5-NW1598	B5-NW1597	B5-NW1598	1.1742	0.0073	0.0582
1441		B5-NW1598_B5-NW1599	B5-NW1598	B5-NW1599	3.0214	0.0193	0.0733
1442		B5-NW1599_B5-NW1600	B5-NW1599	B5-NW1600	4.2556	0.0272	0.0827
1443		B5-NW1600_B5-NW1601	B5-NW1600	B5-NW1601	5.2272	0.0334	0.0946
1444		B5-NW1601_B5-NW1602	B5-NW1601	B5-NW1602	6.3655	0.0406	0.1792
1445		B5-NW1602_B5-NW1603	B5-NW1602	B5-NW1603	27.8033	0.1775	0.3643
1446		B5-NW1603_B5-NW1629	B5-NW1603	B5-NW1629	109.0727	1.1723	0.4713
1447		B5-NW1604_B5-NW1605	B5-NW1604	B5-NW1605	0.8525	0.0053	0.0544
1448		B5-NW1605_B5-NW1614	B5-NW1605	B5-NW1614	2.0038	0.0128	0.0764
1449		B5-NW1606_B5-NW1607	B5-NW1606	B5-NW1607	1.2658	0.0079	0.0611
1450		B5-NW1607_B5-NW1608	B5-NW1607	B5-NW1608	3.1202	0.0199	0.0807
1451		B5-NW1608_B5-NW1609	B5-NW1608	B5-NW1609	4.3549	0.0278	0.0907
1452		B5-NW1609_B5-NW1610	B5-NW1609	B5-NW1610	5.0498	0.0322	0.0957
1453		B5-NW1610_B5-NW1611	B5-NW1610	B5-NW1611	5.4031	0.6835	0.0979
1454		B5-NW1611_B5-NW1651	B5-NW1611	B5-NW1651	16.9306	0.1081	0.1858
1455		B5-NW1612_B5-NW1611	B5-NW1612	B5-NW1611	1.9223	0.5924	0.0536
1456		B5-NW1613_B5-NW1671	B5-NW1613	B5-NW1671	1.0257	0.0065	0.0474

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1457		B5-NW1614_B5-NW1615	B5-NW1614	B5-NW1615	3.5013	0.0223	0.0950
1458		B5-NW1615_B5-NW1616	B5-NW1615	B5-NW1616	4.9682	0.0317	0.1028
1459		B5-NW1616_B5-NW1618	B5-NW1616	B5-NW1618	5.8698	0.0375	0.1094
1460		B5-NW1617_B5-NW1616	B5-NW1617	B5-NW1616	0.3024	0.2623	0.0633
1461		B5-NW1618_B5-NW1619	B5-NW1618	B5-NW1619	6.6228	0.0423	0.1224
1462		B5-NW1619_B5-NW1620	B5-NW1619	B5-NW1620	8.1750	0.6860	0.1296
1463		B5-NW1620_B5-NW1622	B5-NW1620	B5-NW1622	2.7726	0.4821	0.0789
1464		B5-NW1620_B5-NW1669	B5-NW1620	B5-NW1669	6.1198	0.0391	0.0926
1465		B5-NW1621_B5-NW1622	B5-NW1621	B5-NW1622	0.4836	0.0031	0.0608
1466		B5-NW1622_B5-NW1623	B5-NW1622	B5-NW1623	3.7615	0.0240	0.0914
1467		B5-NW1623_B5-NW2434	B5-NW1623	B5-NW2434	4.2458	0.2304	0.1139
1468		B5-NW1624_B5-NW2434	B5-NW1624	B5-NW2434	4.0928	0.5022	0.1000
1469		B5-NW1625_B5-NW1624	B5-NW1625	B5-NW1624	3.7888	0.0242	0.0864
1470		B5-NW1626_B5-NW1627	B5-NW1626	B5-NW1627	1.0736	0.0067	0.0597
1471		B5-NW1627_B5-NW1625	B5-NW1627	B5-NW1625	2.6939	0.5205	0.0734
1472		B5-NW1628_B5-NW1652	B5-NW1628	B5-NW1652	344.3993	0.9818	0.5053
1473		B5-NW1629_B5-NW1630	B5-NW1629	B5-NW1630	110.7914	1.1723	0.4755
1474		B5-NW1630_B5-NW1631	B5-NW1630	B5-NW1631	112.5242	1.1720	0.4800
1475		B5-NW1631_B5-NW1628	B5-NW1631	B5-NW1628	114.3928	1.5294	0.4822
1476		B5-NW1632_B5-NW1633	B5-NW1632	B5-NW1633	0.6233	0.0039	0.0460
1477		B5-NW1633_B5-NW1634	B5-NW1633	B5-NW1634	1.7456	0.0111	0.0685
1478		B5-NW1634_B5-NW1635	B5-NW1634	B5-NW1635	3.2213	0.0206	0.0999
1479		B5-NW1635_B5-NW1636	B5-NW1635	B5-NW1636	7.9942	0.0510	0.1373
1480		B5-NW1636_B5-NW1637	B5-NW1636	B5-NW1637	12.3056	0.0785	0.1665
1481		B5-NW1637_B5-NW1638	B5-NW1637	B5-NW1638	17.6119	0.9100	0.1812
1482		B5-NW1638_B5-NW1639	B5-NW1638	B5-NW1639	19.7140	1.1577	0.1658
1483		B5-NW1639_B5-M14688	B5-NW1639	B5-M14688	498.2439	1.7631	0.5103
1484		B5-NW1640_B5-NW1635	B5-NW1640	B5-NW1635	2.7173	0.6314	0.0648
1485		B5-NW1641_B5-NW1636	B5-NW1641	B5-NW1636	2.6792	0.7249	0.0585
1486		B5-NW1642_B5-NW1637	B5-NW1642	B5-NW1637	2.5617	0.7833	0.0538
1487		B5-NW1643_B5-NW1638	B5-NW1643	B5-NW1638	1.2745	1.0848	0.0271
1488		B5-NW1644_B5-NW1640	B5-NW1644	B5-NW1640	1.1574	0.0072	0.0534
1489		B5-NW1645_B5-NW1641	B5-NW1645	B5-NW1641	1.1146	0.0069	0.0477
1490		B5-NW1646_B5-NW1642	B5-NW1646	B5-NW1642	0.9490	0.0058	0.0430
1491		B5-NW1647_B5-NW1648	B5-NW1647	B5-NW1648	0.6801	0.0043	0.0455
1492		B5-NW1648_B5-NW1649	B5-NW1648	B5-NW1649	1.8283	0.0117	0.0547
1493		B5-NW1649_B5-NW1650	B5-NW1649	B5-NW1650	2.8531	0.0182	0.1258
1494		B5-NW1650_B5-NW1602	B5-NW1650	B5-NW1602	20.9767	0.1339	0.2239
1495		B5-NW1651_B5-NW1650	B5-NW1651	B5-NW1650	17.3866	0.8489	0.1884
1496		B5-NW1652_B5-NW1639	B5-NW1652	B5-NW1639	478.5110	1.4102	0.5917
1497		B5-NW1653_B5-NW1643	B5-NW1653	B5-NW1643	0.5700	0.3628	0.0327
1498		B5-NW1654_B5-NW1570	B5-NW1654	B5-NW1570	0.3627	0.4137	0.0731
1499		B5-NW1654_B5-NW1604	B5-NW1654	B5-NW1604	0.0000	0.0000	0.0000
1500		B5-NW1655_B5-NW1656	B5-NW1655	B5-NW1656	0.4698	0.0030	0.0495
1501		B5-NW1656_B5-NW1659	B5-NW1656	B5-NW1659	2.2679	0.0145	0.0858
1502		B5-NW1657_B5-NW1656	B5-NW1657	B5-NW1656	1.0191	0.0065	0.0606
1503		B5-NW1658_B5-NW1659	B5-NW1658	B5-NW1659	0.5543	0.3162	0.0353
1504		B5-NW1659_B5-NW9143	B5-NW1659	B5-NW9143	5.0980	0.0325	0.1062
1505		B5-NW1660_B5-NW1659	B5-NW1660	B5-NW1659	1.7490	0.4311	0.0623
1506		B5-NW1661_B5-NW1660	B5-NW1661	B5-NW1660	0.7268	0.0046	0.0526
1507		B5-NW1662_B5-NW1663	B5-NW1662	B5-NW1663	0.5358	0.0034	0.0526
1508		B5-NW1663_B5-NW1664	B5-NW1663	B5-NW1664	1.9439	0.3986	0.0705
1509		B5-NW1664_B5-NW1665	B5-NW1664	B5-NW1665	8.2003	0.6404	0.1362
1510		B5-NW1665_B5-NW1666	B5-NW1665	B5-NW1666	9.5747	0.0611	0.1630
1511		B5-NW1666_B5-NW2000	B5-NW1666	B5-NW2000	21.7174	0.1386	0.2129
1512		B5-NW1667_B5-NW1666	B5-NW1667	B5-NW1666	10.8484	0.7463	0.1486

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1513		B5-NW1668_B5-NW1667	B5-NW1668	B5-NW1667	8.6462	0.3739	0.2051
1514		B5-NW1669_B5-NW1668	B5-NW1669	B5-NW1668	7.0141	0.0448	0.1557
1515		B5-NW1670_B5-NW1613	B5-NW1670	B5-NW1613	0.6262	0.0039	0.0387
1516		B5-NW1671_B5-NW1672	B5-NW1671	B5-NW1672	1.4173	0.0090	0.0773
1517		B5-NW1672_B5-NW1674	B5-NW1672	B5-NW1674	5.2992	0.2824	0.1650
1518		B5-NW1673_B5-NW1672	B5-NW1673	B5-NW1672	3.1445	0.0198	0.0867
1519		B5-NW1674_B5-NW1675	B5-NW1674	B5-NW1675	6.5299	0.2426	0.2282
1520		B5-NW1675_B5-NW1676	B5-NW1675	B5-NW1676	11.1452	0.0711	0.1554
1521		B5-NW1676_B5-NW1677	B5-NW1676	B5-NW1677	15.5345	0.0992	0.2245
1522		B5-NW1677_B5-NW1678	B5-NW1677	B5-NW1678	39.5279	1.0951	0.2810
1523		B5-NW1678_B5-NW1679	B5-NW1678	B5-NW1679	39.9015	1.1113	0.2800
1524		B5-NW1679_B5-NW1680	B5-NW1679	B5-NW1680	61.0666	0.5932	0.2730
1525		B5-NW1680_B5-NW1756	B5-NW1680	B5-NW1756	62.1612	1.1445	0.3139
1526		B5-NW1681_B5-NW1682	B5-NW1681	B5-NW1682	4.2958	0.0267	0.0688
1527		B5-NW1682_B5-NW1683	B5-NW1682	B5-NW1683	7.2307	0.0461	0.1091
1528		B5-NW1683_B5-NW1684	B5-NW1683	B5-NW1684	15.5829	1.1908	0.1382
1529		B5-NW1684_B5-NW1685	B5-NW1684	B5-NW1685	18.3711	1.6068	0.1260
1530		B5-NW1685_B5-M14685	B5-NW1685	B5-M14685	570.1693	1.7687	0.4598
1531		B5-NW1686_B5-NW1685	B5-NW1686	B5-NW1685	551.6761	1.0015	0.4177
1532		B5-NW1688_B5-NW1679	B5-NW1688	B5-NW1679	19.0769	1.1621	0.1616
1533		B5-NW1689_B5-NW1688	B5-NW1689	B5-NW1688	10.0065	0.0639	0.1442
1534		B5-NW1690_B5-NW1689	B5-NW1690	B5-NW1689	6.9097	0.0441	0.1160
1535		B5-NW1691_B5-NW1690	B5-NW1691	B5-NW1690	2.2648	0.0142	0.0822
1536		B5-NW1693_B5-NW1694	B5-NW1693	B5-NW1694	5.0279	0.0308	0.2534
1537		B5-NW1694_B5-NW1705	B5-NW1694	B5-NW1705	96.9799	1.4634	0.4394
1538		B5-NW1695_B5-NW1694	B5-NW1695	B5-NW1694	81.8882	0.5227	0.4330
1539		B5-NW1696_B5-NW1695	B5-NW1696	B5-NW1695	70.4343	0.4496	0.3855
1540		B5-NW1697_B5-NW1698	B5-NW1697	B5-NW1698	2.6535	0.0168	0.0892
1541		B5-NW1698_B5-NW1706	B5-NW1698	B5-NW1706	5.8873	0.0376	0.1147
1542		B5-NW1699_B5-NW1698	B5-NW1699	B5-NW1698	1.3824	0.0088	0.0842
1543		B5-NW1700_B5-NW1701	B5-NW1700	B5-NW1701	1.7887	0.0111	0.0864
1544		B5-NW1701_B5-NW1716	B5-NW1701	B5-NW1716	7.2413	0.0462	0.1243
1545		B5-NW1702_B5-NW1701	B5-NW1702	B5-NW1701	1.3736	0.0087	0.0876
1546		B5-NW1703_B5-NW1704	B5-NW1703	B5-NW1704	1.0777	0.0068	0.0748
1547		B5-NW1704_B5-NW1731	B5-NW1704	B5-NW1731	4.6879	0.0299	0.1337
1548		B5-NW1705_B5-NW1707	B5-NW1705	B5-NW1707	106.1405	0.6775	0.4837
1549		B5-NW1706_B5-NW1705	B5-NW1706	B5-NW1705	7.5862	0.0484	0.2962
1550		B5-NW1707_B5-NW1708	B5-NW1707	B5-NW1708	107.8330	1.3838	0.4979
1551		B5-NW1708_B5-NW1709	B5-NW1708	B5-NW1709	108.7577	1.2796	0.4618
1552		B5-NW1709_B5-NW1713	B5-NW1709	B5-NW1713	114.7234	1.5536	0.4775
1553		B5-NW1710_B5-NW1709	B5-NW1710	B5-NW1709	5.1796	0.6662	0.1330
1554		B5-NW1711_B5-NW1710	B5-NW1711	B5-NW1710	3.3235	0.0212	0.0818
1555		B5-NW1712_B5-NW1711	B5-NW1712	B5-NW1711	1.4128	0.0089	0.0653
1556		B5-NW1713_B5-NW1652	B5-NW1713	B5-NW1652	133.8702	1.5140	0.3255
1557		B5-NW1714_B5-NW1713	B5-NW1714	B5-NW1713	12.7515	0.0814	0.2864
1558		B5-NW1715_B5-NW1714	B5-NW1715	B5-NW1714	11.3109	0.6131	0.1506
1559		B5-NW1716_B5-NW1715	B5-NW1716	B5-NW1715	9.2707	0.0592	0.1399
1560		B5-NW1717_B5-NW1713	B5-NW1717	B5-NW1713	5.9714	0.0381	0.1899
1561		B5-NW1718_B5-NW1717	B5-NW1718	B5-NW1717	5.3888	0.0344	0.1016
1562		B5-NW1719_B5-NW9134	B5-NW1719	B5-NW9134	1.4468	0.0091	0.0762
1563		B5-NW1720_B5-NW1724	B5-NW1720	B5-NW1724	6.1656	0.0394	0.1340
1564		B5-NW1721_B5-NW1720	B5-NW1721	B5-NW1720	5.4527	0.0348	0.1059
1565		B5-NW1722_B5-NW1721	B5-NW1722	B5-NW1721	3.1852	0.0203	0.0937
1566		B5-NW1723_B5-NW1722	B5-NW1723	B5-NW1722	1.1453	0.0071	0.0660
1567		B5-NW1724_B5-NW1728	B5-NW1724	B5-NW1728	12.6849	0.7978	0.1581
1568		B5-NW1725_B5-NW1724	B5-NW1725	B5-NW1724	5.7832	0.6566	0.1054

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1569		B5-NW1726_B5-NW1725	B5-NW1726	B5-NW1725	3.5107	0.0224	0.0972
1570		B5-NW1727_B5-NW1726	B5-NW1727	B5-NW1726	1.4453	0.0090	0.0700
1571		B5-NW1728_B5-NW1686	B5-NW1728	B5-NW1686	50.0183	1.4885	0.2670
1572		B5-NW1729_B5-NW1728	B5-NW1729	B5-NW1728	18.7196	0.1195	0.2364
1573		B5-NW1730_B5-NW1729	B5-NW1730	B5-NW1729	16.4609	0.1051	0.1896
1574		B5-NW1731_B5-NW1730	B5-NW1731	B5-NW1730	14.2138	0.0907	0.1704
1575		B5-NW1732_B5-NW1728	B5-NW1732	B5-NW1728	17.9466	0.9056	0.1842
1576		B5-NW1733_B5-NW1732	B5-NW1733	B5-NW1732	11.1437	0.0711	0.1668
1577		B5-NW1734_B5-NW1733	B5-NW1734	B5-NW1733	7.3560	0.0470	0.1399
1578		B5-NW1735_B5-NW1734	B5-NW1735	B5-NW1734	1.6333	0.0103	0.0943
1579		B5-NW1736_B5-NW1731	B5-NW1736	B5-NW1731	6.4744	0.0413	0.1420
1580		B5-NW1737_B5-NW1736	B5-NW1737	B5-NW1736	4.8708	0.0311	0.1067
1581		B5-NW1744_B5-NW1745	B5-NW1744	B5-NW1745	1.1996	0.0075	0.0574
1582		B5-NW1745_B5-NW1746	B5-NW1745	B5-NW1746	2.3219	0.0148	0.0712
1583		B5-NW1746_B5-NW1747	B5-NW1746	B5-NW1747	3.3270	0.0212	0.0778
1584		B5-NW1747_B5-NW1748	B5-NW1747	B5-NW1748	3.5158	0.6099	0.0790
1585		B5-NW1748_B5-NW1750	B5-NW1748	B5-NW1750	78.3509	0.5001	0.3558
1586		B5-NW1749_B5-NW1748	B5-NW1749	B5-NW1748	72.0200	1.2365	0.3189
1587		B5-NW1750_B5-NW1752	B5-NW1750	B5-NW1752	82.2259	0.5248	0.4016
1588		B5-NW1751_B5-NW1750	B5-NW1751	B5-NW1750	2.7791	0.6889	0.0617
1589		B5-NW1752_B5-NW1965	B5-NW1752	B5-NW1965	107.1787	0.6841	0.4404
1590		B5-NW1753_B5-NW1974	B5-NW1753	B5-NW1974	38.3685	1.2844	0.2456
1591		B5-NW1755_B5-NW1757	B5-NW1755	B5-NW1757	3.7657	0.0236	0.1168
1592		B5-NW1756_B5-NW1749	B5-NW1756	B5-NW1749	67.7013	1.5168	0.3276
1593		B5-NW1757_B5-NW1758	B5-NW1757	B5-NW1758	16.0588	0.1025	0.2160
1594		B5-NW1758_B5-NW2361	B5-NW1758	B5-NW2361	28.2130	0.8008	0.2762
1595		B5-NW1763_B5-NW102	B5-NW1763	B5-NW102	214.3799	0.3892	0.3686
1596		B5-NW1764_B5-NW2418	B5-NW1764	B5-NW2418	199.1036	1.6733	0.2680
1597		B5-NW1765_B5-NW2422	B5-NW1765	B5-NW2422	182.8793	1.6739	0.2504
1598		B5-NW1766_B5-NW1765	B5-NW1766	B5-NW1765	14.0307	0.0896	0.3064
1599		B5-NW1767_B5-NW1766	B5-NW1767	B5-NW1766	9.4727	0.0604	0.1307
1600		B5-NW1768_B5-NW1767	B5-NW1768	B5-NW1767	4.2449	0.0271	0.1044
1601		B5-NW1771_B5-NW1765	B5-NW1771	B5-NW1765	168.1066	1.8287	0.3072
1602		B5-NW1772_B5-NW1771	B5-NW1772	B5-NW1771	156.9150	1.4424	0.3024
1603		B5-NW1773_B5-NW1774	B5-NW1773	B5-NW1774	5.7593	0.6118	0.1103
1604		B5-NW1774_B5-NW1775	B5-NW1774	B5-NW1775	6.8382	0.8271	0.1009
1605		B5-NW1775_B5-NW1803	B5-NW1775	B5-NW1803	29.0654	0.1855	0.2546
1606		B5-NW1776_B5-NW1777	B5-NW1776	B5-NW1777	2.4050	0.6886	0.0560
1607		B5-NW1777_B5-NW1775	B5-NW1777	B5-NW1775	21.5446	0.1375	0.2282
1608		B5-NW1778_B5-NW1779	B5-NW1778	B5-NW1779	4.1028	0.8080	0.0722
1609		B5-NW1779_B5-NW1777	B5-NW1779	B5-NW1777	18.6784	0.1192	0.2059
1610		B5-NW1780_B5-NW2394	B5-NW1780	B5-NW2394	1.9434	0.5576	0.0560
1611		B5-NW1781_B5-NW1782	B5-NW1781	B5-NW1782	1.1657	0.4746	0.0442
1612		B5-NW1782_B5-NW2394	B5-NW1782	B5-NW2394	11.4675	0.0732	0.1541
1613		B5-NW1783_B5-NW9126	B5-NW1783	B5-NW9126	2.5050	0.0158	0.0774
1614		B5-NW1784_B5-NW1782	B5-NW1784	B5-NW1782	9.5515	0.6082	0.1567
1615		B5-NW1785_B5-NW1784	B5-NW1785	B5-NW1784	5.1710	0.6452	0.1206
1616		B5-NW1786_B5-NW1787	B5-NW1786	B5-NW1787	1.4187	0.3331	0.0614
1617		B5-NW1787_B5-NW1788	B5-NW1787	B5-NW1788	2.0972	0.0134	0.0725
1618		B5-NW1788_B5-NW1789	B5-NW1788	B5-NW1789	2.8593	0.0183	0.0817
1619		B5-NW1789_B5-NW1790	B5-NW1789	B5-NW1790	3.4786	0.0222	0.0905
1620		B5-NW1790_B5-NW1791	B5-NW1790	B5-NW1791	4.1435	0.0264	0.1330
1621		B5-NW1791_B5-NW2031	B5-NW1791	B5-NW2031	14.4391	0.8102	0.1711
1622		B5-NW1792_B5-NW1791	B5-NW1792	B5-NW1791	10.0685	0.8319	0.1310
1623		B5-NW1793_B5-NW1792	B5-NW1793	B5-NW1792	9.3763	0.3655	0.1263
1624		B5-NW1794_B5-NW1793	B5-NW1794	B5-NW1793	8.2230	0.7376	0.1213

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1625		B5-NW1795_B5-NW1794	B5-NW1795	B5-NW1794	6.6004	0.0421	0.1131
1626		B5-NW1796_B5-NW1795	B5-NW1796	B5-NW1795	4.9217	0.0314	0.1032
1627		B5-NW1797_B5-NW1798	B5-NW1797	B5-NW1798	2.7316	0.0173	0.0824
1628		B5-NW1798_B5-NW1799	B5-NW1798	B5-NW1799	4.6252	0.0295	0.0988
1629		B5-NW1799_B5-NW1800	B5-NW1799	B5-NW1800	6.4909	0.0414	0.1121
1630		B5-NW1800_B5-NW1801	B5-NW1800	B5-NW1801	7.9810	0.0509	0.1226
1631		B5-NW1801_B5-NW1802	B5-NW1801	B5-NW1802	9.3444	0.8015	0.1277
1632		B5-NW1802_B5-NW2396	B5-NW1802	B5-NW2396	25.0137	0.1597	0.2398
1633		B5-NW1803_B5-NW2397	B5-NW1803	B5-NW2397	31.7156	0.2024	0.2781
1634		B5-NW1804_B5-NW1803	B5-NW1804	B5-NW1803	2.2649	0.5104	0.0662
1635		B5-NW1805_B5-NW1804	B5-NW1805	B5-NW1804	0.9867	0.0062	0.0551
1636		B5-NW1806_B5-NW2396	B5-NW1806	B5-NW2396	8.5919	0.7466	0.1265
1637		B5-NW1807_B5-NW1806	B5-NW1807	B5-NW1806	6.7025	0.0428	0.1193
1638		B5-NW1808_B5-NW1807	B5-NW1808	B5-NW1807	4.9291	0.0315	0.1049
1639		B5-NW1809_B5-NW1808	B5-NW1809	B5-NW1808	3.1968	0.0204	0.0884
1640		B5-NW1810_B5-NW9125	B5-NW1810	B5-NW9125	5.5379	0.0352	0.1064
1641		B5-NW1811_B5-NW1812	B5-NW1811	B5-NW1812	8.7709	0.0560	0.1385
1642		B5-NW1812_B5-NW1813	B5-NW1812	B5-NW1813	10.7909	0.7436	0.1484
1643		B5-NW1813_B5-NW2401	B5-NW1813	B5-NW2401	45.9797	0.2935	0.2837
1644		B5-NW1814_B5-NW2399	B5-NW1814	B5-NW2399	32.6840	0.2086	0.3167
1645		B5-NW1815_B5-NW1816	B5-NW1815	B5-NW1816	1.2283	0.0076	0.0492
1646		B5-NW1816_B5-NW1817	B5-NW1816	B5-NW1817	1.6682	0.0106	0.0851
1647		B5-NW1817_B5-NW1818	B5-NW1817	B5-NW1818	7.4147	0.6484	0.1527
1648		B5-NW1818_B5-NW1819	B5-NW1818	B5-NW1819	105.3089	1.2101	0.2953
1649		B5-NW1819_B5-NW1834	B5-NW1819	B5-NW1834	106.3043	1.0662	0.2756
1650		B5-NW1820_B5-NW2400	B5-NW1820	B5-NW2399	13.6964	0.0874	0.2452
1651		B5-NW1821_B5-NW1820	B5-NW1821	B5-NW1820	12.8097	0.7619	0.1386
1652		B5-NW1822_B5-NW1821	B5-NW1822	B5-NW1821	11.9735	0.0764	0.1308
1653		B5-NW1823_B5-NW1822	B5-NW1823	B5-NW1822	9.1293	0.2968	0.2508
1654		B5-NW1824_B5-NW1825	B5-NW1824	B5-NW1825	0.9116	0.0056	0.0548
1655		B5-NW1825_B5-NW1826	B5-NW1825	B5-NW1826	2.8629	0.0183	0.0865
1656		B5-NW1826_B5-NW1817	B5-NW1826	B5-NW1817	4.5998	0.0294	0.1055
1657		B5-NW1827_B5-NW1828	B5-NW1827	B5-NW1828	94.8798	0.7824	0.3762
1658		B5-NW1828_B5-NW1818	B5-NW1828	B5-NW1818	96.5968	0.2740	0.2823
1659		B5-NW1829_B5-NW1830	B5-NW1829	B5-NW1830	0.2211	0.2322	0.0235
1660		B5-NW1830_B5-NW1831	B5-NW1830	B5-NW1831	4.0437	0.0258	0.0958
1661		B5-NW1831_B5-NW1832	B5-NW1831	B5-NW1832	4.7398	0.5022	0.1255
1662		B5-NW1832_B5-NW1835	B5-NW1832	B5-NW1835	112.2268	1.1697	0.3169
1663		B5-NW1833_B5-NW1832	B5-NW1833	B5-NW1832	106.8343	0.3031	0.3008
1664		B5-NW1834_B5-NW1833	B5-NW1834	B5-NW1833	106.8270	1.1024	0.2838
1665		B5-NW1835_B5-NW1836	B5-NW1835	B5-NW1836	115.0480	0.2089	0.2088
1666		B5-NW1836_B5-NW1837	B5-NW1836	B5-NW1837	118.1974	0.2146	0.2539
1667		B5-NW1837_B5-NW1842	B5-NW1837	B5-NW1842	122.1822	0.9573	0.2822
1668		B5-NW1839_B5-NW1830	B5-NW1839	B5-NW1830	2.8876	0.0184	0.0831
1669		B5-NW1840_B5-NW1839	B5-NW1840	B5-NW1839	0.3917	0.2805	0.0303
1670		B5-NW1841_B5-NW1842	B5-NW1841	B5-NW1842	12.4491	0.0795	0.2476
1671		B5-NW1842_B5-NW9128	B5-NW1842	B5-NW9128	135.0740	0.2452	0.2413
1672		B5-NW1843_B5-NW1841	B5-NW1843	B5-NW1841	2.5322	0.0162	0.0708
1673		B5-NW1844_B5-NW1845	B5-NW1844	B5-NW1845	0.6676	0.0042	0.0414
1674		B5-NW1845_B5-NW1846	B5-NW1845	B5-NW1846	1.5597	0.0099	0.0772
1675		B5-NW1846_B5-NW1890	B5-NW1846	B5-NW1890	5.8484	0.0373	0.1120
1676		B5-NW1847_B5-NW1846	B5-NW1847	B5-NW1846	3.4772	0.9427	0.0584
1677		B5-NW1848_B5-NW1849	B5-NW1848	B5-NW1849	1.4191	0.0088	0.0663
1678		B5-NW1849_B5-NW1854	B5-NW1849	B5-NW1854	5.0250	0.0321	0.1142
1679		B5-NW1850_B5-NW1849	B5-NW1850	B5-NW1849	2.5839	0.4848	0.0749
1680		B5-NW1851_B5-NW1850	B5-NW1851	B5-NW1850	0.9132	0.0057	0.0595

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1681		B5-NW1852_B5-NW1853	B5-NW1852	B5-NW1853	0.1911	0.0012	0.0393
1682		B5-NW1853_B5-NW1854	B5-NW1853	B5-NW1854	1.4480	0.4026	0.0574
1683		B5-NW1854_B5-NW2404	B5-NW1854	B5-NW2404	8.1184	0.6815	0.1296
1684		B5-NW1855_B5-NW1856	B5-NW1855	B5-NW1856	0.9619	0.0060	0.0484
1685		B5-NW1856_B5-NW2408	B5-NW1856	B5-NW2408	1.6262	0.0104	0.0644
1686		B5-NW1858_B5-NW1859	B5-NW1858	B5-NW1859	0.7040	0.0043	0.0633
1687		B5-NW1859_B5-NW1860	B5-NW1859	B5-NW1860	5.2360	0.0334	0.1075
1688		B5-NW1860_B5-NW2405	B5-NW1860	B5-NW2405	6.7720	0.6768	0.1150
1689		B5-NW1861_B5-NW1893	B5-NW1861	B5-NW2405	153.4518	1.0155	0.3186
1690		B5-NW1862_B5-NW1863	B5-NW1862	B5-NW1863	150.0911	0.2719	0.2801
1691		B5-NW1863_B5-NW1861	B5-NW1863	B5-NW1861	152.0944	0.4418	0.3126
1692		B5-NW1864_B5-NW2008	B5-NW1864	B5-NW2008	146.6082	1.0955	0.2920
1693		B5-NW1865_B5-NW1864	B5-NW1865	B5-NW1864	143.5740	0.2607	0.2846
1694		B5-NW1866_B5-NW1839	B5-NW1866	B5-NW1839	0.9468	0.3691	0.0457
1695		B5-NW1867_B5-NW1866	B5-NW1867	B5-NW1866	0.0204	0.0000	0.0000
1696		B5-NW1875_B5-M10018	B5-NW1875	B5-M10018	476.3717	1.3854	0.4476
1697		B5-NW1878_B5-NW1879	B5-NW1878	B5-NW1879	1.5135	0.0095	0.0749
1698		B5-NW1879_B5-NW1880	B5-NW1879	B5-NW1880	6.1229	0.7557	0.0996
1699		B5-NW1880_B5-NW1881	B5-NW1880	B5-NW1881	6.7973	0.0434	0.1050
1700		B5-NW1881_B5-NW1882	B5-NW1881	B5-NW1882	8.1205	0.0518	0.1258
1701		B5-NW1882_B5-NW2415	B5-NW1882	B5-NW2415	13.8705	1.0802	0.1364
1702		B5-NW1883_B5-NW1884	B5-NW1883	B5-NW1884	1.0583	0.0066	0.0596
1703		B5-NW1884_B5-NW1882	B5-NW1884	B5-NW1882	4.4298	0.7524	0.0801
1704		B5-NW1885_B5-NW1857	B5-NW1885	B5-NW1857	36.7852	0.5442	0.2374
1705		B5-NW1886_B5-NW1885	B5-NW1886	B5-NW1885	9.8093	1.0407	0.1104
1706		B5-NW1887_B5-NW1886	B5-NW1887	B5-NW1886	5.0254	0.0321	0.1008
1707		B5-NW1889_B5-NW1847	B5-NW1889	B5-NW1847	1.2266	0.0077	0.0522
1708		B5-NW1889_B5-NW1886	B5-NW1889	B5-NW1886	1.6692	0.0105	0.0782
1709		B5-NW1890_B5-NW1885	B5-NW1890	B5-NW1885	7.3282	0.0468	0.1556
1710		B5-NW1891_B5-NW1892	B5-NW1891	B5-NW1892	1.5451	0.5219	0.0501
1711		B5-NW1892_B5-NW1875	B5-NW1892	B5-NW1875	4.8169	0.8779	0.0764
1712		B5-NW1893_B5-M10015	B5-NW2405	B5-M10015	677.8072	0.8535	0.4707
1713		B5-NW1894_B5-NW1466	B5-NW1894	B5-NW1466	9.5916	0.6921	0.1059
1714		B5-NW1896_B5-NW1897	B5-NW1896	B5-NW1897	10.6537	0.8764	0.1314
1715		B5-NW1897_B5-NW1898	B5-NW1897	B5-NW1898	13.4929	0.0861	0.1558
1716		B5-NW1898_B5-NW1899	B5-NW1898	B5-NW1899	16.4796	0.1052	0.2740
1717		B5-NW1899_B5-NW9132	B5-NW1899	B5-NW9132	20.7134	0.4715	0.3238
1718		B5-NW1900_B5-NW1901	B5-NW1900	B5-NW1901	22.5247	1.3189	0.1425
1719		B5-NW1901_B5-NW1902	B5-NW1901	B5-NW1902	22.7427	0.1452	0.1811
1720		B5-NW1902_B5-NW1903	B5-NW1902	B5-NW1903	24.0087	0.9500	0.2183
1721		B5-NW1903_B5-NW1904	B5-NW1903	B5-NW1904	25.2417	0.1611	0.3511
1722		B5-NW1904_B5-NW1939	B5-NW1904	B5-NW1939	245.8681	0.6975	0.3854
1723		B5-NW1905_B5-NW1904	B5-NW1905	B5-NW1904	219.5374	1.6521	0.4028
1724		B5-NW1906_B5-NW1905	B5-NW1906	B5-NW1905	3.3262	0.5299	0.0837
1725		B5-NW1907_B5-NW2004	B5-NW1907	B5-NW2004	44.7600	1.1618	0.2945
1726		B5-NW1908_B5-NW1906	B5-NW1908	B5-NW1906	2.2981	0.0147	0.0780
1727		B5-NW1909_B5-NW1907	B5-NW1909	B5-NW1907	43.1170	0.7621	0.2842
1728		B5-NW1910_B5-NW1908	B5-NW1910	B5-NW1908	0.8968	0.0055	0.0549
1729		B5-NW1911_B5-NW1909	B5-NW1911	B5-NW1909	41.0085	1.1136	0.2851
1730		B5-NW1912_B5-NW1911	B5-NW1912	B5-NW1911	39.3291	1.0536	0.2846
1731		B5-NW1913_B5-NW1912	B5-NW1913	B5-NW1912	38.6774	0.4444	0.2356
1732		B5-NW1914_B5-NW2004	B5-NW1914	B5-NW2004	169.9331	1.6738	0.4328
1733		B5-NW1915_B5-NW1914	B5-NW1915	B5-NW1914	13.6495	0.8466	0.1997
1734		B5-NW1916_B5-NW1915	B5-NW1916	B5-NW1915	8.4774	0.0541	0.1315
1735		B5-NW1917_B5-NW1916	B5-NW1917	B5-NW1916	3.7660	0.0239	0.0998
1736		B5-NW1918_B5-NW1917	B5-NW1918	B5-NW1917	1.0792	0.0067	0.0604

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1737		B5-NW1919_B5-NW1913	B5-NW1919	B5-NW1913	13.6136	0.0869	0.1503
1738		B5-NW1920_B5-NW1919	B5-NW1920	B5-NW1919	12.7006	0.9830	0.1370
1739		B5-NW1921_B5-NW1920	B5-NW1921	B5-NW1920	6.1488	0.0392	0.1171
1740		B5-NW1922_B5-NW1921	B5-NW1922	B5-NW1921	2.3477	0.0147	0.0809
1741		B5-NW1923_B5-NW1924	B5-NW1923	B5-NW1924	1.9172	0.0119	0.0849
1742		B5-NW1924_B5-NW1925	B5-NW1924	B5-NW1926	7.8076	0.7671	0.1163
1743		B5-NW1926_B5-NW1927	B5-NW1926	B5-NW1927	16.9030	0.1079	0.1820
1744		B5-NW1927_B5-NW1928	B5-NW1927	B5-NW1928	21.5782	0.1377	0.2083
1745		B5-NW1928_B5-NW1913	B5-NW1928	B5-NW1913	24.4055	0.9236	0.2252
1746		B5-NW1929_B5-NW1930	B5-NW1929	B5-NW1930	0.8761	0.2509	0.0828
1747		B5-NW1930_B5-NW1926	B5-NW1930	B5-NW1926	8.5564	0.0546	0.1449
1748		B5-NW1931_B5-NW1930	B5-NW1931	B5-NW1930	5.5779	0.0356	0.0897
1749		B5-NW1932_B5-NW1931	B5-NW1932	B5-NW1931	1.4759	0.0094	0.0585
1750		B5-NW1932_B5-NW1933	B5-NW1932	B5-NW1933	3.6608	0.0232	0.1146
1751		B5-NW1933_B5-NW1934	B5-NW1933	B5-NW1934	11.3866	0.0727	0.2361
1752		B5-NW1934_B5-NW1935	B5-NW1934	B5-NW1935	19.1808	0.4897	0.2980
1753		B5-NW1935_B5-NW1464	B5-NW1935	B5-NW1464	19.6145	0.1252	0.3199
1754		B5-NW1935_B5-NW9109	B5-NW1935	B5-NW9109	74.4079	0.8253	0.1661
1755		B5-NW1936_B5-NW1937	B5-NW1936	B5-NW1937	1.0642	0.0066	0.0555
1756		B5-NW1937_B5-NW1938	B5-NW1937	B5-NW1938	3.1238	0.0199	0.0830
1757		B5-NW1938_B5-NW1939	B5-NW1938	B5-NW1939	5.5311	0.5926	0.2822
1758		B5-NW1939_B5-NW1940	B5-NW1939	B5-NW1940	254.2156	1.6843	0.4434
1759		B5-NW1940_B5-NW1942	B5-NW1940	B5-NW1942	256.6710	0.7281	0.4245
1760		B5-NW1942_B5-NW1943	B5-NW1942	B5-NW1943	274.2016	0.8490	0.4753
1761		B5-NW1943_B5-NW1944	B5-NW1943	B5-NW1944	276.6073	1.5944	0.4938
1762		B5-NW1944_B5-M10179	B5-NW1944	B5-NW9244	307.8296	4.0399	0.1522
1763		B5-NW1947_B5-NW9224	B5-NW1947	B5-NW9224	29.5078	0.7766	0.2076
1764		B5-NW1948_B5-NW1947	B5-NW1948	B5-NW1947	27.5004	1.1646	0.2049
1765		B5-NW1949_B5-NW1948	B5-NW1949	B5-NW1948	22.0193	0.1405	0.1922
1766		B5-NW1950_B5-NW1949	B5-NW1950	B5-NW1949	20.4453	1.0427	0.1828
1767		B5-NW1952_B5-NW1953	B5-NW1952	B5-NW1953	1.4988	0.0095	0.0647
1768		B5-NW1953_B5-NW1962	B5-NW1953	B5-NW1962	3.1534	0.0201	0.0953
1769		B5-NW1954_B5-NW2005	B5-NW1954	B5-NW2005	8.7040	0.0556	0.1538
1770		B5-NW1959_B5-NW2005	B5-NW1959	B5-NW2005	2.2286	0.5839	0.0594
1771		B5-NW1960_B5-NW1961	B5-NW1960	B5-NW1961	1.7157	0.0107	0.0636
1772		B5-NW1961_B5-NW1962	B5-NW1961	B5-NW1962	3.6911	0.0235	0.0971
1773		B5-NW1962_B5-NW1954	B5-NW1962	B5-NW1954	7.9097	0.0505	0.1255
1774		B5-NW1965_B5-NW1914	B5-NW1965	B5-NW1914	149.5556	0.6109	0.4000
1775		B5-NW1968_B5-NW1914	B5-NW1968	B5-NW1914	4.0790	0.4876	0.1717
1776		B5-NW1969_B5-NW1968	B5-NW1969	B5-NW1968	2.4160	0.0154	0.0776
1777		B5-NW1970_B5-NW1947	B5-NW1970	B5-NW1947	1.3288	0.6606	0.0388
1778		B5-NW1970_B5-NW1969	B5-NW1970	B5-NW1969	0.6990	0.0044	0.0531
1779		B5-NW1971_B5-NW1965	B5-NW1971	B5-NW1965	7.1734	0.0458	0.2234
1780		B5-NW1972_B5-NW1971	B5-NW1972	B5-NW1971	2.5180	0.0159	0.0837
1781		B5-NW1972_B5-NW1973	B5-NW1972	B5-NW1973	2.0497	0.0130	0.0725
1782		B5-NW1973_B5-NW1948	B5-NW1973	B5-NW1948	5.0767	0.7844	0.0855
1783		B5-NW1974_B5-NW1950	B5-NW1974	B5-NW1950	18.8433	0.8139	0.1784
1784		B5-NW1974_B5-NW2362	B5-NW1974	B5-NW2362	21.8669	0.1396	0.1819
1785		B5-NW1975_B5-NW1976	B5-NW1975	B5-NW1976	3.8018	0.0241	0.0926
1786		B5-NW1976_B5-NW1977	B5-NW1976	B5-NW1977	6.5526	0.0418	0.1377
1787		B5-NW1977_B5-NW1978	B5-NW1977	B5-NW1978	23.3405	0.2819	0.2299
1788		B5-NW1978_B5-NW2003	B5-NW1978	B5-NW2003	28.9507	0.7889	0.2844
1789		B5-NW1979_B5-NW1978	B5-NW1979	B5-NW1978	3.9677	0.3960	0.1758
1790		B5-NW1980_B5-NW1979	B5-NW1980	B5-NW1979	3.3507	0.4981	0.0877
1791		B5-NW1981_B5-NW1980	B5-NW1981	B5-NW1980	0.8894	0.3770	0.0431
1792		B5-NW1982_B5-NW1980	B5-NW1982	B5-NW1980	1.2544	0.0079	0.0617

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1793		B5-NW1983_B5-NW1982	B5-NW1983	B5-NW1982	0.6856	0.0043	0.0341
1794		B5-NW1984_B5-NW1977	B5-NW1984	B5-NW1977	16.4482	1.0488	0.1566
1795		B5-NW1985_B5-NW1984	B5-NW1985	B5-NW1984	14.3419	0.0915	0.1540
1796		B5-NW1986_B5-NW1985	B5-NW1986	B5-NW1985	12.8361	0.0819	0.1471
1797		B5-NW1987_B5-NW1986	B5-NW1987	B5-NW1986	10.7472	0.0686	0.1324
1798		B5-NW1988_B5-NW1987	B5-NW1988	B5-NW1987	6.8543	0.4037	0.1061
1799		B5-NW1989_B5-NW2029	B5-NW1989	B5-NW2029	3.1779	0.0203	0.0843
1800		B5-NW1990_B5-NW1989	B5-NW1990	B5-NW1989	1.1122	0.0070	0.0576
1801		B5-NW1991_B5-NW1992	B5-NW1991	B5-NW1992	1.2943	0.0081	0.0562
1802		B5-NW1992_B5-NW1993	B5-NW1992	B5-NW1993	2.7110	0.0173	0.0674
1803		B5-NW1993_B5-NW2030	B5-NW1993	B5-NW2030	3.4010	0.6344	0.0752
1804		B5-NW1996_B5-NW1488	B5-NW1996	B5-NW1488	1.1265	0.0071	0.0445
1805		B5-NW1997_B5-NW1996	B5-NW1997	B5-NW1996	0.2633	0.0016	0.0310
1806		B5-NW1998_B5-NW1524	B5-NW1998	B5-NW1524	23.8424	1.2373	0.1806
1807		B5-NW1998_B5-NW9212	B5-NW1998	B5-NW9212	15.2032	0.7890	0.1806
1808		B5-NW1999_B5-NW1583	B5-NW1999	B5-NW1583	0.2347	0.2233	0.0289
1809		B5-NW2000_B5-NW1677	B5-NW2000	B5-NW1677	22.7258	0.8264	0.2317
1810		B5-NW2001_B5-NW1390	B5-NW2001	B5-NW1390	1.5004	0.0095	0.0635
1811		B5-NW2003_B5-NW1965	B5-NW2003	B5-NW1965	31.8565	1.1546	0.2671
1812		B5-NW2004_B5-NW1905	B5-NW2004	B5-NW1905	215.4011	0.6110	0.3385
1813		B5-NW2005_B5-NW1942	B5-NW2005	B5-NW1942	15.8416	0.8744	0.1817
1814		B5-NW2006_B5-NW1843	B5-NW2006	B5-NW1843	1.1685	0.0072	0.0443
1815		B5-NW2007_B5-NW2009	B5-NW2007	B5-NW2009	1.6782	0.0105	0.0720
1816		B5-NW2008_B5-NW1862	B5-NW2008	B5-NW1862	147.6811	1.1542	0.2827
1817		B5-NW2009_B5-NW1859	B5-NW2009	B5-NW1859	3.1759	0.0203	0.0952
1818		B5-NW2024_B5-NW9122	B5-NW2024	B5-NW9122	1.7594	0.0111	0.0807
1819		B5-NW2029_B5-NW1988	B5-NW2029	B5-NW1988	6.0638	0.7654	0.0981
1820		B5-NW2030_B5-NW1987	B5-NW2030	B5-NW1987	3.7060	0.0237	0.0946
1821		B5-NW2031_B5-NW1802	B5-NW2031	B5-NW1802	15.0475	0.0960	0.1936
1822		B5-NW2087_B5-NW2088	B5-NW2087	B5-NW2088	6.2772	0.0401	0.1213
1823		B5-NW2088_B5-NW2092	B5-NW2088	B5-NW2092	9.7268	0.0621	0.1422
1824		B5-NW2089_B5-NW2088	B5-NW2089	B5-NW2088	1.3017	0.3282	0.0931
1825		B5-NW2090_B5-NW2091	B5-NW2090	B5-NW2091	1.5902	0.0101	0.0720
1826		B5-NW2091_B5-NW2095	B5-NW2091	B5-NW2095	4.7045	0.0300	0.1047
1827		B5-NW2092_B5-NW2097	B5-NW2092	B5-NW2097	11.3212	0.7632	0.1507
1828		B5-NW2093_B5-NW2087	B5-NW2093	B5-NW2087	2.1437	0.0137	0.0880
1829		B5-NW2095_B5-NW2096	B5-NW2095	B5-NW2096	6.6240	0.0423	0.1564
1830		B5-NW2096_B5-NW2100	B5-NW2096	B5-NW2100	17.1564	0.8119	0.1926
1831		B5-NW2096_B5-NW2143	B5-NW2096	B5-NW2143	30.1039	1.4246	0.1926
1832		B5-NW2097_B5-NW2096	B5-NW2097	B5-NW2096	39.0600	1.1236	0.1141
1833		B5-NW2098_B5-NW2097	B5-NW2098	B5-NW2097	26.7463	0.0486	0.1021
1834		B5-NW2099_B5-NW2098	B5-NW2099	B5-NW2098	25.8028	1.0464	0.0903
1835		B5-NW2100_B5-NW2107	B5-NW2100	B5-NW2107	29.5820	0.7663	0.1024
1836		B5-NW2101_B5-NW2100	B5-NW2101	B5-NW2100	10.0900	0.0644	0.1640
1837		B5-NW2102_B5-NW2101	B5-NW2102	B5-NW2101	3.6981	0.5304	0.0899
1838		B5-NW2103_B5-NW2102	B5-NW2103	B5-NW2102	2.0397	0.0130	0.0758
1839		B5-NW2104_B5-NW2103	B5-NW2104	B5-NW2103	0.7022	0.0044	0.0500
1840		B5-NW2104_B5-NW2105	B5-NW2104	B5-NW2105	0.7168	0.0045	0.0551
1841		B5-NW2105_B5-NW2106	B5-NW2105	B5-NW2106	2.3103	0.0147	0.0819
1842		B5-NW2106_B5-NW2101	B5-NW2106	B5-NW2101	4.6183	0.0295	0.1174
1843		B5-NW2107_B5-NW2108	B5-NW2107	B5-NW2108	32.0797	0.8201	0.1214
1844		B5-NW2108_B5-M14592	B5-NW2108	B5-M14592	97.0559	1.2139	0.1778
1845		B5-NW2109_B5-NW2108	B5-NW2109	B5-NW2108	23.7068	1.0561	0.2009
1846		B5-NW2110_B5-NW2109	B5-NW2110	B5-NW2109	5.1064	0.0326	0.1375
1847		B5-NW2111_B5-NW2110	B5-NW2111	B5-NW2110	1.2942	0.0083	0.0692
1848		B5-NW2112_B5-NW2110	B5-NW2112	B5-NW2110	2.7903	0.4774	0.0798

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1849		B5-NW2113_B5-NW2112	B5-NW2113	B5-NW2112	0.9328	0.0059	0.0614
1850		B5-NW2114_B5-NW9130	B5-NW2114	B5-NW9130	1.0346	0.0065	0.0587
1851		B5-NW2115_B5-NW2116	B5-NW2115	B5-NW2116	3.8039	0.0243	0.1288
1852		B5-NW2116_B5-NW2109	B5-NW2116	B5-NW2109	17.0508	0.1088	0.1910
1853		B5-NW2117_B5-NW2116	B5-NW2117	B5-NW2116	9.2368	0.0590	0.1571
1854		B5-NW2118_B5-NW2117	B5-NW2118	B5-NW2117	1.2514	0.0079	0.0928
1855		B5-NW2119_B5-NW2117	B5-NW2119	B5-NW2117	4.1003	0.0262	0.1124
1856		B5-NW2122_B5-NW2123	B5-NW2122	B5-NW2123	9.8341	0.0628	0.1363
1857		B5-NW2123_B5-NW2125	B5-NW2123	B5-NW2125	13.2421	0.9415	0.1452
1858		B5-NW2124_B5-NW2125	B5-NW2124	B5-NW2125	3.1612	0.0200	0.1231
1859		B5-NW2125_B5-NW2126	B5-NW2125	B5-NW2126	17.5150	0.9740	0.1721
1860		B5-NW2126_B5-NW2099	B5-NW2126	B5-NW2099	24.8347	0.0451	0.0883
1861		B5-NW2127_B5-NW2126	B5-NW2127	B5-NW2126	6.1076	0.0111	0.0639
1862		B5-NW2128_B5-NW2127	B5-NW2128	B5-NW2127	5.2767	0.6563	0.0423
1863		B5-NW2129_B5-NW2128	B5-NW2129	B5-NW2128	3.7107	0.5140	0.0920
1864		B5-NW2130_B5-NW2131	B5-NW2130	B5-NW2131	1.3257	0.0082	0.0606
1865		B5-NW2131_B5-NW2132	B5-NW2131	B5-NW2132	3.2990	0.0211	0.0805
1866		B5-NW2132_B5-NW2133	B5-NW2132	B5-NW2133	4.2561	0.0272	0.1066
1867		B5-NW2133_B5-NW2136	B5-NW2133	B5-NW2136	8.8851	0.0567	0.1317
1868		B5-NW2134_B5-NW2133	B5-NW2134	B5-NW2133	3.6633	0.6991	0.0741
1869		B5-NW2135_B5-NW2134	B5-NW2135	B5-NW2134	2.0262	0.0126	0.0649
1870		B5-NW2136_B5-NW2137	B5-NW2136	B5-NW2137	9.4916	0.0606	0.1380
1871		B5-NW2137_B5-NW2148	B5-NW2137	B5-NW2148	12.1054	0.7210	0.1439
1872		B5-NW2138_B5-NW2137	B5-NW2138	B5-NW2137	1.7999	0.8703	0.0396
1873		B5-NW2139_B5-NW2138	B5-NW2139	B5-NW2138	0.8062	0.0050	0.0385
1874		B5-NW2140_B5-NW2141	B5-NW2140	B5-NW2141	1.3743	0.0086	0.0592
1875		B5-NW2141_B5-NW2142	B5-NW2141	B5-NW2142	3.2993	0.0211	0.0709
1876		B5-NW2142_B5-NW2143	B5-NW2142	B5-NW2143	4.9082	0.0313	0.1567
1877		B5-NW2143_B5-NW2145	B5-NW2143	B5-NW2145	36.8852	0.2354	0.2787
1878		B5-NW2145_B5-NW2149	B5-NW2145	B5-NW2149	56.0478	0.3577	0.3300
1879		B5-NW2146_B5-NW2145	B5-NW2146	B5-NW2145	17.5658	0.1121	0.2643
1880		B5-NW2147_B5-NW2146	B5-NW2147	B5-NW2146	15.9123	0.1016	0.1843
1881		B5-NW2148_B5-NW2147	B5-NW2148	B5-NW2147	14.2968	0.7762	0.1528
1882		B5-NW2149_B5-NW2150	B5-NW2149	B5-NW2150	58.1499	0.8433	0.3521
1883		B5-NW2150_B5-NW2159	B5-NW2150	B5-NW2159	65.2517	0.8444	0.3714
1884		B5-NW2151_B5-NW2150	B5-NW2151	B5-NW2150	6.1519	0.8713	0.0907
1885		B5-NW2152_B5-NW2151	B5-NW2152	B5-NW2151	4.7641	0.0304	0.0899
1886		B5-NW2153_B5-NW2152	B5-NW2153	B5-NW2152	3.1155	0.0199	0.0801
1887		B5-NW2154_B5-NW2153	B5-NW2154	B5-NW2153	1.3898	0.0087	0.0612
1888		B5-NW2155_B5-NW2156	B5-NW2155	B5-NW2156	0.9360	0.0058	0.0522
1889		B5-NW2156_B5-NW2157	B5-NW2156	B5-NW2157	1.8180	0.0116	0.0662
1890		B5-NW2157_B5-NW2158	B5-NW2157	B5-NW2158	3.1632	0.0202	0.0763
1891		B5-NW2158_B5-NW2159	B5-NW2158	B5-NW2159	4.6767	0.7582	0.0827
1892		B5-NW2159_B5-NW2160	B5-NW2159	B5-NW2160	71.1849	0.4544	0.4057
1893		B5-NW2160_B5-NW2170	B5-NW2160	B5-NW2170	73.8697	1.1429	0.4311
1894		B5-NW2161_B5-NW2160	B5-NW2161	B5-NW2160	1.9172	0.4801	0.0943
1895		B5-NW2162_B5-NW2161	B5-NW2162	B5-NW2161	0.6960	0.0044	0.0440
1896		B5-NW2162_B5-NW2163	B5-NW2162	B5-NW2163	0.4549	0.0029	0.0398
1897		B5-NW2163_B5-NW2164	B5-NW2163	B5-NW2164	1.5527	0.0099	0.0544
1898		B5-NW2164_B5-NW2165	B5-NW2164	B5-NW2165	2.8295	0.7399	0.0599
1899		B5-NW2165_B5-NW2167	B5-NW2165	B5-NW2167	44.5542	0.8543	0.3038
1900		B5-NW2166_B5-NW2167	B5-NW2166	B5-NW2167	1.8222	0.7120	0.0453
1901		B5-NW2167_B5-NW2168	B5-NW2167	B5-NW2168	47.9834	1.0590	0.3255
1902		B5-NW2168_B5-NW2208	B5-NW2168	B5-NW2208	134.3010	0.5486	0.4140
1903		B5-NW2169_B5-NW2168	B5-NW2169	B5-NW2168	82.4103	0.5260	0.4329
1904		B5-NW2170_B5-NW2169	B5-NW2170	B5-NW2169	75.1062	0.4794	0.3547

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1905		B5-NW2171_B5-NW2172	B5-NW2171	B5-NW2172	0.8895	0.0055	0.0509
1906		B5-NW2172_B5-NW2173	B5-NW2172	B5-NW2173	2.3925	0.0153	0.0701
1907		B5-NW2173_B5-NW2174	B5-NW2173	B5-NW2174	3.8327	0.0245	0.0813
1908		B5-NW2174_B5-NW2175	B5-NW2174	B5-NW2175	4.9091	0.0313	0.1133
1909		B5-NW2175_B5-NW9129	B5-NW2175	B5-NW9129	11.7036	0.0747	0.1523
1910		B5-NW2176_B5-NW2175	B5-NW2176	B5-NW2175	5.7117	0.0365	0.1229
1911		B5-NW2177_B5-NW2176	B5-NW2177	B5-NW2176	4.3015	0.0275	0.0967
1912		B5-NW2178_B5-NW2177	B5-NW2178	B5-NW2177	2.6530	0.0169	0.0762
1913		B5-NW2179_B5-NW2178	B5-NW2179	B5-NW2178	1.0137	0.0063	0.0527
1914		B5-NW2180_B5-NW2181	B5-NW2180	B5-NW2181	0.5899	0.0037	0.0421
1915		B5-NW2181_B5-NW2182	B5-NW2181	B5-NW2182	1.6448	0.0105	0.0643
1916		B5-NW2182_B5-NW2183	B5-NW2182	B5-NW2183	3.2402	0.0207	0.0843
1917		B5-NW2183_B5-NW2184	B5-NW2183	B5-NW2184	4.7676	0.6582	0.0923
1918		B5-NW2184_B5-NW2185	B5-NW2184	B5-NW2185	22.5859	0.1442	0.2275
1919		B5-NW2185_B5-NW2192	B5-NW2185	B5-NW2192	29.8745	0.1907	0.2581
1920		B5-NW2186_B5-NW2185	B5-NW2186	B5-NW2185	4.0399	0.6213	0.0930
1921		B5-NW2187_B5-NW2186	B5-NW2187	B5-NW2186	2.5392	0.0162	0.0713
1922		B5-NW2188_B5-NW2187	B5-NW2188	B5-NW2187	0.9868	0.0063	0.0570
1923		B5-NW2189_B5-NW2192	B5-NW2189	B5-NW2192	3.7087	0.6883	0.0755
1924		B5-NW2190_B5-NW2189	B5-NW2190	B5-NW2189	2.2573	0.0144	0.0688
1925		B5-NW2191_B5-NW2190	B5-NW2191	B5-NW2190	0.7165	0.0045	0.0520
1926		B5-NW2192_B5-NW2165	B5-NW2192	B5-NW2165	37.7080	0.2407	0.2859
1927		B5-NW2193_B5-NW2194	B5-NW2193	B5-NW2194	6.4148	0.0409	0.1257
1928		B5-NW2194_B5-NW2195	B5-NW2194	B5-NW2195	11.0287	0.0704	0.1616
1929		B5-NW2195_B5-NW2196	B5-NW2195	B5-NW2196	13.9473	0.7083	0.1833
1930		B5-NW2196_B5-NW2197	B5-NW2196	B5-NW2197	14.9205	0.3919	0.1609
1931		B5-NW2197_B5-NW2198	B5-NW2197	B5-NW2198	15.7638	0.1006	0.1828
1932		B5-NW2198_B5-NW2210	B5-NW2198	B5-NW2210	16.6721	0.1064	0.1916
1933		B5-NW2199_B5-NW2200	B5-NW2199	B5-NW2200	3.2054	0.0205	0.0948
1934		B5-NW2200_B5-NW2201	B5-NW2200	B5-NW2201	5.4028	0.6306	0.1034
1935		B5-NW2201_B5-NW2202	B5-NW2201	B5-NW2202	5.6247	0.2642	0.0963
1936		B5-NW2202_B5-NW2218	B5-NW2202	B5-NW2218	6.0914	0.0389	0.1228
1937		B5-NW2203_B5-M14586	B5-NW2203	B5-M14586	150.2493	0.2728	0.2476
1938		B5-NW2204_B5-NW2203	B5-NW2204	B5-NW2203	30.4927	1.1064	0.2320
1939		B5-NW2205_B5-NW2204	B5-NW2205	B5-NW2204	12.4781	0.0796	0.1942
1940		B5-NW2206_B5-NW2204	B5-NW2206	B5-NW2204	12.7658	0.0815	0.1936
1941		B5-NW2207_B5-NW2206	B5-NW2207	B5-NW2206	7.1134	0.0454	0.1376
1942		B5-NW2208_B5-NW2212	B5-NW2208	B5-NW2212	161.7199	0.9647	0.4501
1943		B5-NW2209_B5-NW2208	B5-NW2209	B5-NW2208	24.0526	0.1535	0.3764
1944		B5-NW2210_B5-NW2209	B5-NW2210	B5-NW2209	20.7484	0.7394	0.2046
1945		B5-NW2211_B5-NW2208	B5-NW2211	B5-NW2208	2.3147	0.0148	0.2291
1946		B5-NW2212_B5-NW2216	B5-NW2212	B5-NW2216	170.4597	0.8734	0.4709
1947		B5-NW2213_B5-NW2212	B5-NW2213	B5-NW2212	4.4160	0.6164	0.1802
1948		B5-NW2214_B5-NW2213	B5-NW2214	B5-NW2213	1.4234	0.0089	0.0617
1949		B5-NW2215_B5-NW2211	B5-NW2215	B5-NW2211	1.0686	0.0066	0.0531
1950		B5-NW2216_B5-NW2217	B5-NW2216	B5-NW2217	173.7984	1.5105	0.4764
1951		B5-NW2217_B5-M14584	B5-NW2217	B5-M14584	330.4573	1.3363	0.3087
1952		B5-NW2218_B5-NW2219	B5-NW2218	B5-NW2219	8.8577	0.0565	0.1423
1953		B5-NW2219_B5-NW2220	B5-NW2219	B5-NW2220	10.7260	0.0685	0.1599
1954		B5-NW2220_B5-NW2230	B5-NW2220	B5-NW2230	15.0605	0.0961	0.1803
1955		B5-NW2221_B5-NW2220	B5-NW2221	B5-NW2220	3.4471	0.6836	0.0722
1956		B5-NW2222_B5-NW2221	B5-NW2222	B5-NW2221	2.2918	0.0146	0.0670
1957		B5-NW2223_B5-NW2222	B5-NW2223	B5-NW2222	1.0550	0.0066	0.0518
1958		B5-NW2224_B5-NW2225	B5-NW2224	B5-NW2225	0.4235	0.0027	0.0333
1959		B5-NW2225_B5-NW2227	B5-NW2225	B5-NW2227	0.8926	0.0057	0.0520
1960		B5-NW2226_B5-NW2227	B5-NW2226	B5-NW2227	0.7456	0.0047	0.0508

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
1961		B5-NW2227_B5-NW2229	B5-NW2227	B5-NW2229	2.5646	0.0164	0.0728
1962		B5-NW2228_B5-NW2229	B5-NW2228	B5-NW2229	0.8981	0.0056	0.0598
1963		B5-NW2229_B5-NW2230	B5-NW2229	B5-NW2230	4.3212	0.0276	0.1345
1964		B5-NW2230_B5-NW2231	B5-NW2230	B5-NW2231	20.5172	0.1310	0.2010
1965		B5-NW2231_B5-NW2232	B5-NW2231	B5-NW2232	21.4963	0.8765	0.2137
1966		B5-NW2232_B5-NW2236	B5-NW2232	B5-NW2236	22.9643	0.6902	0.2161
1967		B5-NW2233_B5-NW2232	B5-NW2233	B5-NW2232	1.4692	0.0094	0.1361
1968		B5-NW2234_B5-NW2233	B5-NW2234	B5-NW2233	1.3200	0.0084	0.0546
1969		B5-NW2235_B5-NW2234	B5-NW2235	B5-NW2234	1.2347	0.3447	0.0573
1970		B5-NW2236_B5-NW2238	B5-NW2236	B5-NW2238	23.3972	0.9342	0.2169
1971		B5-NW2238_B5-M15011	B5-NW2238	B5-M15011	27.1794	1.2305	0.1986
1972		B5-NW2239_B5-HF1002	B5-NW2239	B5-HF1002	27.3302	0.9119	0.2462
1973		B5-NW2240_B5-NW2239	B5-NW2240	B5-NW2239	27.2618	0.1740	0.2411
1974		B5-NW2241_B5-NW2240	B5-NW2241	B5-NW2240	2.9735	0.0190	0.1553
1975		B5-NW2242_B5-NW2241	B5-NW2242	B5-NW2241	1.2243	0.0077	0.0624
1976		B5-NW2242_B5-NW2243	B5-NW2242	B5-NW2243	1.0046	0.0064	0.0623
1977		B5-NW2243_B5-NW2244	B5-NW2243	B5-NW2244	2.6915	0.0172	0.1405
1978		B5-NW2244_B5-NW2245	B5-NW2244	B5-NW2245	20.8098	0.1328	0.2189
1979		B5-NW2245_B5-NW2246	B5-NW2245	B5-NW2246	21.2650	0.7755	0.2312
1980		B5-NW2246_B5-M15012	B5-NW2246	B5-M15012	371.1508	0.8218	0.1342
1981		B5-NW2247_B5-NW2244	B5-NW2247	B5-NW2244	17.1953	0.1098	0.2002
1982		B5-NW2248_B5-NW2247	B5-NW2248	B5-NW2247	13.5729	0.0866	0.1831
1983		B5-NW2249_B5-NW2248	B5-NW2249	B5-NW2248	6.0836	0.0388	0.1415
1984		B5-NW2250_B5-NW2251	B5-NW2250	B5-NW2251	1.2602	0.0079	0.0630
1985		B5-NW2251_B5-NW2249	B5-NW2251	B5-NW2249	2.7369	0.0175	0.0926
1986		B5-NW2252_B5-NW2249	B5-NW2252	B5-NW2249	2.2512	0.0144	0.0886
1987		B5-NW2253_B5-NW2252	B5-NW2253	B5-NW2252	1.0647	0.0067	0.0545
1988		B5-NW2254_B5-NW2247	B5-NW2254	B5-NW2247	2.6805	0.0171	0.1339
1989		B5-NW2255_B5-NW2248	B5-NW2255	B5-NW2248	1.1519	0.4120	0.0484
1990		B5-NW2255_B5-NW2261	B5-NW2255	B5-NW2261	0.4253	0.0027	0.0665
1991		B5-NW2256_B5-NW2248	B5-NW2256	B5-NW2248	5.5173	0.0352	0.1422
1992		B5-NW2257_B5-NW2256	B5-NW2257	B5-NW2256	1.9052	0.0122	0.0906
1993		B5-NW2258_B5-NW2256	B5-NW2258	B5-NW2256	2.6981	0.0172	0.0934
1994		B5-NW2259_B5-NW2257	B5-NW2259	B5-NW2257	1.3418	0.0086	0.0612
1995		B5-NW2260_B5-NW2254	B5-NW2260	B5-NW2254	1.1166	0.0071	0.0626
1996		B5-NW2260_B5-NW2264	B5-NW2260	B5-NW2264	1.1732	0.0074	0.1087
1997		B5-NW2261_B5-NW2265	B5-NW2261	B5-NW2265	2.6869	0.0172	0.1196
1998		B5-NW2262_B5-NW2258	B5-NW2262	B5-NW2258	1.0921	0.0069	0.0624
1999		B5-NW2262_B5-NW2266	B5-NW2262	B5-NW2266	1.1270	0.0071	0.0814
2000		B5-NW2263_B5-NW2259	B5-NW2263	B5-NW2259	0.6240	0.0040	0.0461
2001		B5-NW2263_B5-NW2267	B5-NW2263	B5-NW2267	0.6798	0.0043	0.0637
2002		B5-NW2264_B5-NW2271	B5-NW2264	B5-NW2271	12.3893	0.0791	0.1679
2003		B5-NW2265_B5-NW2264	B5-NW2265	B5-NW2264	9.5272	0.0608	0.1604
2004		B5-NW2266_B5-NW2265	B5-NW2266	B5-NW2265	5.6322	0.5793	0.1128
2005		B5-NW2267_B5-NW2266	B5-NW2267	B5-NW2266	3.2352	0.0207	0.1005
2006		B5-NW2268_B5-NW2267	B5-NW2268	B5-NW2267	2.0836	0.0133	0.0821
2007		B5-NW2269_B5-NW2268	B5-NW2269	B5-NW2268	0.8174	0.0052	0.0588
2008		B5-NW2269_B5-NW2278	B5-NW2269	B5-NW2278	0.6903	0.0044	0.0531
2009		B5-NW2270_B5-NW2240	B5-NW2270	B5-NW2240	23.9810	0.7156	0.2313
2010		B5-NW2271_B5-NW2270	B5-NW2271	B5-NW2270	13.4542	0.0859	0.1980
2011		B5-NW2272_B5-NW2270	B5-NW2272	B5-NW2270	10.0991	0.0645	0.1885
2012		B5-NW2273_B5-NW2272	B5-NW2273	B5-NW2272	2.1318	0.0136	0.1106
2013		B5-NW2274_B5-NW2272	B5-NW2274	B5-NW2272	7.3691	0.0470	0.1387
2014		B5-NW2275_B5-NW2274	B5-NW2275	B5-NW2274	2.7208	0.0174	0.1037
2015		B5-NW2276_B5-NW2275	B5-NW2276	B5-NW2275	1.1149	0.0070	0.0654
2016		B5-NW2277_B5-NW2274	B5-NW2277	B5-NW2274	4.2082	0.0269	0.1131

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2017		B5-NW2278_B5-NW2277	B5-NW2278	B5-NW2277	2.3882	0.0152	0.0819
2018		B5-NW2279_B5-NW2285	B5-NW2279	B5-NW2285	0.9658	0.0061	0.0558
2019		B5-NW2280_B5-NW2286	B5-NW2280	B5-NW2286	1.4978	0.0095	0.0714
2020		B5-NW2281_B5-NW2287	B5-NW2281	B5-NW2287	2.4667	0.0157	0.0846
2021		B5-NW2282_B5-NW2288	B5-NW2282	B5-NW2288	3.1349	0.0200	0.0962
2022		B5-NW2283_B5-NW2289	B5-NW2283	B5-NW2289	2.8616	0.0183	0.0929
2023		B5-NW2284_B5-NW2290	B5-NW2284	B5-NW2290	0.6615	0.0042	0.0743
2024		B5-NW2285_B5-NW2295	B5-NW2285	B5-NW2295	2.0935	0.0133	0.0702
2025		B5-NW2286_B5-NW2296	B5-NW2286	B5-NW2296	3.0519	0.0195	0.0907
2026		B5-NW2287_B5-NW2294	B5-NW2287	B5-NW2294	4.3562	0.0278	0.0993
2027		B5-NW2288_B5-NW2293	B5-NW2288	B5-NW2293	5.1524	0.0329	0.1128
2028		B5-NW2289_B5-NW2292	B5-NW2289	B5-NW2292	4.7500	0.0303	0.1101
2029		B5-NW2290_B5-NW2291	B5-NW2290	B5-NW2291	5.3889	0.0344	0.1092
2030		B5-NW2291_B5-NW2297	B5-NW2291	B5-NW2297	6.3524	0.0405	0.1178
2031		B5-NW2292_B5-NW2298	B5-NW2292	B5-NW2298	6.2017	0.0396	0.1238
2032		B5-NW2293_B5-NW2299	B5-NW2293	B5-NW2299	6.6118	0.0422	0.1273
2033		B5-NW2294_B5-NW2300	B5-NW2294	B5-NW2300	5.4839	0.0350	0.1199
2034		B5-NW2295_B5-NW2302	B5-NW2295	B5-NW2302	3.0912	0.0197	0.0861
2035		B5-NW2296_B5-NW2301	B5-NW2296	B5-NW2301	4.1558	0.0265	0.1035
2036		B5-NW2297_B5-NW2315	B5-NW2297	B5-NW2315	7.2356	0.0462	0.1579
2037		B5-NW2298_B5-NW2330	B5-NW2298	B5-NW2330	8.0069	0.0511	0.1339
2038		B5-NW2299_B5-NW2311	B5-NW2299	B5-NW2311	8.3638	0.0534	0.1846
2039		B5-NW2300_B5-NW2309	B5-NW2300	B5-NW2309	7.1775	0.5913	0.1313
2040		B5-NW2301_B5-NW2306	B5-NW2301	B5-NW2306	5.2969	0.5689	0.1095
2041		B5-NW2302_B5-NW2303	B5-NW2302	B5-NW2303	4.0671	0.0260	0.0954
2042		B5-NW2303_B5-NW2304	B5-NW2303	B5-NW2304	5.0417	0.6306	0.0987
2043		B5-NW2304_B5-NW2305	B5-NW2304	B5-NW2305	5.4002	0.0345	0.1369
2044		B5-NW2305_B5-M15174	B5-NW2305	B5-M15174	46.1391	0.6110	0.0364
2045		B5-NW2306_B5-NW2307	B5-NW2306	B5-NW2307	5.5163	0.6913	0.0985
2046		B5-NW2307_B5-NW2305	B5-NW2307	B5-NW2305	40.7389	0.0064	0.0332
2047		B5-NW2308_B5-NW2309	B5-NW2308	B5-NW2309	0.6872	0.0043	0.0370
2048		B5-NW2309_B5-NW9147	B5-NW2309	B5-NW9147	8.9701	0.0573	0.1145
2049		B5-NW2310_B5-NW2309	B5-NW2310	B5-NW2309	0.7043	0.0044	0.0359
2050		B5-NW2311_B5-NW2312	B5-NW2311	B5-NW2312	17.9355	0.6476	0.2328
2051		B5-NW2312_B5-M15177	B5-NW2312	B5-M15177	26.1583	0.0041	0.0237
2052		B5-NW2313_B5-NW2330	B5-NW2313	B5-NW2330	0.4988	0.0031	0.0785
2053		B5-NW2314_B5-M15179	B5-NW2314	B5-M15179	7.7591	0.3775	0.0154
2054		B5-NW2315_B5-NW2314	B5-NW2315	B5-NW2314	7.7341	0.3599	0.1949
2055		B5-NW2322_B5-NW2323	B5-NW2322	B5-NW2323	0.7388	0.0046	0.0442
2056		B5-NW2323_B5-NW2324	B5-NW2323	B5-NW2324	1.9608	0.0125	0.0621
2057		B5-NW2324_B5-NW2238	B5-NW2324	B5-NW2238	3.7629	0.0240	0.1341
2058		B5-NW2325_B5-NW2327	B5-NW2325	B5-NW2327	1.0997	0.0069	0.0550
2059		B5-NW2326_B5-NW2328	B5-NW2326	B5-NW2328	1.6220	0.0101	0.1992
2060		B5-NW2327_B5-NW2336	B5-NW2327	B5-NW2336	2.5393	0.0162	0.3191
2061		B5-NW2328_B5-NW2336	B5-NW2328	B5-NW2336	2.3574	0.2828	0.4680
2062		B5-NW2330_B5-NW2311	B5-NW2330	B5-NW2311	9.1330	0.0583	0.1846
2063		B5-NW2336_B5-M15014	B5-NW2336	B5-M15014	339.2110	2.2957	0.3136
2064		B5-NW2357_B5-NW9120	B5-NW2357	B5-NW9120	16.2537	1.6163	0.1080
2065		B5-NW2360_B5-NW1512	B5-NW2360	B5-NW1512	0.5006	0.5829	0.0514
2066		B5-NW2361_B5-NW1753	B5-NW2361	B5-NW1753	37.3899	0.2387	0.2218
2067		B5-NW2362_B5-NW1752	B5-NW2362	B5-NW1752	24.2729	1.1743	0.1896
2068		B5-NW2368_B5-NW9119	B5-NW2368	B5-NW9119	64.9735	1.1223	0.3968
2069		B5-NW2369_B5-NW1589	B5-NW2369	B5-NW1589	0.9200	0.2488	0.0585
2070		B5-NW2370_B5-NW1603	B5-NW2370	B5-NW1603	2.7456	0.0175	0.2589
2071		B5-NW2371_B5-NW2372	B5-NW2371	B5-NW2372	1.3125	0.3925	0.0577
2072		B5-NW2372_B5-NW1263	B5-NW2372	B5-NW1263	2.4027	0.5106	0.0688

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2073		B5-NW2373_B5-NW1263	B5-NW2373	B5-NW1263	1.7255	0.0110	0.0801
2074		B5-NW2374_B5-NW2373	B5-NW2374	B5-NW2373	0.5662	0.0036	0.0480
2075		B5-NW2374_B5-NW2375	B5-NW2374	B5-NW2375	0.5684	0.0036	0.0578
2076		B5-NW2375_B5-NW1249	B5-NW2375	B5-NW1249	2.5790	0.0165	0.0838
2077		B5-NW2376_B5-NW1335	B5-NW2376	B5-NW1335	1.8126	0.0111	0.0926
2078		B5-NW2377_B5-NW1393	B5-NW2377	B5-NW1393	1.1844	0.0075	0.0731
2079		B5-NW2378_B5-NW2273	B5-NW2378	B5-NW2273	0.7410	0.0047	0.0573
2080		B5-NW2393_B5-NW1809	B5-NW2393	B5-NW1809	1.1699	0.0073	0.0641
2081		B5-NW2394_B5-NW2395	B5-NW2394	B5-NW2395	13.6899	0.2203	0.1600
2082		B5-NW2395_B5-NW1779	B5-NW2395	B5-NW1779	14.1597	0.0904	0.1784
2083		B5-NW2396_B5-NW1813	B5-NW2396	B5-NW1813	34.4017	0.2196	0.2711
2084		B5-NW2397_B5-NW2398	B5-NW2397	B5-NW2398	31.8864	0.8619	0.2860
2085		B5-NW2398_B5-NW1814	B5-NW2398	B5-NW1814	32.5940	0.2080	0.2593
2086		B5-NW2399_B5-NW1827	B5-NW2399	B5-NW1827	93.1800	0.2643	0.3049
2087		B5-NW2401_B5-NW2400	B5-NW2401	B5-NW2399	46.5018	0.2968	0.3178
2088		B5-NW2402_B5-NW2403	B5-NW2402	B5-NW2403	0.4131	0.0026	0.0611
2089		B5-NW2403_B5-NW2404	B5-NW2403	B5-NW2404	1.4091	0.3216	0.0656
2090		B5-NW2404_B5-NW1841	B5-NW2404	B5-NW1841	9.6056	0.0613	0.1141
2091		B5-NW2404_B5-NW1866	B5-NW2404	B5-NW1866	0.2481	0.0016	0.0364
2092		B5-NW2407_B5-NW1857	B5-NW2407	B5-NW1857	0.5818	0.3371	0.0350
2093		B5-NW2407_B5-NW2411	B5-NW2407	B5-NW2411	0.6266	0.0040	0.0388
2094		B5-NW2408_B5-NW9127	B5-NW2408	B5-NW1857	2.6989	0.5341	0.0723
2095		B5-NW2409_B5-NW2410	B5-NW2409	B5-NW2410	0.3753	0.0023	0.0345
2096		B5-NW2410_B5-NW2411	B5-NW2410	B5-NW2411	1.1651	0.4984	0.0429
2097		B5-NW2411_B5-NW1892	B5-NW2411	B5-NW1892	2.0361	0.0130	0.0596
2098		B5-NW2412_B5-NW2413	B5-NW2412	B5-NW2413	1.5760	0.3771	0.0636
2099		B5-NW2413_B5-NW2415	B5-NW2413	B5-NW2415	1.6954	0.0108	0.1054
2100		B5-NW2415_B5-NW2416	B5-NW2415	B5-NW2416	16.5312	1.0372	0.1583
2101		B5-NW2416_B5-NW1885	B5-NW2416	B5-NW1885	18.1405	0.1158	0.1642
2102		B5-NW2417_B5-NW2419	B5-NW2417	B5-NW2419	213.6272	1.7736	0.2708
2103		B5-NW2418_B5-NW2417	B5-NW2418	B5-NW2417	212.0941	0.3851	0.2694
2104		B5-NW2419_B5-NW1763	B5-NW2419	B5-NW1763	214.0799	1.7815	0.2703
2105		B5-NW2420_B5-NW9230	B5-NW2420	B5-NW9230	3.8866	0.0245	0.0833
2106		B5-NW2422_B5-NW1764	B5-NW2422	B5-NW1764	187.4643	1.7257	0.2516
2107		B5-NW2428_B5-NW1460	B5-NW2428	B5-NW1460	1.9708	0.0124	0.0881
2108		B5-NW2429_B5-NW1466	B5-NW2429	B5-NW1466	696.2039	0.3900	0.2240
2109		B5-NW2430_B5-NW1433	B5-NW2430	B5-NW1433	2.7215	0.5276	0.0673
2110		B5-NW2434_B5-NW1611	B5-NW2434	B5-NW1611	8.9222	0.0569	0.1577
2111		B5-NW2435_B5-NW2440	B5-NW2435	B5-NW2440	5.6542	0.7569	0.0942
2112		B5-NW2436_B5-NW2435	B5-NW2436	B5-NW2435	3.9001	0.0249	0.0905
2113		B5-NW2437_B5-NW2436	B5-NW2437	B5-NW2436	2.1010	0.0134	0.0751
2114		B5-NW2438_B5-NW2437	B5-NW2438	B5-NW2437	0.9120	0.2742	0.0527
2115		B5-NW2439_B5-NW2438	B5-NW2439	B5-NW2438	0.3617	0.0023	0.0353
2116		B5-NW2440_B5-M14691	B5-NW2440	B5-NW1628	229.2145	0.6502	0.3775
2117		B5-NW2441_B5-NW2440	B5-NW2441	B5-NW2440	222.9405	1.3180	0.4842
2118		B5-NW2442_B5-NW2441	B5-NW2442	B5-NW2441	4.8068	0.7072	0.0883
2119		B5-NW2443_B5-NW2442	B5-NW2443	B5-NW2442	3.2025	0.0204	0.0796
2120		B5-NW2444_B5-NW2443	B5-NW2444	B5-NW2443	1.6480	0.0105	0.0616
2121		B5-NW2445_B5-NW2444	B5-NW2445	B5-NW2444	0.5572	0.2174	0.0458
2122		B5-NW2446_B5-M14693	B5-NW2446	B5-NW2441	217.0026	0.6156	0.4597
2123		B5-NW2447_B5-NW2446	B5-NW2447	B5-NW2446	3.5515	0.7385	0.0699
2124		B5-NW2448_B5-NW2449	B5-NW2448	B5-NW2449	0.3461	0.2516	0.0499
2125		B5-NW2449_B5-NW2447	B5-NW2449	B5-NW2447	1.5207	0.2904	0.0740
2126		B5-NW2450_B5-M14694	B5-NW2450	B5-NW2446	209.8315	0.5952	0.4195
2127		B5-NW2451_B5-NW2450	B5-NW2451	B5-NW2450	3.4612	0.7829	0.0660
2128		B5-NW2452_B5-NW2451	B5-NW2452	B5-NW2451	1.3506	0.0084	0.0575

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2129		B5-NW2453_B5-NW1532	B5-NW2453	B5-NW1532	85.2438	0.9514	0.3940
2130		B5-NW2454_B5-NW1521	B5-NW2454	B5-NW1521	25.4118	1.3111	0.1813
2131		B5-NW2455_B5-NW2454	B5-NW2455	B5-NW2454	24.6041	1.2541	0.1829
2132		B5-NW2456_B5-NW2455	B5-NW2456	B5-NW2455	22.7927	0.9553	0.1798
2133		B5-NW2457_B5-NW1460	B5-NW2457	B5-NW1460	0.4825	0.4060	0.0710
2134		B5-NW2458_B5-NW1524	B5-NW2458	B5-NW1524	30.5201	0.1948	0.2740
2135		B5-NW2922_B5-NW1949	B5-NW2922	B5-NW1949	1.0321	0.0064	0.1098
2136		B5-NW5000_B5-M10012	B5-NW5000	B5-M10012	694.7483	1.1780	0.5010
2137		B5-NW5002_B5-M10010	B5-NW5002	B5-M10010	701.8211	1.7501	0.5033
2138		B5-NW5006_B5-NW5007	B5-NW5006	B5-NW5007	721.1072	0.9080	0.5199
2139		B5-NW5007_B5-M10004	B5-NW5007	B5-M10004	724.8737	1.5866	0.5598
2140		B5-NW5010_B5-NW5071	B5-NW5010	B5-NW5071	12.0838	0.0771	0.1528
2141		B5-NW5011_B5-NW5010	B5-NW5011	B5-NW5010	9.8866	0.0631	0.1356
2142		B5-NW5012_B5-NW5011	B5-NW5012	B5-NW5011	1.2615	0.0080	0.0933
2143		B5-NW5012_B5-NW5014	B5-NW5012	B5-NW5014	1.9340	0.0122	0.0634
2144		B5-NW5014_B5-NW5016	B5-NW5014	B5-NW5016	3.6690	0.7373	0.0715
2145		B5-NW5016_B5-NW5075	B5-NW5016	B5-NW5075	23.6751	0.1511	0.2278
2146		B5-NW5017_B5-NW5016	B5-NW5017	B5-NW5016	19.7882	0.3901	0.1806
2147		B5-NW5018_B5-NW5017	B5-NW5018	B5-NW5017	2.0535	0.0131	0.1171
2148		B5-NW5019_B5-NW5018	B5-NW5019	B5-NW5018	1.3232	0.0083	0.0535
2149		B5-NW5020_B5-NW5017	B5-NW5020	B5-NW5017	16.2893	0.1040	0.1682
2150		B5-NW5021_B5-NW5020	B5-NW5021	B5-NW5020	8.1190	0.9747	0.1014
2151		B5-NW5022_B5-NW5021	B5-NW5022	B5-NW5021	5.1326	0.7738	0.0876
2152		B5-NW5023_B5-NW5020	B5-NW5023	B5-NW5020	4.1535	0.6954	0.0809
2153		B5-NW5024_B5-NW5023	B5-NW5024	B5-NW5023	2.1966	0.0138	0.0716
2154		B5-NW5025_B5-NW5027	B5-NW5025	B5-NW5027	6.9814	0.0446	0.1082
2155		B5-NW5026_B5-NW5025	B5-NW5026	B5-NW5025	2.1729	0.0136	0.0819
2156		B5-NW5027_B5-NW7312	B5-NW5027	B5-NW7312	8.6365	0.8828	0.1132
2157		B5-NW5028_B5-NW7312	B5-NW5028	B5-NW7312	2.6410	0.5739	0.0676
2158		B5-NW5030_B5-NW5029	B5-NW5030	B5-NW5020	1.6277	0.0103	0.1065
2159		B5-NW5030_B5-NW5031	B5-NW5030	B5-NW5031	1.6107	0.0102	0.0713
2160		B5-NW5031_B5-NW5000	B5-NW5031	B5-NW5000	5.2763	0.7454	0.0908
2161		B5-NW5032_B5-NW9025	B5-NW5032	B5-NW9025	6.1289	1.3085	0.0686
2162		B5-NW5033_B5-NW5038	B5-NW5033	B5-NW5038	2.0491	0.4933	0.0631
2163		B5-NW5034_B5-NW5032	B4-NW5034	B5-NW5032	2.1025	0.0133	0.0644
2164		B5-NW5038_B5-NW5039	B5-NW5038	B5-NW5039	2.4677	0.0157	0.0737
2165		B5-NW5039_B5-NW5002	B5-NW5039	B5-NW5002	4.8504	0.7128	0.0884
2166		B5-NW5068_B5-NW5006	B4-NW5068	B5-NW5006	1.7622	0.4887	0.0574
2167		B5-NW5070_B5-NW5075	B5-NW5070	B5-NW5075	17.0500	0.8033	0.1932
2168		B5-NW5071_B5-NW5070	B5-NW5071	B5-NW5070	14.3137	0.0914	0.1794
2169		B5-NW5072_B5-NW5007	B5-NW5072	B5-NW5007	3.5306	0.4339	0.0999
2170		B5-NW5073_B5-NW5072	B5-NW5073	B5-NW5072	3.2899	0.0210	0.0859
2171		B5-NW5074_B5-NW5073	B5-NW5074	B5-NW5073	2.5149	0.0160	0.0679
2172		B5-NW5075_B5-NW6858	B5-NW5075	B5-NW6858	41.4846	1.2175	0.2697
2173		B5-NW5076_B5-NW5077	B5-NW5076	B5-NW5077	0.4137	0.0026	0.0446
2174		B5-NW5077_B5-NW5078	B5-NW5077	B5-NW5078	1.8431	0.0118	0.0673
2175		B5-NW5078_B5-NW5079	B5-NW5078	B4-NW5079	3.1671	0.0202	0.2220
2176		B5-NW5079_B5-NW5136	B4-NW5079	B5-NW5136	79.1274	1.4988	0.3705
2177		B5-NW5081_B5-NW5080	B5-NW5081	B5-NW5080	93.2929	2.1063	0.1833
2178		B5-NW5082_B5-NW5081	B5-NW5082	B5-NW5081	88.2975	1.6194	0.3795
2179		B5-NW5083_B5-NW5082	B5-NW5083	B5-NW5082	87.1216	1.1390	0.3613
2180		B5-NW5084_B5-NW5083	B5-NW5084	B5-NW5083	3.5534	0.7945	0.0665
2181		B5-NW5085_B5-NW5084	B5-NW5085	B5-NW5084	1.7617	0.0110	0.0588
2182		B5-NW5086_B5-NW5081	B5-NW5086	B5-NW5081	4.9634	0.7385	0.1026
2183		B5-NW5088_B5-NW5089	B5-NW5088	B5-NW5089	1.7595	0.0111	0.0558
2184		B5-NW5088_B5-NW7324	B5-NW5088	B5-NW7324	1.3877	0.0088	0.0509

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2185		B5-NW5089_B5-NW5090	B5-NW5089	B5-NW5090	2.7808	0.6791	0.0627
2186		B5-NW5090_B5-NW7263	B5-NW5090	B5-NW7263	80.3754	1.4345	0.3872
2187		B5-NW5091_B5-NW5090	B5-NW5091	B5-NW5090	77.1347	1.0836	0.4641
2188		B5-NW5092_B5-NW5091	B5-NW5092	B5-NW5091	71.7835	0.4582	0.4090
2189		B5-NW5093_B5-NW5092	B5-NW5093	B5-NW5092	71.3562	1.3051	0.3802
2190		B5-NW5094_B5-NW5093	B5-NW5094	B5-NW5093	56.6165	0.3614	0.3479
2191		B5-NW5095_B5-NW5094	B5-NW5095	B5-NW5094	1.4744	0.2323	0.2556
2192		B5-NW5096_B5-NW5095	B5-NW5096	B5-NW5095	0.9911	0.0063	0.1214
2193		B5-NW5097_B5-NW5094	B5-NW5097	B5-NW5094	23.2899	0.2238	0.2700
2194		B5-NW5098_B5-NW5093	B5-NW5098	B5-NW5093	14.7334	0.2715	0.2619
2195		B5-NW5099_B5-NW5098	B5-NW5099	B5-NW5098	14.3899	0.9599	0.1518
2196		B5-NW5099_B5-NW5100	B5-NW5099	B5-NW5100	0.7423	0.0495	0.1518
2197		B5-NW5100_B5-NW5097	B5-NW5100	B5-NW5097	19.6993	0.1257	0.2013
2198		B5-NW5101_B5-NW5099	B5-NW5101	B5-NW5099	12.7011	0.0811	0.1454
2199		B5-NW5102_B5-NW5101	B5-NW5102	B5-NW5101	10.7626	0.8065	0.1401
2200		B5-NW5103_B5-NW5102	B5-NW5103	B5-NW5102	9.1919	0.0587	0.1351
2201		B5-NW5104_B5-NW5103	B5-NW5104	B5-NW5103	7.9892	0.0510	0.1230
2202		B5-NW5105_B5-NW5104	B5-NW5105	B5-NW5104	6.1657	0.0394	0.1120
2203		B5-NW5106_B5-NW5105	B5-NW5106	B5-NW5105	1.3309	0.0083	0.0783
2204		B5-NW5107_B5-NW5104	B5-NW5107	B5-NW5104	0.8022	0.4722	0.0344
2205		B5-NW5108_B5-NW5105	B5-NW5108	B5-NW5105	3.8321	0.0245	0.0975
2206		B5-NW5109_B5-NW5108	B5-NW5109	B5-NW5108	2.0692	0.0132	0.0771
2207		B5-NW5110_B5-NW5111	B5-NW5110	B5-NW5111	0.8337	0.0052	0.0499
2208		B5-NW5111_B5-NW5113	B5-NW5111	B5-NW5113	1.5214	0.0097	0.0766
2209		B5-NW5112_B5-NW5115	B5-NW5112	B5-NW5115	0.6660	0.0041	0.0414
2210		B5-NW5113_B5-NW5124	B5-NW5113	B5-NW5124	4.1781	0.0267	0.1038
2211		B5-NW5114_B5-NW5116	B5-NW5114	B5-NW5116	0.7624	0.0047	0.0412
2212		B5-NW5115_B5-NW5117	B5-NW5115	B5-NW5117	1.6679	0.0106	0.0511
2213		B5-NW5116_B5-NW5119	B5-NW5116	B5-NW5119	1.4254	0.0091	0.0491
2214		B5-NW5117_B5-NW5118	B5-NW5117	B5-NW5118	2.2057	0.0141	0.0569
2215		B5-NW5118_B5-NW5100	B5-NW5118	B5-NW5100	2.9176	0.0186	0.1193
2216		B5-NW5119_B5-NW5099	B5-NW5119	B5-NW5099	2.1927	0.0140	0.1011
2217		B5-NW5120_B5-NW5100	B5-NW5120	B5-NW5100	15.4569	0.9611	0.1593
2218		B5-NW5121_B5-NW5120	B5-NW5121	B5-NW5120	3.1335	0.8947	0.0564
2219		B5-NW5122_B5-NW5121	B5-NW5122	B5-NW5121	1.7185	0.0106	0.0524
2220		B5-NW5123_B5-NW5120	B5-NW5123	B5-NW5120	10.9072	0.0696	0.1520
2221		B5-NW5124_B5-NW5123	B5-NW5124	B5-NW5123	8.4600	0.0540	0.1285
2222		B5-NW5125_B5-NW5124	B5-NW5125	B5-NW5124	1.2208	0.6075	0.0385
2223		B5-NW5126_B5-NW5127	B5-NW5126	B5-NW5127	0.7399	0.0046	0.0460
2224		B5-NW5127_B5-NW5128	B5-NW5127	B5-NW5128	1.7851	0.0114	0.0556
2225		B5-NW5128_B5-NW5097	B5-NW5128	B5-NW5097	3.0816	0.8824	0.0563
2226		B5-NW5129_B5-NW5094	B5-NW5129	B5-NW5094	31.8521	0.2033	0.2756
2227		B5-NW5130_B5-NW5129	B5-NW5130	B5-NW5129	31.5356	0.9460	0.2655
2228		B5-NW5131_B5-NW5130	B5-NW5131	B5-NW5130	29.6825	0.1895	0.2480
2229		B5-NW5132_B5-NW5131	B5-NW5132	B5-NW5131	0.3394	0.3642	0.1252
2230		B5-NW5132_B5-NW5133	B5-NW5132	B5-NW5133	0.1755	0.1883	0.0232
2231		B5-NW5133_B5-NW5134	B5-NW5133	B5-NW5134	0.8894	0.0056	0.0615
2232		B5-NW5134_B5-NW5159	B5-NW5134	B5-NW5159	5.7081	0.0364	0.1108
2233		B5-NW5135_B5-NW5204	B5-NW5135	B5-NW5204	0.6979	0.0043	0.0448
2234		B5-NW5136_B5-NW7314	B5-NW5136	B5-NW7314	84.2644	1.5150	0.3489
2235		B5-NW5137_B5-NW5080	B5-NW5137	B5-NW5080	1.0237	0.4280	0.0434
2236		B5-NW5138_B5-NW5136	B5-NW5138	B5-NW5136	4.1211	0.4912	0.1764
2237		B5-NW5139_B5-NW5137	B5-NW5139	B5-NW5137	0.0000	0.0000	0.0000
2238		B5-NW5139_B5-NW5138	B5-NW5139	B5-NW5138	1.8709	0.2823	0.0868
2239		B5-NW5141_B5-NW7305	B5-NW5080	B5-NW7305	94.2913	1.3581	0.2513
2240		B5-NW5142_B5-M09997	B5-NW5142	B5-M09997	422.0917	1.2582	0.3692

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2241		B5-NW5143_B5-NW6754	B5-NW5143	B5-NW6754	0.9519	0.3625	0.0465
2242		B5-NW5144_B5-M09995	B5-NW5144	B5-M09995	453.2906	1.6168	0.3837
2243		B5-NW5145_B5-NW5146	B5-NW5145	B5-NW5146	2.0302	0.0127	0.0728
2244		B5-NW5146_B5-NW5147	B5-NW5146	B5-NW5147	5.0740	0.0324	0.1031
2245		B5-NW5147_B5-NW5150	B5-NW5147	B5-NW5150	9.1023	0.0581	0.1247
2246		B5-NW5148_B5-NW5147	B5-NW5148	B5-NW5147	1.9051	0.5341	0.0569
2247		B5-NW5150_B5-NW5151	B5-NW5150	B5-NW5151	11.4203	0.0729	0.1487
2248		B5-NW5151_B5-NW5154	B5-NW5151	B5-NW5154	18.4407	1.0684	0.1673
2249		B5-NW5152_B5-NW5151	B5-NW5152	B5-NW5151	4.9862	1.1504	0.0651
2250		B5-NW5153_B5-NW5152	B5-NW5153	B5-NW5152	2.3365	0.0147	0.0628
2251		B5-NW5154_B5-NW5142	B5-NW5154	B5-NW5142	19.3286	0.1234	0.4627
2252		B5-NW5155_B5-NW5144	B5-NW5155	B5-NW5144	32.0711	0.7378	0.3009
2253		B5-NW5156_B5-NW5155	B5-NW5156	B5-NW5155	30.8376	0.1260	0.1862
2254		B5-NW5157_B5-NW5156	B5-NW5157	B5-NW5156	12.3008	0.0785	0.1717
2255		B5-NW5158_B5-NW5157	B5-NW5158	B5-NW5157	10.7704	0.7998	0.1399
2256		B5-NW5159_B5-NW5158	B5-NW5159	B5-NW5158	8.3620	0.0534	0.1324
2257		B5-NW5160_B5-NW5134	B5-NW5160	B5-NW5134	4.5495	0.0290	0.0834
2258		B5-NW5161_B5-NW5160	B5-NW5161	B5-NW5160	3.9836	0.6465	0.0827
2259		B5-NW5162_B5-NW5163	B5-NW5162	B5-NW5163	21.9370	0.1400	0.2164
2260		B5-NW5163_B5-NW5166	B5-NW5163	B5-NW5166	25.1673	0.7007	0.2284
2261		B5-NW5164_B5-NW5163	B5-NW5164	B5-NW5163	1.9806	0.4678	0.0675
2262		B5-NW5165_B5-NW5164	B5-NW5165	B5-NW5164	0.8129	0.0051	0.0504
2263		B5-NW5166_B5-NW5131	B5-NW5166	B5-NW5131	28.2341	1.0162	0.2333
2264		B5-NW5167_B5-NW5166	B5-NW5167	B5-NW5166	1.9692	0.4574	0.0722
2265		B5-NW5168_B5-NW5167	B5-NW5168	B5-NW5167	0.8961	0.0056	0.0510
2266		B5-NW5169_B5-NW5161	B5-NW5169	B5-NW5161	2.7886	0.0178	0.0716
2267		B5-NW5170_B5-NW5169	B5-NW5170	B5-NW5169	1.2619	0.2756	0.0676
2268		B5-NW5171_B5-NW5169	B5-NW5171	B5-NW5169	0.7316	0.0045	0.0460
2269		B5-NW5172_B5-NW5173	B5-NW5172	B5-NW5173	13.9227	0.0889	0.1532
2270		B5-NW5173_B5-NW5174	B5-NW5173	B5-NW5174	14.8704	0.0949	0.1594
2271		B5-NW5174_B5-NW5162	B5-NW5174	B5-NW5162	16.1721	0.1032	0.1868
2272		B5-NW5175_B5-NW5162	B5-NW5175	B5-NW5162	0.6922	0.3339	0.1216
2273		B5-NW5176_B5-NW5162	B5-NW5176	B5-NW5162	4.4991	0.0287	0.1527
2274		B5-NW5177_B5-NW5176	B5-NW5177	B5-NW5176	1.9204	0.0123	0.0771
2275		B5-NW5178_B5-NW5177	B5-NW5178	B5-NW5177	1.2516	0.0079	0.0510
2276		B5-NW5179_B5-NW5178	B5-NW5179	B5-NW5178	0.2377	0.0015	0.0311
2277		B5-NW5180_B5-NW5181	B5-NW5180	B5-NW5181	0.7545	0.0047	0.0474
2278		B5-NW5181_B5-NW5176	B5-NW5181	B5-NW5176	1.7919	0.5015	0.0572
2279		B5-NW5182_B5-NW5091	B5-NW5182	B5-NW5091	4.9724	0.9876	0.0716
2280		B5-NW5183_B5-NW5184	B5-NW5183	B5-NW5184	5.1257	0.6747	0.0953
2281		B5-NW5184_B5-NW5185	B5-NW5184	B5-NW5185	5.9654	0.0381	0.0929
2282		B5-NW5185_B5-NW5186	B5-NW5185	B5-NW5186	3.4247	0.0219	0.0971
2283		B5-NW5185_B5-NW9017	B5-NW5185	B5-NW9017	3.4956	0.4627	0.0947
2284		B5-NW5186_B5-NW5187	B5-NW5186	B5-NW5187	4.6884	0.5794	0.0995
2285		B5-NW5187_B5-NW5195	B5-NW5187	B5-NW5195	7.4461	0.6188	0.1305
2286		B5-NW5188_B5-NW5187	B5-NW5188	B5-NW5187	1.8236	0.0116	0.0955
2287		B5-NW5189_B5-NW5190	B5-NW5189	B5-NW5190	0.6642	0.0042	0.0522
2288		B5-NW5190_B5-NW5191	B5-NW5190	B5-NW5191	2.0404	0.0130	0.0777
2289		B5-NW5191_B5-NW5192	B5-NW5191	B5-NW5192	3.8776	0.0248	0.1020
2290		B5-NW5192_B5-NW5193	B5-NW5192	B5-NW5193	6.1355	0.6007	0.1166
2291		B5-NW5193_B5-NW5194	B5-NW5193	B5-NW5194	7.3135	0.7362	0.1144
2292		B5-NW5194_B5-M14445	B5-NW5194	B5-M14445	879.0179	1.6139	0.2309
2293		B5-NW5195_B5-NW5197	B5-NW5195	B5-NW5197	8.7860	0.0561	0.1220
2294		B5-NW5196_B5-NW5198	B5-NW5196	B5-NW5198	1.3741	0.0085	0.0592
2295		B5-NW5197_B5-NW5200	B5-NW5197	B5-NW5200	11.5846	0.0739	0.1711
2296		B5-NW5198_B5-NW5201	B5-NW5198	B5-NW5201	3.2555	0.6955	0.0686

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2297		B5-NW5199_B5-NW5202	B5-NW5199	B5-NW5202	6.2611	0.7289	0.1036
2298		B5-NW5200_B5-NW5206	B5-NW5200	B5-NW5206	29.0531	0.1854	0.2274
2299		B5-NW5201_B5-NW5200	B5-NW5201	B5-NW5200	14.7214	0.0940	0.1901
2300		B5-NW5202_B5-NW5201	B5-NW5202	B5-NW5201	9.9097	0.0633	0.1456
2301		B5-NW5203_B5-NW9018	B5-NW5203	B5-NW9018	0.7969	0.0050	0.0541
2302		B5-NW5204_B5-NW5205	B5-NW5204	B5-NW5205	1.5874	0.0101	0.0614
2303		B5-NW5205_B5-NW5206	B5-NW5205	B5-NW5206	2.2807	0.4613	0.0772
2304		B5-NW5206_B5-NW5223	B5-NW5206	B5-NW5223	33.4208	0.8927	0.2372
2305		B5-NW5207_B5-NW5172	B5-NW5207	B5-NW5172	10.4554	0.0667	0.1369
2306		B5-NW5208_B5-NW5207	B5-NW5208	B5-NW5207	1.8628	0.0119	0.0869
2307		B5-NW5209_B5-NW5208	B5-NW5209	B5-NW5208	1.1307	0.0072	0.0458
2308		B5-NW5210_B5-NW5209	B5-NW5210	B5-NW5209	0.7675	0.3486	0.0412
2309		B5-NW5211_B5-NW5156	B5-NW5211	B5-NW5156	17.3313	0.1106	0.1889
2310		B5-NW5212_B5-NW5211	B5-NW5212	B5-NW5211	6.6499	0.8542	0.0969
2311		B5-NW5213_B5-NW5243	B5-NW5213	B5-NW5243	6.4741	0.0413	0.1090
2312		B5-NW5214_B5-NW5244	B5-NW5214	B5-NW5244	6.8643	0.0438	0.1116
2313		B5-NW5215_B5-NW5245	B5-NW5215	B5-NW5245	38.6240	1.2365	0.2535
2314		B5-NW5216_B5-NW5215	B5-NW5216	B5-NW5215	36.5406	1.1384	0.2585
2315		B5-NW5217_B5-NW5214	B5-NW5217	B5-NW5214	4.8002	0.0306	0.0945
2316		B5-NW5218_B5-NW5213	B5-NW5218	B5-NW5213	4.3982	0.0281	0.0914
2317		B5-NW5219_B5-NW5212	B5-NW5219	B5-NW5212	4.5098	0.0288	0.0894
2318		B5-NW5220_B5-NW5219	B5-NW5220	B5-NW5219	2.3790	0.0152	0.0707
2319		B5-NW5221_B5-NW5218	B5-NW5221	B5-NW5218	2.3138	0.0148	0.0724
2320		B5-NW5222_B5-NW5217	B5-NW5222	B5-NW5217	2.6879	0.0171	0.0763
2321		B5-NW5223_B5-NW5216	B5-NW5223	B5-NW5216	35.1356	0.9022	0.2484
2322		B5-NW5224_B5-NW5222	B5-NW5224	B5-NW5222	1.0953	0.0069	0.0555
2323		B5-NW5225_B5-NW5221	B5-NW5225	B5-NW5221	0.6991	0.0044	0.0490
2324		B5-NW5226_B5-NW5220	B5-NW5226	B5-NW5220	0.6244	0.0039	0.0465
2325		B5-NW5227_B5-NW5232	B5-NW5227	B5-NW5232	1.2104	0.0075	0.0576
2326		B5-NW5228_B5-NW5231	B5-NW5228	B5-NW5231	0.8871	0.0055	0.0514
2327		B5-NW5229_B5-NW5230	B5-NW5229	B5-NW5230	1.4385	0.0090	0.0574
2328		B5-NW5230_B5-NW5233	B5-NW5230	B5-NW5233	2.5873	0.5764	0.0667
2329		B5-NW5231_B5-NW5234	B5-NW5231	B5-NW5234	2.4129	0.5634	0.0646
2330		B5-NW5232_B5-NW5235	B5-NW5232	B5-NW5235	2.9364	0.6009	0.0706
2331		B5-NW5233_B5-NW5236	B5-NW5233	B5-NW5236	3.8275	0.0244	0.0752
2332		B5-NW5234_B5-NW5237	B5-NW5234	B5-NW5237	4.0472	0.0258	0.1767
2333		B5-NW5235_B5-NW5246	B5-NW5235	B5-NW5246	4.5463	1.0866	0.0636
2334		B5-NW5236_B5-NW5237	B5-NW5236	B5-NW5237	4.9125	0.0314	0.1926
2335		B5-NW5237_B5-NW5238	B5-NW5237	B5-NW5238	65.1495	0.2661	0.2431
2336		B5-NW5238_B5-NW5239	B5-NW5238	B5-NW5239	68.3360	1.4225	0.2507
2337		B5-NW5239_B5-NW7327	B5-NW5239	B5-NW7327	68.4928	1.3099	0.1175
2338		B5-NW5240_B5-NW5241	B5-NW5240	B5-NW5241	1.0906	0.5290	0.0393
2339		B5-NW5241_B5-NW5238	B5-NW5241	B5-NW5238	1.7138	0.8697	0.0382
2340		B5-NW5242_B5-NW5238	B5-NW5242	B5-NW5238	1.2207	0.6523	0.0368
2341		B5-NW5243_B5-NW5211	B5-NW5243	B5-NW5211	8.5537	0.0546	0.1468
2342		B5-NW5244_B5-NW5245	B5-NW5244	B5-NW5245	9.0817	0.0580	0.2080
2343		B5-NW5245_B5-NW5246	B5-NW5245	B5-NW5246	49.8093	0.3179	0.3010
2344		B5-NW5246_B5-NW5237	B5-NW5246	B5-NW5237	55.4785	1.3535	0.3080
2345		B5-NW5249_B5-NW5250	B5-NW5249	B5-NW5250	885.2622	2.1090	0.2454
2346		B5-NW5250_B5-M14441	B5-NW5250	B5-M14441	889.8661	1.6749	0.2460
2347		B5-NW5251_B5-NW5277	B5-NW5251	B5-NW5277	1.1865	0.5020	0.0433
2348		B5-NW5252_B5-NW5253	B5-NW5252	B5-NW5253	898.0923	2.2055	0.2402
2349		B5-NW5253_B5-NW9090	B5-NW5253	B5-NW9090	917.4616	0.4164	0.2439
2350		B5-NW5254_B5-NW5255	B5-NW5254	B5-NW5255	978.6001	0.4441	0.2578
2351		B5-NW5255_B5-NW5256	B5-NW5255	B5-NW5256	1,000.1423	2.1057	0.2679
2352		B5-NW5256_B5-NW5257	B5-NW5256	B5-NW5257	1,007.7157	0.4566	0.2485

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2353		B5-NW5257_B5-NW5258	B5-NW5257	B5-NW5258	1,024.4455	0.4642	0.2808
2354		B5-NW5258_B5-M14431	B5-NW5258	B5-M14431	1,522.0719	2.7303	0.3005
2355		B5-NW5262_B5-NW5263	B5-NW5262	B5-NW5263	52.4422	0.3347	0.2820
2356		B5-NW5263_B5-NW5470	B5-NW5263	B5-NW5470	53.1355	1.3829	0.2939
2357		B5-NW5267_B5-NW5268	B5-NW5267	B5-NW5268	0.4758	0.0029	0.0375
2358		B5-NW5268_B5-NW5269	B5-NW5268	B5-NW5269	1.6607	0.5957	0.0484
2359		B5-NW5269_B5-NW5249	B5-NW5269	B5-NW5249	2.2057	1.1486	0.0376
2360		B5-NW5273_B5-NW5274	B5-NW5273	B5-NW5274	0.6596	0.0041	0.0408
2361		B5-NW5274_B5-NW5275	B5-NW5274	B5-NW5275	2.0582	0.0131	0.0659
2362		B5-NW5275_B5-NW5250	B5-NW5275	B5-NW5250	3.0733	0.5192	0.0804
2363		B5-NW5276_B5-NW5251	B5-NW5276	B5-NW5251	0.3970	0.0025	0.0342
2364		B5-NW5276_B5-NW5275	B5-NW5276	B5-NW5275	0.2994	0.0019	0.0528
2365		B5-NW5277_B5-NW5252	B5-NW5277	B5-NW5252	8.2606	1.0937	0.0949
2366		B5-NW5278_B5-NW5277	B5-NW5278	B5-NW5277	6.5297	0.7735	0.1024
2367		B5-NW5279_B5-NW5278	B5-NW5279	B5-NW5278	2.5186	0.0159	0.0832
2368		B5-NW5280_B5-NW5279	B5-NW5280	B5-NW5279	1.3305	0.0083	0.0547
2369		B5-NW5281_B5-NW5282	B5-NW5281	B5-NW5282	0.8574	0.0054	0.0433
2370		B5-NW5282_B5-NW5283	B5-NW5282	B5-NW5283	1.5735	0.0100	0.0535
2371		B5-NW5283_B5-NW5278	B5-NW5283	B5-NW5278	2.3455	0.6047	0.0604
2372		B5-NW5284_B5-NW5253	B5-NW5284	B5-NW5253	20.1095	1.1146	0.1725
2373		B5-NW5285_B5-NW5284	B5-NW5285	B5-NW5284	19.9158	0.8659	0.2043
2374		B5-NW5286_B5-NW5285	B5-NW5286	B5-NW5285	18.6474	0.6927	0.1959
2375		B5-NW5287_B5-NW5288	B5-NW5287	B5-NW5288	41.9251	0.7809	0.3751
2376		B5-NW5288_B5-NW7358	B5-NW5288	B5-NW7358	42.9624	0.8125	0.2694
2377		B5-NW5290_B5-NW5291	B5-NW5290	B5-NW5291	15.3828	0.0982	0.2712
2378		B5-NW5291_B5-NW5254	B5-NW5291	B5-NW5254	33.8416	0.8068	0.4506
2379		B5-NW5292_B5-NW5291	B5-NW5292	B5-NW5291	17.5942	0.8812	0.1851
2380		B5-NW5293_B5-NW5292	B5-NW5293	B5-NW5292	15.4645	0.7607	0.1724
2381		B5-NW5294_B5-NW5293	B5-NW5294	B5-NW5293	14.6584	0.0936	0.1516
2382		B5-NW5295_B5-NW5296	B5-NW5295	B5-NW5296	15.1004	0.8349	0.1728
2383		B5-NW5296_B5-NW5297	B5-NW5296	B5-NW5297	15.7149	0.1003	0.1656
2384		B5-NW5297_B5-NW5298	B5-NW5297	B5-NW5298	17.3518	0.6838	0.1857
2385		B5-NW5298_B5-NW5299	B5-NW5298	B5-NW5299	19.8309	0.9485	0.1912
2386		B5-NW5299_B5-NW5255	B5-NW5299	B5-NW5255	21.0057	1.0178	0.1894
2387		B5-NW5300_B5-NW5301	B5-NW5300	B5-NW5301	1.4735	0.0092	0.0616
2388		B5-NW5301_B5-NW5302	B5-NW5301	B5-NW5302	3.1567	0.0201	0.0869
2389		B5-NW5302_B5-NW5303	B5-NW5302	B5-NW5303	5.2053	0.0332	0.1006
2390		B5-NW5303_B5-NW5256	B5-NW5303	B5-NW5256	6.2032	0.7374	0.1021
2391		B5-NW5304_B5-NW5257	B5-NW5304	B5-NW5257	15.5422	0.9678	0.1592
2392		B5-NW5305_B5-NW5304	B5-NW5305	B5-NW5304	14.9085	0.0952	0.1577
2393		B5-NW5306_B5-NW5305	B5-NW5306	B5-NW5305	14.0287	0.6751	0.1550
2394		B5-NW5307_B5-NW5306	B5-NW5307	B5-NW5306	13.2331	0.6779	0.1526
2395		B5-NW5308_B5-NW5307	B5-NW5308	B5-NW5307	12.4807	0.0797	0.1395
2396		B5-NW5309_B5-NW5837	B5-NW5309	B5-NW5837	1.4427	0.3764	0.0964
2397		B5-NW5322_B5-NW5323	B2-NW5322	B5-NW5323	501.7001	2.2556	0.4207
2398		B5-NW5323_B5-NW5258	B5-NW5323	B5-NW5258	504.2574	4.9009	0.2403
2399		B5-NW5324_B5-NW5323	B5-NW5324	B5-NW5323	4.0300	0.5484	0.0932
2400		B5-NW5325_B5-NW5329	B5-NW5325	B5-NW5329	1.0564	0.0066	0.0587
2401		B5-NW5326_B5-NW5330	B5-NW5326	B5-NW5330	0.9856	0.0061	0.0561
2402		B5-NW5327_B5-NW5331	B5-NW5327	B5-NW5331	1.3978	0.0087	0.0681
2403		B5-NW5328_B5-NW5332	B5-NW5328	B5-NW5332	1.7162	0.0107	0.0810
2404		B5-NW5329_B5-NW5333	B5-NW5329	B5-NW5333	3.2999	0.0211	0.0808
2405		B5-NW5330_B5-NW5334	B5-NW5330	B5-NW5334	2.7984	0.0179	0.0749
2406		B5-NW5331_B5-NW5335	B5-NW5331	B5-NW5335	3.4617	0.0221	0.0882
2407		B5-NW5332_B5-NW5336	B5-NW5332	B5-NW5336	5.7567	0.0367	0.1115
2408		B5-NW5333_B5-NW5337	B5-NW5333	B5-NW5341	5.7157	0.8343	0.0888

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2409		B5-NW5334_B5-NW5338	B5-NW5334	B5-NW5338	4.4728	0.0285	0.0874
2410		B5-NW5335_B5-NW5339	B5-NW5335	B5-NW5339	4.9363	0.0315	0.0944
2411		B5-NW5336_B5-NW5340	B5-NW5336	B5-NW5340	7.5959	0.7346	0.1176
2412		B5-NW5338_B5-NW5358	B5-NW5338	B5-NW5358	5.7020	0.0364	0.0990
2413		B5-NW5339_B5-NW5359	B5-NW5339	B5-NW5359	6.0330	0.0385	0.1015
2414		B5-NW5340_B5-NW5360	B5-NW5340	B5-NW5360	8.7040	0.0556	0.1179
2415		B5-NW5341_B5-NW5342	B5-NW5341	B5-NW5342	7.0033	0.0447	0.1471
2416		B5-NW5342_B5-NW5343	B5-NW5342	B5-NW5343	23.5346	0.9817	0.2108
2417		B5-NW5343_B5-NW5344	B5-NW5343	B5-NW5344	25.1439	1.0362	0.2121
2418		B5-NW5344_B5-NW7332	B5-NW5344	B5-NW7332	25.5902	1.1305	0.2021
2419		B5-NW5345_B5-NW7331	B5-NW5345	B5-NW7331	10.5467	0.9212	0.1261
2420		B5-NW5346_B5-NW7330	B5-NW5346	B5-NW7330	11.1073	0.9958	0.1239
2421		B5-NW5347_B5-NW7329	B5-NW5347	B5-NW7329	13.3507	1.0467	0.1358
2422		B5-NW5348_B5-NW7328	B5-NW5348	B5-NW7328	9.9963	1.6544	0.1500
2423		B5-NW5349_B5-NW5345	B5-NW5349	B5-NW5345	9.4665	0.0604	0.1243
2424		B5-NW5350_B5-NW5346	B5-NW5350	B5-NW5346	9.8904	0.8790	0.1246
2425		B5-NW5351_B5-NW5347	B5-NW5351	B5-NW5347	12.2656	0.9432	0.1376
2426		B5-NW5352_B5-NW5353	B5-NW5352	B5-NW5353	7.2948	0.0466	0.1078
2427		B5-NW5353_B5-NW5348	B5-NW5353	B5-NW5348	9.0529	0.9586	0.1105
2428		B5-NW5354_B5-NW5352	B5-NW5354	B5-NW5352	1.5286	0.5000	0.0513
2429		B5-NW5355_B5-NW5352	B5-NW5355	B5-NW5352	4.5059	0.0288	0.0946
2430		B5-NW5356_B5-NW5355	B5-NW5356	B5-NW5355	1.3130	0.4774	0.0477
2431		B5-NW5357_B5-NW5355	B5-NW5357	B5-NW5355	1.9350	0.0123	0.0698
2432		B5-NW5358_B5-NW5349	B5-NW5358	B5-NW5349	7.4990	0.0479	0.1130
2433		B5-NW5359_B5-NW5350	B5-NW5359	B5-NW5350	7.9299	0.0506	0.1159
2434		B5-NW5360_B5-NW5351	B5-NW5360	B5-NW5351	10.4582	0.0668	0.1301
2435		B5-NW5361_B5-NW7333	B5-NW5361	B5-NW7333	3.6854	0.7560	0.0705
2436		B5-NW5362_B5-NW5361	B5-NW5362	B5-NW5361	2.7069	0.0173	0.0694
2437		B5-NW5363_B5-NW5362	B5-NW5363	B5-NW5362	0.9931	0.0062	0.0549
2438		B5-NW5364_B5-NW7334	B5-NW5364	B5-NW7334	9.2807	1.3646	0.0884
2439		B5-NW5365_B5-NW5364	B5-NW5365	B5-NW5364	8.3473	0.4987	0.1638
2440		B5-NW5366_B5-NW5365	B5-NW5366	B5-NW5365	6.6493	0.0424	0.1243
2441		B5-NW5367_B5-NW5366	B5-NW5367	B5-NW5366	0.9095	0.0056	0.1327
2442		B5-NW5368_B5-NW5366	B5-NW5368	B5-NW5366	4.7457	0.7131	0.0871
2443		B5-NW5369_B5-NW5368	B5-NW5369	B5-NW5368	1.4868	0.0092	0.0687
2444		B5-NW5370_B5-NW5371	B5-NW5370	B5-NW5371	0.9708	0.4263	0.0420
2445		B5-NW5371_B5-NW5372	B5-NW5371	B5-NW5372	11.4046	0.6799	0.1640
2446		B5-NW5372_B5-NW5373	B5-NW5372	B5-NW5373	14.1848	0.9735	0.1488
2447		B5-NW5373_B5-NW5342	B5-NW5373	B5-NW5342	15.6467	1.1311	0.1436
2448		B5-NW5374_B5-NW5375	B5-NW5374	B5-NW5375	1.7743	0.0111	0.0860
2449		B5-NW5375_B5-NW5376	B5-NW5375	B5-NW5376	5.1803	0.0331	0.1299
2450		B5-NW5376_B5-NW5377	B5-NW5376	B5-NW5377	8.2138	0.5883	0.1445
2451		B5-NW5377_B5-NW5378	B5-NW5377	B5-NW5378	8.8006	0.7681	0.1262
2452		B5-NW5378_B5-NW5379	B5-NW5378	B5-NW5379	8.9276	0.0570	0.1389
2453		B5-NW5379_B5-NW5380	B5-NW5379	B5-NW5380	9.2523	0.0591	0.1598
2454		B5-NW5380_B5-NW5381	B5-NW5380	B5-NW5381	14.4794	0.0924	0.2114
2455		B5-NW5381_B5-NW5382	B5-NW5381	B5-NW5382	20.0076	0.1277	0.2726
2456		B5-NW5382_B5-NW5412	B5-NW5382	B5-NW5412	33.1694	0.8789	0.2902
2457		B5-NW5383_B5-NW5382	B5-NW5383	B5-NW5382	11.0263	0.7875	0.1448
2458		B5-NW5384_B5-NW5383	B5-NW5384	B5-NW5383	1.5345	0.4380	0.0563
2459		B5-NW5385_B5-NW5386	B5-NW5385	B5-NW5386	1.0394	0.0065	0.0850
2460		B5-NW5386_B5-NW5383	B5-NW5386	B5-NW5383	8.0695	0.0515	0.1345
2461		B5-NW5387_B5-NW5386	B5-NW5387	B5-NW5386	5.4043	0.0345	0.1126
2462		B5-NW5388_B5-NW5387	B5-NW5388	B5-NW5387	2.4608	0.5157	0.0695
2463		B5-NW5389_B5-NW5388	B5-NW5389	B5-NW5388	1.2669	0.0080	0.0589
2464		B5-NW5390_B5-NW9068	B5-NW5390	B5-NW9068	1.1954	0.0076	0.0562

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2465		B5-NW5412_B5-NW5477	B5-NW5412	B5-NW5477	33.5919	0.2490	0.2786
2466		B5-NW5413_B5-NW5812	B5-NW5413	B5-NW5812	2.3770	0.2663	0.1064
2467		B5-NW5414_B5-NW5413	B5-NW5414	B5-NW5413	2.2515	0.0144	0.0884
2468		B5-NW5415_B5-NW5414	B5-NW5415	B5-NW5414	1.4538	0.0093	0.0642
2469		B5-NW5416_B5-NW5415	B5-NW5416	B5-NW5415	0.5867	0.0037	0.0470
2470		B5-NW5417_B5-NW5418	B5-NW5417	B5-NW5418	1.1591	0.0073	0.0630
2471		B5-NW5418_B5-NW5419	B5-NW5418	B5-NW5419	2.8268	0.0180	0.0773
2472		B5-NW5419_B5-NW5420	B5-NW5419	B5-NW5420	4.3526	0.3124	0.0904
2473		B5-NW5420_B5-NW5813	B5-NW5420	B5-NW5813	5.0202	0.0320	0.1067
2474		B5-NW5422_B5-NW5419	B5-NW5422	B5-NW5419	1.0253	0.0065	0.0635
2475		B5-NW5423_B5-NW5429	B5-NW5423	B5-NW5429	6.3147	0.6439	0.1134
2476		B5-NW5424_B5-NW5423	B5-NW5424	B5-NW5423	2.5324	0.0162	0.0951
2477		B5-NW5427_B5-NW5424	B5-NW5427	B5-NW5424	1.1464	0.0072	0.0623
2478		B5-NW5429_B5-NW5435	B5-NW5429	B5-NW5435	6.5186	0.0416	0.0979
2479		B5-NW5430_B5-NW5877	B5-NW5430	B5-NW5877	0.5965	0.0037	0.0529
2480		B5-NW5431_B5-NW5432	B5-NW5431	B5-NW5432	9.1645	0.7507	0.1318
2481		B5-NW5432_B5-NW5450	B5-NW5432	B5-NW5450	10.0165	0.0639	0.1288
2482		B5-NW5433_B5-NW5451	B5-NW5433	B5-NW5451	0.6147	0.0038	0.0429
2483		B5-NW5434_B5-NW5437	B5-NW5434	B5-NW5437	0.5868	0.0036	0.0400
2484		B5-NW5435_B5-NW5436	B5-NW5435	B5-NW5436	7.3812	0.0471	0.1275
2485		B5-NW5436_B5-NW5438	B5-NW5436	B5-NW5438	8.3341	0.0532	0.1723
2486		B5-NW5437_B5-NW5439	B5-NW5437	B5-NW5439	1.5203	0.0097	0.0555
2487		B5-NW5438_B5-NW5440	B5-NW5438	B5-NW5440	9.0971	0.0581	0.2484
2488		B5-NW5439_B5-NW5441	B5-NW5439	B5-NW5441	2.5511	0.0163	0.1547
2489		B5-NW5440_B5-NW5441	B5-NW5440	B5-NW5441	26.7895	0.7292	0.2846
2490		B5-NW5441_B5-NW5456	B5-NW5441	B5-NW5456	36.7674	0.2347	0.2615
2491		B5-NW5442_B5-NW5441	B5-NW5442	B5-NW5441	7.0316	0.8288	0.1027
2492		B5-NW5443_B5-NW5440	B5-NW5443	B5-NW5440	17.2047	0.1098	0.2271
2493		B5-NW5444_B5-NW5442	B5-NW5444	B5-NW5442	1.8859	0.0120	0.0805
2494		B5-NW5445_B5-NW5444	B5-NW5445	B5-NW5444	0.6158	0.0038	0.0463
2495		B5-NW5446_B5-NW5447	B5-NW5446	B5-NW5447	0.0080	0.0000	0.0368
2496		B5-NW5447_B5-NW5443	B5-NW5447	B5-NW5443	2.9531	0.0189	0.1217
2497		B5-NW5448_B5-NW5443	B5-NW5448	B5-NW5443	13.3490	0.9651	0.1436
2498		B5-NW5449_B5-NW5447	B5-NW5449	B5-NW5447	2.3544	0.5350	0.0658
2499		B5-NW5450_B5-NW5448	B5-NW5450	B5-NW5448	11.7714	0.0751	0.1383
2500		B5-NW5451_B5-NW5449	B5-NW5451	B5-NW5449	1.5079	0.0096	0.0587
2501		B5-NW5452_B5-NW5442	B5-NW5452	B5-NW5442	4.5269	0.0289	0.0950
2502		B5-NW5453_B5-NW5452	B5-NW5453	B5-NW5452	3.6903	0.4360	0.0742
2503		B5-NW5454_B5-NW5453	B5-NW5454	B5-NW5453	3.0577	0.6342	0.0700
2504		B5-NW5455_B5-NW5454	B5-NW5455	B5-NW5454	1.3567	0.0084	0.0585
2505		B5-NW5456_B5-NW5460	B5-NW5456	B5-NW5460	42.7365	0.2728	0.2781
2506		B5-NW5457_B5-NW5456	B5-NW5457	B5-NW5456	5.0170	0.9692	0.0734
2507		B5-NW5458_B5-NW5457	B5-NW5458	B5-NW5457	3.2057	0.0204	0.0731
2508		B5-NW5459_B5-NW5458	B5-NW5459	B5-NW5458	1.3533	0.0084	0.0596
2509		B5-NW5460_B5-NW5469	B5-NW5460	B5-NW5469	47.7539	0.3048	0.2854
2510		B5-NW5461_B5-NW5460	B5-NW5461	B5-NW5460	4.3199	0.8859	0.0705
2511		B5-NW5462_B5-NW5461	B5-NW5462	B5-NW5461	3.1312	0.0200	0.0698
2512		B5-NW5463_B5-NW5462	B5-NW5463	B5-NW5462	1.8254	0.0116	0.0610
2513		B5-NW5464_B5-NW5463	B5-NW5464	B5-NW5463	1.0166	0.2837	0.0573
2514		B5-NW5465_B5-NW5466	B5-NW5465	B5-NW5466	1.0712	0.4281	0.0468
2515		B5-NW5466_B5-NW5467	B5-NW5466	B5-NW5467	1.9230	0.0122	0.0632
2516		B5-NW5467_B5-NW5468	B5-NW5467	B5-NW5468	3.0143	0.6111	0.0711
2517		B5-NW5468_B5-NW5469	B5-NW5468	B5-NW5469	4.1327	1.0100	0.0627
2518		B5-NW5469_B5-NW5262	B5-NW5469	B5-NW5262	52.3388	1.3958	0.2888
2519		B5-NW5470_B5-M09979	B5-NW5470	B5-M09979	142.3236	3.2927	0.1802
2520		B5-NW5472_B5-NW5470	B5-NW5472	B5-NW5470	89.0325	1.6141	0.3827

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2521		B5-NW5477_B5-NW5478	B5-NW5477	B5-NW5478	34.3301	0.8025	0.3176
2522		B5-NW5478_B5-NW5479	B5-NW5478	B5-NW5479	38.9479	1.1190	0.2738
2523		B5-NW5479_B5-NW5480	B5-NW5479	B5-NW5480	39.5269	0.2523	0.2523
2524		B5-NW5480_B5-NW5481	B5-NW5480	B5-NW5481	50.7607	0.9204	0.2954
2525		B5-NW5481_B5-NW5482	B5-NW5481	B5-NW5482	53.2923	0.7980	0.3145
2526		B5-NW5482_B5-NW5483	B5-NW5482	B5-NW5483	54.1663	0.3457	0.3497
2527		B5-NW5483_B5-NW5484	B5-NW5483	B5-NW5484	54.3378	0.9969	0.3794
2528		B5-NW5484_B5-NW5485	B5-NW5484	B5-NW5485	63.1798	0.4033	0.3617
2529		B5-NW5485_B5-NW5486	B5-NW5485	B5-NW5486	69.8048	0.9900	0.3754
2530		B5-NW5486_B5-NW5487	B5-NW5486	B5-NW5487	71.4885	0.9497	0.3869
2531		B5-NW5487_B5-NW5472	B5-NW5487	B5-NW5472	73.6662	1.2878	0.3933
2532		B5-NW5545_B5-NW7354	B5-NW5545	B5-NW7354	795.2743	0.3604	0.2216
2533		B5-NW5546_B5-NW5547	B5-NW5546	B5-NW5547	845.8580	1.7858	0.2675
2534		B5-NW5547_B5-M14449	B5-NW5547	B5-M14449	854.1791	0.3876	0.2391
2535		B5-NW5548_B5-NW5549	B5-NW5548	B5-NW5549	863.8057	0.3921	0.2551
2536		B5-NW5549_B5-NW5194	B5-NW5549	B5-NW5194	871.9339	1.8167	0.2700
2537		B5-NW5584_B5-NW5295	B5-NW5584	B5-NW5295	13.6153	0.0869	0.1638
2538		B5-NW5585_B5-NW5294	B5-NW5585	B5-NW5294	7.4580	0.0476	0.2790
2539		B5-NW5586_B5-NW9011	B5-NW5586	B5-NW9011	5.6836	0.6142	0.1090
2540		B5-NW5587_B5-NW5584	B5-NW5587	B5-NW5584	10.4839	0.0669	0.1456
2541		B5-NW5588_B5-NW5585	B5-NW5588	B5-NW5585	5.7504	0.0367	0.1041
2542		B5-NW5589_B5-NW5586	B5-NW5589	B5-NW5586	4.0048	0.0256	0.1049
2543		B5-NW5590_B5-NW5587	B5-NW5590	B5-NW5587	7.1252	0.0454	0.1200
2544		B5-NW5591_B5-NW5590	B5-NW5591	B5-NW5590	3.4400	0.0218	0.0913
2545		B5-NW5592_B5-NW5588	B5-NW5592	B5-NW5588	4.2012	0.0268	0.0925
2546		B5-NW5593_B5-NW5589	B5-NW5593	B5-NW5589	2.5760	0.0164	0.0863
2547		B5-NW5594_B5-NW5602	B5-NW5594	B5-NW5602	39.6383	0.5740	0.2769
2548		B5-NW5595_B5-NW5592	B5-NW5595	B5-NW5592	2.6134	0.0167	0.0850
2549		B5-NW5596_B5-NW5593	B5-NW5596	B5-NW5593	1.0462	0.0066	0.0618
2550		B5-NW5597_B5-NW5595	B5-NW5597	B5-NW5595	1.4910	0.3737	0.0623
2551		B5-NW5598_B5-NW5597	B5-NW5598	B5-NW5597	0.7521	0.2910	0.0453
2552		B5-NW5599_B5-NW5600	B5-NW5599	B5-NW5600	0.5895	0.3411	0.0349
2553		B5-NW5600_B5-NW5594	B5-NW5600	B5-NW5594	37.5500	0.7011	0.2564
2554		B5-NW5601_B5-NW5603	B5-NW5601	B5-NW5603	1.1848	0.0074	0.0667
2555		B5-NW5602_B5-NW5605	B5-NW5602	B5-NW5605	40.4697	1.0845	0.2878
2556		B5-NW5603_B5-NW5604	B5-NW5603	B5-NW5604	2.5883	0.3960	0.0860
2557		B5-NW5604_B5-NW5606	B5-NW5604	B5-NW5606	12.3702	0.0790	0.1709
2558		B5-NW5605_B5-NW5287	B5-NW5605	B5-NW5287	41.0786	0.2622	0.3007
2559		B5-NW5606_B5-NW5286	B5-NW5606	B5-NW5286	18.4186	0.8591	0.1945
2560		B5-NW5607_B5-NW5606	B5-NW5607	B5-NW5606	5.5934	0.6759	0.1010
2561		B5-NW5608_B5-NW5607	B5-NW5608	B5-NW5607	4.1986	0.0268	0.0929
2562		B5-NW5609_B5-NW5608	B5-NW5609	B5-NW5608	2.6600	0.0170	0.0774
2563		B5-NW5610_B5-NW9010	B5-NW5610	B5-NW9010	0.4531	0.2668	0.0362
2564		B5-NW5611_B5-NW5604	B5-NW5611	B5-NW5604	8.3984	0.0536	0.1364
2565		B5-NW5612_B5-NW5611	B5-NW5612	B5-NW5611	7.0229	0.0448	0.1131
2566		B5-NW5613_B5-NW5612	B5-NW5613	B5-NW5612	4.4955	0.0287	0.0932
2567		B5-NW5614_B5-NW5613	B5-NW5614	B5-NW5613	1.7206	0.0107	0.0698
2568		B5-NW5615_B5-NW5636	B5-NW5615	B5-NW5636	28.8357	0.8952	0.2591
2569		B5-NW5616_B5-NW5615	B5-NW5616	B5-NW5615	20.6951	0.1321	0.2334
2570		B5-NW5617_B5-NW5616	B5-NW5617	B5-NW5616	19.5007	0.1245	0.1988
2571		B5-NW5618_B5-NW5617	B5-NW5618	B5-NW5617	18.4683	0.7060	0.1870
2572		B5-NW5619_B5-NW5620	B5-NW5619	B5-NW5620	1.7469	0.0110	0.0814
2573		B5-NW5620_B5-NW5621	B5-NW5620	B5-NW5621	4.6437	0.0296	0.1117
2574		B5-NW5621_B5-NW5615	B5-NW5621	B5-NW5615	7.4281	0.7004	0.1197
2575		B5-NW5622_B5-NW5618	B5-NW5622	B5-NW5618	17.8351	0.8673	0.1890
2576		B5-NW5623_B5-NW5622	B5-NW5623	B5-NW5622	13.1894	0.8044	0.1615

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2577		B5-NW5624_B5-NW5623	B5-NW5624	B5-NW5623	6.6320	0.0423	0.1372
2578		B5-NW5625_B5-NW5624	B5-NW5625	B5-NW5624	4.8964	0.0313	0.1078
2579		B5-NW5626_B5-NW5623	B5-NW5626	B5-NW5623	4.9595	0.5829	0.1029
2580		B5-NW5627_B5-NW5625	B5-NW5627	B5-NW5625	2.9756	0.0190	0.0903
2581		B5-NW5628_B5-NW5626	B5-NW5628	B5-NW5626	3.2042	0.0204	0.0915
2582		B5-NW5629_B5-NW5627	B5-NW5629	B5-NW5627	1.1644	0.0073	0.0637
2583		B5-NW5630_B5-NW5628	B5-NW5630	B5-NW5628	1.4206	0.0090	0.0684
2584		B5-NW5631_B5-NW5632	B5-NW5631	B5-NW5632	0.9075	0.0057	0.0500
2585		B5-NW5632_B5-NW5638	B5-NW5632	B5-NW5638	1.9915	0.0127	0.0695
2586		B5-NW5633_B5-NW5634	B5-NW5633	B5-NW5634	0.7209	0.0045	0.0477
2587		B5-NW5634_B5-NW5635	B5-NW5634	B5-NW5635	2.2346	0.0143	0.0679
2588		B5-NW5635_B5-NW7354	B5-NW5635	B5-NW7354	3.6652	0.6581	0.0772
2589		B5-NW5636_B5-NW9012	B5-NW5636	B5-NW9012	38.8273	0.2478	0.2992
2590		B5-NW5637_B5-NW5638	B5-NW5637	B5-NW5638	1.5623	0.5217	0.0506
2591		B5-NW5638_B5-NW5640	B5-NW5638	B5-NW5640	4.3917	0.0280	0.0929
2592		B5-NW5639_B5-NW5640	B5-NW5639	B5-NW5640	1.5073	0.6552	0.0423
2593		B5-NW5640_B5-NW5642	B5-NW5640	B5-NW5642	6.7812	0.0433	0.1134
2594		B5-NW5641_B5-NW5642	B5-NW5641	B5-NW5642	1.3166	0.6962	0.0370
2595		B5-NW5642_B5-NW5636	B5-NW5642	B5-NW5636	8.9557	0.0572	0.1733
2596		B5-NW5643_B5-NW5644	B5-NW5643	B5-NW5644	6.6773	0.0426	0.1198
2597		B5-NW5644_B5-NW5645	B5-NW5644	B5-NW5645	8.7521	0.7748	0.1249
2598		B5-NW5645_B5-NW5649	B5-NW5645	B5-NW5649	23.0734	0.7478	0.2513
2599		B5-NW5647_B5-NW5648	B5-NW5647	B5-NW5648	0.6679	0.3202	0.0459
2600		B5-NW5648_B5-NW5657	B5-NW5648	B5-NW5657	1.3236	0.0084	0.0612
2601		B5-NW5649_B5-NW5656	B5-NW5649	B5-NW5656	26.7481	0.1707	0.2308
2602		B5-NW5650_B5-NW5649	B5-NW5650	B5-NW5649	2.9812	0.5637	0.0745
2603		B5-NW5651_B5-NW5650	B5-NW5651	B5-NW5650	1.1711	0.0074	0.0629
2604		B5-NW5651_B5-NW5652	B5-NW5651	B5-NW5652	0.5628	0.0036	0.0532
2605		B5-NW5652_B5-NW5653	B5-NW5652	B5-NW5653	2.3386	0.0149	0.0804
2606		B5-NW5653_B5-NW5654	B5-NW5653	B5-NW5654	4.2680	0.0272	0.1071
2607		B5-NW5654_B5-NW5659	B5-NW5654	B5-NW5659	7.9823	0.7193	0.1234
2608		B5-NW5655_B5-NW5654	B5-NW5655	B5-NW5654	2.5524	0.5107	0.0717
2609		B5-NW5656_B5-NW5659	B5-NW5656	B5-NW5659	27.4144	0.9657	0.2369
2610		B5-NW5657_B5-NW5660	B5-NW5657	B5-NW5660	2.3576	0.0150	0.0751
2611		B5-NW5658_B5-NW5655	B5-NW5658	B5-NW5655	1.4413	0.0091	0.0632
2612		B5-NW5659_B5-NW7352	B5-NW5659	B5-NW7352	35.9126	0.2292	0.2596
2613		B5-NW5660_B5-NW5661	B5-NW5660	B5-NW5661	3.1501	0.0201	0.0875
2614		B5-NW5661_B5-NW5622	B5-NW5661	B5-NW5622	3.8624	0.0247	0.1391
2615		B5-NW5677_B5-NW5678	B5-NW5677	B5-NW5678	2.6934	0.0172	0.0886
2616		B5-NW5678_B5-NW5679	B5-NW5678	B5-NW5679	5.3678	0.0343	0.1128
2617		B5-NW5679_B5-NW5680	B5-NW5679	B5-NW5680	8.1263	0.0519	0.1356
2618		B5-NW5680_B5-NW5836	B5-NW5680	B5-NW5836	10.4187	0.7203	0.1481
2619		B5-NW5681_B5-NW5546	B5-NW5681	B5-NW5546	8.0083	0.6704	0.1298
2620		B5-NW5682_B5-NW5681	B5-NW5682	B5-NW5681	6.7786	0.0433	0.1229
2621		B5-NW5683_B5-NW5547	B5-NW5683	B5-NW5547	7.6553	0.7090	0.1211
2622		B5-NW5684_B5-NW5548	B5-NW5684	B5-NW5548	8.1450	0.7046	0.1269
2623		B5-NW5685_B5-NW5549	B5-NW5685	B5-NW5549	8.0674	0.7127	0.1251
2624		B5-NW5686_B5-NW5683	B5-NW5686	B5-NW5683	6.3771	0.0407	0.1200
2625		B5-NW5687_B5-NW5684	B5-NW5687	B5-NW5684	6.7349	0.0430	0.1240
2626		B5-NW5688_B5-NW5685	B5-NW5688	B5-NW5685	6.6223	0.0423	0.1227
2627		B5-NW5689_B5-NW5682	B5-NW5689	B5-NW5682	4.6690	0.0298	0.1071
2628		B5-NW5690_B5-NW5686	B5-NW5690	B5-NW5686	4.4626	0.0285	0.1069
2629		B5-NW5691_B5-NW5687	B5-NW5691	B5-NW5687	4.7342	0.0302	0.1092
2630		B5-NW5692_B5-NW5688	B5-NW5692	B5-NW5688	4.6194	0.0295	0.1085
2631		B5-NW5693_B5-NW5692	B5-NW5693	B5-NW5692	2.6843	0.0171	0.0865
2632		B5-NW5694_B5-NW5691	B5-NW5694	B5-NW5691	2.8256	0.0180	0.0877

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2633		B5-NW5695_B5-NW5690	B5-NW5695	B5-NW5690	2.6108	0.0167	0.0847
2634		B5-NW5696_B5-NW5689	B5-NW5696	B5-NW5689	2.9045	0.0185	0.0859
2635		B5-NW5697_B5-NW5696	B5-NW5697	B5-NW5696	1.1599	0.0072	0.0590
2636		B5-NW5698_B5-NW5695	B5-NW5698	B5-NW5695	1.0631	0.0067	0.0595
2637		B5-NW5699_B5-NW5694	B5-NW5699	B5-NW5694	1.0971	0.0069	0.0620
2638		B5-NW5700_B5-NW5693	B5-NW5700	B5-NW5693	1.0520	0.0066	0.0601
2639		B5-NW5701_B5-NW5545	B5-NW5701	B5-NW5545	5.4251	0.6036	0.1069
2640		B5-NW5702_B5-NW5703	B5-NW5702	B5-NW5703	0.0511	0.0003	0.1694
2641		B5-NW5703_B5-NW5701	B5-NW5703	B5-NW5701	3.6836	0.0788	0.3387
2642		B5-NW5704_B5-NW5703	B5-NW5704	B5-NW5703	2.7196	0.4806	0.0780
2643		B5-NW5705_B5-NW5704	B5-NW5705	B5-NW5704	1.2488	0.0080	0.0653
2644		B5-NW5706_B5-NW5705	B5-NW5706	B5-NW5705	0.3451	0.0022	0.0416
2645		B5-NW5707_B5-NW5708	B5-NW5707	B5-NW5708	0.7080	0.0045	0.0484
2646		B5-NW5708_B5-NW5709	B5-NW5708	B5-NW5709	1.4556	0.0093	0.0635
2647		B5-NW5709_B5-NW5710	B5-NW5709	B5-NW5710	2.3357	0.0149	0.0863
2648		B5-NW5710_B5-NW5713	B5-NW5710	B5-NW5713	6.7511	0.0431	0.1112
2649		B5-NW5711_B5-NW5710	B5-NW5711	B5-NW5710	3.0485	0.0194	0.0868
2650		B5-NW5712_B5-NW5711	B5-NW5712	B5-NW5711	1.5675	0.0099	0.0638
2651		B5-NW5713_B5-NW5207	B5-NW5713	B5-NW5207	8.1251	0.7421	0.1223
2652		B5-NW5714_B5-NW9019	B5-NW5714	B5-NW9019	2.7399	0.6176	0.0662
2653		B5-NW5715_B5-NW5718	B5-NW5715	B5-NW5718	1.9388	0.0124	0.0610
2654		B5-NW5716_B5-NW5715	B5-NW5716	B5-NW5715	0.7754	0.0048	0.0500
2655		B5-NW5717_B5-NW5714	B5-NW5717	B5-NW5714	1.1787	0.0073	0.0563
2656		B5-NW5718_B5-NW5183	B5-NW5718	B5-NW5183	2.0738	0.5196	0.0616
2657		B5-NW5719_B5-NW5183	B5-NW5719	B5-NW5183	2.8434	0.0181	0.0849
2658		B5-NW5720_B5-NW5719	B5-NW5720	B5-NW5719	1.8429	0.0118	0.0687
2659		B5-NW5721_B5-NW5720	B5-NW5721	B5-NW5720	0.7702	0.0048	0.0532
2660		B5-NW5812_B5-NW5813	B5-NW5812	B5-NW5813	2.4587	0.0157	0.1018
2661		B5-NW5813_B5-NW5431	B5-NW5813	B5-NW5431	8.0687	0.0515	0.1219
2662		B5-NW5814_B5-NW5819	B5-NW5814	B5-NW5819	0.3890	0.0024	0.0424
2663		B5-NW5815_B5-NW5820	B5-NW5815	B5-NW5820	0.4584	0.0029	0.0521
2664		B5-NW5815_B5-NW5922	B5-NW5815	B5-NW5922	0.9909	0.0063	0.0477
2665		B5-NW5816_B5-NW5821	B5-NW5816	B5-NW5821	0.8622	0.0054	0.0607
2666		B5-NW5817_B5-NW5822	B5-NW5817	B5-NW5822	0.1910	0.0012	0.0426
2667		B5-NW5818_B5-NW5823	B5-NW5818	B5-NW5823	0.5282	0.0033	0.0455
2668		B5-NW5819_B5-NW5824	B5-NW5819	B5-NW5824	1.3141	0.3978	0.0542
2669		B5-NW5820_B5-NW5825	B5-NW5820	B5-NW5825	2.3603	0.0151	0.0835
2670		B5-NW5821_B5-NW5826	B5-NW5821	B5-NW5826	2.7418	0.0175	0.0890
2671		B5-NW5822_B5-NW5827	B5-NW5822	B5-NW5827	1.7814	0.0114	0.0751
2672		B5-NW5823_B5-NW5828	B5-NW5823	B5-NW5828	1.3965	0.0089	0.0635
2673		B5-NW5824_B5-NW5832	B5-NW5824	B5-NW5832	2.0329	0.0130	0.0790
2674		B5-NW5825_B5-NW5835	B5-NW5825	B5-NW5835	4.2294	0.0270	0.1027
2675		B5-NW5826_B5-NW5831	B5-NW5826	B5-NW5831	4.6784	0.0299	0.1072
2676		B5-NW5827_B5-NW5830	B5-NW5827	B5-NW5830	3.4515	0.5245	0.0864
2677		B5-NW5828_B5-NW5829	B5-NW5828	B5-NW5829	2.2506	0.4642	0.0703
2678		B5-NW5829_B5-NW5989	B5-NW5829	B5-NW5989	13.8816	0.0886	0.1483
2679		B5-NW5830_B5-NW5829	B5-NW5830	B5-NW5829	11.2511	0.7812	0.1476
2680		B5-NW5831_B5-NW5830	B5-NW5831	B5-NW5830	6.7910	0.0433	0.1309
2681		B5-NW5832_B5-NW5833	B5-NW5832	B5-NW5833	2.6549	0.0169	0.1468
2682		B5-NW5833_B5-NW5834	B5-NW5833	B5-NW5834	7.5534	0.3289	0.2041
2683		B5-NW5834_B5-NW5484	B5-NW5834	B5-NW5484	8.4048	0.6003	0.1666
2684		B5-NW5835_B5-NW5485	B5-NW5835	B5-NW5485	6.0750	0.5166	0.1653
2685		B5-NW5836_B5-NW5837	B5-NW5836	B5-NW5837	10.4187	0.0665	0.1296
2686		B5-NW5837_B5-NW5308	B5-NW5837	B5-NW5308	11.9124	0.8804	0.1414
2687		B5-NW5874_B5-NW5357	B5-NW5874	B5-NW5357	1.0828	0.0068	0.0480
2688		B5-NW5877_B5-NW5324	B5-NW5877	B5-NW5324	1.9886	0.0127	0.0816

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2689		B5-NW5878_B5-NW5879	B5-NW5878	B5-NW5879	3.2162	0.0205	0.0964
2690		B5-NW5879_B5-NW5881	B5-NW5879	B5-NW5881	6.1795	0.0394	0.1194
2691		B5-NW5880_B5-NW5879	B5-NW5880	B5-NW5879	1.6909	0.5684	0.0504
2692		B5-NW5881_B5-NW5885	B5-NW5881	B5-NW5885	7.8255	0.0499	0.1422
2693		B5-NW5882_B5-NW5883	B5-NW5882	B5-NW5883	1.0750	0.0067	0.0623
2694		B5-NW5883_B5-NW5884	B5-NW5883	B5-NW5884	3.6355	0.0232	0.0941
2695		B5-NW5884_B5-NW5888	B5-NW5884	B5-NW5888	5.1027	0.0326	0.1146
2696		B5-NW5885_B5-NW5898	B5-NW5885	B5-NW5898	12.0171	0.0767	0.1593
2697		B5-NW5886_B5-NW5885	B5-NW5886	B5-NW5885	1.9944	0.4555	0.0655
2698		B5-NW5887_B5-NW5888	B5-NW5887	B5-NW5888	0.7377	0.3165	0.0428
2699		B5-NW5888_B5-NW5889	B5-NW5888	B5-NW5889	7.5750	0.0484	0.1291
2700		B5-NW5889_B5-NW5890	B5-NW5889	B5-NW5890	8.5723	0.0547	0.1386
2701		B5-NW5890_B5-NW5892	B5-NW5890	B5-NW5892	9.5479	0.5663	0.1440
2702		B5-NW5892_B5-NW5893	B5-NW5892	B5-NW5893	11.1243	0.7727	0.1476
2703		B5-NW5893_B5-NW5902	B5-NW5893	B5-NW5902	37.2275	1.0643	0.2748
2704		B5-NW5894_B5-NW5893	B5-NW5894	B5-NW5893	25.5575	0.1631	0.2509
2705		B5-NW5895_B5-NW5894	B5-NW5895	B5-NW5894	3.9831	0.4851	0.1005
2706		B5-NW5896_B5-NW5895	B5-NW5896	B5-NW5895	2.3877	0.0152	0.0812
2707		B5-NW5897_B5-NW5896	B5-NW5897	B5-NW5896	1.1549	0.0073	0.0563
2708		B5-NW5898_B5-NW5899	B5-NW5898	B5-NW5899	14.1324	0.8627	0.1614
2709		B5-NW5899_B5-NW5900	B5-NW5899	B5-NW5900	16.0976	0.1027	0.1833
2710		B5-NW5900_B5-NW5901	B5-NW5900	B5-NW5901	18.6027	0.7818	0.2092
2711		B5-NW5901_B5-NW5894	B5-NW5901	B5-NW5894	20.6835	0.1320	0.2098
2712		B5-NW5902_B5-NW5903	B5-NW5902	B5-NW5903	37.2557	0.2378	0.2809
2713		B5-NW5903_B5-NW5904	B5-NW5903	B5-NW5904	37.3535	0.7029	0.3723
2714		B5-NW5904_B5-NW5905	B5-NW5904	B5-NW5905	37.3535	0.9138	0.3073
2715		B5-NW5905_B5-NW5907	B5-NW5905	B5-NW5907	37.8598	0.2417	0.2803
2716		B5-NW5907_B5-NW5918	B5-NW5907	B5-NW5918	44.8344	0.9360	0.2961
2717		B5-NW5908_B5-NW5907	B5-NW5908	B5-NW5907	6.6693	0.6601	0.1158
2718		B5-NW5909_B5-NW5908	B5-NW5909	B5-NW5908	5.6779	0.0362	0.1087
2719		B5-NW5910_B5-NW5909	B5-NW5910	B5-NW5909	1.9135	0.4903	0.0607
2720		B5-NW5911_B5-NW5910	B5-NW5911	B5-NW5910	1.0103	0.0064	0.0526
2721		B5-NW5912_B5-NW5911	B5-NW5912	B5-NW5911	0.4541	0.0028	0.0372
2722		B5-NW5913_B5-NW5914	B5-NW5913	B5-NW5914	1.3377	0.0084	0.0679
2723		B5-NW5914_B5-NW5915	B5-NW5914	B5-NW5915	3.1194	0.5112	0.0821
2724		B5-NW5915_B5-NW5833	B5-NW5915	B5-NW5833	4.2308	0.0270	0.1394
2725		B5-NW5916_B5-NW5909	B5-NW5916	B5-NW5909	2.6431	0.0169	0.0861
2726		B5-NW5917_B5-NW5916	B5-NW5917	B5-NW5916	1.0110	0.0063	0.0557
2727		B5-NW5918_B5-NW5927	B5-NW5918	B5-NW5927	52.7751	0.2156	0.2536
2728		B5-NW5919_B5-NW5918	B5-NW5919	B5-NW5918	7.6614	0.7209	0.1305
2729		B5-NW5920_B5-NW5919	B5-NW5920	B5-NW5919	6.0324	0.0385	0.1095
2730		B5-NW5921_B5-NW5920	B5-NW5921	B5-NW5920	4.0566	0.0259	0.0957
2731		B5-NW5922_B5-NW5921	B5-NW5922	B5-NW5921	2.1050	0.0134	0.0742
2732		B5-NW5923_B5-NW5924	B5-NW5923	B5-NW5924	1.3064	0.0081	0.0605
2733		B5-NW5924_B5-NW5925	B5-NW5924	B5-NW5925	3.3413	0.0213	0.0831
2734		B5-NW5925_B5-NW5926	B5-NW5925	B5-NW5926	5.4537	0.0348	0.0977
2735		B5-NW5926_B5-NW5927	B5-NW5926	B5-NW5927	6.8454	0.8048	0.1029
2736		B5-NW5927_B5-NW5928	B5-NW5927	B5-NW5928	59.8678	1.1299	0.2688
2737		B5-NW5928_B5-NW5929	B5-NW5928	B5-NW5929	60.3840	0.2467	0.2786
2738		B5-NW5929_B5-NW5935	B5-NW5929	B5-NW5935	67.0727	1.1453	0.2887
2739		B5-NW5930_B5-NW5929	B5-NW5930	B5-NW5929	6.0947	0.9184	0.0869
2740		B5-NW5932_B5-NW5930	B5-NW5932	B5-NW5930	4.0702	0.0260	0.0838
2741		B5-NW5933_B5-NW5932	B5-NW5933	B5-NW5932	2.8723	0.0183	0.0745
2742		B5-NW5934_B5-NW5933	B5-NW5934	B5-NW5933	1.2354	0.0077	0.0571
2743		B5-NW5935_B5-NW5936	B5-NW5935	B5-NW5936	70.7375	2.5794	0.1693
2744		B5-NW5936_B5-NW6141	B5-NW5936	B5-NW6141	2,885.8553	1.0801	0.3787

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2745		B5-NW5937_B5-NW5935	B5-NW5937	B5-NW5935	3.2381	0.0207	0.1350
2746		B5-NW5938_B5-NW5937	B5-NW5938	B5-NW5937	2.1656	0.5309	0.0625
2747		B5-NW5939_B5-NW5938	B5-NW5939	B5-NW5938	1.2778	0.0081	0.0536
2748		B5-NW5940_B5-NW5939	B5-NW5940	B5-NW5939	0.5517	0.0034	0.0381
2749		B5-NW5989_B5-NW7335	B5-NW5989	B5-NW7335	14.7109	0.9165	0.1591
2750		B5-NW6040_B5-NW6041	B5-NW6040	B5-NW6041	1.0618	0.0067	0.0643
2751		B5-NW6041_B5-NW6042	B5-NW6041	B5-NW6042	2.5410	0.0162	0.0813
2752		B5-NW6042_B5-NW6043	B5-NW6042	B5-NW6043	3.6953	0.0236	0.0962
2753		B5-NW6043_B5-NW6044	B5-NW6043	B5-NW6044	5.3318	0.0340	0.1076
2754		B5-NW6044_B5-NW6045	B5-NW6044	B5-NW6045	6.8275	0.0436	0.1175
2755		B5-NW6045_B5-NW6046	B5-NW6045	B5-NW6046	8.1578	0.0521	0.1595
2756		B5-NW6046_B5-NW6057	B5-NW6046	B5-NW6057	18.6633	0.1191	0.2152
2757		B5-NW6047_B5-NW6046	B5-NW6047	B5-NW6046	8.0932	0.7784	0.1180
2758		B5-NW6048_B5-NW6047	B5-NW6048	B5-NW6047	6.4999	0.5820	0.1240
2759		B5-NW6049_B5-NW6048	B5-NW6049	B5-NW6048	4.9271	0.0314	0.1113
2760		B5-NW6050_B5-NW6049	B5-NW6050	B5-NW6049	3.5947	0.0229	0.0937
2761		B5-NW6051_B5-NW6050	B5-NW6051	B5-NW6050	1.4119	0.0089	0.0723
2762		B5-NW6052_B5-NW6053	B5-NW6052	B5-NW6053	1.4675	0.0092	0.0702
2763		B5-NW6053_B5-NW6054	B5-NW6053	B5-NW6054	3.6608	0.0234	0.0897
2764		B5-NW6054_B5-NW6055	B5-NW6054	B5-NW6055	4.9309	0.0315	0.1082
2765		B5-NW6055_B5-NW6056	B5-NW6055	B5-NW6056	6.5618	0.6011	0.1221
2766		B5-NW6056_B5-NW6057	B5-NW6056	B5-NW6057	8.1593	0.6859	0.1369
2767		B5-NW6057_B5-NW6063	B5-NW6057	B5-NW6063	28.6164	0.1827	0.2576
2768		B5-NW6058_B5-NW6059	B5-NW6058	B5-NW6059	1.4576	0.0091	0.0695
2769		B5-NW6059_B5-NW6060	B5-NW6059	B5-NW6060	3.6445	0.0233	0.0900
2770		B5-NW6060_B5-NW6061	B5-NW6060	B5-NW6061	4.9363	0.0315	0.1080
2771		B5-NW6061_B5-NW6062	B5-NW6061	B5-NW6062	6.5524	0.6048	0.1214
2772		B5-NW6062_B5-NW6063	B5-NW6062	B5-NW6063	8.1401	0.8013	0.1196
2773		B5-NW6063_B5-NW6064	B5-NW6063	B5-NW6064	38.9158	1.0974	0.2775
2774		B5-NW6064_B5-NW6073	B5-NW6064	B5-NW6073	46.9858	0.3973	0.3138
2775		B5-NW6065_B5-NW6064	B5-NW6065	B5-NW6064	6.6941	0.0427	0.1845
2776		B5-NW6066_B5-NW6065	B5-NW6066	B5-NW6065	5.1315	0.0328	0.1035
2777		B5-NW6067_B5-NW6066	B5-NW6067	B5-NW6066	3.8597	0.0246	0.0927
2778		B5-NW6068_B5-NW6067	B5-NW6068	B5-NW6067	2.9195	0.0186	0.0803
2779		B5-NW6069_B5-NW6068	B5-NW6069	B5-NW6068	1.1521	0.0073	0.0631
2780		B5-NW6070_B5-NW6071	B5-NW6070	B5-NW6071	1.1014	0.0069	0.0639
2781		B5-NW6071_B5-NW6072	B5-NW6071	B5-NW6072	2.6342	0.4520	0.0796
2782		B5-NW6072_B5-NW6073	B5-NW6072	B5-NW6073	3.4542	0.3106	0.1619
2783		B5-NW6073_B5-NW6770	B5-NW6073	B5-NW6770	66.2807	1.2810	0.3650
2784		B5-NW6074_B5-NW6073	B5-NW6074	B5-NW6073	15.3655	0.8588	0.1715
2785		B5-NW6075_B5-NW6074	B5-NW6075	B5-NW6074	5.3371	0.0341	0.1353
2786		B5-NW6076_B5-NW6075	B5-NW6076	B5-NW6075	3.3061	0.0211	0.0930
2787		B5-NW6077_B5-NW6076	B5-NW6077	B5-NW6076	1.1410	0.0072	0.0686
2788		B5-NW6087_B5-NW6074	B5-NW6087	B5-NW6074	8.8001	0.0562	0.1508
2789		B5-NW6088_B5-NW6089	B5-NW6088	B5-NW6089	2.2709	0.0143	0.0791
2790		B5-NW6089_B5-NW6090	B5-NW6089	B5-NW6090	5.1349	0.0327	0.0924
2791		B5-NW6090_B5-NW6091	B5-NW6090	B5-NW6091	6.9603	0.0444	0.1202
2792		B5-NW6091_B5-NW6096	B5-NW6091	B5-NW6096	10.7439	0.0686	0.1558
2793		B5-NW6092_B5-NW6091	B5-NW6092	B5-NW6091	3.0627	0.6158	0.0715
2794		B5-NW6093_B5-NW6092	B5-NW6093	B5-NW6092	1.2559	0.0079	0.0610
2795		B5-NW6094_B5-NW6095	B5-NW6094	B5-NW6095	0.9031	0.0057	0.0526
2796		B5-NW6095_B5-NW6096	B5-NW6095	B5-NW6096	2.3216	0.5664	0.0627
2797		B5-NW6096_B5-NW6097	B5-NW6096	B5-NW6097	13.7218	0.8070	0.1656
2798		B5-NW6097_B5-NW6137	B5-NW6097	B5-NW6137	13.7300	0.6699	0.1653
2799		B5-NW6098_B5-NW6099	B5-NW6098	B5-NW6099	1.6566	0.0104	0.0789
2800		B5-NW6099_B5-NW6104	B5-NW6099	B5-NW6104	4.7124	0.0301	0.1125

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2801		B5-NW6100_B5-NW6101	B5-NW6100	B5-NW6101	1.0471	0.0066	0.0649
2802		B5-NW6101_B5-NW6105	B5-NW6101	B5-NW6105	2.9855	0.0191	0.0906
2803		B5-NW6102_B5-NW6103	B5-NW6102	B5-NW6103	1.2382	0.0078	0.0692
2804		B5-NW6103_B5-NW6106	B5-NW6103	B5-NW6106	3.5757	0.0228	0.1000
2805		B5-NW6104_B5-NW6107	B5-NW6104	B5-NW6107	7.8584	0.0502	0.1370
2806		B5-NW6105_B5-NW6108	B5-NW6105	B5-NW6108	5.0195	0.0320	0.1104
2807		B5-NW6106_B5-NW6109	B5-NW6106	B5-NW6109	6.2603	0.0400	0.1227
2808		B5-NW6107_B5-NW6110	B5-NW6107	B5-NW6110	10.9743	0.0700	0.1517
2809		B5-NW6108_B5-NW6111	B5-NW6108	B5-NW6111	7.0318	0.0449	0.1642
2810		B5-NW6109_B5-NW6112	B5-NW6109	B5-NW6112	8.7975	0.0562	0.1376
2811		B5-NW6110_B5-NW6111	B5-NW6110	B5-NW6111	12.8779	0.8289	0.1556
2812		B5-NW6111_B5-NW9039	B5-NW6111	B5-NW9039	20.8232	0.2753	0.2204
2813		B5-NW6112_B5-NW6116	B5-NW6112	B5-NW6116	10.4793	0.0669	0.1495
2814		B5-NW6113_B5-NW6114	B5-NW6113	B5-NW6114	2.0978	0.0133	0.0885
2815		B5-NW6114_B5-NW6117	B5-NW6114	B5-NW6117	5.5123	0.0352	0.1185
2816		B5-NW6115_B5-NW6118	B5-NW6115	B5-NW6118	24.6299	0.8956	0.2317
2817		B5-NW6116_B5-NW6119	B5-NW6116	B5-NW6119	12.6606	0.8128	0.1559
2818		B5-NW6117_B5-NW6123	B5-NW6117	B5-NW6123	8.5674	0.0547	0.1303
2819		B5-NW6118_B5-NW6122	B5-NW6118	B5-NW6122	26.6694	1.0897	0.2134
2820		B5-NW6119_B5-NW6120	B5-NW6119	B5-NW6120	13.9663	0.8977	0.1557
2821		B5-NW6120_B5-NW6121	B5-NW6120	B5-NW6121	14.2790	0.0911	0.2438
2822		B5-NW6121_B5-NW6125	B5-NW6121	B5-NW6125	55.3907	0.3535	0.3727
2823		B5-NW6122_B5-NW6121	B5-NW6122	B5-NW6121	40.8534	1.0416	0.2983
2824		B5-NW6123_B5-NW6124	B5-NW6123	B5-NW6124	12.4576	0.5553	0.1616
2825		B5-NW6124_B5-NW6122	B5-NW6124	B5-NW6122	13.3028	0.0849	0.2433
2826		B5-NW6125_B5-NW6129	B5-NW6125	B5-NW6129	59.5902	0.9443	0.4233
2827		B5-NW6126_B5-NW6125	B5-NW6126	B5-NW6125	4.1216	0.6762	0.1419
2828		B5-NW6127_B5-NW6126	B5-NW6127	B5-NW6126	3.6153	0.4001	0.0670
2829		B5-NW6128_B5-NW6127	B5-NW6128	B5-NW6127	3.0430	0.9216	0.0548
2830		B5-NW6129_B5-NW6130	B5-NW6129	B5-NW6130	59.5902	1.0650	0.3868
2831		B5-NW6130_B5-NW6131	B5-NW6130	B5-NW6131	59.5901	0.3804	0.4014
2832		B5-NW6131_B5-NW6223	B5-NW6131	B5-NW6223	87.0639	1.1078	0.3575
2833		B5-NW6132_B5-NW6131	B5-NW6132	B5-NW6131	26.9770	1.0794	0.2166
2834		B5-NW6133_B5-NW6134	B5-NW6133	B5-NW6134	21.6637	0.2846	0.1815
2835		B5-NW6134_B5-NW6135	B5-NW6134	B5-NW6135	22.4239	0.1431	0.1951
2836		B5-NW6135_B5-NW6136	B5-NW6135	B5-NW6136	24.2813	0.8258	0.2064
2837		B5-NW6136_B5-NW6132	B5-NW6136	B5-NW6132	25.8181	0.9080	0.2133
2838		B5-NW6137_B5-NW6138	B5-NW6137	B5-NW6138	14.2901	0.5827	0.1807
2839		B5-NW6138_B5-NW6139	B5-NW6138	B5-NW6139	15.9861	0.7646	0.1912
2840		B5-NW6139_B5-NW6140	B5-NW6139	B5-NW6140	16.2417	0.1037	0.1996
2841		B5-NW6140_B5-NW6141	B5-NW6140	B5-NW6141	16.3092	0.5897	0.2326
2842		B5-NW6141_B5-M09968	B5-NW6141	B5-M09968	2,921.5681	2.5359	0.4461
2843		B5-NW6142_B5-NW6141	B5-NW6142	B5-NW6141	23.8560	1.9618	0.1314
2844		B5-NW6143_B5-NW6142	B5-NW6143	B5-NW6142	20.1610	0.8515	0.2085
2845		B5-NW6144_B5-NW6143	B5-NW6144	B5-NW6143	14.0311	0.0896	0.1931
2846		B5-NW6145_B5-NW6144	B5-NW6145	B5-NW6144	8.3069	0.0530	0.1514
2847		B5-NW6146_B5-NW6145	B5-NW6146	B5-NW6145	3.8245	0.0244	0.1062
2848		B5-NW6147_B5-NW6146	B3-NW6147	B5-NW6146	0.9389	0.5332	0.0589
2849		B5-NW6154_B5-NW6155	B5-NW6154	B5-NW6155	5.5056	0.0344	0.1309
2850		B5-NW6155_B5-NW6160	B5-NW6155	B5-NW6160	22.1599	1.1448	0.1812
2851		B5-NW6156_B5-NW6160	B5-NW6156	B5-NW6160	6.1114	0.0388	0.1535
2852		B5-NW6157_B5-NW6156	B5-NW6157	B5-NW6156	4.3388	0.6476	0.0875
2853		B5-NW6158_B5-NW6155	B5-NW6158	B5-NW6155	10.8075	0.0690	0.1549
2854		B5-NW6159_B5-NW6158	B3-NW6159	B5-NW6158	4.2789	0.0271	0.1048
2855		B5-NW6160_B5-NW6161	B5-NW6160	B5-NW6161	29.2857	0.1869	0.2260
2856		B5-NW6161_B5-NW6162	B5-NW6161	B5-NW6162	31.5408	0.2013	0.2395

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2857		B5-NW6162_B5-NW6165	B5-NW6162	B5-NW6165	36.4297	1.2112	0.2468
2858		B5-NW6163_B5-NW6162	B5-NW6163	B5-NW6162	3.6180	1.0839	0.0542
2859		B5-NW6164_B5-NW6165	B5-NW6164	B5-NW6165	2.0801	0.9344	0.0412
2860		B5-NW6165_B5-NW6166	B5-NW6165	B5-NW6166	39.6916	0.2533	0.2624
2861		B5-NW6166_B5-NW6167	B5-NW6166	B5-NW6167	40.3839	1.1365	0.2779
2862		B5-NW6167_B5-M09965	B5-NW6167	B5-M09965	2,959.5837	2.8043	0.4174
2863		B5-NW6168_B5-NW6169	B5-NW6168	B5-NW6169	1.2269	0.0078	0.0721
2864		B5-NW6169_B5-NW6182	B5-NW6169	B5-NW6182	4.3529	0.0278	0.1021
2865		B5-NW6170_B5-NW6169	B5-NW6170	B5-NW6169	1.2378	0.0078	0.0733
2866		B5-NW6171_B5-NW6183	B5-NW6171	B5-NW6183	1.8124	0.0113	0.0677
2867		B5-NW6172_B5-NW7215	B5-NW6172	B5-NW7215	0.6540	0.0041	0.0385
2868		B5-NW6174_B5-NW6175	B5-NW6174	B5-NW6175	1.5066	0.0094	0.0580
2869		B5-NW6175_B5-NW6184	B5-NW6175	B5-NW6184	2.6758	0.0171	0.0820
2870		B5-NW6176_B5-M10155	B5-NW6176	B5-M10155	2,975.5836	3.0687	0.3920
2871		B5-NW6177_B5-NW7216	B5-NW6177	B5-NW7216	16.4773	1.1126	0.1505
2872		B5-NW6178_B5-NW6177	B5-NW6178	B5-NW6177	16.1506	1.0220	0.1574
2873		B5-NW6179_B5-NW6178	B5-NW6179	B5-NW6178	7.6525	0.6187	0.1330
2874		B5-NW6180_B5-NW6178	B5-NW6180	B5-NW6178	6.8343	0.0436	0.1287
2875		B5-NW6181_B5-NW6180	B5-NW6181	B5-NW6180	4.9200	0.5839	0.1023
2876		B5-NW6182_B5-NW6179	B5-NW6182	B5-NW6179	6.4774	0.0413	0.1220
2877		B5-NW6183_B5-NW6181	B5-NW6183	B5-NW6181	3.8003	0.0242	0.0902
2878		B5-NW6184_B5-NW6185	B5-NW6184	B5-NW6185	4.7516	0.0303	0.1067
2879		B5-NW6185_B5-NW6236	B5-NW6185	B5-NW6236	6.5082	0.0415	0.1234
2880		B5-NW6186_B5-NW6240	B5-NW6186	B5-NW6240	1.3763	0.0087	0.0732
2881		B5-NW6187_B5-NW6242	B5-NW6187	B5-NW6242	11.6173	0.0742	0.1826
2882		B5-NW6188_B5-NW6187	B5-NW6188	B5-NW6187	2.7990	0.0178	0.1143
2883		B5-NW6189_B5-NW6188	B5-NW6189	B5-NW6188	0.9805	0.0062	0.0543
2884		B5-NW6190_B5-NW6191	B5-NW6190	B5-NW6191	0.7072	0.0044	0.0576
2885		B5-NW6191_B5-NW6192	B5-NW6191	B5-NW6192	2.6773	0.0171	0.0888
2886		B5-NW6192_B5-NW6193	B5-NW6192	B5-NW6193	4.7269	0.0302	0.1286
2887		B5-NW6193_B5-NW6200	B5-NW6193	B5-NW6200	12.2639	0.0783	0.1737
2888		B5-NW6194_B5-NW6193	B5-NW6194	B5-NW6193	6.1629	0.6383	0.1122
2889		B5-NW6195_B5-NW6194	B5-NW6195	B5-NW6194	3.8259	0.0244	0.1014
2890		B5-NW6196_B5-NW6195	B5-NW6196	B5-NW6195	1.3777	0.0087	0.0716
2891		B5-NW6197_B5-NW6200	B5-NW6197	B5-NW6200	4.1967	0.5665	0.0937
2892		B5-NW6198_B5-NW6197	B5-NW6198	B5-NW6197	2.4580	0.0157	0.0841
2893		B5-NW6199_B5-NW6198	B5-NW6199	B5-NW6198	0.8642	0.0054	0.0581
2894		B5-NW6200_B5-NW6201	B5-NW6200	B5-NW6201	17.7091	0.8465	0.1912
2895		B5-NW6201_B5-NW6133	B5-NW6201	B5-NW6133	18.0450	0.9396	0.1802
2896		B5-NW6202_B5-NW6133	B5-NW6202	B5-NW6133	3.1919	0.0204	0.1336
2897		B5-NW6203_B5-NW6202	B5-NW6203	B5-NW6202	2.4025	0.0153	0.0793
2898		B5-NW6204_B5-NW6203	B5-NW6204	B5-NW6203	1.7817	0.0114	0.0643
2899		B5-NW6205_B5-NW6210	B5-NW6205	B5-NW6210	0.6113	0.0038	0.0486
2900		B5-NW6206_B5-NW6204	B5-NW6206	B5-NW6204	0.9139	0.0057	0.0525
2901		B5-NW6207_B5-NW6211	B5-NW6207	B5-NW6211	0.4309	0.0027	0.0400
2902		B5-NW6208_B5-NW6209	B5-NW6208	B5-NW6209	0.6884	0.0043	0.0502
2903		B5-NW6209_B5-NW6212	B5-NW6209	B5-NW6212	2.2747	0.0145	0.0793
2904		B5-NW6210_B5-NW6213	B5-NW6210	B5-NW6213	2.1362	0.0136	0.0780
2905		B5-NW6211_B5-NW6214	B5-NW6211	B5-NW6214	1.2811	0.0082	0.0619
2906		B5-NW6212_B5-NW6221	B5-NW6212	B5-NW6221	4.2862	0.0274	0.1452
2907		B5-NW6213_B5-NW6220	B5-NW6213	B5-NW6220	4.1908	0.5918	0.0909
2908		B5-NW6214_B5-NW6219	B5-NW6214	B5-NW6219	2.6738	0.5221	0.0729
2909		B5-NW6215_B5-NW6216	B5-NW6215	B5-NW6216	5.6020	0.0358	0.1047
2910		B5-NW6216_B5-NW6217	B5-NW6216	B5-NW6217	6.6502	0.0424	0.1135
2911		B5-NW6217_B5-NW6218	B5-NW6217	B5-NW6218	7.8598	0.7553	0.1181
2912		B5-NW6218_B5-NW6219	B5-NW6218	B5-NW6219	8.6697	0.0553	0.1331

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2913		B5-NW6219_B5-NW6220	B5-NW6219	B5-NW6220	12.5488	0.0801	0.1636
2914		B5-NW6220_B5-NW6221	B5-NW6220	B5-NW6221	18.6893	0.9834	0.1789
2915		B5-NW6221_B5-NW6222	B5-NW6221	B5-NW6222	24.3835	0.1556	0.2066
2916		B5-NW6222_B5-NW6223	B5-NW6222	B5-NW6223	25.8368	0.8406	0.2518
2917		B5-NW6223_B5-NW6225	B5-NW6223	B5-NW6225	113.4604	0.3219	0.2940
2918		B5-NW6224_B5-NW6218	B5-NW6224	B5-NW6218	0.2344	0.0015	0.0677
2919		B5-NW6225_B5-NW6226	B5-NW6225	B5-NW6226	114.7453	1.2524	0.3060
2920		B5-NW6226_B5-NW6229	B5-NW6226	B5-NW6229	114.8762	0.9555	0.3095
2921		B5-NW6229_B5-NW7257	B5-NW6229	B5-NW7257	116.7781	0.3313	0.3183
2922		B5-NW6231_B5-NW6232	B5-NW6231	B5-NW6232	1.3618	0.3289	0.0630
2923		B5-NW6232_B5-NW6233	B5-NW6232	B5-NW6233	2.6521	0.0169	0.0877
2924		B5-NW6233_B5-NW6234	B5-NW6233	B5-NW6234	4.7695	0.0304	0.1050
2925		B5-NW6234_B5-NW6237	B5-NW6234	B5-NW6237	6.6337	0.0423	0.1195
2926		B5-NW6235_B5-NW6238	B5-NW6235	B5-NW6238	5.3294	0.0340	0.1081
2927		B5-NW6236_B5-NW6187	B5-NW6236	B5-NW6187	8.4509	0.0539	0.1497
2928		B5-NW6237_B5-NW6242	B5-NW6237	B5-NW6242	8.4056	0.0537	0.1652
2929		B5-NW6238_B5-NW7219	B5-NW6238	B5-NW7219	6.9701	0.0445	0.1780
2930		B5-NW6239_B5-NW6246	B5-NW6239	B5-NW6246	13.9046	0.0888	0.1635
2931		B5-NW6240_B5-NW6235	B5-NW6240	B5-NW6235	3.6226	0.0231	0.0932
2932		B5-NW6241_B5-NW6239	B5-NW6241	B5-NW6239	11.9271	0.7032	0.1653
2933		B5-NW6242_B5-NW7219	B5-NW6242	B5-NW7219	20.5300	0.1310	0.2177
2934		B5-NW6243_B5-NW6244	B5-NW6243	B5-NW6244	0.3685	0.3305	0.0261
2935		B5-NW6244_B5-NW9093	B5-NW6244	B5-NW9093	3.9620	2.4993	0.0331
2936		B5-NW6245_B5-NW6247	B5-NW6245	B5-NW6247	44.0368	0.9420	0.3388
2937		B5-NW6246_B5-NW6245	B5-NW6246	B5-NW6245	15.5513	0.0993	0.2555
2938		B5-NW6247_B5-NW6259	B5-NW6247	B5-NW6259	53.0040	1.1867	0.3277
2939		B5-NW6248_B5-NW6247	B5-NW6248	B5-NW6247	8.0559	0.2072	0.2679
2940		B5-NW6249_B5-NW6248	B5-NW6249	B5-NW6248	7.0852	0.0452	0.1565
2941		B5-NW6250_B5-NW6249	B5-NW6250	B5-NW6249	5.0433	0.0322	0.1006
2942		B5-NW6251_B5-NW6250	B5-NW6251	B5-NW6250	2.5051	0.0160	0.0825
2943		B5-NW6252_B5-NW6251	B5-NW6252	B5-NW6251	0.9735	0.0061	0.0550
2944		B5-NW6253_B5-NW6241	B5-NW6253	B5-NW6241	10.1741	0.0649	0.1512
2945		B5-NW6254_B5-NW6253	B5-NW6254	B5-NW6253	1.9010	0.0120	0.1002
2946		B5-NW6255_B5-NW6215	B5-NW6255	B5-NW6215	4.7392	0.4718	0.0997
2947		B5-NW6256_B5-NW6255	B5-NW6256	B5-NW6255	3.4910	0.0223	0.0924
2948		B5-NW6257_B5-NW6256	B5-NW6257	B5-NW6256	2.0828	0.0133	0.0765
2949		B5-NW6258_B5-NW6257	B5-NW6258	B5-NW6257	0.8556	0.0054	0.0555
2950		B5-NW6259_B5-NW6442	B5-NW6259	B5-NW6442	62.4880	1.6843	0.2866
2951		B5-NW6260_B5-NW6259	B5-NW6260	B5-NW6259	8.3506	0.7877	0.1196
2952		B5-NW6261_B5-NW6260	B5-NW6261	B5-NW6260	6.0191	0.0384	0.1114
2953		B5-NW6262_B5-NW6261	B5-NW6262	B5-NW6261	3.6667	0.0234	0.0910
2954		B5-NW6263_B5-NW6262	B5-NW6263	B5-NW6262	1.5193	0.0095	0.0663
2955		B5-NW6318_B5-NW7318	B5-NW6318	B5-NW7318	0.7579	0.0047	0.0467
2956		B5-NW6319_B5-NW6331	B5-NW6319	B5-NW6331	7.3912	0.6895	0.1205
2957		B5-NW6320_B5-NW6319	B5-NW6320	B5-NW6319	3.1499	0.5452	0.0791
2958		B5-NW6321_B5-NW6320	B5-NW6321	B5-NW6320	1.0287	0.0065	0.0629
2959		B5-NW6322_B5-NW6323	B5-NW6322	B5-NW6323	0.8418	0.0053	0.0401
2960		B5-NW6323_B5-NW6324	B5-NW6323	B5-NW6324	1.9827	0.8492	0.0429
2961		B5-NW6324_B5-NW7197	B5-NW6324	B5-NW7197	33.8121	1.0475	0.2595
2962		B5-NW6325_B5-NW6324	B5-NW6325	B5-NW6324	30.9676	0.7946	0.2566
2963		B5-NW6326_B5-NW6325	B5-NW6326	B5-NW6325	29.8455	0.1905	0.2470
2964		B5-NW6327_B5-NW6326	B5-NW6327	B5-NW6326	2.1083	0.8594	0.0444
2965		B5-NW6328_B5-NW6327	B5-NW6328	B5-NW6327	0.9080	0.0056	0.0417
2966		B5-NW6329_B5-NW6326	B5-NW6329	B5-NW6326	27.1746	0.1735	0.2338
2967		B5-NW6330_B5-NW6329	B5-NW6330	B5-NW6329	19.9262	0.1272	0.2116
2968		B5-NW6331_B5-NW6330	B5-NW6331	B5-NW6330	8.7707	0.9963	0.1054

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
2969		B5-NW6332_B5-NW7306	B5-NW6332	B5-NW7306	6.1378	0.0392	0.1300
2970		B5-NW6333_B5-NW6332	B5-NW6333	B5-NW6332	1.9745	0.6884	0.0493
2971		B5-NW6334_B5-NW6333	B5-NW6334	B5-NW6333	0.7212	0.0045	0.0417
2972		B5-NW6335_B5-NW6332	B5-NW6335	B5-NW6332	3.6881	0.0235	0.1026
2973		B5-NW6336_B5-NW6335	B5-NW6336	B5-NW6335	2.7257	0.0174	0.0851
2974		B5-NW6337_B5-NW7306	B5-NW6337	B5-NW7306	3.5843	0.0229	0.1017
2975		B5-NW6338_B5-NW6329	B5-NW6338	B5-NW6329	6.3615	0.0406	0.1533
2976		B5-NW6339_B5-NW6336	B5-NW6339	B5-NW6336	1.2340	0.0078	0.0635
2977		B5-NW6340_B5-NW6337	B5-NW6340	B5-NW6337	1.9372	0.0122	0.0726
2978		B5-NW6341_B5-NW6338	B5-NW6341	B5-NW6338	4.1935	0.0265	0.0968
2979		B5-NW6342_B5-NW6343	B5-NW6342	B5-NW6343	0.9380	0.0059	0.0524
2980		B5-NW6343_B5-NW6344	B5-NW6343	B5-NW6344	2.0681	0.0132	0.0777
2981		B5-NW6344_B5-NW6345	B5-NW6344	B5-NW6345	3.6807	0.0235	0.0989
2982		B5-NW6345_B5-NW6346	B5-NW6345	B5-NW6346	5.4082	0.0345	0.1118
2983		B5-NW6346_B5-NW6347	B5-NW6346	B5-NW6347	6.7610	0.0432	0.3518
2984		B5-NW6347_B5-NW7319	B5-NW6347	B5-NW7319	267.3552	1.8163	0.3126
2985		B5-NW6349_B5-NW6347	B3-NW6349	B5-NW6347	260.5994	1.6810	0.3246
2986		B5-NW6356_B5-NW6358	B5-NW6356	B5-NW6358	2.5595	0.0163	0.0780
2987		B5-NW6357_B5-NW6356	B5-NW6357	B5-NW6356	1.6451	0.0102	0.0562
2988		B5-NW6358_B5-NW6360	B5-NW6358	B5-NW6360	5.0912	0.0325	0.1038
2989		B5-NW6359_B5-NW6358	B5-NW6359	B5-NW6358	1.5635	0.5031	0.0518
2990		B5-NW6360_B5-NW6362	B5-NW6360	B5-NW6362	7.6383	0.0488	0.1171
2991		B5-NW6361_B5-NW6360	B5-NW6361	B5-NW6360	1.8452	0.5694	0.0533
2992		B5-NW6362_B5-NW6363	B5-NW6362	B5-NW6363	8.0421	0.0513	0.1250
2993		B5-NW6363_B5-NW6364	B5-NW6363	B5-NW6364	9.8075	0.8152	0.1305
2994		B5-NW6364_B5-M02195	B5-NW6364	B5-NW7210	10.0536	1.3656	0.0933
2995		B5-NW6365_B5-NW7319	B5-NW6365	B5-NW7319	0.9480	0.3955	0.0435
2996		B5-NW6366_B5-NW6363	B5-NW6366	B5-NW6363	1.1650	0.4737	0.0442
2997		B5-NW6367_B5-NW6368	B5-NW6367	B5-NW6368	17.8657	0.8310	0.1949
2998		B5-NW6368_B5-NW9037	B5-NW6368	B5-NW9037	17.9503	0.9994	0.1720
2999		B5-NW6369_B5-NW6367	B5-NW6369	B5-NW6367	2.1466	0.0137	0.1310
3000		B5-NW6370_B5-NW6369	B5-NW6370	B5-NW6369	0.9050	0.0057	0.0566
3001		B5-NW6371_B5-NW6367	B5-NW6371	B5-NW6367	14.6137	0.0933	0.1732
3002		B5-NW6372_B5-NW6371	B5-NW6372	B5-NW6371	10.9232	0.0697	0.1398
3003		B5-NW6373_B5-NW6372	B5-NW6373	B5-NW6372	6.3566	0.0406	0.1136
3004		B5-NW6374_B5-NW6373	B5-NW6374	B5-NW6373	2.9485	0.0188	0.0832
3005		B5-NW6375_B5-NW6374	B5-NW6375	B5-NW6374	1.8689	0.0119	0.0613
3006		B5-NW6376_B5-NW6373	B5-NW6376	B5-NW6373	2.1481	0.5796	0.0586
3007		B5-NW6377_B5-NW6372	B5-NW6377	B5-NW6372	3.3167	0.6672	0.0714
3008		B5-NW6378_B5-NW6371	B5-NW6378	B5-NW6371	2.3772	0.0152	0.1062
3009		B5-NW6379_B5-NW6375	B5-NW6379	B5-NW6375	0.7845	0.0049	0.0464
3010		B5-NW6380_B5-NW6376	B5-NW6380	B5-NW6376	0.8646	0.0054	0.0490
3011		B5-NW6381_B5-NW6377	B5-NW6381	B5-NW6377	2.0420	0.0129	0.0655
3012		B5-NW6382_B5-NW6378	B5-NW6382	B5-NW6378	1.0924	0.0068	0.0527
3013		B5-NW6383_B5-NW6384	B5-NW6383	B5-NW6384	5.0707	0.0320	0.1017
3014		B5-NW6384_B5-NW6385	B5-NW6384	B5-NW6385	8.5593	0.0546	0.1353
3015		B5-NW6385_B5-NW6386	B5-NW6385	B5-NW6386	10.7960	0.0689	0.1591
3016		B5-NW6386_B5-NW6387	B5-NW6386	B5-NW6387	13.5456	0.8329	0.1606
3017		B5-NW6387_B5-NW6388	B5-NW6387	B5-NW6388	15.3207	0.4636	0.1776
3018		B5-NW6388_B5-NW6395	B5-NW6388	B5-NW6395	23.2989	0.1487	0.2726
3019		B5-NW6389_B5-NW6388	B5-NW6389	B5-NW6388	6.8164	0.6931	0.1136
3020		B5-NW6390_B5-NW6389	B5-NW6390	B5-NW6389	4.8258	0.0308	0.1094
3021		B5-NW6391_B5-NW6390	B5-NW6391	B5-NW6390	2.5767	0.0163	0.0881
3022		B5-NW6392_B5-NW6393	B5-NW6392	B5-NW6393	1.5696	0.0098	0.0665
3023		B5-NW6393_B5-NW6394	B5-NW6393	B5-NW6394	3.0779	0.0196	0.0837
3024		B5-NW6394_B5-NW6395	B5-NW6394	B5-NW6395	4.5861	0.6919	0.0869

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3025		B5-NW6395_B5-NW6396	B5-NW6395	B5-NW6396	28.5261	0.6245	0.3331
3026		B5-NW6396_B5-NW6397	B5-NW6396	B5-NW6397	14.4252	0.0921	0.1568
3027		B5-NW6396_B5-NW6419	B5-NW6396	B5-NW6419	15.2340	0.0972	0.1474
3028		B5-NW6397_B5-NW6398	B5-NW6397	B5-NW6398	15.7874	0.8402	0.1775
3029		B5-NW6398_B5-NW6399	B5-NW6398	B5-NW6399	17.3018	1.0164	0.1657
3030		B5-NW6399_B5-NW9091	B5-NW6399	B5-NW9091	17.9448	0.5823	0.1331
3031		B5-NW6400_B5-NW6403	B5-NW6400	B5-NW6403	0.6300	0.0040	0.0435
3032		B5-NW6401_B5-M02189	B5-NW6401	B5-M02189	976.6387	2.1668	0.5537
3033		B5-NW6402_B5-NW6401	B5-NW6402	B5-NW6401	1.9571	0.6649	0.0502
3034		B5-NW6403_B5-NW6402	B5-NW6403	B5-NW6402	1.5398	0.5149	0.0507
3035		B5-NW6404_B5-NW6405	B5-NW6404	B5-NW6405	19.1181	0.1220	0.1916
3036		B5-NW6405_B5-NW6446	B5-NW6405	B5-NW6446	23.6692	0.9206	0.2209
3037		B5-NW6406_B5-NW6405	B5-NW6406	B5-NW6405	2.2114	0.7543	0.0500
3038		B5-NW6407_B5-NW6406	B5-NW6407	B5-NW6406	1.4096	0.0087	0.0474
3039		B5-NW6408_B5-NW6409	B5-NW6408	B5-NW6409	1.4437	0.0091	0.0685
3040		B5-NW6409_B5-NW6410	B5-NW6409	B5-NW6410	3.2779	0.5246	0.0835
3041		B5-NW6410_B5-NW6412	B5-NW6410	B5-NW6412	17.4795	0.6992	0.2166
3042		B5-NW6411_B5-NW6410	B5-NW6411	B5-NW6410	11.2377	0.3326	0.1858
3043		B5-NW6412_B5-NW6435	B5-NW6412	B5-NW6435	27.4332	0.1751	0.2252
3044		B5-NW6413_B5-NW6412	B5-NW6413	B5-NW6412	8.5057	0.0536	0.1641
3045		B5-NW6414_B5-NW6415	B5-NW6414	B5-NW6415	1.1693	0.0074	0.0584
3046		B5-NW6415_B5-NW6416	B5-NW6415	B5-NW6416	2.4332	0.0155	0.0871
3047		B5-NW6416_B5-NW6417	B5-NW6416	B5-NW6417	5.2390	0.0334	0.1181
3048		B5-NW6417_B5-NW6418	B5-NW6417	B5-NW6418	8.8196	0.7301	0.1308
3049		B5-NW6418_B5-NW6422	B5-NW6418	B5-NW6422	27.1724	0.1734	0.2094
3050		B5-NW6419_B5-NW6418	B5-NW6419	B5-NW6418	16.5676	0.1057	0.1787
3051		B5-NW6420_B5-NW6421	B5-NW6420	B5-NW6421	0.9423	0.0059	0.0525
3052		B5-NW6421_B5-NW6417	B5-NW6421	B5-NW6417	2.0671	0.0132	0.0970
3053		B5-NW6422_B5-NW6426	B5-NW6422	B5-NW6426	32.4366	0.2070	0.2275
3054		B5-NW6423_B5-NW6422	B5-NW6423	B5-NW6422	4.0505	0.7023	0.0790
3055		B5-NW6424_B5-NW6423	B5-NW6424	B5-NW6423	2.5183	0.0161	0.0720
3056		B5-NW6425_B5-NW6424	B5-NW6425	B5-NW6424	1.0150	0.0063	0.0538
3057		B5-NW6426_B5-NW6438	B5-NW6426	B5-NW6438	38.1462	1.2059	0.2578
3058		B5-NW6427_B5-NW6426	B5-NW6427	B5-NW6426	4.3372	0.7420	0.0824
3059		B5-NW6428_B5-NW6427	B5-NW6428	B5-NW6427	2.9454	0.0188	0.0749
3060		B5-NW6429_B5-NW6428	B5-NW6429	B5-NW6428	1.4100	0.0088	0.0599
3061		B5-NW6430_B5-NW6416	B5-NW6430	B5-NW6416	1.5119	0.4433	0.0553
3062		B5-NW6431_B5-NW6432	B5-NW6431	B5-NW6432	1.1913	0.3133	0.1640
3063		B5-NW6432_B5-NW6436	B5-NW6432	B5-NW6436	42.3365	0.7662	0.2865
3064		B5-NW6433_B5-NW6432	B5-NW6433	B5-NW6432	38.7021	1.0590	0.2835
3065		B5-NW6434_B5-NW6433	B5-NW6434	B5-NW6433	34.1892	0.2182	0.2665
3066		B5-NW6435_B5-NW6434	B5-NW6435	B5-NW6434	30.3215	0.1935	0.2402
3067		B5-NW6436_B5-NW6437	B5-NW6436	B5-NW6437	44.0757	1.1353	0.2961
3068		B5-NW6437_B5-NW6438	B5-NW6437	B5-NW6438	45.6078	0.2911	0.3591
3069		B5-NW6438_B5-NW6439	B5-NW6438	B5-NW6439	84.8785	1.0709	0.4326
3070		B5-NW6439_B5-NW6452	B5-NW6439	B5-NW6452	91.5718	1.1343	0.4400
3071		B5-NW6440_B5-NW6444	B5-NW6440	B5-NW6444	1.5933	0.0099	0.0608
3072		B5-NW6441_B5-M10042	B5-NW6441	B5-M10042	78.6583	0.5760	0.0548
3073		B5-NW6442_B5-NW6441	B5-NW6442	B5-NW6441	64.3963	3.6139	0.1711
3074		B5-NW6443_B5-NW6442	B5-NW6443	B5-NW6442	0.8947	0.4354	0.0392
3075		B5-NW6444_B5-NW6445	B5-NW6444	B5-NW6445	3.2649	0.0208	0.0765
3076		B5-NW6445_B5-NW6439	B5-NW6445	B5-NW6439	5.0166	0.6159	0.1852
3077		B5-NW6446_B5-NW6447	B5-NW6446	B5-NW6447	25.6450	0.1637	0.2261
3078		B5-NW6447_B5-NW6452	B5-NW6447	B5-NW6452	27.5255	0.7567	0.2750
3079		B5-NW6448_B5-NW6449	B5-NW6448	B5-NW6449	1.1295	0.0070	0.0559
3080		B5-NW6449_B5-NW6450	B5-NW6449	B5-NW6450	2.8579	0.0182	0.0678

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3081		B5-NW6450_B5-NW6451	B5-NW6450	B5-NW6451	4.7232	0.9530	0.0878
3082		B5-NW6451_B5-NW7307	B5-NW6451	B5-NW7307	126.6731	1.4545	0.3857
3083		B5-NW6452_B5-NW6451	B5-NW6452	B5-NW6451	120.7724	0.4934	0.3710
3084		B5-NW6453_B5-NW7307	B5-NW6453	B5-NW7307	39.6575	0.2531	0.3229
3085		B5-NW6454_B5-M02185	B5-NW6454	B5-M02185	381.4435	4.6168	0.3707
3086		B5-NW6455_B5-NW6453	B5-NW6455	B5-NW6453	39.0078	0.2490	0.2493
3087		B5-NW6456_B5-NW6455	B5-NW6456	B5-NW6455	4.6842	1.0328	0.0702
3088		B5-NW6457_B5-NW6456	B5-NW6457	B5-NW6456	2.9473	0.6545	0.0668
3089		B5-NW6458_B5-NW6457	B5-NW6458	B5-NW6457	1.1804	0.0073	0.0556
3090		B5-NW6459_B5-NW6462	B5-NW6459	B5-NW6462	0.5935	0.0037	0.0408
3091		B5-NW6460_B5-NW6461	B5-NW6460	B5-NW6461	0.6809	0.0042	0.0345
3092		B5-NW6461_B5-NW6405	B5-NW6461	B5-NW6405	1.5654	0.7398	0.0402
3093		B5-NW6462_B5-NW6463	B5-NW6462	B5-NW6463	2.0704	0.0132	0.0887
3094		B5-NW6463_B5-NW6467	B5-NW6463	B5-NW6467	10.9055	0.0696	0.1316
3095		B5-NW6464_B5-NW6463	B5-NW6464	B5-NW6463	6.0493	0.0386	0.1136
3096		B5-NW6465_B5-NW6464	B5-NW6465	B5-NW6464	2.8475	0.0180	0.0842
3097		B5-NW6465_B5-NW6473	B5-NW6465	B5-NW6473	2.8478	0.0180	0.0816
3098		B5-NW6466_B5-NW6472	B5-NW6466	B5-NW6472	1.6020	0.0100	0.0627
3099		B5-NW6467_B5-NW6468	B5-NW6467	B5-NW6468	12.8231	0.0818	0.1427
3100		B5-NW6468_B5-NW6469	B5-NW6468	B5-NW6469	14.7093	0.9980	0.1500
3101		B5-NW6469_B5-NW9052	B5-NW6469	B5-NW9052	32.5718	1.0514	0.2157
3102		B5-NW6470_B5-NW6469	B5-NW6470	B5-NW6469	16.9646	0.1083	0.1848
3103		B5-NW6471_B5-NW6470	B5-NW6471	B5-NW6470	5.2005	0.8694	0.0810
3104		B5-NW6472_B5-NW6471	B5-NW6472	B5-NW6471	3.3548	0.0214	0.0765
3105		B5-NW6473_B5-NW6474	B5-NW6473	B5-NW6474	5.7894	0.0370	0.1036
3106		B5-NW6474_B5-NW6475	B5-NW6474	B5-NW6475	8.6232	0.0550	0.1180
3107		B5-NW6475_B5-NW6470	B5-NW6475	B5-NW6470	10.3273	0.0659	0.1405
3108		B5-NW6478_B5-NW6477	B5-NW6478	B5-NW6477	28.1753	0.9756	0.2398
3109		B5-NW6479_B5-NW6478	B5-NW6479	B5-NW6478	21.5011	0.1372	0.2254
3110		B5-NW6480_B5-NW6481	B5-NW6480	B5-NW6481	0.2977	0.0019	0.0495
3111		B5-NW6481_B5-NW6482	B5-NW6481	B5-NW6482	2.8668	0.0183	0.1048
3112		B5-NW6482_B5-NW6483	B5-NW6482	B5-NW6483	8.6728	0.0554	0.1483
3113		B5-NW6483_B5-NW6484	B5-NW6483	B5-NW6484	12.3128	0.0786	0.1655
3114		B5-NW6484_B5-NW6485	B5-NW6484	B5-NW6485	14.6007	0.0932	0.1753
3115		B5-NW6485_B5-NW6479	B5-NW6485	B5-NW6479	17.7710	0.1134	0.1959
3116		B5-NW6487_B5-NW6488	B5-NW6487	B5-NW6488	0.7102	0.3273	0.0690
3117		B5-NW6488_B5-NW6495	B5-NW6488	B5-NW6495	6.8819	0.0439	0.1358
3118		B5-NW6489_B5-NW6488	B5-NW6489	B5-NW6488	3.5464	0.6537	0.0758
3119		B5-NW6490_B5-NW6489	B5-NW6490	B5-NW6489	2.1861	0.0138	0.0695
3120		B5-NW6491_B5-NW6488	B5-NW6491	B5-NW6488	2.1838	0.5662	0.0602
3121		B5-NW6492_B5-NW6491	B5-NW6492	B5-NW6491	1.1334	0.0071	0.0514
3122		B5-NW6493_B5-NW6494	B5-NW6493	B5-NW6494	1.9671	0.0124	0.0738
3123		B5-NW6494_B5-NW6495	B5-NW6494	B5-NW6495	3.6173	0.5318	0.0884
3124		B5-NW6495_B5-NW6500	B5-NW6495	B5-NW6500	17.6638	0.1127	0.1815
3125		B5-NW6496_B5-NW6495	B5-NW6496	B5-NW6495	5.9830	0.7955	0.0947
3126		B5-NW6497_B5-NW6496	B5-NW6497	B5-NW6496	4.9241	0.6432	0.0958
3127		B5-NW6498_B5-NW6499	B5-NW6498	B5-NW6499	1.7980	0.0113	0.0729
3128		B5-NW6499_B5-NW6500	B5-NW6499	B5-NW6500	3.5715	0.5277	0.0881
3129		B5-NW6500_B5-NW6584	B5-NW6500	B5-NW6584	24.7279	0.1578	0.2073
3130		B5-NW6501_B5-NW6500	B5-NW6501	B5-NW6500	2.3211	0.6651	0.0563
3131		B5-NW6502_B5-NW6501	B5-NW6502	B5-NW6501	1.2815	0.0080	0.0521
3132		B5-NW6503_B5-NW6497	B5-NW6503	B5-NW6497	3.7959	0.0242	0.0954
3133		B5-NW6504_B5-NW6503	B5-NW6504	B5-NW6503	0.9671	0.3851	0.0450
3134		B5-NW6505_B5-NW6503	B5-NW6505	B5-NW6503	2.1229	0.0135	0.0797
3135		B5-NW6506_B5-NW9066	B5-NW6506	B5-NW9066	0.2651	0.2174	0.0321
3136		B5-NW6507_B5-NW6509	B5-NW6507	B5-NW6509	1.1690	0.0075	0.0655

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3137		B5-NW6508_B5-NW6507	B5-NW6508	B5-NW6507	0.5798	0.3281	0.0355
3138		B5-NW6509_B5-NW6511	B5-NW6509	B5-NW6511	2.0333	0.0130	0.0811
3139		B5-NW6510_B5-NW6512	B5-NW6510	B5-NW6512	1.1090	0.0070	0.0592
3140		B5-NW6511_B5-NW6514	B5-NW6511	B5-NW6514	3.0971	0.0198	0.0882
3141		B5-NW6512_B5-NW6515	B5-NW6512	B5-NW6515	1.9332	0.0123	0.0733
3142		B5-NW6513_B5-NW6528	B5-NW6513	B5-NW6528	6.8073	0.6814	0.1149
3143		B5-NW6514_B5-NW6518	B5-NW6514	B5-NW6518	4.2876	0.5895	0.0925
3144		B5-NW6515_B5-NW6516	B5-NW6515	B5-NW6516	2.9694	0.5419	0.0763
3145		B5-NW6516_B5-NW6518	B5-NW6516	B5-NW6518	4.2304	0.0270	0.0949
3146		B5-NW6517_B5-NW6516	B5-NW6517	B5-NW6516	0.5469	0.4641	0.0450
3147		B5-NW6518_B5-NW6528	B5-NW6518	B5-NW6528	9.1962	0.0587	0.1519
3148		B5-NW6519_B5-NW6520	B5-NW6519	B5-NW6520	1.1628	0.3941	0.0501
3149		B5-NW6520_B5-NW9067	B5-NW6520	B5-NW9067	2.1114	0.0134	0.0748
3150		B5-NW6521_B5-NW6520	B5-NW6521	B5-NW6520	0.4953	0.0031	0.0453
3151		B5-NW6522_B5-NW6520	B5-NW6522	B5-NW6520	0.2642	0.0017	0.0415
3152		B5-NW6523_B5-NW6524	B5-NW6523	B5-NW6524	3.3205	0.3661	0.1075
3153		B5-NW6524_B5-NW6513	B5-NW6524	B5-NW6513	4.8171	0.0307	0.1103
3154		B5-NW6525_B5-NW6526	B5-NW6525	B5-NW6526	0.8395	0.0053	0.0593
3155		B5-NW6526_B5-NW6527	B5-NW6526	B5-NW6527	2.4238	0.0155	0.0843
3156		B5-NW6527_B5-NW6529	B5-NW6527	B5-NW6529	4.3235	0.6020	0.0917
3157		B5-NW6528_B5-NW6529	B5-NW6528	B5-NW6529	17.1178	0.1093	0.1956
3158		B5-NW6529_B5-NW6530	B5-NW6529	B5-NW6530	22.4790	0.1435	0.2227
3159		B5-NW6530_B5-NW6538	B5-NW6530	B5-NW6538	27.8506	0.9911	0.2352
3160		B5-NW6531_B5-NW6530	B5-NW6531	B5-NW6530	4.3766	0.6061	0.0921
3161		B5-NW6532_B5-NW6531	B5-NW6532	B5-NW6531	2.5553	0.0163	0.0851
3162		B5-NW6533_B5-NW6532	B5-NW6533	B5-NW6532	0.9036	0.0057	0.0607
3163		B5-NW6534_B5-NW6535	B5-NW6534	B5-NW6535	0.3734	0.0023	0.0459
3164		B5-NW6535_B5-NW6536	B5-NW6535	B5-NW6536	1.6754	0.0107	0.0746
3165		B5-NW6536_B5-NW6537	B5-NW6536	B5-NW6537	3.1624	0.0202	0.0890
3166		B5-NW6537_B5-NW6538	B5-NW6537	B5-NW6538	4.5334	0.0289	0.1412
3167		B5-NW6538_B5-NW6539	B5-NW6538	B5-NW6539	33.3755	0.2130	0.2495
3168		B5-NW6539_B5-NW7283	B5-NW6539	B5-NW7283	51.6070	1.2616	0.3075
3169		B5-NW6540_B5-NW6539	B5-NW6540	B5-NW6539	17.9360	0.1145	0.2477
3170		B5-NW6541_B5-NW6540	B5-NW6541	B5-NW6540	17.6031	0.8637	0.1871
3171		B5-NW6542_B5-NW6541	B5-NW6542	B5-NW6541	17.2678	0.8556	0.1862
3172		B5-NW6543_B5-NW6542	B5-NW6543	B5-NW6542	0.9713	0.0060	0.1112
3173		B5-NW6544_B5-NW6545	B5-NW6544	B5-NW6545	1.8572	0.0118	0.0717
3174		B5-NW6545_B5-NW6546	B5-NW6545	B5-NW6546	3.4559	0.0221	0.0998
3175		B5-NW6546_B5-NW6551	B5-NW6546	B5-NW6551	7.3983	0.0472	0.1414
3176		B5-NW6547_B5-NW6546	B5-NW6547	B5-NW6546	2.4285	0.0155	0.0943
3177		B5-NW6548_B5-NW6547	B5-NW6548	B5-NW6547	0.9218	0.0058	0.0599
3178		B5-NW6549_B5-NW6550	B5-NW6549	B5-NW6550	1.0252	0.0064	0.0593
3179		B5-NW6550_B5-NW6551	B5-NW6550	B5-NW6551	2.6832	0.5129	0.0740
3180		B5-NW6551_B5-NW6556	B5-NW6551	B5-NW6556	14.1055	0.0900	0.1846
3181		B5-NW6552_B5-NW6551	B5-NW6552	B5-NW6551	2.4910	0.4852	0.0730
3182		B5-NW6553_B5-NW6552	B5-NW6553	B5-NW6552	0.9118	0.0057	0.0592
3183		B5-NW6554_B5-NW6555	B5-NW6554	B5-NW6555	0.9298	0.0058	0.0605
3184		B5-NW6555_B5-NW6556	B5-NW6555	B5-NW6556	2.6007	0.4690	0.0770
3185		B5-NW6556_B5-NW6561	B5-NW6556	B5-NW6561	20.6535	0.1318	0.2168
3186		B5-NW6557_B5-NW6556	B5-NW6557	B5-NW6556	2.4487	0.4846	0.0723
3187		B5-NW6558_B5-NW6557	B5-NW6558	B5-NW6557	0.9073	0.0057	0.0596
3188		B5-NW6559_B5-NW6560	B5-NW6559	B5-NW6560	0.7875	0.0049	0.0574
3189		B5-NW6560_B5-NW6561	B5-NW6560	B5-NW6561	2.4002	0.4270	0.0790
3190		B5-NW6561_B5-NW6566	B5-NW6561	B5-NW6566	27.1437	0.9768	0.2334
3191		B5-NW6562_B5-NW6561	B5-NW6562	B5-NW6561	2.5960	0.4454	0.0806
3192		B5-NW6563_B5-NW6562	B5-NW6563	B5-NW6562	1.0983	0.0069	0.0625

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3193		B5-NW6564_B5-NW6565	B5-NW6564	B5-NW6565	0.2546	0.0016	0.0403
3194		B5-NW6564_B5-NW6616	B5-NW6564	B5-NW6616	0.4546	0.3992	0.0364
3195		B5-NW6565_B5-NW6566	B5-NW6565	B5-NW6566	1.8284	0.0117	0.1433
3196		B5-NW6566_B5-NW6568	B5-NW6566	B5-NW6568	30.5755	1.1321	0.2287
3197		B5-NW6567_B5-NW6566	B5-NW6567	B5-NW6566	0.8224	0.4162	0.0571
3198		B5-NW6568_B5-NW6569	B5-NW6568	B5-NW6569	32.1073	1.2399	0.2220
3199		B5-NW6569_B5-NW6570	B5-NW6569	B5-NW6570	85.1204	1.7102	0.3547
3200		B5-NW6570_B5-HF1009	B5-NW6570	B5-HF1009	87.8861	1.9099	0.3349
3201		B5-NW6571_B5-NW6570	B5-NW6571	B5-NW6570	2.3922	0.5002	0.1224
3202		B5-NW6572_B5-NW6571	B5-NW6572	B5-NW6571	1.6948	0.0108	0.0582
3203		B5-NW6573_B5-NW6572	B5-NW6573	B5-NW6572	1.3171	0.0084	0.0555
3204		B5-NW6574_B5-NW6573	B5-NW6574	B5-NW6573	0.6119	0.0038	0.0449
3205		B5-NW6577_B5-NW6576	B5-NW6577	B5-NW6576	80.1385	1.5026	0.2700
3206		B5-NW6578_B5-NW6577	B5-NW6578	B5-NW6577	80.1385	1.3560	0.2906
3207		B5-NW6579_B5-NW6578	B5-NW6579	B5-NW6578	80.1385	0.3274	0.2289
3208		B5-NW6580_B5-NW6579	B5-NW6580	B5-NW6579	0.0000	0.0000	0.0520
3209		B5-NW6581_B5-NW6580	B5-NW6581	B5-NW6580	0.0000	0.0000	0.0000
3210		B5-NW6582_B5-NW6583	B5-NW6582	B5-NW6583	1.8169	0.0113	0.0652
3211		B5-NW6583_B5-NW6584	B5-NW6583	B5-NW6584	3.5982	0.6462	0.0772
3212		B5-NW6584_B5-NW6589	B5-NW6584	B5-NW6589	31.8119	0.2030	0.2321
3213		B5-NW6585_B5-NW6584	B5-NW6585	B5-NW6584	2.3783	0.5897	0.0647
3214		B5-NW6586_B5-NW6585	B5-NW6586	B5-NW6585	1.1718	0.0073	0.0519
3215		B5-NW6587_B5-NW6588	B5-NW6587	B5-NW6588	1.7767	0.0110	0.0640
3216		B5-NW6588_B5-NW6589	B5-NW6588	B5-NW6589	3.5415	0.6156	0.0846
3217		B5-NW6589_B5-NW6595	B5-NW6589	B5-NW6595	39.0950	1.0323	0.2519
3218		B5-NW6590_B5-NW6589	B5-NW6590	B5-NW6589	2.3787	0.4068	0.0850
3219		B5-NW6591_B5-NW6590	B5-NW6591	B5-NW6590	0.8899	0.0057	0.0608
3220		B5-NW6592_B5-NW6591	B5-NW6592	B5-NW6591	0.1893	0.0012	0.0333
3221		B5-NW6593_B5-NW6594	B5-NW6593	B5-NW6594	1.6896	0.0105	0.0596
3222		B5-NW6594_B5-NW6595	B5-NW6594	B5-NW6595	3.4979	0.6660	0.0882
3223		B5-NW6595_B5-NW6598	B5-NW6595	B5-NW6598	44.2160	1.0270	0.2679
3224		B5-NW6596_B5-NW6597	B5-NW6596	B5-NW6597	1.6737	0.0104	0.0601
3225		B5-NW6597_B5-NW6598	B5-NW6597	B5-NW6598	3.6500	0.6344	0.0970
3226		B5-NW6598_B5-NW6601	B5-NW6598	B5-NW6601	49.4807	0.3158	0.2886
3227		B5-NW6599_B5-NW6600	B5-NW6599	B5-NW6600	1.7334	0.0108	0.0617
3228		B5-NW6600_B5-NW6601	B5-NW6600	B5-NW6601	3.7559	0.6340	0.1100
3229		B5-NW6601_B5-NW6607	B5-NW6601	B5-NW6607	58.3018	0.3721	0.3116
3230		B5-NW6602_B5-NW6601	B5-NW6602	B5-NW6601	3.8794	0.5731	0.1133
3231		B5-NW6603_B5-NW6602	B5-NW6603	B5-NW6602	2.4885	0.0159	0.0712
3232		B5-NW6604_B5-NW6603	B5-NW6604	B5-NW6603	0.7205	0.0045	0.0517
3233		B5-NW6605_B5-NW6606	B5-NW6605	B5-NW6606	1.8030	0.0112	0.0606
3234		B5-NW6606_B5-NW6607	B5-NW6606	B5-NW6607	3.9028	0.7112	0.1189
3235		B5-NW6607_B5-NW6613	B5-NW6607	B5-NW6613	67.4982	1.5472	0.3222
3236		B5-NW6608_B5-NW6607	B5-NW6608	B5-NW6607	3.9013	0.5404	0.1256
3237		B5-NW6609_B5-NW6608	B5-NW6609	B5-NW6608	2.4635	0.0157	0.0730
3238		B5-NW6610_B5-NW6609	B5-NW6610	B5-NW6609	0.9816	0.0061	0.0548
3239		B5-NW6611_B5-NW6612	B5-NW6611	B5-NW6612	2.2999	0.0144	0.0695
3240		B5-NW6612_B5-NW6613	B5-NW6612	B5-NW6613	5.1822	0.7835	0.1202
3241		B5-NW6613_B5-NW6579	B5-NW6613	B5-NW6579	80.1385	1.8868	0.3160
3242		B5-NW6614_B5-NW6613	B5-NW6614	B5-NW6613	5.6875	0.5679	0.1347
3243		B5-NW6615_B5-NW6614	B5-NW6615	B5-NW6614	3.7126	0.0237	0.0901
3244		B5-NW6616_B5-NW6615	B5-NW6616	B5-NW6615	1.5605	0.0099	0.0635
3245		B5-NW6617_B5-NW6618	B5-NW6617	B5-NW6618	53.2492	0.7777	0.4504
3246		B5-NW6618_B5-NW6619	B5-NW6618	B5-NW6619	54.3822	1.1582	0.3399
3247		B5-NW6619_B5-NW6620	B5-NW6619	B5-NW6620	55.0474	0.9354	0.3440
3248		B5-NW6620_B5-NW6621	B5-NW6620	B5-NW6621	58.2107	1.1884	0.3506

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3249		B5-NW6621_B5-NW6622	B5-NW6621	B5-NW6622	59.3234	1.2244	0.3478
3250		B5-NW6622_B5-NW6623	B5-NW6622	B5-NW6623	59.7714	0.9246	0.3388
3251		B5-NW6623_B5-NW6624	B5-NW6623	B5-NW6624	60.7077	1.0724	0.3441
3252		B5-NW6624_B5-NW6625	B5-NW6624	B5-NW6625	61.2567	1.2723	0.3462
3253		B5-NW6625_B5-NW6626	B5-NW6625	B5-NW6626	61.5531	0.8097	0.3427
3254		B5-NW6626_B5-NW6627	B5-NW6626	B5-NW6627	62.4233	1.0126	0.3555
3255		B5-NW6627_B5-NW6628	B5-NW6627	B5-NW6628	63.0238	1.2398	0.3603
3256		B5-NW6629_B5-NW6630	B5-NW6629	B5-NW6630	0.9266	0.0057	0.0457
3257		B5-NW6630_B5-NW6631	B5-NW6630	B5-NW6631	1.7754	0.5325	0.0546
3258		B5-NW6631_B5-NW6632	B5-NW6631	B5-NW6632	94.9644	0.7335	0.4414
3259		B5-NW6635_B5-NW6631	B5-NW6635	B5-NW6631	92.8094	0.1685	0.3508
3260		B5-NW6636_B5-NW6635	B5-NW6636	B5-NW6635	7.0691	0.5730	0.1327
3261		B5-NW6637_B5-NW6636	B5-NW6637	B5-NW6636	2.3652	0.0151	0.0967
3262		B5-NW6638_B5-NW6637	B5-NW6638	B5-NW6637	1.3142	0.0082	0.0553
3263		B5-NW6639_B5-NW6640	B5-NW6639	B5-NW6640	1.0900	0.0068	0.0553
3264		B5-NW6640_B5-NW6641	B5-NW6640	B5-NW6641	2.3912	0.5234	0.0675
3265		B5-NW6641_B5-NW6644	B5-NW6641	B5-NW6644	9.7497	0.0622	0.1431
3266		B5-NW6642_B5-NW6636	B5-NW6642	B5-NW6636	3.3377	0.5536	0.0814
3267		B5-NW6643_B5-NW6642	B5-NW6643	B5-NW6642	1.0234	0.0065	0.0639
3268		B5-NW6643_B5-NW6644	B5-NW6643	B5-NW6644	1.0027	0.3023	0.0614
3269		B5-NW6644_B5-NW6645	B5-NW6644	B5-NW6645	12.6315	0.8459	0.1514
3270		B5-NW6645_B5-NW6646	B5-NW6645	B5-NW6646	83.0878	0.7428	0.2257
3271		B5-NW6646_B5-NW6647	B5-NW6646	B5-NW6647	84.1414	0.4357	0.2380
3272		B5-NW6647_B5-NW6635	B5-NW6647	B5-NW6635	84.6926	0.7826	0.2714
3273		B5-NW6648_B5-NW6674	B5-NW6648	B5-NW6674	4.9166	0.3512	0.1448
3274		B5-NW6649_B5-NW6648	B5-NW6649	B5-NW6648	4.5541	0.0291	0.1067
3275		B5-NW6650_B5-NW6649	B5-NW6650	B5-NW6649	4.5136	0.7647	0.0803
3276		B5-NW6651_B5-NW6650	B5-NW6651	B5-NW6650	3.8526	0.4031	0.1115
3277		B5-NW6652_B5-NW6651	B5-NW6652	B5-NW6651	2.5176	0.0161	0.0880
3278		B5-NW6653_B5-NW6652	B5-NW6653	B5-NW6652	1.4454	0.0092	0.0644
3279		B5-NW6654_B5-NW6653	B5-NW6654	B5-NW6653	0.4326	0.0027	0.0462
3280		B5-NW6655_B5-NW6657	B5-NW6655	B5-NW6657	0.6314	0.0039	0.0471
3281		B5-NW6656_B5-NW6645	B5-NW6656	B5-NW6645	69.8237	0.1268	0.2171
3282		B5-NW6657_B5-NW6672	B5-NW6657	B5-NW6672	1.3126	0.0084	0.0781
3283		B5-NW6658_B5-NW6656	B5-NW6658	B5-NW6656	68.7327	0.6155	0.2055
3284		B5-NW6659_B5-NW6658	B5-NW6659	B5-NW6658	68.4376	0.6714	0.1986
3285		B5-NW6660_B5-NW6659	B5-NW6660	B5-NW6659	66.6184	0.7494	0.2184
3286		B5-NW6661_B5-NW6660	B5-NW6661	B5-NW6660	64.9868	0.1180	0.2066
3287		B5-NW6662_B5-NW6661	B5-NW6662	B5-NW6661	59.7042	0.6793	0.2166
3288		B5-NW6663_B5-NW6661	B5-NW6663	B5-NW6661	4.6046	0.6781	0.0883
3289		B5-NW6664_B5-NW6663	B5-NW6664	B5-NW6663	3.4522	0.0220	0.0847
3290		B5-NW6665_B5-NW6664	B5-NW6665	B5-NW6664	1.8245	0.0114	0.0680
3291		B5-NW6666_B5-NW6667	B5-NW6666	B5-NW6667	0.2558	0.4068	0.0178
3292		B5-NW6667_B5-NW6662	B5-NW6667	B5-NW6662	59.3386	0.1077	0.2032
3293		B5-NW6668_B5-NW6667	B5-NW6668	B5-NW6667	58.0446	0.7678	0.1949
3294		B5-NW6669_B5-NW6670	B5-NW6669	B5-NW6670	0.5852	0.0037	0.0472
3295		B5-NW6670_B5-NW6671	B5-NW6670	B5-NW6671	1.4895	0.3927	0.0595
3296		B5-NW6671_B5-NW6673	B5-NW6671	B5-NW6673	2.3200	0.0148	0.0611
3297		B5-NW6672_B5-NW6717	B5-NW6672	B5-NW6717	4.5703	0.0292	0.1272
3298		B5-NW6673_B5-NW6672	B5-NW6673	B5-NW6672	2.9099	0.2466	0.0875
3299		B5-NW6674_B5-NW6681	B5-NW6674	B5-NW6681	12.6956	0.0810	0.1874
3300		B5-NW6675_B5-NW6674	B5-NW6675	B5-NW6674	6.8899	0.0440	0.1497
3301		B5-NW6676_B5-NW6681	B5-NW6676	B5-NW6681	7.2467	0.0463	0.1646
3302		B5-NW6677_B5-NW6682	B5-NW6677	B5-NW6682	5.9658	0.0381	0.1660
3303		B5-NW6678_B5-NW6683	B5-NW6678	B5-NW6683	7.1732	0.0458	0.2037
3304		B5-NW6679_B5-NW6684	B5-NW6679	B5-NW6684	7.4573	0.0476	0.2123

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3305		B5-NW6680_B5-NW6685	B5-NW6680	B5-NW6685	7.0198	0.0448	0.2939
3306		B5-NW6681_B5-NW6682	B5-NW6681	B5-NW6682	21.2262	0.7354	0.2075
3307		B5-NW6682_B5-NW6683	B5-NW6682	B5-NW6683	27.7993	0.1774	0.2490
3308		B5-NW6683_B5-NW6684	B5-NW6683	B5-NW6684	36.1082	0.7157	0.2922
3309		B5-NW6684_B5-NW6685	B5-NW6684	B5-NW6685	44.7314	0.2855	0.3839
3310		B5-NW6685_B5-NW6617	B5-NW6685	B5-NW6617	52.9050	0.7362	0.4675
3311		B5-NW6686_B5-NW6675	B5-NW6686	B5-NW6675	4.7235	0.0301	0.1135
3312		B5-NW6687_B5-NW6676	B5-NW6687	B5-NW6676	5.0803	0.0324	0.1169
3313		B5-NW6689_B5-NW6678	B5-NW6689	B5-NW6678	4.9655	0.0317	0.1113
3314		B5-NW6690_B5-NW6679	B5-NW6690	B5-NW6679	5.1129	0.0326	0.1134
3315		B5-NW6691_B5-NW6680	B5-NW6691	B5-NW6680	4.6212	0.0295	0.1090
3316		B5-NW6692_B5-NW6686	B5-NW6692	B5-NW6686	3.0499	0.0195	0.0931
3317		B5-NW6693_B5-NW6687	B5-NW6693	B5-NW6687	3.2372	0.0207	0.0964
3318		B5-NW6694_B5-NW9061	B5-NW6694	B5-NW9061	2.9413	0.0188	0.0883
3319		B5-NW6695_B5-NW6689	B5-NW6695	B5-NW6689	3.1385	0.0200	0.0908
3320		B5-NW6696_B5-NW6690	B5-NW6696	B5-NW6690	3.1261	0.0200	0.0923
3321		B5-NW6697_B5-NW6691	B5-NW6697	B5-NW6691	2.9406	0.0188	0.0888
3322		B5-NW6698_B5-NW6692	B5-NW6698	B5-NW6692	1.2482	0.0078	0.0680
3323		B5-NW6699_B5-NW6693	B5-NW6699	B5-NW6693	1.2814	0.0081	0.0698
3324		B5-NW6700_B5-NW6694	B5-NW6700	B5-NW6694	1.0341	0.0065	0.0642
3325		B5-NW6701_B5-NW6695	B5-NW6701	B5-NW6695	1.2387	0.0078	0.0656
3326		B5-NW6702_B5-NW6696	B5-NW6702	B5-NW6696	1.2343	0.0077	0.0654
3327		B5-NW6703_B5-NW6697	B5-NW6703	B5-NW6697	1.2110	0.0076	0.0640
3328		B5-NW6704_B5-NW6705	B5-NW6704	B5-NW6705	0.9475	0.3674	0.0426
3329		B5-NW6705_B5-NW6706	B5-NW6705	B5-NW6706	1.3390	0.2843	0.0577
3330		B5-NW6706_B5-NW7179	B5-NW6706	B5-NW7179	2.7009	0.5695	0.0692
3331		B5-NW6708_B5-NW7178	B5-NW6708	B5-NW7178	0.2612	0.0017	0.0382
3332		B5-NW6709_B5-NW6716	B5-NW6709	B5-NW6716	1.3004	0.0081	0.0659
3333		B5-NW6710_B5-NW6718	B5-NW6710	B5-NW6718	1.3733	0.0087	0.0719
3334		B5-NW6711_B5-NW6719	B5-NW6711	B5-NW6719	1.1768	0.0074	0.0679
3335		B5-NW6712_B5-NW6720	B5-NW6712	B5-NW6720	1.3267	0.0084	0.0712
3336		B5-NW6713_B5-NW6721	B5-NW6713	B5-NW6721	1.3153	0.0084	0.0726
3337		B5-NW6714_B5-NW6722	B5-NW6714	B5-NW6722	0.8787	0.0056	0.0599
3338		B5-NW6715_B5-NW6723	B5-NW6715	B5-NW6723	1.2688	0.0081	0.0662
3339		B5-NW6716_B5-NW6717	B5-NW6716	B5-NW6717	3.2474	0.0207	0.1212
3340		B5-NW6717_B5-NW6724	B5-NW6717	B5-NW6724	12.6178	0.0805	0.1833
3341		B5-NW6718_B5-NW6724	B5-NW6718	B5-NW6724	3.4286	0.0219	0.1471
3342		B5-NW6719_B5-NW6725	B5-NW6719	B5-NW6725	3.1455	0.0201	0.1646
3343		B5-NW6720_B5-NW6726	B5-NW6720	B5-NW6726	3.3401	0.0213	0.1841
3344		B5-NW6721_B5-NW6727	B5-NW6721	B5-NW6727	3.4574	0.0221	0.2051
3345		B5-NW6722_B5-NW6728	B5-NW6722	B5-NW6728	2.2991	0.0147	0.1998
3346		B5-NW6723_B5-NW6729	B5-NW6723	B5-NW6729	2.7908	0.0178	0.2151
3347		B5-NW6724_B5-NW6725	B5-NW6724	B5-NW6725	21.4263	0.1368	0.2276
3348		B5-NW6725_B5-NW6726	B5-NW6725	B5-NW6726	28.7899	0.1838	0.2654
3349		B5-NW6726_B5-NW6727	B5-NW6726	B5-NW6727	37.0425	0.2364	0.3037
3350		B5-NW6727_B5-NW6728	B5-NW6727	B5-NW6728	45.9176	0.8085	0.3261
3351		B5-NW6728_B5-NW6729	B5-NW6728	B5-NW6729	51.9261	0.3314	0.3407
3352		B5-NW6729_B5-NW6730	B5-NW6729	B5-NW6730	55.7039	1.1272	0.3529
3353		B5-NW6730_B5-NW7175	B5-NW6730	B5-NW7175	59.2565	1.2667	0.3390
3354		B5-NW6731_B5-NW6730	B5-NW6731	B5-NW6730	3.2634	0.0208	0.2152
3355		B5-NW6733_B5-NW7174	B5-NW6733	B5-NW7174	1.8574	0.0119	0.0704
3356		B5-NW6734_B5-NW6733	B5-NW6734	B5-NW6733	0.9243	0.0058	0.0549
3357		B5-NW6735_B5-NW6746	B5-NW6735	B5-NW6746	0.9213	0.0058	0.0610
3358		B5-NW6736_B5-NW6745	B5-NW6736	B5-NW6745	1.4189	0.0089	0.0735
3359		B5-NW6737_B5-NW6744	B5-NW6737	B5-NW6744	1.1214	0.0071	0.0687
3360		B5-NW6738_B5-NW6743	B5-NW6738	B5-NW6743	1.1029	0.0069	0.0682

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3361		B5-NW6739_B5-NW6742	B5-NW6739	B5-NW6742	1.3348	0.0084	0.0697
3362		B5-NW6740_B5-NW6741	B5-NW6740	B5-NW6741	1.1031	0.0069	0.0648
3363		B5-NW6741_B5-NW6717	B5-NW6741	B5-NW6717	3.0755	0.0196	0.1204
3364		B5-NW6742_B5-NW6724	B5-NW6742	B5-NW6724	3.4857	0.0222	0.1476
3365		B5-NW6743_B5-NW6725	B5-NW6743	B5-NW6725	3.1597	0.0202	0.1673
3366		B5-NW6744_B5-NW6726	B5-NW6744	B5-NW6726	3.1472	0.0201	0.1851
3367		B5-NW6745_B5-NW6727	B5-NW6745	B5-NW6727	3.5098	0.0224	0.2073
3368		B5-NW6746_B5-NW6728	B5-NW6746	B5-NW6728	2.4246	0.0155	0.2024
3369		B5-NW6747_B5-NW6633	B5-NW6747	B5-NW6632	42.8611	1.2284	0.2743
3370		B5-NW6748_B5-NW6747	B5-NW6748	B5-NW6747	42.6706	1.0377	0.3087
3371		B5-NW6749_B5-NW6751	B5-NW6749	B5-NW6751	2.2771	0.0142	0.0718
3372		B5-NW6750_B5-NW6763	B5-NW6750	B5-NW6763	15.5365	0.0992	0.1767
3373		B5-NW6751_B5-NW6750	B5-NW6751	B5-NW6750	5.6263	0.0359	0.1197
3374		B5-NW6753_B5-NW5143	B5-NW6753	B5-NW5143	0.4536	0.0028	0.0375
3375		B5-NW6754_B5-NW6755	B5-NW6754	B5-NW6755	1.1494	0.0073	0.0469
3376		B5-NW6755_B5-NW6756	B5-NW6755	B5-NW6756	1.1944	0.0076	0.0548
3377		B5-NW6756_B5-NW6757	B5-NW6756	B5-NW6757	2.4832	0.0159	0.1609
3378		B5-NW6757_B5-NW6781	B5-NW6757	B5-NW6781	43.5115	1.3450	0.2599
3379		B5-NW6758_B5-NW6757	B5-NW6758	B5-NW6757	40.0421	1.8973	0.1924
3380		B5-NW6759_B5-NW6763	B5-NW6759	B5-NW6763	5.3506	0.8837	0.0815
3381		B5-NW6760_B5-NW6759	B5-NW6760	B5-NW6759	2.1174	0.0131	0.0631
3382		B5-NW6761_B5-NW6762	B5-NW6761	B5-NW6762	1.9119	0.0119	0.0711
3383		B5-NW6762_B5-NW6758	B5-NW6762	B5-NW6758	5.1203	0.7228	0.0909
3384		B5-NW6763_B5-NW6758	B5-NW6763	B5-NW6758	28.5327	1.2369	0.2047
3385		B5-NW6764_B5-NW6758	B5-NW6764	B5-NW6758	3.9162	0.3117	0.1344
3386		B5-NW6765_B5-NW6764	B5-NW6765	B5-NW6764	1.5570	0.0097	0.0905
3387		B5-NW6766_B5-NW6767	B5-NW6766	B5-NW6767	1.9464	0.0124	0.0817
3388		B5-NW6767_B5-NW6763	B5-NW6767	B5-NW6763	4.6100	0.6239	0.0935
3389		B5-NW6768_B5-NW6750	B5-NW6768	B5-NW6750	6.8684	0.0438	0.1469
3390		B5-NW6769_B5-NW6768	B5-NW6769	B5-NW6768	3.5828	0.0229	0.1139
3391		B5-NW6770_B5-NW6772	B5-NW6770	B5-NW6772	66.9103	1.3044	0.3627
3392		B5-NW6772_B5-NW6776	B5-NW6772	B5-NW6776	72.5714	0.4632	0.3573
3393		B5-NW6773_B5-NW6774	B5-NW6773	B5-NW6774	1.2725	0.3944	0.0488
3394		B5-NW6774_B5-NW6775	B5-NW6774	B5-NW6775	1.8568	0.5940	0.0522
3395		B5-NW6775_B5-NW6772	B5-NW6775	B5-NW6772	4.8329	0.0308	0.1790
3396		B5-NW6776_B5-NW6777	B5-NW6776	B5-NW6777	73.7918	1.2458	0.4036
3397		B5-NW6777_B5-NW6780	B5-NW6777	B5-NW6780	74.6161	1.4253	0.3682
3398		B5-NW6778_B5-NW6775	B5-NW6778	B5-NW6775	1.9550	0.5739	0.0553
3399		B5-NW6779_B5-NW6778	B5-NW6779	B5-NW6778	0.9067	0.0056	0.0456
3400		B5-NW6780_B5-NW6782	B5-NW6780	B5-NW6782	119.4677	0.1506	0.4872
3401		B5-NW6781_B5-NW6780	B5-NW6781	B5-NW6780	44.2849	1.3687	0.2599
3402		B5-NW6782_B5-M02217	B5-NW6782	B5-M02217	758.9611	0.9561	0.6279
3403		B5-NW6783_B5-NW6782	B5-NW6783	B5-NW6782	644.7488	1.9868	0.3834
3404		B5-NW6784_B5-NW6785	B5-NW6784	B5-NW6785	1.9493	0.0121	0.0738
3405		B5-NW6785_B5-NW6087	B5-NW6785	B5-NW6087	5.0970	0.0325	0.1109
3406		B5-NW6786_B5-NW6787	B5-NW6786	B5-NW6787	0.6177	0.0039	0.0616
3407		B5-NW6787_B5-NW6788	B5-NW6787	B5-NW6788	3.4940	0.0223	0.0974
3408		B5-NW6788_B5-NW7249	B5-NW6788	B5-NW7249	5.8894	0.0376	0.1148
3409		B5-NW6789_B5-NW7196	B5-NW6789	B5-NW7196	41.7124	1.1591	0.2804
3410		B5-NW6791_B5-NW6789	B5-NW6791	B5-NW6789	34.1734	1.3003	0.2244
3411		B5-NW6792_B5-NW6791	B5-NW6792	B5-NW6791	33.7543	1.2571	0.2278
3412		B5-NW6793_B5-NW6792	B5-NW6793	B5-NW6792	2.6523	0.0163	0.1417
3413		B5-NW6794_B5-NW6795	B5-NW6794	B5-NW6795	2.1896	0.0137	0.0633
3414		B5-NW6795_B5-NW6796	B5-NW6795	B5-NW6796	2.8279	0.0180	0.0813
3415		B5-NW6796_B5-NW6797	B5-NW6796	B5-NW6797	5.7939	0.0369	0.0991
3416		B5-NW6797_B5-NW6798	B5-NW6797	B5-NW6798	8.0303	0.9437	0.1029

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3417		B5-NW6798_B5-NW6792	B5-NW6798	B5-NW6792	30.3036	1.1860	0.2200
3418		B5-NW6799_B5-NW6798	B5-NW6799	B5-NW6798	20.9831	0.1339	0.2024
3419		B5-NW6800_B5-NW6799	B5-NW6800	B5-NW6799	14.4588	0.0923	0.1691
3420		B5-NW6801_B5-NW6800	B5-NW6801	B5-NW6800	7.2520	0.0463	0.1307
3421		B5-NW6802_B5-NW6799	B5-NW6802	B5-NW6799	4.8536	0.7422	0.0861
3422		B5-NW6803_B5-NW6800	B5-NW6803	B5-NW6800	5.5671	0.7469	0.0941
3423		B5-NW6804_B5-NW6801	B5-NW6804	B5-NW6801	5.7265	0.7584	0.0949
3424		B5-NW6805_B5-NW6802	B5-NW6805	B5-NW6802	2.8059	0.0179	0.0765
3425		B5-NW6806_B5-NW6803	B5-NW6806	B5-NW6803	3.5005	0.0223	0.0844
3426		B5-NW6807_B5-NW6804	B5-NW6807	B5-NW6804	3.8678	0.0247	0.0868
3427		B5-NW6808_B5-NW6807	B5-NW6808	B5-NW6807	2.0677	0.0132	0.0676
3428		B5-NW6809_B5-NW6808	B5-NW6809	B5-NW6808	0.6959	0.0044	0.0458
3429		B5-NW6810_B5-NW6805	B5-NW6810	B5-NW6805	1.4506	0.0089	0.0544
3430		B5-NW6811_B5-NW6806	B5-NW6811	B5-NW6806	1.5048	0.0093	0.0603
3431		B5-NW6812_B5-NW6813	B5-NW6812	B5-NW6813	0.6936	0.0043	0.0436
3432		B5-NW6813_B5-NW6814	B5-NW6813	B5-NW6814	2.4523	0.0155	0.0704
3433		B5-NW6814_B5-NW6815	B5-NW6814	B5-NW6815	4.9002	0.7814	0.0836
3434		B5-NW6815_B5-NW6817	B5-NW6815	B5-NW6817	7.0811	0.0452	0.1246
3435		B5-NW6816_B5-NW6815	B5-NW6816	B5-NW6815	0.8462	0.4272	0.0684
3436		B5-NW6817_B5-NW6819	B5-NW6817	B5-NW6819	13.6852	0.0874	0.1533
3437		B5-NW6818_B5-NW6817	B5-NW6818	B5-NW6817	5.1378	0.7730	0.0870
3438		B5-NW6819_B5-NW6820	B5-NW6819	B5-NW6820	14.4814	0.0924	0.1767
3439		B5-NW6820_B5-NW7259	B5-NW6820	B5-NW7259	21.3506	0.1363	0.2069
3440		B5-NW6821_B5-NW6820	B5-NW6821	B5-NW6820	4.8984	0.6520	0.0946
3441		B5-NW6822_B5-NW6818	B5-NW6822	B5-NW6818	3.1447	0.0201	0.0771
3442		B5-NW6823_B5-NW6822	B5-NW6823	B5-NW6822	1.2303	0.0076	0.0532
3443		B5-NW6824_B5-NW6825	B5-NW6824	B5-NW6825	0.9235	0.0058	0.0499
3444		B5-NW6825_B5-NW6821	B5-NW6825	B5-NW6821	2.5436	0.0162	0.0786
3445		B5-NW6826_B5-NW6827	B5-NW6826	B5-NW6827	1.4463	0.0089	0.0585
3446		B5-NW6827_B5-NW6828	B5-NW6827	B5-NW6828	3.3524	0.0214	0.0829
3447		B5-NW6828_B5-NW7259	B5-NW6828	B5-NW7259	5.4381	0.7360	0.0935
3448		B5-NW6829_B5-NW6830	B5-NW6829	B5-NW6830	29.2727	0.1868	0.2498
3449		B5-NW6830_B5-NW6846	B5-NW6830	B5-NW6846	44.8614	1.2451	0.2807
3450		B5-NW6831_B5-NW6830	B5-NW6831	B5-NW6830	7.9447	0.7637	0.1220
3451		B5-NW6832_B5-NW6831	B5-NW6832	B5-NW6831	0.5417	0.0034	0.0732
3452		B5-NW6833_B5-NW6830	B5-NW6833	B5-NW6830	6.5277	0.6524	0.1195
3453		B5-NW6834_B5-NW6833	B5-NW6834	B5-NW6833	4.4218	0.0282	0.0997
3454		B5-NW6835_B5-NW6834	B5-NW6835	B5-NW6834	3.0393	0.0194	0.0796
3455		B5-NW6836_B5-NW6835	B5-NW6836	B5-NW6835	1.3797	0.0086	0.0598
3456		B5-NW6837_B5-NW6838	B5-NW6837	B5-NW6838	1.1110	0.0070	0.0591
3457		B5-NW6838_B5-NW6839	B5-NW6838	B5-NW6839	2.4733	0.0158	0.0853
3458		B5-NW6839_B5-NW6840	B5-NW6839	B5-NW6840	3.9766	0.0254	0.1014
3459		B5-NW6840_B5-NW6841	B5-NW6840	B5-NW6841	5.5652	0.6222	0.1065
3460		B5-NW6841_B5-NW6641	B5-NW6841	B5-NW6641	6.3641	0.0406	0.1181
3461		B5-NW6842_B5-NW6843	B5-NW6842	B5-NW6843	1.2616	0.0079	0.0628
3462		B5-NW6843_B5-NW6844	B5-NW6843	B5-NW6844	3.3872	0.0216	0.0856
3463		B5-NW6844_B5-NW6845	B5-NW6844	B5-NW6845	4.9691	0.0317	0.1038
3464		B5-NW6845_B5-NW6846	B5-NW6845	B5-NW6846	7.1439	0.0456	0.2070
3465		B5-NW6846_B5-NW6847	B5-NW6846	B5-NW6847	53.2555	1.3397	0.3012
3466		B5-NW6847_B5-NW6668	B5-NW6847	B5-NW6668	55.1480	0.1001	0.1761
3467		B5-NW6848_B5-NW6868	B5-NW6848	B5-NW6868	1.7194	0.0108	0.0651
3468		B5-NW6849_B5-NW6867	B5-NW6849	B5-NW6867	1.7358	0.0109	0.0659
3469		B5-NW6850_B5-NW6866	B5-NW6850	B5-NW6866	1.4427	0.0090	0.0619
3470		B5-NW6851_B5-NW6865	B5-NW6851	B5-NW6865	1.3384	0.0083	0.0608
3471		B5-NW6852_B5-NW6864	B5-NW6852	B5-NW6864	1.1427	0.0071	0.0580
3472		B5-NW6853_B5-NW6863	B5-NW6853	B5-NW6863	1.3357	0.0083	0.0605

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3473		B5-NW6854_B5-NW6862	B5-NW6854	B5-NW6862	2.1535	0.0134	0.0700
3474		B5-NW6855_B5-NW6861	B5-NW6855	B5-NW6861	2.0918	0.0129	0.0643
3475		B5-NW6856_B5-NW6859	B5-NW6856	B5-NW6859	45.1780	1.0325	0.3229
3476		B5-NW6857_B5-NW6856	B5-NW6857	B5-NW6856	43.0412	0.9962	0.3212
3477		B5-NW6858_B5-NW6857	B5-NW6858	B5-NW6857	42.6586	0.3545	0.2909
3478		B5-NW6859_B5-NW6898	B5-NW6859	B5-NW6898	46.2718	0.7763	0.3069
3479		B5-NW6860_B5-NW6856	B5-NW6860	B5-NW6856	1.3391	0.3663	0.1862
3480		B5-NW6861_B5-NW6875	B5-NW6861	B5-NW6875	4.6497	0.0297	0.0846
3481		B5-NW6862_B5-NW6881	B5-NW6862	B5-NW6881	4.4694	0.0285	0.0860
3482		B5-NW6863_B5-NW6874	B5-NW6863	B5-NW6874	3.2350	0.0206	0.0779
3483		B5-NW6864_B5-NW6873	B5-NW6864	B5-NW6873	3.1079	0.0198	0.0769
3484		B5-NW6865_B5-NW6872	B5-NW6865	B5-NW6872	3.2837	0.0210	0.0787
3485		B5-NW6866_B5-NW6871	B5-NW6866	B5-NW6871	3.3912	0.0216	0.0796
3486		B5-NW6867_B5-NW6870	B5-NW6867	B5-NW6870	3.7792	0.0241	0.0836
3487		B5-NW6868_B5-NW6869	B5-NW6868	B5-NW6869	3.6578	0.0233	0.0823
3488		B5-NW6869_B5-NW6890	B5-NW6869	B5-NW6890	5.1994	0.0332	0.0985
3489		B5-NW6870_B5-NW6891	B5-NW6870	B5-NW6891	5.3845	0.0344	0.1009
3490		B5-NW6871_B5-NW6892	B5-NW6871	B5-NW6892	4.9317	0.0315	0.0970
3491		B5-NW6872_B5-NW6893	B5-NW6872	B5-NW6893	4.8125	0.0307	0.0958
3492		B5-NW6873_B5-NW6894	B5-NW6873	B5-NW6894	4.6478	0.0297	0.0947
3493		B5-NW6874_B5-NW6895	B5-NW6874	B5-NW6895	4.7335	0.0302	0.0947
3494		B5-NW6875_B5-NW6897	B5-NW6875	B5-NW6897	6.6484	0.0424	0.1065
3495		B5-NW6876_B5-M02221	B5-NW6876	B5-NW7253	532.3066	1.3894	0.4866
3496		B5-NW6877_B5-NW6876	B5-NW6877	B5-NW6876	127.9291	1.1289	0.4709
3497		B5-NW6878_B5-NW6877	B5-NW6878	B5-NW6877	119.7393	0.9867	0.4966
3498		B5-NW6879_B5-NW6878	B5-NW6879	B5-NW6878	111.6952	0.4563	0.4326
3499		B5-NW6880_B5-NW6879	B5-NW6880	B5-NW6879	103.7666	1.0216	0.3629
3500		B5-NW6881_B5-NW6896	B5-NW6881	B5-NW6896	6.2685	0.0400	0.0956
3501		B5-NW6882_B5-NW6880	B5-NW6882	B5-NW6880	95.7831	1.0273	0.3501
3502		B5-NW6883_B5-NW6882	B5-NW6883	B5-NW6882	85.7664	0.3504	0.3325
3503		B5-NW6884_B5-NW6883	B5-NW6884	B5-NW6883	74.9180	0.9454	0.3597
3504		B5-NW6885_B5-NW6886	B5-NW6885	B5-NW6886	1.1828	0.0073	0.0541
3505		B5-NW6886_B5-NW6887	B5-NW6886	B5-NW6887	2.6963	0.0172	0.0778
3506		B5-NW6887_B5-NW6888	B5-NW6887	B5-NW6888	4.6383	0.0296	0.0958
3507		B5-NW6888_B5-NW6889	B5-NW6888	B5-NW6889	5.8627	0.0374	0.1030
3508		B5-NW6889_B5-NW6831	B5-NW6889	B5-NW6831	6.7410	0.0430	0.1088
3509		B5-NW6890_B5-NW7252	B5-NW6890	B5-NW7252	7.3145	0.8333	0.1051
3510		B5-NW6891_B5-NW7253	B5-NW6891	B5-NW7253	7.6692	0.8071	0.1110
3511		B5-NW6892_B5-NW6877	B5-NW6892	B5-NW6877	7.1476	0.7920	0.1072
3512		B5-NW6893_B5-NW6878	B5-NW6893	B5-NW6878	6.9866	0.7841	0.1062
3513		B5-NW6894_B5-NW6879	B5-NW6894	B5-NW6879	6.8510	0.7786	0.1053
3514		B5-NW6895_B5-NW6880	B5-NW6895	B5-NW6880	6.8312	0.7761	0.1053
3515		B5-NW6896_B5-NW6882	B5-NW6896	B5-NW6882	8.7782	1.0800	0.0998
3516		B5-NW6897_B5-NW6883	B5-NW6897	B5-NW6883	9.4950	0.8981	0.1194
3517		B5-NW6898_B5-NW6899	B5-NW6898	B5-NW6899	48.7377	1.1252	0.3205
3518		B5-NW6899_B5-NW6884	B5-NW6899	B5-NW6884	48.8901	0.1997	0.2603
3519		B5-NW6903_B5-NW6905	B5-NW6903	B5-NW6905	5.9022	0.0377	0.1207
3520		B5-NW6904_B5-NW6905	B5-NW6904	B5-NW6905	0.5962	0.2863	0.0397
3521		B5-NW6905_B5-NW6910	B5-NW6905	B5-NW6910	8.0336	0.0513	0.1404
3522		B5-NW6906_B5-NW6905	B5-NW6906	B5-NW6905	1.2525	0.3637	0.0557
3523		B5-NW6907_B5-NW6908	B5-NW6907	B5-NW6908	4.1916	0.0266	0.1304
3524		B5-NW6908_B5-NW6911	B5-NW6908	B5-NW6911	14.3614	0.0917	0.1938
3525		B5-NW6909_B5-NW6908	B5-NW6909	B5-NW6908	4.4183	0.0282	0.1351
3526		B5-NW6910_B5-NW6912	B5-NW6910	B5-NW6912	10.9180	0.0697	0.1565
3527		B5-NW6911_B5-NW6913	B5-NW6911	B5-NW6913	21.1528	0.1350	0.2326
3528		B5-NW6912_B5-NW6915	B5-NW6912	B5-NW6915	14.2558	0.0910	0.3613

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3529		B5-NW6913_B5-NW6917	B5-NW6913	B5-NW6917	28.5712	0.9185	0.2527
3530		B5-NW6914_B5-NW6915	B5-NW6914	B5-NW6915	0.4311	0.0028	0.1133
3531		B5-NW6915_B5-NW6916	B5-NW6915	B5-NW6916	15.6848	0.6125	0.1928
3532		B5-NW6916_B5-NW6917	B5-NW6916	B5-NW6917	18.1471	0.1158	0.2173
3533		B5-NW6917_B5-M14990	B5-NW6917	B5-M14990	50.3871	1.7850	0.2360
3534		B5-NW6918_B5-NW6917	B5-NW6918	B5-NW6917	1.8558	0.4436	0.0634
3535		B5-NW6919_B5-M14990	B5-NW6919	B5-M14990	279.7958	0.7118	0.2186
3536		B5-NW6920_B5-NW6919	B5-NW6920	B5-NW6919	34.2884	0.9846	0.2739
3537		B5-NW6921_B5-NW6542	B5-NW6921	B5-NW6542	15.9059	0.8794	0.1728
3538		B5-NW6922_B5-NW6921	B5-NW6922	B5-NW6921	14.5728	0.0930	0.1702
3539		B5-NW6923_B5-NW6922	B5-NW6923	B5-NW6922	7.5626	0.7273	0.1181
3540		B5-NW6924_B5-NW6925	B5-NW6924	B5-NW6925	0.8685	0.3502	0.0446
3541		B5-NW6925_B5-NW6923	B5-NW6925	B5-NW6923	6.1451	0.0392	0.1147
3542		B5-NW6926_B5-NW6927	B5-NW6926	B5-NW6927	0.8393	0.3465	0.0439
3543		B5-NW6927_B5-NW6925	B5-NW6927	B5-NW6925	4.1828	0.0267	0.1038
3544		B5-NW6928_B5-NW6927	B5-NW6928	B5-NW6927	2.0920	0.0134	0.0806
3545		B5-NW6929_B5-NW6928	B5-NW6929	B5-NW6928	1.0948	0.0070	0.0568
3546		B5-NW6930_B5-NW6929	B5-NW6930	B5-NW6929	0.5900	0.0037	0.0424
3547		B5-NW6931_B5-NW6932	B5-NW6931	B5-NW6932	1.0988	0.0069	0.0570
3548		B5-NW6932_B5-NW6933	B5-NW6932	B5-NW6933	2.3680	0.0151	0.0759
3549		B5-NW6933_B5-NW6934	B5-NW6933	B5-NW6934	3.7551	0.0240	0.1012
3550		B5-NW6934_B5-NW6922	B5-NW6934	B5-NW6922	5.5836	0.0356	0.1418
3551		B5-NW6935_B5-NW6919	B5-NW6935	B5-NW6919	252.1078	0.7341	0.1761
3552		B5-NW6936_B5-NW6920	B5-NW6936	B5-NW6920	5.9115	0.0377	0.1921
3553		B5-NW6937_B5-NW6935	B5-NW6937	B5-NW6935	6.0956	0.6282	0.1126
3554		B5-NW6938_B5-NW6939	B5-NW6938	B5-NW6939	1.7681	0.0112	0.0650
3555		B5-NW6939_B5-NW6940	B5-NW6939	B5-NW6940	3.1265	0.0199	0.0802
3556		B5-NW6940_B5-NW6943	B5-NW6940	B5-NW6943	4.5932	0.0293	0.0972
3557		B5-NW6941_B5-NW6940	B5-NW6941	B5-NW6940	0.8052	0.4052	0.0384
3558		B5-NW6942_B5-NW6962	B5-NW6942	B5-NW6962	0.8953	0.0056	0.0513
3559		B5-NW6943_B5-NW6945	B5-NW6943	B5-NW6945	7.0008	0.0447	0.1172
3560		B5-NW6944_B5-NW6943	B5-NW6944	B5-NW6943	0.7102	0.3955	0.0359
3561		B5-NW6945_B5-NW6947	B5-NW6945	B5-NW6947	11.0462	0.9108	0.1312
3562		B5-NW6946_B5-NW6945	B5-NW6946	B5-NW6945	0.6744	0.4054	0.0341
3563		B5-NW6947_B5-NW6948	B5-NW6947	B5-NW6948	11.8988	0.0759	0.1304
3564		B5-NW6948_B5-NW6974	B5-NW6948	B5-NW6974	12.4892	0.0797	0.1459
3565		B5-NW6949_B5-NW6963	B5-NW6949	B5-NW6963	0.8802	0.0055	0.0504
3566		B5-NW6950_B5-NW6970	B5-NW6950	B5-NW6970	0.9141	0.0057	0.0515
3567		B5-NW6951_B5-NW6920	B5-NW6951	B5-NW6920	27.5034	0.1755	0.2624
3568		B5-NW6952_B5-NW6951	B5-NW6952	B5-NW6951	24.3621	0.1555	0.2340
3569		B5-NW6953_B5-NW6952	B5-NW6953	B5-NW6952	21.2715	0.1358	0.2168
3570		B5-NW6954_B5-NW6953	B5-NW6954	B5-NW6953	20.0308	0.1279	0.2063
3571		B5-NW6955_B5-NW6954	B5-NW6955	B5-NW6954	9.3129	0.0594	0.1680
3572		B5-NW6956_B5-NW6957	B5-NW6956	B5-NW6957	1.0303	0.0065	0.0674
3573		B5-NW6957_B5-NW6958	B5-NW6957	B5-NW6958	3.0072	0.0192	0.0962
3574		B5-NW6958_B5-NW6936	B5-NW6958	B5-NW6936	4.9988	0.0319	0.1090
3575		B5-NW6959_B5-NW6960	B5-NW6959	B5-NW6960	1.2206	0.0078	0.0705
3576		B5-NW6960_B5-NW6961	B5-NW6960	B5-NW6961	3.2478	0.0207	0.0971
3577		B5-NW6961_B5-NW6937	B5-NW6961	B5-NW6937	5.1609	0.0329	0.1097
3578		B5-NW6962_B5-NW6966	B5-NW6962	B5-NW6966	2.4581	0.5677	0.0651
3579		B5-NW6963_B5-NW6965	B5-NW6963	B5-NW6965	2.3455	0.5487	0.0645
3580		B5-NW6965_B5-NW6969	B5-NW6965	B5-NW6969	11.3903	0.0727	0.1440
3581		B5-NW6966_B5-NW6965	B5-NW6966	B5-NW6965	6.8821	0.0439	0.1169
3582		B5-NW6967_B5-NW6959	B5-NW6967	B5-NW6959	0.7068	0.2295	0.0491
3583		B5-NW6967_B5-NW6966	B5-NW6967	B5-NW6966	2.7741	0.0176	0.0735
3584		B5-NW6968_B5-NW6955	B5-NW6968	B5-NW6955	4.4166	0.0282	0.1211

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3585		B5-NW6969_B5-NW6972	B5-NW6969	B5-NW6972	16.4762	0.1052	0.1854
3586		B5-NW6970_B5-NW6969	B5-NW6970	B5-NW6969	2.4362	0.5515	0.0660
3587		B5-NW6972_B5-NW6975	B5-NW6972	B5-NW6975	30.5657	0.9866	0.2156
3588		B5-NW6974_B5-NW6972	B5-NW6974	B5-NW6972	13.3278	0.8792	0.1530
3589		B5-NW6975_B5-NW7280	B5-NW6975	B5-NW7280	30.6802	0.1958	0.2254
3590		B5-NW6977_B5-NW9089	B5-NW6977	B5-NW9089	202.5583	4.5494	0.2369
3591		B5-NW6978_B5-NW9088	B5-NW6978	B5-NW9088	104.9380	1.3239	0.3597
3592		B5-NW6980_B5-NW6978	B5-NW6980	B5-NW6978	44.7307	1.0512	0.2301
3593		B5-NW6981_B5-NW6980	B5-NW6981	B5-NW6980	43.8776	1.0282	0.2294
3594		B5-NW6982_B5-NW6981	B5-NW6982	B5-NW6981	39.5097	0.1614	0.2178
3595		B5-NW6983_B5-NW6982	B5-NW6983	B5-NW6982	32.8897	0.7083	0.2039
3596		B5-NW6984_B5-NW6983	B5-NW6984	B5-NW6983	26.4024	0.1079	0.1895
3597		B5-NW6985_B5-NW6984	B5-NW6985	B5-NW6984	19.7426	0.0806	0.1664
3598		B5-NW6986_B5-NW6985	B5-NW6986	B5-NW6985	3.6013	0.4229	0.1099
3599		B5-NW6987_B5-NW6981	B5-NW6987	B5-NW6981	3.8082	0.5271	0.0921
3600		B5-NW6988_B5-NW6982	B5-NW6988	B5-NW6982	4.8964	0.4910	0.1147
3601		B5-NW6989_B5-NW6983	B5-NW6989	B5-NW6983	4.7145	0.4821	0.1132
3602		B5-NW6990_B5-NW6984	B5-NW6990	B5-NW6984	4.9629	0.4923	0.1156
3603		B5-NW6991_B5-NW6985	B5-NW6991	B5-NW6985	15.0433	1.1384	0.1391
3604		B5-NW6992_B5-NW6987	B5-NW6992	B5-NW6987	2.2251	0.0142	0.0799
3605		B5-NW6993_B5-NW6988	B5-NW6993	B5-NW6988	2.8209	0.0180	0.0955
3606		B5-NW6994_B5-NW6989	B5-NW6994	B5-NW6989	2.5766	0.0164	0.0933
3607		B5-NW6995_B5-NW6990	B5-NW6995	B5-NW6990	2.9041	0.0185	0.0967
3608		B5-NW6996_B5-NW6991	B5-NW6996	B5-NW6991	11.2556	0.7549	0.1512
3609		B5-NW6997_B5-NW6996	B5-NW6997	B5-NW6996	6.7983	0.0434	0.1315
3610		B5-NW6998_B5-NW6997	B5-NW6998	B5-NW6997	3.9706	0.4230	0.1032
3611		B5-NW6999_B5-NW6995	B5-NW6999	B5-NW6995	1.0554	0.0066	0.0621
3612		B5-NW7000_B5-NW6994	B5-NW7000	B5-NW6994	0.7548	0.0047	0.0562
3613		B5-NW7001_B5-NW6993	B5-NW7001	B5-NW6993	1.0225	0.0064	0.0608
3614		B5-NW7002_B5-NW6997	B5-NW7002	B5-NW6997	2.0039	0.0128	0.0894
3615		B5-NW7003_B5-NW7002	B5-NW7003	B5-NW7002	1.4075	0.0090	0.0597
3616		B5-NW7004_B5-NW6992	B5-NW7004	B5-NW6992	0.7013	0.0044	0.0527
3617		B5-NW7004_B5-NW7003	B5-NW7004	B5-NW7003	0.5655	0.0036	0.0451
3618		B5-NW7005_B5-NW6978	B5-NW7005	B5-NW6978	28.2235	0.1801	0.3325
3619		B5-NW7006_B5-NW7005	B5-NW7006	B5-NW7005	20.8628	0.1332	0.2028
3620		B5-NW7007_B5-NW7006	B5-NW7007	B5-NW7006	14.7466	0.0941	0.1712
3621		B5-NW7008_B5-NW7007	B5-NW7008	B5-NW7007	9.2068	0.0588	0.1378
3622		B5-NW7009_B5-NW7008	B5-NW7009	B5-NW7008	4.9338	0.0315	0.1079
3623		B5-NW7010_B5-NW7006	B5-NW7010	B5-NW7006	4.7350	0.7150	0.0868
3624		B5-NW7011_B5-NW7007	B5-NW7011	B5-NW7007	4.2276	0.0270	0.1172
3625		B5-NW7012_B5-NW7005	B5-NW7012	B5-NW7005	6.2775	0.0401	0.1593
3626		B5-NW7013_B5-NW7008	B5-NW7013	B5-NW7008	2.6472	0.0169	0.0959
3627		B5-NW7014_B5-NW7009	B5-NW7014	B5-NW7009	1.6963	0.0107	0.0749
3628		B5-NW7014_B5-NW7020	B5-NW7014	B5-NW7020	1.8985	0.0120	0.0790
3629		B5-NW7015_B5-NW7010	B5-NW7015	B5-NW7010	3.1128	0.0199	0.0794
3630		B5-NW7016_B5-NW7011	B5-NW7016	B5-NW7011	2.6845	0.0171	0.0762
3631		B5-NW7017_B5-NW7012	B5-NW7017	B5-NW7012	4.8004	0.0306	0.0966
3632		B5-NW7018_B5-NW7016	B5-NW7018	B5-NW7016	1.1294	0.0071	0.0571
3633		B5-NW7018_B5-NW7023	B5-NW7018	B5-NW7023	0.7702	0.0049	0.0710
3634		B5-NW7019_B5-NW7013	B5-NW7019	B5-NW7013	0.8524	0.0054	0.0542
3635		B5-NW7019_B5-NW7022	B5-NW7019	B5-NW7022	0.9860	0.0062	0.0864
3636		B5-NW7020_B5-NW7021	B5-NW7020	B5-NW7021	5.6339	0.0360	0.1437
3637		B5-NW7021_B5-NW7028	B5-NW7021	B5-NW7028	18.3742	0.1173	0.1982
3638		B5-NW7022_B5-NW7021	B5-NW7022	B5-NW7021	10.2105	0.0652	0.1598
3639		B5-NW7023_B5-NW7022	B5-NW7023	B5-NW7022	5.6874	0.7168	0.0982
3640		B5-NW7024_B5-NW7023	B5-NW7024	B5-NW7023	2.3131	0.0145	0.0805

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3641		B5-NW7025_B5-NW7026	B5-NW7025	B5-NW7026	1.8901	0.0118	0.0646
3642		B5-NW7026_B5-NW7017	B5-NW7026	B5-NW7017	3.1491	0.0201	0.0824
3643		B5-NW7027_B5-NW7015	B5-NW7027	B5-NW7015	1.0928	0.0069	0.0607
3644		B5-NW7028_B5-NW7030	B5-NW7028	B5-NW7030	23.2824	0.1486	0.3230
3645		B5-NW7030_B5-NW7031	B5-NW7030	B5-NW7031	89.1479	1.0119	0.4472
3646		B5-NW7031_B5-NW7037	B5-NW7031	B5-NW7037	95.7551	1.3692	0.4578
3647		B5-NW7032_B5-NW7030	B5-NW7032	B5-NW7030	63.3445	1.2503	0.3594
3648		B5-NW7033_B5-NW7032	B5-NW7033	B5-NW7032	53.1152	0.3390	0.3432
3649		B5-NW7034_B5-NW7033	B5-NW7034	B5-NW7033	40.4408	0.2581	0.3054
3650		B5-NW7035_B5-NW7034	B5-NW7035	B5-NW7034	28.0046	0.1787	0.2595
3651		B5-NW7036_B5-NW7035	B5-NW7036	B5-NW7035	16.8763	0.1077	0.1957
3652		B5-NW7037_B5-NW7038	B5-NW7037	B5-NW7038	100.2322	1.4385	0.4566
3653		B5-NW7038_B5-M15459	B5-NW7038	B5-M15459	450.7581	0.0799	0.0717
3654		B5-NW7039_B5-M15455	B5-NW7039	B5-M15455	459.0293	2.3547	0.0757
3655		B5-NW7047_B5-NW6884	B5-NW7047	B5-NW6884	25.1035	0.1901	0.2631
3656		B5-NW7048_B5-NW7047	B5-NW7048	B5-NW7047	24.8283	0.5250	0.2479
3657		B5-NW7049_B5-NW7048	B5-NW7049	B5-NW7048	24.5213	0.1565	0.2385
3658		B5-NW7050_B5-NW7049	B5-NW7050	B5-NW7049	24.1550	1.0296	0.2072
3659		B5-NW7051_B5-NW7050	B5-NW7051	B5-NW7050	23.0413	0.8928	0.2215
3660		B5-NW7052_B5-NW7051	B5-NW7052	B5-NW7051	12.3500	0.0788	0.1843
3661		B5-NW7053_B5-NW7055	B5-NW7053	B5-NW7055	2.4528	0.0153	0.0714
3662		B5-NW7054_B5-NW7056	B5-NW7054	B5-NW7056	3.6374	0.0228	0.0861
3663		B5-NW7055_B5-NW7057	B5-NW7055	B5-NW7057	4.4610	0.0284	0.0972
3664		B5-NW7056_B5-NW7058	B5-NW7056	B5-NW7058	6.5271	0.0416	0.1083
3665		B5-NW7057_B5-NW7059	B5-NW7057	B5-NW7059	7.2501	0.7474	0.1126
3666		B5-NW7058_B5-NW7060	B5-NW7058	B5-NW7060	8.7624	0.8425	0.1181
3667		B5-NW7059_B5-NW7051	B5-NW7059	B5-NW7051	9.9634	1.1878	0.1019
3668		B5-NW7060_B5-NW7052	B5-NW7060	B5-NW7052	11.2924	0.0721	0.1319
3669		B5-NW7061_B5-NW7062	B5-NW7061	B5-NW7062	2.1075	0.0132	0.0720
3670		B5-NW7062_B5-NW7063	B5-NW7062	B5-NW7063	4.0658	0.0259	0.0964
3671		B5-NW7063_B5-NW7064	B5-NW7063	B5-NW7064	6.4234	0.7088	0.1075
3672		B5-NW7064_B5-NW7065	B5-NW7064	B5-NW7065	8.1294	0.0519	0.1153
3673		B5-NW7065_B5-NW7069	B5-NW7065	B5-NW7069	10.0169	0.0639	0.1740
3674		B5-NW7066_B5-NW7065	B5-NW7066	B5-NW7065	1.1643	0.6039	0.0377
3675		B5-NW7067_B5-NW7066	B5-NW7067	B5-NW7066	0.7141	0.3364	0.0360
3676		B5-NW7068_B5-NW7069	B5-NW7068	B5-NW7069	0.4887	0.0031	0.1240
3677		B5-NW7069_B5-NW7070	B5-NW7069	B5-NW7070	23.0276	0.8832	0.2231
3678		B5-NW7070_B5-NW7071	B5-NW7070	B5-NW7071	23.3497	0.1490	0.2200
3679		B5-NW7071_B5-NW7072	B5-NW7071	B5-NW7072	30.0359	0.1917	0.2374
3680		B5-NW7072_B5-NW7121	B5-NW7072	B5-NW7121	31.2038	0.1992	0.2618
3681		B5-NW7073_B5-NW7074	B5-NW7073	B5-NW7074	7.2709	0.5553	0.1383
3682		B5-NW7074_B5-NW7075	B5-NW7074	B5-NW7075	9.2111	0.7285	0.1350
3683		B5-NW7075_B5-NW7076	B5-NW7075	B5-NW7076	10.9542	0.0699	0.1267
3684		B5-NW7076_B5-NW7077	B5-NW7076	B5-NW7077	11.8422	0.9784	0.1310
3685		B5-NW7077_B5-NW7069	B5-NW7077	B5-NW7069	12.2063	0.0779	0.1746
3686		B5-NW7078_B5-NW7071	B5-NW7078	B5-NW7071	5.9181	0.0378	0.1680
3687		B5-NW7079_B5-NW7078	B5-NW7079	B5-NW7078	4.9770	0.0318	0.0969
3688		B5-NW7080_B5-NW7079	B5-NW7080	B5-NW7079	4.0448	0.0258	0.0816
3689		B5-NW7081_B5-NW7080	B5-NW7081	B5-NW7080	2.5013	0.0160	0.0722
3690		B5-NW7082_B5-NW7081	B5-NW7082	B5-NW7081	0.7805	0.0049	0.0549
3691		B5-NW7083_B5-NW7084	B5-NW7083	B5-NW7084	11.0743	0.7292	0.1532
3692		B5-NW7084_B5-NW7090	B5-NW7084	B5-NW7090	11.4014	0.0728	0.0790
3693		B5-NW7085_B5-NW7083	B5-NW7085	B5-NW7083	10.0661	0.0643	0.1512
3694		B5-NW7086_B5-NW7085	B5-NW7086	B5-NW7085	9.5958	0.0612	0.1364
3695		B5-NW7087_B5-NW7086	B5-NW7087	B5-NW7086	4.8011	0.0300	0.1002
3696		B5-NW7088_B5-NW7086	B5-NW7088	B5-NW7086	2.7026	0.0172	0.0943

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3697		B5-NW7089_B5-NW7088	B5-NW7089	B5-NW7088	1.2255	0.3911	0.0548
3698		B5-NW7090_B5-NW7091	B5-NW7090	B5-NW7091	11.9169	1.0721	0.1236
3699		B5-NW7091_B5-NW7092	B5-NW7091	B5-NW7092	5.6635	0.0361	0.1143
3700		B5-NW7091_B5-NW7095	B5-NW7091	B5-NW7095	6.9626	0.2963	0.1015
3701		B5-NW7092_B5-NW7099	B5-NW7092	B5-NW7099	7.8032	0.4938	0.1381
3702		B5-NW7093_B5-NW7094	B5-NW7093	B5-NW7094	9.2495	0.6040	0.1383
3703		B5-NW7094_B5-NW7104	B5-NW7094	B5-NW7104	10.4735	0.5499	0.1497
3704		B5-NW7095_B5-NW7096	B5-NW7095	B5-NW7096	7.8761	0.0503	0.1163
3705		B5-NW7096_B5-NW7093	B5-NW7096	B5-NW7093	8.7434	0.3009	0.1292
3706		B5-NW7097_B5-NW7098	B5-NW7097	B5-NW7098	0.8869	0.0056	0.0557
3707		B5-NW7098_B5-NW7105	B5-NW7098	B5-NW7105	1.9853	0.0127	0.0757
3708		B5-NW7099_B5-NW7100	B5-NW7099	B5-NW7100	10.2688	0.0655	0.1469
3709		B5-NW7100_B5-NW7101	B5-NW7100	B5-NW7101	11.8372	0.8100	0.1491
3710		B5-NW7101_B5-NW7117	B5-NW7101	B5-NW7117	12.4145	0.0792	0.1505
3711		B5-NW7102_B5-NW7112	B5-NW7102	B5-NW7112	14.3441	0.7569	0.1785
3712		B5-NW7103_B5-NW7102	B5-NW7103	B5-NW7102	13.3419	0.0852	0.1713
3713		B5-NW7104_B5-NW7103	B5-NW7104	B5-NW7103	12.0188	0.0767	0.1593
3714		B5-NW7105_B5-NW7106	B5-NW7105	B5-NW7106	3.4311	0.0219	0.0929
3715		B5-NW7106_B5-NW7107	B5-NW7106	B5-NW7107	4.8235	0.0308	0.1266
3716		B5-NW7107_B5-NW7108	B5-NW7107	B5-NW7108	6.0758	0.4071	0.1513
3717		B5-NW7108_B5-NW7109	B5-NW7108	B5-NW7109	7.4438	0.5870	0.1353
3718		B5-NW7109_B5-NW7110	B5-NW7109	B5-NW7110	9.1323	0.0583	0.1346
3719		B5-NW7110_B5-NW7111	B5-NW7110	B5-NW7111	10.6022	0.5955	0.1407
3720		B5-NW7111_B5-NW7116	B5-NW7111	B5-NW7116	11.6273	0.0742	0.1991
3721		B5-NW7112_B5-NW7113	B5-NW7112	B5-NW7113	15.7298	0.6223	0.1685
3722		B5-NW7113_B5-NW7114	B5-NW7113	B5-NW7114	17.1315	0.1093	0.1769
3723		B5-NW7114_B5-NW7115	B5-NW7114	B5-NW7115	18.8170	0.7659	0.1845
3724		B5-NW7115_B5-NW7116	B5-NW7115	B5-NW7116	20.1774	0.9915	0.1876
3725		B5-NW7116_B5-NW7132	B5-NW7116	B5-NW7132	33.2563	0.2123	0.2922
3726		B5-NW7117_B5-NW7118	B5-NW7117	B5-NW7118	14.0998	0.8998	0.1565
3727		B5-NW7118_B5-NW7119	B5-NW7118	B5-NW7119	16.0639	0.1025	0.1637
3728		B5-NW7119_B5-NW7120	B5-NW7119	B5-NW7120	18.2422	0.9254	0.1835
3729		B5-NW7120_B5-NW7132	B5-NW7120	B5-NW7132	20.2699	1.2888	0.1569
3730		B5-NW7121_B5-NW7290	B5-NW7121	B5-NW7290	32.2591	0.8946	0.2808
3731		B5-NW7122_B5-NW7123	B5-NW7122	B5-NW7123	39.3988	0.2515	0.2414
3732		B5-NW7123_B5-NW7124	B5-NW7123	B5-NW7124	41.5747	1.3043	0.2572
3733		B5-NW7124_B5-NW7125	B5-NW7124	B5-NW7125	44.0628	2.0039	0.1980
3734		B5-NW7125_B5-NW7131	B5-NW7125	B5-NW7131	99.2668	0.4055	0.3467
3735		B5-NW7126_B5-NW7122	B5-NW7126	B5-NW7122	3.6709	0.7734	0.0693
3736		B5-NW7127_B5-NW7126	B5-NW7127	B5-NW7126	2.4619	0.0157	0.0657
3737		B5-NW7128_B5-NW7127	B5-NW7128	B5-NW7127	1.1860	0.0073	0.0507
3738		B5-NW7129_B5-NW7130	B5-NW7129	B5-NW7130	1.7844	0.4951	0.0573
3739		B5-NW7130_B5-NW7131	B5-NW7130	B5-NW7131	4.1870	1.2549	0.0546
3740		B5-NW7131_B5-NW7133	B5-NW7131	B5-NW7133	109.2227	1.3401	0.3672
3741		B5-NW7132_B5-NW7125	B5-NW7132	B5-NW7125	54.1555	0.3457	0.3679
3742		B5-NW7133_B5-NW7143	B5-NW7133	B5-NW7143	120.6508	0.3423	0.3103
3743		B5-NW7134_B5-NW7133	B5-NW7134	B5-NW7133	7.8887	1.4169	0.1078
3744		B5-NW7135_B5-NW7134	B5-NW7135	B5-NW7134	5.2634	0.7173	0.0930
3745		B5-NW7136_B5-NW7135	B5-NW7136	B5-NW7135	3.2674	0.0208	0.0822
3746		B5-NW7137_B5-NW7136	B5-NW7137	B5-NW7136	2.3961	0.0153	0.0632
3747		B5-NW7138_B5-NW7137	B5-NW7138	B5-NW7137	1.0976	0.0069	0.0514
3748		B5-NW7139_B5-NW7140	B5-NW7139	B5-NW7140	1.1221	0.0070	0.0567
3749		B5-NW7140_B5-NW7141	B5-NW7140	B5-NW7141	2.9065	0.0185	0.0781
3750		B5-NW7141_B5-NW7142	B5-NW7141	B5-NW7142	5.1318	0.7209	0.0912
3751		B5-NW7142_B5-NW7143	B5-NW7142	B5-NW7143	7.6826	1.5873	0.0702
3752		B5-NW7143_B5-NW7144	B5-NW7143	B5-NW7144	129.8153	0.3683	0.3302

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3753		B5-NW7144_B5-NW9238	B5-NW7144	B5-NW9238	141.8614	1.3698	0.3350
3754		B5-NW7145_B5-NW7144	B5-NW7145	B5-NW7144	8.0045	1.8160	0.0659
3755		B5-NW7146_B5-NW7145	B5-NW7146	B5-NW7145	6.3398	0.7380	0.1036
3756		B5-NW7147_B5-NW7146	B5-NW7147	B5-NW7146	4.8800	0.0311	0.0976
3757		B5-NW7148_B5-NW7147	B5-NW7148	B5-NW7147	4.4560	0.2580	0.0893
3758		B5-NW7149_B5-NW7148	B5-NW7149	B5-NW7148	4.0464	0.0258	0.0862
3759		B5-NW7150_B5-NW7149	B5-NW7150	B5-NW7149	3.2292	0.0206	0.0790
3760		B5-NW7151_B5-NW7150	B5-NW7151	B5-NW7150	2.2499	0.0143	0.0636
3761		B5-NW7152_B5-NW7151	B5-NW7152	B5-NW7151	0.9658	0.0061	0.0490
3762		B5-NW7153_B5-NW7154	B5-NW7153	B5-NW7154	0.8586	0.0053	0.0495
3763		B5-NW7154_B5-NW7155	B5-NW7154	B5-NW7155	2.4620	0.0157	0.0728
3764		B5-NW7155_B5-NW7156	B5-NW7155	B5-NW7156	4.4597	0.7293	0.0822
3765		B5-NW7156_B5-NW7157	B5-NW7156	B5-NW7157	6.2124	0.0397	0.0773
3766		B5-NW7157_B5-NW7168	B5-NW7157	B5-NW7168	7.3713	0.9825	0.0945
3767		B5-NW7168_B5-M15159	B5-NW7168	B5-M15159	340.7258	0.9403	0.1062
3768		B5-NW7174_B5-NW6731	B5-NW7174	B5-NW6731	2.2255	0.0142	0.0826
3769		B5-NW7175_B5-M10059	B5-NW7175	B5-M10059	2,563.9462	1.6474	0.3200
3770		B5-NW7178_B5-NW6706	B5-NW7178	B5-NW6706	1.0991	0.0070	0.0596
3771		B5-NW7179_B5-M10056	B5-NW7179	B5-M10056	2,562.7493	1.0354	0.3149
3772		B5-NW7196_B5-NW6748	B5-NW7196	B5-NW6748	42.0769	0.2686	0.2882
3773		B5-NW7197_B5-NW6634	B5-NW7197	B5-M02210	799.1649	1.0070	0.5603
3774		B5-NW7198_B5-NW6634	B5-NW6632	B5-M02210	138.1044	1.0481	0.5004
3775		B5-NW7210_B5-HF1015	B5-NW7210	B5-M10037	2,563.1306	2.4474	0.2403
3776		B5-NW7215_B5-NW7216	B5-NW7215	B5-NW7216	1.4728	0.0094	0.0798
3777		B5-NW7216_B5-NW6176	B5-NW7216	B5-NW6176	18.6877	1.8253	0.1168
3778		B5-NW7218_B5-NW6243	B5-NW7218	B5-NW6243	0.1878	0.0012	0.0227
3779		B5-NW7219_B5-NW6245	B5-NW7219	B5-NW6245	28.0011	0.1787	0.2881
3780		B5-NW7220_B5-NW6244	B5-NW7220	B5-NW6244	3.6043	0.6477	0.0771
3781		B5-NW7222_B5-M10139	B5-NW7222	B5-M10139	123.9112	0.8353	0.1047
3782		B5-NW7249_B5-NW6789	B5-NW7249	B5-NW6789	7.0755	0.0452	0.1997
3783		B5-NW7252_B5-M02219	B5-NW7252	B5-NW6783	550.2088	2.0466	0.3720
3784		B5-NW7253_B5-M02220	B5-NW7253	B5-NW7252	541.1271	1.7623	0.4108
3785		B5-NW7257_B5-NW7222	B5-NW7257	B5-NW7222	116.7781	1.1800	0.3241
3786		B5-NW7259_B5-NW6829	B5-NW7259	B5-NW6829	28.4180	1.0996	0.2217
3787		B5-NW7263_B5-NW5083	B5-NW7263	B5-NW5083	82.9726	1.5847	0.3682
3788		B5-NW7264_B5-NW7263	B5-NW7264	B5-NW7263	1.5628	0.6651	0.0811
3789		B5-NW7265_B5-NW5025	B5-NW7265	B5-NW5025	2.7479	0.5349	0.0729
3790		B5-NW7269_B5-M10176	B5-NW7269	B5-M10176	646.6326	1.9902	0.3409
3791		B5-NW7280_B5-NW6978	B5-NW7280	B5-NW6978	31.6696	0.3210	0.3341
3792		B5-NW7283_B5-NW7284	B5-NW7283	B5-NW7284	51.7976	0.3306	0.3699
3793		B5-NW7284_B5-NW7285	B5-NW7284	B5-NW7285	52.0548	0.7397	0.4600
3794		B5-NW7285_B5-NW6569	B5-NW7285	B5-NW6569	52.2678	0.3336	0.3129
3795		B5-NW7287_B5-NW7072	B5-NW7287	B5-NW7072	0.9487	0.0061	0.1509
3796		B5-NW7288_B5-NW7289	B5-NW7288	B5-NW7289	0.5716	0.0036	0.0454
3797		B5-NW7289_B5-NW7290	B5-NW7289	B5-NW7290	1.3518	0.3681	0.0648
3798		B5-NW7290_B5-NW7122	B5-NW7290	B5-NW7122	34.5878	1.2920	0.2250
3799		B5-NW7298_B5-NW6801	B5-NW7298	B5-NW6801	0.4782	0.3738	0.0663
3800		B5-NW7302_B5-NW7303	B5-NW7302	B5-NW7303	97.2116	1.5463	0.2343
3801		B5-NW7303_B5-NW6783	B5-NW7303	B5-NW6783	98.5391	1.5978	0.2311
3802		B5-NW7304_B5-NW7302	B5-NW7304	B5-NW7302	96.3083	0.8362	0.2229
3803		B5-NW7305_B5-NW7304	B5-NW7305	B5-NW7304	95.1701	1.3862	0.2493
3804		B5-NW7306_B5-NW6330	B5-NW7306	B5-NW6330	10.6614	0.0681	0.1723
3805		B5-NW7307_B5-9088b	B5-NW7307	B5-9088b	166.4796	2.4353	0.2486
3806		B5-NW7308_B5-NW6507	B5-NW7308	B5-NW6507	0.3202	0.4192	0.0351
3807		B5-NW7308_B5-NW7309	B5-NW7308	B5-NW7309	0.0878	0.0006	0.0290
3808		B5-NW7309_B5-NW6505	B5-NW7309	B5-NW6505	0.7443	0.3434	0.0408

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3809		B5-NW7310_B5-NW5074	B5-NW7310	B5-NW5074	1.4144	0.0088	0.0575
3810		B5-NW7312_B5-M10008	B5-NW7312	B5-M10008	715.6443	1.2051	0.5670
3811		B5-NW7314_B5-M02225	B5-NW7314	B5-M02225	403.3962	1.7959	0.3261
3812		B5-NW7318_B5-NW6319	B5-NW7318	B5-NW6319	1.9056	0.0122	0.0879
3813		B5-NW7319_B5-HF1015	B5-NW7319	B5-M10038	268.6924	2.0365	0.2889
3814		B5-NW7320_B5-NW6367	B5-NW7320	B5-NW6367	0.5805	0.0037	0.1168
3815		B5-NW7324_B5-NW7325	B5-NW7324	B5-NW7325	2.1292	0.0136	0.0617
3816		B5-NW7325_B5-NW5086	B5-NW7325	B5-NW5086	3.7445	0.0239	0.0754
3817		B5-NW7327_B5-M09989	B5-NW7327	B5-M09989	521.0744	1.0240	0.3895
3818		B5-NW7328_B5-NW7329	B5-NW7328	B5-NW7329	530.4317	1.2135	0.5402
3819		B5-NW7329_B5-NW7330	B5-NW7329	B5-NW7330	542.7001	1.0913	0.4766
3820		B5-NW7330_B5-NW7331	B5-NW7330	B5-NW7331	552.9065	1.4751	0.4785
3821		B5-NW7331_B5-M09984	B5-NW7331	B5-M09984	562.4246	1.2544	0.4683
3822		B5-NW7332_B5-NW7333	B5-NW7332	B5-NW7333	585.6301	1.4901	0.4963
3823		B5-NW7333_B5-NW7334	B5-NW7333	B5-NW7334	588.9051	1.5035	0.4951
3824		B5-NW7334_B5-M09981	B5-NW7334	B5-M09981	597.3054	2.2804	0.3650
3825		B5-NW7335_B5-NW5472	B5-NW7335	B5-NW5472	15.3605	0.2964	0.2703
3826		B5-NW7336_B5-NW5431	B5-NW7336	B5-NW5431	0.5824	0.0037	0.0868
3827		B5-NW7347_B5-NW5423	B2-NW7347	B5-NW5423	3.2375	0.5557	0.0796
3828		B5-NW7351_B5-NW5290	B5-NW7351	B5-NW5290	14.6227	0.8816	0.1628
3829		B5-NW7351_B5-NW9090	B5-NW7351	B5-NW9090	29.1377	1.7567	0.1628
3830		B5-NW7352_B5-NW5600	B5-NW7352	B5-NW5600	36.4129	1.0659	0.2426
3831		B5-NW7354_B5-NW5546	B5-NW7354	B5-NW5546	837.1621	0.3796	0.2516
3832		B5-NW7358_B5-NW7351	B5-NW7358	B5-NW7351	43.4844	1.2467	0.2742
3833		B5-NW9010_B5-NW5609	B5-NW9010	B5-NW5609	1.3122	0.0083	0.0564
3834		B5-NW9011_B5-NW5294	B5-NW9011	B5-NW5294	6.4672	0.0413	0.1257
3835		B5-NW9012_B5-NW7354	B5-NW9012	B5-NW7354	39.4825	0.8194	0.3464
3836		B5-NW9017_B5-NW5199	B5-NW9017	B5-NW5199	4.8313	0.0308	0.0992
3837		B5-NW9018_B5-NW5202	B5-NW9018	B5-NW5202	2.3404	0.0149	0.1002
3838		B5-NW9019_B5-NW5172	B5-NW9019	B5-NW5172	3.0536	0.4492	0.0995
3839		B5-NW9025_B5-NW5000	B5-NW9025	B5-NW5000	688.8938	0.8676	0.4447
3840		B5-NW9034_B5-NW6180	B5-NW9034	B5-NW6180	0.7557	0.3545	0.0403
3841		B5-NW9037_B5-M02196	B5-NW9037	B5-M02196	963.8485	1.2150	0.6219
3842		B5-NW9039_B5-NW6115	B5-NW9039	B5-NW6115	22.2275	0.8024	0.2328
3843		B5-NW9050_B5-NW6411	B5-NW9050	B5-NW6411	9.4713	0.5575	0.1486
3844		B5-NW9052_B5-NW6455	B5-NW9052	B5-NW6455	33.5204	1.0000	0.2228
3845		B5-NW9061_B5-NW6677	B5-NW9061	B5-NW6677	4.0034	0.0256	0.1057
3846		B5-NW9065_B5-NW6847	B5-NW9065	B5-NW6847	0.6045	0.0017	0.1076
3847		B5-NW9066_B5-NW6505	B5-NW9066	B5-NW6505	0.7443	0.0047	0.0524
3848		B5-NW9067_B5-NW6523	B5-NW9067	B5-NW6523	2.5418	0.1630	0.1001
3849		B5-NW9068_B5-NW5387	B5-NW9068	B5-NW5387	2.1360	0.0136	0.0825
3850		B5-NW9069_B5-NW5390	B5-NW9069	B5-NW5390	0.6486	0.2404	0.0445
3851		B5-NW9089_B5-M14998	B5-NW9089	B5-M14998	272.0747	0.6583	0.1237
3852		B5-NW9090_B5-NW5254	B5-NW9090	B5-NW5254	945.5661	2.0684	0.2608
3853		B5-NW9091_B5-NW6404	B5-NW9091	B5-NW6404	18.2293	0.7377	0.1611
3854		B5-NW9092_B5-NW7220	B5-NW9092	B5-NW7220	3.4586	0.5471	0.0841
3855		B5-NW9094_B5-NW1895	B5-NW9094	B5-HF1008	5.9532	0.6402	0.1094
3856		B5-NW9095_B5-NW1396	B5-NW9095	B5-NW1396	1.7356	0.4652	0.0587
3857		B5-NW9096_B5-NW7269	B5-NW9096	B5-NW7269	0.8344	1.1354	0.0197
3858		B5-NW9099_B5-NW5645	B5-NW9099	B5-NW5645	13.9694	0.3119	0.2089
3859		B5-NW9100_B5-NW9099	B5-NW9100	B5-NW9099	12.7681	0.0813	0.1330
3860		B5-NW9101_B5-NW9100	B5-NW9101	B5-NW9100	10.1016	0.7140	0.1458
3861		B5-NW9102_B5-NW1894	B5-NW9102	B5-NW1894	8.0840	0.0516	0.1192
3862		B5-NW9108_B5-NW5371	B5-NW9108	B5-NW5371	9.1732	0.0585	0.1390
3863		B5-NW9109_B5-NW9110	B5-NW9109	B5-NW9110	75.6703	0.2147	0.2601
3864		B5-NW9110_B5-NW1466	B5-NW9110	B5-NW1466	76.0133	0.8044	0.3134

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3865		B5-NW9111_B5-NW9112	B5-NW9111	B5-NW9112	0.9243	0.3606	0.0428
3866		B5-NW9112_B5-NW9113	B5-NW9112	B5-NW9113	1.5762	0.5968	0.0466
3867		B5-NW9113_B5-NW9144	B5-NW9113	B5-NW9144	6.2302	0.0909	0.4509
3868		B5-NW9115_B5-M14463	B5-NW9115	B5-M14463	581.7377	0.2638	0.1815
3869		B5-NW9117_B5-NW9118	B5-NW9117	B5-NW9118	1.9685	0.0124	0.0659
3870		B5-NW9118_B5-NW2005	B5-NW9118	B5-NW2005	3.3563	0.6477	0.0735
3871		B5-NW9119_B5-NW1596	B5-NW9119	B5-NW1596	65.2914	0.4167	0.3244
3872		B5-NW9120_B5-NW9157	B5-NW9120	B5-NW9157	16.1169	0.1025	0.1520
3873		B5-NW9121_B5-NW1097	B5-NW9121	B5-NW1097	3.4153	0.0218	0.1075
3874		B5-NW9122_B5-NW1097	B5-NW9122	B5-NW1097	4.6325	0.0296	0.1226
3875		B5-NW9124_B5-NW1253	B5-NW9124	B5-NW1253	5.3779	0.6002	0.1066
3876		B5-NW9125_B5-NW1811	B5-NW9125	B5-NW1811	7.1611	0.0457	0.1233
3877		B5-NW9126_B5-NW1784	B5-NW9126	B5-NW1784	4.1262	0.5983	0.0892
3878		B5-NW9127_B5-NW2405	B5-NW1857	B5-NW2405	41.4868	1.1240	0.2856
3879		B5-NW9128_B5-NW1865	B5-NW9128	B5-NW1865	137.8832	0.8789	0.2736
3880		B5-NW9129_B5-NW2184	B5-NW9129	B5-NW2184	14.5171	0.0927	0.1882
3881		B5-NW9130_B5-NW2115	B5-NW9130	B5-NW2115	2.2956	0.0146	0.0729
3882		B5-NW9131_B5-NW2093	B5-NW9131	B5-NW2093	0.8016	0.0051	0.0549
3883		B5-NW9132_B5-NW1900	B5-NW9132	B5-NW1900	21.6735	1.3812	0.1566
3884		B5-NW9133_B5-NW1478	B5-NW9133	B5-NW1478	10.9575	0.3040	0.1360
3885		B5-NW9134_B5-NW1718	B5-NW9134	B5-NW1718	3.5928	0.0229	0.0953
3886		B5-NW9139_B5-NW1085	B5-NW9139	B5-NW1085	19.5813	0.1250	0.1748
3887		B5-NW9140_B5-NW1296	B5-NW9140	B5-NW1296	0.7019	0.9101	0.0203
3888		B5-NW9141_B5-NW1402	B5-NW9141	B5-NW1402	100.4769	0.0563	0.1061
3889		B5-NW9142_B5-NW1356	B5-NW9142	B5-NW1356	2.9292	0.0187	0.0936
3890		B5-NW9143_B5-NW1664	B5-NW9143	B5-NW1664	5.7174	0.0365	0.1214
3891		B5-NW9144_B5-NW1732	B5-NW9144	B5-NW1732	6.3032	0.0402	0.1112
3892		B5-NW9145_B5-NW9113	B5-NW9145	B5-NW9113	4.1790	0.2973	0.2696
3893		B5-NW9147_B5-M15176	B5-NW9147	B5-M15176	35.1712	0.6986	0.0280
3894		B5-NW9148_B5-NW9149	B5-NW9148	B5-NW9149	3.6065	0.0230	0.0987
3895		B5-NW9149_B5-NW5643	B5-NW9149	B5-NW5643	6.1023	0.5945	0.1170
3896		B5-NW9150_B5-NW9151	B5-NW9150	B5-NW9151	2.6367	0.0168	0.0899
3897		B5-NW9151_B5-NW9162	B5-NW9151	B5-NW9162	5.4471	0.0348	0.1178
3898		B5-NW9152_B5-NW9139	B5-NW9152	B5-NW9139	18.7090	1.1439	0.1612
3899		B5-NW9153_B5-NW9152	B5-NW9153	B5-NW9152	18.2625	1.0829	0.1646
3900		B5-NW9154_B5-NW9153	B5-NW9154	B5-NW9153	17.7021	0.1130	0.1632
3901		B5-NW9155_B5-NW9154	B5-NW9155	B5-NW9154	16.6874	0.2709	0.1588
3902		B5-NW9156_B5-NW9155	B5-NW9156	B5-NW9155	16.3108	0.9782	0.1634
3903		B5-NW9157_B5-NW9156	B5-NW9157	B5-NW9156	16.3108	0.8099	0.1862
3904		B5-NW9158_B5-NW9159	B5-NW9158	B5-NW9159	4.1617	0.4617	0.1071
3905		B5-NW9159_B5-NW7073	B5-NW9159	B5-NW7073	6.5234	0.5426	0.1144
3906		B5-NW9160_B5-NW6544	B5-NW9160	B5-NW6544	0.9583	0.4251	0.0648
3907		B5-NW9162_B5-NW7039	B5-NW9162	B5-NW7039	8.3316	0.0532	0.2907
3908		B5-NW9163_B5-NW6945	B5-NW9163	B5-NW6945	3.1640	0.7235	0.0654
3909		B5-NW9165_B5-NW6253	B5-NW9165	B5-NW6253	5.6281	1.0741	0.0741
3910		B5-NW9166_B5-NW9165	B5-NW9166	B5-NW9165	1.6628	0.0103	0.0629
3911		B5-NW9167_B5-NW6659	B5-NW9167	B5-NW6659	1.2027	0.4577	0.0464
3912		B5-NW9168_B5-NW5210	B5-NW9168	B5-NW5210	0.7035	0.3399	0.0375
3913		B5-NW9169_B5-NW1522	B5-NW9169	B5-NW1522	7.5317	0.0481	0.1433
3914		B5-NW9170_B5-NW9169	B5-NW9170	B5-NW9169	1.5729	0.4963	0.0527
3915		B5-NW9171_B5-NW9170	B5-NW9171	B5-NW9170	0.9900	0.0063	0.0483
3916		B5-NW9172_B5-NW9171	B5-NW9172	B5-NW9171	0.6101	0.2715	0.0398
3917		B5-NW9173_B5-NW9169	B5-NW9173	B5-NW9169	4.1277	0.0263	0.0977
3918		B5-NW9174_B5-NW9173	B5-NW9174	B5-NW9173	2.1011	0.0134	0.0718
3919		B5-NW9175_B5-NW9174	B5-NW9175	B5-NW9174	1.0148	0.0065	0.0496
3920		B5-NW9176_B5-NW9175	B5-NW9176	B5-NW9175	0.5273	0.0033	0.0389

		ID	From ID	To ID	Maximum Flow (gpm)	Maximum Adjusted Velocity	Maximum Adjusted d/D
3921		B5-NW9177_B5-NW9175	B5-NW9177	B5-NW9175	0.1811	0.2028	0.0315
3922		B5-NW9178_B5-NW9169	B5-NW9178	B5-NW9169	0.9353	0.3548	0.0466
3923		B5-NW9179_B5-NW9094	B5-NW9179	B5-NW9094	4.3457	0.0277	0.1028
3924		B5-NW9180_B5-NW9121	B5-NW9180	B5-NW9121	0.5634	0.0035	0.0488
3925		B5-NW9181_B5-NW1887	B5-NW9181	B5-NW1887	1.2193	0.0076	0.0674
3926		B5-NW9201_B5-NW9200	B5-NW9201	B5-NW9200	22.8485	1.0136	0.1478
3927		B5-NW9202_B5-NW9201	B5-NW9202	B5-NW9201	18.7670	0.1198	0.1750
3928		B5-NW9203_B5-NW9202	B5-NW9203	B5-NW9202	15.2911	0.0976	0.1646
3929		B5-NW9208_B5-NW2456	B5-NW9208	B5-NW2456	20.7612	0.9121	0.1749
3930		B5-NW9212_B5-NW1525	B5-NW9212	B5-NW1525	14.1218	0.9446	0.1769
3931		B5-NW9212_B5-NW1566	B5-NW9212	B5-NW1566	11.0604	0.9591	0.1267
3932		B5-NW9214_B5-NW1531	B5-NW9214	B5-NW1531	5.8866	0.0376	0.2213
3933		B5-NW9216_B5-NW1573	B5-NW9216	B5-NW1573	7.7205	0.6003	0.1366
3934		B5-NW9222_B5-NW1944	B5-NW9222	B5-NW1944	30.4713	1.6144	0.1780
3935		B5-NW9224_B5-NW9222	B5-NW9224	B5-NW9222	29.8382	1.2522	0.2095
3936		B5-NW9226_B5-NW1532	B5-NW9226	B5-NW1532	9.5276	0.3766	0.2615
3937		B5-NW9228_B5-NW1555	B5-NW9228	B5-NW1555	4.9441	0.0855	0.3966
3938		B5-NW9228_B5-NW1998	B5-NW9228	B5-NW1998	30.9394	0.5348	0.3966
3939		B5-NW9230_B5-NW2418	B5-NW9230	B5-NW2418	6.9500	1.0392	0.0873
3940		B5-NW9234_B5-NW1772	B5-NW9234	B5-NW1772	137.3441	1.4836	0.2870
3941		B5-NW9236_B5-NW9234	B5-NW9236	B5-NW9234	101.5586	0.2881	0.2565
3942		B5-NW9238_B5-NW9240	B5-NW9238	B5-NW7168	142.6192	2.5256	0.2172
3943		B5-NW9242_B5-NW9065	B5-NW9242	B5-NW9065	0.0915	0.0003	0.0092
3944		B5-NW9244_B5-M10178	B5-NW9244	B5-M10178	643.8682	1.7925	0.3120
3945		B5-P1764a_B5-NW1764	B5-P1764a	B5-NW1764	7.2789	0.6737	0.1212
3946		B5-P1764b_B5-P1764a	B5-P1764b	B5-P1764a	4.0286	0.0255	0.1034
3947		B5-P1810a_B5-NW1810	B5-P1810a	B5-NW1810	4.0329	0.0808	0.3554
3948		B5-P1823a_B5-NW1823	B5-P1823a	B5-NW1823	4.5699	0.0837	0.3800
3949		B5-P2422a_B5-NW2422	B5-P2422a	B5-NW2422	3.2882	0.7048	0.0682
3950		B5-P9108a_B5-NW9108	B5-P9108a	B5-NW9108	8.0892	0.4341	0.1109
3951		B5-P9108b_B5-P9108a	B5-P9108b	B5-P9108a	6.5069	0.0414	0.1013
3952		B5-P9108c_B5-P9108b	B5-P9108c	B5-P9108b	3.1443	0.4946	0.0834