MASTER WATER REPORT
FOR
DEVELOPMENT UNIT 3/4
AT
EASTMARK

April 8, 2014
WP# 113697.09

CITY OF MESA
APPROVED
Date 5/15/14 By RAP (JH)

REVIEWED BY
CITY STAFF
5/1/14 BY
DATE

WOOD/PATEL
MISSION: CLIENT SERVICE™

MASTER WATER REPORT
FOR
DEVELOPMENT UNIT 3/4
AT
EASTMARK

April 8, 2014
WP# 113697.09

DMB Master Developer Approval EASTMARK.
_____ Date _____

Submitted to:

City of Mesa
55 North Center Street
P.O. Box 1466
Mesa, Arizona 85211-1466
Phone: (480) 644-3258

Prepared for:

DMB Mesa Proving Grounds, LLC
7600 East Doubletree Ranch Road
Suite 300
Scottsdale, Arizona 85258
Phone: (480) 367-7000

Prepared By:

Wood, Patel & Associates, Inc.
2220 South Country Club Drive
Suite 101
Mesa, Arizona 85210
Phone: (480) 834-3300
Fax: (602) 335-8580

Registered Professional Engineer (Civil)
CERTIFICATE NO. 53408
DANIEL W. MATTHEWS
Date Signed 04-08-14
ARIZONA, U.S.A.
EXPIRES 06/30/2015

WOOD/PATEL
MISSION: CLIENT SERVICE™

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 General Background and Project Location 1

1.2 Scope of Master Water Report 1

1.3 Master Water Report for Eastmark 2

1.4 Full Build-Out Condition 2

1.5 Basis of Design Reports for Specific Individual Developments 2

2.0 EXISTING CONDITIONS 3

2.1 Topographic Conditions 3

2.2 Existing Pressure Zones and Hydraulic Grade Lines 3

2.3 Existing Offsite Water Infrastructure 3

2.4 Existing Onsite Water Infrastructure 4

3.0 DESIGN CRITERIA AND PROJECTED WATER DEMANDS 5

3.1 Design Criteria 5

3.2 Water Demand Design Flows 5

4.0 HYDRAULIC MODEL 6

4.1 Modeled Scenarios 6

4.2 Hydraulic Modeling Criteria 6

4.3 Hydraulic Modeling Results 7

5.0 GENERAL PLAN FOR ONSITE WATER DISTRIBUTION 9

5.1 Piping Layout 9

5.2 Water Sources 9

5.2.1 Surface Water 9

5.2.2 Groundwater Wells 10

5.3 Water Pressure to Multi-Story Buildings 10

6.0 CONCLUSIONS 11

Registered Professional Engineer (Civil)
CERTIFICATE NO. 53408
DANIEL W. MATTHEWS
Date Signed 04-08-14
ARIZONA, U.S.A.

EXPIRES 06/30/2015

TABLES

Table 1 DU 3/4 Water System Design Criteria

Table 2 Eastmark Modeled Land Use

Table 3 DU 3/4 Modeled Land Use

Table 4 Water Demand Design Flows by Development Unit

Table 5 Water Demand Design Flows by Junction Node

APPENDICES

Appendix A Hydraulic Modeling Results – Served by South C.A.P. Water Treatment Plant (Non-Drought Condition)

- Average-Day Demand
- Max-Day Demand
- Peak-Hour Demand
- Max-Day Demand Plus Fire Flow

PLATES

Plate 1 Vicinity Map

Plate 2 DU 3/4 Master Water Exhibit

Km
Y:\WP\Reports\Residential\113697 09 Eastmark DU 3-4 Master Water Report.docx

Registered Professional Engineer (Civil)
CERTIFICATE NO. 53408
DANIEL W. MATTHEWS
Date Signed 04-09-14
ARIZONA, U.S.A.
EXPIRES 06/30/2015

1.0 INTRODUCTION

1.1 General Background and Project Location

The proposed Development Unit 3/4 is anticipated to be an approximate 608-acre Development Unit (DU) within the 3,151-acre Eastmark master planned community in the City of Mesa (City). It is a Planned Community District (PCD) which is a mixed-use development that will include single-family residential, multi-family residential, urban mixed-use, commercial mixed-use, industrial, office, hotel, resort, golf, various community uses, and open spaces.

This Master Water Report has been prepared in accordance with Wood, Patel & Associates, Inc.'s (Wood/Patel's) understanding of the City of Mesa's technical requirements for water distribution systems, as applicable for the development known as Eastmark.

The Site is located within Sections 15, 22, and 23, Township 1 South, Range 7 East of the Gila and Salt River Meridian. The Site is bounded by Ray Road to the south (from Ellsworth Road to Inspirian Parkway), Inspirian Parkway on the east (from Ray Road to Point Twenty-Two Boulevard), Point Twenty-Two Boulevard on the south (from Inspirian Parkway to Eastmark Parkway), Eastmark Parkway on the east (from Point Twenty-Two Boulevard to Warner Road), Warner Road on the north, and Ellsworth Road on the west (refer to Plate 1 – *Vicinity Map*).

1.2 Scope of Master Water Report

The Master Water Report for Development Unit 3/4 at Eastmark presents water design flows, pipe sizes, and backbone waterline locations, as required to provide water service to the Site at full build-out conditions prior to the full build-out of Eastmark. This update reflects the City of Mesa Water Master Plan modeled waterline sizes in this area of the Desert Wells system. Report results indicate pressures and flows which are adequate to serve DU 3/4.

The purpose of this report is to provide a water analysis reflecting the developed condition of DU 3/4, based on the land uses provided by DMB Mesa Proving Grounds, LLC, and to identify the water infrastructure required to serve the Site, while meeting the

requirements of the City's Engineering and Design Standards. Updates to this DU 3/4 Master Water Report may be required if significant changes are made to the land uses and assumptions utilized to prepare this report. Additionally, design criteria may change based on actual water demands to calculate draws on the system in the future.

1.3 Master Water Report for Eastmark

The *Master Water Report Update for Eastmark*, prepared by Wood/Patel, dated November 26, 2013, was approved by the City of Mesa. Additionally, the *Master Water Report Update for Eastmark*, prepared by Wood/Patel and updated April 4, 2014, was submitted to the City of Mesa for review and re-approval to incorporate development changes and revised design criteria within DU 3/4. The updated master report includes the revised information utilized as the basis for this report.

1.4 Full Build-Out Condition

The design criteria utilized to calculate water flows and determine required pipe sizes for the Site are based on projected full build-out conditions for DU 3/4. For a detailed breakdown of DU 3/4 modeled land use, please refer to the following:

- Table 3 – *DU 3/4 Modeled Land Use*
- Table 4 – *Water Demand Design Flows by Development Unit*
- Table 5 – *Water Demand Design Flows by Junction Node*
- Plate 2 – *DU 3/4 Master Water Exhibit*

1.5 Basis of Design Reports for Specific Individual Developments

As development progresses within the Site, Basis of Design (BOD) reports are required for specific individual developments to ensure compliance with the Master Report and this Development Unit Master Report, and to identify significant variations in land use, water demands, and the water infrastructure needed to serve the parcel. The Site will be developed in phases, and the infrastructure needed to support a phased development will be determined at the time of platting.

2.0 EXISTING CONDITIONS

2.1 Topographic Conditions

The Site consists of multiple automotive test tracks and undisturbed desert, which borders the Site to the west, north, and the north half of the eastern boundary. Along the south half of the eastern boundary, DU 7 is under construction. To the south, the site is bound by the Powerline Floodway and Ray Road. The land generally slopes in a southwesterly direction, at approximately 0.5 to 1 percent. The peak elevation within the Site is approximately 1,425 feet above mean sea level (MSL), located along Inspirian Parkway, north of Ray Road. The lowest elevation within the Site is approximately 1,390 feet MSL, located at the southwest corner of DU 3/4. Refer to Plate 1 – *Vicinity Map* for roadway alignments.

2.2 Existing Pressure Zones and Hydraulic Grade Lines

The Site is located within the Desert Wells water pressure zone, defined by the City of Mesa as follows:

<u>Desert Wells Pressure Zone:</u>

- Ground elevation range = 1,370 to 1,520 feet
- Static hydraulic grade line (HGL) = 1,634 feet.

2.3 Existing Offsite Water Infrastructure

Relevant existing water infrastructure adjacent to the Site includes the following within the Desert Wells Pressure Zone:

- 16-inch waterline extending south along Ellsworth Road, from Elliot Road to Pecos Road.
- 16-inch waterline extending east along Elliot Road, from Ellsworth Road to Signal Butte Road.
- 16-inch waterline extending south along Signal Butte Road, from Elliot Road to Ray Road.
- 30-inch waterline extending south along Signal Butte Road, from Elliot Road to north of Warner Road.

- 16-inch waterline extending east along Ray Road, from Ellsworth Road to Signal Butte Road.
- 12-inch waterline extending east along Warner Road, from the Loop 202 freeway to Ellsworth Road.
- 24-inch waterline extending west along Point Twenty-Two Boulevard, from Signal Butte Road to Inspirian Parkway.
- 20-inch waterline extending north along Eastmark Parkway, from Ray Road to Point Twenty-Two Boulevard.
- 12-inch waterline extending north along Inspirian Parkway, from Ray Road to Point Twenty-Two Boulevard.

2.4 Existing Onsite Water Infrastructure

It is Wood/Patel's understanding there may be existing onsite waterlines within DU 3/4 near the original General Motors offices at the northeast corner of Ellsworth and Ray Roads. If waterlines are discovered, they will be removed by the developer, where applicable, with construction of DU 3/4.

3.0 DESIGN CRITERIA AND PROJECTED WATER DEMANDS

3.1 Design Criteria

Water demand and pipe-sizing criteria utilized in this DU 3/4 Master Water Report are based on Wood/Patel's understanding of the following:

- Applicable water system design criteria listed in the *2012 City of Mesa Engineering and Design Standards,* along with City-accepted population-based criteria, per Table 1 – *DU 3/4 Water System Design Criteria.*
- Regionally-accepted design standards.
- Title 18, Chapter 9 of the *Arizona Administrative Code.*

Table 1 represents Unit Daily Water Demand design criteria for each land use category. The Development Unit Daily Water Demand was used to estimate demands at each node in the hydraulic model to determine flow rates, velocities, and pipe sizing.

Fire flow requirements were modeled during the fire flow analysis of the Site. Residential development was modeled with a fire flow of 3,000 gpm, and the commercial development was modeled with a minimum fire flow of 4,000 gpm.

3.2 Water Demand Design Flows

Water demand flows under full build-out conditions are calculated using the design criteria listed in Section 3.1. Water demand for the second phase of the Great Park, between Point Twenty-Two Boulevard and Warner Road, was included. Ultimately, when the raw waterline from the C.A.P. Canal is extended to the site, the park will be served by non-potable water. For detailed calculations, refer to Table 3 – *DU 3/4 Modeled Land Use.* Design flows are summarized below and include the development unit adjustments.

	Average-Day Demand MGD (gpm)	**Peak-Day Demand MGD (gpm)**	**Peak-Hour Demand MGD (gpm)**
DU 3/4	3.70 (2,568)	7.39 (5,135)	11.09 (7,703)
Total Eastmark	8.90 (6,179)	16.09 (11,174)	22.19 (15,413)

4.0 HYDRAULIC MODEL

Bentley WaterCAD Version 8i, a potable water transmission and distribution system numerical modeling program, was utilized to analyze the proposed potable water system. A hydraulic grade line (HGL) of 1,634 feet was used to simulate the water supply pressure for the Desert Wells pressure zone. Water demands and peaking factors utilized are based on information listed in Section 3.0 of this report. Pipes are sized to accommodate modeled conditions of flow.

4.1 Modeled Scenarios

The following primary modeling scenarios were selected to demonstrate compliance with City of Mesa requirements, and to analyze the proposed water system:

- Average-Day Demand
- Max-Day Demand
- Peak-Hour Demand
- Max-Day Demand Plus Fire Flow
- Fire Flow Analyses

The hydraulic model utilizes the Hazen-Williams equation to calculate head losses throughout the system during the modeled scenarios. Refer to Table 1 for additional information regarding hydraulic modeling parameters.

4.2 Hydraulic Modeling Criteria

Estimations were made regarding offsite water infrastructure for the purpose of modeling DU 3/4 to full build-out design conditions.

- The DU 3 South, 7, 8, and 9 water infrastructure has been constructed and is operational.
- The proposed infrastructure requires several connections to existing offsite waterlines.
    - The first connection is to the existing 16-inch waterline in Ellsworth Road at the northwest corner of DU 3/4.
    - The second and third connections are to the existing 16-inch waterline in Ellsworth Road, between Warner Road and Ray Road, with proposed 12-inch and 24-inch waterlines.

- The fourth connection is at the intersection of Eastmark Parkway and Point Twenty-Two Boulevard, where a proposed 16-inch waterline extending north in Eastmark Parkway will connect to the existing 20-inch and 24-inch waterlines.
- The fifth connection is at the intersection of Inspirian Parkway and Point Twenty-Two Boulevard, where a proposed 24-inch waterline extending west in Point Twenty-Two Boulevard and a proposed 12-inch waterline extending north in Inspirian Parkway will connect to the existing 12-inch and 24-inch waterlines.
- The sixth connection is to the existing 16-inch waterline in Ray Road, between Ellsworth Road and Crismon Road, with a proposed 12-inch waterline.

Refer to Plate 2 for detailed information regarding existing and proposed offsite water infrastructure. With multiple connections to existing waterlines, the system has redundancy allowing the water system to function in compliance with City of Mesa standards and specifications. Additional connections to existing waterlines may be required to provide looped systems, if construction is phased.

4.3 Hydraulic Modeling Results

The hydraulic modeling results indicate the onsite system in DU 3/4 is capable of delivering Average-Day and Peak-Hour demands within the following onsite pressure ranges:

DU 3/4 Full Build-Out Pressure (psi)

Hydraulic Model Scenario	Low	Node	High	Node
Average Day Demand	92	J-DU3-4-190	103	J-DU3-4-100
Peak Hour Demand	83	J-DU3-4-190	93	J-DU3-4-100

Fire flow results for the model indicate available fire flows of 4,000 gpm for commercial development and 3,000 gpm for residential development during Max-Day demands, while maintaining residual pressures greater than 20 psi throughout the Site at full build-out conditions. Detailed hydraulic modeling results, calculations, and exhibits are provided in the attached appendices and plates. Modeled outflow from each water source is shown below.

Flow from South C.A.P. Desert Wells Pump Station:

Average-Day Demand:	5,458 gpm
Max-Day Demand:	9.871 gpm
Peak-Hour Demand:	13,615 gpm

Flow from City of Mesa Water System, North of Elliot Road:

Average-Day Demand:	721 gpm
Max-Day Demand:	1,303 gpm
Peak-Hour Demand:	1,798 gpm

5.0 GENERAL PLAN FOR ONSITE WATER DISTRIBUTION

5.1 Piping Layout

The planned water distribution system for the Site consists of looped public waterlines, ranging in diameter from 8 inches (onsite) up to 30 inches (offsite), using pipe materials per City of Mesa standards. Main waterlines have been located within designated public rights-of-way. In accordance with City of Mesa standards, 12-inch and 16-inch waterlines are generally located near ½-mile and 1-mile street alignments, or are upsized, as needed, to meet design constraints (refer to Plate 2 – *DU 3/4 Master Water Exhibit*).

5.2 Water Sources

According to the *2010 City of Mesa Water Master Plan Update,* two primary sources of water will supply Eastmark. These sources are surface water supplied from the Central Arizona Project (C.A.P.) canal, and groundwater from proposed well sites.

5.2.1 Surface Water

The Signal Butte Groundwater Facility, consisting of a reservoir and groundwater wells, has recently been constructed to provide storage and assist in meeting peak demands in the Desert Wells Zone. A portion of the facility will serve Eastmark in the interim until such time as the City deems it necessary to construct the C.A.P. raw water conveyance system from the C.A.P. canal and the water treatment portion of the plant.

According to the *2010 City of Mesa Water Master Plan (Update),* the C.A.P. water supply system typically provides a constant supply of surface water, although outages are possible as a result of failures and for periodic maintenance. C.A.P. has indicated that short dry-ups (ranging from one week to one month in duration) may be required every two to three years, on average, for maintenance purposes. According to the *2010 City of Mesa Water Master Plan (Update),* the South C.A.P. water facilities will be supplied by groundwater production wells during C.A.P. dry-ups to provide adequate storage and pumping to the Desert Wells Pressure Zone and other pressure zones.

5.2.2 Groundwater Wells

Conceptual locations of the future groundwater wells are shown on Plate 2. Well locations are conceptual in nature and will be coordinated with the City of Mesa during the construction plan design and preparation. Well collection lines will be required extending from each well site to supply the South C.A.P. water facilities. It is Wood/Patel's understanding the well sites and well collector mains will be phased with development and will be owned, operated, and maintained by the City of Mesa.

5.3 Water Pressure to Multi-Story Buildings

Based on full build-out hydraulic modeling results, Peak-Hour residual pressures within the Site are at or above 80 pounds per square inch (psi). Private individual booster pumps may be required to serve multi-story buildings, and should be evaluated on an individual basis.

6.0 CONCLUSIONS

This *Master Water Report for Development Unit 3/4 at Eastmark* meets accepted standards and requirements, and will serve, in conjunction with the *Master Water Report for Eastmark*, as a guide for construction documents associated with the planned potable water systems of DU 3/4. No critical issues were identified that would preclude the anticipated development as presented in this Master Water Report. The following are critical conclusions:

1. The Site is located within the existing Desert Wells Water Pressure Zone currently served by the City of Mesa.

2. For the purpose of this Master Water Report, the full build-out conditions for DU 3/4 have been evaluated for the design of the water distribution system.

3. The approximate Average-Day water demand for DU 3/4 is 3.7 million gallons per day (MGD) at full build-out conditions, per Section 3.2 of this report.

4. A hydraulic model was utilized to analyze the proposed potable water system and size pipes for the water distribution system. Modeling results indicate minimum residual pressures are met, and head loss and velocities within the planned waterlines meet the design criteria presented herein.

5. The planned onsite water distribution system for DU 3/4 consists of looped 8-inch and larger public waterlines.

6. Modeling results indicated the proposed waterline layout would adequately serve DU 3/4.

7. The proposed water distribution system and resulting hydraulic modeling output anticipates City of Mesa water production facilities and booster pump station facilities will be brought into service, as necessary.

8. This *Master Water Report Update for Development Unit 3/4 at Eastmark* demonstrates the sufficiency of the proposed water distribution system to serve the Site in accordance with City of Mesa Water Standards and the *Master Water Report for Eastmark.*

TABLE 1

DU 3/4 Water System Design Criteria

WOOD/PATEL

TABLE 1 - DU 3/4 WATER DESIGN CRITERIA

CIVIL ENGINEERS • HYDROLOGISTS • LAND SURVEYORS • CONSTRUCTION MANAGERS

Project: Eastmark
Location: Mesa, Arizona
References: 2012 City of Mesa Engineering Design Standards and City of Mesa approved population based design criteria

Proj. Number: 113697.09
Proj. Engineer: Dan Matthews, P.E.

UNIT DAILY RESIDENTIAL WATER DEMANDS

LAND USE CATEGORY	LAND USE	DWELLING UNIT DENSITY VALUE	DWELLING UNIT DENSITY UNITS	UNIT DAILY WATER DEMAND VALUE	UNIT DAILY WATER DEMAND UNITS	NOTES
LDR-1	Low Density Residential (LDR 0-1)	0.5	DU/AC	490	GPD/DU	Source: Dwelling unit density divisions are based on City of Mesa 2025 General Plan. Unit water demands are based on the City of Mesa 2012 Engineering and Design Standards. LDR 1.0 Average and MDR 4.0 Average are used at locations where the dwelling unit densities are at or near 1 DU/AC and 4 DU/AC, respectively.
LDR-2	LDR 0-1 & LDR 1-2 AVG.	1	DU/AC	490	GPD/DU	
LDR-3	Low Density Residential (LDR-1-2)	1.2	DU/AC	490	GPD/DU	
MDR-1	Medium Density Residential (MDR 2-4)	3.0	DU/AC	250	GPD/DU	
MDR-2	MDR 2-4 & MDR 4-6 AVG.	4	DU/AC	250	GPD/DU	
MDR-3	Medium Density Residential (MDR 4-6)	5.0	DU/AC	250	GPD/DU	
MDR-4	Medium Density Residential (MDR 6-10)	6.5	DU/AC	250	GPD/DU	
HDR-1	High Density Residential (HDR 10-15)	11.0	DU/AC	230	GPD/DU	
HDR-2	High Density Residential (HDR 15+)	20.0	DU/AC	230	GPD/DU	
MUR-1	Mixed Use/Residential (MUR) – Residential	15.0	DU/AC	185	GPD/DU	

UNIT DAILY NON RESIDENTIAL WATER DEMANDS

LAND USE	Population Density		WATER DESIGN DEMANDS (PER CAPITA)		NOTES
University - Boarded Student	---	—	80	GPD / Person	Source: City of Mesa approved population based criteria
University - Commuter Student and Staff	—	---	40	GPD / Person	
Elementary School - Student and Staff	200	Students and Staff / Acre	40	GPD / Person	
Middle School - Student and Staff	100	Students and Staff / Acre	40	GPD / Person	
Civic / Church / Library Staff	0.4	Employees / 1,000 S.F.	54	GPD / Person	
Civic / Church / Library Patrons	2	Patrons / 1,000 S.F.	20	GPD / Person	
Aquatic Center	200	Patrons and Staff / Acre	15	GPD / Person	
Commercial / Retail / Restaurant	2.5	Employees and Patrons / 1,000 S.F.	80	GPD / Person	
Office	5.0	Employees / 1,000 S.F.	80	GPD / Person	
Theater	250	Seats / Screen	7.5	GPD / Seat	
Hotel	---	—	150	GPD / Room	
Resort	---	—	300	GPD / Room	
Turf	---	---	4400	GPD/Acre	
Low Water Use Landscaping	---	---	800	GPD/Acre	

HYDRAULIC MODELING CRITERIA

DESCRIPTION	VALUE	UNITS	NOTES
PEAKING FACTORS			
Max Day	2.0	x Ave Day Demand	1
Peak Hour	3.0	x Ave Day Demand	1
MODELED FIRE HYDRANT FLOW (MINIMUMS)			
Residential	1,500	gpm	
Commercial (represents flow in backbone waterlines)	4,000	gpm	
HYDRAULICS (ON SITE)			
Minimum Residual Pressure, Peak Hour	40	psi	1
Minimum Residual Pressure, Max Day + Fire Flow	20	psi	1
Maximum Pipe Head Loss, Max Day Demand	10 ft/1000 ft	-	2
Maximum Velocity, Peak Hour Demand	5 (+/-)	ft/s	1
Maximum Velocity, Max Day + Fire Flow	10	ft/s	1
Minimum Pipe Diameter, Looped System	8	in	1
Hazen-Williams C-value	120	-	2

Notes:
1. Per 2012 City of Mesa Engineering Design Standards.
2. Per City of Phoenix Design Standards Manual for Water and Wastewater Systems.

TABLE 2

Eastmark Modeled Land Use

Project: Eastmark
Location: Mesa, Arizona

Proj. Number: 113697.09
Proj. Engineer: Dan Matthews, P.E.

EASTMARK - PRELIMINARY RESIDENTIAL LAND USE AND DWELLING UNIT BREAKDOWN

Land Use	LDR-2	LDR-3	MDR-1	MDR-2	MDR-3	MDR-4	HDR-1	HDR-2	Residential Total	Mixed Use Residential	Total Residential Units
Acreage	--	20.0	726.7	114.7	148.4	0.0	37.3	228.0	1,275.1	0.0	--
Dwelling Units	--	39	2,364	481	669	--	410	4,559	8,522	0	8,522

EASTMARK - WATER DEMAND CALCULATIONS

Development Unit	Total Area (AC)	Residential (AC)	Total Dwelling Units	Keys[1]	Gross Non-Residential[2] (AC)	Total Floor Area (sq. ft.)	Education (AC)	Church (AC)	Civic (AC)	Other (AC)	Golf[3] (AC)	Avg. Day Water Demand (GPD)	Development Unit Flow Area (AC)	Unit Daily Water Demand (GPD/AC)[3]
1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3S	92.3	92.3	391	0	0.0	--	0.0	0.0	0.0	0.0	0.0	112,421	92.3	1,218.0
3/4	608.3	228.0	4,559	150	118.0	2,728,680	176.0	0.0	31.0	27.4	0.0	3,697,210	608.3	6,077.9
5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6N	272.5	0.0	--	0	272.5	5,360,000	0.0	0.0	0.0	0.0	0.0	3,834,705	272.5	14,072.3
6S	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7	575.5	504.7	2,129	0	5.5	265,000	20.0	13.5	2.5	29.3	0.0	768,266	575.5	1,335.0
8	198.8	192.0	535	0	0.0	--	0.0	0.0	0.0	35.0	0.0	197,830	198.8	995.1
9	327.8	258.1	908	0	0.0	200,000	0.0	0.0	12.4	22.3	0.0	286,500	327.8	874.0
Subtotal:	**2,075.2**	**1275.1**	**8,522**	**150**	**396.0**	**8,553,680**	**196.0**	**13.5**	**45.9**	**114.0**	**0.0**	**8,896,932**	**2,075.2**	--

[1] Anticipated number of "Keys" represents hotel and resort uses. This includes approximately 2.5 acres within DU 3/4.
[2] Non-residential water demands are calculated based on net non-residential acreage.
[3] Unit daily water demand calculations do not include golf course acreage.

Abbreviations:
AC = Acres
GPD = Gallons Per Day
GPD/AC = Gallons Per Day Per Acre

TABLE 3

DU 3/4 Modeled Land Use

TABLE 3 - DU 3/4 MODELED LAND USE

Project: DU 3/4 at Eastmark
Location: Mesa, Arizona

Proj. Number: 113697.09
Proj. Engineer: Dan Matthews, P.E.

PRELIMINARY LAND USE AND DWELLING UNIT BREAKDOWN BY PARCEL

Parcel	No. of DUs	Residential Acres	Density (DU/AC)	Non-Residential Acres	Land Use	Floor Area (SQ. FT.)	Population Density or Acreage		Total Population or Acreage	Unit Daily Water Demand (GPD/DU, AC, or S.F.)		Avg Day Flow (GPD)	Total Avg Day Flow (GPD)
3/4-1	--	--	--	10.0	Middle School	87,120	100	Students and Staff/Acre	1,000	40	GPD / Person	40,000	54,800
							0.30	Acres of Turf/Acre	3	4,400	GPD/Acre	13,200	
							0.20	Acres of Low Water Use Landscaping/Acre	2	800	GPD/Acre	1,600	
3/4-2	460	23.0	20.00	--	HDR-2	--	--	--	--	230	GPD/DU	105,800	105,800
3/4-3 (1)	--	--	--	58.9	Park	--	58.9	Turf	58.9	4,400	GPD/Acre	259,160	259,160
3/4-4	--	--	--	5.0	Elementary School	43,560	200	Students and Staff / Acre	1,000	40	GPD / Person	40,000	47,400
							0.3	Acres of Turf/Acre	1.5	4,400	GPD/Acre	6,600	
							0.2	Acres of Low Water Use Landscaping/Acre	1.0	800	GPD/Acre	800	
3/4-5	--	--	--	15.0	Library	50,000	0.4	Empolyees/ 1, 000 S.F.	20	54	GPD / Person	1,080	10,680
							2.0	Patrons/1,000 S.F.	100	20	GPD / Person	2,000	
							1.0	Acres of Turf	1.0	4,400	GPD/Acre	4,400	
							4.0	Acres of Low Water Use Landscaping	4.0	800	GPD/Acre	3,200	
3/4-6	--	--	--	16.0	Aquatic Center	50,000	200	Patrons and Staff / Acre	3,200	15	GPD / Person	48,000	48,000
3/4-7	--	--	--	49.0	University	--	4,780	Boarded Students	4,780	80	GPD / Person	382,400	406,400
							4.0	Acres of Turf	4.0	4,400	GPD/Acre	17,600	
							8.0	Acres of Low Water Use Landscaping	8.0	800	GPD/Acre	6,400	
3/4-8	640	32.0	20.00	--	HDR-2	--	--	--	--	230	GPD/DU	147,200	147,200
3/4-9	--	--	--	112.0	University	--	7,970	Boarded Students	7,970	80	GPD / Person	637,600	871,600
							4,950	Commuter Students and Staff	4,950	40	GPD / Person	198,000	
							6.0	Acres of Turf	6.0	4,400	GPD/Acre	26,400	
							12	Acres of Low Water Use Landscaping	12.0	800	GPD/Acre	9,600	
3/4-10	3459	173.0	19.99	--	HDR-2	--	--	--	--	230	GPD/DU	795,570	795,570
3/4-11	--	--	--	29.5	Office	1,124,000	5	Employees/ 1,000 S.F.	5,620	80	GPD / Person	449,600	449,600
3/4-12	--	--	--	12.5	Office	476,000	5	Employees/ 1,000 S.F.	2,380	80	GPD / Person	190,400	190,400
3/4-13	--	--	--	45.0	Commercial/Retail/Restaurant	278,000	2.5	Employees and Patrons/ 1,000 S.F.	695	80	GPD / Person	55,600	310,600
	--	--	--		Office	525,000	5.0	Employees/ 1,000 S.F.	2,625	80	GPD / Person	210,000	
	--	--	--		Theater	12 Screens 50,000	250	Seats/Screen	3,000	7.5	GPD / Seat	22,500	
	--	--	--		Hotel	45,000	150	Rooms	--	150	GPD / Room	22,500	
Other	--	--	--	27.4	Road ROW	--	--	--	--	--	--	--	--
DU 3 & 4 Totals	**4,559**	**228**		**380.3**		**2,728,680**							**3,697,210**

Notes: 1) The full-buildout of Eastmark includes the construction of a non-potable water system. The future non-potable water system will ultimately provide the water demands for the park. However, during the interim condtion, the water infrastructure must be designed to handle the water demands of the park.

TABLE 3 - DU 3/4 MODELED LAND USE

Project: DU 3/4 at Eastmark
Location: Mesa, Arizona

Proj. Number: 113697.09
Proj. Engineer: Dan Matthews, P.E.

PRELIMINARY LAND USE AND DWELLING UNIT BREAKDOWN BY JUNCTION

Junction	Parcel(s)	No. of DUs	Acres	Density (DU/AC)	Land Use	Floor Area (SQ. FT.)	Avg Day Flow (GPD)	Total Avg Day Flow (GPD)	Avg Day (GPM)	Total Avg Day Flow (GPM)
J-DU3-4-010	1/4 3/4-10	864	43.3	20	HDR-2	--	198,893	198,893	138.1	138.1
J-DU3-4-020	1/4 3/4-10	865	43.3	20	HDR-2	--	198,893	198,893	138.1	138.1
J-DU3-4-030	1/4 3/4-13	--	11.3	--	Commercial/Retail/ Restaurant/Office/ Theater/Hotel	224,500	77,650	186,600	53.9	129.6
	1/8 3/4-9	--	14	--	University	--	108,950		75.7	
J-DU3-4-040	1/4 3/4-9	--	28	--	University	--	217,900	217,900	151.3	151.3
J-DU3-4-050	1/4 3/4-8	160	8.0	5	HDR-2	--	36,800	36,800	25.6	25.6
J-DU3-4-060	3/4-6	--	16.0	--	Aquatic Center	50,000	48,000	48,000	33.3	58.9
	1/4 3/4-8	160	8.0	5	HDR-2	--	36,800	36,800	25.6	
J-DU3-4-070	1/8 3/4-7	--	6.1	--	University	--	50,800	268,700	35.3	186.6
	1/4 3/4-9	--	28	--	University	--	217,900		151.3	
J-DU3-4-080	1/8 3/4-7	--	6.1	--	University	--	50,800	268,700	35.3	186.6
	1/4 3/4-9	--	28	--	University	--	217,900		151.3	
J-DU3-4-090	1/8 3/4-9	--	14	--	University	--	108,950	108,950	75.7	75.7
J-DU3-4-100	3/4-12	--	12.5	--	Office	476,000	190,400	268,050	132.2	186.1
	1/4 3/4-13	--	45	--	Commercial/Retail/ Restaurant/Office/ Theater/Hotel	224,500	77,650		53.9	
J-DU3-4-110	1/2 3/4-7	--	24.5	--	University	--	203,200	203,200	141.1	141.1
J-DU3-4-120	1/2-3/4-11	--	14.8	--	Office	562,000	224,800	224,800	156.1	156.1
J-DU3-4-130	1/4-3/4-2	115	5.8	20.0	HDR-2	--	26,450	251,250	18.4	174.5
	1/2-3/4-11	--	14.8	--	Office	562,000	224,800		156.1	
J-DU3-4-140	3/4-1	--	10	--	Middle School	87,120	54,800	134,150	38.1	93.2
	3/4-3/4-2	345	17.3	20	HDR-2	--	79,350		55.1	
J-DU3-4-150	1/4 3/4-7	--	12.3	--	University	--	101,600	101,600	70.6	70.6
J-DU3-4-160	1/2 3/4-3	--	29.5	--	Park	--	129,580	129,580	90.0	90.0
J-DU3-4-170	1/2 3/4-3	--	29.5	--	Park	--	129,580	129,580	90.0	90.0
J-DU3-4-180	3/4-5	--	15	--	Library	50,000	10,680	10,680	7.4	7.4
J-DU3-4-190	3/4-4	--	5	--	Elementary School	43,560	47,400	47,400	32.9	32.9
J-DU3-4-200	1/4 3/4-10	865	43.3	20	HDR-2	--	198,893	198,893	138.1	138.1
J-300EX	1/4 3/4-13	--	--	--	Commercial/Retail/ Restaurant/Office/ Theater/Hotel	224,500	77,650	77,650	53.9	53.9
J-DU3S-080	1/4 3/4-13	--	--	--	Commercial/Retail/ Restaurant/Office/ Theater/Hotel	224,500	77,650	77,650	53.9	53.9
J-DU7-020	1/4 3/4-10	865	43.3	20	HDR-2	--	198,893	198,893	138.1	138.1
J-DU7-040	1/4 3/4-8	160	8.0	5	HDR-2	--	36,800	36,800	25.6	25.6
J-DU7-050	1/4 3/4-8	160	8.0	5	HDR-2	--	36,800	36,800	25.6	25.6
Totals		**4,559**				**2,728,680**	**3,697,212**	**3,697,212**	**2567.6**	**2,567.6**

TABLE 4

Water Demand Design Flows by Development Unit

TABLE 4 - WATER DEMAND DESIGN FLOWS BY DEVELOPMENT UNIT

CIVIL ENGINEERS • HYDROLOGISTS • LAND SURVEYORS • CONSTRUCTION MANAGERS

Project: Eastmark
Location: Mesa, Arizona
References: 2012 City of Mesa Engineering Design Standards

Proj. Number: 113697.09
Proj. Engineer: Dan Matthews, P.E.

Eastmark

DEVELOPMENT UNIT	PARCEL/ DEVELOPMENT UNIT SUB-AREA	DEVELOPMENT UNIT DEMAND AREA (ACRES)	DWELLING UNITS	LAND USE	UNIT FLOW (GPD/AC)	HYD. MODEL NODE	AVE. DAY DEMAND (GPD)	AVE. DAY DEMAND (GPM)	MAX DAY DEMAND (GPD)	MAX DAY DEMAND (GPM)	PEAK HOUR DEMAND (GPM)
DU-3S	3S-1	30.9	137	MDR-2	1,218	J-DU3S-030, J-DU3S-040, J-DU3S-050	37,636	26.1	75,272	52.3	78.3
	3S-2	31.4	115	MDR-2	1,218	J-DU3S-020, J-DU3S-030, J-DU3S-050, J-DU3S-060	38,245	26.6	76,490	53.1	79.8
	3S-3	30.0	139	MDR-2	1,218	J-DU3S-010, J-DU3S-020, J-DU3S-060, J-DU3S-070	36,540	25.4	73,080	50.8	76.2
Total		**92.3**	**391**				**112,421**	**78.1**	**224,842**	**156.2**	**234.3**
DU-3/4	DU-3/4-1	10.0	--	Middle School	5,480	J-DU3-4-140	54,800	38.1	109,600	76.1	114.3
	DU-3/4-2	23.0		HDR-2	4,600	J-DU3-4-130, J-DU3-4-140	105,800	73.5	211,600	146.9	220.5
	DU-3/4-3	58.8	--	Park	4,400	J-DU3-4-160, J-DU3-4-170	259,160	180.0	518,320	359.9	540.0
	DU-3/4-4	6.0	--	Elementary School	9,480	J-DU3-4-190	47,400	32.9	94,800	65.8	98.7
	DU-3/4-5	15.0	--	Library	712	J-DU3-4-180	10,680	7.4	21,360	14.8	22.2
	DU-3/4-6	16.0	--	Aquatic Center	3,000	J-DU3-4-060	48,000	33.3	96,000	66.7	99.9
	DU-3/4-7	49.0	--	University	8,294	J-DU3-4-070, J-DU3-4-180 J-DU3-4-110, J-DU3-4-150	406,400	282.2	812,800	564.4	846.6
	DU-3/4-8	32.0		HDR-2	4,600	J-DU3-4-050, J-DU3-4-060, J-DU7-040, J-DU7-050	147,200	102.2	294,400	204.4	306.6
	DU-3/4-9	112.0	--	University	7,782	J-DU3-4-030, J-DU3-4-040, J-DU3-4-070, J-DU3-4-080, J-DU3-4-090	871,800	605.3	1,743,200	1,210.6	1,815.9
	DU-3/4-10	173.0		HDR-2	4,599	J-DU3-4-010, J-DU3-4-020, J-DU3-4-200, J-DU7-020	795,570	552.5	1,591,140	1,105.0	1,657.5
	DU-3/4-11	29.5	--	Office	15,241	J-DU3-4-120, J-DU3-4-130	449,600	312.2	899,200	624.4	936.6
	DU-3/4-12	12.5	--	Office	15,232	J-DU3-4-100	190,400	132.2	380,800	264.4	396.6
	DU-3/4-13	45.0	--	Commercial/Retail/ Restaurant/Hotel/ Office/Theater	6,902	J-DU3-4-030, J-DU3-4-100, J-300EX, J-DU3S-080	310,600	215.7	621,200	431.4	647.1
		27.4		Other	0		0	0.0	0	0.0	0.0
Total		**608.3**	**0.0**				**3,697,210**	**2,567.5**	**7,394,420**	**5,134.8**	**7,702.5**
DU-6N	DU-6A [1]	89.1	--	INDUSTRIAL	5,339	J-DU6-020, J-DU6-060	2,793,600	1,940.0	3,883,104	2,696.6	2,696.6
	DU-6B	53.7	--	INDUSTRIAL	6,462	J-DU6-030, J-DU6-040, J-DU6-050	347,035	241.0	694,070	482.0	723.0
	DU-6C	129.7		INDUSTRIAL	5,351	J-DU6-040, J-DU6-050, J-DU6-070, J-DU6-080, J-DU6-090	694,070	482.0	1,388,140	964.0	1,446.0
Total		**272.5**	**0.0**				**3,834,705**	**2,663.0**	**5,965,314**	**4,142.6**	**4,865.6**

Notes: 1) The CH2M Hill Plan that was provided by the City of Mesa shows that the Max Day Demand and Peak Hour Demand is equal to approximately 1.39 multiplied by the AVG Day Demand.

TABLE 4 - WATER DEMAND DESIGN FLOWS BY DEVELOPMENT UNIT

CIVIL ENGINEERS • HYDROLOGISTS • LAND SURVEYORS • CONSTRUCTION MANAGERS

Project: Eastmark
Location: Mesa, Arizona
References: 2012 City of Mesa Engineering Design Standards

Proj. Number: 113697.09
Proj. Engineer: Dan Matthews, P.E.

Eastmark

DEVELOPMENT UNIT	PARCEL/ DEVELOPMENT UNIT SUB-AREA	DEVELOPMENT UNIT DEMAND AREA (ACRES)	DWELLING UNITS	LAND USE	UNIT FLOW (GPD/AC)	HYD. MODEL NODE	AVE. DAY DEMAND (GPD)	AVE. DAY DEMAND (GPM)	MAX DAY DEMAND (GPD)	MAX DAY DEMAND (GPM)	PEAK HOUR DEMAND (GPM)
DU-7	7-1	21.0	81	MDR-1	834	J-DU7-100	17,514	12.2	35,028	24.3	36.6
	7-2	20.8	86	MDR-3	1,602	J-DU7-100	33,322	23.1	66,644	46.3	69.3
	7-3	33.1	109	MDR-1	834	J-DU7-110	27,605	19.2	55,210	38.3	57.6
	7-4	34.8	84	MDR-1	834	J-DU7-180	29,023	20.2	58,046	40.3	60.6
	7-5	26.9	66	MDR-1	834	J-DU7-180	22,435	15.6	44,870	31.2	46.8
	7-6	26.8	78	MDR-1	834	J-DU7-170	22,351	15.5	44,702	31.0	46.5
	7-7	31.4	104	MDR-1	834	J-DU7-180	26,188	18.2	52,376	36.4	54.6
	7-8	25.3	116	MDR-3	1,602	J-250EX	40,531	28.1	81,062	56.3	84.3
	7-9	7.5	--	CHURCH	--	J-250EX	11,250	7.8	22,500	15.6	23.4
	7-10	25.4	108	MDR-3	1,602	J-DU7-080	40,691	28.3	81,382	56.5	84.9
	7-11	19.1	100	MDR-3	1,602	J-DU7-080	30,598	21.2	61,196	42.5	63.8
	7-12	19.6	93	MDR-3	1,602	J-DU7-160	31,399	21.8	62,798	43.6	65.4
	7-13	20.1	82	MDR-3	1,602	J-DU7-060	32,200	22.4	64,400	44.7	67.2
	7-14	17.3	190	HDR-1	1,936	J-DU7-150	33,493	23.3	66,986	46.5	69.9
	7-15	18.1	84	MDR-3	1,602	J-DU7-160	28,996	20.1	57,992	40.3	60.3
	7-16	25.4	100	MDR-1	834	J-DU7-140	21,184	14.7	42,368	29.4	44.1
	7-17	23.4	78	MDR-1	834	J-DU7-200	19,516	13.6	39,032	27.1	40.8
	7-18	28.9	85	MDR-1	834	J-DU7-200	24,103	16.7	48,206	33.5	50.1
	7-19	25.1	98	MDR-1	834	J-DU7-140	20,933	14.5	41,866	29.1	43.5
	7-20	20.1	60	MDR-1	834	J-DU7-200	16,763	11.6	33,526	23.3	34.8
	7-21	22.1	85	MDR-1	834	J-DU7-110	18,431	12.8	36,862	25.6	38.4
	7-22	20.0	--	EDUCATION	--	J-DU7-140	30,000	20.8	60,000	41.7	62.4
	7-23	20.0	220	HDR-1	1,936	J-DU7-050	38,720	26.9	77,440	53.8	80.7
	7-24	6.0	--	CHURCH	1,500	J-DU7-150	9,000	6.3	18,000	12.5	18.9
	7-25	2.5	--	CIVIC	1,500	J-DU7-130	3,750	2.6	7,500	5.2	7.8
	7-26	5.5	--	COMMERCIAL/ RESTAURANT	1,700	J-DU7-010	9,350	6.5	18,700	13.0	19.5
	7-27	29.3	--	PARK/LAKE	4,400	J-DU7-020	128,920	90	257,840	179	270
Total		**575.5**	**2,129**				**768,286**	**534.0**	**1,536,532**	**1,067.0**	**1,602.0**
DU-8	8-1	22.9	74	MDR-1	969	J-DU8-070	22,200	15.4	44,400	30.8	46.2
	8-2	30.0	87	MDR-1	870	J-DU8-050, J-DU8-100	26,100	18.1	52,200	36.3	54.3
	8-3	24.7	64	MDR-1	777	J-DU8-110	19,200	13.3	38,400	26.7	39.9
	8-4	20.9	42	MDR-1	603	J-DU8-060, J-DU8-090	12,600	8.8	25,200	17.5	26.4
	8-5	6.8	--	PARK	4,400	J-DU8-080, J-DU8-090	29,920	20.8	59,840	41.6	62.4
	8-6	23.6	91	MDR-1	1,157	J-DU8-110, J-DU8-120	27,300	19.0	54,600	37.9	57.0
	8-7	28.2	74	MDR-1	787	J-DU8-120, J-DU8-130	22,200	15.4	44,400	30.8	46.2
	8-8	20.0	39	LDR-3	956	J-DU8-090, J-DU8-130	19,110	13.3	38,220	26.5	39.9
	8-9	21.7	64	MDR-1	885	J-DU8-040, J-DU8-130	19,200	13.3	38,400	26.7	39.9
Total		**198.8**	**535**				**197,830**	**137.4**	**395,660**	**274.8**	**412.2**
DU-9	9-1	54.0	189	MDR-1	1,050	J-DU9-010, J-DU9-020	56,700	39.4	113,400	78.8	118.2
	9-2	31.8	99	MDR-1	934	J-DU9-020, J-DU9-030	29,700	20.6	59,400	41.3	61.8
	9-3	12.4	--	Civic	1,500	J-DU9-020, J-DU9-030	18,600	12.9	37,200	25.8	38.7
	9-4	49.4	159	MDR-1	966	J-DU9-030, J-DU9-070	47,700	33.1	95,400	66.3	99.3
	9-5	39.8	145	MDR-1	1,093	J-DU9-070, J-DU9-080	43,500	30.2	87,000	60.4	90.6
	9-6	22.4	90	MDR-2	1,004	J-DU9-040, J-DU9-060	22,500	15.6	45,000	31.3	46.8
	9-7	60.7	226	MDR-1	1,117	J-DU9-050, J-DU9-080	67,800	47.1	135,600	94.2	141.3
		57.3	0	Other	0		0.0	0.0	0.0	0.0	0.0
Total		**327.8**	**908**				**286,500**	**199.9**	**573,000**	**398.1**	**596.7**
EASTMARK TOTAL		**2,075**	**3,963**				**8,898,932**	**6,179**	**16,059,768**	**11,174**	**15,413**

TABLE 5

Water Demand Design Flows by Junction Node

WOOD/PATEL **TABLE 5 - WATER DEMAND DESIGN FLOWS BY JUNCTION NODE**

CIVIL ENGINEERS * HYDROLOGISTS * LAND SURVEYORS * CONSTRUCTION MANAGERS

Project: Eastmark

Location: Mesa, Arizona **Proj. Number:** 113697.09

References: 2012 City of Mesa Engineering Design Standards **Proj. Engineer:** Dan Matthews, P.E.

EASTMARK

	WATER DEMAND (GPM)		
HYDRAULIC MODEL NODE	AVE. DAY	MAX DAY	PEAK HOUR
J-DU3S-010	10.2	20.4	30.6
J-DU3S-020	11.0	22.0	33.0
J-DU3S-030	15.0	30.0	45.0
J-DU3S-040	11.0	22.0	33.0
J-DU3S-050	12.1	24.2	36.3
J-DU3S-060	11.8	23.6	35.4
J-DU3S-070	7.0	14.0	21.0
J-DU3S-080	53.9	107.8	161.7
J-DU3-4-010	138.1	276.2	414.3
J-DU3-4-020	138.1	276.2	414.3
J-DU3-4-030	129.6	259.2	388.8
J-DU3-4-040	151.3	302.6	453.9
J-DU3-4-050	25.6	51.2	76.8
J-DU3-4-060	58.9	117.8	176.7
J-DU3-4-070	186.6	373.2	559.8
J-DU3-4-080	186.6	373.2	559.8
J-DU3-4-090	75.7	151.4	227.1
J-DU3-4-100	186.1	372.2	558.3
J-DU3-4-110	141.1	282.2	423.3
J-DU3-4-120	156.1	312.2	468.3
J-DU3-4-130	174.5	349.0	523.5
J-DU3-4-140	93.2	186.4	279.6
J-DU3-4-150	70.6	141.2	211.8
J-DU3-4-160	90.0	180.0	270.0
J-DU3-4-170	90.0	180.0	270.0
J-DU3-4-180	7.4	14.8	22.2
J-DU3-4-190	32.9	65.8	98.7
J-DU3-4-200	138.1	276.2	414.3
J-DU6-010	0.0	0.0	0.0
J-DU6-020 (1)	1580.0	2196.2	2196.2
J-DU6-030	80.3	160.6	240.9
J-DU6-040	160.7	321.4	482.1
J-DU6-050	241.0	482.0	723.0
J-DU6-060 (1)	360.0	500.4	500.4
J-DU6-070	80.3	160.6	240.9
J-DU6-080	80.3	160.6	240.9
J-DU6-090	80.3	160.6	240.9
J-DU7-010	6.5	13.0	19.5
J-DU7-020	227.6	455.2	682.8
J-DU7-030	0.0	0.0	0.0
J-DU7-040	25.6	51.2	76.8
J-DU7-050	52.5	105.0	157.5
J-DU7-060	22.4	44.8	67.2
J-DU7-070	0.0	0.0	0.0
J-DU7-080	49.5	99.0	148.5
J-DU7-090	0.0	0.0	0.0
J-DU7-100	35.3	70.6	105.9
J-DU7-110	32.0	64.0	96.0
J-DU7-120	0.0	0.0	0.0
J-DU7-130	2.6	5.2	7.8
J-DU7-140	50.1	100.2	150.3
J-DU7-150	29.5	59.0	88.5
J-DU7-160	41.9	83.8	125.7
J-DU7-170	15.5	31.0	46.5

WOOD/PATEL **TABLE 5 - WATER DEMAND DESIGN FLOWS BY JUNCTION NODE**

CIVIL ENGINEERS * HYDROLOGISTS * LAND SURVEYORS * CONSTRUCTION MANAGERS

Project: Eastmark

Location: Mesa, Arizona **Proj. Number:** 113697.09

References: 2012 City of Mesa Engineering Design Standards **Proj. Engineer:** Dan Matthews, P.E.

EASTMARK

	WATER DEMAND (GPM)		
J-DU7-180	20.2	40.4	60.6
J-DU7-190	33.8	67.6	101.4
J-DU7-200	41.9	83.8	125.7
J-250EX	36.0	72.0	108.0
J-DU8-010	0.0	0.0	0.0
J-DU8-020	0.0	0.0	0.0
J-DU8-030	0.0	0.0	0.0
J-DU8-040	6.7	13.4	20.1
J-DU8-050	0.0	0.0	0.0
J-DU8-060	9.1	18.2	27.3
J-DU8-070	15.4	30.8	46.2
J-DU8-080	4.4	8.8	13.2
J-DU8-090	11.0	22.0	33.0
J-DU8-100	9.1	18.2	27.3
J-DU8-110	43.6	87.2	130.8
J-DU8-120	17.2	34.4	51.6
J-DU8-130	21.0	42.0	63.0
J-DU9-010	19.7	39.4	59.1
J-DU9-020	36.5	73.0	109.5
J-DU9-030	33.3	66.6	99.9
J-DU9-040	7.8	15.6	23.4
J-DU9-050	0.0	0.0	0.0
J-DU9-060	31.4	62.8	94.2
J-DU9-070	31.7	63.4	95.1
J-DU9-080	38.6	77.2	115.8
J-300EX	53.9	107.8	161.7
J-970EX	0.0	0.0	0.0
TOTAL	**6,178.7**	**11,174.0**	**15,412.7**

Notes: 1) The CH2M Hill Plan that was provided by the City of Mesa shows that the Max Day Demand and Peak Hour Demand is equal to approximately 1.39 multiplied by the AVG Day Demand for the retrofit of First Solar.

APPENDIX A

Hydraulic Modeling Results –

Served by South C.A.P. Water Treatment Plant (Non-Drought Condition)

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Reservoir Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Flow Net (Out) (gpm)	Zone	Hydraulic Grade (ft)
C.O.M. DW SUPPLY FROM NORTH	1,634.0	720.6	Desert Wells	1,634.0
SCAP DWPS	1,634.0	5,458.1	Desert Wells	1,634.0
DWGWF - DWPS	1,634.0	(N/A)	Desert Wells	(N/A)

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-100EX	1,406.0	Desert Wells	0.0	97	1,630.3
J-110EX	1,440.0	Desert Wells	0.0	82	1,630.5
J-120EX	1,462.0	Desert Wells	0.0	74	1,633.4
J-135EX	1,460.0	Desert Wells	0.0	75	1,632.7
J-150EX	1,472.0	Desert Wells	0.0	69	1,631.9
J-160EX	1,435.0	Desert Wells	0.0	85	1,630.6
J-170EX	1,430.0	Desert Wells	0.0	87	1,630.5
J-180EX	1,405.0	Desert Wells	0.0	97	1,630.3
J-190EX	1,395.0	Desert Wells	0.0	102	1,630.2
J-200EX	1,385.0	Desert Wells	0.0	106	1,630.1
J-220EX	1,480.0	Desert Wells	0.0	66	1,632.7
J-230EX	1,475.0	Desert Wells	0.0	68	1,632.2
J-250EX	1,452.0	Desert Wells	36.0	78	1,632.0
J-260EX	1,453.0	Desert Wells	0.0	77	1,631.9
J-270	1,429.0	Desert Wells	0.0	87	1,630.6
J-280EX	1,460.0	Desert Wells	0.0	74	1,630.7
J-300EX	1,392.0	Desert Wells	53.9	103	1,629.9
J-330EX	1,455.0	Desert Wells	0.0	76	1,630.9
J-340	1,440.0	Desert Wells	0.0	82	1,630.6
J-360EX	1,400.0	Desert Wells	0.0	100	1,630.0
J-550	1,425.0	Desert Wells	0.0	89	1,630.6
J-590EX	1,410.0	Desert Wells	0.0	95	1,630.4
J-920	1,434.0	Desert Wells	0.0	85	1,630.6
J-950	1,414.0	Desert Wells	0.0	94	1,630.2
J-960EX	1,401.0	Desert Wells	0.0	99	1,630.1
J-970EX	1,397.0	Desert Wells	0.0	101	1,629.9
J-1000EX	1,455.0	Desert Wells	0.0	77	1,633.9
J-1010EX	1,485.0	Desert Wells	0.0	64	1,633.7
J-1020EX	1,425.0	Desert Wells	0.0	90	1,633.9
J-1030EX	1,480.0	Desert Wells	0.0	67	1,634.0
J-1040EX	1,433.0	Desert Wells	0.0	86	1,630.8
J-1050EX	1,445.0	Desert Wells	0.0	81	1,631.4
J-1120EX	1,453.0	Desert Wells	0.0	77	1,631.9
J-1130EX	1,445.0	Desert Wells	0.0	80	1,631.0
J-1160EX	1,445.0	Desert Wells	0.0	82	1,633.9
J-1170EX	1,470.0	Desert Wells	0.0	71	1,633.8
J-1180EX	1,440.0	Desert Wells	0.0	84	1,633.9
J-1190EX	1,420.0	Desert Wells	0.0	93	1,633.9
J-1200EX	1,445.0	Desert Wells	0.0	82	1,633.9
J-1210EX	1,455.0	Desert Wells	0.0	77	1,633.8
J-1220EX	1,475.0	Desert Wells	0.0	69	1,633.6
J-1230EX	1,460.0	Desert Wells	0.0	74	1,630.8
J-1235EX	1,440.0	Desert Wells	0.0	83	1,631.0
J-1240EX	1,455.0	Desert Wells	0.0	76	1,631.1

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-1290EX	1,480.0	Desert Wells	0.0	66	1,633.6
J-1300EX	1,465.0	Desert Wells	0.0	73	1,633.8
J-1310EX	1,480.0	Desert Wells	0.0	66	1,633.7
J-1330EX	1,465.0	Desert Wells	0.0	73	1,633.8
J-1340EX	1,450.0	Desert Wells	0.0	80	1,633.9
J-1350EX	1,465.0	Desert Wells	0.0	73	1,633.8
J-1360EX	1,445.0	Desert Wells	0.0	82	1,633.9
J-1370EX	1,430.0	Desert Wells	0.0	88	1,633.9
J-1380EX	1,450.0	Desert Wells	0.0	80	1,633.9
J-1390EX	1,430.0	Desert Wells	0.0	88	1,633.9
J-1400EX	1,430.0	Desert Wells	0.0	88	1,633.9
J-1410	1,454.0	Desert Wells	0.0	77	1,632.2
J-1410EX	1,420.0	Desert Wells	0.0	93	1,633.9
J-1420EX	1,460.0	Desert Wells	0.0	74	1,631.9
J-1430EX	1,455.0	Desert Wells	0.0	77	1,632.1
J-1440EX	1,478.0	Desert Wells	0.0	67	1,632.4
J-1680EX	1,400.0	Desert Wells	0.0	100	1,630.1
J-1990EX	1,447.0	Desert Wells	0.0	80	1,631.5
J-2000EX	1,442.0	Desert Wells	0.0	82	1,631.1
J-2120EX	1,453.0	Desert Wells	0.0	77	1,631.1
J-2140EX	1,446.0	Desert Wells	0.0	80	1,631.1
J-2295	1,415.0	Desert Wells	0.0	93	1,630.2
J-DU3-4-010	1,405.0	Desert Wells	138.1	97	1,629.9
J-DU3-4-020	1,401.0	Desert Wells	138.1	99	1,629.9
J-DU3-4-030	1,397.0	Desert Wells	129.6	101	1,629.9
J-DU3-4-040	1,403.0	Desert Wells	151.3	98	1,630.0
J-DU3-4-050	1,410.0	Desert Wells	25.6	95	1,629.9
J-DU3-4-060	1,408.0	Desert Wells	58.9	96	1,629.7
J-DU3-4-070	1,404.0	Desert Wells	186.6	98	1,629.6
J-DU3-4-080	1,400.0	Desert Wells	186.6	99	1,629.6
J-DU3-4-090	1,393.0	Desert Wells	75.7	102	1,629.7
J-DU3-4-100	1,391.0	Desert Wells	186.1	103	1,629.9
J-DU3-4-110	1,393.0	Desert Wells	141.1	102	1,629.7
J-DU3-4-120	1,393.0	Desert Wells	156.1	102	1,629.7
J-DU3-4-130	1,399.0	Desert Wells	174.5	100	1,629.7
J-DU3-4-140	1,404.0	Desert Wells	93.2	98	1,629.7
J-DU3-4-150	1,407.0	Desert Wells	70.6	96	1,629.7
J-DU3-4-160	1,407.0	Desert Wells	90.0	96	1,629.8
J-DU3-4-170	1,412.0	Desert Wells	90.0	94	1,629.8
J-DU3-4-180	1,414.0	Desert Wells	7.4	93	1,629.9
J-DU3-4-190	1,417.0	Desert Wells	32.9	92	1,630.0
J-DU3-4-200	1,412.5	Desert Wells	138.1	94	1,630.0
J-DU3S-010	1,412.0	Desert Wells	10.2	94	1,630.1
J-DU3S-020	1,407.0	Desert Wells	11.0	96	1,630.0

ONSITE

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-DU3S-030	1,401.0	Desert Wells	15.0	99	1,629.9
J-DU3S-040	1,399.0	Desert Wells	11.0	100	1,629.9
J-DU3S-050	1,404.0	Desert Wells	12.1	98	1,629.9
J-DU3S-060	1,410.0	Desert Wells	11.8	95	1,630.0
J-DU3S-070	1,417.0	Desert Wells	7.0	92	1,630.0
J-DU3S-080	1,396.0	Desert Wells	53.9	101	1,629.9
J-DU6-010	1,459.0	Desert Wells	0.0	75	1,631.3
J-DU6-020	1,453.0	Desert Wells	1,580.0	77	1,631.1
J-DU6-030	1,450.0	Desert Wells	80.3	78	1,631.1
J-DU6-040	1,440.0	Desert Wells	160.7	83	1,631.1
J-DU6-050	1,448.0	Desert Wells	241.0	79	1,631.2
J-DU6-060	1,458.0	Desert Wells	360.0	75	1,631.8
J-DU6-070	1,452.0	Desert Wells	80.3	78	1,631.8
J-DU6-080	1,446.0	Desert Wells	80.3	80	1,631.3
J-DU6-090	1,435.0	Desert Wells	80.3	85	1,631.2
J-DU7-010	1,415.0	Desert Wells	6.5	93	1,630.1
J-DU7-020	1,425.0	Desert Wells	227.6	89	1,630.0
J-DU7-030	1,416.0	Desert Wells	0.0	93	1,630.0
J-DU7-040	1,409.0	Desert Wells	25.6	96	1,630.0
J-DU7-050	1,416.0	Desert Wells	52.5	93	1,630.2
J-DU7-060	1,423.0	Desert Wells	22.4	90	1,630.5
J-DU7-070	1,430.0	Desert Wells	0.0	87	1,630.8
J-DU7-080	1,434.0	Desert Wells	49.5	85	1,631.1
J-DU7-090	1,437.0	Desert Wells	0.0	84	1,630.7
J-DU7-100	1,435.0	Desert Wells	35.3	85	1,630.5
J-DU7-110	1,435.0	Desert Wells	32.0	85	1,630.4
J-DU7-120	1,420.0	Desert Wells	0.0	91	1,630.2
J-DU7-130	1,420.0	Desert Wells	2.6	91	1,630.2
J-DU7-140	1,425.0	Desert Wells	50.1	89	1,630.2
J-DU7-150	1,419.0	Desert Wells	29.5	91	1,630.2
J-DU7-160	1,435.0	Desert Wells	41.9	85	1,630.7
J-DU7-170	1,432.0	Desert Wells	15.5	86	1,630.6
J-DU7-180	1,433.0	Desert Wells	20.2	85	1,630.6
J-DU7-190	1,437.0	Desert Wells	33.8	84	1,630.8
J-DU7-200	1,432.0	Desert Wells	41.9	86	1,630.3
J-DU8-010	1,420.0	Desert Wells	0.0	91	1,630.2
J-DU8-020	1,419.5	Desert Wells	0.0	91	1,630.3
J-DU8-030	1,421.0	Desert Wells	0.0	91	1,630.3
J-DU8-040	1,418.0	Desert Wells	6.7	92	1,630.4
J-DU8-050	1,422.0	Desert Wells	0.0	90	1,630.4
J-DU8-060	1,420.0	Desert Wells	9.1	91	1,630.3
J-DU8-070	1,420.0	Desert Wells	15.4	91	1,630.3
J-DU8-080	1,422.0	Desert Wells	4.4	90	1,630.3
J-DU8-090	1,424.0	Desert Wells	11.0	89	1,630.3

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-DU8-100	1,425.0	Desert Wells	9.1	89	1,630.3
J-DU8-110	1,430.0	Desert Wells	43.6	87	1,630.3
J-DU8-120	1,431.0	Desert Wells	17.2	86	1,630.3
J-DU8-130	1,427.0	Desert Wells	21.0	88	1,630.3
J-DU9-010	1,419.0	Desert Wells	19.7	91	1,630.2
J-DU9-020	1,415.0	Desert Wells	36.5	93	1,630.2
J-DU9-030	1,416.0	Desert Wells	33.3	93	1,630.2
J-DU9-040	1,416.0	Desert Wells	7.8	93	1,630.2
J-DU9-050	1,419.0	Desert Wells	0.0	91	1,630.2
J-DU9-060	1,422.0	Desert Wells	31.4	90	1,630.3
J-DU9-070	1,414.0	Desert Wells	31.7	94	1,630.2
J-DU9-080	1,419.0	Desert Wells	38.6	91	1,630.2

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-160EX	16.0	2,722.00	120.0	165.2	0.26	0.0000
P-170EX	16.0	5,366.00	120.0	165.2	0.26	0.0000
P-180EX	16.0	5,396.00	120.0	165.2	0.26	0.0000
P-190EX	16.0	5,728.00	120.0	165.2	0.26	0.0000
P-200EX	16.0	231.00	120.0	-344.7	0.55	0.0001
P-210EX	16.0	1,388.00	120.0	-272.3	0.43	0.0001
P-220EX	16.0	2,909.00	120.0	579.5	0.92	0.0003
P-240EX	16.0	1,387.00	120.0	-1,560.1	2.49	0.0016
P-250EX	16.0	2,611.00	120.0	351.9	0.56	0.0001
P-340EX	16.0	5,775.00	120.0	165.2	0.26	0.0000
P-410EX	16.0	5,368.00	120.0	165.2	0.26	0.0000
P-970	24.0	1,001.00	120.0	412.6	0.29	0.0000
P-980	24.0	1,935.00	120.0	0.0	0.00	0.0000
P-1060EX	16.0	1,328.00	120.0	-344.7	0.55	0.0001
P-1070EX	16.0	1,243.00	120.0	-344.7	0.55	0.0001
P-1630EX	16.0	1,793.00	120.0	157.3	0.25	0.0000
P-1640EX	16.0	1,335.00	120.0	363.1	0.58	0.0001
P-1780	24.0	1,528.00	120.0	412.6	0.29	0.0000
P-1790	24.0	1,115.00	120.0	412.6	0.29	0.0000
P-1940EX	16.0	1,976.00	120.0	-344.7	0.55	0.0001
P-1950EX	16.0	680.00	120.0	-344.7	0.55	0.0001
P-1970EX	16.0	927.00	120.0	82.1	0.13	0.0000
P-1980EX	16.0	1,106.00	120.0	-59.0	0.09	0.0000
P-2000EX	16.0	2,710.00	120.0	-344.7	0.55	0.0001
P-2040EX	16.0	10,635.00	120.0	-167.9	0.27	0.0000
P-2055EX	16.0	10,453.00	120.0	75.6	0.12	0.0000
P-2070EX	24.0	5,329.00	120.0	-477.1	0.34	0.0000
P-2340EX	16.0	2,281.00	120.0	-344.7	0.55	0.0001
P-2500EX	24.0	2,750.00	120.0	500.1	0.35	0.0000
P-2510EX	24.0	2,726.00	120.0	478.9	0.34	0.0000
P-2540EX	12.0	2,624.00	120.0	-59.0	0.17	0.0000
P-2570EX	16.0	2,640.00	120.0	0.0	0.00	0.0000
P-2655EX	16.0	2,870.00	120.0	165.2	0.26	0.0000
P-2660EX	24.0	2,797.00	120.0	720.6	0.51	0.0001
P-2665EX	16.0	2,716.00	120.0	165.2	0.26	0.0000
P-2690EX	16.0	2,914.00	120.0	193.7	0.31	0.0000
P-2700EX	16.0	3,115.00	120.0	545.6	0.87	0.0002
P-2710EX	16.0	1,823.00	120.0	446.3	0.71	0.0002
P-2720EX	12.0	3,042.00	120.0	-99.3	0.28	0.0000
P-2830	16.0	2,890.00	120.0	281.1	0.45	0.0001
P-2860EX	24.0	761.00	120.0	720.6	0.51	0.0001
P-2880EX	12.0	383.00	120.0	0.0	0.00	0.0000
P-2890EX	8.0	3,148.00	120.0	-37.2	0.24	0.0000
P-2900	24.0	1,423.00	120.0	646.8	0.46	0.0000

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-2910EX	24.0	497.00	120.0	683.4	0.48	0.0000
P-2950	12.0	1,089.00	120.0	21.1	0.06	0.0000
P-2970EX	12.0	1,119.00	120.0	34.7	0.10	0.0000
P-2990EX	8.0	2,811.00	120.0	-26.7	0.17	0.0000
P-3010EX	12.0	471.00	120.0	37.2	0.11	0.0000
P-3020EX	12.0	1,167.00	120.0	8.0	0.02	0.0000
P-3030EX	12.0	378.00	120.0	0.0	0.00	0.0000
P-3040EX	8.0	3,081.00	120.0	-26.0	0.17	0.0000
P-3060	12.0	595.00	120.0	0.0	0.00	0.0000
P-3070EX	8.0	2,922.00	120.0	-17.9	0.11	0.0000
P-3080EX	12.0	1,397.00	120.0	-57.7	0.16	0.0000
P-3090EX	12.0	1,109.00	120.0	-46.1	0.13	0.0000
P-3100EX	12.0	695.00	120.0	12.9	0.04	0.0000
P-3110EX	12.0	664.00	120.0	1.3	0.00	0.0000
P-3120EX	8.0	1,851.00	120.0	-11.6	0.07	0.0000
P-3130	12.0	1,155.00	120.0	17.9	0.05	0.0000
P-3140EX	16.0	1,783.00	120.0	16.6	0.03	0.0000
P-3150EX	16.0	958.00	120.0	0.0	0.00	0.0000
P-3160EX	8.0	3,801.00	120.0	-16.6	0.11	0.0000
P-3170EX	8.0	2,838.00	120.0	-36.6	0.23	0.0000
P-3180EX	8.0	736.00	120.0	11.2	0.07	0.0000
P-3190EX	30.0	4,441.00	120.0	3,106.5	1.41	0.0003
P-3200	30.0	814.00	120.0	3,106.5	1.41	0.0003
P-3240EX	16.0	1,954.00	120.0	133.2	0.21	0.0000
P-3250EX	12.0	844.00	120.0	-227.6	0.65	0.0002
P-3260EX	16.0	1,108.00	120.0	579.5	0.92	0.0003
P-3270EX	16.0	1,509.00	120.0	422.7	0.67	0.0001
P-3280EX	12.0	2,890.00	120.0	-156.8	0.44	0.0001
P-3290EX	12.0	2,432.00	120.0	70.8	0.20	0.0000
P-3930EX	16.0	751.00	120.0	-344.7	0.55	0.0001
P-3940EX	16.0	509.00	120.0	-344.7	0.55	0.0001
P-3970EX	16.0	1,445.00	120.0	344.7	0.55	0.0001
P-4720EX	16.0	1,216.00	120.0	683.3	1.09	0.0004
P-4730EX	16.0	456.00	120.0	683.3	1.09	0.0004
P-4750EX	16.0	715.00	120.0	683.3	1.09	0.0004
P-4760EX	16.0	774.00	120.0	406.2	0.65	0.0001
P-4790EX	16.0	1,816.00	120.0	505.5	0.81	0.0002
P-5700EX	16.0	1,176.00	120.0	932.7	1.49	0.0006
P-5710EX	16.0	1,171.00	120.0	932.7	1.49	0.0006
P-5770	16.0	353.00	120.0	-287.3	0.46	0.0001
P-5780	16.0	684.00	120.0	-287.3	0.46	0.0001
P-6030	12.0	162.00	120.0	72.4	0.21	0.0000
P-6070	16.0	247.00	120.0	-244.3	0.39	0.0001
P-7000	16.0	742.00	120.0	-147.9	0.24	0.0000

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP

FlexTable: Pipe Table

(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

	Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
	P-COMWTREX	36.0	10.00	120.0	720.6	0.23	0.0000
ONSITE	P-DU-3-4-070	12.0	734.00	120.0	-252.3	0.72	0.0002
	P-DU-3-4-080	12.0	913.00	120.0	-168.0	0.48	0.0001
	P-DU-3-4-090	12.0	1,401.00	120.0	18.6	0.05	0.0000
	P-DU-3-4-100	12.0	717.00	120.0	-205.2	0.58	0.0002
	P-DU-3-4-110	16.0	597.00	120.0	129.6	0.21	0.0000
	P-DU-3-4-120	16.0	1,375.00	120.0	-44.9	0.07	0.0000
	P-DU-3-4-130	12.0	1,165.00	120.0	45.2	0.13	0.0000
	P-DU-3S-130	16.0	1,385.00	120.0	-345.4	0.55	0.0001
ONSITE	P-DU3-4-010	12.0	1,834.00	120.0	12.5	0.04	0.0000
	P-DU3-4-020	24.0	1,370.00	120.0	-391.8	0.28	0.0000
	P-DU3-4-030	24.0	1,035.00	120.0	-521.4	0.37	0.0000
	P-DU3-4-040	24.0	496.00	120.0	-672.1	0.48	0.0000
	P-DU3-4-050	24.0	1,092.00	120.0	-823.4	0.58	0.0001
	P-DU3-4-060	12.0	553.00	120.0	-277.9	0.79	0.0003
	P-DU3-4-160	12.0	1,157.00	120.0	-25.4	0.07	0.0000
	P-DU3-4-170	16.0	937.00	120.0	-183.3	0.29	0.0000
	P-DU3-4-180	16.0	1,045.00	120.0	-273.3	0.44	0.0001
	P-DU3-4-190	16.0	1,019.00	120.0	-363.3	0.58	0.0001
	P-DU3-4-200	16.0	958.00	120.0	-370.7	0.59	0.0001
	P-DU3-4-210	16.0	1,373.00	120.0	-403.6	0.64	0.0001
	P-DU3S-010	8.0	261.00	120.0	96.4	0.62	0.0003
	P-DU3S-020	8.0	1,374.00	120.0	41.5	0.27	0.0001
	P-DU3S-030	8.0	1,542.00	120.0	30.5	0.19	0.0000
	P-DU3S-040	8.0	1,242.00	120.0	15.5	0.10	0.0000
	P-DU3S-050	8.0	801.00	120.0	-18.3	0.12	0.0000
	P-DU3S-060	8.0	974.00	120.0	-13.8	0.09	0.0000
	P-DU3S-070	8.0	1,384.00	120.0	-25.9	0.17	0.0000
	P-DU3S-080	8.0	1,241.00	120.0	-37.7	0.24	0.0000
	P-DU3S-090	8.0	621.00	120.0	-44.7	0.29	0.0001
	P-DU3S-100	16.0	1,114.00	130.0	46.1	0.07	0.0000
	P-DU3S-110	16.0	1,525.00	130.0	-81.7	0.13	0.0000
	P-DU3S-120	16.0	1,560.00	120.0	-207.3	0.33	0.0000
	P-DU6-010	12.0	1,163.00	120.0	245.9	0.70	0.0002
	P-DU6-020	16.0	124.00	120.0	735.7	1.17	0.0004
	P-DU6-030	12.0	1,388.00	120.0	77.5	0.22	0.0000
	P-DU6-040	12.0	2,188.00	120.0	75.3	0.21	0.0000
	P-DU6-050	12.0	2,203.00	120.0	-123.8	0.35	0.0001
	P-DU6-060	12.0	2,209.00	120.0	245.9	0.70	0.0002
	P-DU6-070	16.0	142.00	120.0	1,027.1	1.64	0.0008
	P-DU6-080	12.0	1,130.00	120.0	397.8	1.13	0.0005
	P-DU6-090	12.0	1,397.00	120.0	146.8	0.42	0.0001
	P-DU6-100	12.0	1,966.00	120.0	89.2	0.25	0.0000
	P-DU6-110	12.0	1,963.00	120.0	-113.8	0.32	0.0001

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-DU6-120	12.0	1,955.00	120.0	-23.5	0.07	0.0000
P-DU6-130	12.0	135.00	120.0	420.4	1.19	0.0006
P-DU6-140	12.0	1,094.00	120.0	363.6	1.03	0.0005
P-DU6-150	12.0	1,411.00	120.0	169.5	0.48	0.0001
P-DU6-160	16.0	211.00	120.0	552.1	0.88	0.0002
P-DU7-010	12.0	1,169.00	120.0	170.8	0.48	0.0001
P-DU7-020	12.0	1,092.00	120.0	56.8	0.16	0.0000
P-DU7-030	12.0	1,044.00	120.0	56.8	0.16	0.0000
P-DU7-040	24.0	1,410.00	120.0	-1,183.6	0.84	0.0001
P-DU7-050	24.0	1,075.00	120.0	-1,636.5	1.16	0.0003
P-DU7-060	24.0	1,254.00	120.0	-1,658.9	1.18	0.0003
P-DU7-070	24.0	992.00	120.0	-1,856.8	1.32	0.0003
P-DU7-080	24.0	2,552.00	120.0	-1,906.3	1.35	0.0003
P-DU7-090	16.0	941.00	120.0	-374.0	0.60	0.0001
P-DU7-100	16.0	1,562.00	120.0	-338.7	0.54	0.0001
P-DU7-110	16.0	1,742.00	120.0	-328.4	0.52	0.0001
P-DU7-120	16.0	778.00	120.0	374.7	0.60	0.0001
P-DU7-130	20.0	317.00	120.0	79.0	0.08	0.0000
P-DU7-140	20.0	1,207.00	120.0	81.6	0.08	0.0000
P-DU7-150	20.0	1,514.00	120.0	-32.7	0.03	0.0000
P-DU7-160	20.0	619.00	120.0	-3.2	0.00	0.0000
P-DU7-170	12.0	1,073.00	130.0	-197.9	0.56	0.0001
P-DU7-180	12.0	828.00	120.0	156.0	0.44	0.0001
P-DU7-190	12.0	399.00	120.0	-65.9	0.19	0.0000
P-DU7-200	12.0	2,378.00	120.0	157.2	0.45	0.0001
P-DU7-210	12.0	1,049.00	120.0	-277.1	0.79	0.0003
P-DU7-220	12.0	1,054.00	120.0	-243.3	0.69	0.0002
P-DU7-230	12.0	1,714.00	120.0	-206.4	0.59	0.0002
P-DU7-240	12.0	1,014.00	120.0	-164.5	0.47	0.0001
P-DU8-010	16.0	1,107.00	120.0	32.7	0.05	0.0000
P-DU8-020	16.0	714.00	120.0	-223.1	0.36	0.0000
P-DU8-030	16.0	1,312.00	120.0	-216.4	0.35	0.0000
P-DU8-040	16.0	1,371.00	120.0	-255.6	0.41	0.0001
P-DU8-050	16.0	520.00	120.0	-308.0	0.49	0.0001
P-DU8-060	16.0	1,021.00	120.0	-412.6	0.66	0.0001
P-DU8-070	8.0	542.00	120.0	-46.8	0.30	0.0001
P-DU8-080	8.0	253.00	120.0	-17.7	0.11	0.0000
P-DU8-090	8.0	1,138.00	120.0	-33.1	0.21	0.0000
P-DU8-100	12.0	599.00	120.0	135.5	0.38	0.0001
P-DU8-110	12.0	709.00	120.0	63.7	0.18	0.0000
P-DU8-120	8.0	678.00	120.0	-38.2	0.24	0.0001
P-DU8-130	8.0	1,315.00	120.0	29.6	0.19	0.0000
P-DU8-140	8.0	966.00	120.0	21.1	0.13	0.0000
P-DU8-150	6.0	737.00	130.0	-3.6	0.04	0.0000

Active Scenario: DU 3-4 Ave Day Demand - Served by SCAP

FlexTable: Pipe Table

(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-DU8-160	8.0	1,265.00	120.0	15.7	0.10	0.0000
P-DU8-170	8.0	2,613.00	120.0	1.7	0.01	0.0000
P-DU8-180	8.0	1,778.00	120.0	-15.5	0.10	0.0000
P-DU8-190	8.0	1,185.00	120.0	9.2	0.06	0.0000
P-DU8-200	8.0	1,054.00	120.0	45.7	0.29	0.0001
P-DU9-010	16.0	904.00	120.0	-244.3	0.39	0.0001
P-DU9-020	16.0	227.00	120.0	-255.9	0.41	0.0001
P-DU9-030	8.0	1,616.00	120.0	-8.1	0.05	0.0000
P-DU9-040	8.0	746.00	120.0	-40.1	0.26	0.0001
P-DU9-050	8.0	869.00	120.0	-4.6	0.03	0.0000
P-DU9-060	8.0	1,550.00	120.0	-42.8	0.27	0.0001
P-DU9-070	8.0	1,001.00	120.0	-4.9	0.03	0.0000
P-DU9-080	8.0	644.00	120.0	-12.7	0.08	0.0000
P-DU9-090	8.0	3,092.00	120.0	9.8	0.06	0.0000
P-DU9-100	8.0	1,619.00	120.0	-16.9	0.11	0.0000
P-DU9-110	8.0	3,057.00	120.0	-5.0	0.03	0.0000
P-DU9-120	8.0	901.00	120.0	20.6	0.13	0.0000
P-DU9-130	8.0	879.00	120.0	-50.2	0.32	0.0001
P-DU9-140	8.0	430.00	120.0	-104.6	0.67	0.0003
P-DU9-150	8.0	4,471.00	120.0	-23.0	0.15	0.0000
P-SCAP	36.0	1,752.00	120.0	-5,458.1	1.72	0.0003

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Reservoir Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Flow Net (Out) (gpm)	Zone	Hydraulic Grade (ft)
C.O.M. DW SUPPLY FROM NORTH	1,634.0	1,303.2	Desert Wells	1,634.0
SCAP DWPS	1,634.0	9,870.8	Desert Wells	1,634.0
DWGWF - DWPS	1,634.0	(N/A)	Desert Wells	(N/A)

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-100EX	1,406.0	Desert Wells	0.0	94	1,622.3
J-110EX	1,440.0	Desert Wells	0.0	79	1,623.4
J-120EX	1,462.0	Desert Wells	0.0	74	1,632.3
J-135EX	1,460.0	Desert Wells	0.0	74	1,630.1
J-150EX	1,472.0	Desert Wells	0.0	67	1,627.4
J-160EX	1,435.0	Desert Wells	0.0	81	1,622.7
J-170EX	1,430.0	Desert Wells	0.0	83	1,622.4
J-180EX	1,405.0	Desert Wells	0.0	94	1,622.0
J-190EX	1,395.0	Desert Wells	0.0	98	1,621.5
J-200EX	1,385.0	Desert Wells	0.0	102	1,621.0
J-220EX	1,480.0	Desert Wells	0.0	65	1,629.9
J-230EX	1,475.0	Desert Wells	0.0	66	1,628.3
J-250EX	1,452.0	Desert Wells	72.0	76	1,627.7
J-260EX	1,453.0	Desert Wells	0.0	76	1,627.7
J-270	1,429.0	Desert Wells	0.0	84	1,622.8
J-280EX	1,460.0	Desert Wells	0.0	71	1,623.2
J-300EX	1,392.0	Desert Wells	107.8	99	1,620.5
J-330EX	1,455.0	Desert Wells	0.0	73	1,623.7
J-340	1,440.0	Desert Wells	0.0	79	1,622.8
J-360EX	1,400.0	Desert Wells	0.0	96	1,621.1
J-550	1,425.0	Desert Wells	0.0	86	1,622.8
J-590EX	1,410.0	Desert Wells	0.0	92	1,622.9
J-920	1,434.0	Desert Wells	0.0	82	1,622.9
J-950	1,414.0	Desert Wells	0.0	90	1,621.3
J-960EX	1,401.0	Desert Wells	0.0	95	1,621.6
J-970EX	1,397.0	Desert Wells	0.0	97	1,620.8
J-1000EX	1,455.0	Desert Wells	0.0	77	1,633.6
J-1010EX	1,485.0	Desert Wells	0.0	64	1,633.2
J-1020EX	1,425.0	Desert Wells	0.0	90	1,633.8
J-1030EX	1,480.0	Desert Wells	0.0	67	1,634.0
J-1040EX	1,433.0	Desert Wells	0.0	83	1,624.6
J-1050EX	1,445.0	Desert Wells	0.0	78	1,625.6
J-1120EX	1,453.0	Desert Wells	0.0	76	1,627.7
J-1130EX	1,445.0	Desert Wells	0.0	78	1,625.7
J-1160EX	1,445.0	Desert Wells	0.0	82	1,633.6
J-1170EX	1,470.0	Desert Wells	0.0	71	1,633.4
J-1180EX	1,440.0	Desert Wells	0.0	84	1,633.7
J-1190EX	1,420.0	Desert Wells	0.0	93	1,633.8
J-1200EX	1,445.0	Desert Wells	0.0	82	1,633.7
J-1210EX	1,455.0	Desert Wells	0.0	77	1,633.3
J-1220EX	1,475.0	Desert Wells	0.0	68	1,632.8
J-1230EX	1,460.0	Desert Wells	0.0	71	1,623.5
J-1235EX	1,440.0	Desert Wells	0.0	80	1,624.3
J-1240EX	1,455.0	Desert Wells	0.0	73	1,624.8

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-1290EX	1,480.0	Desert Wells	0.0	66	1,632.9
J-1300EX	1,465.0	Desert Wells	0.0	73	1,633.3
J-1310EX	1,480.0	Desert Wells	0.0	66	1,633.0
J-1330EX	1,465.0	Desert Wells	0.0	73	1,633.4
J-1340EX	1,450.0	Desert Wells	0.0	79	1,633.6
J-1350EX	1,465.0	Desert Wells	0.0	73	1,633.3
J-1360EX	1,445.0	Desert Wells	0.0	82	1,633.6
J-1370EX	1,430.0	Desert Wells	0.0	88	1,633.7
J-1380EX	1,450.0	Desert Wells	0.0	79	1,633.7
J-1390EX	1,430.0	Desert Wells	0.0	88	1,633.7
J-1400EX	1,430.0	Desert Wells	0.0	88	1,633.7
J-1410	1,454.0	Desert Wells	0.0	75	1,628.4
J-1410EX	1,420.0	Desert Wells	0.0	93	1,633.8
J-1420EX	1,460.0	Desert Wells	0.0	73	1,627.9
J-1430EX	1,455.0	Desert Wells	0.0	75	1,628.3
J-1440EX	1,478.0	Desert Wells	0.0	65	1,629.0
J-1680EX	1,400.0	Desert Wells	0.0	96	1,621.4
J-1990EX	1,447.0	Desert Wells	0.0	78	1,626.2
J-2000EX	1,442.0	Desert Wells	0.0	79	1,624.7
J-2120EX	1,453.0	Desert Wells	0.0	75	1,626.2
J-2140EX	1,446.0	Desert Wells	0.0	78	1,625.8
J-2295	1,415.0	Desert Wells	0.0	89	1,621.3
J-DU3-4-010	1,405.0	Desert Wells	276.2	93	1,620.5
J-DU3-4-020	1,401.0	Desert Wells	276.2	95	1,620.5
J-DU3-4-030	1,397.0	Desert Wells	259.2	97	1,620.4
J-DU3-4-040	1,403.0	Desert Wells	302.6	94	1,620.6
J-DU3-4-050	1,410.0	Desert Wells	51.2	91	1,620.4
J-DU3-4-060	1,408.0	Desert Wells	117.8	92	1,619.8
J-DU3-4-070	1,404.0	Desert Wells	373.2	93	1,619.4
J-DU3-4-080	1,400.0	Desert Wells	373.2	95	1,619.4
J-DU3-4-090	1,393.0	Desert Wells	151.4	98	1,619.9
J-DU3-4-100	1,391.0	Desert Wells	372.2	99	1,620.3
J-DU3-4-110	1,393.0	Desert Wells	282.2	98	1,619.8
J-DU3-4-120	1,393.0	Desert Wells	312.2	98	1,619.9
J-DU3-4-130	1,399.0	Desert Wells	349.0	96	1,619.8
J-DU3-4-140	1,404.0	Desert Wells	186.4	93	1,619.8
J-DU3-4-150	1,407.0	Desert Wells	141.2	92	1,619.8
J-DU3-4-160	1,407.0	Desert Wells	180.0	92	1,619.9
J-DU3-4-170	1,412.0	Desert Wells	180.0	90	1,620.2
J-DU3-4-180	1,414.0	Desert Wells	14.8	89	1,620.5
J-DU3-4-190	1,417.0	Desert Wells	65.8	88	1,620.9
J-DU3-4-200	1,412.5	Desert Wells	276.2	90	1,620.7
J-DU3S-010	1,412.0	Desert Wells	20.4	90	1,621.0
J-DU3S-020	1,407.0	Desert Wells	22.0	92	1,620.7

ON-SITE

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-DU3S-030	1,401.0	Desert Wells	30.0	95	1,620.6
J-DU3S-040	1,399.0	Desert Wells	22.0	96	1,620.5
J-DU3S-050	1,404.0	Desert Wells	24.2	94	1,620.5
J-DU3S-060	1,410.0	Desert Wells	23.6	91	1,620.7
J-DU3S-070	1,417.0	Desert Wells	14.0	88	1,620.9
J-DU3S-080	1,396.0	Desert Wells	107.8	97	1,620.5
J-DU6-010	1,459.0	Desert Wells	0.0	73	1,626.6
J-DU6-020	1,453.0	Desert Wells	2,196.2	75	1,626.1
J-DU6-030	1,450.0	Desert Wells	160.6	76	1,625.8
J-DU6-040	1,440.0	Desert Wells	321.4	80	1,625.8
J-DU6-050	1,448.0	Desert Wells	482.0	77	1,626.1
J-DU6-060	1,458.0	Desert Wells	500.4	73	1,627.6
J-DU6-070	1,452.0	Desert Wells	160.6	76	1,627.5
J-DU6-080	1,446.0	Desert Wells	160.6	78	1,626.3
J-DU6-090	1,435.0	Desert Wells	160.6	83	1,625.9
J-DU7-010	1,415.0	Desert Wells	13.0	89	1,621.2
J-DU7-020	1,425.0	Desert Wells	455.2	85	1,620.8
J-DU7-030	1,416.0	Desert Wells	0.0	89	1,620.8
J-DU7-040	1,409.0	Desert Wells	51.2	92	1,620.9
J-DU7-050	1,416.0	Desert Wells	105.0	89	1,621.5
J-DU7-060	1,423.0	Desert Wells	44.8	86	1,622.5
J-DU7-070	1,430.0	Desert Wells	0.0	84	1,623.6
J-DU7-080	1,434.0	Desert Wells	99.0	83	1,624.7
J-DU7-090	1,437.0	Desert Wells	0.0	80	1,623.0
J-DU7-100	1,435.0	Desert Wells	70.6	81	1,622.6
J-DU7-110	1,435.0	Desert Wells	64.0	81	1,622.1
J-DU7-120	1,420.0	Desert Wells	0.0	87	1,621.5
J-DU7-130	1,420.0	Desert Wells	5.2	87	1,621.5
J-DU7-140	1,425.0	Desert Wells	100.2	85	1,621.5
J-DU7-150	1,419.0	Desert Wells	59.0	88	1,621.5
J-DU7-160	1,435.0	Desert Wells	83.8	81	1,623.1
J-DU7-170	1,432.0	Desert Wells	31.0	83	1,622.9
J-DU7-180	1,433.0	Desert Wells	40.4	82	1,622.9
J-DU7-190	1,437.0	Desert Wells	67.6	81	1,623.7
J-DU7-200	1,432.0	Desert Wells	83.8	82	1,621.9
J-DU8-010	1,420.0	Desert Wells	0.0	87	1,621.5
J-DU8-020	1,419.5	Desert Wells	0.0	87	1,621.6
J-DU8-030	1,421.0	Desert Wells	0.0	87	1,621.8
J-DU8-040	1,418.0	Desert Wells	13.4	88	1,622.1
J-DU8-050	1,422.0	Desert Wells	0.0	87	1,622.3
J-DU8-060	1,420.0	Desert Wells	18.2	87	1,621.8
J-DU8-070	1,420.0	Desert Wells	30.8	87	1,621.8
J-DU8-080	1,422.0	Desert Wells	8.8	86	1,621.9
J-DU8-090	1,424.0	Desert Wells	22.0	86	1,621.8

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-DU8-100	1,425.0	Desert Wells	18.2	85	1,621.9
J-DU8-110	1,430.0	Desert Wells	87.2	83	1,621.8
J-DU8-120	1,431.0	Desert Wells	34.4	83	1,621.8
J-DU8-130	1,427.0	Desert Wells	42.0	84	1,621.9
J-DU9-010	1,419.0	Desert Wells	39.4	88	1,621.5
J-DU9-020	1,415.0	Desert Wells	73.0	89	1,621.5
J-DU9-030	1,416.0	Desert Wells	66.6	89	1,621.5
J-DU9-040	1,416.0	Desert Wells	15.6	89	1,621.5
J-DU9-050	1,419.0	Desert Wells	0.0	88	1,621.5
J-DU9-060	1,422.0	Desert Wells	62.8	86	1,621.8
J-DU9-070	1,414.0	Desert Wells	63.4	90	1,621.4
J-DU9-080	1,419.0	Desert Wells	77.2	88	1,621.5

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-160EX	16.0	2,722.00	120.0	325.4	0.52	0.0001
P-170EX	16.0	5,366.00	120.0	325.4	0.52	0.0001
P-180EX	16.0	5,396.00	120.0	325.4	0.52	0.0001
P-190EX	16.0	5,728.00	120.0	325.4	0.52	0.0001
P-200EX	16.0	231.00	120.0	-772.3	1.23	0.0004
P-210EX	16.0	1,388.00	120.0	-636.5	1.02	0.0003
P-220EX	16.0	2,909.00	120.0	1,063.2	1.70	0.0008
P-240EX	16.0	1,387.00	120.0	-2,649.0	4.23	0.0044
P-250EX	16.0	2,611.00	120.0	702.5	1.12	0.0004
P-340EX	16.0	5,775.00	120.0	325.4	0.52	0.0001
P-410EX	16.0	5,368.00	120.0	325.4	0.52	0.0001
P-970	24.0	1,001.00	120.0	814.9	0.58	0.0001
P-980	24.0	1,935.00	120.0	0.0	0.00	0.0000
P-1060EX	16.0	1,328.00	120.0	-772.3	1.23	0.0004
P-1070EX	16.0	1,243.00	120.0	-772.3	1.23	0.0004
P-1630EX	16.0	1,793.00	120.0	301.9	0.48	0.0001
P-1640EX	16.0	1,335.00	120.0	682.8	1.09	0.0004
P-1780	24.0	1,528.00	120.0	814.9	0.58	0.0001
P-1790	24.0	1,115.00	120.0	814.9	0.58	0.0001
P-1940EX	16.0	1,976.00	120.0	-772.3	1.23	0.0004
P-1950EX	16.0	680.00	120.0	-772.3	1.23	0.0004
P-1970EX	16.0	927.00	120.0	118.1	0.19	0.0000
P-1980EX	16.0	1,106.00	120.0	-164.1	0.26	0.0000
P-2000EX	16.0	2,710.00	120.0	-772.3	1.23	0.0004
P-2040EX	16.0	10,635.00	120.0	-303.6	0.48	0.0001
P-2055EX	16.0	10,453.00	120.0	136.8	0.22	0.0000
P-2070EX	24.0	5,329.00	120.0	-862.9	0.61	0.0001
P-2340EX	16.0	2,281.00	120.0	-772.3	1.23	0.0004
P-2500EX	24.0	2,750.00	120.0	904.1	0.64	0.0001
P-2510EX	24.0	2,726.00	120.0	866.4	0.61	0.0001
P-2540EX	12.0	2,624.00	120.0	-106.7	0.30	0.0000
P-2570EX	16.0	2,640.00	120.0	0.0	0.00	0.0000
P-2655EX	16.0	2,870.00	120.0	325.4	0.52	0.0001
P-2660EX	24.0	2,797.00	120.0	1,303.2	0.92	0.0002
P-2665EX	16.0	2,716.00	120.0	325.4	0.52	0.0001
P-2690EX	16.0	2,914.00	120.0	375.6	0.60	0.0001
P-2700EX	16.0	3,115.00	120.0	1,078.1	1.72	0.0008
P-2710EX	16.0	1,823.00	120.0	881.3	1.41	0.0006
P-2720EX	12.0	3,042.00	120.0	-196.8	0.56	0.0001
P-2830	16.0	2,890.00	120.0	555.9	0.89	0.0002
P-2860EX	24.0	761.00	120.0	1,303.2	0.92	0.0002
P-2880EX	12.0	383.00	120.0	0.0	0.00	0.0000
P-2890EX	8.0	3,148.00	120.0	-67.1	0.43	0.0001
P-2900	24.0	1,423.00	120.0	1,169.9	0.83	0.0001

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-2910EX	24.0	497.00	120.0	1,236.2	0.88	0.0001
P-2950	12.0	1,089.00	120.0	37.7	0.11	0.0000
P-2970EX	12.0	1,119.00	120.0	63.1	0.18	0.0000
P-2990EX	8.0	2,811.00	120.0	-48.6	0.31	0.0001
P-3010EX	12.0	471.00	120.0	67.1	0.19	0.0000
P-3020EX	12.0	1,167.00	120.0	14.6	0.04	0.0000
P-3030EX	12.0	378.00	120.0	0.0	0.00	0.0000
P-3040EX	8.0	3,081.00	120.0	-47.0	0.30	0.0001
P-3060	12.0	595.00	120.0	0.0	0.00	0.0000
P-3070EX	8.0	2,922.00	120.0	-32.4	0.21	0.0000
P-3080EX	12.0	1,397.00	120.0	-104.3	0.30	0.0000
P-3090EX	12.0	1,109.00	120.0	-83.3	0.24	0.0000
P-3100EX	12.0	695.00	120.0	23.4	0.07	0.0000
P-3110EX	12.0	664.00	120.0	2.4	0.01	0.0000
P-3120EX	8.0	1,851.00	120.0	-21.0	0.13	0.0000
P-3130	12.0	1,155.00	120.0	32.4	0.09	0.0000
P-3140EX	16.0	1,783.00	120.0	30.1	0.05	0.0000
P-3150EX	16.0	958.00	120.0	0.0	0.00	0.0000
P-3160EX	8.0	3,801.00	120.0	-30.1	0.19	0.0000
P-3170EX	8.0	2,838.00	120.0	-66.2	0.42	0.0001
P-3180EX	8.0	736.00	120.0	20.1	0.13	0.0000
P-3190EX	30.0	4,441.00	120.0	5,788.0	2.63	0.0009
P-3200	30.0	814.00	120.0	5,788.0	2.63	0.0009
P-3240EX	16.0	1,954.00	120.0	382.2	0.61	0.0001
P-3250EX	12.0	844.00	120.0	-360.7	1.02	0.0004
P-3260EX	16.0	1,108.00	120.0	1,063.2	1.70	0.0008
P-3270EX	16.0	1,509.00	120.0	788.1	1.26	0.0005
P-3280EX	12.0	2,890.00	120.0	-275.1	0.78	0.0003
P-3290EX	12.0	2,432.00	120.0	85.6	0.24	0.0000
P-3930EX	16.0	751.00	120.0	-772.3	1.23	0.0004
P-3940EX	16.0	509.00	120.0	-772.3	1.23	0.0004
P-3970EX	16.0	1,445.00	120.0	772.3	1.23	0.0004
P-4720EX	16.0	1,216.00	120.0	1,348.3	2.15	0.0013
P-4730EX	16.0	456.00	120.0	1,348.3	2.15	0.0013
P-4750EX	16.0	715.00	120.0	1,348.3	2.15	0.0013
P-4760EX	16.0	774.00	120.0	800.8	1.28	0.0005
P-4790EX	16.0	1,816.00	120.0	997.6	1.59	0.0007
P-5700EX	16.0	1,176.00	120.0	1,673.8	2.67	0.0019
P-5710EX	16.0	1,171.00	120.0	1,673.8	2.67	0.0019
P-5770	16.0	353.00	120.0	-231.2	0.37	0.0000
P-5780	16.0	684.00	120.0	-231.2	0.37	0.0000
P-6030	12.0	162.00	120.0	135.7	0.39	0.0001
P-6070	16.0	247.00	120.0	-481.4	0.77	0.0002
P-7000	16.0	742.00	120.0	-291.1	0.46	0.0001

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

	Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
	P-COMWTREX	36.0	10.00	120.0	1,303.2	0.41	0.0000
ONSITE	P-DU-3-4-070	12.0	734.00	120.0	-487.4	1.38	0.0008
	P-DU-3-4-080	12.0	913.00	120.0	-333.1	0.94	0.0004
	P-DU-3-4-090	12.0	1,401.00	120.0	40.1	0.11	0.0000
	P-DU-3-4-100	12.0	717.00	120.0	-413.3	1.17	0.0006
	P-DU-3-4-110	16.0	597.00	120.0	295.9	0.47	0.0001
	P-DU-3-4-120	16.0	1,375.00	120.0	-53.1	0.08	0.0000
	P-DU-3-4-130	12.0	1,165.00	120.0	104.7	0.30	0.0000
	P-DU-3S-130	16.0	1,385.00	120.0	-680.3	1.09	0.0004
ONSITE	P-DU3-4-010	12.0	1,834.00	120.0	30.1	0.09	0.0000
	P-DU3-4-020	24.0	1,370.00	120.0	-753.1	0.53	0.0001
	P-DU3-4-030	24.0	1,035.00	120.0	-1,012.3	0.72	0.0001
	P-DU3-4-040	24.0	496.00	120.0	-1,318.5	0.94	0.0002
	P-DU3-4-050	24.0	1,092.00	120.0	-1,621.1	1.15	0.0002
	P-DU3-4-060	12.0	553.00	120.0	-538.6	1.53	0.0009
	P-DU3-4-160	12.0	1,157.00	120.0	-36.5	0.10	0.0000
	P-DU3-4-170	16.0	937.00	120.0	-344.2	0.55	0.0001
	P-DU3-4-180	16.0	1,045.00	120.0	-524.2	0.84	0.0002
	P-DU3-4-190	16.0	1,019.00	120.0	-704.2	1.12	0.0004
	P-DU3-4-200	16.0	958.00	120.0	-719.0	1.15	0.0004
	P-DU3-4-210	16.0	1,373.00	120.0	-784.8	1.25	0.0005
	P-DU3S-010	8.0	261.00	120.0	190.3	1.21	0.0010
	P-DU3S-020	8.0	1,374.00	120.0	81.8	0.52	0.0002
	P-DU3S-030	8.0	1,542.00	120.0	59.8	0.38	0.0001
	P-DU3S-040	8.0	1,242.00	120.0	29.8	0.19	0.0000
	P-DU3S-050	8.0	801.00	120.0	-34.1	0.22	0.0000
	P-DU3S-060	8.0	974.00	120.0	-26.3	0.17	0.0000
	P-DU3S-070	8.0	1,384.00	120.0	-50.5	0.32	0.0001
	P-DU3S-080	8.0	1,241.00	120.0	-74.1	0.47	0.0002
	P-DU3S-090	8.0	621.00	120.0	-88.1	0.56	0.0002
	P-DU3S-100	16.0	1,114.00	130.0	84.3	0.13	0.0000
	P-DU3S-110	16.0	1,525.00	130.0	-157.9	0.25	0.0000
	P-DU3S-120	16.0	1,560.00	120.0	-404.1	0.64	0.0001
	P-DU6-010	12.0	1,163.00	120.0	366.5	1.04	0.0005
	P-DU6-020	16.0	124.00	120.0	1,149.6	1.83	0.0009
	P-DU6-030	12.0	1,388.00	120.0	247.5	0.70	0.0002
	P-DU6-040	12.0	2,188.00	120.0	48.9	0.14	0.0000
	P-DU6-050	12.0	2,203.00	120.0	-64.8	0.18	0.0000
	P-DU6-060	12.0	2,209.00	120.0	366.5	1.04	0.0005
	P-DU6-070	16.0	142.00	120.0	1,652.3	2.64	0.0018
	P-DU6-080	12.0	1,130.00	120.0	651.9	1.85	0.0013
	P-DU6-090	12.0	1,397.00	120.0	253.8	0.72	0.0002
	P-DU6-100	12.0	1,966.00	120.0	116.5	0.33	0.0001
	P-DU6-110	12.0	1,963.00	120.0	-148.6	0.42	0.0001

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-DU6-120	12.0	1,955.00	120.0	-133.6	0.38	0.0001
P-DU6-130	12.0	135.00	120.0	613.4	1.74	0.0012
P-DU6-140	12.0	1,094.00	120.0	586.4	1.66	0.0011
P-DU6-150	12.0	1,411.00	120.0	277.1	0.79	0.0003
P-DU6-160	16.0	211.00	120.0	862.8	1.38	0.0006
P-DU7-010	12.0	1,169.00	120.0	338.0	0.96	0.0004
P-DU7-020	12.0	1,092.00	120.0	117.2	0.33	0.0001
P-DU7-030	12.0	1,044.00	120.0	117.2	0.33	0.0001
P-DU7-040	24.0	1,410.00	120.0	-2,328.1	1.65	0.0005
P-DU7-050	24.0	1,075.00	120.0	-3,225.3	2.29	0.0009
P-DU7-060	24.0	1,254.00	120.0	-3,270.1	2.32	0.0009
P-DU7-070	24.0	992.00	120.0	-3,661.9	2.60	0.0011
P-DU7-080	24.0	2,552.00	120.0	-3,760.9	2.67	0.0012
P-DU7-090	16.0	941.00	120.0	-738.6	1.18	0.0004
P-DU7-100	16.0	1,562.00	120.0	-668.0	1.07	0.0003
P-DU7-110	16.0	1,742.00	120.0	-645.5	1.03	0.0003
P-DU7-120	16.0	778.00	120.0	740.2	1.18	0.0004
P-DU7-130	20.0	317.00	120.0	165.7	0.17	0.0000
P-DU7-140	20.0	1,207.00	120.0	170.9	0.17	0.0000
P-DU7-150	20.0	1,514.00	120.0	-51.7	0.05	0.0000
P-DU7-160	20.0	619.00	120.0	7.3	0.01	0.0000
P-DU7-170	12.0	1,073.00	130.0	-391.9	1.11	0.0004
P-DU7-180	12.0	828.00	120.0	308.1	0.87	0.0003
P-DU7-190	12.0	399.00	120.0	-129.5	0.37	0.0001
P-DU7-200	12.0	2,378.00	120.0	310.0	0.88	0.0003
P-DU7-210	12.0	1,049.00	120.0	-547.5	1.55	0.0010
P-DU7-220	12.0	1,054.00	120.0	-479.9	1.36	0.0008
P-DU7-230	12.0	1,714.00	120.0	-406.6	1.15	0.0006
P-DU7-240	12.0	1,014.00	120.0	-322.8	0.92	0.0004
P-DU8-010	16.0	1,107.00	120.0	71.1	0.11	0.0000
P-DU8-020	16.0	714.00	120.0	-436.5	0.70	0.0002
P-DU8-030	16.0	1,312.00	120.0	-424.9	0.68	0.0001
P-DU8-040	16.0	1,371.00	120.0	-503.8	0.80	0.0002
P-DU8-050	16.0	520.00	120.0	-607.6	0.97	0.0003
P-DU8-060	16.0	1,021.00	120.0	-814.9	1.30	0.0005
P-DU8-070	8.0	542.00	120.0	-91.5	0.58	0.0003
P-DU8-080	8.0	253.00	120.0	-34.5	0.22	0.0000
P-DU8-090	8.0	1,138.00	120.0	-65.3	0.42	0.0001
P-DU8-100	12.0	599.00	120.0	268.4	0.76	0.0003
P-DU8-110	12.0	709.00	120.0	126.0	0.36	0.0001
P-DU8-120	8.0	678.00	120.0	-75.2	0.48	0.0002
P-DU8-130	8.0	1,315.00	120.0	59.0	0.38	0.0001
P-DU8-140	8.0	966.00	120.0	42.0	0.27	0.0001
P-DU8-150	6.0	737.00	130.0	-5.8	0.07	0.0000

Active Scenario: DU 3-4 Max Day - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-DU8-160	8.0	1,265.00	120.0	31.7	0.20	0.0000
P-DU8-170	8.0	2,613.00	120.0	3.5	0.02	0.0000
P-DU8-180	8.0	1,778.00	120.0	-30.9	0.20	0.0000
P-DU8-190	8.0	1,185.00	120.0	17.5	0.11	0.0000
P-DU8-200	8.0	1,054.00	120.0	90.5	0.58	0.0002
P-DU9-010	16.0	904.00	120.0	-481.4	0.77	0.0002
P-DU9-020	16.0	227.00	120.0	-507.5	0.81	0.0002
P-DU9-030	8.0	1,616.00	120.0	-13.3	0.08	0.0000
P-DU9-040	8.0	746.00	120.0	-79.9	0.51	0.0002
P-DU9-050	8.0	869.00	120.0	-6.4	0.04	0.0000
P-DU9-060	8.0	1,550.00	120.0	-84.7	0.54	0.0002
P-DU9-070	8.0	1,001.00	120.0	-8.4	0.05	0.0000
P-DU9-080	8.0	644.00	120.0	-24.0	0.15	0.0000
P-DU9-090	8.0	3,092.00	120.0	20.1	0.13	0.0000
P-DU9-100	8.0	1,619.00	120.0	-33.6	0.21	0.0000
P-DU9-110	8.0	3,057.00	120.0	-9.6	0.06	0.0000
P-DU9-120	8.0	901.00	120.0	41.3	0.26	0.0001
P-DU9-130	8.0	879.00	120.0	-99.0	0.63	0.0003
P-DU9-140	8.0	430.00	120.0	-207.3	1.32	0.0011
P-DU9-150	8.0	4,471.00	120.0	-45.5	0.29	0.0001
P-SCAP	36.0	1,752.00	120.0	-9,870.8	3.11	0.0010

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP
FlexTable: Reservoir Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Flow Net (Out) (gpm)	Zone	Hydraulic Grade (ft)
C.O.M. DW SUPPLY FROM NORTH	1,634.0	1,797.5	Desert Wells	1,634.0
SCAP DWPS	1,634.0	13,615.2	Desert Wells	1,634.0
DWGWF - DWPS	1,634.0	(N/A)	Desert Wells	(N/A)

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-100EX	1,406.0	Desert Wells	0.0	89	1,611.6
J-110EX	1,440.0	Desert Wells	0.0	75	1,614.3
J-120EX	1,462.0	Desert Wells	0.0	73	1,630.9
J-135EX	1,460.0	Desert Wells	0.0	72	1,627.0
J-150EX	1,472.0	Desert Wells	0.0	65	1,621.5
J-160EX	1,435.0	Desert Wells	0.0	76	1,611.7
J-170EX	1,430.0	Desert Wells	0.0	78	1,611.2
J-180EX	1,405.0	Desert Wells	0.0	89	1,610.2
J-190EX	1,395.0	Desert Wells	0.0	93	1,609.2
J-200EX	1,385.0	Desert Wells	0.0	97	1,608.1
J-220EX	1,480.0	Desert Wells	0.0	63	1,626.6
J-230EX	1,475.0	Desert Wells	0.0	64	1,623.6
J-250EX	1,452.0	Desert Wells	108.0	74	1,622.2
J-260EX	1,453.0	Desert Wells	0.0	73	1,622.2
J-270	1,429.0	Desert Wells	0.0	79	1,611.9
J-280EX	1,460.0	Desert Wells	0.0	66	1,612.8
J-300EX	1,392.0	Desert Wells	161.7	93	1,607.1
J-330EX	1,455.0	Desert Wells	0.0	69	1,613.9
J-340	1,440.0	Desert Wells	0.0	74	1,612.0
J-360EX	1,400.0	Desert Wells	0.0	90	1,608.7
J-550	1,425.0	Desert Wells	0.0	81	1,611.9
J-590EX	1,410.0	Desert Wells	0.0	88	1,613.0
J-920	1,434.0	Desert Wells	0.0	77	1,612.2
J-950	1,414.0	Desert Wells	0.0	84	1,608.9
J-960EX	1,401.0	Desert Wells	0.0	90	1,610.1
J-970EX	1,397.0	Desert Wells	0.0	91	1,608.0
J-1000EX	1,455.0	Desert Wells	0.0	77	1,633.3
J-1010EX	1,485.0	Desert Wells	0.0	64	1,632.5
J-1020EX	1,425.0	Desert Wells	0.0	90	1,633.7
J-1030EX	1,480.0	Desert Wells	0.0	67	1,634.0
J-1040EX	1,433.0	Desert Wells	0.0	80	1,617.2
J-1050EX	1,445.0	Desert Wells	0.0	75	1,617.8
J-1120EX	1,453.0	Desert Wells	0.0	73	1,622.2
J-1130EX	1,445.0	Desert Wells	0.0	76	1,619.6
J-1160EX	1,445.0	Desert Wells	0.0	81	1,633.2
J-1170EX	1,470.0	Desert Wells	0.0	70	1,632.8
J-1180EX	1,440.0	Desert Wells	0.0	84	1,633.4
J-1190EX	1,420.0	Desert Wells	0.0	92	1,633.7
J-1200EX	1,445.0	Desert Wells	0.0	82	1,633.4
J-1210EX	1,455.0	Desert Wells	0.0	77	1,632.8
J-1220EX	1,475.0	Desert Wells	0.0	68	1,631.8
J-1230EX	1,460.0	Desert Wells	0.0	66	1,613.4
J-1235EX	1,440.0	Desert Wells	0.0	76	1,615.2
J-1240EX	1,455.0	Desert Wells	0.0	70	1,616.1

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-1290EX	1,480.0	Desert Wells	0.0	66	1,632.0
J-1300EX	1,465.0	Desert Wells	0.0	73	1,632.8
J-1310EX	1,480.0	Desert Wells	0.0	66	1,632.1
J-1330EX	1,465.0	Desert Wells	0.0	73	1,632.8
J-1340EX	1,450.0	Desert Wells	0.0	79	1,633.2
J-1350EX	1,465.0	Desert Wells	0.0	73	1,632.8
J-1360EX	1,445.0	Desert Wells	0.0	81	1,633.2
J-1370EX	1,430.0	Desert Wells	0.0	88	1,633.4
J-1380EX	1,450.0	Desert Wells	0.0	79	1,633.4
J-1390EX	1,430.0	Desert Wells	0.0	88	1,633.4
J-1400EX	1,430.0	Desert Wells	0.0	88	1,633.4
J-1410	1,454.0	Desert Wells	0.0	73	1,623.6
J-1410EX	1,420.0	Desert Wells	0.0	92	1,633.7
J-1420EX	1,460.0	Desert Wells	0.0	71	1,623.0
J-1430EX	1,455.0	Desert Wells	0.0	73	1,623.5
J-1440EX	1,478.0	Desert Wells	0.0	64	1,624.9
J-1680EX	1,400.0	Desert Wells	0.0	91	1,609.5
J-1990EX	1,447.0	Desert Wells	0.0	74	1,619.0
J-2000EX	1,442.0	Desert Wells	0.0	75	1,615.9
J-2120EX	1,453.0	Desert Wells	0.0	73	1,620.9
J-2140EX	1,446.0	Desert Wells	0.0	75	1,619.8
J-2295	1,415.0	Desert Wells	0.0	84	1,608.8
J-DU3-4-010	1,405.0	Desert Wells	414.3	87	1,607.2
J-DU3-4-020	1,401.0	Desert Wells	414.3	89	1,607.2
J-DU3-4-030	1,397.0	Desert Wells	388.8	91	1,607.0
J-DU3-4-040	1,403.0	Desert Wells	453.9	88	1,607.4
J-DU3-4-050	1,410.0	Desert Wells	76.8	85	1,606.9
J-DU3-4-060	1,408.0	Desert Wells	176.7	86	1,605.7
J-DU3-4-070	1,404.0	Desert Wells	559.8	87	1,605.0
J-DU3-4-080	1,400.0	Desert Wells	559.8	89	1,605.0
J-DU3-4-090	1,393.0	Desert Wells	227.1	92	1,605.9
J-DU3-4-100	1,391.0	Desert Wells	558.3	93	1,606.8
J-DU3-4-110	1,393.0	Desert Wells	423.3	92	1,605.9
J-DU3-4-120	1,393.0	Desert Wells	468.3	92	1,605.9
J-DU3-4-130	1,399.0	Desert Wells	523.5	89	1,605.8
J-DU3-4-140	1,404.0	Desert Wells	279.6	87	1,605.8
J-DU3-4-150	1,407.0	Desert Wells	211.8	86	1,605.7
J-DU3-4-160	1,407.0	Desert Wells	270.0	86	1,606.0
J-DU3-4-170	1,412.0	Desert Wells	270.0	84	1,606.5
J-DU3-4-180	1,414.0	Desert Wells	22.2	84	1,607.3
J-DU3-4-190	1,417.0	Desert Wells	98.7	83	1,608.0
J-DU3-4-200	1,412.5	Desert Wells	414.3	84	1,607.6
J-DU3S-010	1,412.0	Desert Wells	30.6	85	1,608.2
J-DU3S-020	1,407.0	Desert Wells	33.0	87	1,607.6

ON SITE

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-DU3S-030	1,401.0	Desert Wells	45.0	89	1,607.3
J-DU3S-040	1,399.0	Desert Wells	33.0	90	1,607.2
J-DU3S-050	1,404.0	Desert Wells	36.3	88	1,607.2
J-DU3S-060	1,410.0	Desert Wells	35.4	85	1,607.5
J-DU3S-070	1,417.0	Desert Wells	21.0	83	1,607.9
J-DU3S-080	1,396.0	Desert Wells	161.7	91	1,607.1
J-DU6-010	1,459.0	Desert Wells	0.0	70	1,621.4
J-DU6-020	1,453.0	Desert Wells	2,196.2	73	1,620.7
J-DU6-030	1,450.0	Desert Wells	240.9	73	1,619.8
J-DU6-040	1,440.0	Desert Wells	482.1	78	1,619.8
J-DU6-050	1,448.0	Desert Wells	723.0	75	1,620.4
J-DU6-060	1,458.0	Desert Wells	500.4	71	1,622.6
J-DU6-070	1,452.0	Desert Wells	240.9	74	1,622.1
J-DU6-080	1,446.0	Desert Wells	240.9	75	1,620.5
J-DU6-090	1,435.0	Desert Wells	240.9	80	1,619.9
J-DU7-010	1,415.0	Desert Wells	19.5	84	1,608.6
J-DU7-020	1,425.0	Desert Wells	682.8	79	1,607.7
J-DU7-030	1,416.0	Desert Wells	0.0	83	1,607.8
J-DU7-040	1,409.0	Desert Wells	76.8	86	1,607.9
J-DU7-050	1,416.0	Desert Wells	157.5	84	1,609.3
J-DU7-060	1,423.0	Desert Wells	67.2	81	1,611.3
J-DU7-070	1,430.0	Desert Wells	0.0	79	1,613.7
J-DU7-080	1,434.0	Desert Wells	148.5	79	1,616.0
J-DU7-090	1,437.0	Desert Wells	0.0	76	1,612.4
J-DU7-100	1,435.0	Desert Wells	105.9	76	1,611.6
J-DU7-110	1,435.0	Desert Wells	96.0	76	1,610.5
J-DU7-120	1,420.0	Desert Wells	0.0	82	1,609.3
J-DU7-130	1,420.0	Desert Wells	7.8	82	1,609.3
J-DU7-140	1,425.0	Desert Wells	150.3	80	1,609.3
J-DU7-150	1,419.0	Desert Wells	88.5	82	1,609.3
J-DU7-160	1,435.0	Desert Wells	125.7	77	1,612.7
J-DU7-170	1,432.0	Desert Wells	46.5	78	1,612.1
J-DU7-180	1,433.0	Desert Wells	60.6	78	1,612.2
J-DU7-190	1,437.0	Desert Wells	101.4	76	1,613.8
J-DU7-200	1,432.0	Desert Wells	125.7	77	1,610.1
J-DU8-010	1,420.0	Desert Wells	0.0	82	1,609.3
J-DU8-020	1,419.5	Desert Wells	0.0	82	1,609.5
J-DU8-030	1,421.0	Desert Wells	0.0	82	1,609.9
J-DU8-040	1,418.0	Desert Wells	20.1	83	1,610.5
J-DU8-050	1,422.0	Desert Wells	0.0	82	1,610.8
J-DU8-060	1,420.0	Desert Wells	27.3	82	1,609.8
J-DU8-070	1,420.0	Desert Wells	46.2	82	1,609.8
J-DU8-080	1,422.0	Desert Wells	13.2	81	1,610.1
J-DU8-090	1,424.0	Desert Wells	33.0	80	1,609.9

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP
FlexTable: Junction Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Zone	Demand (gpm)	Pressure (psi)	Hydraulic Grade (ft)
J-DU8-100	1,425.0	Desert Wells	27.3	80	1,610.2
J-DU8-110	1,430.0	Desert Wells	130.8	78	1,609.9
J-DU8-120	1,431.0	Desert Wells	51.6	77	1,609.8
J-DU8-130	1,427.0	Desert Wells	63.0	79	1,610.0
J-DU9-010	1,419.0	Desert Wells	59.1	82	1,609.2
J-DU9-020	1,415.0	Desert Wells	109.5	84	1,609.2
J-DU9-030	1,416.0	Desert Wells	99.9	84	1,609.2
J-DU9-040	1,416.0	Desert Wells	23.4	84	1,609.2
J-DU9-050	1,419.0	Desert Wells	0.0	82	1,609.3
J-DU9-060	1,422.0	Desert Wells	94.2	81	1,609.8
J-DU9-070	1,414.0	Desert Wells	95.1	84	1,609.1
J-DU9-080	1,419.0	Desert Wells	115.8	82	1,609.1

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP

FlexTable: Pipe Table

(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-160EX	16.0	2,722.00	120.0	484.1	0.77	0.0002
P-170EX	16.0	5,366.00	120.0	484.1	0.77	0.0002
P-180EX	16.0	5,396.00	120.0	484.1	0.77	0.0002
P-190EX	16.0	5,728.00	120.0	484.1	0.77	0.0002
P-200EX	16.0	231.00	120.0	-1,225.7	1.96	0.0011
P-210EX	16.0	1,388.00	120.0	-1,043.6	1.67	0.0008
P-220EX	16.0	2,909.00	120.0	1,482.3	2.37	0.0015
P-240EX	16.0	1,387.00	120.0	-3,463.7	5.53	0.0072
P-250EX	16.0	2,611.00	120.0	1,050.1	1.68	0.0008
P-340EX	16.0	5,775.00	120.0	484.1	0.77	0.0002
P-410EX	16.0	5,368.00	120.0	484.1	0.77	0.0002
P-970	24.0	1,001.00	120.0	1,214.0	0.86	0.0001
P-980	24.0	1,935.00	120.0	0.0	0.00	0.0000
P-1060EX	16.0	1,328.00	120.0	-1,225.7	1.96	0.0011
P-1070EX	16.0	1,243.00	120.0	-1,225.7	1.96	0.0011
P-1630EX	16.0	1,793.00	120.0	442.3	0.71	0.0002
P-1640EX	16.0	1,335.00	120.0	989.1	1.58	0.0007
P-1780	24.0	1,528.00	120.0	1,214.0	0.86	0.0001
P-1790	24.0	1,115.00	120.0	1,214.0	0.86	0.0001
P-1940EX	16.0	1,976.00	120.0	-1,225.7	1.96	0.0011
P-1950EX	16.0	680.00	120.0	-1,225.7	1.96	0.0011
P-1970EX	16.0	927.00	120.0	140.0	0.22	0.0000
P-1980EX	16.0	1,106.00	120.0	-283.3	0.45	0.0001
P-2000EX	16.0	2,710.00	120.0	-1,225.7	1.96	0.0011
P-2040EX	16.0	10,635.00	120.0	-418.8	0.67	0.0001
P-2055EX	16.0	10,453.00	120.0	188.6	0.30	0.0000
P-2070EX	24.0	5,329.00	120.0	-1,190.1	0.84	0.0001
P-2340EX	16.0	2,281.00	120.0	-1,225.7	1.96	0.0011
P-2500EX	24.0	2,750.00	120.0	1,247.3	0.88	0.0002
P-2510EX	24.0	2,726.00	120.0	1,195.0	0.85	0.0001
P-2540EX	12.0	2,624.00	120.0	-147.1	0.42	0.0001
P-2570EX	16.0	2,640.00	120.0	0.0	0.00	0.0000
P-2655EX	16.0	2,870.00	120.0	484.1	0.77	0.0002
P-2660EX	24.0	2,797.00	120.0	1,797.5	1.27	0.0003
P-2665EX	16.0	2,716.00	120.0	484.1	0.77	0.0002
P-2690EX	16.0	2,914.00	120.0	556.1	0.89	0.0002
P-2700EX	16.0	3,115.00	120.0	1,606.2	2.56	0.0017
P-2710EX	16.0	1,823.00	120.0	1,312.6	2.09	0.0012
P-2720EX	12.0	3,042.00	120.0	-293.6	0.83	0.0003
P-2830	16.0	2,890.00	120.0	828.5	1.32	0.0005
P-2860EX	24.0	761.00	120.0	1,797.5	1.27	0.0003
P-2880EX	12.0	383.00	120.0	0.0	0.00	0.0000
P-2890EX	8.0	3,148.00	120.0	-92.5	0.59	0.0003
P-2900	24.0	1,423.00	120.0	1,613.7	1.14	0.0002

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP

FlexTable: Pipe Table

(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-2910EX	24.0	497.00	120.0	1,705.0	1.21	0.0003
P-2950	12.0	1,089.00	120.0	52.3	0.15	0.0000
P-2970EX	12.0	1,119.00	120.0	86.7	0.25	0.0000
P-2990EX	8.0	2,811.00	120.0	-66.6	0.42	0.0001
P-3010EX	12.0	471.00	120.0	92.5	0.26	0.0000
P-3020EX	12.0	1,167.00	120.0	20.1	0.06	0.0000
P-3030EX	12.0	378.00	120.0	0.0	0.00	0.0000
P-3040EX	8.0	3,081.00	120.0	-64.9	0.41	0.0001
P-3060	12.0	595.00	120.0	0.0	0.00	0.0000
P-3070EX	8.0	2,922.00	120.0	-44.7	0.29	0.0001
P-3080EX	12.0	1,397.00	120.0	-143.9	0.41	0.0001
P-3090EX	12.0	1,109.00	120.0	-114.9	0.33	0.0001
P-3100EX	12.0	695.00	120.0	32.3	0.09	0.0000
P-3110EX	12.0	664.00	120.0	3.3	0.01	0.0000
P-3120EX	8.0	1,851.00	120.0	-29.0	0.19	0.0000
P-3130	12.0	1,155.00	120.0	44.7	0.13	0.0000
P-3140EX	16.0	1,783.00	120.0	41.5	0.07	0.0000
P-3150EX	16.0	958.00	120.0	0.0	0.00	0.0000
P-3160EX	8.0	3,801.00	120.0	-41.5	0.26	0.0001
P-3170EX	8.0	2,838.00	120.0	-91.3	0.58	0.0003
P-3180EX	8.0	736.00	120.0	27.6	0.18	0.0000
P-3190EX	30.0	4,441.00	120.0	8,171.3	3.71	0.0017
P-3200	30.0	814.00	120.0	8,171.3	3.71	0.0017
P-3240EX	16.0	1,954.00	120.0	727.1	1.16	0.0004
P-3250EX	12.0	844.00	120.0	-432.2	1.23	0.0006
P-3260EX	16.0	1,108.00	120.0	1,482.3	2.37	0.0015
P-3270EX	16.0	1,509.00	120.0	1,109.9	1.77	0.0009
P-3280EX	12.0	2,890.00	120.0	-372.4	1.06	0.0005
P-3290EX	12.0	2,432.00	120.0	59.7	0.17	0.0000
P-3930EX	16.0	751.00	120.0	-1,225.7	1.96	0.0011
P-3940EX	16.0	509.00	120.0	-1,225.7	1.96	0.0011
P-3970EX	16.0	1,445.00	120.0	1,225.7	1.96	0.0011
P-4720EX	16.0	1,216.00	120.0	2,007.8	3.20	0.0026
P-4730EX	16.0	456.00	120.0	2,007.8	3.20	0.0026
P-4750EX	16.0	715.00	120.0	2,007.8	3.20	0.0026
P-4760EX	16.0	774.00	120.0	1,192.1	1.90	0.0010
P-4790EX	16.0	1,816.00	120.0	1,485.7	2.37	0.0015
P-5700EX	16.0	1,176.00	120.0	2,295.4	3.66	0.0034
P-5710EX	16.0	1,171.00	120.0	2,295.4	3.66	0.0034
P-5770	16.0	353.00	120.0	100.3	0.16	0.0000
P-5780	16.0	684.00	120.0	100.3	0.16	0.0000
P-6030	12.0	162.00	120.0	182.1	0.52	0.0001
P-6070	16.0	247.00	120.0	-716.3	1.14	0.0004
P-7000	16.0	742.00	120.0	-432.8	0.69	0.0002

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP

FlexTable: Pipe Table

(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

	Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
	P-COMWTREX	36.0	10.00	120.0	1,797.5	0.57	0.0000
ON-SITE	P-DU-3-4-070	12.0	734.00	120.0	-717.1	2.03	0.0016
	P-DU-3-4-080	12.0	913.00	120.0	-497.6	1.41	0.0008
	P-DU-3-4-090	12.0	1,401.00	120.0	62.2	0.18	0.0000
	P-DU-3-4-100	12.0	717.00	120.0	-622.0	1.76	0.0012
	P-DU-3-4-110	16.0	597.00	120.0	474.0	0.76	0.0002
	P-DU-3-4-120	16.0	1,375.00	120.0	-49.5	0.08	0.0000
	P-DU-3-4-130	12.0	1,165.00	120.0	169.0	0.48	0.0001
	P-DU-3S-130	16.0	1,385.00	120.0	-1,012.0	1.61	0.0007
ON-SITE	P-DU3-4-010	12.0	1,834.00	120.0	49.0	0.14	0.0000
	P-DU3-4-020	24.0	1,370.00	120.0	-1,105.1	0.78	0.0001
	P-DU3-4-030	24.0	1,035.00	120.0	-1,493.9	1.06	0.0002
	P-DU3-4-040	24.0	496.00	120.0	-1,957.1	1.39	0.0003
	P-DU3-4-050	24.0	1,092.00	120.0	-2,411.0	1.71	0.0005
	P-DU3-4-060	12.0	553.00	120.0	-793.9	2.25	0.0019
	P-DU3-4-160	12.0	1,157.00	120.0	-42.8	0.12	0.0000
	P-DU3-4-170	16.0	937.00	120.0	-498.0	0.79	0.0002
	P-DU3-4-180	16.0	1,045.00	120.0	-768.0	1.23	0.0004
	P-DU3-4-190	16.0	1,019.00	120.0	-1,038.0	1.66	0.0008
	P-DU3-4-200	16.0	958.00	120.0	-1,060.2	1.69	0.0008
	P-DU3-4-210	16.0	1,373.00	120.0	-1,158.9	1.85	0.0010
	P-DU3S-010	8.0	261.00	120.0	283.6	1.81	0.0021
	P-DU3S-020	8.0	1,374.00	120.0	121.8	0.78	0.0004
	P-DU3S-030	8.0	1,542.00	120.0	88.8	0.57	0.0002
	P-DU3S-040	8.0	1,242.00	120.0	43.8	0.28	0.0001
	P-DU3S-050	8.0	801.00	120.0	-49.3	0.31	0.0001
	P-DU3S-060	8.0	974.00	120.0	-38.5	0.25	0.0001
	P-DU3S-070	8.0	1,384.00	120.0	-74.8	0.48	0.0002
	P-DU3S-080	8.0	1,241.00	120.0	-110.2	0.70	0.0004
	P-DU3S-090	8.0	621.00	120.0	-131.2	0.84	0.0005
	P-DU3S-100	16.0	1,114.00	130.0	119.9	0.19	0.0000
	P-DU3S-110	16.0	1,525.00	130.0	-232.4	0.37	0.0000
	P-DU3S-120	16.0	1,560.00	120.0	-597.7	0.95	0.0003
	P-DU6-010	12.0	1,163.00	120.0	409.8	1.16	0.0006
	P-DU6-020	16.0	124.00	120.0	1,382.5	2.21	0.0013
	P-DU6-030	12.0	1,388.00	120.0	443.1	1.26	0.0007
	P-DU6-040	12.0	2,188.00	120.0	-20.1	0.06	0.0000
	P-DU6-050	12.0	2,203.00	120.0	190.6	0.54	0.0001
	P-DU6-060	12.0	2,209.00	120.0	409.8	1.16	0.0006
	P-DU6-070	16.0	142.00	120.0	2,000.5	3.19	0.0026
	P-DU6-080	12.0	1,130.00	120.0	800.5	2.27	0.0019
	P-DU6-090	12.0	1,397.00	120.0	356.4	1.01	0.0004
	P-DU6-100	12.0	1,966.00	120.0	105.5	0.30	0.0000
	P-DU6-110	12.0	1,963.00	120.0	-88.3	0.25	0.0000

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP

FlexTable: Pipe Table

(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-DU6-120	12.0	1,955.00	120.0	-289.8	0.82	0.0003
P-DU6-130	12.0	135.00	120.0	626.8	1.78	0.0012
P-DU6-140	12.0	1,094.00	120.0	675.7	1.92	0.0014
P-DU6-150	12.0	1,411.00	120.0	346.4	0.98	0.0004
P-DU6-160	16.0	211.00	120.0	1,037.6	1.66	0.0008
P-DU7-010	12.0	1,169.00	120.0	504.1	1.43	0.0008
P-DU7-020	12.0	1,092.00	120.0	178.7	0.51	0.0001
P-DU7-030	12.0	1,044.00	120.0	178.7	0.51	0.0001
P-DU7-040	24.0	1,410.00	120.0	-3,460.5	2.45	0.0010
P-DU7-050	24.0	1,075.00	120.0	-4,799.4	3.40	0.0018
P-DU7-060	24.0	1,254.00	120.0	-4,866.6	3.45	0.0019
P-DU7-070	24.0	992.00	120.0	-5,451.2	3.87	0.0023
P-DU7-080	24.0	2,552.00	120.0	-5,599.7	3.97	0.0024
P-DU7-090	16.0	941.00	120.0	-1,100.2	1.76	0.0009
P-DU7-100	16.0	1,562.00	120.0	-994.3	1.59	0.0007
P-DU7-110	16.0	1,742.00	120.0	-959.0	1.53	0.0007
P-DU7-120	16.0	778.00	120.0	1,102.8	1.76	0.0009
P-DU7-130	20.0	317.00	120.0	255.0	0.26	0.0000
P-DU7-140	20.0	1,207.00	120.0	262.8	0.27	0.0000
P-DU7-150	20.0	1,514.00	120.0	-66.0	0.07	0.0000
P-DU7-160	20.0	619.00	120.0	22.5	0.02	0.0000
P-DU7-170	12.0	1,073.00	130.0	-584.6	1.66	0.0009
P-DU7-180	12.0	828.00	120.0	458.9	1.30	0.0007
P-DU7-190	12.0	399.00	120.0	-192.4	0.55	0.0001
P-DU7-200	12.0	2,378.00	120.0	461.3	1.31	0.0007
P-DU7-210	12.0	1,049.00	120.0	-815.7	2.31	0.0020
P-DU7-220	12.0	1,054.00	120.0	-714.3	2.03	0.0016
P-DU7-230	12.0	1,714.00	120.0	-604.8	1.72	0.0012
P-DU7-240	12.0	1,014.00	120.0	-479.1	1.36	0.0008
P-DU8-010	16.0	1,107.00	120.0	111.2	0.18	0.0000
P-DU8-020	16.0	714.00	120.0	-646.7	1.03	0.0003
P-DU8-030	16.0	1,312.00	120.0	-630.8	1.01	0.0003
P-DU8-040	16.0	1,371.00	120.0	-749.5	1.20	0.0004
P-DU8-050	16.0	520.00	120.0	-904.6	1.44	0.0006
P-DU8-060	16.0	1,021.00	120.0	-1,214.0	1.94	0.0010
P-DU8-070	8.0	542.00	120.0	-135.6	0.87	0.0005
P-DU8-080	8.0	253.00	120.0	-51.0	0.33	0.0001
P-DU8-090	8.0	1,138.00	120.0	-97.2	0.62	0.0003
P-DU8-100	12.0	599.00	120.0	400.6	1.14	0.0005
P-DU8-110	12.0	709.00	120.0	187.8	0.53	0.0001
P-DU8-120	8.0	678.00	120.0	-111.9	0.71	0.0004
P-DU8-130	8.0	1,315.00	120.0	88.3	0.56	0.0002
P-DU8-140	8.0	966.00	120.0	62.7	0.40	0.0001
P-DU8-150	6.0	737.00	130.0	-7.6	0.09	0.0000

Active Scenario: DU 3-4 Peak Hour Demand - Served by SCAP
FlexTable: Pipe Table
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
P-DU8-160	8.0	1,265.00	120.0	47.7	0.30	0.0001
P-DU8-170	8.0	2,613.00	120.0	5.3	0.03	0.0000
P-DU8-180	8.0	1,778.00	120.0	-46.3	0.30	0.0001
P-DU8-190	8.0	1,185.00	120.0	25.6	0.16	0.0000
P-DU8-200	8.0	1,054.00	120.0	135.0	0.86	0.0005
P-DU9-010	16.0	904.00	120.0	-716.3	1.14	0.0004
P-DU9-020	16.0	227.00	120.0	-757.9	1.21	0.0004
P-DU9-030	8.0	1,616.00	120.0	-17.5	0.11	0.0000
P-DU9-040	8.0	746.00	120.0	-119.7	0.76	0.0004
P-DU9-050	8.0	869.00	120.0	-7.4	0.05	0.0000
P-DU9-060	8.0	1,550.00	120.0	-126.4	0.81	0.0005
P-DU9-070	8.0	1,001.00	120.0	-11.5	0.07	0.0000
P-DU9-080	8.0	644.00	120.0	-34.9	0.22	0.0000
P-DU9-090	8.0	3,092.00	120.0	30.6	0.20	0.0000
P-DU9-100	8.0	1,619.00	120.0	-50.4	0.32	0.0001
P-DU9-110	8.0	3,057.00	120.0	-14.1	0.09	0.0000
P-DU9-120	8.0	901.00	120.0	62.1	0.40	0.0001
P-DU9-130	8.0	879.00	120.0	-147.4	0.94	0.0006
P-DU9-140	8.0	430.00	120.0	-309.4	1.97	0.0024
P-DU9-150	8.0	4,471.00	120.0	-67.8	0.43	0.0001
P-SCAP	36.0	1,752.00	120.0	-13,615.2	4.29	0.0018

Active Scenario: DU 3-4 Max Day + FF - Served by SCAP
Fire Flow Node FlexTable: Fire Flow Report
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Zone	Elevation (ft)	Satisfies FF?	Flow (Total Needed) (gpm)	Fire Flow (Avalb.) (gpm)	Press. (Calc. Rsdl) (psi)	Pres. (Calc Zn Lwr Lmt) (psi)	Junction w/ Minimum Pressure (Zone)
J-100EX	Desert Wells	1,406.0	True	3,000.0	5,000.0	75	63	J-220EX
J-110EX	Desert Wells	1,440.0	True	3,000.0	5,000.0	62	63	J-220EX
J-120EX	Desert Wells	1,462.0	True	3,000.0	5,000.0	73	64	J-1010EX
J-135EX	Desert Wells	1,460.0	True	3,000.0	5,000.0	69	63	J-220EX
J-150EX	Desert Wells	1,472.0	True	3,000.0	5,000.0	60	62	J-1440EX
J-160EX	Desert Wells	1,435.0	True	3,000.0	5,000.0	45	49	J-280EX
J-170EX	Desert Wells	1,430.0	True	3,000.0	5,000.0	45	49	J-160EX
J-180EX	Desert Wells	1,405.0	True	3,000.0	5,000.0	55	53	J-170EX
J-190EX	Desert Wells	1,395.0	True	3,000.0	5,000.0	62	57	J-280EX
J-200EX	Desert Wells	1,385.0	True	3,000.0	5,000.0	75	60	J-280EX
J-220EX	Desert Wells	1,480.0	True	3,000.0	5,000.0	58	60	J-1440EX
J-230EX	Desert Wells	1,475.0	True	3,000.0	5,000.0	59	60	J-1440EX
J-250EX	Desert Wells	1,452.0	True	4,072.0	5,000.0	73	63	J-220EX
J-260EX	Desert Wells	1,453.0	True	3,000.0	5,000.0	71	63	J-220EX
J-270	Desert Wells	1,429.0	True	3,000.0	5,000.0	72	63	J-220EX
J-280EX	Desert Wells	1,460.0	True	3,000.0	5,000.0	43	52	J-1230EX
J-300EX	Desert Wells	1,392.0	True	4,107.8	5,000.0	87	63	J-220EX
J-330EX	Desert Wells	1,455.0	True	3,000.0	5,000.0	62	60	J-1230EX
J-340	Desert Wells	1,440.0	True	3,000.0	5,000.0	69	63	J-220EX
J-360EX	Desert Wells	1,400.0	True	3,000.0	5,000.0	79	63	J-220EX
J-550	Desert Wells	1,425.0	True	3,000.0	5,000.0	75	63	J-220EX
J-590EX	Desert Wells	1,410.0	True	3,000.0	5,000.0	74	63	J-220EX
J-920	Desert Wells	1,434.0	True	3,000.0	5,000.0	72	63	J-220EX
J-950	Desert Wells	1,414.0	True	3,000.0	5,000.0	79	63	J-220EX
J-960EX	Desert Wells	1,401.0	True	3,000.0	5,000.0	77	63	J-220EX
J-970EX	Desert Wells	1,397.0	True	3,000.0	5,000.0	80	63	J-220EX
J-1000EX	Desert Wells	1,455.0	True	3,000.0	5,000.0	76	63	J-1010EX
J-1010EX	Desert Wells	1,485.0	True	3,000.0	5,000.0	62	64	J-220EX
J-1020EX	Desert Wells	1,425.0	True	3,000.0	5,000.0	71	64	J-1010EX
J-1030EX	Desert Wells	1,480.0	True	3,000.0	5,000.0	67	64	J-1010EX
J-1040EX	Desert Wells	1,433.0	True	3,000.0	5,000.0	69	63	J-220EX
J-1050EX	Desert Wells	1,445.0	True	3,000.0	5,000.0	70	63	J-220EX
J-1120EX	Desert Wells	1,453.0	True	3,000.0	5,000.0	71	63	J-220EX
J-1130EX	Desert Wells	1,445.0	True	3,000.0	5,000.0	69	63	J-220EX
J-1160EX	Desert Wells	1,445.0	True	3,000.0	5,000.0	48	57	J-1360EX
J-1170EX	Desert Wells	1,470.0	True	3,000.0	5,000.0	69	63	J-1010EX
J-1180EX	Desert Wells	1,440.0	True	3,000.0	5,000.0	67	63	J-1010EX
J-1190EX	Desert Wells	1,420.0	True	3,000.0	5,000.0	59	64	J-1010EX
J-1200EX	Desert Wells	1,445.0	True	3,000.0	5,000.0	26	47	J-1370EX
J-1210EX	Desert Wells	1,455.0	True	3,000.0	4,928.2	20	25	J-1300EX
J-1220EX	Desert Wells	1,475.0	True	3,000.0	5,000.0	67	63	J-1010EX
J-1230EX	Desert Wells	1,460.0	True	3,000.0	5,000.0	50	51	J-280EX
J-1235EX	Desert Wells	1,440.0	True	3,000.0	5,000.0	71	63	J-220EX

Active Scenario: DU 3-4 Max Day + FF - Served by SCAP
Fire Flow Node FlexTable: Fire Flow Report
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Zone	Elevation (ft)	Satisfies FF?	Flow (Total Needed) (gpm)	Fire Flow (Avalb.) (gpm)	Press. (Calc. Rsdl) (psi)	Pres. (Calc Zn Lwr Lmt) (psi)	Junction w/ Minimum Pressure (Zone)
J-1240EX	Desert Wells	1,455.0	True	3,000.0	5,000.0	64	63	J-1230EX
J-1290EX	Desert Wells	1,480.0	True	3,000.0	5,000.0	65	63	J-1010EX
J-1300EX	Desert Wells	1,465.0	True	3,000.0	5,000.0	24	28	J-1210EX
J-1310EX	Desert Wells	1,480.0	True	3,000.0	5,000.0	65	63	J-1010EX
J-1330EX	Desert Wells	1,465.0	True	3,000.0	5,000.0	61	63	J-1010EX
J-1340EX	Desert Wells	1,450.0	True	3,000.0	5,000.0	66	63	J-1010EX
J-1350EX	Desert Wells	1,465.0	True	3,000.0	5,000.0	29	29	J-1300EX
J-1360EX	Desert Wells	1,445.0	True	3,000.0	5,000.0	57	57	J-1160EX
J-1370EX	Desert Wells	1,430.0	True	3,000.0	5,000.0	47	41	J-1200EX
J-1380EX	Desert Wells	1,450.0	True	3,000.0	5,000.0	65	63	J-1010EX
J-1390EX	Desert Wells	1,430.0	True	3,000.0	5,000.0	67	63	J-1200EX
J-1400EX	Desert Wells	1,430.0	True	3,000.0	5,000.0	62	56	J-1200EX
J-1410	Desert Wells	1,454.0	True	3,000.0	5,000.0	72	63	J-220EX
J-1410EX	Desert Wells	1,420.0	True	3,000.0	5,000.0	65	64	J-1010EX
J-1420EX	Desert Wells	1,460.0	True	3,000.0	5,000.0	68	63	J-220EX
J-1430EX	Desert Wells	1,455.0	True	3,000.0	5,000.0	66	61	J-1440EX
J-1440EX	Desert Wells	1,478.0	True	3,000.0	5,000.0	58	60	J-220EX
J-1680EX	Desert Wells	1,400.0	True	3,000.0	5,000.0	78	63	J-220EX
J-1990EX	Desert Wells	1,447.0	True	3,000.0	5,000.0	70	63	J-220EX
J-2000EX	Desert Wells	1,442.0	True	3,000.0	5,000.0	71	63	J-220EX
J-2120EX	Desert Wells	1,453.0	True	3,000.0	5,000.0	69	63	J-220EX
J-2140EX	Desert Wells	1,446.0	True	3,000.0	5,000.0	70	63	J-220EX
J-2295	Desert Wells	1,415.0	True	3,000.0	5,000.0	79	63	J-220EX
J-DU3-4-010	Desert Wells	1,405.0	True	3,276.2	5,000.0	81	63	J-220EX
J-DU3-4-020	Desert Wells	1,401.0	True	3,276.2	5,000.0	86	63	J-220EX
J-DU3-4-030	Desert Wells	1,397.0	True	4,259.2	5,000.0	87	63	J-220EX
J-DU3-4-040	Desert Wells	1,403.0	True	4,302.6	5,000.0	85	63	J-220EX
J-DU3-4-050	Desert Wells	1,410.0	True	3,051.2	5,000.0	76	63	J-220EX
J-DU3-4-060	Desert Wells	1,408.0	True	4,117.8	5,000.0	74	63	J-220EX
J-DU3-4-070	Desert Wells	1,404.0	True	4,373.2	5,000.0	69	63	J-220EX
J-DU3-4-080	Desert Wells	1,400.0	True	4,373.2	5,000.0	74	63	J-220EX
J-DU3-4-090	Desert Wells	1,393.0	True	4,151.4	5,000.0	86	63	J-220EX
J-DU3-4-100	Desert Wells	1,391.0	True	4,372.2	5,000.0	89	63	J-220EX
J-DU3-4-110	Desert Wells	1,393.0	True	4,282.2	5,000.0	85	63	J-220EX
J-DU3-4-120	Desert Wells	1,393.0	True	4,312.2	5,000.0	85	63	J-220EX
J-DU3-4-130	Desert Wells	1,399.0	True	4,349.0	5,000.0	82	63	J-220EX
J-DU3-4-140	Desert Wells	1,404.0	True	4,186.4	5,000.0	79	63	J-220EX
J-DU3-4-150	Desert Wells	1,407.0	True	4,141.2	5,000.0	71	63	J-220EX
J-DU3-4-160	Desert Wells	1,407.0	True	3,180.0	5,000.0	77	63	J-220EX
J-DU3-4-170	Desert Wells	1,412.0	True	4,180.0	5,000.0	75	63	J-220EX
J-DU3-4-180	Desert Wells	1,414.0	True	4,014.8	5,000.0	75	63	J-220EX
J-DU3-4-190	Desert Wells	1,417.0	True	4,065.8	5,000.0	76	63	J-220EX
J-DU3-4-200	Desert Wells	1,412.5	True	3,276.2	5,000.0	78	63	J-220EX

ON-SITE

Active Scenario: DU 3-4 Max Day + FF - Served by SCAP
Fire Flow Node FlexTable: Fire Flow Report
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Zone	Elevation (ft)	Satisfies FF?	Flow (Total Needed) (gpm)	Fire Flow (Avalb.) (gpm)	Press. (Calc. Rsdl) (psi)	Pres. (Calc Zn Lwr Lmt) (psi)	Junction w/ Minimum Pressure (Zone)
J-DU3S-010	Desert Wells	1,412.0	True	3,020.4	5,000.0	52	52	J-DU3S-070
J-DU3S-020	Desert Wells	1,407.0	True	3,022.0	3,642.8	20	51	J-DU3S-030
J-DU3S-030	Desert Wells	1,401.0	True	3,030.0	3,682.5	20	48	J-DU3S-020
J-DU3S-040	Desert Wells	1,399.0	True	3,022.0	5,000.0	32	40	J-DU3S-050
J-DU3S-050	Desert Wells	1,404.0	True	3,024.2	3,769.5	20	42	J-DU3S-060
J-DU3S-060	Desert Wells	1,410.0	True	3,023.6	3,446.6	20	53	J-DU3S-050
J-DU3S-070	Desert Wells	1,417.0	True	3,014.0	4,176.9	20	38	J-DU3S-060
J-DU3S-080	Desert Wells	1,396.0	True	4,107.8	5,000.0	85	63	J-220EX
J-DU6-010	Desert Wells	1,459.0	True	3,000.0	5,000.0	57	63	J-220EX
J-DU6-020	Desert Wells	1,453.0	True	6,196.2	7,000.0	65	63	J-220EX
J-DU6-030	Desert Wells	1,450.0	True	4,160.6	5,000.0	67	63	J-220EX
J-DU6-040	Desert Wells	1,440.0	True	4,321.4	5,000.0	66	63	J-220EX
J-DU6-050	Desert Wells	1,448.0	True	4,482.0	5,000.0	68	63	J-220EX
J-DU6-060	Desert Wells	1,458.0	True	4,500.4	5,000.0	69	63	J-220EX
J-DU6-070	Desert Wells	1,452.0	True	4,160.6	5,000.0	70	63	J-220EX
J-DU6-080	Desert Wells	1,446.0	True	4,160.6	5,000.0	66	63	J-220EX
J-DU6-090	Desert Wells	1,435.0	True	4,160.6	5,000.0	61	63	J-220EX
J-DU7-010	Desert Wells	1,415.0	True	4,013.0	5,000.0	80	63	J-220EX
J-DU7-020	Desert Wells	1,425.0	True	3,455.2	5,000.0	64	63	J-220EX
J-DU7-030	Desert Wells	1,416.0	True	3,000.0	5,000.0	69	63	J-220EX
J-DU7-040	Desert Wells	1,409.0	True	3,051.2	5,000.0	83	63	J-220EX
J-DU7-050	Desert Wells	1,416.0	True	4,105.0	5,000.0	81	63	J-220EX
J-DU7-060	Desert Wells	1,423.0	True	3,044.8	5,000.0	79	63	J-220EX
J-DU7-070	Desert Wells	1,430.0	True	3,000.0	5,000.0	77	63	J-220EX
J-DU7-080	Desert Wells	1,434.0	True	3,099.0	5,000.0	76	63	J-220EX
J-DU7-090	Desert Wells	1,437.0	True	3,000.0	5,000.0	72	63	J-220EX
J-DU7-100	Desert Wells	1,435.0	True	3,070.6	5,000.0	71	63	J-220EX
J-DU7-110	Desert Wells	1,435.0	True	3,064.0	5,000.0	71	63	J-220EX
J-DU7-120	Desert Wells	1,420.0	True	3,000.0	5,000.0	79	63	J-220EX
J-DU7-130	Desert Wells	1,420.0	True	4,005.2	5,000.0	78	63	J-220EX
J-DU7-140	Desert Wells	1,425.0	True	4,100.2	5,000.0	76	63	J-220EX
J-DU7-150	Desert Wells	1,419.0	True	4,059.0	5,000.0	79	63	J-220EX
J-DU7-160	Desert Wells	1,435.0	True	3,083.8	5,000.0	67	63	J-220EX
J-DU7-170	Desert Wells	1,432.0	True	3,031.0	5,000.0	70	63	J-220EX
J-DU7-180	Desert Wells	1,433.0	True	3,040.4	5,000.0	70	63	J-220EX
J-DU7-190	Desert Wells	1,437.0	True	3,067.6	5,000.0	65	63	J-220EX
J-DU7-200	Desert Wells	1,432.0	True	3,083.8	5,000.0	65	63	J-220EX
J-DU8-010	Desert Wells	1,420.0	True	3,000.0	5,000.0	78	63	J-220EX
J-DU8-020	Desert Wells	1,419.5	True	3,000.0	5,000.0	77	63	J-220EX
J-DU8-030	Desert Wells	1,421.0	True	3,000.0	5,000.0	75	63	J-220EX
J-DU8-040	Desert Wells	1,418.0	True	3,013.4	5,000.0	76	63	J-220EX
J-DU8-050	Desert Wells	1,422.0	True	3,000.0	5,000.0	75	63	J-220EX
J-DU8-060	Desert Wells	1,420.0	True	3,018.2	5,000.0	58	61	J-DU8-070

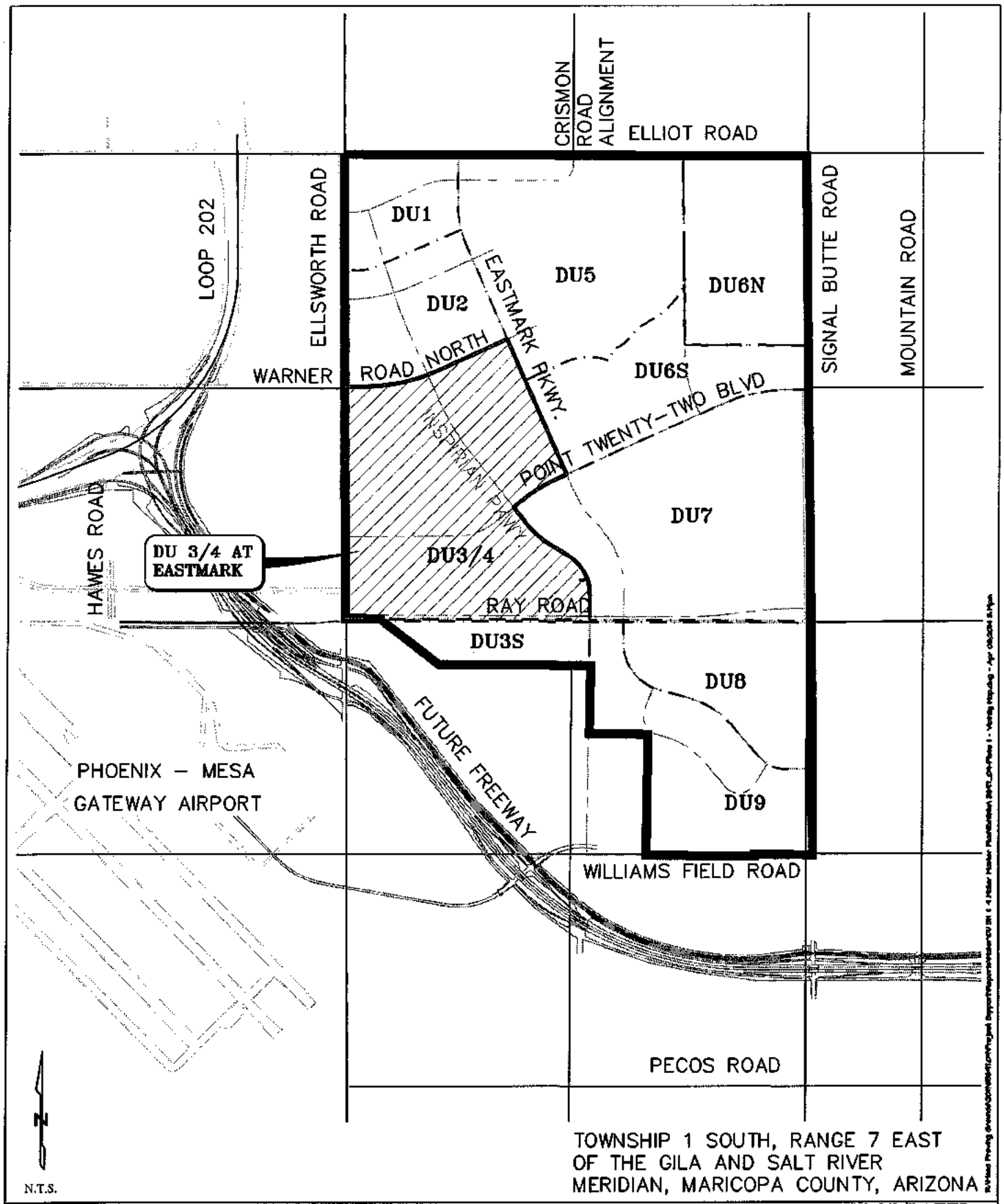
Active Scenario: DU 3-4 Max Day + FF - Served by SCAP
Fire Flow Node FlexTable: Fire Flow Report
(113697_09 DU 3-4 EM Water Model-04-02-14.wtg)

Current Time: 0.000 hours

Label	Zone	Elevation (ft)	Satisfies FF?	Flow (Total Needed) (gpm)	Fire Flow (Avalb.) (gpm)	Press. (Calc. Rsdl) (psi)	Pres. (Calc Zn Lwr Lmt) (psi)	Junction w/ Minimum Pressure (Zone)
J-DU8-070	Desert Wells	1,420.0	True	3,030.8	5,000.0	43	63	J-DU8-060
J-DU8-080	Desert Wells	1,422.0	True	3,008.8	5,000.0	65	63	J-220EX
J-DU8-090	Desert Wells	1,424.0	True	3,022.0	5,000.0	48	58	J-DU8-120
J-DU8-100	Desert Wells	1,425.0	True	3,018.2	5,000.0	69	63	J-220EX
J-DU8-110	Desert Wells	1,430.0	True	3,087.2	5,000.0	20	43	J-DU8-120
J-DU8-120	Desert Wells	1,431.0	True	3,034.4	3,134.2	20	64	J-220EX
J-DU8-130	Desert Wells	1,427.0	True	3,042.0	5,000.0	29	40	J-DU8-120
J-DU9-010	Desert Wells	1,419.0	True	3,039.4	5,000.0	78	63	J-220EX
J-DU9-020	Desert Wells	1,415.0	True	4,073.0	5,000.0	52	63	J-220EX
J-DU9-030	Desert Wells	1,416.0	True	4,066.6	5,000.0	44	52	J-DU9-040
J-DU9-040	Desert Wells	1,416.0	True	3,015.6	4,523.7	20	48	J-DU9-050
J-DU9-050	Desert Wells	1,419.0	True	3,000.0	5,000.0	25	31	J-DU9-080
J-DU9-060	Desert Wells	1,422.0	True	3,062.8	5,000.0	38	49	J-DU9-080
J-DU9-070	Desert Wells	1,414.0	True	3,063.4	3,950.7	20	51	J-DU9-080
J-DU9-080	Desert Wells	1,419.0	True	3,077.2	3,987.9	20	51	J-DU9-050

PLATE 1

Vicinity Map



NOT FOR CONSTRUCTION
OR RECORDING

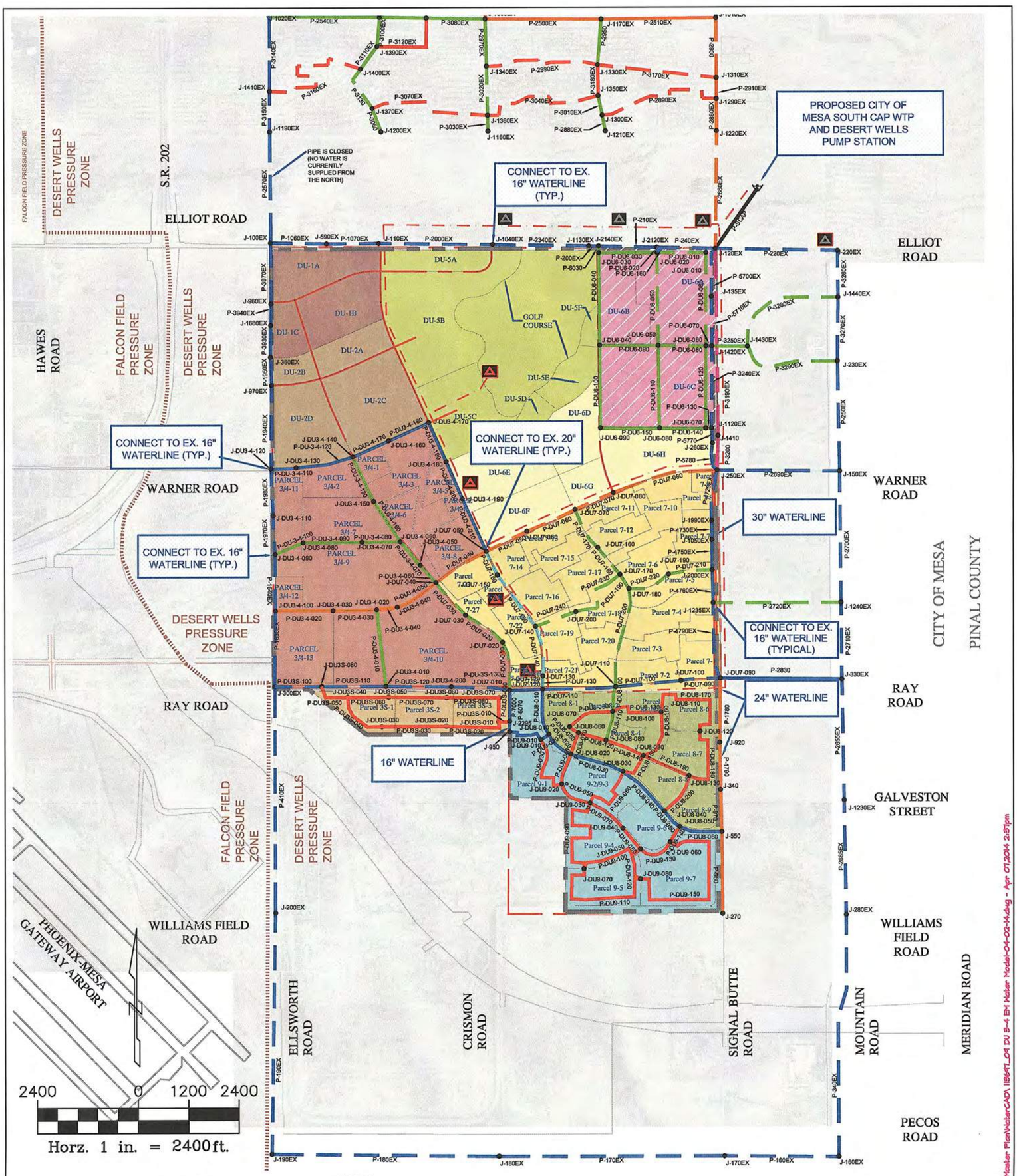
PLATE 1: VICINITY MAP

EASTMARK
MESA, ARIZONA

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION/TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2220 S. Country Club Dr.
Suite 101
Mesa, AZ 85210
(480) 834-3300
www.woodpatel.com
PHOENIX • MESA • TUCSON

PLATE 2

DU 3/4 South Master Water Exhibit



LEGEND

NOTES:
1. INFRASTRUCTURE SIZES AND LOCATIONS ARE CONCEPTUAL AND SUBJECT TO CHANGE.

PIPE DIAMETER	EXISTING	PLANNED
8-INCHES		
12-INCHES		
16-INCHES		
20-INCHES		
24-INCHES		
30-INCHES		
WELL SITE		
WELL COLLECTION LINE		
PRESSURE ZONE BOUNDARY		

●	JUNCTION NODE
▽	WATER SOURCE
P-XXX	PROPOSED PIPE
P-XXXEX	EXISTING PIPE
J-XXX	JUNCTION NODE (PROPOSED)
J-XXXEX	JUNCTION NODE (EXIST.)
MODELED PRESSURE ZONE :	DESERT WELLS

ON-SITE DEVELOPMENT UNITS

DU-1	DU-6N
DU-2	DU-6S
DU-3S	DU-7
DU-3/4	DU-8
DU-5	DU-9

DU-4A DEVELOPMENT UNIT SUB-AREA

SITE BOUNDARY

FIRST SOLAR SITE

PLATE 2 - DU 3/4 MASTER WATER EXHIBIT

EASTMARK
MESA, ARIZONA

NOT FOR CONSTRUCTION OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2220 S. Country Club Dr.
Suite 101
Mesa, AZ 85210
(480) 834-3300
www.woodpatel.com
PHOENIX • MESA • TUCSON

R:\Mesa Proving Grounds\2011\11841\01\Project Support\Reports\Water\DU 3/4 & 4 Water Master Plan\Water\CAD\ 11841_01 DU 3-4 EH Water Model-04-02-14.dwg - Apr 07,2014 2:57pm