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WS-01303A-02-0867
WS-01303A-02-0868
WS-01303A-02-0869
WS-01303A-02-0870
W-01303A-02-0908

May 25, 2005

Re: Arizona-American Water Company's General Rate Case
Docket Nos. WS-01303A-02-0867, *et. al.*
Decision No. 67093: Compliance Filing

Dear Sir or Madam:

As required by Decision No. 67093 enclosed are an original and 21 copies of the **Youngstown/Sun City Fire Flow Task Force Report**. Copies of the Report are being mailed today to the parties of record in Docket Nos. WS-01303A-02-0867, *et. al.* Copies are also being mailed to each of the Commissioners under separate cover.

Very truly yours,

Craig A. Marks
Corporate Counsel

Cc: Parties of Record

Enclosure

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YOUNGTOWN/SUN CITY

FIRE FLOW TASK FORCE REPORT

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Section I – Report Summary

Youngtown/Sun City Fire Flow Task Force

Report Summary

The following report is provided in accordance with Amendment #1, to Arizona American Water's last rate case, Docket No. WS-01303A-02-0867 et al. In this Amendment, Arizona American was tasked to form a Fire Flow Task Force ("Task Force") with the purpose of determining if the water production capacity, storage capacity, water lines, water pressure, and fire hydrants of Youngtown and Sun City are sufficient to provide the fire protection desired by the communities of Sun City and Youngtown.

In the summer of 2004, Arizona American Water initiated its planning process for the Task Force. Following the success of a similar process recently completed by Arizona American Water in Paradise Valley, a professional team of public planners and engineers was assembled to assist with the Task Force. This team included:

Marty Rozelle, Ph.D. – President, The Rozelle Group, LTD
Ron Ablin, P.E. – Regional Infrastructure Manager, Brown and Caldwell Engineering
Jennifer Hill, P.E. – Senior Engineer, Brown and Caldwell Engineering

In accordance with the Amendment, Arizona American Water formed the Task Force in October 2004, with the following representatives:

- Town of Youngtown Management and Public Works
- Youngtown resident
- Youngtown area senior citizen health care facility
- Sun City Taxpayers Association
- Recreation Centers of Sun City
- Sun City Home Owners Association
- Condominium Owners Association, Inc.
- Sun City Fire Department
- City of Surprise Fire Department

In addition to the above representatives, Brian Biesemeyer, Network General Manager, represented Arizona American Water on the Task Force. Additionally, Don Breeding, Asset and Capital Planning Manager; Tom Broderick, Government and Regulatory Affairs Manager; and Steve Uraine, Field Operations Supervisor, provided additional staff support for the Task Force.

The public process of the Task Force occurred from October 2004 through March 2005, with a remarkable solidarity between all members of the Task Force. Several of the groups represented on the Task Force had disagreed, or were currently in disagreement, with each other on various issues in the community; however, when it came to the issue of public safety as related to fire flow, all were unified in their concern and diligence to find a solution. While the initial purpose assigned to the Task Force was to evaluate the available fire flow capacity, the Task Force quickly moved beyond simply evaluating, to determining a plan to provide the fire flow capacity desired by the communities. A more detailed review of the public planning process is included in Attachment A to this report.

The resulting plan from the Task Force is a comprehensive one that addresses the community needs in a systematic and logical fashion. While the majority of the Sun City/Youngtown Water System met the communities' required fire flows (1000 gallons per minute for residential areas and 1500 gallons per minute for commercial areas), several deficiencies were found, most notably:

(1) A lack of fire hydrants (large distances between fire hydrants) in Sun City south of Grand Avenue
(2) A lack of fire hydrants in Youngtown
(3) Insufficient fire flow in a residential area in Youngtown (vicinity of Illinois Avenue) and another residential area in Sun City (along North Cherry Hills Drive)
(4) Insufficient fire flow in some commercial areas in Youngtown

To correct these deficiencies, a Four-Year Fire Flow Improvement Plan ("Four-Year Plan") was developed that followed the priorities of, first, improving fire flows below 500 gallons per minute, and then improving residential areas before commercial. The Four-Year Plan (discussed in detail in Attachment B to this report) involves an investment of $3.1 million over four years. The Four-Year Plan also calls for a slightly higher investment in Youngtown ($1.62 million) than Sun City ($1.38 million), with only a small investment necessary in the City of Peoria ($82,500). Arizona American Water estimates that this investment will require a rate increase of approximately 6.2 percent for customers.

With full knowledge of the Four-Year Plan and its estimated costs, the Task Force *unanimously* endorsed it. This endorsement is attached in Section II of this report.

Section II – Task Force Summary Statement

Sun City/ Youngtown Water District
Fire Flow Improvement Program:
A Cooperative Planning Process

As members of the Youngtown/Sun City Fire Flow Task Force, we support the Four-Year PLAN, including the fire flow improvement projects and schedule, and we understand that an increase in rates, as explained below, is necessary. We appreciate the commitment made to us by Arizona-American Water Company to accelerate the schedule when possible. As Task Force members we have taken care to represent the interests of our organizations or constituents. However, some of us are not empowered to speak on behalf of or commit our elected officials or Boards of Directors. It is our hope that these commitments will be forthcoming, and we will work towards that objective.

Arizona-American Water Company serves Sun City and Youngtown. Concern about the inconsistent levels of fire flow in parts of the service area led to an order by the Arizona Corporation Commission to form a Fire Flow Task Force. The purpose of this Task Force was to determine if the water production capacity, storage capacity, water lines, water pressure, and fire hydrants of Youngtown and Sun City are sufficient to provide the fire protection capacity that is necessary for each community.

The Arizona Corporation Commission regulates Arizona-American Water Company as a private water provider. Under Arizona Administrative Code R12-2-407.E, Arizona-American Water Company is required to deliver potable water to the customer at a minimum pressure of 20 pounds/square inch. This requirement is silent on enhanced water flow for fire protection. Although Arizona-American Water Company is not required to provide fire flow within their service area, they believe fire flow is an important issue within the Sun City/Youngtown District. They committed to use input from the Task Force to develop a capital improvement program that, over time, would bring fire flow levels in this district up to acceptable levels.

In October 2004, Arizona-American Water Company initiated a comprehensive and thoughtful public planning process to study the matter of how best to identify and prioritize system improvements that would be completed over several years. They formed a citizen-based Fire Flow Task Force to help set these priorities.

The Task Force followed a systematic four-step planning process:

1. Become educated and informed on all relevant issues
2. Develop and prioritize criteria that will be used to generate and evaluate fire flow system improvement projects
3. Prioritize specific projects
4. Endorse a recommended improvement plan

To provide guidance to Arizona-American Water Company, members agreed that the priority to improvements should be given to residential areas over commercial areas. They also agreed that areas with less than 500 gallons per minute should be addressed as soon as possible. After careful analysis and under the guidelines discussed above, Arizona-American Water Company presented to the Task Force a Four-Year Public Safety Capital Investment Plan (Four-Year PLAN).

The improvement projects include: modification of pressure reducing/pressure sustaining valves; replacement of existing pipes with more than 42,000 lineal feet of new 6 to 10-inch lines; and installation of more than 200 fire hydrants. The pressure valve modification would be completed in 2005. The remainder of the projects would be spread across the next four years with completion expected in 2009.

During this Four -Year PLAN, Arizona-American Water Company is anticipating a $3.1 million investment for fire flow improvements. Between 2005 and 2010, this level of investment is expected to cause rates to increase. The Arizona Corporation Commission first must approve rate increases before they can take effect. Arizona-American Water Company is committed to being flexible and cost efficient, respecting the best interest of their customers, working closely with Youngtown and Sun City management and the Sun City, Peoria, and Surprise Fire Departments. They are also committed to keeping all of their customers informed.

This Four-Year PLAN is submitted in compliance with the Arizona Corporation Commission Amendment #1 to the Arizona-American Water Company rate case, Docket No. WS-01303A-02-0867 et al. While Arizona-American Water Company stands behind the community in this plan, approval by the Corporation Commission is necessary in order for Arizona-American Water Company to commit to the Four-Year PLAN.

Raymond Dare, President
Sun City Taxpayers Association

Orville Druehl
Youngtown resident

Mark Fooks, Town Manager
Youngtown

Grey Gooby, Board Member
Condominium Owners Association

Jim Green, President
Sun City Community Fund

4-25-05
Gene Jensen. Board Member
Sun City HOA

David Kafora, Executive Director
Youngtown Baptist Village

Jesse Mendez
Public Works Director, Youngtown

Steve Morrow, Assistant Chief
Sun City Fire Department

Jim Sebert, Chief
Sun City Fire Department

Jim Wellman, Sr. Manager
Recreation Centers of Sun City

Mike White, Chief
City of Surprise Fire Department

Youngtown/Sun City Fire Flow Improvement Program: A Cooperative Planning Process

FINAL REPORT
May 2005

Members of the Youngtown/Sun City Fire Flow Task Force

Arizona American Water

Youngtown/Sun City
Fire Flow Improvement Program:
A Cooperative Planning Process

Final Report

Prepared for
Arizona American Water Company

by
The Rozelle Group. Ltd.

May 2005

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I. INTRODUCTION

Arizona American Water Company serves Sun City and Youngtown. Concern about the inconsistent levels of fire flow in parts of the service area led to an order by the Arizona Corporation Commission to form a Fire Flow Task Force. The purpose of this Task Force was to determine if the water production capacity, storage capacity, water lines, water pressure, and fire hydrants of Youngtown and Sun City are sufficient to provide the fire protection capacity that is desired by each community. This order further directed the Company to present findings and a proposed plan of action by May 30, 2005. As an indication of the Commission's continuing interest in the efforts of the Task Force, Commissioner Mundell attended the February 15, 2005 meeting and Commissioner Mayes attended the March 15, 2005 meeting.

Arizona American Water Company is part of American Water Company, the nation's largest private enterprise devoted exclusively to the business of providing water and wastewater services. American Water Company serves over 18 million people in 29 states and three Canadian provinces. Communities served in Arizona include: Anthem, Paradise Valley, Sun City, Sun City West, Youngtown, Surprise, Peoria, Buckeye, Bullhead City, Lake Havasu City, and Tubac. Arizona American Water Company has provided continuous water and wastewater service in Arizona since 1962.

The water in Sun City and Youngtown comes from 19 wells. The distribution system covers 18 square miles with more than 22,000 connections. The challenges to the Youngtown/Sun City system in regards to providing fire flow as evaluated through the Task Force process are: undersized pipes and insufficient number of fire hydrants in certain areas.

The Arizona Corporation Commission regulates Arizona American Water Company as a private water provider. The Company is compliant with all requirements under Arizona Administrative Code R14-2-407 *et seq.* They are required to deliver potable water to the customer at a minimum pressure of 20 pounds/square inch. They are not required to provide fire flow within their service area.

II. Formation of the Youngtown/Sun City Task Force

In October 2004 Arizona American Water Company formed the Youngtown/Sun City Task Force and initiated a comprehensive and thoughtful public planning process to study the matter of how best to prioritize system improvements that would be completed over several years. The Company retained Dr. Martha Rozelle, President of The Rozelle Group, Ltd., to organize and facilitate the Task Force. Dr. Rozelle is a leading expert in public participation and is the Past-President of the International Association of Public Participation.

Dr. Rozelle interviewed a dozen customers in the Arizona American Water Company Youngtown/Sun City Water District to understand the range of concerns and to receive guidance on the membership and structure of the Task Force.

The criteria for membership on the Task Force included representative(s) from:

- Town of Youngtown management and public works
- Youngtown resident
- Youngtown area senior citizen health care facility
- Sun City Taxpayers Association
- Recreation Centers of Sun City
- Sun City Home Owners Association
- Condominium Owners Association, Inc.
- Sun City Fire Department
- City of Surprise Fire Department

All Task Force members were Arizona American Water Company customers and represented areas with current fire flow levels ranging from 500 gpm to 1500 gpm. See Appendix A for a complete listing of the 13 members of the Task Force.

Brian Biesemeyer, Network General Manager; Steve Uraine, Field Operations Supervisor; and Don Breeding, Asset and Capital Planning Manager, were the primary Arizona American Water Company staff overseeing this project. Tom Broderick, Government and Regulatory Affairs Manager, was also involved in the project. Arizona American Water Company retained Jennifer Hill and Ron Ablin of Brown & Caldwell Engineering Company to model the current system and recommend system improvements. Brown & Caldwell is a private firm that provides design services and construction management exclusively for the water and wastewater industry.

At its first meeting the Task Force agreed upon the following mission statement:

To build consensus among representatives of all stakeholder parties served by Arizona American Water Company in the Youngtown/Sun City Water District regarding the priorities for addressing needs and feasibility of water system improvements to meet fire flow requirements and expectations. Membership shall include, but not limited to, representatives from Arizona American Water Company, Youngtown, Sun City, the Sun City Taxpayer's Association, the Recreation Centers of Sun City, and the Sun City Fire Department.

The Task Force also adopted ground rules for its conduct:

- Respect each participant and their views
- Participate In open and timely communication
- Commit to creative problem solving – Keep an open mind. Be willing to consider other possibilities and approaches.

See Appendix B for the complete Task Force Purpose and Process Ground Rules.

Over the course of five months, the Task Force met six times, beginning on October 12, 2004 and ending on March 15, 2005. Meeting agendas, summaries, and attendance records are included in Appendix C.

III. Issues of Concern or Questions Raised by the Task Force

At its first meeting, members received a brief introduction to Arizona American Water Company by Brian Biesemeyer. Jennifer Hill of Brown & Caldwell presented information on how water systems work and defined several technical terms. She explained how water modeling works and how hydrant flow tests are performed. She described how she planned to use a computer model to identify low-pressure areas, model the results of specific improvements to the system, provide a cost-benefit analysis of those improvements and suggest an implementation plan.

The Fire Department representative asked the Company for a list of hydrants and locations to compare with their maps. The Mayor of Youngtown asked for clarification on some issues regarding the last rate case that Arizona American Water Company filed with the Arizona Corporation Commission. Another member asked about the status of fire hydrant inspections. A suggestion was made to invite the City of Peoria and Town of El Mirage Fire Departments to participate in the Task Force meetings. The invitation was extended and representatives attended a few subsequent meetings.

IV. The Task Force Recommendation Process

The Task Force followed a systematic four-step planning process:

1. Become educated and informed on all relevant issues
2. Develop and prioritize criteria that will be used to generate and evaluate fire flow system improvement projects
3. Prioritize specific projects
4. Endorse a recommended improvement plan

The group agreed that the overall goal was to provide fire safety protection to Arizona American Water Company customers in the Youngtown/Sun City District. Members were comfortable with the assumptions that all projects must be technically feasible and that some should be completed before others can begin.

The group agreed to the following fire flow requirements for existing construction:

Category	Required fire flow
Single family residential	1,000 gpm
Multi-family residential	1,500 gpm
Non-residential	1,500 gpm

Members agreed that the priority for improvements should be given to residential areas over commercial areas. They also agreed that areas with less than 500 gallons per minute should be addressed as soon as possible.

V. Recommendation

At the February 15, 2005 Task Force meeting, Brian Biesemeyer presented the project improvements, or Four-Year Plan, that Arizona American Water Company recommended through 2009.

Year	Description	Cost
Immediate	Sun City and Youngtown pressure reducing/pressure sustaining valve modifications	$ 10,000
Year 1	Youngtown neighborhood commercial – 111th Avenue south of Youngtown Avenue; Youngtown residential; fire hydrants in Youngtown and Sun City installed on existing pipe	$ 680,960
Year 2	City of Peoria – Paradise Mobile Home Park; Sun City residential; Youngtown – 6" piping and fire hydrants	$ 699,568
Year 3	6" piping and fire hydrants - Sun City and Youngtown	$ 702,934
Year 4	6" piping and fire hydrants - Sun City and Youngtown; piping improvements – Youngtown commercial	$ 986,640
Total		**$3,080,102**

The improvement projects include: modification of pressure reducing/pressure sustaining valves; replacement of existing pipes with more than 42,000 lineal feet of new 6 to 10-inch lines; and installation of more than 200 fire hydrants.

All Task Force members agreed that the plan was good, and encouraged Arizona American Water Company to set the goal of escalating the projects as much as possible without adding to the cost. They supported the need for the plan to be flexible, particularly in the later years of implementation. They stressed the importance of keeping the customers informed throughout the process.

The Task Force expressed its gratitude and strong thanks to Arizona American Water Company and their representatives for their forthright, helpful, and supportive role in this evaluation process.

VI. Customer Outreach Program and Rate Impacts

At the February and March Task Force meetings, Brian Biesemeyer explained that Arizona American Water Company is anticipating a $3.1 million investment. Between 2005 and 2010, this level of investment is expected to cause rates to increase by 6.2%. The Arizona Corporation Commission first must approve rate increases before they can take effect. While the Company stands behind the community in this plan, approval by

the Corporation Commission is necessary in order for Arizona American Water Company to commit to the Four-Year Plan.

The Company is committed to being flexible and cost efficient, respecting the best interest of their customers, working closely with Youngtown and Sun City management and the Sun City, Peoria, and Surprise Fire Departments. They are also committed to keeping all of their customers informed.

VII. Conclusion

The public planning process was a successful, cooperative effort among Arizona American Water Company, its customers, the Town of Youngtown and representatives from Sun City and the Sun City and Surprise Fire Departments. The issue was widely covered in the local print media. The Task Force developed thoughtful recommendations and acknowledged the potential impact on the current water rates.

Appendix A

Membership Roster for Youngtown/Sun City Task Force

Ray Dare	Sun City Taxpayers Association
Orville Dreuhl	Youngtown Resident
Mark Fooks	Youngtown Town Manager
Grey Gooby	Condominium Owners Association, Inc.
Jim Green	Sun City Community Fund
Gene Jensen	Sun City Home Owners Association
David Kafora	Youngtown Baptist Village Executive Director
Jesse Mendez	Youngtown Public Works Director
Steve Morrow	Sun City Fire Department Assistant Chief
Jim Sebert	Sun City Fire Department Chief
Jim Wellman	Recreation Centers of Sun City, Sr. Manager
Mike White	City of Surprise Fire Department
*Jeff Valder	Pulte Homes

*Served for three meetings, but left the company. No replacement was made.

Appendix B

Youngtown/Sun City Fire Flow Task Force
Purpose and Process Ground Rules

1) Objective

To build consensus among representatives of all stakeholder parties served by Arizona American Water (AAW) in the Youngtown/Sun City Water District regarding the priorities for addressing needs and feasibility of water system improvements to meet fire flow requirements and expectations. Membership shall include , but not limited to, representatives from AAW, Youngtown, Sun City, the Sun City Taxpayer's Association, the Recreation Centers of Sun City, and the Sun City Fire Department,

2) Behavior and Participation

Respect each participant and their views

- Everyone will respect the personal integrity and values of each participant. The motivations and intentions of participants will not be questioned.
- Focus on the issues not the person.

Open and timely communication

- Listen to each other without interrupting; listen fully before responding.
- Be concise and take time to communicate clearly.
- Repetition of previous points should be avoided.

Commit to creative problem solving – Keep an open mind. Be willing to consider other possibilities and approaches.

- Disagreements will be regarded as creative opportunities. Reach past compromise to creative solutions.

3) Youngtown/Sun City Work Group Members Responsibilities

Participation in meetings – It is anticipated that the Work Group will meet six times through the months of October 2004 to March 2005. Each member will make their best efforts to participate in the meetings in order to maintain continuity and understanding of the issues.

Communication with press and other organizations – Participants are free to communicate with press and interested organizations regarding their *own* views. Comments should accurately reflect the Work Group's activities as documented in the meeting summaries. No comments or statements should be made that could negatively impact the Work Group's ability to accomplish its mission. Any statements attributed to the Work Group must be approved by AAW and the Work Group membership and reflected in the meeting summaries.

4) Facilitator's Responsibilities – Dr. Marty Rozelle, under contract to AAW, will facilitate the Work Group meetings

Compile and maintain Work Group roster –Dr. Rozelle will compile and maintain a current roster of Work Group members and make the current roster available to all participants. The roster will include each participant's name, voice and fax numbers, and email address.

Preparation of meeting agendas – Agenda items for the next Work Group meeting will be discussed at the end of each meeting. Dr. Rozelle will then prepare the meeting agenda and distribute it to Work Group participants via email prior to the next meeting. She will coordinate the agenda with AAW and Brown & Caldwell.

Preparation of meeting summaries –Dr. Rozelle will prepare summaries of Work Group meetings. Meeting summaries will document issues discussed and include any unanimous recommendations made by the Group. Every effort will be made to accurately convey the concerns and perspectives of the participants. Meeting summaries will also include action items, work tasks, deadlines and schedules. Draft meeting summaries will be circulated for review by the participants on the Work Group roster prior to the next meeting. She will revise the draft meeting summary consistent with revisions suggested by the participants. The revised meeting summary will be provided to the participants via email and they will then review and ratify the meeting summary at the beginning of the next meeting.

Maintain master file of documents –AAW will maintain a file of all materials presented at Work Group meetings. This will include agendas, meeting summaries, reports, presentations, memos and handouts distributed at the meetings.

Appendix C

Task Force Meeting Agendas and Summaries

Youngtown/Sun City Fire Flow Work Group
Meeting #1

October 12, 2004
4:00 – 6:00 p.m.
Youngtown Police Training Room

4:00 – 4:15	Welcome, Introductions, Purpose	Brian Biesemeyer Arizona American Water
4:15 – 4:30	Overview of AAW operations	Brian Beisemeyer
4:30 – 5:15	"Municipal Water Systems 101" Youngtown/Sun City System Schedule and Scope of Work	Jennifer Hill Brown & Caldwell
5:15 – 5:45	Operating Principles and Responsibilities for Work Group	Marty Rozelle The Rozelle Group
5:45 – 6:00	Future Meeting Dates Questions	All

Meeting Summary
Youngtown/Sun City Fire Flow Work Group
October 12, 2004

1. Welcome, Introductions, Purpose

The Arizona American Water (AAW) Youngtown/Sun City Fire Flow Work Group met from 4:00 – 6:00 p.m. on October 12, 2004, at the Youngtown Town Hall Clubhouse. The purpose of this meeting was to introduce the project and provide basic water systems information. Work Group and team members met each other. Subsequent meeting dates and objectives were set.

Members in Attendance
Raymond Dare, Sun City Taxpayers Association
Orville Druehl, Youngtown resident
Mark Fooks, Town Manager, Youngtown
Jim Green, Sun City Community Fund
Greg Gooby, Sun City HOA
David Kafora, Baptist Village, Youngtown
Jesse Mendez, Public Works Director, Youngtown
Steve Morrow, Sun City Fire Department
Ben Roloff, Condominium Owners Association
John Snyder, Recreation Centers of Sun City
Jeff Valder, Pulte Homes
Mike White, City of Surprise Fire Department

Members not in Attendance
Joe Dubasik, Youngtown businessman

AAW Team
Brian Biesemeyer, AAW
Don Breeding, AAW
Tom DeYoung, AAW
Steve Uraine, AAW
Phyllis Windham, AAW
Ron Ablin, Brown & Caldwell
Jennifer Hill, Brown & Caldwell
Marty Rozelle, The Rozelle Group

Others Present
Bryan Hackbarth, Mayor, Youngtown
Don Coleman, Sun City resident
Gerald DeLozal, Sun City resident
Michael Vantrease, *Daily News-Sun*

After introductions, Brian Biesemeyer explained the purpose of the group: (1) to become informed about the fire flow capacity on the AAW Sun City/Youngtown Water District; (2) help establish criteria for formulating and evaluating alternatives to improve the fire flow capacity; and (3) assist AAW in prioritizing system improvements for completion over the next several years.

2. Overview of AAW Operations

Brian provided an overview of the AAW and the Sun City/Youngtown Water district. AAW is the nation's largest private enterprise devoted exclusively to the water and wastewater business and serves approximately 16 million people. Communities served in Arizona include: Anthem, Paradise Valley, Sun City, Sun City West, Youngtown, Surprise, Peoria, Buckeye, Bullhead City, Lake Havasu City, and Tubac. AAW is regulated by the Arizona Corporation Commission and is required to provide potable service at the customer's point of delivery with a minimum pressure of 20 pounds per square inch. AAW is not required by the Corporation Commission to provide specific water flows for fire protection. Brian presented the Corporation Commission's amendment to AAW's last rate case. This amendment directed AAW to form a fire flow task force of representatives from Sun City and Youngtown in October 2004 and to present findings and a proposed plan of action by April 30, 2005.

The amendment is attached to this summary. Work Group members will receive a copy of Brian's presentation.

3. Municipal Water Systems "101"

Brown & Caldwell is a private firm that offers water and wastewater consulting services. The firm provides design work and construction management, as well as other services, exclusively for the water and wastewater industry. Their local workforce consists of approximately 125 employees, with a total of about 1,000 employees nationally. AAW has retained Brown & Caldwell as a consultant for the Youngtown/Sun City Fire Flow Project.

Jennifer Hill presented information on how water systems work in general and defined several technical terms. She explained how water modeling works and how hydrant flow test are performed. She will use this model to identify low pressure areas, model the results of specific improvements to the system, provide a cost-benefit analysis of those improvements and suggest an implementation plan. A copy of the presentation was given to the meeting attendees.

4. Work Group Questions and Action Items

Members asked several questions.

Q. Are the Youngtown fire hydrants color-coded to show what size main serves the hydrant?
A. No, at this time the hydrants are not color-coded.

Q. Sun City Fire Chief Morrow asked if his fire hydrant location map is current.
A. Brian said that AAW now has a digitized map, and he will furnish one to Chief Morrow shortly.

Q. How long has AAW served Sun City and Youngtown?
A. AAW (and its predecessors, Citizens Utilities Company and Citizens Water Resources) has served Sun City since 1962. Citizens Utilities Company (now AAW) began providing water and sewer service to Youngtown after purchasing it from the Town in December 1994.

Q. Why did AAW file for an 88 percent rate increase? How can this be the case when Brian stated that AAW cannot file for another rate increase until January 2006?
A. The referenced rate request was filed with the Arizona Corporation Commission prior to January 15, 2003 when the "three-year stay-out" went into effect. AAW's last rate case resulted in an overall increase of 27% for the base rate, or less than $3.00 per month for an average residential customer in Sun City or Youngtown. The sewer rate was decreased by 15%. Under this "three-year stay-out," AAW is prohibited from submitting for an increase in Sun City or Youngtown rates until January 2006.

Q. You say the rate case has been completed, but I understand AAW has filed an appeal.
A. AAW is not appealing any issue related to fire flow.

Q. Can AAW inspect the fire hydrants before proceeding with the work of the Task Force?
A. Steve Uraine (Operations Supervisor, AAW) replied that he maintains a copy of all hydrant inspection records and that the hydrants are serviced annually. Chief Morrow verified Steve's statement, agreeing that the hydrants are indeed serviced on a yearly basis. Brian said if anyone knows of any non-working hydrants, please report them, and AAW will gladly repair them.

Q. Does AAW have water modeling maps for Youngtown?
A. AAW will be generating water modeling maps for the Town and will share them at future meetings. Chief Morrow recommended cross-referencing his Youngtown maps against AAW's maps. He believes his Youngtown maps are relatively current and that they simply need to be cross-referenced against those generated by AAW.

Q. Marty Rozelle asked if anyone felt that representatives from other entities should be included in the Task Force.
A. Youngtown Mayor Hackbarth suggested that perhaps a representative from the Peoria Fire Departments and the El Mirage Fire and Water Departments should be included. Brian promised to extend an invitation to them.

Q. Chief Morrow asked if AAW can provide him with a list of hydrants and their locations prior to the next meeting.
A. AAW agreed.

Action Items:

- AAW will send digitized maps, including list of hydrant locations to Sun City Fire Department
- Marty Rozelle will furnish her email address to the Work Group members by the end of the week of October 18th. Individuals desiring answers to questions prior to the November meeting can email her.
- List of members and contact information will be sent to everyone. Email is the preferred method of contact for all members.

5. Next meetings

Note: Since the meeting, we have learned that the Sun City Fire District Board of Directors meets on the second Tuesday at the same time. We will poll the Work Group membership about moving the meeting to the third Tuesday.

Future meeting dates and times were set for the second Tuesday of each month, except for November. All meetings will begin at 2 p.m. and end around 4 p.m. The location will be the Youngtown Clubhouse. Dates and topics for each meeting include:

November 16	Set a standard for current fire flow needs for different types of land use (commercial, residential including mobile homes, multi-residential units, single family homes, etc.); provide overview of hydrant flow tests
December 14	Present system deficiencies and results of the calibrated model of the existing system
January 11	Present recommended improvements with alternatives and planning level costs
February 8	Prioritize improvements
March 8	Present final recommendations with schedule and costs.

Agendas will be sent ahead of each meeting.

Agenda

Youngtown/Sun City Fire Flow Work Group
Meeting #2

November 16, 2004
2:00 – 4:00 p.m.
Town of Youngtown Clubhouse

2:00 – 2:15	Welcome, Introductions, Review of 10/12/04 meeting summary	Marty Rozelle
2:15 – 2:30	Review Action Items from last meeting	All
2:30 –3:15	Fire Flow Requirements for Sun City/Youngtown District *Presentation and group discussion*	Jennifer Hill Brown & Caldwell
3:15 – 3:45	Overview of Hydrant Flow Testing Program	Jennifer Hill
3:45 – 3:55	Opportunity for Observers to ask questions or comment	
3:55 – 4:00	Confirm topics, date and time for next meeting	All

Meeting Summary
Youngtown/Sun City Fire Flow Work Group
November 16, 2004

1. Welcome, Introductions, Purpose

The Arizona American Water (AAW) Youngtown/Sun City Fire Flow Work Group met from 2:00 – 3:30 p.m. on November 16, 2004, at the Youngtown Town Hall Clubhouse. The purpose of this meeting was to review and discuss the fire flow requirements for the Sun City/Youngtown District and the results of the hydrant flow testing program.

Members in Attendance
Raymond Dare, Sun City Taxpayers Association
Orville Druehl, Youngtown resident
Mark Fooks, Town Manager, Youngtown
David Kafora, Baptist Village, Youngtown
Jesse Mendez, Public Works Director, Youngtown
Steve Morrow, Sun City Fire Department
Ben Roloff, Condominium Owners Association
Jim Sebert, Sun City Fire Department
Jim Wellman, Recreation Centers of Sun City
Jeff Valder, Pulte Homes
Mike White, City of Surprise Fire Department

Members not in Attendance
Greg Gooby, Sun City HOA
Jim Green, Sun City Community Fund

AAW Team
Brian Biesemeyer, AAW
Don Breeding, AAW
Steve Uraine, AAW
Phyllis Windham, AAW
Ron Ablin, Brown & Caldwell
Jennifer Hill, Brown & Caldwell
Marty Rozelle, The Rozelle Group

Others Present
Michael Vantrease, *Daily News-Sun*

The following acronyms may be used throughout this summary:

gpm - gallons per minute
psi - pounds per square inch

1. Review of action items from previous meeting

Marty Rozelle introduced new member, Jim Wellman, who is the new Senior Manager for the Sun City Recreation Centers. She asked for any suggestions or corrections to the draft meeting summary from the October 12th meeting. None were offered, and the summary was accepted. Action items from the October meeting have been addressed.

- AAW is furnishing a digitized map to the Sun City Fire Department. A confidentiality agreement must be in place first.
- Brian reported that a representative from the City of El Mirage Fire Department accepted his invitation to attend and was expected at this meeting. He will follow up with him. Brian expects to connect with the representative from the City of Peoria Fire Department soon. They have been playing voice mail tag.
- A list of Work Group members and their contact information will be re-sent in a format that everyone can open.

2. Fire flow requirements for Sun City/Youngtown District

Jennifer Hill presented guidelines for fire flow requirements based on the Uniform Fire Code (UFC) and the International Fire Code (IFC). These requirements are: 1,000 gpm/two-hour duration for residential and 1,500 gpm/two hour duration for commercial. The requirements depend on the type of buidling construction and square footage. A reduction up to 75% is

allowed when the building has an approved automatic sprinkler system. Jennifer presented fire flow requirements for several other Valley cities. For *new construction*, AAW requires 1,500 gpm for residential and 3,000 gpm for commercial. She recommended fire flow requirements for *existing construction* in Youngtown and Sun City:

Category	Required fire flow
Single family residential	1,000 gpm
Multi-family residential	1,500 gpm
Non-residential	1,500 gpm

The group discussed this recommendation. A duplex is considered a single family residence. Non-residential is primarily commercial. The fire flow requirements under the UFC and IFC assume a residence of 3,600 square feet or less. All existing residences in this district would be less than that. Mark Fooks said the City Council adopted the IFC code in August 2004. He is willing to accept whatever his fire experts advise. Sun City Fire Chief Sebert said 1,000 gpm would be sufficient for existing residential structures up to 3,600 square feet. Sun City Assistant Fire Chief Morrow concurred that under normal circumstances, 1,000 gpm would be adequate. Dave Kafora said he has some four-plexes at Baptist Village that might be more than 3600 square feet and would require the 1500 gpm. These would fall under the multi-family residential requirement.

The group agreed to the recommended fire flow requirements.

3. Overview of Hydrant Flow Testing

Hydrant flow tests were conducted the week of November 8, 2004 by AAW and witnessed by Brown & Caldwell. The testing locations were discussed with both the Sun City Fire Department and the Town of Youngtown before being conducted. Jennifer Hill presented a map showing where the 29 fire flow tests were conducted. These tests were spread evenly through the system, so there will be numerous points to compare when constructing the water model. Test results will be used to calibrate the base model. The goal is to have 1,000 gpm and 20 psi throughout the system. Tests found the hydrants to be in good working order. The number of hydrants in Sun City is 1,600 and 87 in Youngtown.

Mark Fooks passed around a drawing from Don Coleman that illustrates the proper way to conduct the hydrant flow tests. The photos Jennifer used in her presentation indicated that the flow tests were done in that manner.

AAW will be looking at the spacing of the hydrants. They recognize the need for additional hydrants in some locations. The Sun City Fire Department will verify every hydrant location over the course of this project.

4. Date and Time for Next Meetings

The next meeting will be Thursday, December 16. Beginning in January, the meetings will be held on the third Tuesday of each month. All meetings will begin at 2 p.m. and end around 4 p.m. at the Youngtown Clubhouse. Agendas will be sent ahead of each meeting, and dates and topics for each meeting include:

December 16	Present system deficiencies and results of the calibrated model of the existing system. A map showing hydrant locations will be available.
January 18	Present recommended improvements with alternatives and planning level costs
February 15	Prioritize improvements
March 15	Present final recommendations with schedule and costs.

Agenda

Youngtown/Sun City Fire Flow Work Group
Meeting #3

December 16, 2004
2:00 – 4:00 p.m.
Town of Youngtown Clubhouse

2:00 – 2:15	Welcome, Introductions, Review of 11/16/04 meeting summary	Marty Rozelle
2:15 – 2:30	Review Action Items from last meeting	All
2:30 –3:15	Presentation of Model Results - how model was calibrated - existing system fire flow levels - preliminary look at deficiencies	Jennifer Hill Brown & Caldwell
3:15 – 3:45	Overview of hydrant spacing	Brian Biesemeyer AAW
3:45 – 3:55	Opportunity for Observers to ask questions or comment	
3:55 – 4:00	Confirm topics, date and time for next meeting	All

Meeting Summary
Youngtown/Sun City Fire Flow Work Group
December 16, 2004

1. Welcome, Introductions, Purpose

The Arizona American Water (AAW) Youngtown/Sun City Fire Flow Work Group met from 2:00 – 3:30 p.m. on December 16, 2004, at the Youngtown Town Hall Clubhouse. The purpose of this meeting was to review and discuss the results of the modeling of the existing fire flow capacity for the Sun City/Youngtown District and the existing spacing of the fire hydrants in the District.

Members in Attendance
Raymond Dare, Sun City Taxpayers Association
Orville Druehl, Youngtown resident
Mark Fooks, Town Manager, Youngtown
Jim Green, Sun City Community Fund
David Kafora, Baptist Village, Youngtown
Jesse Mendez, Public Works Director, Youngtown
Steve Morrow, Sun City Fire Dept.
Jim Sebert, Sun City Fire Dept.
Jim Wellman, Recreation Centers of Sun City
Jeff Valder, Pulte Homes

Members not in Attendance
Grey Gooby, Sun City HOA
Ben Roloff, Condominium Owners Association
Mike White, City of Surprise Fire Department

AAW Team
Brian Biesemeyer, AAW
Don Breeding, AAW
Steve Uraine, AAW
Phyllis Windham, AAW
Ron Ablin, Brown & Caldwell
Jennifer Hill, Brown & Caldwell
Marty Rozelle, The Rozelle Group

Others Present
Tom Christmas, El Mirage Fire Dept.
Don Coleman, Sun City resident
Howard Munding, Peoria Fire Marshall
Michael Vantrease, *Daily News-Sun*

The following acronyms may be used throughout this summary:

gpm	gallons per minute
GIS	geographical information system
psi	pounds per square inch

1. Review of action items from previous meeting

All work group members and guests introduced themselves. Representatives from the Peoria and El Mirage Fire Departments were welcomed. Marty asked for any suggestions or corrections to the draft meeting summary from the November 16th meeting. None were offered, and the summary was accepted. Action items from the previous meetings have been addressed. AAW and the Sun City Fire Department are working on a confidentiality agreement to share digitized maps.

2. Presentation of Model Results

Jennifer Hill explained that the fire flow capacity modeling results are compared to the hydrant flow tests to calibrate the model. Calibration tells us many different things about the water system including: if the pipe network is accurate, if pipe sizes are correct, and if the "friction" factor (C factor) is correct. It also tells us if control valves are working. Twenty-nine hydrants tests were originally conducted. Twenty locations matched the model satisfactorily. Four flow tests in Youngtown and one in Sun City were repeated with pressure reducing

valves open. Two additional flow tests in Coyote Lakes were performed. The overall system is very strong. Multiple sources of water are at locations throughout the system. Adequate pumping capacity with system redundancy and adequate storage also is found throughout the system. Jennifer distributed a color-coded map of the District showing the model results. Almost all of the area shows greater than 1,500 gpm. A few areas in Youngtown and the northern most part of the District show 1,000 – 1,500 gpm. These areas are residential where 1,000gpm is acceptable. An area just south of Grand Avenue and on the western edge of the District is between 500 – 1,000. Jennifer will bring a larger map showing street names to the next meeting.

3. Overview of Hydrant Spacing

Brian Biesemeyer presented a map showing the locations of all fire hydrants in the District. Coverage is adequate in all areas north of Grand Avenue. There are a few areas in Phase 1 of Sun City south of Grand Avenue. Chief Jim Sebert said in *new* residential areas fire hydrants should be 660 feet apart and 330 feet apart in commercial areas. An analysis of the spacing will be completed for the next work group meeting. The Sun City Fire Department will verify every hydrant location over the course of this project.

4. Date and Time for Next Meetings

The next meeting will be Tuesday, January 18 at 2 p.m. at the Sun City Fire Department office, 17017 N. 99th Avenue (northeast corner of Bell and 99th Avenel). The first hour will be spent watching a fire apparatus demonstration and looking at their GIS mapping program for hydrant locations. During the second hour the modeled system with proposed improvements and with future demands will be presented. Cost estimates for future improvements and a rate impact analysis will also be discussed.

Note: Due to unforeseen circumstances, the January meeting will not be held at the Fire Department. It will be held at the Youngtown Club House. This message came on January 6, 2005

Future meeting dates are the third Tuesday of the month.

February 15	Prioritize improvements
March 15	Present final recommendations with schedule and costs.

Agenda

Youngtown/Sun City Fire Flow Work Group
Meeting #4

January 18, 2005
2:00 – 4:00 p.m.
Town of Youngtown Clubhouse

2:00 – 2:15	Welcome Review of 12/16/04 meeting summary	Marty Rozelle
2:15 – 2:45	Presentation and discussion of specific improvements to fire flow system and general costs	Jennifer Hill Brown & Caldwell
2:45 – 3:15	Discuss criteria for prioritizing improvements	All
3:15 – 3:30	Opportunity for Observers to ask questions or comment	
3:30 – 3:45	Confirm topics, date and time for next meeting	All

Meeting Summary
Youngtown/Sun City Fire Flow Work Group
January 18, 2005

1. Welcome, Introductions, Purpose

The Arizona American Water (AAW) Youngtown/Sun City Fire Flow Work Group met from 2:00 – 4:00 p.m. on January 18, 2005 at the Youngtown Town Hall Clubhouse. The purpose of this meeting was to review and discuss specific improvements to the fire flow system and the general cost of such improvements.

Members in Attendance
Raymond Dare, Sun City Taxpayers Association
Orville Druehl, Youngtown resident
Mark Fooks, Town Manager, Youngtown
Grey Gooby, Sun City HOA
David Kafora, Baptist Village, Youngtown
Jesse Mendez, Public Works Director, Youngtown
Jim Sebert, Sun City Fire Dept.
Jim Wellman, Recreation Centers of Sun City

Members not in Attendance
Jim Green, Sun City Community Fund
Steve Morrow, Sun City Fire Dept.
Jeff Valder, Pulte Homes
Mike White, City of Surprise Fire Department

AAW Team
Brian Biesemeyer, AAW
Phyllis Windham, AAW
Jennifer Hill, Brown & Caldwell
Marty Rozelle, The Rozelle Group
Steve Uraine, AAW

Others Present
Tom Broderick, AAW
Don Coleman, Sun City resident
Michael Vantrease, *Daily News-Sun*

The following acronyms may be used throughout this summary:

CDBG	Community Development Block Grant
gpm	gallons per minute
GIS	geographical information system
psi	pounds per square inch

2. Review of action items from previous meeting

All work group members and guests introduced themselves. Marty asked for suggestions or corrections to the draft meeting summary from the December 16th meeting. The word "residential" was inserted in section 3, line 3 after the word *new*. The correction was made and the summary was accepted. There were no outstanding action items. Ben Roloff is no longer representing the Condominium Owners Association. Grey Gooby will represent both the Condominium Owners and the Sun City HOA. Marty will contact the Sun City HOA for a new representative.

3. Presentation of Specific Improvements

Jennifer Hill showed a map of the area, reviewed the available fire flow, and recommended improvements by area. She discussed the expected fire flow with these improvements and presented a summary of the costs. Most of the service area has flows greater than 1500 gpm. Much of Youngtown has flows between 1000 and 1500gpm. There is one area with flow of less than 1000 gpm and two small areas with flows of 500 gpm or less. A few small areas in the northernmost portion of the service area experience flows between 1000 and 1500 gpm. Recommended improvements include:

1. Modify pressure reducing valves at connections between Sun City and Youngtown system in three locations. This is an "easy fix" and will greatly improve flows in Youngtown.
2. Install new six and ten-inch pipes in the Youngtown commercial area south of Grand Avenue and install fire hydrants.
3. Replace existing two and four-inch pipes in Youngtown neighborhood commercial area south of Alabama and 111th Avenue and loop to existing six-inch fire line.
4. Replace two and four-inch pipes and add fire hydrants in the Youngtown residential area.
5. Replace four-inch with six-inch pipes in the Sun City residential area along Cherry Hills Drive and Pebble Beach Drive and install fire hydrants. Connect the six-inch pipes in the mobile home park north of Union Hills Drive and replace the existing six-inch connections to the system in Union Hills Drive with eight-inch connections. It was noted that the mobile home park is in the City of Peoria.

The available fire flow after these improvements would be greater than 1000 gpm throughout the service area and most of the area will be above 1500 gpm.

A total of 132 new fire hydrants would be installed: 79 new hydrants would be installed in Youngtown, and 53 in Sun City. Jennifer said that she was sure the number of new hydrants would increase, as her research is completed.

The preliminary recommended improvements are summarized below:

10-inch pipe	8-inch pipe	6-inch pipe	Fire hydrants
1,100 feet	2,000 feet	35,000 feet	132

The preliminary estimated cost of the recommended improvements is $2.5 million.

Description	Cost
Pressure reducing valve modifications	$ 10,000
Youngtown Commercial	$ 192,000
Youngtown Neighborhood Commercial	$ 60,000
Youngtown Residential	$ 1.16 million
Sun City Residential	$ 1.08 million
Total	**$ 2.5 million**

Mark raised the question of whether or not the impact to the ratepayer might be offset by money from the Community Development Block Grant (CDBG) program. The cities of Peoria, Surprise, and Youngtown and Maricopa County would be eligible to apply for the grant. Mark will talk to town's attorney and report at the next meeting.

4. Criteria for prioritizing improvements

The group made several suggestions for prioritizing the improvements. All agreed that the modifications to the valves should be made immediately and that priority should be given to residential over commercial. Chief Sebert said that he was more concerned about the commercial areas, while Mark Fooks believed the residential should have priority. Most agreed that the areas with less than 500 gpm should be addressed as soon as possible.

5. Action Items and Next Meetings

Action: Mark will look into the possibility of using CDBG money to offset future rate impacts.

The next meeting will be Tuesday, February 15 at 2 p.m. at the Sun City Fire Department office, 17017 N. 99th Avenue (northeast corner of Bell and 99th Avenue). During the first hour the work group will prioritize the recommended improvements. A rate impact analysis will also be discussed. The second hour will be spent watching a fire apparatus demonstration and looking at the Department's GIS mapping program for hydrant locations.

Future meeting dates are the third Tuesday of the month.

March 15	Present final recommendations with schedule and costs.

Agenda

Youngtown/Sun City Fire Flow Work Group
Meeting #5

February 15, 2005
2:00 – 4:00 p.m.
Sun City Fire Department – 99th Avenue and Bell Road

2:00 – 2:10	Welcome Review of 01/18/05 meeting summary Summary of previous Work Group Meetings	Marty Rozelle
2:10 – 2:30	Discussion with AZ Corporation Commissioner William Mundell	All
2:30 – 3:00	Presentation of specific improvement projects and schedule. Analysis of rate impacts	Jennifer Hill Brown & Caldwell
3:00 – 4:00	Fire Department Demonstrations	All

Meeting Summary
Youngtown/Sun City Fire Flow Work Group
February 15, 2005

1. Welcome, Introductions, Purpose

The Arizona American Water (AAW) Youngtown/Sun City Fire Flow Work Group met from 2:00 – 4:00 p.m. on February 15, 2005 at the Sun City Fire Department. The purpose of this meeting was to present specific improvement projects and implementation schedule. A presentation about fire Department operations was also planned.

Members in Attendance
Raymond Dare, Sun City Taxpayers Association
Orville Druehl, Youngtown resident
Mark Fooks, Town Manager, Youngtown
Grey Gooby, Condominium Owners Association
Jim Green, Sun City Community Fund
Gene Jensen, Sun City HOA
David Kafora, Baptist Village, Youngtown
Jesse Mendez, Public Works Director, Youngtown
Steve Morrow, Sun City Fire Dept.
Jim Sebert, Sun City Fire Dept.
Jim Wellman, Recreation Centers of Sun City
Mike White, City of Surprise Fire Department

Members not in Attendance
John Dannan, Pulte Homes

AAW Team
Brian Biesemeyer, AAW
Don Breeding, AAW
Tom Broderick, AAW
Steve Uraine, AAW
Phyllis Windham, AAW
Jennifer Hill, Brown & Caldwell
Marty Rozelle, The Rozelle Group

Others Present
Gerald Dolezal, Sun City Taxpayers Association
Bill Mundell, Commissioner, ACC
Larry Ogelsby, Youngtown Councilman
Michael Vantrease, *Daily News-Sun*
Cecilia Chan, *Sun Cities Independent*

The following acronyms may be used throughout this summary:

CDBG	Community Development Block Grant
gpm	gallons per minute
GIS	geographical information system
psi	pounds per square inch

1. Review of action items from previous meeting

All work group members and guests introduced themselves. Marty asked for suggestions or corrections to the draft meeting summary from the January 18, 2005 meeting. None were offered, and the summary was accepted. Gene Jensen was introduced as the new representative for the Sun City Homeowners Association. Grey Gooby, the former representative, will now represent the Condominium Owners Association. Mark Fooks reported that CDBG funds cannot be used for any of the fire flow infrastructure improvements because the facilities are not owned by a public entity.

2. Discussion with AZ Corporation Commissioner William Mundell

Marty summarized the activities that the Fire Flow Work Group has completed since its organization in October 2004. She reviewed the scope of the effort by Brown & Caldwell to model the fire flow capacity in the service area and to use that information to develop the set

of improvement projects and schedule. The priority of the projects met the criteria established by the Wok Group.

Commissioner Mundell answered questions and said that he was excited about the results so far and hopes this task force can be a model for other cities with similar challenges.

3. Presentation of Specific Improvements

Jennifer Hill presented specific fire flow improvement projects and their costs. The projects would be implemented over four years. As summarized below, the total estimated cost is a little more than $3 million or about $500,000 more than presented in January. The additional cost is due mostly to the need for 70 more hydrants.

Year	Description	Cost
Immediate	Sun City and Youngtown pressure reducing/pressure sustaining valve modifications	$ 10,000
Year 1	Youngtown neighborhood commercial – 111th Avenue south of Youngtown Avenue; Youngtown residential; fire hydrants in Youngtown and Sun City installed on existing pipe	$ 680,960
Year 2	City of Peoria – Paradise Mobile Home Park; Sun City residential; Youngtown – 6" piping and fire hydrants	$ 699,568
Year 3	6" piping and fire hydrants - Sun City and Youngtown	$ 702,934
Year 4	6" piping and fire hydrants - Sun City and Youngtown; piping improvements – Youngtown commercial	$ 986,640
Total		**$3,080,102**

A detailed breakdown of these costs is shown in the attached table.

Brian Biesemeyer said the potential rate increase for these investments is estimated to be 6.2%. He emphasized that all rates are set by the Arizona Corporation Commission. The next step is to submit the report of the Fire Flow Capacity Study and the Work Group's contribution to the Corporation Commission. One way to possibly accelerate the start of the Capital Improvement Plan would be for Arizona American to ask the Corporation Commission to re-open the last rate case for Sun City and Youngtown.

The Work Group supported the proposed improvement projects and the schedule, though several members emphasized the need for urgency to complete the projects sooner. Brian said that the timetable was chosen to minimize disruption during construction and to ensure a steady flow of funds. Jim Green suggested that the improvements be accompanied with a public information and education program.

4. Fire Department Demonstrations

Chief Morrow provided a brief presentation of the Sun City Fire Department operations. Work group members enjoyed a display from the ladder truck showing the differences between 100 gpm and 800 gpm.

5. Next Meeting

Marty offered Work Group members the opportunity for AAW to present to their Boards or the Town Council and to delay the next meeting by two weeks if that would provide them more time for feedback. All members felt they were ready to move ahead. The final Work Group meeting will be Tuesday, March 15 at the Youngtown Clubhouse.

Agenda

Youngtown/Sun City Fire Flow Work Group
Meeting #6

March 15, 2005
2:00 – 3:30 p.m.
Youngtown Clubhouse

2:00 – 2:10	Welcome Review of 02/15/05 meeting summary Summary of previous Work Group Meetings	Marty Rozelle
2:10 – 2:30	Discussion with AZ Corporation Commissioners	All
2:30 – 3:00	Another look at improvements projects, schedule, rate analysis Outline for final report	Brian Biesemeyer
3:00 – 3:30	Role of Work Group in final proposal to ACC	All

Meeting Summary
Youngtown/Sun City Fire Flow Work Group
March 15, 2005

1. Welcome, Introductions, Purpose

The Arizona American Water (AAW) Youngtown/Sun City Fire Flow Work Group met from 2:00 – 4:00 p.m. on March 15, 2005 at the Youngtown Town Hall Clubhouse. The purpose of this meeting was to review specific improvement projects, implementation schedule and discuss the future role of the Work Group.

Members in Attendance
Raymond Dare, Sun City Taxpayers Association
Orville Druehl, Youngtown resident
Mark Fooks, Town Manager, Youngtown
Grey Gooby, Condominium Owners Association
Jim Green, Sun City Community Fund
Gene Jensen, Sun City HOA
David Kafora, Baptist Village, Youngtown
Steve Morrow, Sun City Fire Dept.
Jim Wellman, Recreation Centers of Sun City

Members not in Attendance
John Dannan, Pulte Homes
Jesse Mendez, Public Works Director, Youngtown
Jim Sebert, Sun City Fire Dept.
Mike White, City of Surprise Fire Dept.

AAW Team
Rob Antoniak, AAW
Brian Biesemeyer, AAW
Tom Broderick, AAW
Camilla Fernandez, AAW
Fred Schneider, AAW
Phyllis Windham, AAW
Jennifer Hill, Brown & Caldwell
Marty Rozelle, The Rozelle Group

Others Present
Kris Mayes, Commissioner, ACC
Phil Dion, ACC
Michael Vantrease, *Daily News-Sun*
Cecilia Chan, *Sun Cities Independent*

The following acronyms may be used throughout this summary:

ACC	Arizona Corporation Commission
AAW	Arizona American Water
CDBG	Community Development Block Grant
gpm	gallons per minute
GIS	geographical information system
psi	pounds per square inch

1. Welcome and review of action items from previous meeting

All work group members and guests introduced themselves. Marty asked for suggestions or corrections to the draft meeting summary from the February 15, 2005 meeting. None were offered, and the summary was accepted. No action items were outstanding.

2. Discussion with AZ Corporation Commissioners

Marty summarized the work that the Fire Flow Work Group has completed since its organization in October 2004. She reviewed the scope of the effort by Brown & Caldwell to model the fire flow capacity in the service area and to use that information to develop a set of improvement projects and schedule. The priority of the projects met the criteria established by the Work Group.

Commissioner Mayes answered questions and expressed appreciation to the group for their time and effort. She recently toured the area with AAW staff and said she is now more aware of the need to improve the system. The public's safety is critical and she was interested to learn that the fatality rate by fire in Sun City is four times the national average. Phil Dion, representing Commissioner Mark Spitzer, acknowledged the need to balance public safety and reasonable rates. Both asked the group for their feedback on the process. Several members said that they are now much more understanding of the need to improve the fire flow capacity, and they appreciated the entire process. It has been very systematic and focused, and they felt that their input is reflected in the recommendations.

3. Review of specific improvements and rate analysis

The specific fire flow improvement projects and their costs remained the same as presented in the February meeting. Implementation would occur over four years. Brian Biesemeyer explained that AAW is anticipating a $3.1 million investment. Between 2005 and 2010, this level of investment is expected to cause rates to increase by 6.2%. The Arizona Corporation Commission must approve rate increases before they can take effect. AAW is considering asking the ACC to re-open the last rate case for purposes of public safety. If approved, AAW would begin implementing the plan one year at a time with small rate increases or surcharges each year. For example, in the first three years the increase would be 1.4% .each year. In the fourth year, the increase would be 2%.

This cost recovery process is relatively new. The ACC is currently addressing a similar public safety issue in which private water providers are striving to meet new federal mandates for the reduction of arsenic levels in drinking water. While AAW stands behind the community in this Four-Year PLAN, they must receive pre-approval and acknowledgement of rates from the ACC for the proposed investment. Otherwise, AAW is not obligated to complete the improvements.

Brian emphasized that AAW is committed to keeping all of their customers informed. He introduced Rob Antoniak, the new Community Relations manager for AAW.

Marty asked the Work Group members for comments or concerns. All of the individual members support the Four-Year PLAN. The Recreational Centers of Sun City Board of Directors wants more information to explain the benefit to Sun City. Another member suggested that a survey of Sun City residents, coupled with a good information program, may be needed.

4. Next Steps

A report describing the process for the Work Group and the technical studies is due to the ACC by April 30, 2005. Marty presented a draft Executive Summary of the report and asked if members would feel comfortable signing in their role of Work Group member. Most said they would do so. A change in wording was suggested to clarify that while Work Group members have represented the interests of their organization, some can not speak formally for the organization. Marty will send a revised draft out to members for their comments. Brian thanked everyone for their time and commitment and promised to keep them informed as the process moves ahead.

ARIZONA AMERICAN WATER

SUN CITY WATER DISTRICT
FIRE FLOW STUDY

MAY 2005

Registered Professional Engineer (Civil)
CERTIFICATE NO.
32570
JENNIFER E.
HILL
Date Signed 5/20/05
ARIZONA, U.S.A.

Prepared by

BROWN AND
CALDWELL

201 East Washington Street, Suite 500
Phoenix, Arizona 85004

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ARIZONA AMERICAN WATER
SUN CITY WATER DISTRICT FIRE FLOW STUDY
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ARIZONA AMERICAN WATER
SUN CITY WATER DISTRICT FIRE FLOW STUDY

OBJECTIVES OF STUDY

Arizona American Water (AAW) owns and operates the water system serving Sun City and Youngtown. The system is approximately 50 years old and was designed to meet fire flow standards that are now outdated. In response to direction from the Arizona Corporation Commission, AAW formed a Fire Flow Task Force (referred to as the Sun City/Youngtown [SC/YT] Work Group), which worked with Brown and Caldwell and the Rozelle Group to evaluate the existing water system and its capability to provide needed fire flows, and to make recommendations for system improvements to address system deficiencies.

The project described in this report accomplished the following objectives:

1. Developed a computerized water system model in WaterCAD software by Haestad Methods and calibrated that model to field test data.

2. Established fire flow criteria for existing development.

3. Developed cost estimates and schedule phasing of capital improvements.

4. Analyzed the existing system's ability to provide fire flow under maximum day demand conditions.

5. Developed recommended improvements to provide required fire flows to deficient areas.

6. Modeled improved system under average day, maximum day, maximum day with fire, and peak hour demand conditions.

7. Modeled existing system maximum day with fire demand conditions.

8. Presented information throughout the course of the project to the SC/YT Work Group for evaluation, input and concurrence.

SC/YT WORK GROUP MEETINGS

The SC/YT Work Group was formed of concerned citizens within the Sun City District water service area representing a range of interests. Representatives included the Sun City Taxpayers Association, Sun City Community Fund, Sun City Fire Department, City of Surprise Fire Department, Condominium Owners Association, Recreation Centers of Sun City, Pulte Homes

(developers of the Aqua Fria Ranch development), the Baptist Village Retirement Community, the Sun City Homeowner's Association, the Youngtown Public Works Director, the Youngtown City Manager, and residential and commercial customers.

Six SC/YT Work Group meetings were held from October 2004 to March 2005. The meetings were facilitated by Dr. Martha Rozelle of the Rozelle Group and are summarized under separate cover by the Rozelle Group.

Over the series of meetings, Brown and Caldwell and AAW presented the details of the fire flow study to the SC/YT Work Group. The information presented included an overview of how water systems work, fire flow criteria, available fire flow, specific deficiencies in the Sun City system when compared to the fire flow criteria, recommended improvements, and recommended prioritization of improvements. The SC/YT Work Group offered feedback on fire flow requirements, criteria for prioritizing improvements, and approval of the final schedule of improvements.

The SC/YT Work Group set the minimum fire flow standards for existing development at 1,000 gpm for residential areas and 1,500 gpm for multi-family and commercial areas. The SC/YT Work Group also agreed that the priority for improvements should be:

1. Control Valve Modifications.
2. Areas with available flow under 500 gpm.
3. Residential.
4. Commercial.

The recommended schedule of improvements was endorsed by the SC/YT Work Group at their March 15, 2005 meeting.

OVERVIEW OF WATER SYSTEM

The Sun City/Youngtown Water System serves an area between Beardsley Road on the north to Olive Avenue on the south, from Agua Fria Ranch Parkway and the Agua Fria River on the west, to 99th Drive and the New River on the east. This area includes the Sun City community (in unincorporated Maricopa County), all of the Town of Youngtown, a portion of the City of Surprise that includes the Coyote Lakes Subdivision, and a small portion of the City of Peoria.

The total service area represents approximately 22,000 accounts. Based on US Census data, there are an estimated 38,000 people living in Sun City, and approximately 3,000 people in Youngtown. The average day demand is approximately 14 million gallons (9,700 gpm). This demand includes unmetered and unaccounted for water.

The majority of the service area is single-family residential. The commercial development exists primarily along Grand Avenue, including the Boswell Memorial Hospital and surrounding medical office use. There is commercial development and multi-family residential in the north part of the Town of Youngtown, south of Grand and west of 111th Avenue. Other commercial development includes strip malls on 99th Avenue at Bell Road, and 111th Avenue at Alabama.

The source of water for the system is 19 wells which pump groundwater to storage tanks at six water plants identified by AAW as Water Plants (WPs) 1, 2, 3, 5, 6 and 8. One well, identified as WP 4, pumps directly to the distribution system. A schematic of the Sun City system is presented on Figure 1. A summary of storage and pumping capacity is presented in Tables 1 and 2, below.

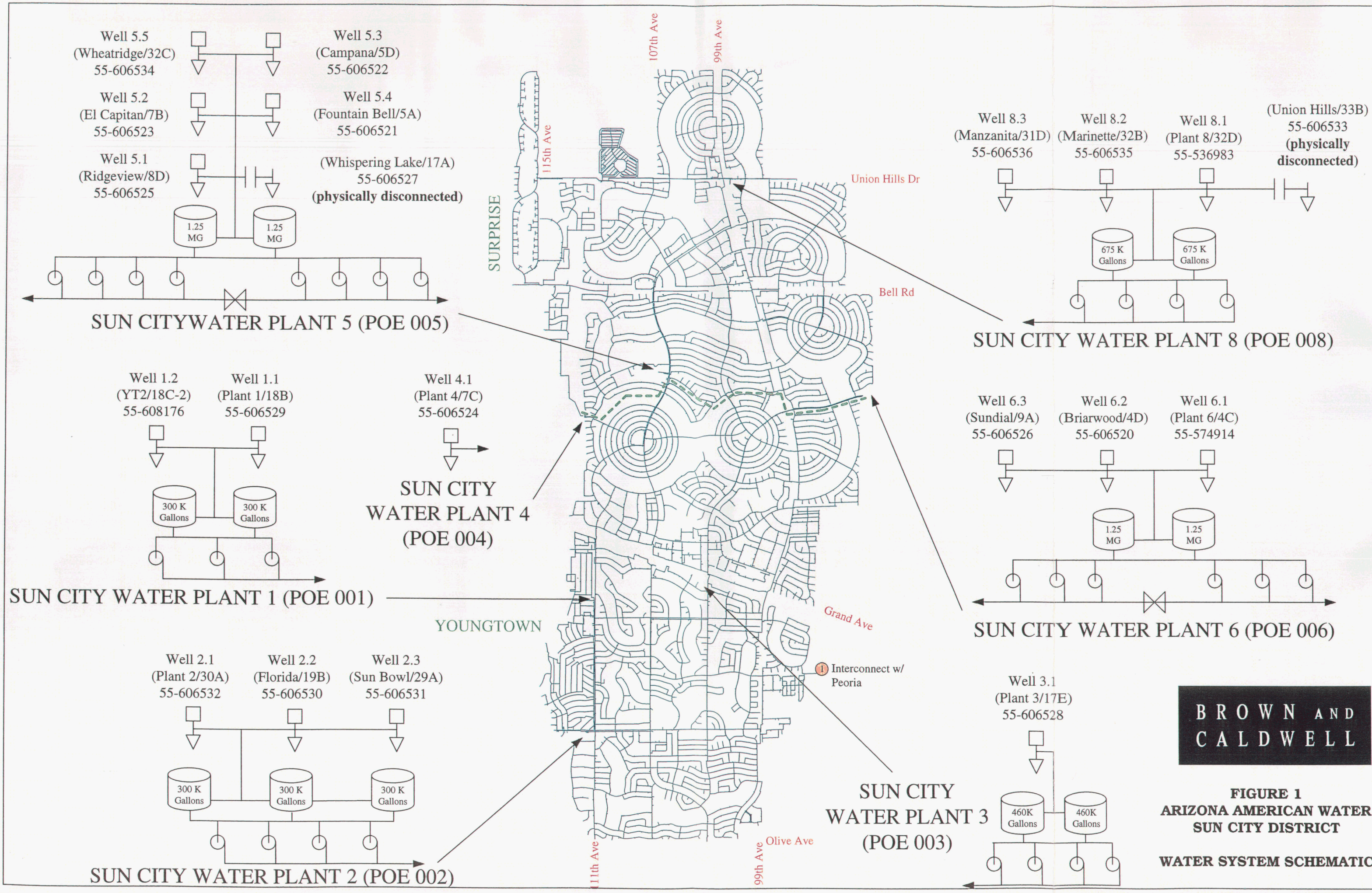
The system is operated in three zones. The high zone serves the area north of Greenway to Beardsley Road, which is the north boundary of the service area. Elevations in the high zone range from 1,155 to 1,250 feet above sea level. The low zone serves the area south of Greenway to Olive Avenue. Elevations in the low zone range from 1,085 to 1,185 feet above sea level. Youngtown operates in its own zone as all water is delivered to Youngtown from the low zone of Sun City through three pressure reducing/pressure sustaining valves. The elevations in Youngtown range from 1,120 to 1,190 feet above sea level. The pressure zones are illustrated on Figure 2.

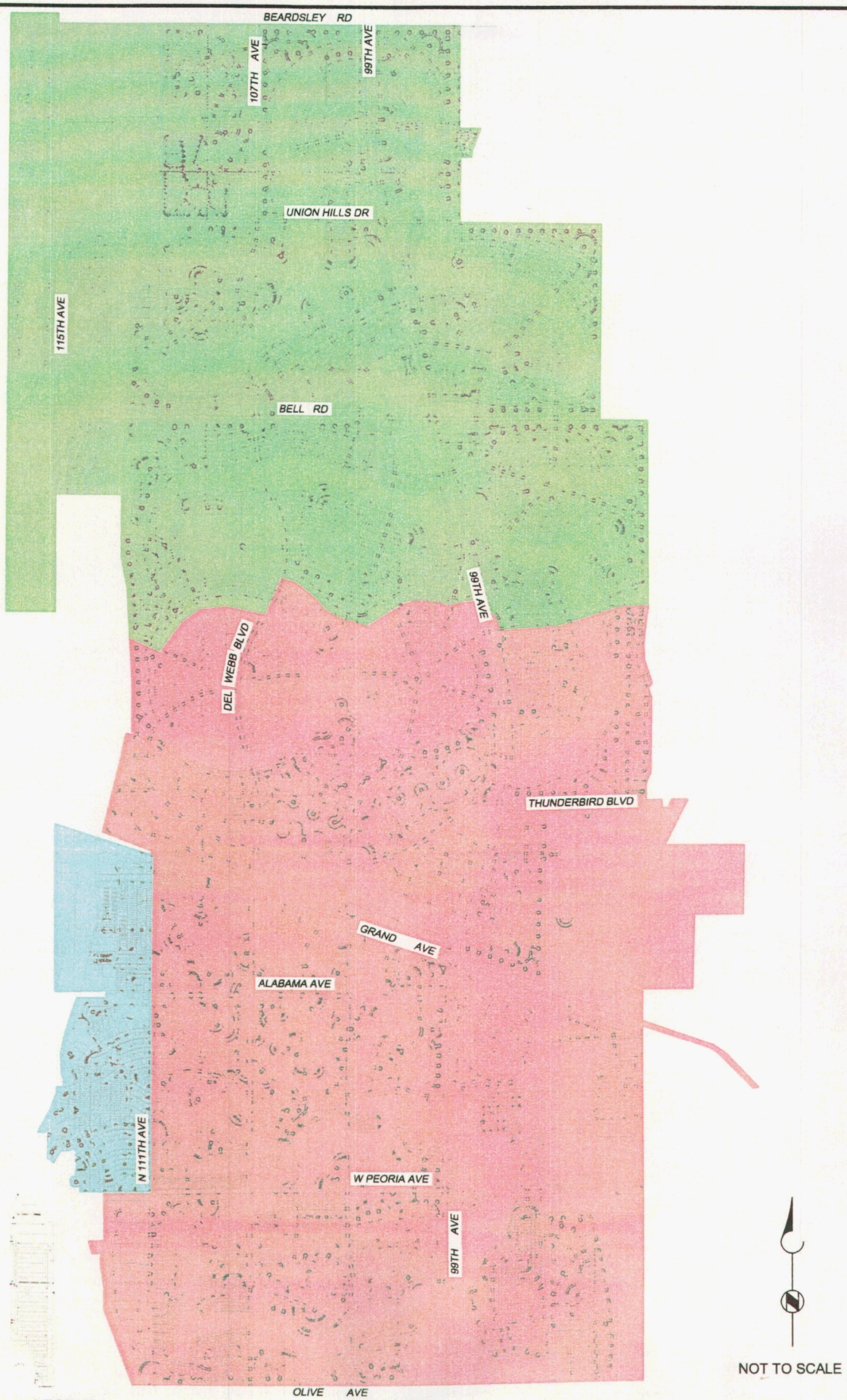
TABLE 1. SUMMARY OF SUN CITY DISTRICT PUMPING CAPACITY BY WATER PLANT

WATER PLANT	LOW ZONE	HIGH ZONE
WP 1	3,000 gpm	
WP 2	6,200 gpm	
WP 3	6,300 gpm	
WP 4	1,200 gpm	8,000 gpm
WP 5	8,000 gpm	6,000 gpm
WP 6	6,000 gpm	6,400 gpm
WP 8		7,000 gpm
TOTAL	**30,700 gpm**	**27,400 gpm**

TABLE 2. SUMMARY OF SUN CITY DISTRICT STORAGE CAPACITY BY WATER PLANT

LOCATION	NUMBER OF TANKS	CAPACITY (gallons)
WP 1	2	600,000
WP 2	3	900,000
WP 3	2	920,000
WP 5	2	2,500,000
WP 6	2	2,500,000
WP 8	2	1,350,000
TOTAL		**8,770,000**


Well 5.5
(Wheatridge/32C)
55-606534
Well 5.3
(Campana/5D)
55-606522
Well 5.2
(El Capitan/7B)
55-606523
Well 5.4
(Fountain Bell/5A)
55-606521
Well 5.1
(Ridgeview/8D)
55-606525
(Whispering Lake/17A)
55-606527
(physically disconnected)
1.25 MG
1.25 MG
SUN CITYWATER PLANT 5 (POE 005)
107th Ave
99th Ave
115th Ave
SURPRISE
Union Hills Dr
Bell Rd
Well 8.3
(Manzanita/31D)
55-606536
Well 8.2
(Marinette/32B)
55-606535
Well 8.1
(Plant 8/32D)
55-536983
(Union Hills/33B)
55-606533
(physically disconnected)
675 K Gallons
675 K Gallons
SUN CITY WATER PLANT 8 (POE 008)
Well 1.2
(YT2/18C-2)
55-608176
Well 1.1
(Plant 1/18B)
55-606529
300 K Gallons
300 K Gallons
SUN CITY WATER PLANT 1 (POE 001)
Well 4.1
(Plant 4/7C)
55-606524
SUN CITY
WATER PLANT 4
(POE 004)
Well 6.3
(Sundial/9A)
55-606526
Well 6.2
(Briarwood/4D)
55-606520
Well 6.1
(Plant 6/4C)
55-574914
1.25 MG
1.25 MG
SUN CITY WATER PLANT 6 (POE 006)
YOUNGTOWN
Grand Ave
1 Interconnect w/
Peoria
Well 2.1
(Plant 2/30A)
55-606532
Well 2.2
(Florida/19B)
55-606530
Well 2.3
(Sun Bowl/29A)
55-606531
300 K Gallons
300 K Gallons
300 K Gallons
SUN CITY WATER PLANT 2 (POE 002)
Well 3.1
(Plant 3/17E)
55-606528
460K Gallons
460K Gallons
SUN CITY
WATER PLANT 3
(POE 003)
Olive Ave
111th Ave
99th Ave
BROWN AND
CALDWELL
FIGURE 1
ARIZONA AMERICAN WATER
SUN CITY DISTRICT
WATER SYSTEM SCHEMATIC



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BROWN AND CALDWELL

LEGEND

HIGH ZONE

LOW ZONE

YOUNGTOWN ZONE

FIGURE 2
AAWC SUN CITY WATER DISTRICT
WATER PRESSURE ZONES

WP 4 is a groundwater well that pumps directly into the system. The piping exists to allow pumping to either the low zone or the high zone from this well, but currently it is only operated by pumping into the low zone. This well was not being operated at the time of this study, and the modeling was performed with the WP 4 off. This well provides system redundancy and backup but is not used to maintain daily system flows or pressures.

The existing water system is comprised mainly of asbestos cement pipe ranging from 4 inch to 18 inch in diameter. Most of the 4-inch pipe occurs in Youngtown and in the area south of Grand Avenue and north of Peoria Avenue in Sun City.

Fire hydrant spacing is an issue in some parts of the developed area, particularly in the Youngtown residential area, and in Sun City between Grand Avenue and Peoria Avenue. During the course of this project, the Sun City Fire Department met with AAW staff to select locations for new fire hydrants to provide adequate coverage throughout the Sun City District.

The Town of Youngtown's developed area forms approximately 1 square mile of the roughly 17 square miles of the Sun City Water District. The Town of Youngtown owned and operated its water system until the early 1990s when the water system was sold to AAW. Subsequent to that sale, the existing Youngtown water plants were shut down and Youngtown was connected to the Sun City distribution system at three locations. Those locations are at WP 1 on 111th Avenue, at WP 2 on Peoria Avenue, and at Well 2.2, located south of WP 1 on 111th Avenue. All three of the interconnections are comprised of 6-inch pipe equipped with a pressure reducing/pressure sustaining valve.

DEVELOPMENT OF HYDRAULIC MODEL

Brown and Caldwell developed the Sun City District model from an AutoCAD system map provided by AAW. The AutoCAD file included the Youngtown system. The model was converted to WaterCAD version 6.5, as follows:

- The AutoCAD system map was edited to produce a simplified map that includes pipes 4 inches and larger.
- The AutoCAD map was converted to a hydraulic model in WaterCAD.
- Digital elevation models were obtained from Maricopa County Flood Control District. The most recent topographic information available was for 2001. Each node was assigned an elevation based on this data.
- Water demands were loaded to the model based on water meter routes. Demand development is discussed below.

- Pump and tank information was input based on information provided by AAW. Pumps were input based on pump operating curves provided by AAW.

DEMAND DEVELOPMENT

AAW provided the following water use data and water production data:

- Water meter records, by meter read route, for all months of 2003 and January through August of 2004. The water meter routes are shown on Figure 3.
- Water production data, by month, from January 1996 through August 2004.
- Daily water production data for May, June, July and August of 2003 and 2004.

Water demands for the model were taken from the 2003 water use data because data for the entire year of 2004 was not available at the start of the project. Water demands have remained fairly consistent for the past 5 years in the Sun City District as illustrated in Chart 1.

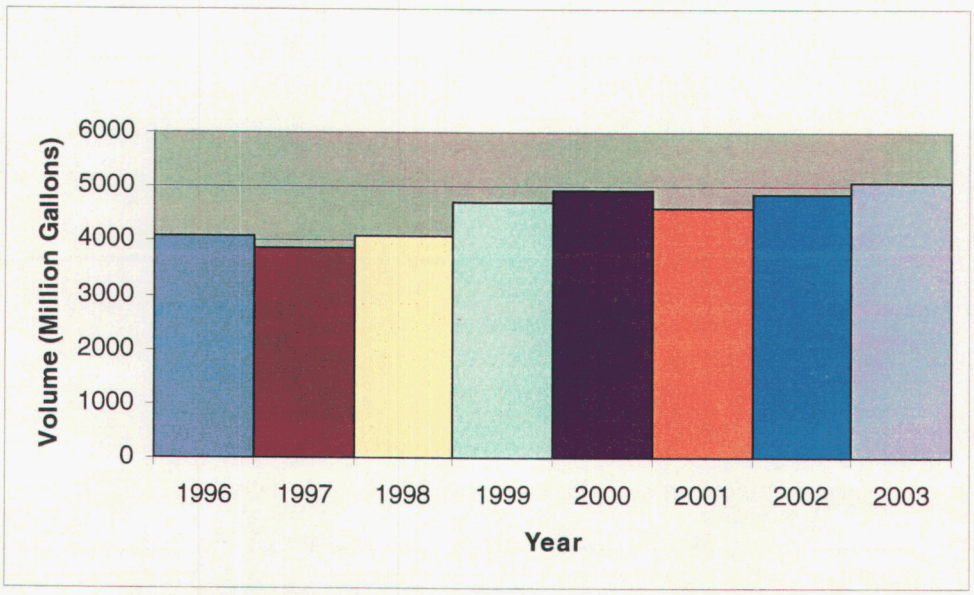
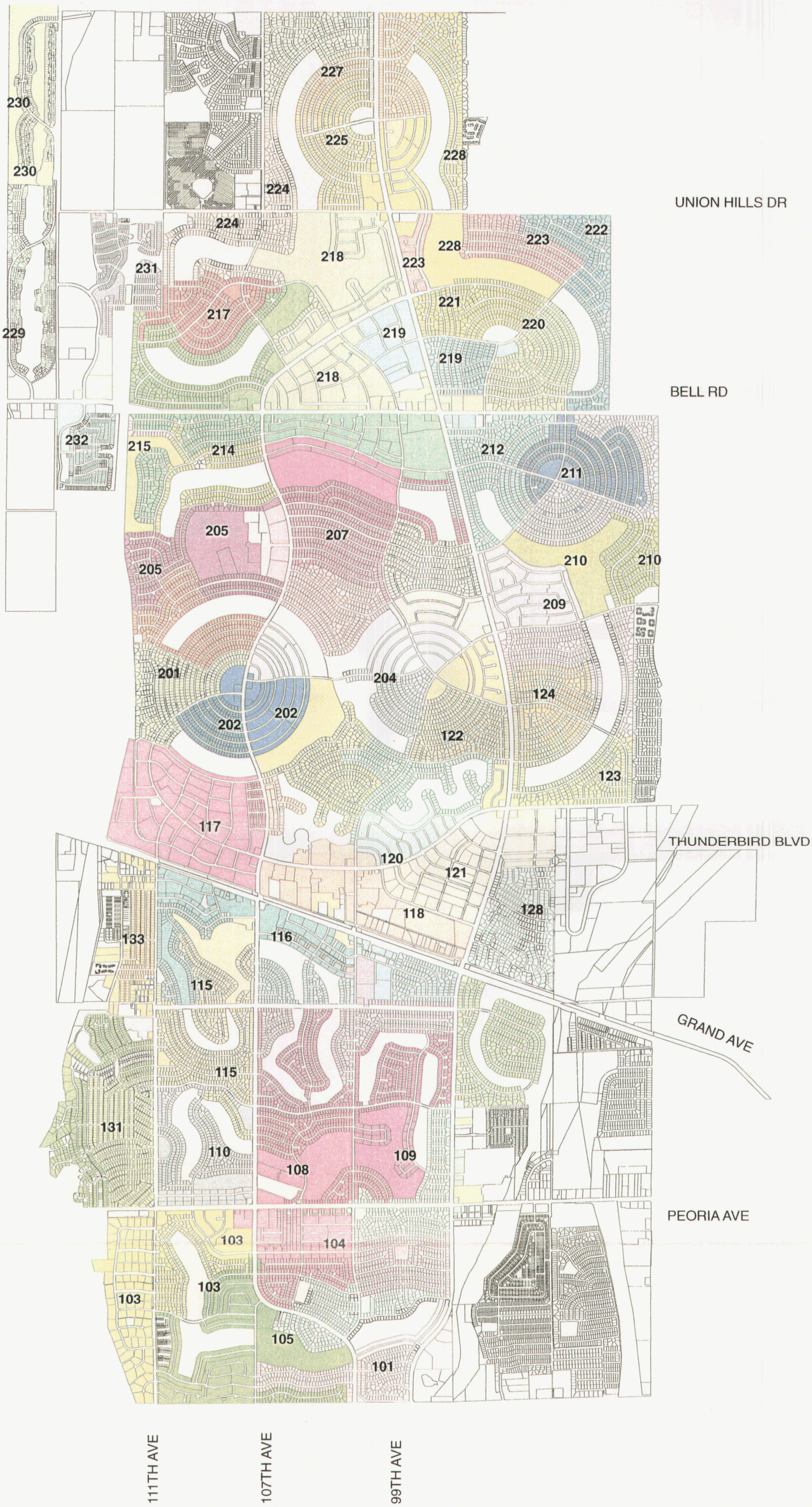


CHART 1. HISTORIC WATER USE 1996 THROUGH 2003

The water use data and water production data were not comparable by month. This is ascribed to the fact that meters are not read on the same day of every month.



BROWN AND CALDWELL

FIGURE 3
SUN CITY DISTRICT
WATER METER ROUTES

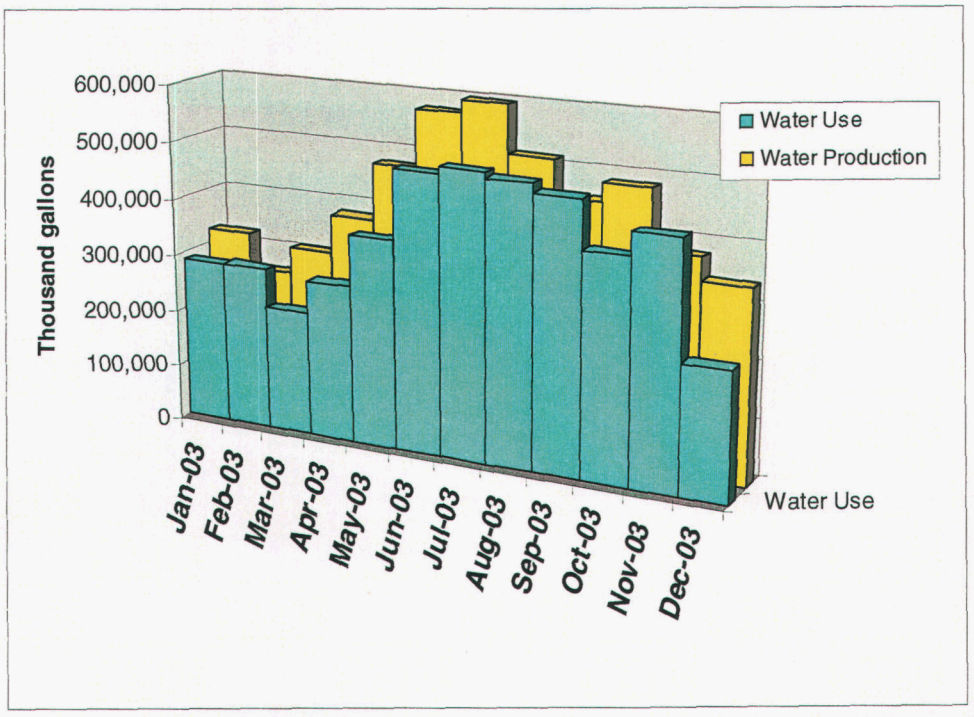


CHART 2. WATER USE VERSUS WATER PRODUCTION 2003

The 2004 water use for months January through August was examined. Although the demand varies by month, the total water use recorded is not significantly different (3 billion gallons for the first 8 months of 2004, versus 2.9 billion gallons for the first 8 months of 2003). The use of 2003 water use data to establish model demands is therefore an accurate simulation of current demand conditions.

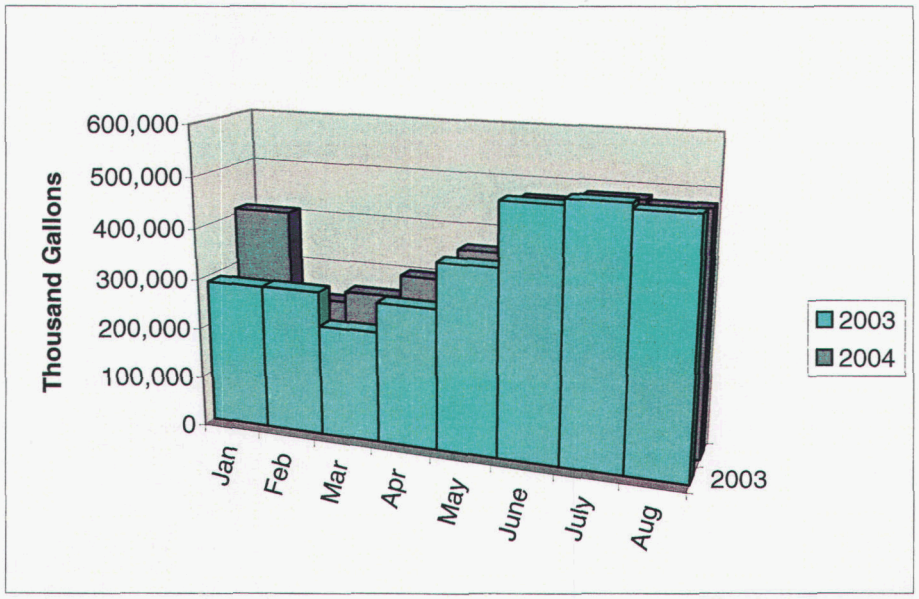


CHART 3. COMPARISON OF WATER USE FOR YEARS 2003 AND 2004

Water Demands for Existing Development

The water use data provided by AAW was divided into categories: Residential, Commercial, Miscellaneous, and Company Account (CA). The CA use is an estimated usage for maintenance activities such as flushing lines. This use does not appear every month and accounts for a small percentage of the total use. In addition, no location is specified for the use, other than the route number. Because this use is discretionary and is not consistent, it was not included in the model demands.

The water demands used to load the model were the total average metered water use less the CA category of usage. The total water use for each route was distributed evenly across the number of model nodes lying within the boundaries of the route. In such a way, the demand pattern for the water system was established in the model, and the demands can be multiplied by a global factor to model various demand scenarios.

A summary of metered water use for the period January through December 2003, less the CA, is provided in Appendix A. These demands were used as the basis for the average day demand under the current day scenario in the water model. The demands were multiplied by a factor of 1.12 to account for lost water[1].

There were no demands available for the Agua Fria Ranch development. This residential subdivision is still being constructed, and had not been included in the meter routes at the time

[1]A comparison of total production versus total metered use for the year 2003 showed 12 percent of water produced unaccounted for.

that data was collected for this project. The demands used for that development were based on AAW's Development Guide standards of 150 gallons per capita day, 3.2 persons per dwelling unit. The fire flow standard used by AAW for new developments is 1,500 gpm for residential and 3,000 gpm for commercial use.

Demands for Future Development

Very little area remains undeveloped within the Sun City District certificated area. The area available for future development is shown on Figure 4. For estimating purposes, a unit demand of 1,500 gallons per acre per day was established based on the historical demands for typical Sun City/Youngtown areas with mixed residential and commercial mixed use.

Undeveloped land exists in the southwestern part of the service area between Agua Fria Ranch and Rancho Estates subdivision. Per the Youngtown General Plan, this property is proposed for mixed uses including low density residential, institutional/public use, and commercial use. The total undeveloped area is approximately 100 acres. The total average demand for future for this property is estimated at 150,000 gallons per day.

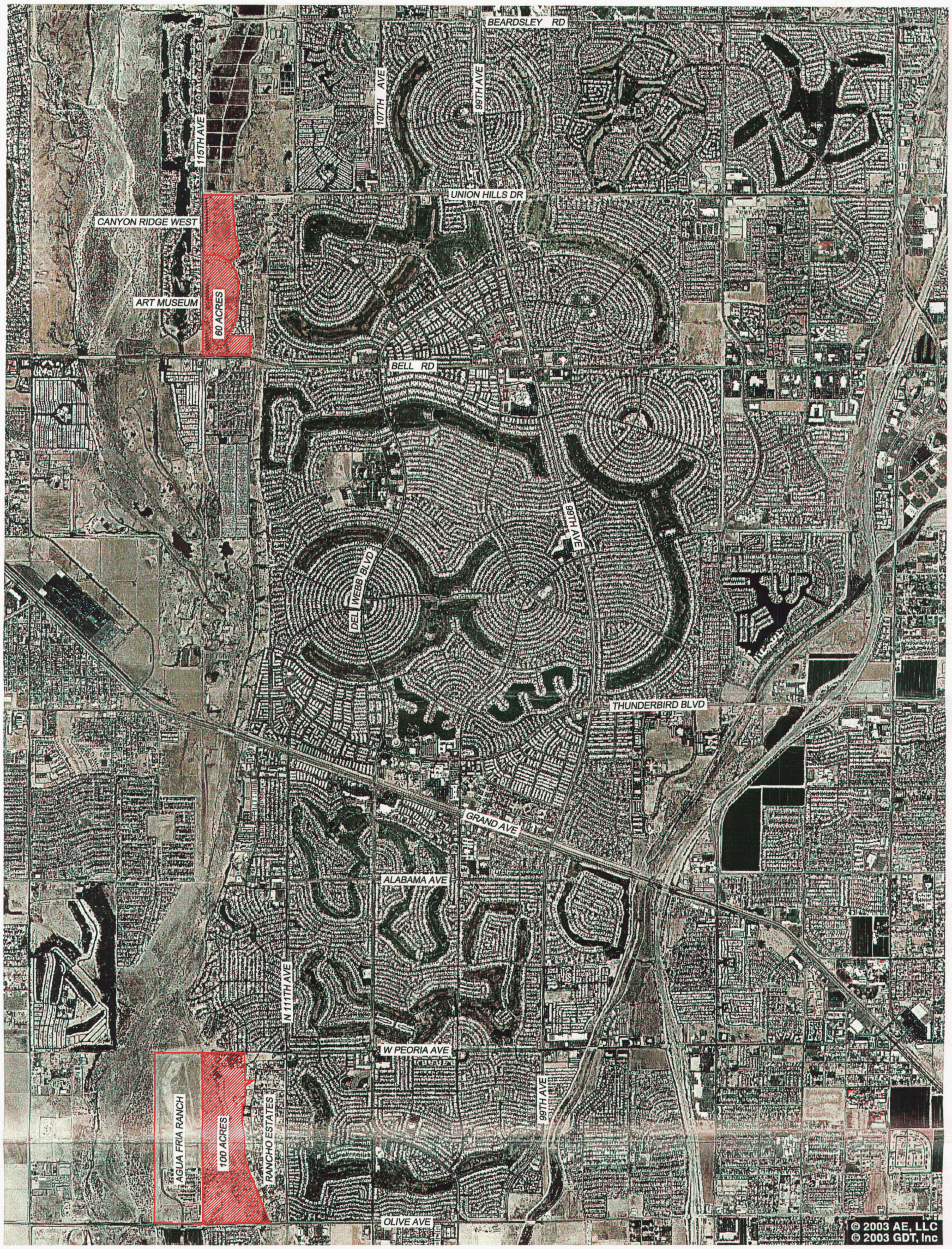
The area in the vicinity of the Sun City Art Museum, north of Bell Road and east of 115th Avenue, remains largely undeveloped. Existing development in the area consists of the art museum, a church, apartments, and high-density residential. The total undeveloped area is approximately 60 acres. The total future average day demand is estimated as 90,000 gallons per day.

Canyon Ridge West is a high-density residential development located south of Union Hills Drive, north of the Art Museum. A new phase of Canyon Ridge West has been platted but not yet developed. This new phase consists of 150 lots. The water pipelines for the new phase of the subdivision were included in the AutoCAD map provided by AAW to Brown and Caldwell. Demands for this subdivision were assumed to be the same as demands for the existing phase of development, represented in the demand data as meter route 231. The average demand per lot for Route 231 is 250 gallons per day. The total average demand per day for the undeveloped phase of Canyon Ridge West is 37,750 gallons per day.

Maximum Day and Peak Hour Factors

The maximum day peak factor was determined from daily water production data for the peak months of 2003. This data is attached as Appendix B. The peak months for 2003 were June, July and August with a total production of 575, 597, and 514 million gallons respectively for those months. The maximum day factor for the system was determined to be 1.75, based on a maximum day of 24 mgd and an average day of 14 mgd.

Hourly production data was not available for this project. A peak hour factor of 3.0 times average day demand was used corresponding to AAW's Development Guide standards for potable water line design.



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BROWN AND CALDWELL

LEGEND

AREAS AVAILABLE FOR DEVELOPMENT

NOT TO SCALE

FIGURE 4

AAWC SUN CITY WATER DISTRICT AREAS AVAILABLE FOR DEVELOPMENT

DWG FILE P:\Arizona-American Water Comp\126530 - Sun City-Youngtown-Fire Flow Study\Drawings\RW\2-sheets\F-FIGURES\F126530-4 DEVELLOPEABLE AREAS.dwg Apr 20, 2005 - 2:34pm mpanz

MODEL CALIBRATION

To calibrate the model, hydrant flow tests were conducted at 32 locations throughout the AAW system. Those locations are labeled on Figure 5. The flow tests were conducted by AAW personnel and were witnessed by Brown and Caldwell. The flow curves for all tests are attached as Appendix C.

Flow tests were conducted in November, December and February. During the first series of flow tests, conducted at 29 sites over 2 days, system operating parameters were recorded by AAW personnel at the water plant sites and the pressure reducing valve site at Florida and 111th Avenue.

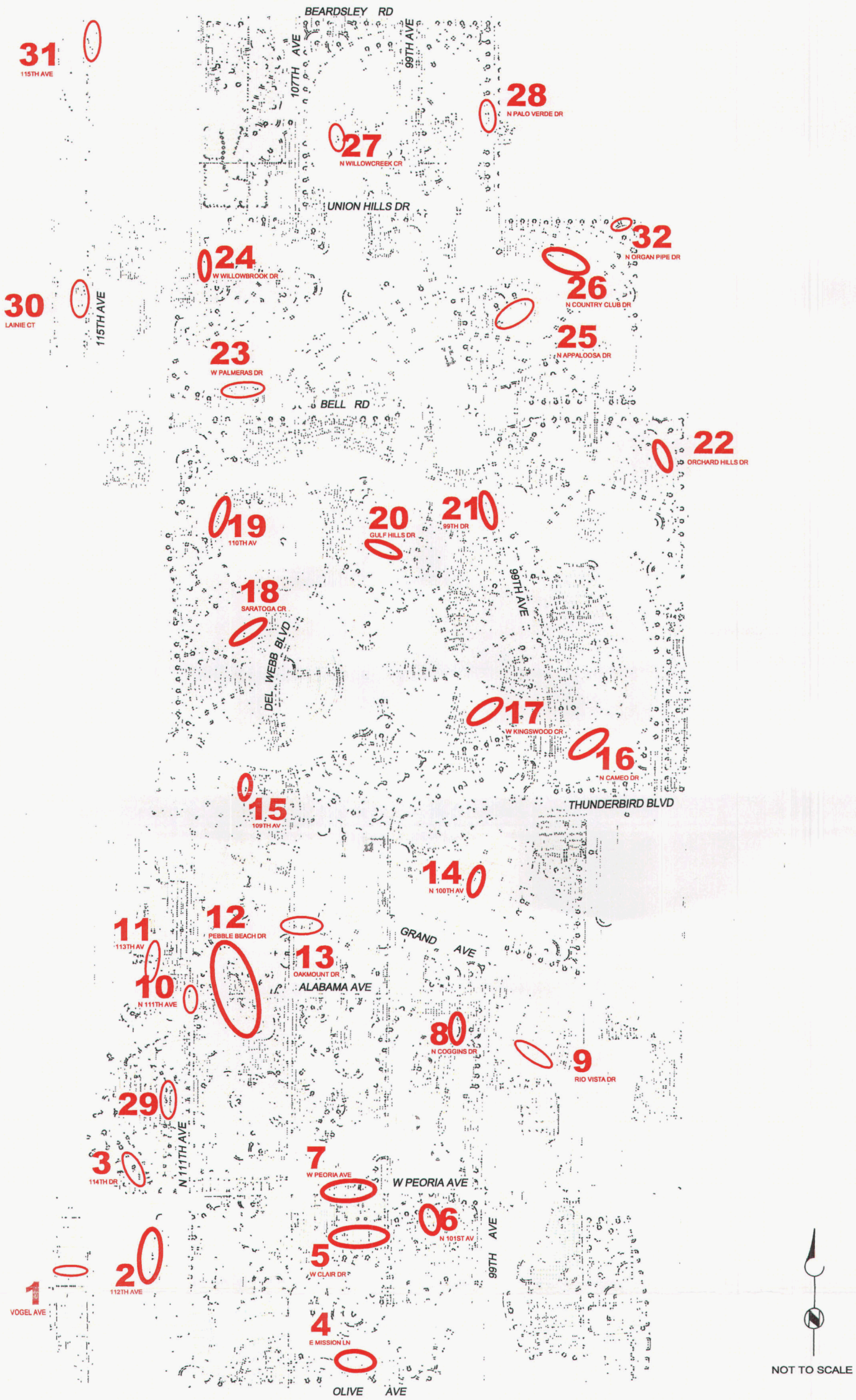
The hydrant flow tests revealed that the pressure sustaining feature on the valves at the three points of interconnection between the Sun City and the Youngtown systems are limiting the flow into Youngtown under fire flow conditions.

Accordingly, the flow tests in Youngtown were repeated with all of the pressure reducing values open. Based on the second set of flow tests, AAW checked valves along Alabama and 111th Avenues, and found one completely closed 10-inch valve on 111th Avenue at Alabama, and one partially closed valve on Alabama east of 111th Avenue. Results of the repeated flow tests were calibrated satisfactorily.

The calibration consisted of running the model under the demand scenario at the time of the test, and comparing the model results to the flow test results. Static pressure and pressure losses were compared. If the losses were within 4 pounds per square inch (psi) of each other, or 8 feet, the calibration was considered satisfactory. This magnitude of difference can be ascribed to differences between actual elevations and model elevations at pumps and at hydrants.

At most of the flow test locations the static pressures were within a few psi of the model. The location with the largest discrepancy in static pressure was Flow Test 31 in the furthest north part of the service area in Coyote Lake, which may have been influenced by the Flow Test conducted immediately before it. The static pressure of the test was 12 psi less then that predicted by the model; however, the test headloss was 19 psi compared to the model prediction of 23, which is satisfactory.

Of the 32 flow test locations conducted, 26 were satisfactorily calibrated. The six locations that could not be satisfactorily calibrated were Flow Test 12 on Pebble Beach Drive, Flow Test 16 on Cameo Drive (12-inch main), Flow Test 23 on Palmeras Drive (12-inch main), Flow Test 26 on Country Club Drive, Flow Test 27 on Willow Creek (8-inch line), and Flow Test 32 (6-inch pipe) on Organ Pipe Drive. In all instances, the flow tests showed larger pressure drops than the model predicts. Possible explanations for this may be that valves are closed or are partially closed on the waterlines, pipe sizes are incorrect on the mapping, or pipes are not connected as shown on the maps. AAW performed several valve surveys in these areas after the testing and did not find closed valves that would have influenced the tests.



Arizona American Water Company

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FIGURE 5

SUN CITY DISTRICT PROPOSED FLOW TEST LOCATIONS

DWG FILE: P:\Arizona-American Water Comp\126530 - Sun City-Youngtown-Fire Flow Study\Drawings\WW\2-sheets\F-FIGURES\F126530-1-NO PIPES.dwg Apr 20, 2005 - 2:45pm mijanz

The location of greatest significance for fire protection is Flow Test 32. This location was chosen for a flow test based on the results of Flow Test 26 because of the lower available fire flow in comparison to the rest of the high zone at this location. The results for Test 32 are directly related to the results for test 26, as the water from the nearest water plant (WP 8) passes through the 12-inch main in Country Club.

AAW Operations personnel checked valves on the 12-inch mains in Country Club Road and in Cameo but found no closed valves. AAW checked valves on 111th Avenue and Alabama and found one valve completely closed on 111th Avenue at Alabama. The flow tests were repeated in this area and Flow Test 10 was satisfactorily calibrated as a result.

In the six instances listed above, flows greater than 1,000 gpm, when expressed at a residual pressure of 20 psi, were achieved during the test so the fire flow criteria can be met. However, the tests were not conducted during the summer, which is the season of highest demand.

The Coyote Lakes subdivision tests showed that the system can provide adequate fire flows. Head losses under fire flow conditions were simulated satisfactorily. However, the static pressure at Flow Test 31, performed at the extreme north end of the system, was substantially lower in the field than predicted by the model (12 psi). Flow Tests 30 and 31 were conducted within a 1/2 hour period. The static pressure at 31 may have been affected by Flow Test 30, conducted immediately prior to Flow Test 31.

The following adjustments were made to the model to simulate field results:

- The pipe size in Cameo was changed from 12 inch to 8 inch from 99th Avenue north to the 16 inch south of Greenway.
- The pipe size in Palmeras Drive was changed from 12 inch to 8 inch from Del Webb Boulevard to West Willowbrook.
- The pipe size in Country Club Drive was changed from 12 inch to 8 inch from Union Hills Drive south to Palmeras.

The calibration demonstrated that the model is accurate. The adjustments above are not reflected in the buildout model. Table 3 presents the final flow test results as compared to the model results. The flow test reports for all tests conducted are included in Appendix C.

TABLE 3. HYDRANT FLOW TEST AND CALIBRATION RESULTS

FLOW TEST NUMBER	DATE	TIME	ZONE	LOCATION	HYDRANT TEST				MODEL			
					FLOW (gpm)	STATIC PRESSURE (psi)	RESIDUAL PRESSURE (psi)	DIFFERENCE	STATIC PRESSURE (psi)	RESIDUAL PRESSURE (psi)	DIFFERENCE	DIFF TEST VS MODEL
1	11/8/2004	11:15 a.m.	Low	Vogel west of 115th Drive	1250	90	86	4	89	85	4	0
2	11/8/2004	10:00 a.m.	Low	112th Avenue north of Cinnabar	1270	90	80	10	89	83	6	4
3	2/1/2005	10:00 a.m.	Youngtown	114th Drive south of Missouri	1147	88	70	18	86	71	15	3
4	11/8/2004	1:3O p.m.	Low	105th Avenue and Mission Lane	1290	90	85	5	91	84	7	2
5	11/8/2004	1:50 p.m.	Low	103rd Avenue and Clair Drive	1021	88	84	4	86	83	3	1
6	11/8/2004	2:05 p.m.	Low	Deanne and 101st Avenue	1220	84	79	5	86	81	5	0
7	11/8/2004	2:25 p.m.	Low	Peoria Avenue east of 106th	1318	87	82	5	86	83	3	2
8	11/11/2004	9:10 a.m.	Low	Coggins Drive and Balboa Drive	1220	84	74	10	84	73	11	1
9	11/11/2004	8:50 a.m.	Low	Rio Vista Drive	1136	86	68	18	80	65	15	3
10	2/1/2005	8:30 a.m.	Youngtown	111th Avenue and Youngtown	1103	78	62	16	74	55	19	3
11	2/1/2005	9:25 a.m.	Youngtown	113th Avenue and Nevada	1068	85	65	20	73	52	21	1
12	2/1/2005	10:15 a.m.	Low	Pebble Beach Drive	1091	83	75	8	84	82	2	6
13	11/8/2004	2:44 p.m.	Low	107th Avenue and Oakmount Drive	1290	84	78	6	82	75	7	1
14	11/11/2004	11:10a.m.	Low	Forester Drive and 100th Avenue	1168	80	71	9	72	66	6	3
15	11/11/2004	9:50 a.m.	Low	109th Avenue south of Cameo Drive	1168	75	69	6	76	70	6	0
16	11/11/2004	10:45 a.m.	Low	Cameo Drive	1200	78	70	8	72	70	2	6
17	11/11/2004	10:25 a.m.	Low	Kingswood Circle	1125	71	63	8	70	62	8	0
18	11/11/2004	10:05 a.m.	Low	Saratoga Circle	1057	70	59	11	66	57	9	2
19	11/11/2004	12:40 a.m.	High	110th Avenue	1189	83	72	11	76	67	9	2
20	11/11/2004	1:10 p.m.	High	Gulf Hills Drive	1260	87	79	8	81	71	10	2
21	11/11/2004	1:35 p.m.	High	9th Drive	1179	81	68	13	82	68	14	1
22	11/11/2004	1:55 p.m.	High	Orchard Hills Drive	1136	83	67	16	79	62	17	1
23	11/11/2004	3:55 p.m.	High	Granada Drive and Palmeras Drive	1189	80	72	8	78	75	3	5
24	11/11/2004	3:30 p.m.	High	Willow Brook	1147	78	70	8	73	67	6	2
25	11/11/2004	2:20 p.m.	High	Appaloosa Drive	1168	72	58	14	72	58	14	0
26	11/11/2004	2:40 p.m.	High	Country Club Drive	1033	69	60	9	74	68	6	3
27	11/11/2004	3:10 p.m.	High	Willow Creek Circle	1080	65	56	9	68	65	3	6
28	11/11/2004	2:55 p.m.	High	Palo Verde Drive	1009	66	56	10	65	56	9	1
29	2/1/2005	9:40 a.m.	Youngtown	Greer east of 112th Avenue	819	81	73	8	85	76	9	1
30	12/14/2004	12:10 p.m.	High	Coyote Lakes – Lainie Court	996	91	60	31	88	56	32	1
31	12/14/2004	12:46 p.m.	High	Coyote Lakes – 115th Drive	848	67	48	19	79	56	23	4
32	2/1/2005	10:40 a.m.	High	Organ Pipe Drive	932	72	48	24	73	40	33	9

REQUIRED FIRE FLOWS

The required fire flows for this system were determined by the SC/YT Work Group. A discussion of the SC/YT Work Group meetings is provided later in this document.

In determining minimum acceptable fire flows, the SC/YT Work Group considered the fire flow criteria of other municipalities in the metropolitan area: Phoenix, Gilbert, Tempe, Scottsdale and Paradise Valley, and the Uniform Fire Code (UFC) and International Fire Code Requirements.

The SC/YT Work Group selected 1,000 gpm for single-family residential fire flow requirements, and 1,500 gpm for multi-family and commercial development. Both of these requirements are at a minimum system pressure of 20 psi. This criteria was applied to the existing development in the study area with the understanding that new development will be subject to UFC fire code requirements, in accordance with the Sun City Fire Department's standards.

MODELING

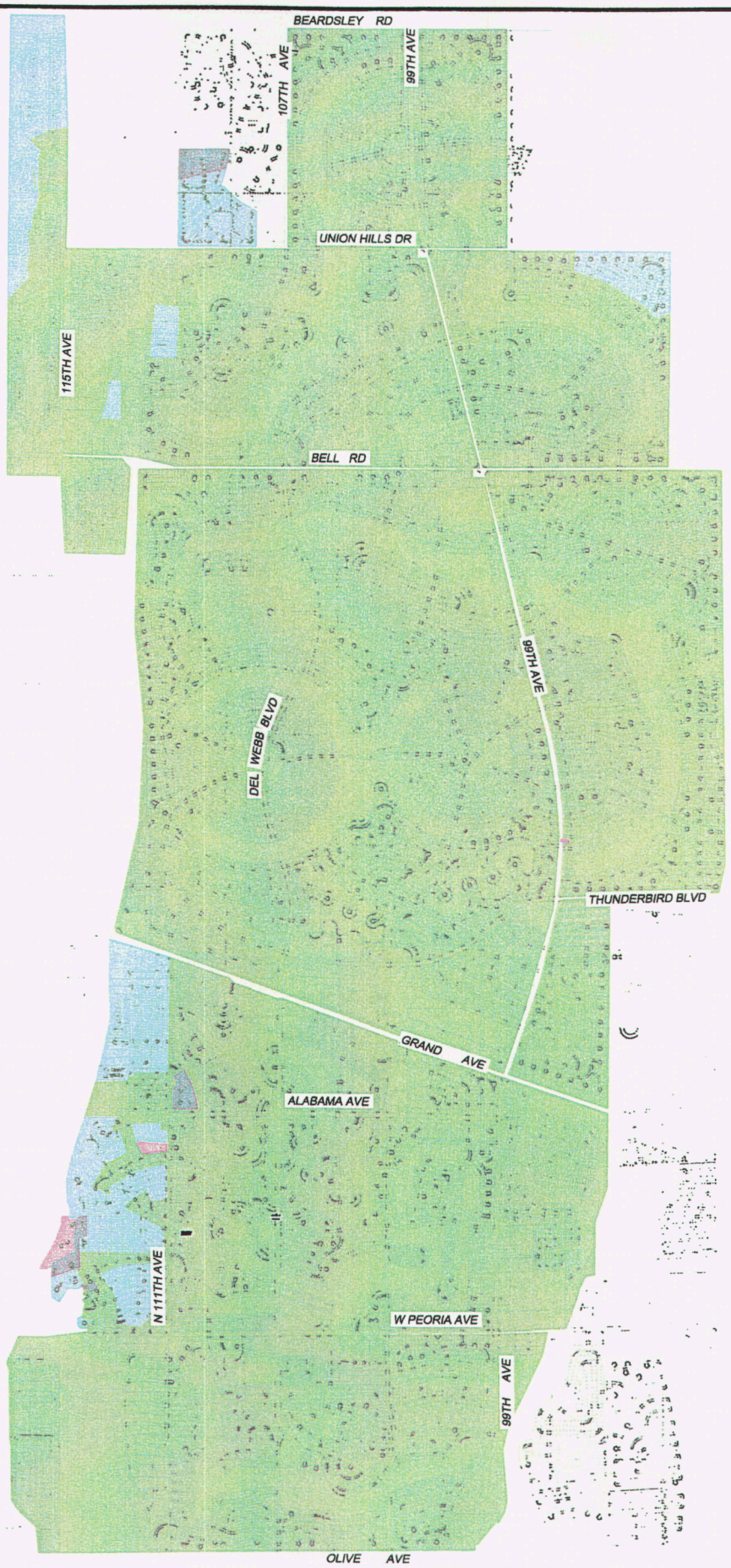
Hydraulic modeling was completed for both existing (2004) and buildout scenarios. The following scenarios were established in the model for the Sun City system: Average Day Existing (2004), Maximum Day Existing (2004), Peak Hour Existing (2004). The Fire Flow Analysis for Maximum Day Existing 2004 is included in Appendix E. Also included in Appendix E is the Fire Flow Analysis for Maximum Day Buildout. Scenarios are established in the model for Average Day Buildout, Maximum Day Buildout, and Peak Hour Buildout.

A base demand scenario is included in the model that represents metered demands without adjustment for water lost. Child scenarios that are multiples of the base scenario are also included. These scenarios were used for model calibration.

FIRE FLOWS AVAILABLE IN THE EXISTING SYSTEM

The fire flows available in the system under 2004 maximum day demand conditions are illustrated on Figure 6. The water system in the majority of the service area can provide over 1,500 gpm fire flow at a minimum system pressure of 20 psi.

During the flow testing it was discovered that the control valves on the three interconnections between the Sun City and Youngtown systems were limiting the fire flow to Youngtown. The interconnections consist of 6-inch pipe equipped with a 6-inch pressure sustaining valve. During the flow tests, the valves were closing to sustain the upstream pressure. It appears that the pressure sustaining feature is set to a value of around 65 psi.



NOT TO SCALE

LEGEND

- 0 - 500 Gallons Per Minute
- 500 - 1,000 Gallons Per Minute
- 1,000 - 1,500 Gallons Per Minute
- Greater Than 1,500 Gallons Per Minute

Arizona American Water Company

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FIGURE 6
AAWC SUN CITY WATER DISTRICT
AVAILABLE FIRE FLOW
MAXIMUM DAY WITH FIRE - EXISTING SYSTEM

The Youngtown flow tests were repeated with the valves fully open. The model was calibrated to the values from the flow tests with the valve open. The modeling results therefore represent the available fire flow with the control valves inactivated.

Modeling of the existing system demonstrated that the majority of the system can provided needed fire flows, with the exception of the commercial area in Youngtown, and some small residential areas in Youngtown and Sun City. The deficiencies are described below.

The water system in the commercial area in Youngtown on the south side of Grand Avenue cannot provide the required fire flows. For water to travel to this area it must pass through the 6-inch interconnection at WP 1, located approximately 3/4 of a mile south on the east side of 111th Avenue, and through a series of 4-inch through 8-inch piping. The piping serving the commercial area is 4 inch and 6 inch in size. The resulting available fire flows are in the range of 1,000 to 1,499 gpm, which is less than the 1,500 gpm established as the criteria for commercial and multi-family development.

Fire flows under 500 gpm occur in the system at two locations in Youngtown. One of those locations is a commercial strip mall on the west side of 111th Avenue south of Alabama. There exists a dead end 6-inch fire line into the property from the north side (Alabama). The domestic water service is provided through a 2-inch tap connected to 4-inch piping. The second location is Illinois Avenue, a cul-de-sac served by a dead end 4-inch water main.

The area between Grand Avenue and Peoria has substantial lengths of 4-inch piping. However, fire flows can generally be provided as the 4-inch piping connects to larger size piping in the major roadways. In North Cherry Hills Drive and North Pebble Beach Drive, the minimum residential fire flow cannot be achieved due to the long lengths of 4-inch piping with few connections to the larger mains.

Fire flows less than 1,000 gpm are available in the far north portion of the Paradise Mobile Home Park on Union Hills Drive. This mobile home park is within the municipal boundaries of the City of Peoria. The development is connected to the water system by 6-inch piping connection on the east and west sides of the development to the 12-inch pipe in Union Hills Drive. The 6-inch loop in the north part of the development is not looped, which limits the fire flow available.

The remainder of the water system generally provides fire flows over the established criteria. The water system north of Grand Avenue generally provides fire flows over 1,500 gpm due to the multiple pumping sources, looped piping and adequate pipe sizes.

FIRE HYDRANT SPACING

AAW Operations staff worked closely with the Sun City Fire Department to verify existing fire hydrant locations and identify proposed locations for hydrants in the Sun City District. The

existing and proposed fire hydrant locations are shown on Figure 7. Locations were chosen to meet Uniform Fire Code requirements for spacing which are 660 feet in residential area and 330 feet in commercial areas.

The majority of the hydrants require the installation of 6-inch pipe. Where there are existing 6-inch fire hydrants on the 4-inch pipe, our recommendations include installation of 6-inch pipe to replace the existing 4-inch pipe to the fire hydrant.

There are a number of 3-inch fire hydrants in Youngtown. Per the Sun City Fire Department, those fire hydrants will remain.

RECOMMENDED IMPROVEMENTS

The recommended system improvements are listed below and are illustrated on Figure 8.

Improvement 1 – Sun City/Youngtown Pressure Reducing/Pressure Sustaining Valve Station Modifications

Three 6-inch control valves exist at the interconnections between the Sun City and the Youngtown systems. The locations of those valves are at WP 1, WP 2, and at the Florida Well site. All three installations are above ground.

The control valves were installed when the interconnections were installed. They are equipped with pressure sustaining pilots to protect the upstream system. In the case of the installations at WPs 1 and 2, the control valves are directly downstream of the booster pumps and reservoirs, so that the pressure sustaining function serves no practical purpose.

In order to ensure delivery of the water required to maintain required flows under a fire event in Youngtown, the pressure sustaining function on the control valves should either be set much lower (i.e. 20 psi)., or eliminated altogether.

It is recommended that a flowmeter be installed at the location of the control valves. The flowmeter would allow AAW to track water losses in Youngtown, and to verify the operation of the control valves. Currently, the valves are not provided with position indicators. The 1997 Sun City/Youngtown Interconnection Study by HYA (a subsidiary of Dames & Moore Company) found that the unaccounted water was much higher in Youngtown than in the Sun City system.

The pressure sustaining assemblies consist of four or six 90-degree elbows, two gate valves and the control valve. The total equivalent length of this assembly, 6 inches in diameter, is estimated to be greater than 220 feet. For a flow of 1,000 gpm, the head loss through such an assembly is estimated to be 17 psi. It is recommended that the entire assembly be removed and a straight pipe with a meter be installed in a vault below grade.

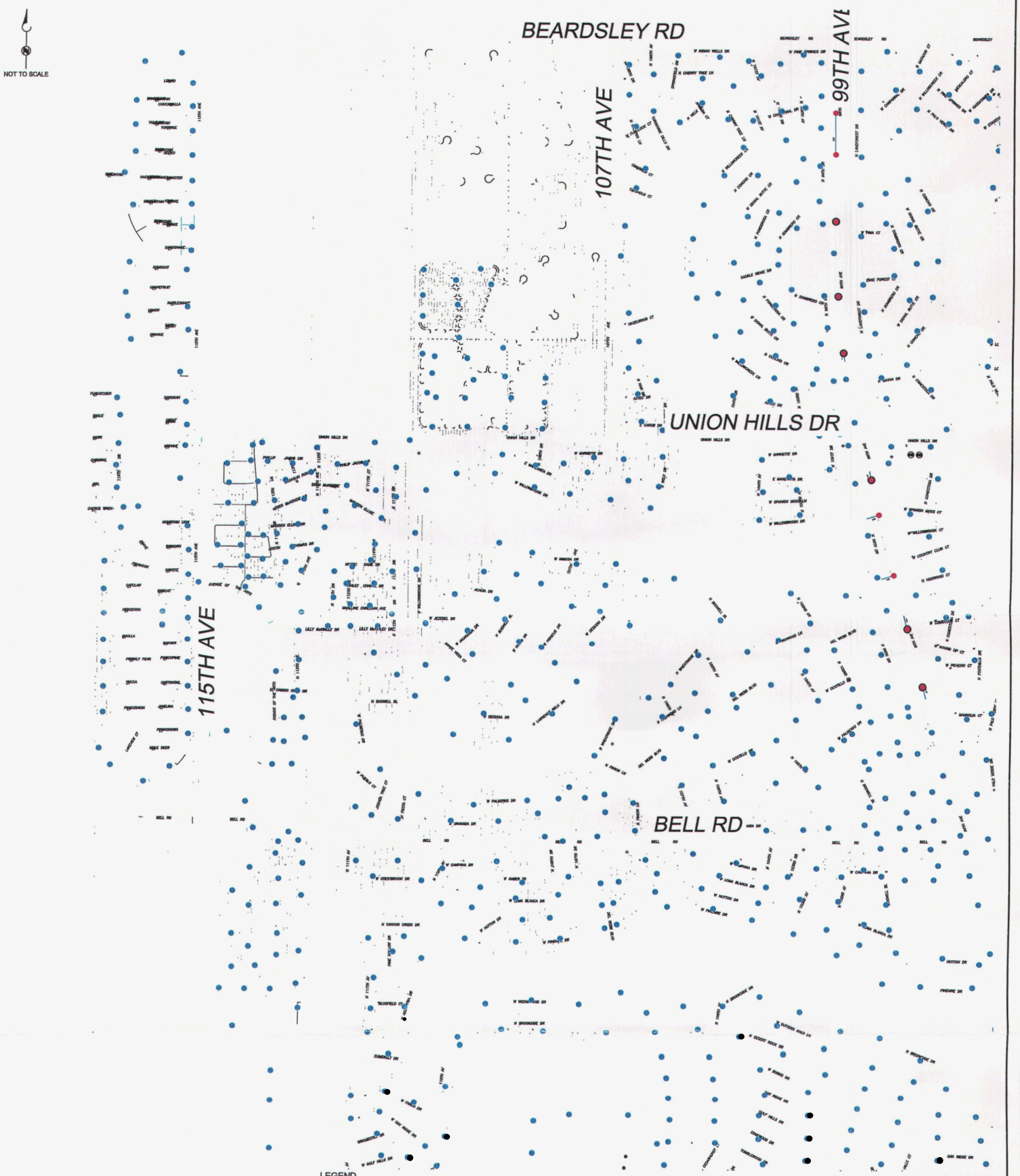

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FIGURE 7 - SHEET 2
AAWC SUN CITY WATER DISTRICT
EXISTING AND PROPOSED FIRE HYDRANTS

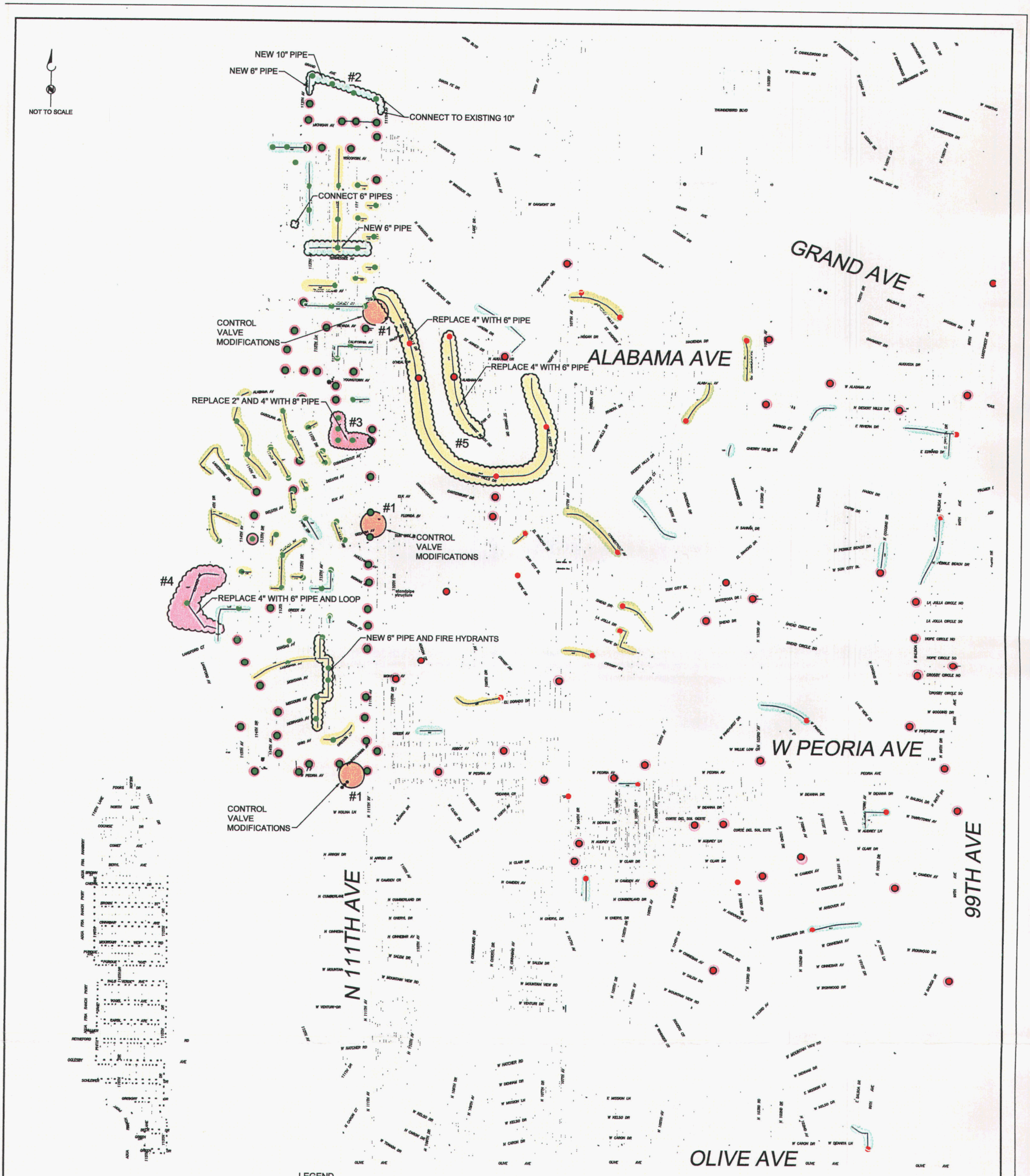
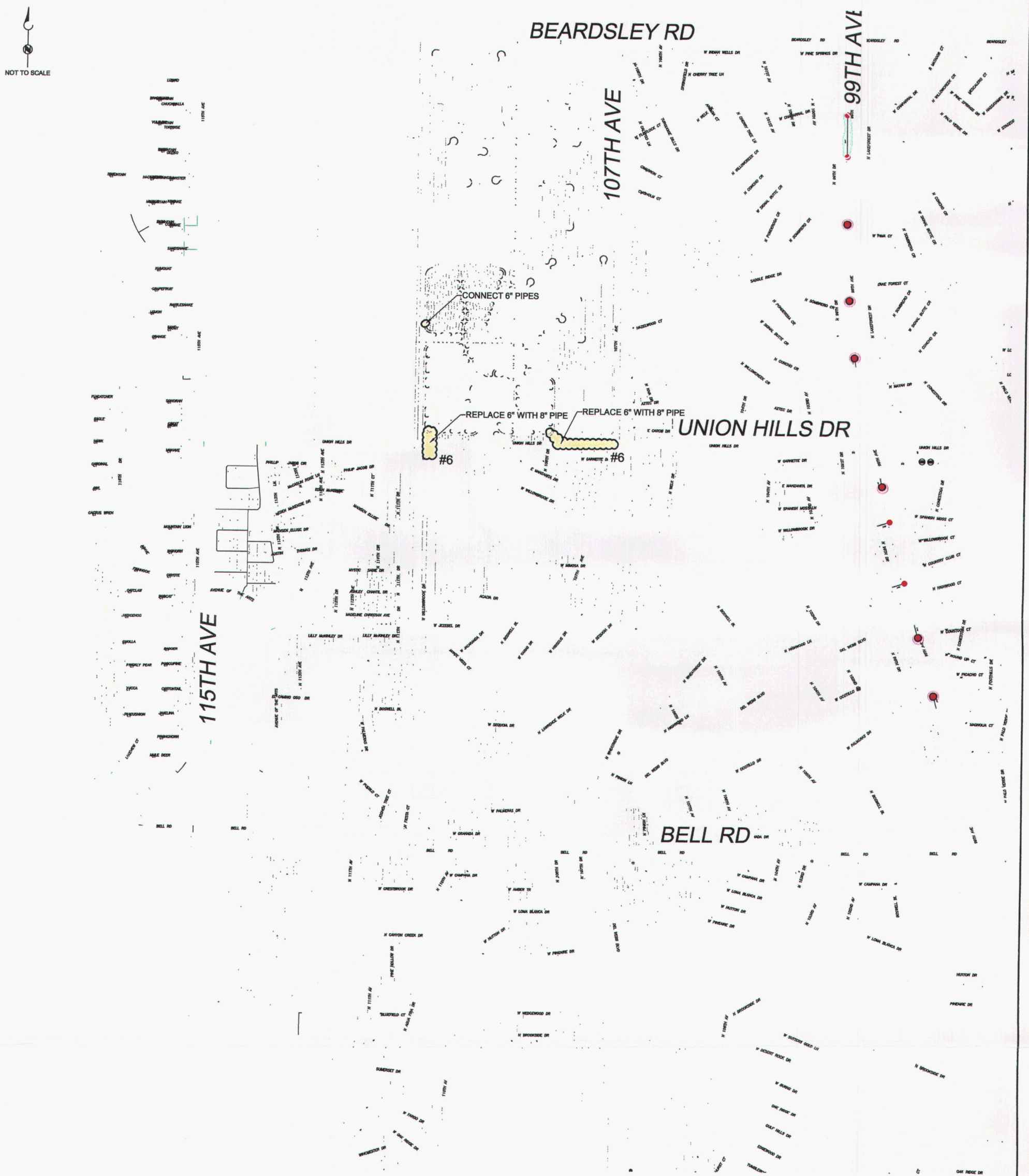


FIGURE 8 - SHEET 1
AAWC SUN CITY WATER DISTRICT
RECOMMENDED IMPROVEMENTS AND PHASING



BROWN AND CALDWELL

Arizona American Water Company

FIGURE 8 - SHEET 2
AAWC SUN CITY WATER DISTRICT
RECOMMENDED IMPROVEMENTS AND PHASING

DWG FILE: P:\Arizona-American Water Comp\126530 - Sun City-Youngtown-Fire Flow Study\Working\Water Model\SunCity_byYear-2.dwg Apr 28, 2005 - 2:42pm myers

Improvement 2 – Youngtown Commercial Piping Improvements

Fire flows do not meet the established SC/YT Work Group standards in the commercial area south of Grand Avenue. This is due to the small size pipes (4 and 6 inch) and the distance the water must travel from the nearest interconnection point at WPt 2, just north of Alabama on 111th Avenue.

Our recommendation is to install a 10-inch pipe along Grand Avenue, connecting to the existing 10-inch pipe on the east side of 111th Avenue. The 10-inch pipe should be looped back to the Youngtown system in 113th Avenue with minimum 6-inch pipe. This new loop, and new connection to the Sun City system, will significantly lower pipe friction losses and allows for a more direct delivery of water from the closest water plant, which is WP 1 on 111th Avenue.

The new connection between the systems should be provided with a flowmeter to allow AAW to monitor water losses in the Youngtown system.

The Spanish Villa Apartments are located on the west side of 113th Avenue, south of Wisconsin. A 6 inch water main provides potable service to the apartments and connects to the water system at both the north and south ends, but the valve is closed at the south connection because there is no meter on that line. A second 6 inch water main (fire line) through the complex connects to the existing system at the north end of the apartments and dead-ends in the drive between apartments at the south end of the complex. This line is equipped with two fire hydrants. A water main is needed from south to north in this area to convey water to the apartments and to the Youngtown commercial area on Grand Avenue north at the required 1,500 gpm. We recommend that the fire line be connected at the south end of the complex to the existing water system to accomplish this.

Improvement 3 – Youngtown Neighborhood Commercial Piping Improvements

The commercial strip mall located on the southwest corner of Alabama Avenue and 111th Avenue is provided with a 6-inch dead end fire line from Alabama. Potable service is provided via a 2-inch tap connected to a 4-inch water line.

In order to provide fire flows over 1,500 gpm, the water line must be looped through the development. We recommend an 8-inch pipe be installed to replace the 2-inch and 4-inch pipes. The new 8-inch pipe would connect to the existing 6-inch fire line, and four new hydrants should be installed.

Improvement 4 – Youngtown Residential Piping Improvements

A dead end 4-inch pipe serves the cul-de-sac of Illinois Avenue in Youngtown. We recommend that the 4-inch pipe be replaced with 6 inch and that the 6-inch pipe be looped back to the existing system in 114th Drive. A new 6-inch fire hydrant should be installed on the 6-inch pipe.

Improvements 4a and 4b – Fire Hydrants in Youngtown

Locations for 117 new fire hydrants were identified within the Town of Youngtown. Fifty-six hydrants can be installed on existing water lines that are 6 inch or greater in diameter (Improvement 4a). The other 61 fire hydrants will require a total of approximately 17,000 linear feet of new 6-inch pipe (Improvement 4b).

Improvement 5 – Sun City Residential Piping Improvements

The 4-inch pipe in North Cherry Hills Drive from 111th Avenue north of Alabama, including the loop south of Alabama, should be replaced with 6-inch pipe. The 4-inch pipe in Pebble Beach should be replaced from East Riviera Drive to Par Court.

Improvements 5a and 5b – Fire Hydrants in Sun City

Locations for 78 new fire hydrants in Sun City were identified with this project. Most of those hydrants are between Grand Avenue and Peoria Avenue. Hydrants are also needed along 99th Avenue every 1,000 feet for vehicle fires. Fifty-two hydrants can be installed on existing pipe (Improvement 5a).

There are a number of existing 6-inch fire hydrants installed on 4-inch water lines. The water lines must be upsized to 6 inch to these hydrants to provide adequate fire flow.

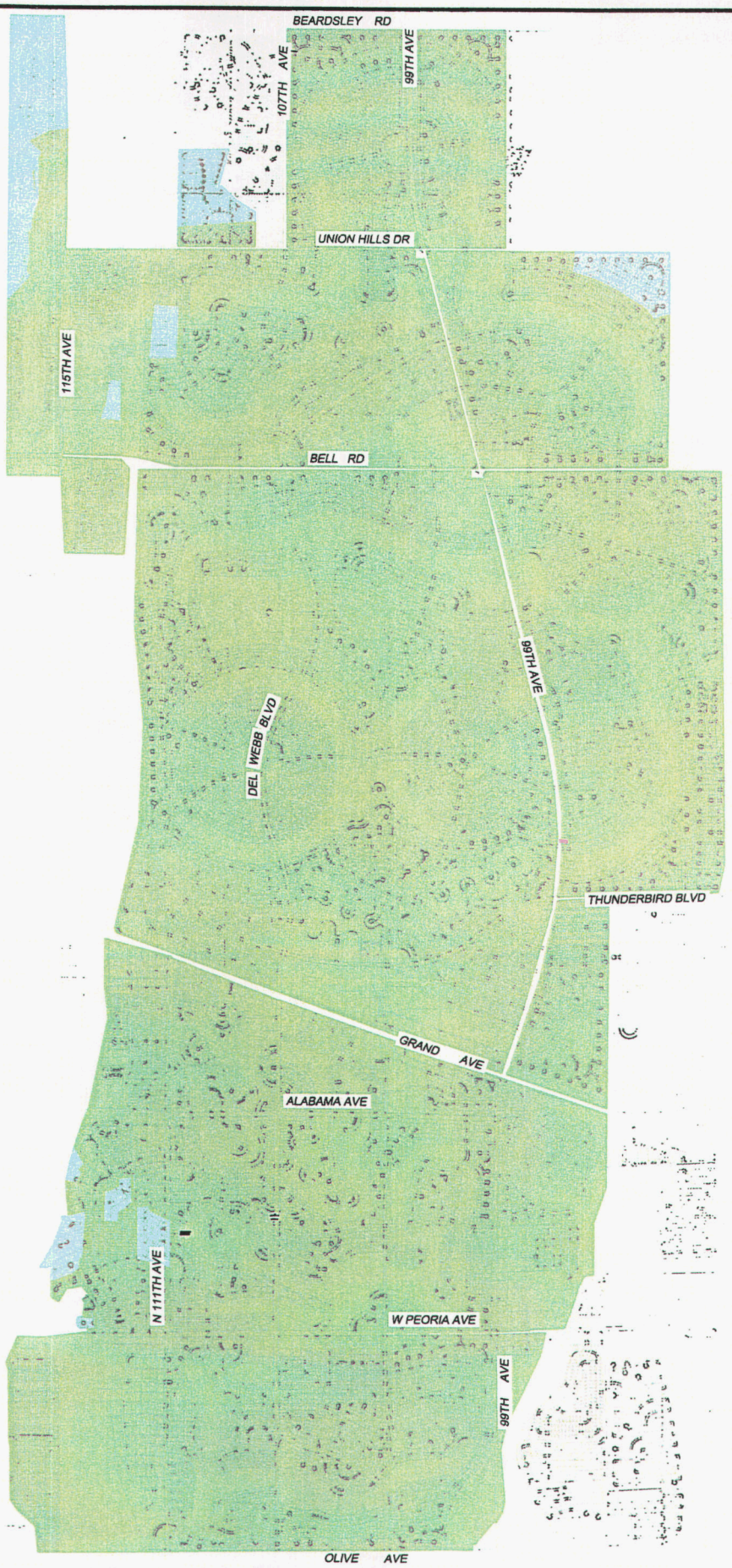
Improvement 6 – City of Peoria Piping Improvements

The Paradise Mobile Home Park, located north of Union Hills Drive, is within the boundaries of the City of Peoria. Available fire flows are less than 1,000 gpm in the north part of the mobile home park. The existing 6-inch water line in the north part of the development should be looped. The mobile home park is connected to the Sun City system though two 6-inch connections. Those connections need to be upsized to 8 inch.

FIRE FLOWS AVAILABLE UNDER BUILDOUT CONDITIONS

The fire flows available in the improved system, under buildout demands, are illustrated on Figure 9. Figure 9 reflects the system with all improvements recommended to address fire deficits and with future development.

The existing backbone infrastructure is adequate to serve the buildout condition for the existing certificated area. The certificated area does not include area included in the Youngtown General Plan, south of Olive Avenue. If that area is to be connected to the AAW system in the future, the affects on the existing system should be reviewed.



NOT TO SCALE

LEGEND

- 0 - 500 Gallons Per Minute
- 500 - 1,000 Gallons Per Minute
- 1,000 - 1,500 Gallons Per Minute
- Greater Than 1,500 Gallons Per Minute

Arizona American Water Company

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FIGURE 9
AAWC SUN CITY WATER DISTRICT
AVAILABLE FIRE FLOW
MAXIMUM DAY WITH FIRE AT BUILDOUT

COST ESTIMATES

Planning level cost estimates were developed for use in prioritizing the improvements. A summary of costs is given below. Costs for pipe replacement assume a depth of cover of 4 feet, and include pavement removal and replacement. Prices have not been adjusted to account for varying site conditions, such as utility conflicts and traffic control.

TABLE 4. ESTIMATED COST OF IMPROVEMENTS

ITEM	DESCRIPTION	COST
1	Sun City/Youngtown Control Valve Modifications	$10,000
2	Youngtown Commercial Piping Improvements	$257,154
3	Youngtown Neighborhood Commercial Piping Improvements	$65,120
4	Youngtown Residential Piping Improvements	$75,840
4a	Youngtown Fire Hydrants on Existing Piping	$280,000
4b	Youngtown Fire Hydrants with New Piping	$927,466
5	Sun City Residential Piping Improvements	$353,960
5a	Sun City Fire Hydrants on Existing Piping	$260,000
5b	Sun City Fire Hydrant with New Piping	$768,062
6	City of Peoria Piping Improvements	$82,500
TOTAL		**$3,080,102**

The itemized costs for the proposed improvements are included in Appendix D. A summary of pipe and fire hydrants proposed with these improvements is provided below.

TABLE 5. SUMMARY OF PIPING AND FIRE HYDRANTS UNDER PROPOSED IMPROVEMENTS

DESCRIPTION	YOUNGTOWN	SUN CITY	PEORIA	TOTAL
10-inch Pipe	1,050 linear feet			1,050 linear feet
8-inch Pipe	700 linear feet		1,250 linear feet	1,950 linear feet
6-inch Pipe	19,641 linear feet	21,492 linear feet		41,133 linear feet
Fire Hydrants	117	78		195

SCHEDULE OF RECOMMENDED IMPROVEMENTS

On the basis of the SC/YT Work Group recommendations, the recommended improvements were prioritized. The improvements were scheduled over a 4-year period. The following is a summary of improvements in the years that they are scheduled.

Table 6 shows the implementation schedule. The improvements have been color-coded by year, and correspond to the color-coding on Figure 8.

TABLE 6. RECOMMENDED FIRE FLOW IMPROVEMENTS ESTIMATED COSTS BY YEAR

No	Description	Year 2004 $
Immediate (2005)		
1	Sun City/Youngtown Pressure Reducing/Pressure Sustaining Valve modifications	$10,000
Total - Immediate Improvements		**$ 10,000**
Year 1		
3	Youngtown Neighborhood Commercial - 111th Avenue south of Youngtown Avenue	$65,120
4	Youngtown Residential	$75,840
4a	Youngtown - Install fire hydrants on existing pipe	$280,000
5a	Sun City - Install fire hydrants on existing pipe	$260,000
Total for Year 1		**$680,960**
Year 2		
6	City of Peoria - Paradise MHP	$82,500
5	Sun City Residential	$353,960
4b	Youngtown – 6-inch piping and fire hydrants	$263,108
Total for Year 2		**$699,568**
Year 3		
4b	Youngtown – 6-inch piping and fire hydrants	$411,848
5b	Sun City – 6-inch piping and fire hydrants	$291,086
Total for Year 3		**$702,934**
Year 4		
4b	Youngtown – 6-inch piping and fire hydrants	$252,510
5b	Sun City – 6-inch piping and fire hydrants	$476,976
2	Piping Improvements - Youngtown Commercial	$257,154
Total for Year 4		**$986,640**
Total All Improvements		**$3,080,102**

OVERSIZED
MAP

FIGURE 8
AAWC SUN CITY
WATER DISTRICT
RECOMMENDED
IMPROVEMENTS
AND
PHASING
(SEE FILE)

APPENDICES

A

APPENDIX A

SUMMARY OF WATER USE BY ROUTE FOR 2003

APPENDIX A

METERED WATER USE BY ROUTE
AAW SUN CITY DISTRICT

Summary of Total Use Less Company Account by Route
1,000 gallons

Route	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	*Avg Mo (1000 gal)*	*Avg Day* gallons	*Avg Day* gpm	*# of* nodes	*Demand* per node
101	4,858.00	5,081.00	3,980.00	4,487.00	6,115.00	8,144.64	8,645.36	8,894.00	7,766.00	6,939.00	7,559.00	10,618.00	*6,039*	201,303	140	17	8.2
102	7,645.00	7,830.00	4,723.00	5,784.13	10,680.00	17,542.94	20,255.93	22,412.00	19,499.00	14,772.00	15,766.00	7,815.00	*12,243*	408,083	283	33	8.6
103	5,653.27	6,025.86	3,811.18	4,646.82	6,705.00	8,772.00	9,888.00	10,907.00	9,570.00	8,989.00	9,647.00	8,144.00	*7,051*	235,042	163	23	7.1
104	4,980.22	5,422.00	4,166.00	4,718.00	6,811.00	11,296.00	12,272.00	13,834.00	10,719.00	8,526.00	8,872.00	3,170.62	*7,635*	254,490	177	45	3.9
105	3,043.00	2,867.00	2,221.00	2,617.00	3,355.00	3,486.00	3,670.00	3,916.00	4,108.00	3,495.00	3,493.00	2,390.97	*3,023*	100,753	70	22	3.2
106	2,320.00	2,165.00	1,814.00	2,040.00	2,669.00	2,495.00	2,383.00	2,594.00	2,699.00	2,612.00	2,541.00	2,552.33	*2,194*	73,144	51	46	1.1
107	2,511.40	2,365.60	1,871.00	2,255.00	2,839.50	2,963.76	2,807.74	2,992.00	3,252.00	2,968.00	3,030.67	3,419.52	*2,488*	82,935	58	29	2.0
108	3,243.00	3,012.63	2,373.00	2,846.00	3,904.00	4,188.00	5,239.00	5,262.50	4,828.73	3,649.77	4,280.48	4,178.00	*3,569*	118,964	83	34	2.4
109	4,205.00	3,799.00	2,654.00	3,891.00	4,871.00	6,395.65	7,926.35	7,074.00	6,253.00	5,034.18	7,174.82	3,903.68	*4,940*	164,661	114	27	4.2
110	3,547.00	3,130.00	2,321.00	3,256.00	3,902.00	5,253.00	6,591.00	6,566.00	6,280.00	4,447.00	5,528.32	1,958.62	*4,235*	141,170	98	43	2.3
111	2,006.75	2,288.25	1,618.00	2,007.00	2,305.00	2,851.00	2,963.00	2,748.00	2,669.00	2,879.00	2,572.77	2,161.00	*2,242*	74,744	52	37	1.4
112	2,146.00	2,201.00	1,659.50	2,049.50	2,365.00	2,848.09	2,556.91	2,530.00	2,711.00	2,625.00	2,461.00	3,782.00	*2,179*	72,647	50	18	2.8
113	3,098.00	3,295.00	2,291.00	3,071.14	3,863.86	4,544.00	4,488.00	4,306.00	4,547.00	4,354.00	3,900.00	2,548.97	*3,480*	115,994	81	25	3.2
114	2,537.00	2,656.00	2,048.00	2,505.00	2,989.00	3,432.00	3,244.00	3,256.00	3,556.00	3,032.00	2,973.00	2,246.62	*2,686*	89,522	62	27	2.3
115	2,146.00	2,145.00	1,588.00	2,001.00	2,576.00	2,833.33	2,863.67	2,703.50	3,128.50	2,638.00	2,457.38	7,166.00	*2,257*	75,223	52	16	3.3
116	6,767.00	6,307.00	4,891.14	5,084.86	8,610.47	10,860.64	10,228.89	10,063.87	9,733.13	6,217.00	11,845.00	12,746.00	*7,551*	251,692	175	26	6.7
117	12,221.00	12,703.00	8,751.00	11,429.00	17,536.00	21,939.51	24,357.49	24,190.00	22,052.00	15,456.00	23,264.00	11,984.00	*16,158*	538,608	374	63	5.9
118	12,403.24	11,980.31	9,902.00	12,752.06	15,870.94	18,589.57	21,250.73	20,721.70	20,739.00	18,445.47	15,201.53	13.00	*16,169*	538,959	374	44	8.5
119	2,736.00	8.00	4,627.00	2,678.17	2,789.83	2,937.00	3,191.00	3,001.93	3,120.07	3,214.00	3,307.00	3.00	*2,874*	95,788	67	27	2.5
120	5,075.00	14.00	8,172.00	5,468.00	7,303.00	10,733.00	12,730.00	11,723.00	9,728.00	6,309.00	11,850.00	0.00	*8,100*	270,015	188	36	5.2
121	7,453.94	7,869.43	5,807.63	7,481.00	9,823.00	13,347.94	14,688.06	12,924.00	11,499.03	8,782.97	13,048.06	12.00	*10,248*	341,591	237	22	10.8
122	3,777.00	3,591.00	2,797.00	3,459.00	4,110.00	5,804.00	5,197.00	5,144.00	5,046.00	4,651.00	5,365.00	-2.00	*4,449*	148,306	103	37	2.8
123	2,795.00	2,932.00	2,280.00	2,768.00	3,199.00	3,814.00	3,738.00	3,684.00	3,971.00	3,345.00	3,434.00	28.00	*3,269*	108,970	76	15	5.0
124	3,672.00	3,992.00	2,899.00	3,813.00	5,372.00	8,971.00	9,079.00	8,674.00	7,105.85	4,354.15	8,138.00	18.00	*6,006*	200,212	139	17	8.2
125	3,051.65	2,768.00	2,369.00	3,022.00	3,497.00	3,508.00	3,436.00	3,465.00	3,878.00	3,376.00	3,356.00	0.00	*3,248*	108,263	75	8	9.4
126	6,594.38	6,275.69	5,462.31	5,758.00	6,963.00	8,428.58	8,099.00	7,705.00	8,156.06	7,157.00	7,296.00	37.00	*7,081*	236,046	164	32	5.1
127	3,496.81	2,960.00	2,829.00	3,223.00	3,603.00	3,587.00	3,698.00	3,453.00	3,741.00	3,437.14	3,536.73	0.00	*3,415*	113,832	79	18	4.4
128	3,324.00	2,842.00	2,486.00	2,984.00	3,577.00	3,623.00	3,625.00	3,500.57	4,021.16	3,507.84	3,455.00	0.00	*3,359*	111,956	78	17	4.6
129	0	0.00	0.00	0.00	944.00	13,129.00	5,317.00	10,591.00	5,697.00	8,296.00	-1.00	3,319.69	*5,912*	197,053	137	7	19.5
131	3,285.08	3,615.67	2,679.97	3,229.00	4,421.00	5,781.00	6,010.29	6,546.71	5,127.00	6,035.00	4,790.00	4,155.80	*4,684*	156,123	108	60	1.8
132	4,157.00	3,962.00	2,756.11	3,734.89	5,696.59	6,762.41	7,341.00	7,622.66	7,097.84	6,649.43	5,873.27	1,814.90	*5,138*	171,259	119	48	2.5
133	1,980.00	1,664.47	1,462.53	1,622.00	2,300.06	2,538.94	2,598.31	2,923.07	2,870.27	2,476.35	2,368.10	4,966.36	*2,067*	68,900	48	18	2.7
134	4,491.00	4,063.00	3,589.00	4,000.00	4,762.00	5,204.00	5,574.00	5,864.00	6,140.06	5,124.94	6,115.64	0.00	*4,577*	152,577	106	35	3.0
151	0.00	5.00	6.00	3.00		16,869.00	0.00	112.00	1,163.00	-24.00	580.00	794.00	*1,560*	51,983	36		
201	2,445.00	2,546.00	2,061.00	2,321.00	2,642.00	2,970.00	2,734.00	2,989.00	2,959.00	3,422.00	3,139.00	2,410.94	*2,519*	83,967	58	25	2.3
202	5,972.00	6,242.00	3,896.00	4,733.00	6,813.00	10,778.00	11,528.00	12,269.00	13,725.00	9,724.00	7,310.00	6,858.00	*7,749*	258,306	179	19	9.4
203	2,595.03	2,711.97	2,037.00	2,363.00	2,766.00	3,068.00	2,982.00	3,221.00	3,087.00	3,417.00	3,065.00	2,881.00	*2,609*	86,981	60	25	2.4
204	6,869.00	6,299.00	4,305.00	5,532.00	9,183.00	14,856.00	18,888.00	20,614.00	17,252.58	10,701.42	14,241.00	10,819.00	*10,728*	357,614	248	34	7.3
205	3,892.00	3,898.00	2,839.00	3,782.00	5,258.00	5,798.00	6,206.00	4,700.30	6,194.57	5,280.13	4,544.15	4,075.85	*4,366*	145,534	101	22	4.6
206	2,618.00	2,460.00	2,024.00	2,359.00	2,924.77	2,904.23	2,756.00	3,076.00	3,223.97	3,065.03	2,850.00	2,736.00	*2,522*	84,058	58	21	2.8
207	2,804.00	2,566.00	2,104.00	2,450.00	3,009.00	2,930.00	2,919.00	3,007.00	3,038.58	3,397.49	3,096.93	2,734.41	*2,610*	87,006	60	29	2.1
208	4,549.00	3,960.37	3,297.63	3,783.00	5,748.00	7,305.00	8,417.00	8,855.00	8,829.00	5,887.00	8,453.00	4,314.00	*5,757*	191,900	133	33	4.0
209	7,551.00	7,236.00	4,455.00	7,198.00	11,459.00	17,042.55	19,257.45	18,600.00	16,729.35	8,746.97	16,329.00	8,661.00	*11,217*	373,901	260	44	5.9

APPENDIX A

METERED WATER USE BY ROUTE
AAW SUN CITY DISTRICT

Route	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	(1000 gal)	gallons	gpm	nodes	per node
210	3,149.00	2,921.00	2,387.00	3,077.00	3,225.83	3,323.17	3,668.00	3,247.00	4,288.73	4,055.13	2,378.14	3,104.62	*2,977*	99,222	69	9	7.7
211	3,003.00	3,364.71	2,424.29	2,937.00	3,292.00	3,902.00	3,688.00	3,693.00	3,952.00	4,073.00	3,363.00	3,176.00	*3,141*	104,700	73	28	2.6
212	3,060.00	3,733.00	2,962.54	3,318.46	3,787.00	4,298.00	4,505.00	4,386.00	4,360.00	4,683.00	4,034.00	3,612.84	*3,594*	119,797	83	39	2.1
213	3,271.00	3,595.00	2,338.00	3,315.00	4,586.00	5,498.00	5,406.00	5,630.00	5,583.00	4,131.00	4,520.00	3,891.31	*3,989*	132,981	92	23	4.0
214	2,463.00	2,570.00	2,097.00	2,560.00	2,822.00	3,121.00	2,965.00	3,067.00	3,331.50	3,126.50	2,834.00	2,691.00	*2,580*	85,992	60	14	4.3
215	6,474.14	6,249.86	4,450.00	6,480.00	9,054.00	10,264.00	11,310.00	11,489.00	10,726.00	7,809.00	9,276.00	7,753.00	*7,799*	259,950	181	44	4.1
216	3,571.54	3,362.46	2,980.14	3,239.86	3,756.00	3,644.00	3,649.00	3,584.00	4,213.32	4,072.68	3,504.00	3,897.00	*3,298*	109,936	76	29	2.6
217	3,031.00	2,737.00	2,266.00	2,715.00	3,141.00	3,226.06	3,255.94	2,988.00	3,598.00	3,366.00	3,285.00	2,836.00	*2,801*	93,358	65	28	2.3
218	10,946.00	10,930.00	6,971.00	11,043.00	15,590.00	21,230.00	25,149.21	24,847.79	24,418.00	15,175.00	20,807.00	11,660.00	*15,592*	519,742	361	56	6.4
219	5,731.00	5,114.00	4,351.00	5,619.00	6,405.00	7,743.00	9,882.00	8,844.00	9,607.00	7,256.00	8,101.00	4.00	*6,554*	218,481	152	26	5.8
220	2,862.00	2,722.00	2,254.00	2,836.00	2,900.00	3,071.00	3,188.00	3,067.00	3,771.00	3,173.00	3,005.00	12.00	*2,986*	99,542	69	48	1.4
221	3,179.00	3,277.00	2,505.00	2,685.00	2,858.00	3,096.00	3,005.00	2,681.00	3,120.00	3,204.00	2,983.32	20.00	*2,963*	98,768	69	36	1.9
222	2,734.00	2,878.00	2,385.00	2,729.00	2,957.00	3,377.00	3,209.00	2,951.00	3,291.00	3,242.00	3,103.00	8.00	*2,987*	99,564	69	50	1.4
223	2,836.26	3,156.74	2,315.00	3,184.00	4,502.40	6,286.60	6,590.00	5,804.00	4,691.00	2,880.00	5,131.91	5.00	*4,307*	143,569	100	41	2.4
224	6,447.00	6,954.00	6,082.00	6,610.00	6,274.10	7,483.90	7,136.00	6,973.00	7,462.00	6,167.00	7,634.00	-175.00	*6,838*	227,948	158	44	3.6
225	4,299.00	3,877.00	3,468.00	4,102.00	4,551.40	5,470.60	5,295.00	4,873.00	5,659.32	5,178.68	4,628.00	2.00	*4,673*	155,764	108	25	4.3
226	2,957.00	2,632.00	2,363.00	2,745.00	3,075.00	3,234.00	3,051.00	3,115.00	3,761.00	3,125.00	3,065.00	9.00	*3,011*	100,373	70	15	4.6
227	3,286.00	2,827.00	2,450.00	2,972.00	3,569.25	3,624.75	3,634.00	3,379.00	3,915.00	3,255.00	3,434.36	0.00	*3,304*	110,140	76	19	4.0
228	5,073.00	4,625.00	3,345.00	5,574.00	8,730.00	10,605.00	11,174.00	9,277.00	8,070.00	5,507.00	8,981.27	6.00	*7,360*	245,337	170	28	6.1
229	12,520.00	19,431.00	9,860.00	17,971.00	19,280.00	21,125.00	23,715.00	21,039.00	19,546.00	19,470.00	22,597.00	12,918.00	*17,213*	573,761	398	63	6.3
230	3,217.00	2,711.00	2,284.00	2,944.00	3,147.00	3,553.00	4,234.00	3,986.00	3,984.76	3,730.24	3,700.95	2,879.05	*3,124*	104,144	72	64	1.1
231	8,491.96	10,097.51	5,147.91	11,374.58	20,774.33	26,952.97	27,900.87	17,873.16	21,390.09	21,261.41	17,913.32	10,687.59	*15,765*	525,495	365	36	10.1
232	2,569.00	2,694.13	2,135.87	2,799.00	3,531.00	4,476.00	4,165.33	4,179.98	5,222.75	3,599.75	3,854.00	4,171.03	*3,269*	108,963	76	35	2.2
													362,328				

B

APPENDIX B

WATER PRODUCTION FOR PEAK MONTHS 2003

Sun City Monthly Well Production

June 2003

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
6		Date	06/01	06/02	06/03	06/04	06/05	06/06	06/07	06/08	06/09	06/10	06/11	06/12	06/13	06/14	06/15	06/16	06/17	06/18	06/19	06/20	06/21	06/22	06/23	06/24	06/25	06/26	06/27	06/28	06/29	06/30			Minimum	Maximum	Total	Average
7	Location																																					
8	Well 1.1 Well Meter	KGALS	383,701	384,336	385,325	386,149	387,032	387,774	388,951	389,770	390,743	391,966	393,300	394,461	395,640	396,647	397,882	399,423	400,124	401,391	402,611	403,990	404,934	406,098	407,661	408,678	409,606	410,683	412,180	413,413	414,462	415,625			383,701	415,625	########	398,819
9	Well 1.1 Well Production	KGALS	635	989	824	883	742	1,177	819	973	1,223	1,334	1,161	1,179	1,007	1,235	1,541	701	1,267	1,220	1,379	944	1,164	1,563	1,017	928	1,077	1,497	1,233	1,049	1,163	1,107			635	1,563	33,031	1,101
10	Well 1.2 Well Meter	KGALS		167,494		168,628		170,530			172,404		173,896		175,348			177,685		179,582		181,196			183,649		184,915		186,695			189,642			167,494	189,642	2,311,664	177,820
11	Well 1.2 Well Production	KGALS	479	567	567	951	951	625	625	625	746	746	726	726	779	779	779	949	949	807	807	818	818	818	633	633	890	890	982	982	982	723			479	982	23,350	778
12	Well 2.1 Well Meter	KGALS	435,309	435,588	436,282	437,011	437,993	439,022	440,164	440,617	441,482	442,906	444,638	445,950	447,166	448,347	449,787	451,202	452,651	454,148	455,463	457,178	458,400	459,667	460,888	462,114	462,886	464,105	465,548	466,749	467,912	469,151			435,309	469,151	########	451,011
13	Well 2.1 Well Production	KGALS	279	694	729	982	1,029	1,142	453	865	1,424	1,732	1,312	1,216	1,181	1,440	1,415	1,449	1,497	1,315	1,715	1,222	1,267	1,221	1,226	772	1,219	1,443	1,201	1,163	1,239	997			279	1,732	34,839	1,161
14	Well 2.2 Well Meter	KGALS		182,919		184,097		185,376			187,036		188,647		190,269			192,407		193,976		195,549			197,432		198,384		199,675			201,343			182,919	201,343	2,497,110	192,085
15	Well 2.2 Well Production	KGALS	609	589	589	640	640	553	553	553	806	806	811	811	713	713	713	785	785	787	787	628	628	628	476	476	646	646	556	556	556	499			476	811	19,532	651
16	Well 2.3 Well Meter	KGALS		480,598		480,871		481,390			481,934		482,432		482,888			483,552		484,030		484,483			484,978		485,172		485,485			485,890			480,598	485,890	6,283,703	483,362
17	Well 2.3 Well Production	KGALS	195	137	137	260	260	181	181	181	249	249	228	228	221	221	221	239	239	227	227	165	165	165	97	97	157	157	135	135	135	136			97	260	5,623	188
18	Well 3.1 Well Meter	KGALS	719,835																													733,410			719,835	733,410	1,453,245	726,623
19	Well 3.1 Well Production	KGALS	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	468	0			0	468	13,575	452
20	Well 4.1 Well Meter	KGALS	3,173	3,962	5,574	7,402	9,228	11,131	13,227	14,772	16,577	17,647	18,755	19,781	20,815	22,419	24,271	26,847	28,202	30,005	31,922	33,974	35,353	37,189	39,498	41,078	42,891	44,630	45,288	45,791	45,797	45,797			3,173	45,797	782,996	26,100
21	Well 4.1 Well Production	KGALS	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,522	1,835	1,835			1,522	1,835	46,294	1,543
22	Well 5.1 Well Meter	KGALS		292,331		293,052		293,862			294,628		295,894		297,613			299,473		300,993		303,086			306,167		308,092		310,936			314,929			292,331	314,929	3,911,056	300,850
23	Well 5.1 Well Production	KGALS	315	361	361	405	405	255	255	255	633	633	860	860	620	620	620	760	760	1,047	1,047	1,027	1,027	1,027	963	963	1,422	1,422	1,331	1,331	1,331	860			255	1,422	23,773	793
24	Well 5.2 Well Meter	KGALS		113,870		113,970		113,970			113,970		113,970		113,970			113,970		113,970		113,970			113,970		113,970		113,970			113,970			113,870	113,970	1,481,510	113,962
25	Well 5.2 Well Production	KGALS	89	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151			0	151	340	11
26	Well 5.3 Well Meter	KGALS		73,837		79,026		84,470			92,100		97,205		101,942			109,124		113,533		118,548			126,060		130,650		135,412			142,845			73,837	142,845	1,404,752	108,058
27	Well 5.3 Well Production	KGALS	2,521	2,595	2,595	2,722	2,722	2,543	2,543	2,543	2,553	2,553	2,369	2,369	2,394	2,394	2,394	2,205	2,205	2,508	2,508	2,504	2,504	2,504	2,295	2,295	2,381	2,381	2,478	2,478	2,478	2,105			2,105	2,722	73,634	2,455
28	Well 5.4 Well Meter	KGALS		331,109		331,109		331,109			331,109		331,109		331,109			331,109		331,109		331,109			331,109		331,109		331,109						331,109	331,109	3,973,308	331,109
29	Well 5.4 Well Production	KGALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
30	Well 5.5 Well Meter	KGALS		717,605		720,124		722,811			726,761		730,589		734,350			740,093		743,950		747,866			753,454		757,334		761,163			767,014			717,605	767,014	9,623,114	740,240
31	Well 5.5 Well Production	KGALS	1,346	1,260	1,260	1,344	1,344	1,317	1,317	1,317	1,914	1,914	1,881	1,881	1,914	1,914	1,914	1,929	1,929	1,958	1,958	1,863	1,863	1,863	1,940	1,940	1,915	1,915	1,950	1,950	1,950	1,769			1,260	1,958	52,523	1,751
32	Well 6.1 Well Meter	KGALS	796,669	797,089	797,286	797,684	797,847	798,303	798,913	799,178	799,769	800,606	801,553	802,034	802,619	803,400	804,453	805,182	805,855	806,456	806,907	807,576	807,875	808,442	809,247	809,689	809,945	810,341	810,778	811,113	811,657	812,055			796,669	812,055	########	804,351
33	Well 6.1 Well Production	KGALS	420	197	398	163	456	610	265	591	837	947	481	585	781	1,053	729	673	601	451	669	299	567	805	442	256	396	437	335	544	398	392			163	1,053	15,778	526
34	Well 6.2 Well Meter	KGALS		949,818		951,921		954,167			959,692		965,177		970,324			978,950		984,738		990,516			999,243	0	4,477		10,178			18,986			0	999,243	9,738,187	695,585
35	Well 6.2 Well Production	KGALS	1,136	1,052	1,052	1,123	1,123	1,842	1,842	1,842	2,743	2,743	2,574	2,574	2,875	2,875	2,875	2,894	2,894	2,889	2,889	2,909	2,909	2,909	757	4,477	2,851	2,851	2,936	2,936	2,936	2,805			757	4,477	73,109	2,437
36	Well 6.3 Well Meter	KGALS		558,264		562,247		567,209			572,814		574,905		576,547			579,157		581,182		583,172			586,774		588,271		590,443			594,173			558,264	594,173	7,515,158	578,089
37	Well 6.3 Well Production	KGALS	1,983	1,992	1,992	2,481	2,481	1,868	1,868	1,868	1,046	1,046	821	821	870	870	870	1,013	1,013	995	995	1,201	1,201	1,201	749	749	1,086	1,086	1,243	1,243	1,243	1,326			749	2,481	39,218	1,307
38	Well 8.1 Well Meter	KGALS	807,792	808,662	809,253	810,130	811,007	811,958	812,820	813,627	814,535	815,822	817,794	819,064	820,856	821,348	822,188	823,359	824,288	825,535	825,817	826,005	826,220	826,633	827,049	827,318	827,722	828,696	829,503	829,932	831,354	832,628			807,792	832,628	########	820,964
39	Well 8.1 Well Production	KGALS	870	591	877	877	951	862	807	908	1,287	1,972	1,270	1,792	492	840	1,171	929	1,247	282	188	215	413	416	269	404	974	807	429	1,422	1,274	113			113	1,972	24,949	832
40	Well 8.2 Well Meter	KGALS		364,669		365,064		365,338			366,382		368,595		370,475			370,868		373,442		374,739			377,075		378,632		379,429			379,807			364,669	379,807	4,834,515	371,886
41	Well 8.2 Well Production	KGALS	111	198	198	137	137	348	348	348	1,107	1,107	940	940	131	131	131	1,287	1,287	649	649	779	779	779	779	779	399	399	126	126	126	945			111	1,287	16,194	540
42	Well 8.3 Well Meter	KGALS		295,690		299,587		304,625			310,807		311,853		313,157			320,044		321,753		326,702			333,353		337,601		341,564			349,198			295,690	349,198	4,165,934	320,456
43	Well 8.3 Well Production	KGALS	2,443	1,949	1,949	2,519	2,519	2,061	2,061	2,061	523	523	652	652	2,296	2,296	2,296	855	855	2,475	2,475	2,217	2,217	2,217	2,124	2,124	1,982	1,982	2,545	2,545	2,545	2,417			523	2,545	58,368	1,946
44	Irrigation Well 1 Well Meter	KGALS		578,094		579,518		580,501			583,125		584,349		585,021			587,843		589,220		589,921			592,432		593,821		594,021			597,274			578,094	597,274	7,635,140	587,318
45	Irrigation Well 1 Well Production	KGALS	904	712	712	492	492	875	875	875	612	612	336	336	941	941	941	689	689	351	351	837	837	837	695	695	100	100	1,084	1,084	1,084	491			100	1,084	20,575	686
46																																						
47	Total Production		16,326	15,919	16,276	17,967	18,240	18,249	16,802	17,795	19,691	20,905	18,410	18,958	19,205	20,312	20,600	19,344	20,204	19,948	20,631	19,617	20,348	20,942	16,450	19,576	19,482	20,000	20,555	21,535	21,744	18,668	574,704	21,744				
48																																	SUM	MAX				

Sun City Monthly Well Production

July 2003

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
6		Date	07/01	07/02	07/03	07/04	07/05	07/06	07/07	07/08	07/09	07/10	07/11	07/12	07/13	07/14	07/15	07/16	07/17	07/18	07/19	07/20	07/21	07/22	07/23	07/24	07/25	07/26	07/27	07/28	07/29	07/30	07/31		Minimum	Maximum	Total	Average
7	Location																																					
8	Well 1.1 Well Meter	KGALS	416,732	417,917	419,082	420,092	421,423	422,710	424,093	425,027	426,271	427,564	428,571	429,870	431,555	433,568	435,203	436,911	438,650	440,470	442,665	444,198								456,550	458,255	459,884	460,966		416,732	460,966	10,418,227	434,093
9	Well 1.1 Well Production	KGALS	1,185	1,165	1,010	1,331	1,287	1,383	934	1,244	1,293	1,007	1,299	1,685	2,013	1,635	1,708	1,739	1,820	2,195	1,533	1,544	1,544	1,544	1,544	1,544	1,544	1,544	1,544	1,705	1,629	1,082	1,116		934	2,195	45,350	1,463
10	Well 1.2 Well Meter	KGALS		191,087		192,433			194,962		197,419		199,700			201,204		202,603		203,633										206,647	209,048	209,891			191,087	209,891	2,210,627	200,966
11	Well 1.2 Well Production	KGALS	723	673	673	843	843	843	1,229	1,229	1,141	1,141	501	501	501	700	700	515	515	501	501	501	501	501	501	501	501	501	501	401	843	841	841		401	1,229	21,208	684
12	Well 2.1 Well Meter	KGALS	470,148	471,322	472,334	473,201	474,401	475,568	476,928	478,047	479,461	481,010	482,353	483,332	484,553	485,861	486,972	487,949	489,566	491,070	492,713	493,744								502,673	503,763	504,880	506,010		470,148	506,010	11,647,859	485,327
13	Well 2.1 Well Production	KGALS	1,174	1,012	867	1,200	1,167	1,360	1,119	1,414	1,549	1,343	979	1,221	1,308	1,111	977	1,617	1,504	1,643	1,031	1,116	1,116	1,116	1,116	1,116	1,116	1,116	1,116	1,090	1,117	1,130	534		534	1,643	36,396	1,174
14	Well 2.2 Well Meter	KGALS		202,341		203,165			204,924		206,073		207,477			209,125		210,072		211,617										216,949	217,319	217,906			202,341	217,906	2,306,968	209,724
15	Well 2.2 Well Production	KGALS	499	412	412	586	586	586	575	575	702	702	549	549	549	474	474	773	773	533	533	533	533	533	533	533	533	533	533	370	587	284	284		284	773	16,632	536
16	Well 2.3 Well Meter	KGALS		486,161		486,337			486,784		487,096		487,429			487,872		488,069		488,534										489,986	490,124	490,224			486,161	490,224	5,368,616	488,056
17	Well 2.3 Well Production	KGALS	136	88	88	149	149	149	156	156	167	167	148	148	148	99	99	233	233	145	145	145	145	145	145	145	145	145	145	138	100	18	18		18	233	4,235	137
18	Well 3.1 Well Meter	KGALS	733,410																														735,198		733,410	735,198	1,468,608	734,304
19	Well 3.1 Well Production	KGALS	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	1,005		60	1,005	2,793	90
20	Well 4.1 Well Meter	KGALS	49,467	51,141	52,787	54,424	55,091	56,865	58,804	60,552	62,432	62,760	64,520	66,133	66,791	67,474	67,977	68,754	70,736	72,494	74,958	76,684	89,420	91,324	93,183	95,284	96,758	98,899	245						245	98,899	1,825,957	67,628
21	Well 4.1 Well Production	KGALS	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,527	1,474		1,474	1,527	47,291	1,525
22	Well 5.1 Well Meter	KGALS		316,649		319,005			323,113		324,589		325,919			328,523		330,448		331,805										338,307	339,088	339,553			316,649	339,553	3,616,999	328,818
23	Well 5.1 Well Production	KGALS	860	1,178	1,178	1,369	1,369	1,369	738	738	665	665	868	868	868	963	963	679	679	650	650	650	650	650	650	650	650	650	650	781	465	340	340		340	1,369	24,443	788
24	Well 5.2 Well Meter	KGALS		114,271		114,271			114,271		114,271		114,543			114,658		116,108		117,865										126,871	128,093	129,017			114,271	129,017	1,304,239	118,567
25	Well 5.2 Well Production	KGALS	151	0	0	0	0	0	0	0	136	136	38	38	38	725	725	879	879	901	901	901	901	901	901	901	901	901	901	1,222	924	420	420		0	1,222	15,737	508
26	Well 5.3 Well Meter	KGALS		147,054		151,424			158,672		162,142		166,866			171,174		171,174		171,174			171,174	171,174	171,174		171,174					171,174		147,054	171,174	2,155,550	165,812
27	Well 5.3 Well Production	KGALS	2,105	2,185	2,185	2,416	2,416	2,416	1,735	1,735	2,362	2,362	1,436	1,436	1,436	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	2,416	26,225	846
28	Well 5.4 Well Meter	KGALS														331,109		331,109		331,109			331,109	331,109	331,109		331,109					331,109			331,109	331,109	2,648,872	331,109
29	Well 5.4 Well Production	KGALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
30	Well 5.5 Well Meter	KGALS		770,551		773,984			780,028		783,005		785,564			790,240		793,889		798,019										814,944	816,576	817,135			770,551	817,135	8,723,935	793,085
31	Well 5.5 Well Production	KGALS	1,769	1,717	1,717	2,015	2,015	2,015	1,489	1,489	1,280	1,280	1,559	1,559	1,559	1,825	1,825	2,065	2,065	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,693	1,632	559	635	635		559	2,065	49,622	1,601
32	Well 6.1 Well Meter	KGALS	812,447	813,173	813,502	813,631	814,008	814,520	815,109	815,466	816,426	817,155	817,913	818,467	819,233	820,124	821,240	822,386	823,597	824,358	825,939	826,395								832,690	833,334	834,454	835,005		812,447	835,005	19,700,572	820,857
33	Well 6.1 Well Production	KGALS	726	329	129	377	512	589	357	960	729	758	554	766	891	1,116	1,146	1,211	761	1,581	456	787	787	787	787	787	787	787	787	644	1,120	551	666		129	1,581	23,224	749
34	Well 6.2 Well Meter	KGALS		24,596		29,721			30,796		44,426		49,861			58,579		63,535		69,858										97,937	100,732	103,532			24,596	103,532	673,573	61,234
35	Well 6.2 Well Production	KGALS	2,805	2,563	2,563	358	358	358	6,815	6,815	2,718	2,718	2,906	2,906	2,906	2,478	2,478	3,162	3,162	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,795	2,800	2,827	2,827		358	6,815	87,394	2,819
36	Well 6.3 Well Meter	KGALS		596,825		598,277			601,795		605,120		609,464			616,361		619,848		624,115										645,799	647,701	649,919			596,825	649,919	6,815,224	619,566
37	Well 6.3 Well Production	KGALS	1,326	726	726	1,173	1,173	1,173	1,663	1,663	2,172	2,172	2,299	2,299	2,299	1,744	1,744	2,134	2,134	2,168	2,168	2,168	2,168	2,168	2,168	2,168	2,168	2,168	2,168	1,902	2,218	2,252	2,252		726	2,299	58,923	1,901
38	Well 8.1 Well Meter	KGALS	832,741	833,064	833,064	833,978	835,006	836,022	837,509	838,490	839,992	841,203	842,985	844,182	845,724	847,858	848,992	850,385	851,358	852,443	853,622	854,470								861,087	862,091	862,650	862,970		832,741	862,970	20,301,886	845,912
39	Well 8.1 Well Production	KGALS	323	0	914	1,028	1,016	1,487	981	1,502	1,211	1,782	1,197	1,542	2,134	1,134	1,393	973	1,085	1,179	848	827	827	827	827	827	827	827	827	1,004	559	320	435		0	2,134	30,664	989
40	Well 8.2 Well Meter	KGALS		381,697		382,801			382,802		382,802		384,582			387,468		387,716		388,754										395,189	396,122	396,846			381,697	396,846	4,266,779	387,889
41	Well 8.2 Well Production	KGALS	945	552	552	0	0	0	0	0	890	890	962	962	962	124	124	519	519	644	644	644	644	644	644	644	644	644	644	933	724	1,035	1,035		0	1,035	18,163	586
42	Well 8.3 Well Meter	KGALS		354,032		358,489			366,367		371,381		373,525			377,060		381,793		386,411										410,098	411,992	414,262			354,032	414,262	4,205,410	382,310
43	Well 8.3 Well Production	KGALS	2,417	2,229	2,229	2,626	2,626	2,626	2,507	2,507	1,072	1,072	1,178	1,178	1,178	2,367	2,367	2,309	2,309	2,369	2,369	2,369	2,369	2,369	2,369	2,369	2,369	2,369	2,369	1,894	2,270	2,529	2,529		1,072	2,626	67,704	2,184
44	Irrigation Well 1 Well Meter	KGALS		598,255		598,923			601,228		602,794		603,149			606,884		608,206		609,959										615,935	616,714	617,511			598,255	617,511	6,679,558	607,233
45	Irrigation Well 1 Well Production	KGALS	491	334	334	768	768	768	783	783	178	178	1,245	1,245	1,245	661	661	877	877	598	598	598	598	598	598	598	598	598	598	779	797	409	409		178	1,245	20,564	664
46																																						
47			19,219	16,748	17,162	17,827	17,873	18,710	22,666	24,395	19,849	19,957	19,306	20,491	21,623	18,739	18,967	21,268	20,898	21,194	18,464	18,870	18,870	18,870	18,870	18,870	18,870	18,870	18,870	18,877	18,299	16,256	16,816	596,565	24,395			
48																																		SUM	MAX			

Sun City Monthly Well Production

August 2003

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
6		Date	08/01	08/02	08/03	08/04	08/05	08/06	08/07	08/08	08/09	08/10	08/11	08/12	08/13	08/14	08/15	08/16	08/17	08/18	08/19	08/20	08/21	08/22	08/23	08/24	08/25	08/26	08/27	08/28	08/29	08/30	08/31		Minimum	Maximum	Total	Average
7	Location																																					
8	Well 1.1 Well Meter	KGALS	462,082																														487,011		462,082	487,011	949,093	474,547
9	Well 1.1 Well Production	KGALS	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	831	883		831	883	25,812	833
10	Well 1.2 Well Meter	KGALS	211,572																												230,209				211,572	230,209	441,781	220,891
11	Well 1.2 Well Production	KGALS	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	666	483	483	483		483	666	20,087	648
12	Well 2.1 Well Meter	KGALS	506,544																														528,406		506,544	528,406	1,034,950	517,475
13	Well 2.1 Well Production	KGALS	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	511		511	729	22,373	722
14	Well 2.2 Well Meter	KGALS	218,474																												224,908				218,474	224,908	443,382	221,691
15	Well 2.2 Well Production	KGALS	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	144	144	144		144	230	6,866	222
16	Well 2.3 Well Meter	KGALS	490,260																												491,105				490,260	491,105	981,365	490,683
17	Well 2.3 Well Production	KGALS	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	0	0	0		0	30	845	27
18	Well 3.1 Well Meter	KGALS	736,203																														795,539		736,203	795,539	1,531,742	765,871
19	Well 3.1 Well Production	KGALS	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,225		1,225	1,978	60,561	1,954
20	Well 4.1 Well Meter	KGALS																																				
21	Well 4.1 Well Production	KGALS	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,759	1,835		1,759	1,835	54,596	1,761
22	Well 5.1 Well Meter	KGALS	340,232																												355,414				340,232	355,414	695,646	347,823
23	Well 5.1 Well Production	KGALS	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	542	1,320	1,320	1,320		542	1,320	19,141	617
24	Well 5.2 Well Meter	KGALS	129,857																												154,519				129,857	154,519	284,376	142,188
25	Well 5.2 Well Production	KGALS	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	881	775	775	775		775	881	26,988	871
26	Well 5.3 Well Meter	KGALS	171,174																												171,174				171,174	171,174	342,348	171,174
27	Well 5.3 Well Production	KGALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
28	Well 5.4 Well Meter	KGALS	331,109																												331,109				331,109	331,109	662,218	331,109
29	Well 5.4 Well Production	KGALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
30	Well 5.5 Well Meter	KGALS	818,404																												849,080				818,404	849,080	1,667,484	833,742
31	Well 5.5 Well Production	KGALS	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,238	1,238	1,238		1,096	1,238	34,390	1,110
32	Well 6.1 Well Meter	KGALS	835,671																														871,097		835,671	871,097	1,706,768	853,384
33	Well 6.1 Well Production	KGALS	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,181	1,531		1,181	1,531	36,957	1,192
34	Well 6.2 Well Meter	KGALS	109,185																												148,501				109,185	148,501	257,686	128,843
35	Well 6.2 Well Production	KGALS	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	1,404	685	685	685		685	1,404	41,371	1,334
36	Well 6.3 Well Meter	KGALS	654,422																												685,487				654,422	685,487	1,339,909	669,955
37	Well 6.3 Well Production	KGALS	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,109	1,230	1,230	1,230		1,109	1,230	34,755	1,121
38	Well 8.1 Well Meter	KGALS	863,405																														887,118		863,405	887,118	1,750,523	875,262
39	Well 8.1 Well Production	KGALS	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	1,141		790	1,141	24,854	801
40	Well 8.2 Well Meter	KGALS	398,915																												422,061				398,915	422,061	820,976	410,488
41	Well 8.2 Well Production	KGALS	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	608	608	608		608	827	24,969	806
42	Well 8.3 Well Meter	KGALS	419,319																												480,232				419,319	480,232	899,551	449,776
43	Well 8.3 Well Production	KGALS	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	2,175	1,548	1,548	1,548		1,548	2,175	65,556	2,114
44	Irrigation Well 1 Well Meter	KGALS	618,328																												630,514				618,328	630,514	1,248,842	624,421
45	Irrigation Well 1 Well Production	KGALS	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	510	510	510		435	510	13,715	442
46																																						
47			16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	16,663	15,808	15,808	15,666	513,836	16,663			
48																																		SUM	MAX			

C

APPENDIX C

HYDRANT FLOW TEST CURVES

Fire Flow Report
Test 1

Location: North Side of Vogel on West End

Date: 11/8/2004 Time: 11:15 AM

Test Performed by: Mark Knutson

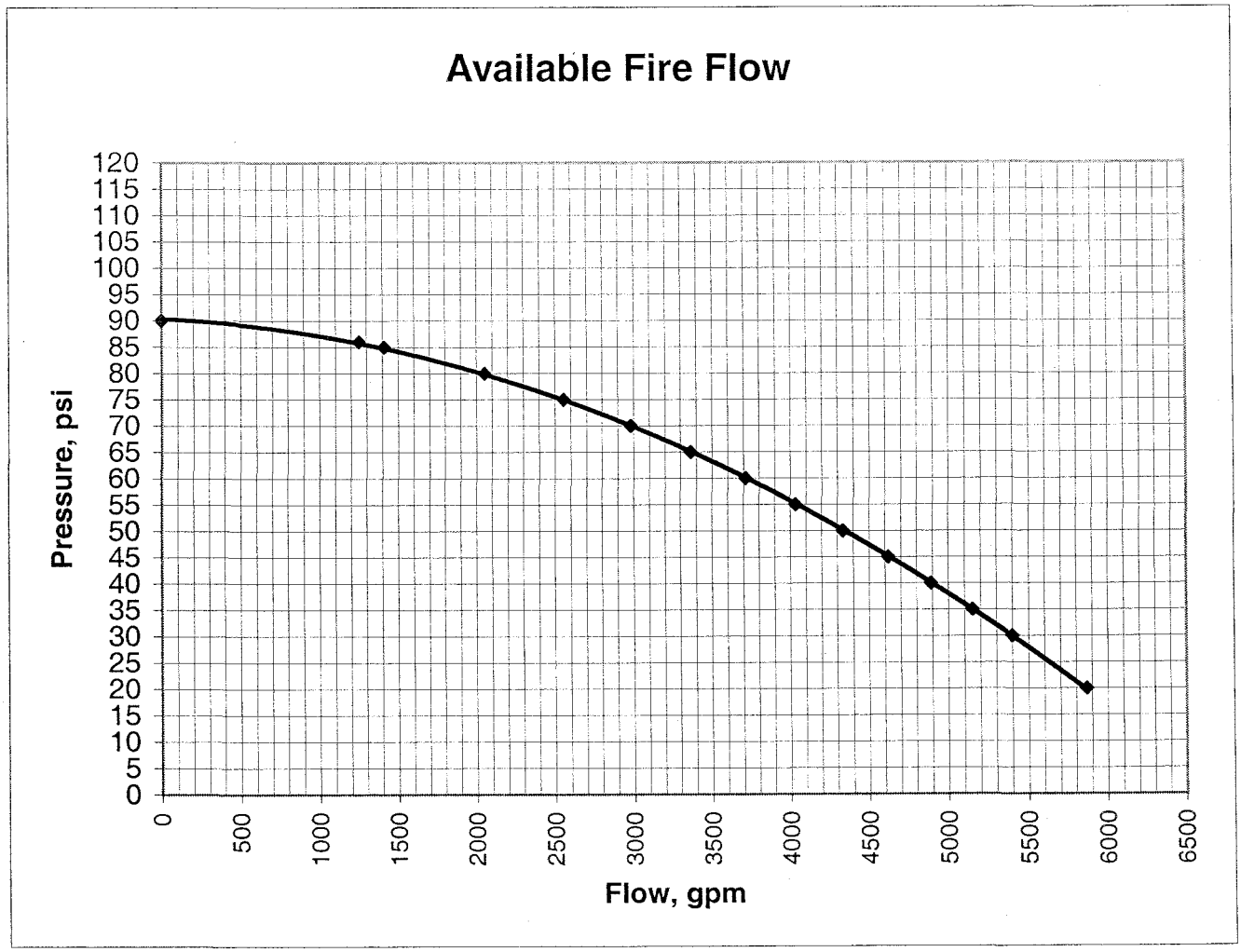
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	90.0	Pitot Pressure (psi)	63
Residual Pressure (psi)	86.0	**Flow (gpm)**	**1250**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

		Coefficient of Discharge	PlantPRO HFD = 0.845
4%	(0.9 Typical)	0.845	Typ = 0.90
		Diameter of Outlet (2.5 in. Typical)	2.5

Calculated Flow at 20 psi 5865 gpm **Calculated Flow at 20 psi 5865 gpm**



Fire Flow Report

Test 2

Arizona-American Water Company

Location: 112th Ave North of Cinnebar on West Side
Date: 11/8/2004 Time: 10:30AM

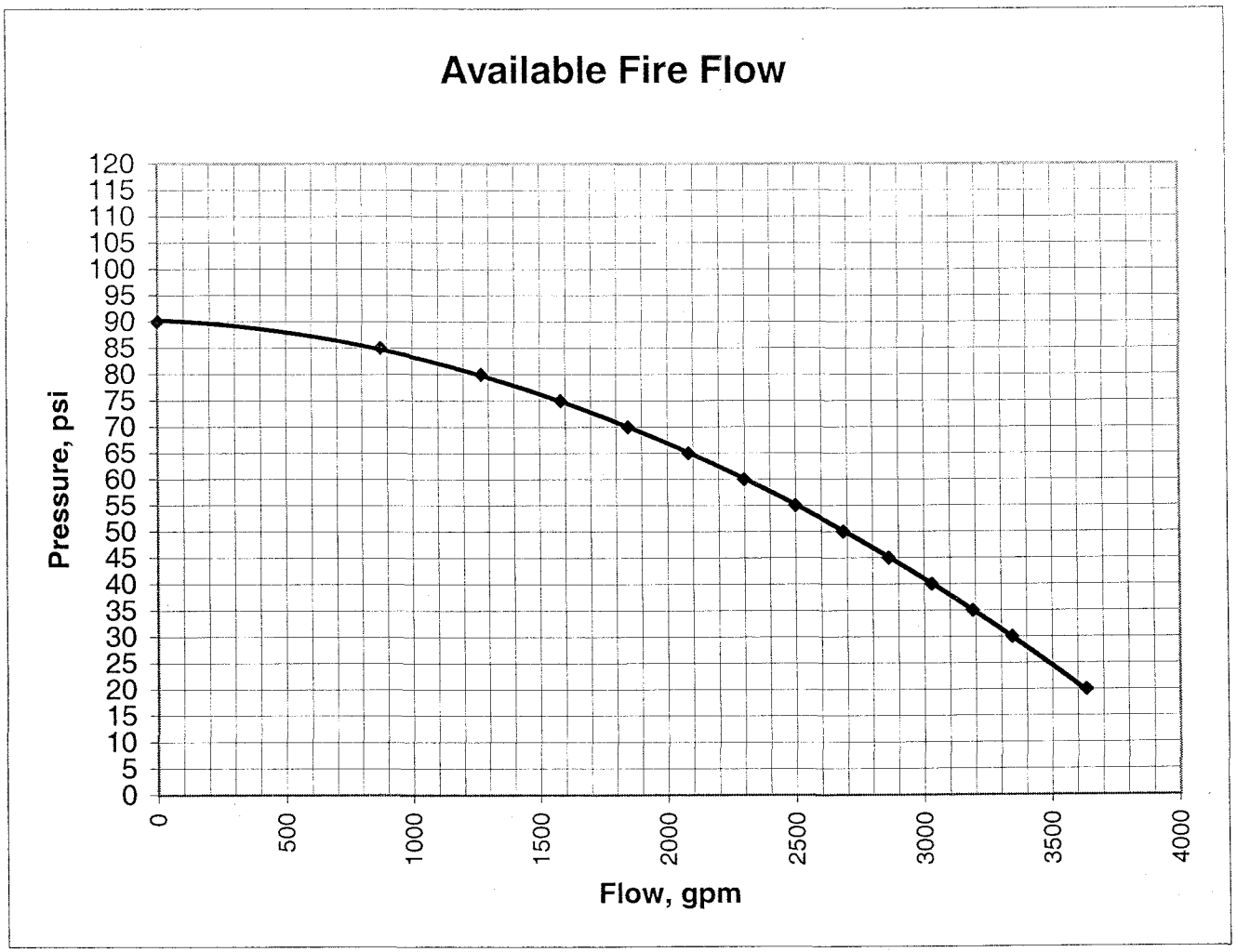
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	90.0	Pitot Pressure (psi)	65
Residual Pressure (psi)	80.0	**Flow (gpm)**	**1270**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
11% (0.9 Typical)	0.845	Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi **3632 gpm** **Calculated Flow at** 20 **psi** **3632 gpm**



Fire Flow Report

Test 3

Arizona-American Water Company

Location: South of Missouri on East side of 114th Drive
Date: 11/8/2004 Time: 10:30AM
Test Performed by: Mark Knutson

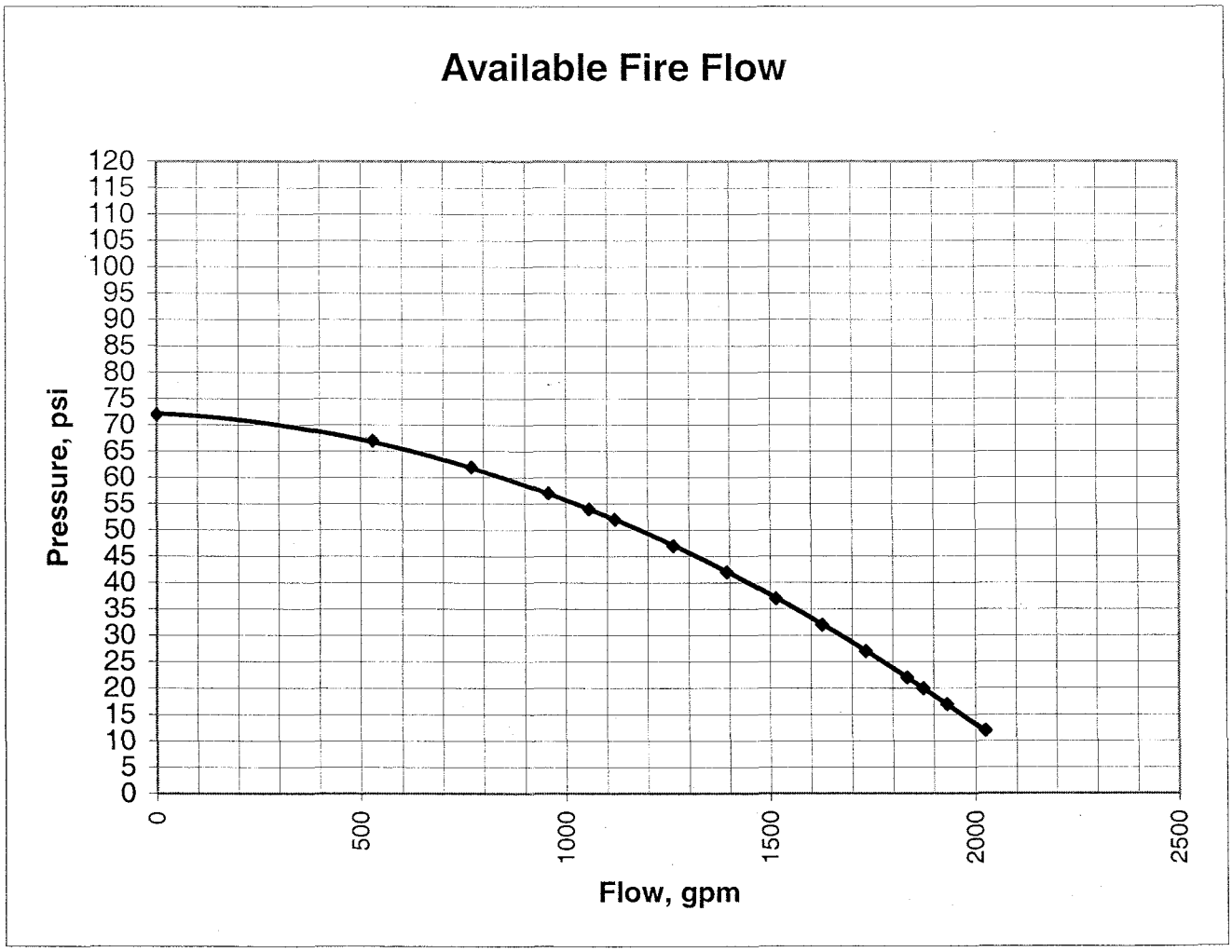
Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0	Pitot Pressure (psi)	45
Residual Pressure (psi)	54.0	**Flow (gpm)**	**1057**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge	25%	(0.9 Typical)	0.845
Diameter of Outlet (2.5 in. Typical)			2.5

PlantPRO HFD = 0.845
Typ = 0.90

Calculated Flow at 20 psi 1874 gpm **Calculated Flow at 20 psi 1874 gpm**



Fire Flow Report

Test 3

Arizona-American Water Company

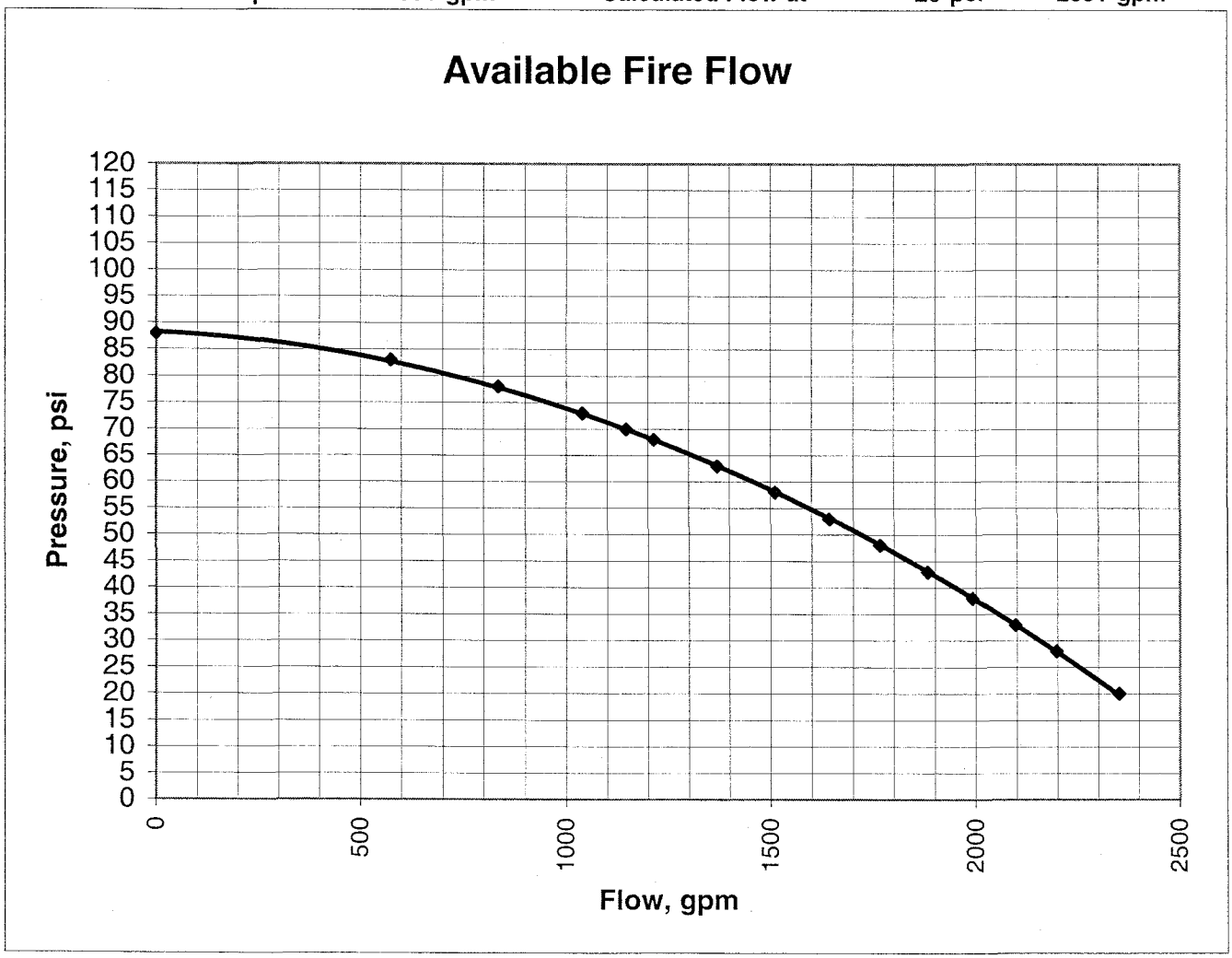
Location: 114th Drive north of Peoria
Date: 2/1/2005 Time:10:00 AM
Test Performed by: Mark Knutson & Jeremiah Mecham

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	88.0	Pitot Pressure (psi)	53
Residual Pressure (psi)	70.0	**Flow (gpm)**	**1147**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

		Coefficient of Discharge	PlantPRO HFD = 0.845
20%		(0.9 Typical)	0.845 Typ = 0.90
		Diameter of Outlet (2.5 in. Typical)	2.5

Calculated Flow at 20 psi 2351 gpm **Calculated Flow at 20 psi 2351 gpm**



Fire Flow Report
Test 4

Location: 105th Ave and Mission Lane

Date: 11/8/2004 **Time: 1:30PM**

Test Performed by: Mark Knutson

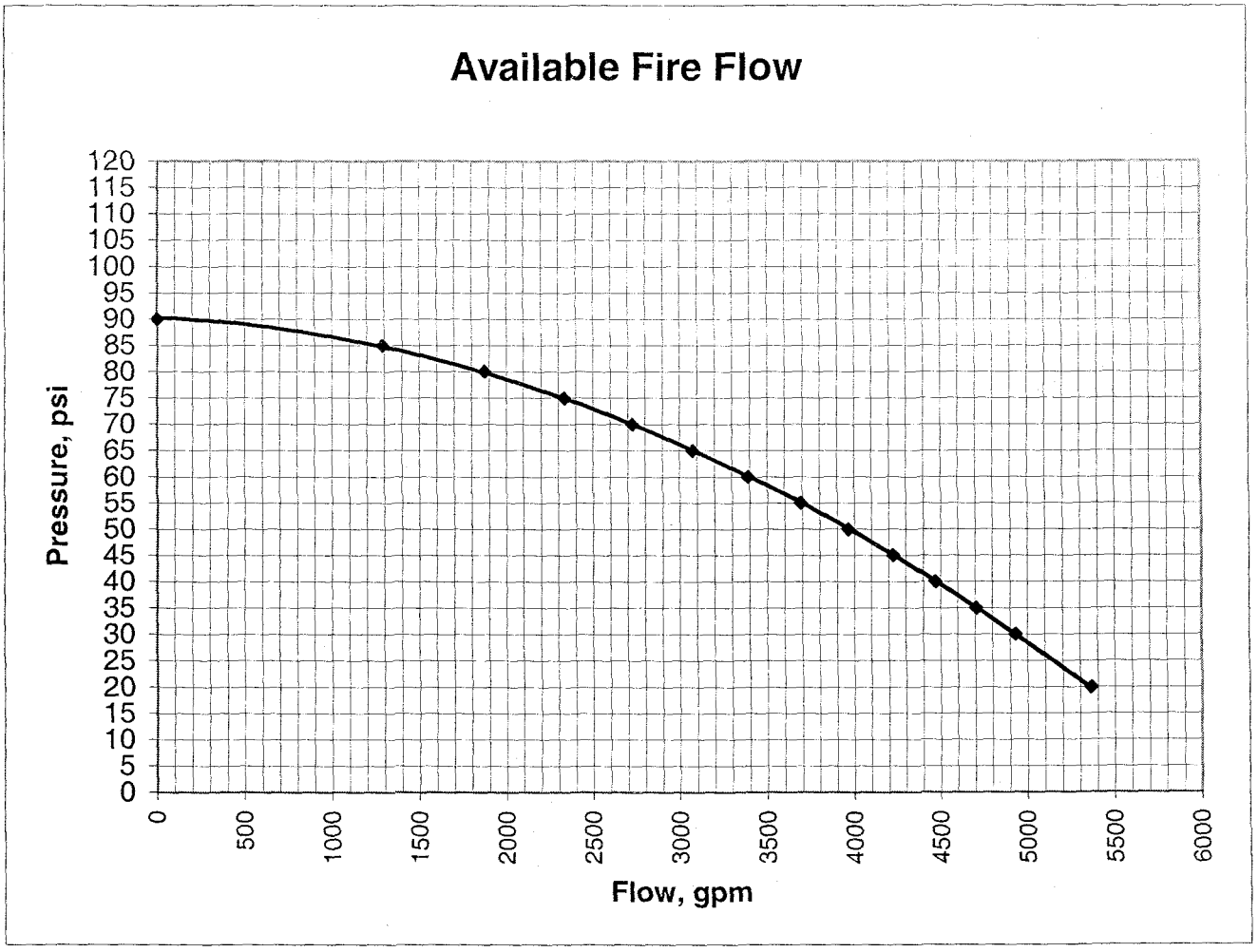
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	90.0	Pitot Pressure (psi)	67
Residual Pressure (psi)	85.0	**Flow (gpm)**	**1290**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge 6% (0.9 Typical)	0.845 Typ = 0.90	PlantPRO HFD = 0.845
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi **5362 gpm** **Calculated Flow at** 20 **psi** **5362 gpm**



Fire Flow Report
Test 5

Location: 103rd Ave and Clair Dr. N.W. Corner

Date: 11/8/2004 Time: 1:50PM

Test Performed by: Mark Knutson

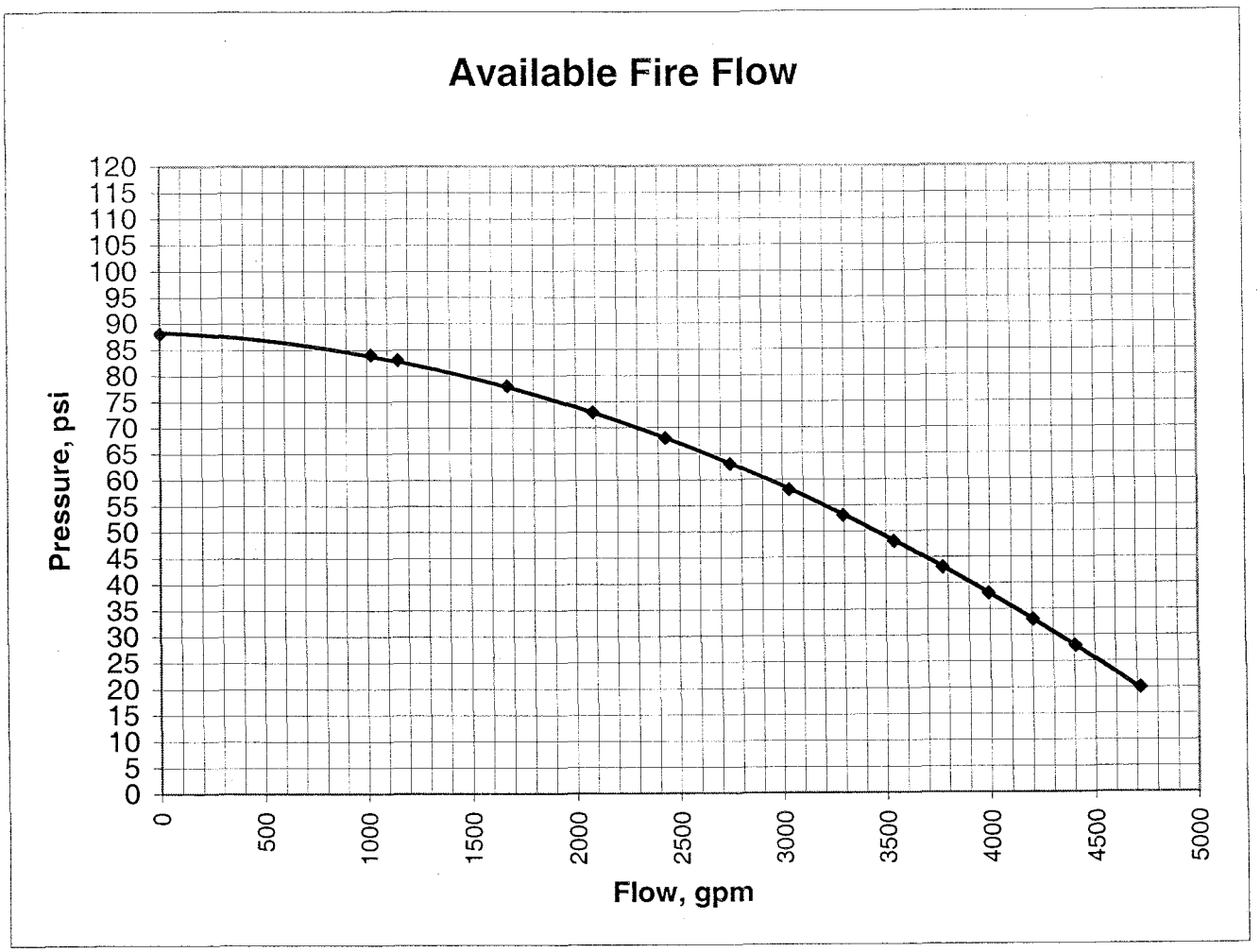
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	88.0	Pitot Pressure (psi)	42
Residual Pressure (psi)	84.0	**Flow (gpm)**	**1021**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
5%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi 4715 gpm **Calculated Flow at 20 psi 4715 gpm**



Fire Flow Report

Test 6

Location: Deanne and 101ST Ave SE Corner

Date: 11/8/2004 Time: 2:05PM

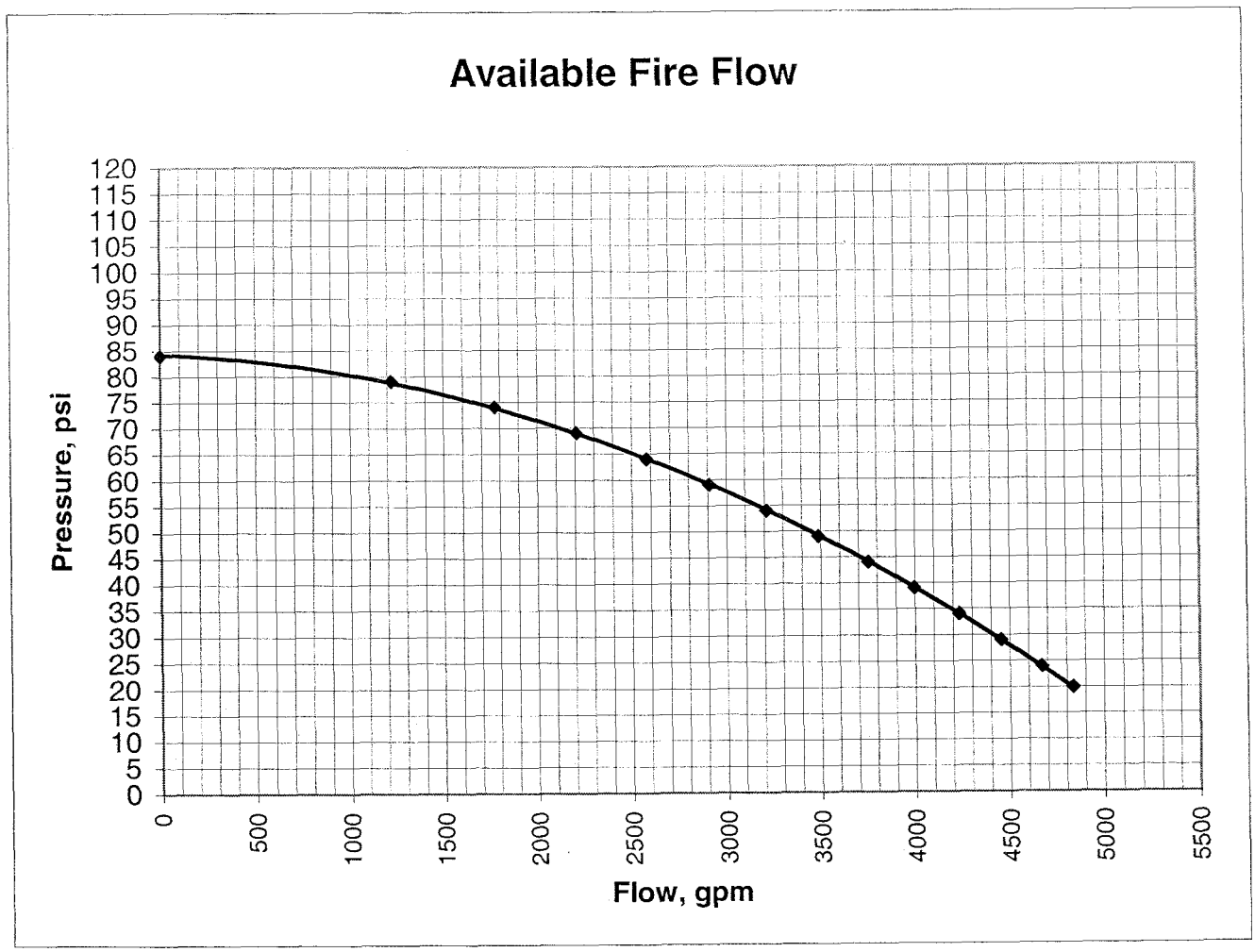
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	84.0	Pitot Pressure (psi)	60
Residual Pressure (psi)	79.0	**Flow (gpm)**	**1220**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge 6% (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 4835 gpm **Calculated Flow at 20 psi 4835 gpm**



Location: Peoria Ave East of 106th

Arizona-American Water Company

Date: 11/8/2004 **Time: 2:25PM**

Test Performed by: Mark Knutson

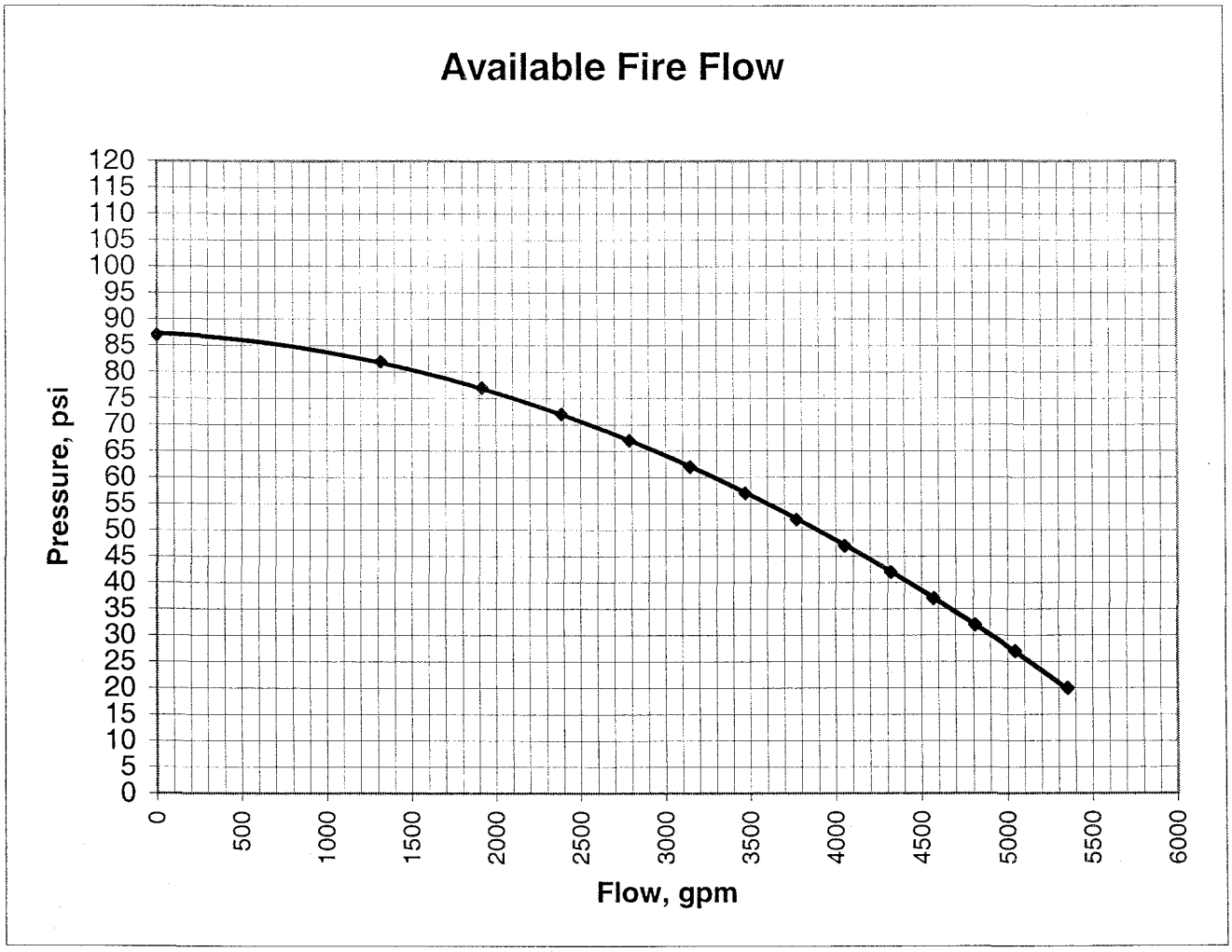
Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	87.0	Pitot Pressure (psi)	70
Residual Pressure (psi)	82.0	**Flow (gpm)**	**1318**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge	6%	(0.9 Typical)	0.845
Diameter of Outlet (2.5 in. Typical)			2.5

PlantPRO HFD = 0.845
Typ = 0.90

Calculated Flow at 20 psi **5353 gpm** **Calculated Flow at** 20 **psi** **5353 gpm**



Fire Flow Report

Test 8

Location: Coggins Dr. and Balboa Dr W. side

Date: 11/11/2004 Time: 9:12 AM

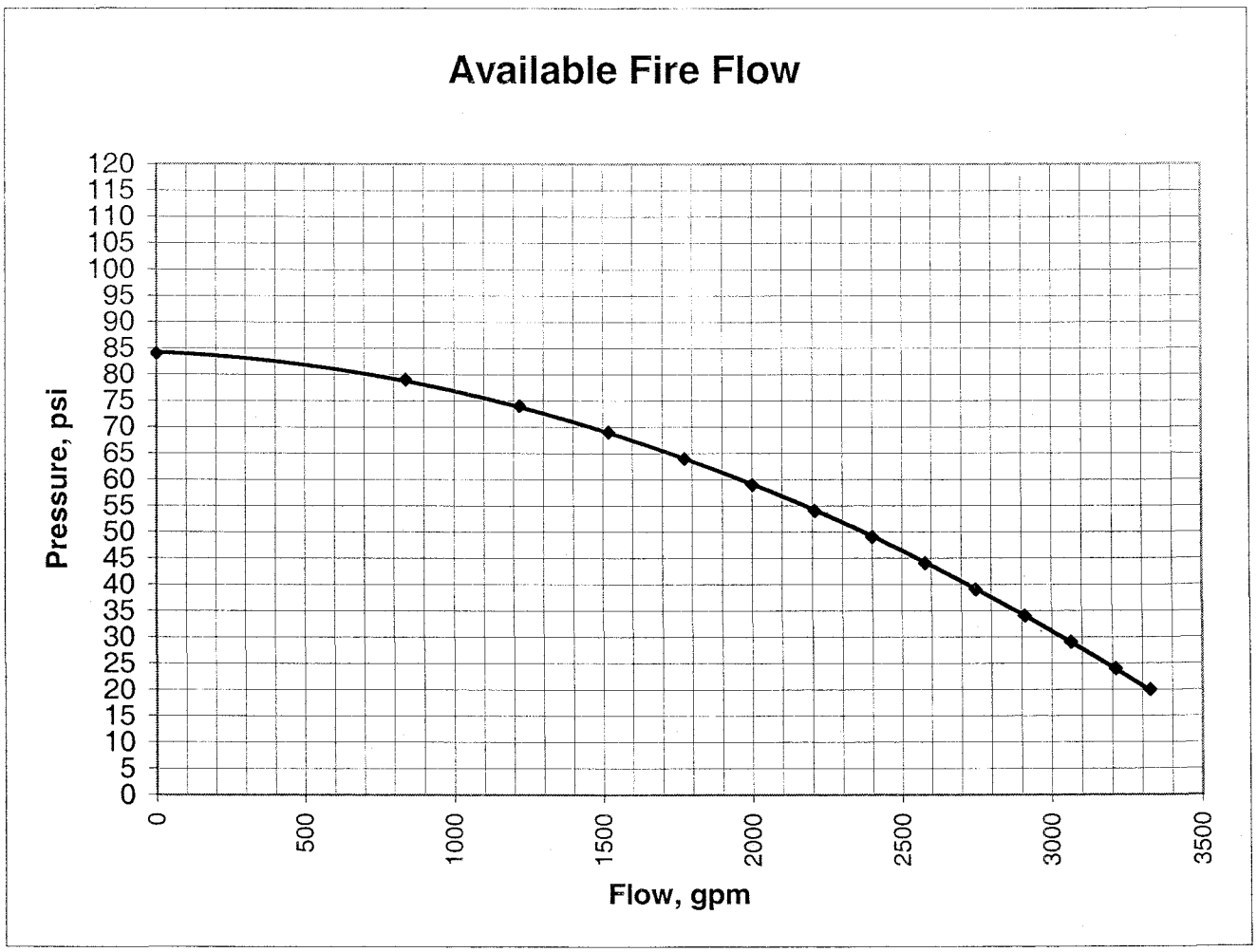
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	84.0	Pitot Pressure (psi)	60
Residual Pressure (psi)	74.0	**Flow (gpm)**	**1220**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

12%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3325 gpm **Calculated Flow at 20 psi 3325 gpm**



Fire Flow Report

Test 9

Location: Rio Vista Dr. By House #11631

Date: 11/11/2004 Time: 8:48 AM

Test Performed by: Mark Knutson

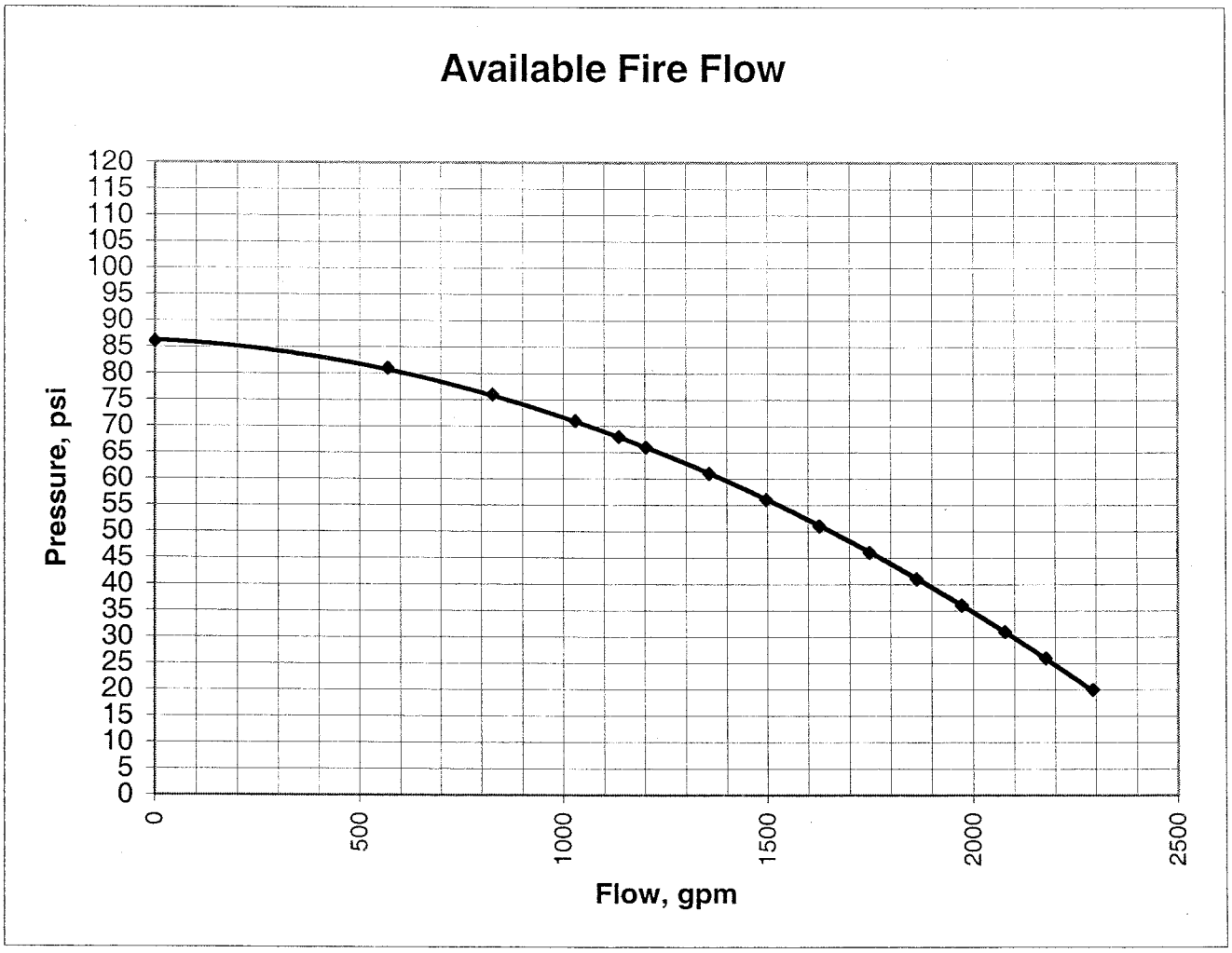
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	86.0	Pitot Pressure (psi)	52
Residual Pressure (psi)	68.0	**Flow (gpm)**	**1136**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

21%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 2291 gpm **Calculated Flow at 20 psi 2291 gpm**



Fire Flow Report
Test 10

Arizona-American Water Company

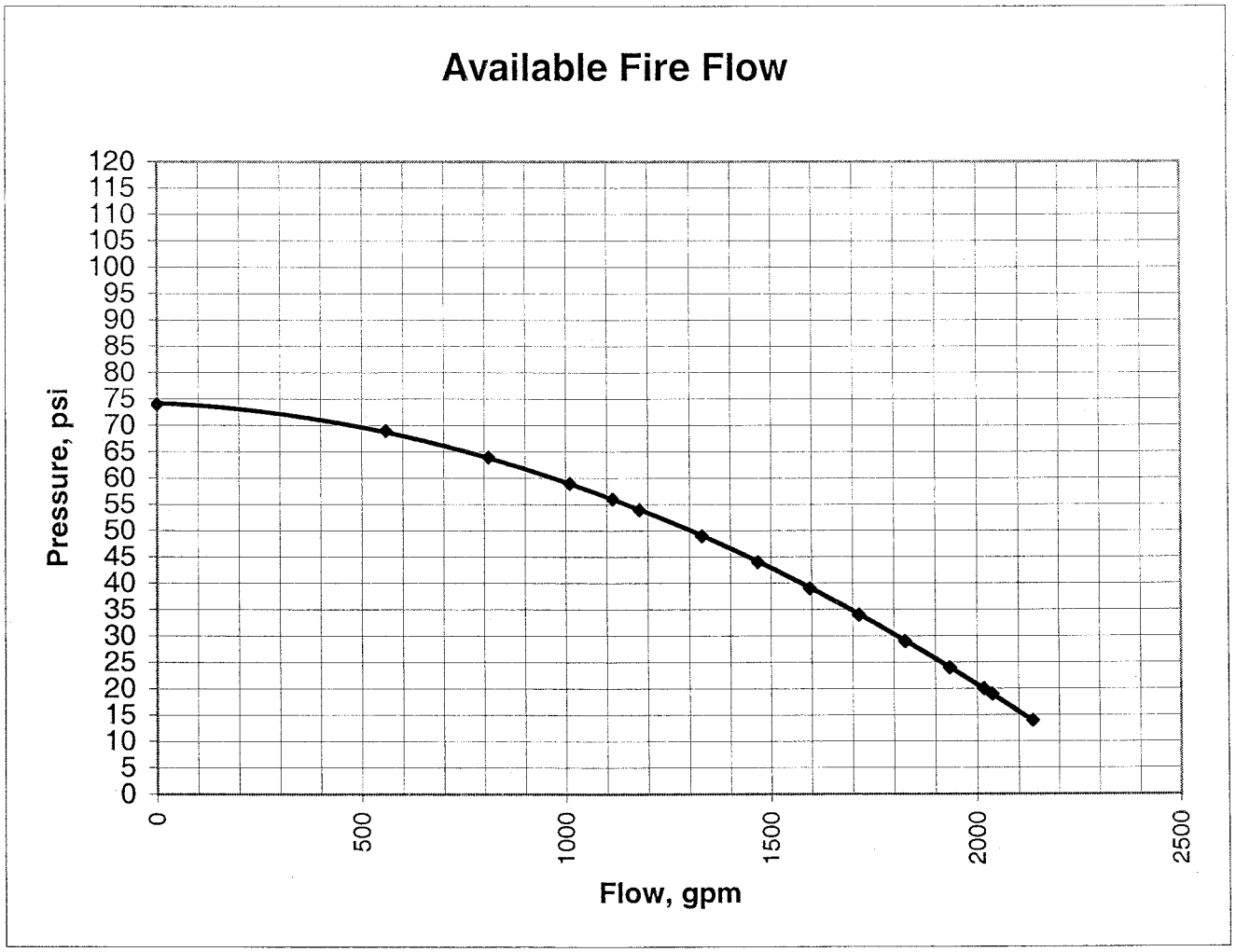
Location: 111th Ave and Youngtown
Date: 11/8/2004 Time:9:30AM
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	74.0	Pitot Pressure (psi)	50
Residual Pressure (psi)	56.0	**Flow (gpm)**	**1114**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

	Coefficient of Discharge		PlantPRO HFD = 0.845
24%	(0.9 Typical)	0.845	Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 2016 gpm **Calculated Flow at 20 psi 2016 gpm**



Fire Flow Report

Test 10

Arizona-American Water Company

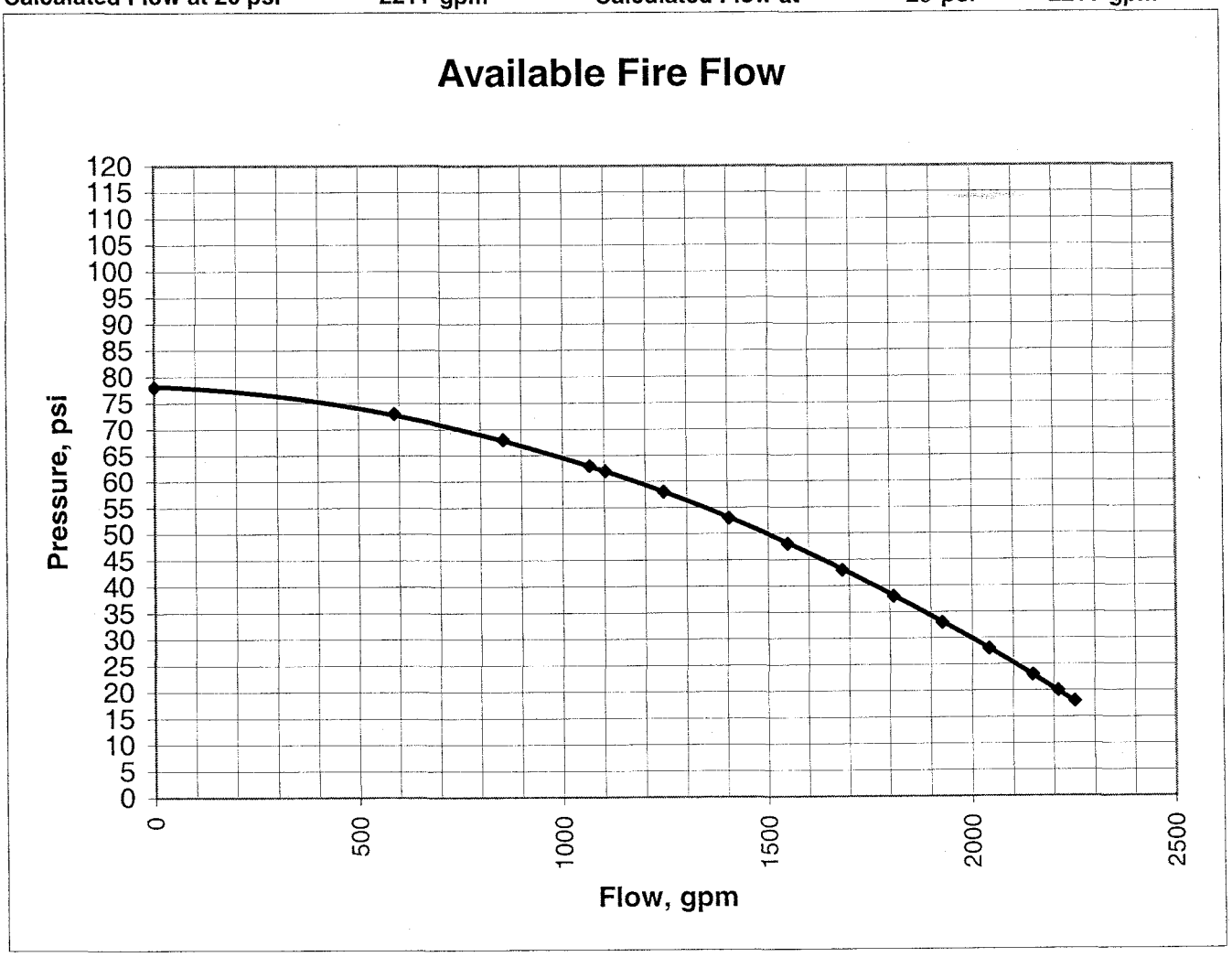
Location: Youngtown Avenue and 111th Ave
Date: 2/1/2005 Time: 8:30 a.m.
Test Performed by: Mark Knutson & Jeremiah Mecham

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	78.0	Pitot Pressure (psi)	49
Residual Pressure (psi)	62.0	**Flow (gpm)**	**1103**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

		Coefficient of Discharge	PlantPRO HFD = 0.845
21%	(0.9 Typical)	0.845	Typ = 0.90
		Diameter of Outlet (2.5 in. Typical)	2.5

Calculated Flow at 20 psi 2211 gpm **Calculated Flow at 20 psi 2211 gpm**



Fire Flow Report
Test 11

Location: Willow Creek Senior Campus, 113th Ave and Nevada SW Corn

Arizona-American Water Company

Date: 11/8/2004 **Time: 9:00AM**

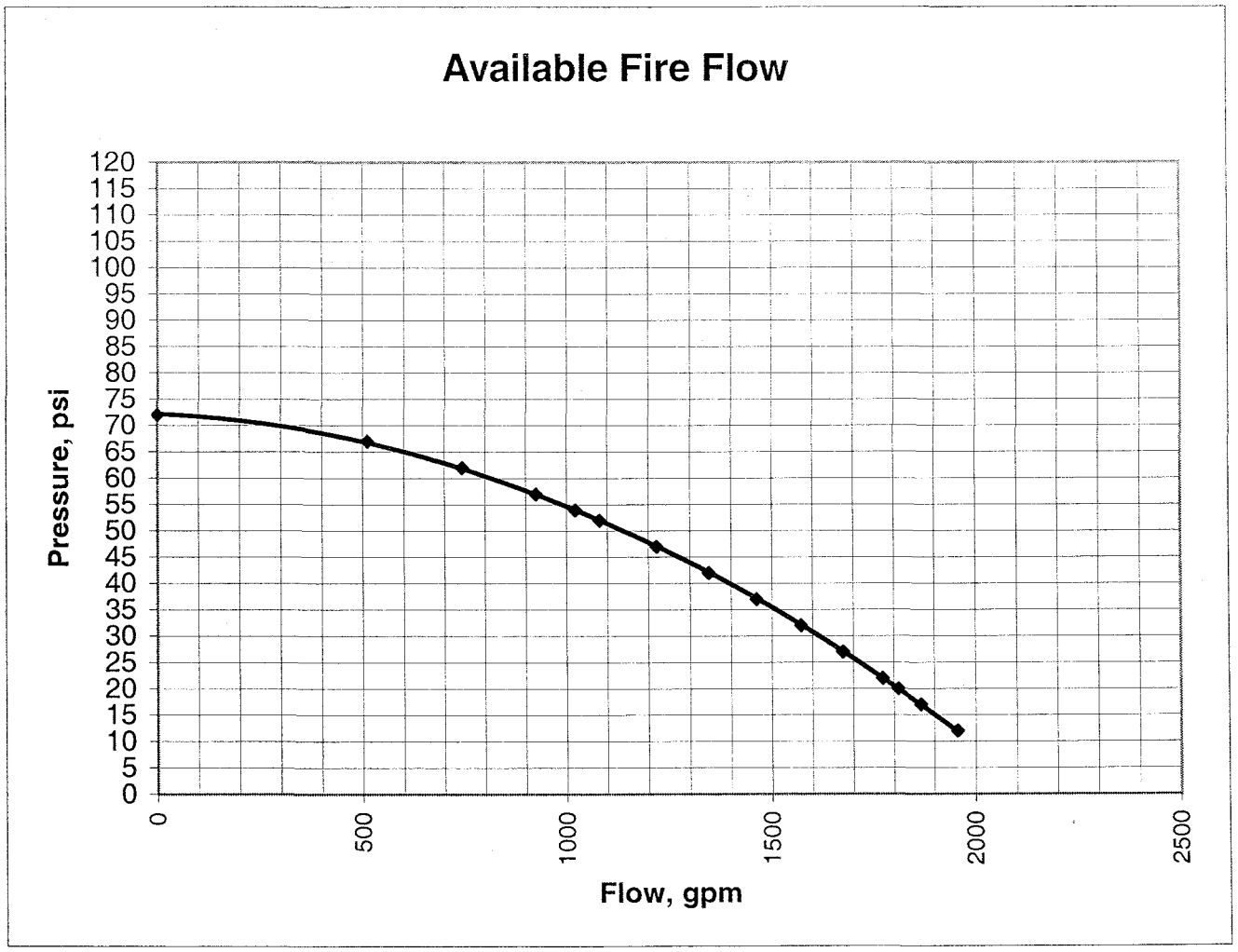
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0	Pitot Pressure (psi)	42
Residual Pressure (psi)	54.0	**Flow (gpm)**	**1021**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
25%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi **1811 gpm** **Calculated Flow at** 20 **psi** **1811 gpm**



Fire Flow Report

Test 11

Arizona-American Water Company

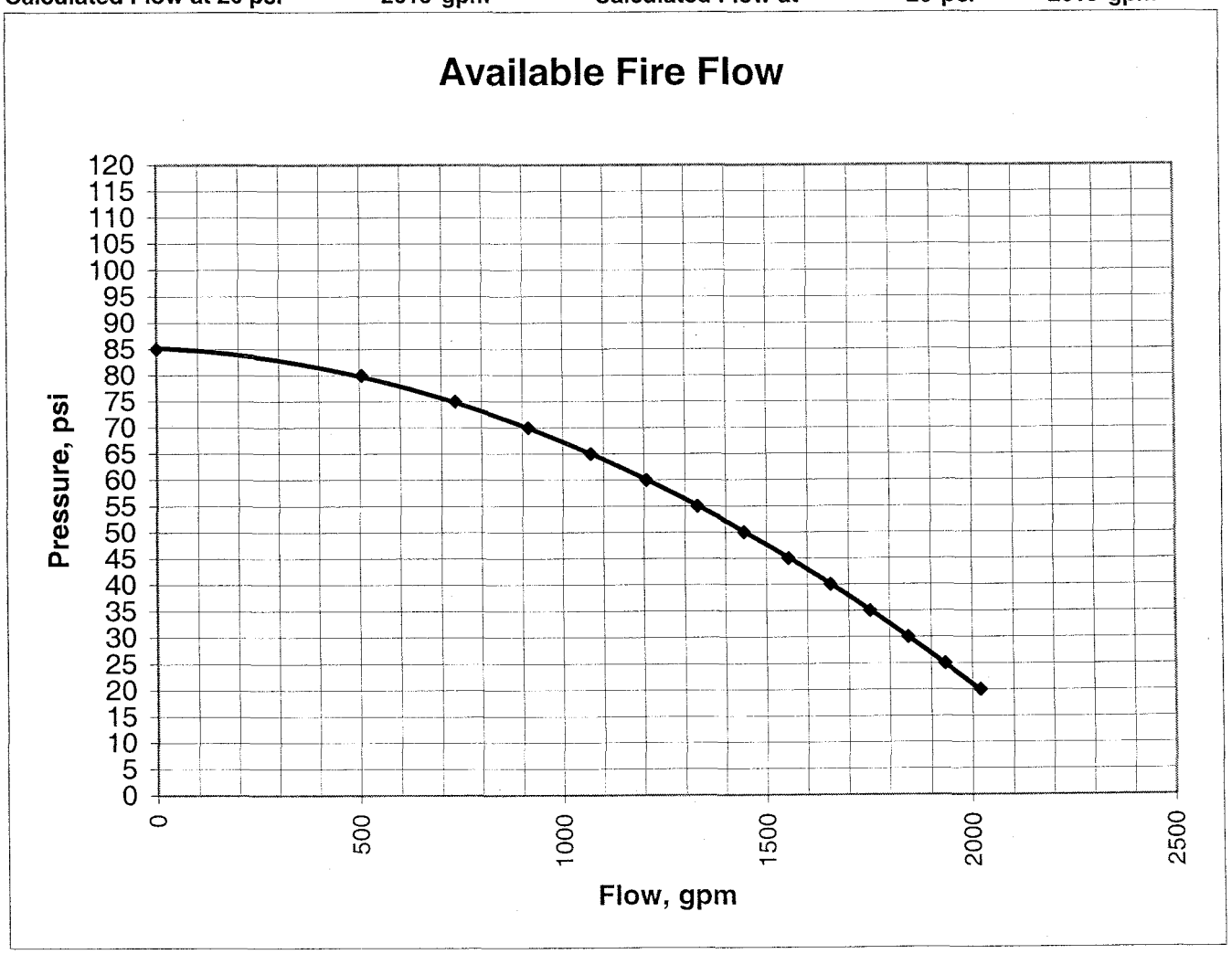
Location: 113th Ave at Willow Creek Senior Center
Date: 2/1/2005 Time: 9:25 AM
Test Performed by: Mark Knutson & Jeremiah Mecham

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	85.0	Pitot Pressure (psi)	46
Residual Pressure (psi)	65.0	**Flow (gpm)**	**1068**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

		Coefficient of Discharge	PlantPRO HFD = 0.845
24%		(0.9 Typical)	0.845 Typ = 0.90
		Diameter of Outlet (2.5 in. Typical)	2.5

Calculated Flow at 20 psi 2019 gpm **Calculated Flow at 20 psi 2019 gpm**



Fire Flow Report

Test 12

Arizona-American Water Company

Location: Beebble Beach Dr. N. of Rivera Dr. E. side

Date: 11/11/2004 Time: 9:27 AM

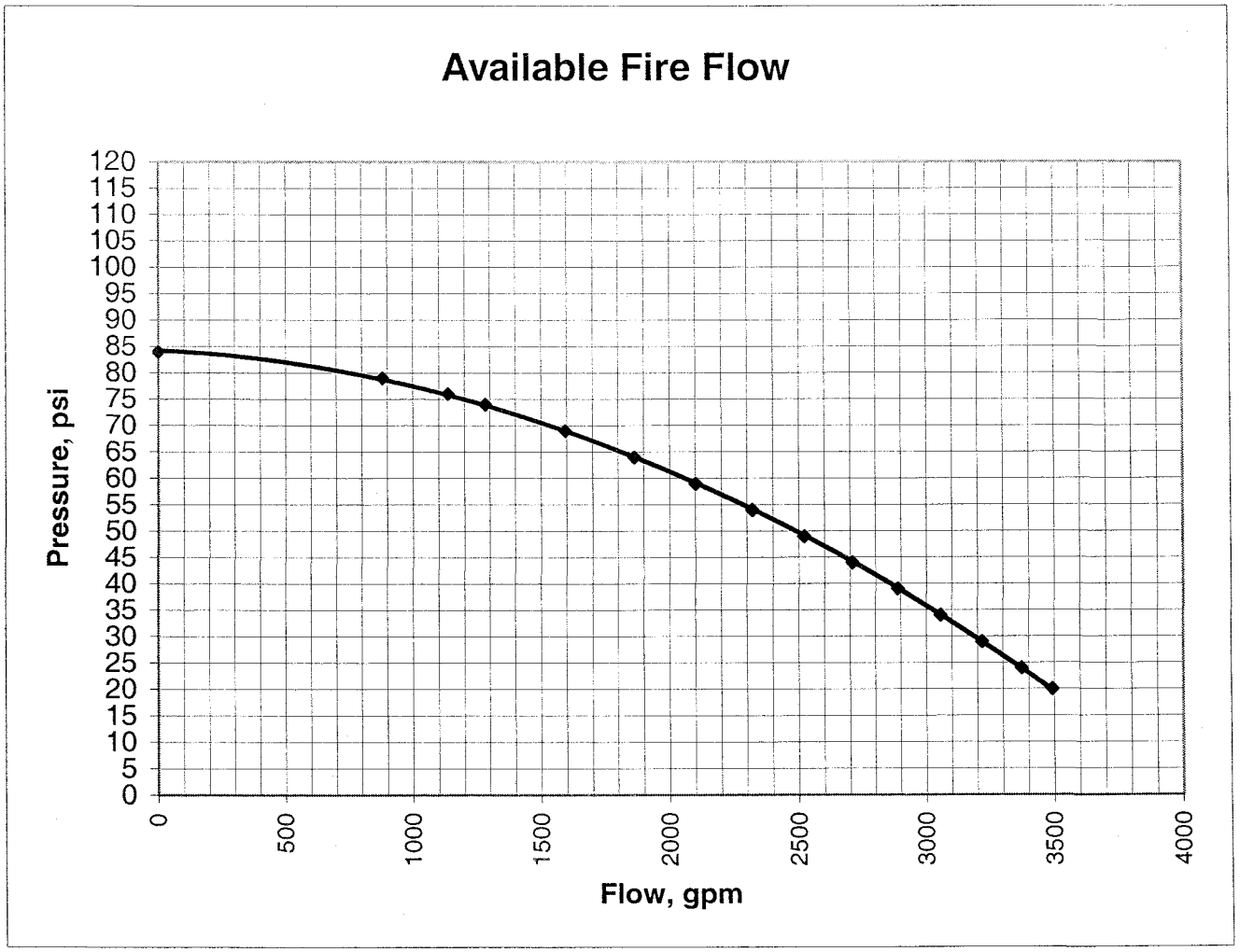
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	84.0	Pitot Pressure (psi)	52
Residual Pressure (psi)	76.0	**Flow (gpm)**	**1136**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
10%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi 3492 gpm **Calculated Flow at 20 psi 3492 gpm**



Fire Flow Report

Test 12

Arizona-American Water Company

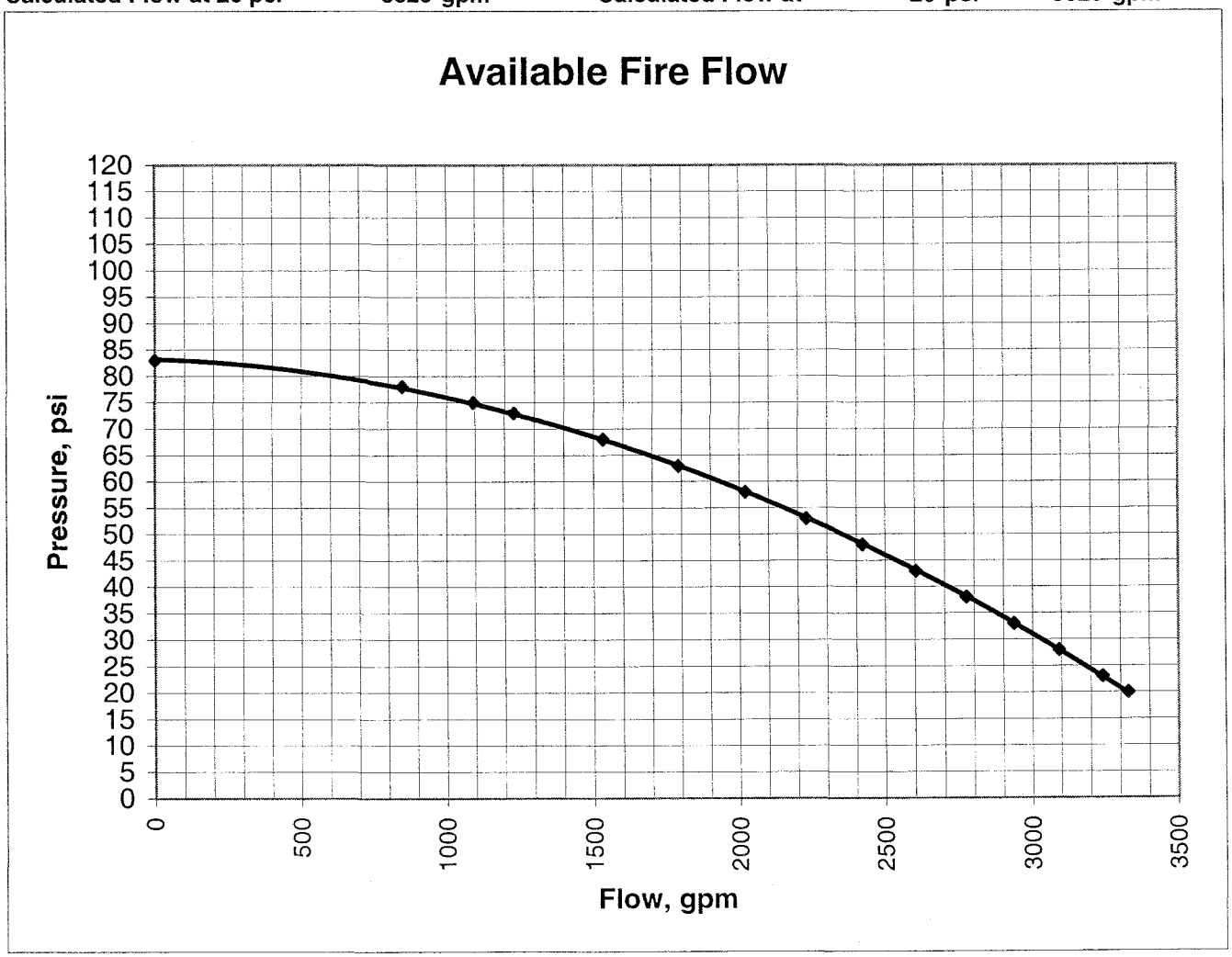
Location: Pebble Beach Drive
Date: 2/1/2005 Time: 10:15 a.m.
Test Performed by: Mark Knutson & Jeremiah Mecham

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	83.0	Pitot Pressure (psi)	48
Residual Pressure (psi)	75.0	**Flow (gpm)**	**1091**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge	10% (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5	

Calculated Flow at 20 psi 3326 gpm **Calculated Flow at 20 psi 3326 gpm**



Fire Flow Report

Test 13

Location: 107th Ave and Oakmont Drive

Date: 11/8/2004 Time:2:44 PM

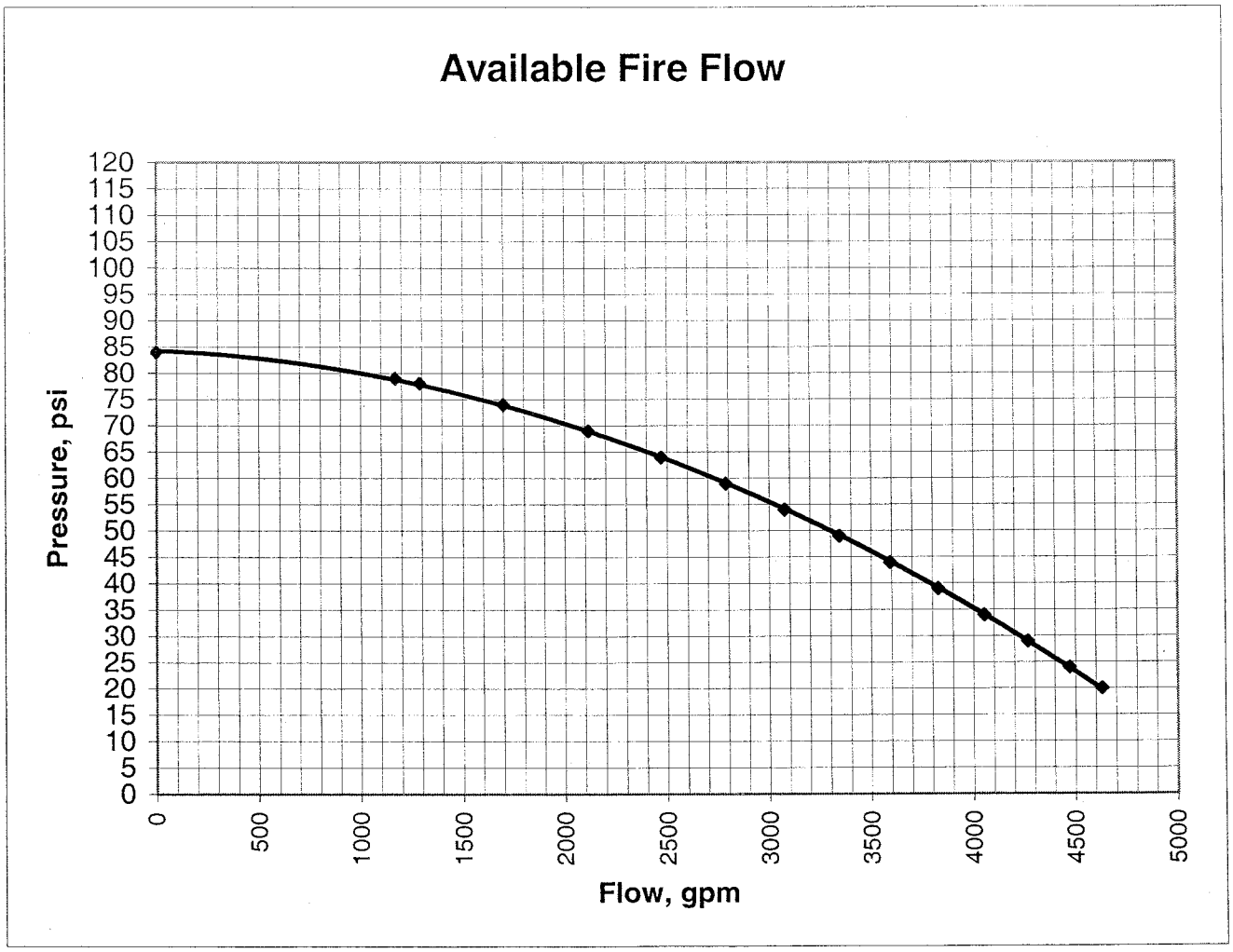
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	84.0	Pitot Pressure (psi)	67
Residual Pressure (psi)	78.0	**Flow (gpm)**	**1290**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

		Coefficient of Discharge	PlantPRO HFD = 0.845
7%	(0.9 Typical)	0.845	Typ = 0.90
		Diameter of Outlet (2.5 in. Typical)	2.5

Calculated Flow at 20 psi 4630 gpm **Calculated Flow at 20 psi 4630 gpm**



Fire Flow Report

TEST 14

Location: Forester Dr. and 100th Ave NE corner

Date: 11/11/2004 Time: 11:10 AM

Test Performed by: Mark Knutson

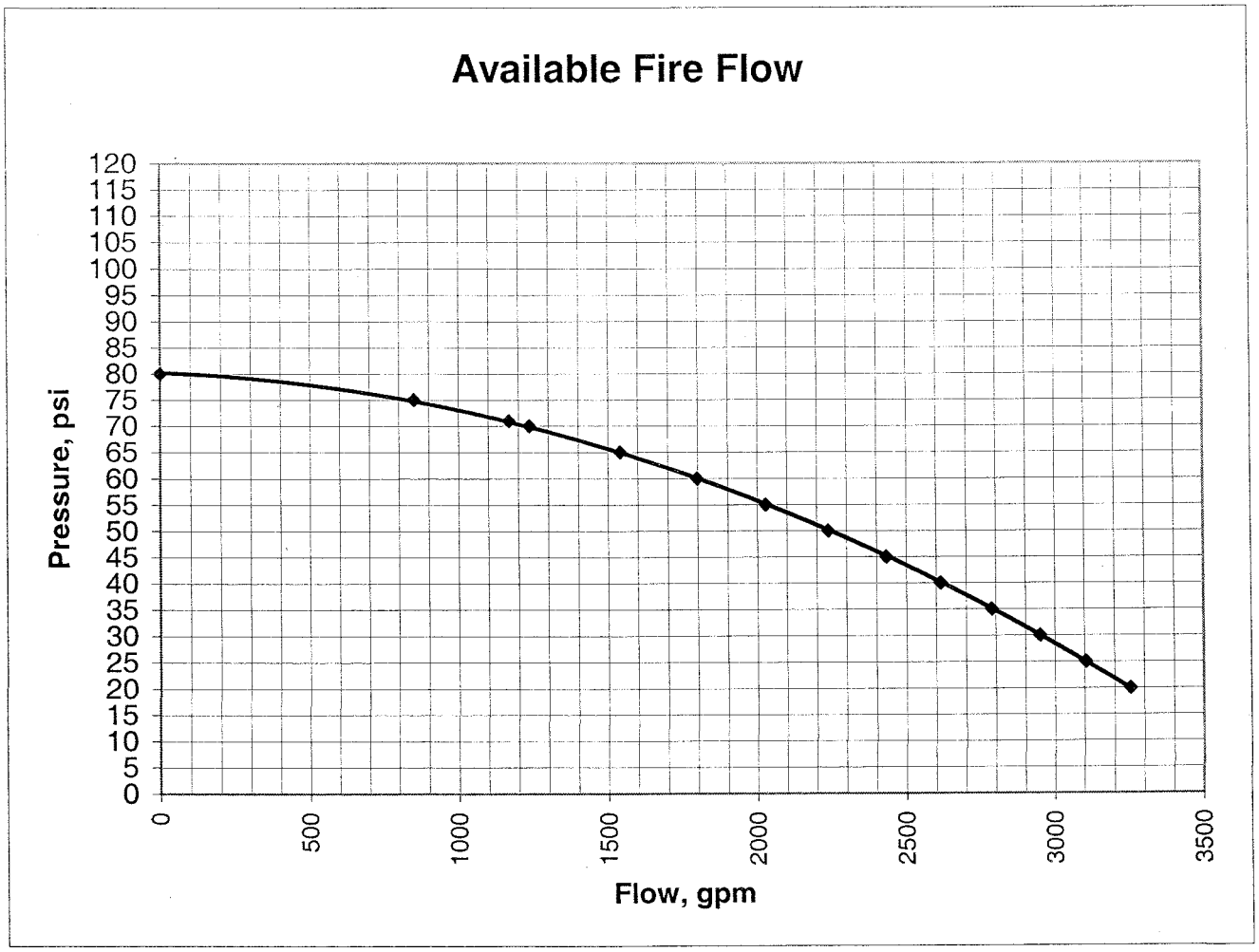
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	80.0	Pitot Pressure (psi)	55
Residual Pressure (psi)	71.0	**Flow (gpm)**	**1168**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

	Coefficient of Discharge		PlantPRO HFD = 0.845
11%	(0.9 Typical)	0.845	Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3254 gpm **Calculated Flow at 20 psi 3254 gpm**



Fire Flow Report

Test 15

Location: 109th Ave S. of Cameo Dr. W. side

Date: 11/11/2004 Time: 9:50 AM

Test Performed by: Mark Knutson

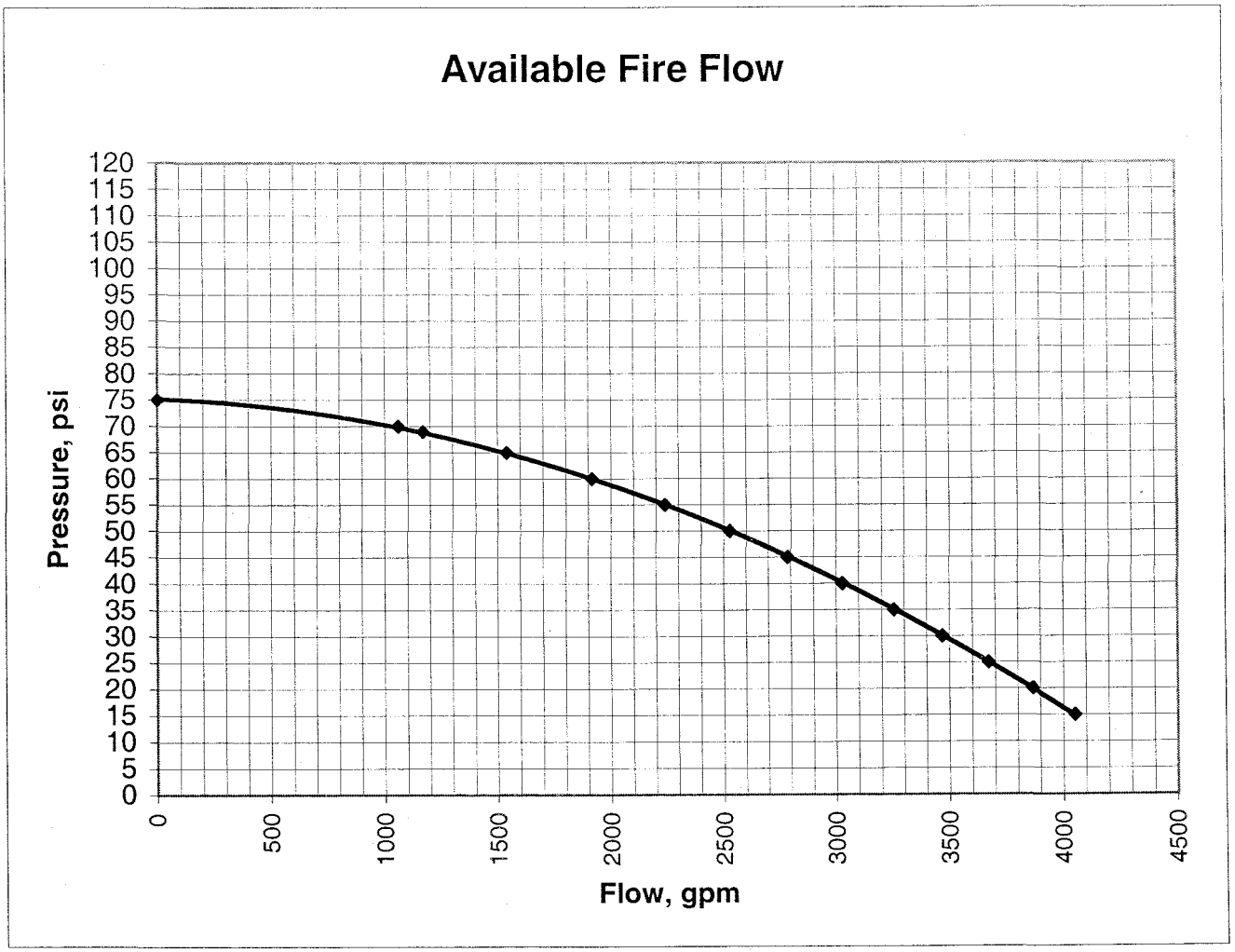
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	75.0	Pitot Pressure (psi)	55
Residual Pressure (psi)	69.0	**Flow (gpm)**	**1168**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
8% (0.9 Typical)	0.845	Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3865 gpm **Calculated Flow at 20 psi 3865 gpm**



Fire Flow Report

TEST 16

Location: Cameo Drive by house #14208

Date: 11/11/2004 Time: 10:45 AM

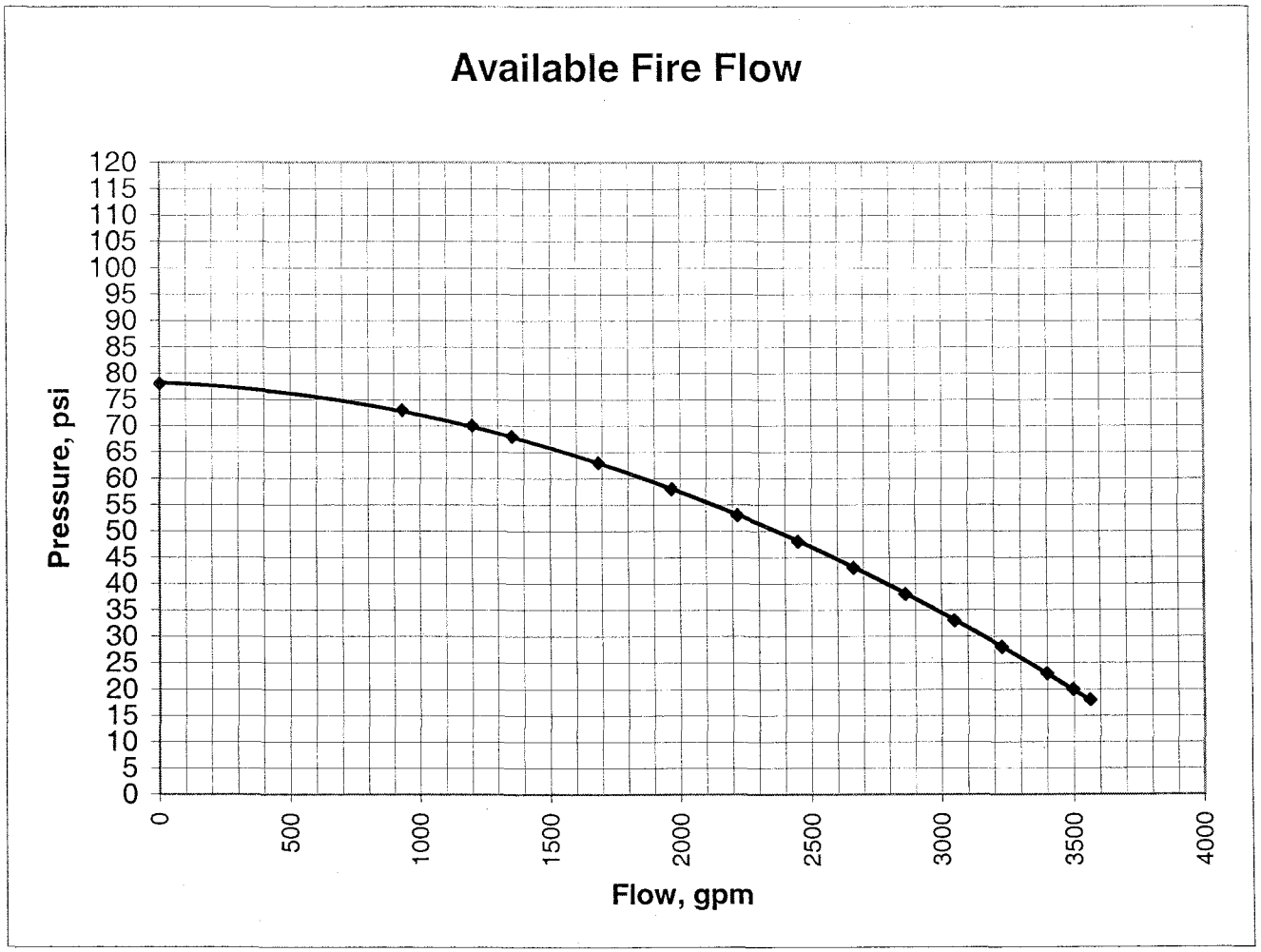
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	78.0	Pitot Pressure (psi)	58
Residual Pressure (psi)	70.0	**Flow (gpm)**	**1200**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge 10% (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3497 gpm **Calculated Flow at 20 psi 3497 gpm**



Fire Flow Report
TEST 17

Arizona-American Water Company

Location: Kingswood Cr. By House #9918

Date: 11/11/2004 Time: 10:25 AM

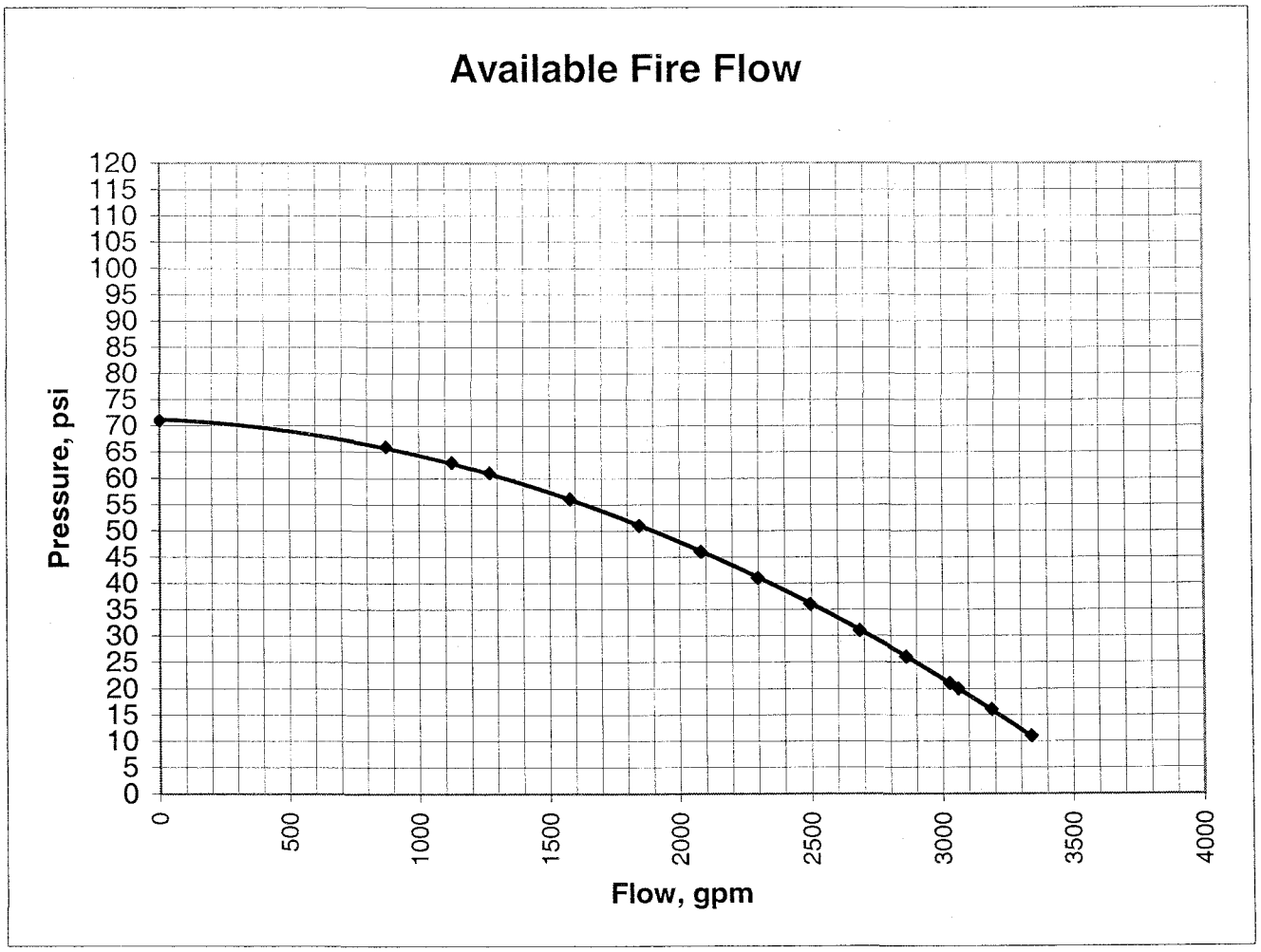
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	71.0	Pitot Pressure (psi)	51
Residual Pressure (psi)	63.0	**Flow (gpm)**	**1125**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
11%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi 3059 gpm **Calculated Flow at 20 psi 3059 gpm**



Fire Flow Report

Test 18

Location: Saratoga Cr. By house # 10729

Date: 11/11/2004 Time: 10:05 AM

Test Performed by: Mark Knutson

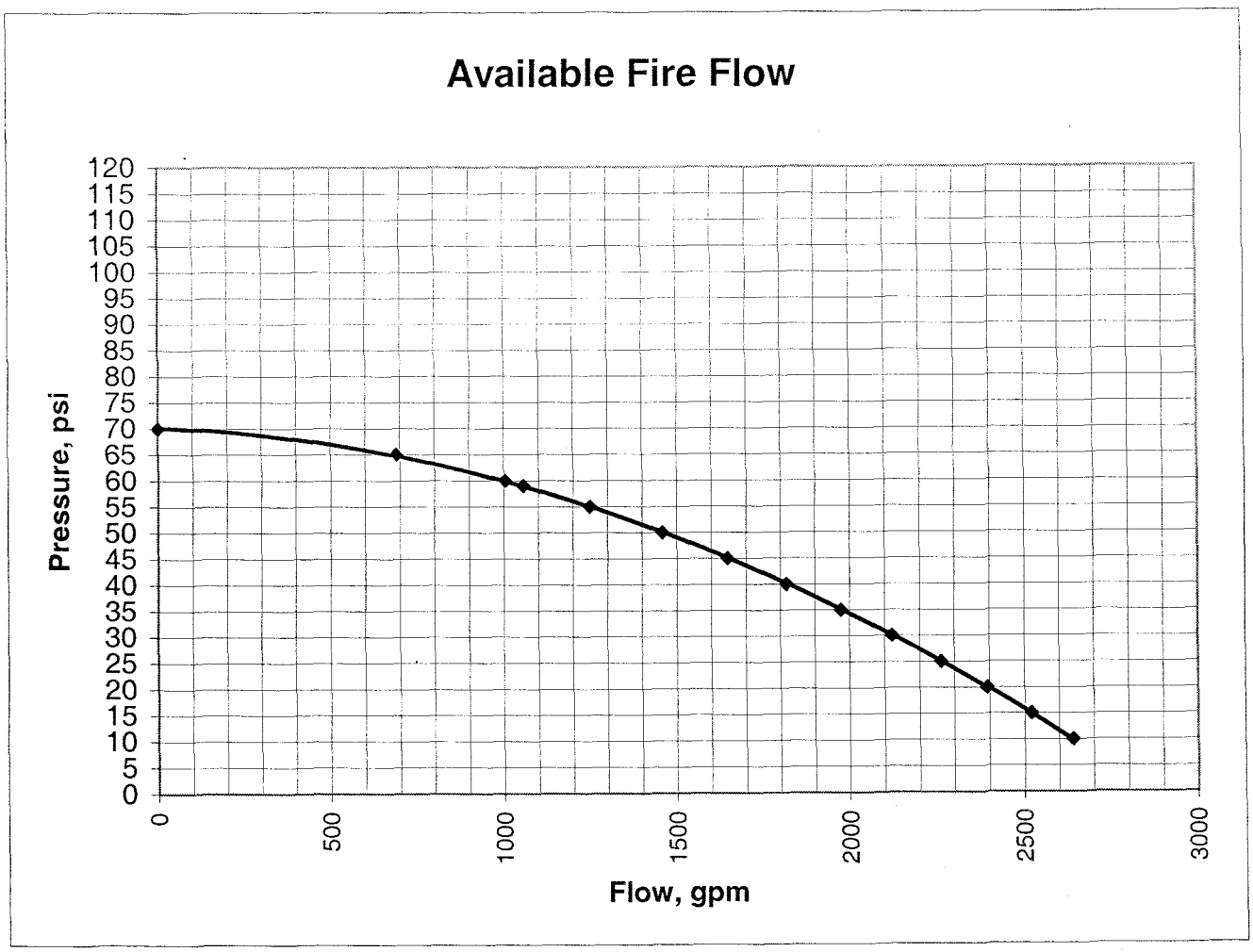
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	70.0	Pitot Pressure (psi)	45
Residual Pressure (psi)	59.0	**Flow (gpm)**	**1057**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

16%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 2394 gpm **Calculated Flow at 20 psi 2394 gpm**



Fire Flow Report

TEST 19

Arizona-American Water Company

Location: 110th Ave by house #16005

Date: 11/11/2004 Time: 12:40 AM

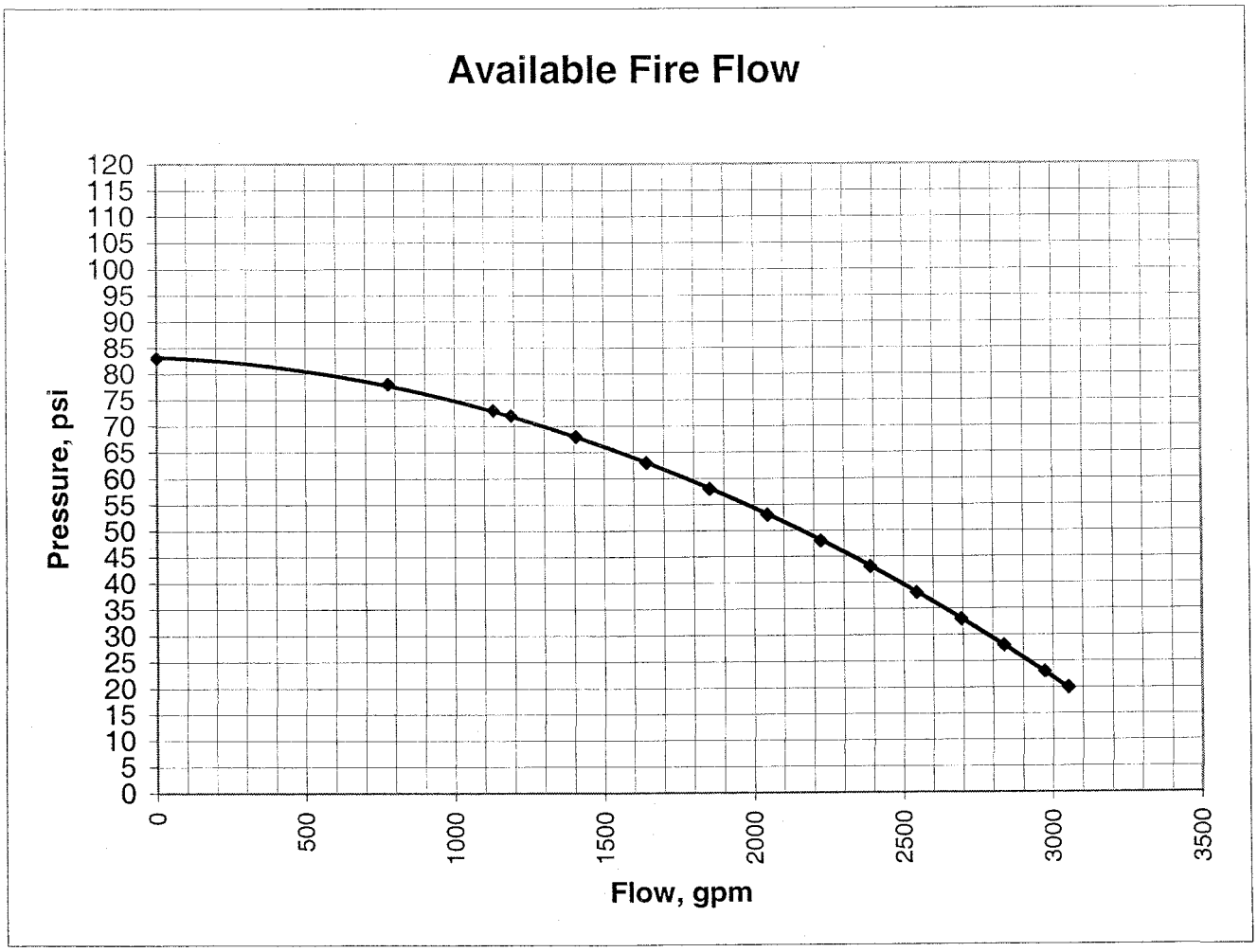
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	83.0	Pitot Pressure (psi)	57
Residual Pressure (psi)	72.0	**Flow (gpm)**	**1189**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
13% (0.9 Typical)	0.845	Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3052 gpm **Calculated Flow at 20 psi 3052 gpm**



Fire Flow Report

TEST 20

Location: Gulf Hills Dr. by house #10401

Date: 11/11/2004 Time: 1:10 PM

Test Performed by: Mark Knutson

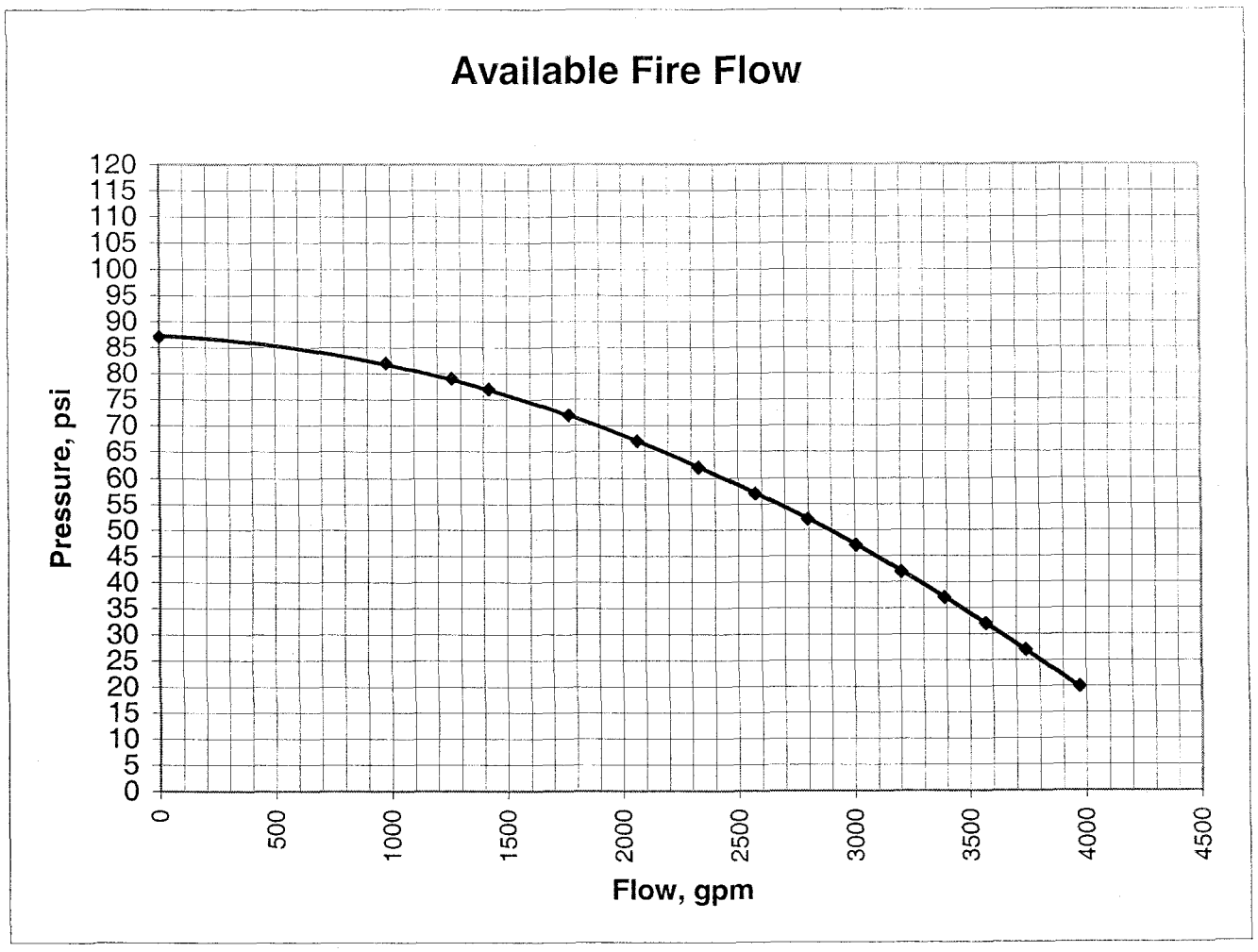
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	87.0	Pitot Pressure (psi)	64
Residual Pressure (psi)	79.0	**Flow (gpm)**	**1260**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
9% (0.9 Typical)	0.845	Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3971 gpm **Calculated Flow at 20 psi 3971 gpm**



Fire Flow Report

TEST 21

Arizona-American Water Company

Location: 99th Drive by house #16206

Date: 11/11/2004 Time: 1:35 PM

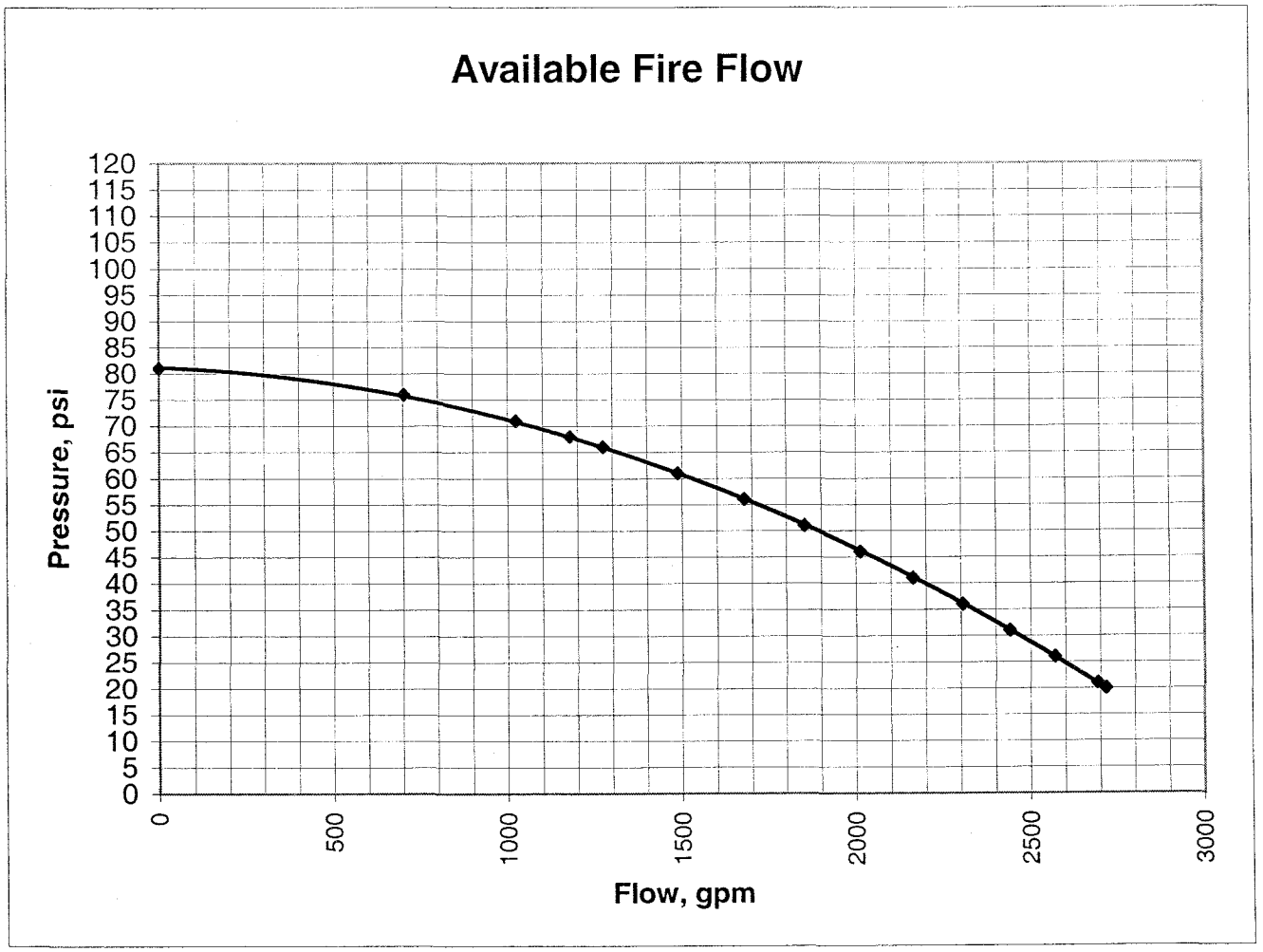
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	81.0	Pitot Pressure (psi)	56
Residual Pressure (psi)	68.0	**Flow (gpm)**	**1179**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

16%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 2717 gpm **Calculated Flow at 20 psi 2717 gpm**



Fire Flow Report

TEST 22

Location: Orchard Hills Drive by House #16626

Date: 11/11/2004 Time: 1:55 PM

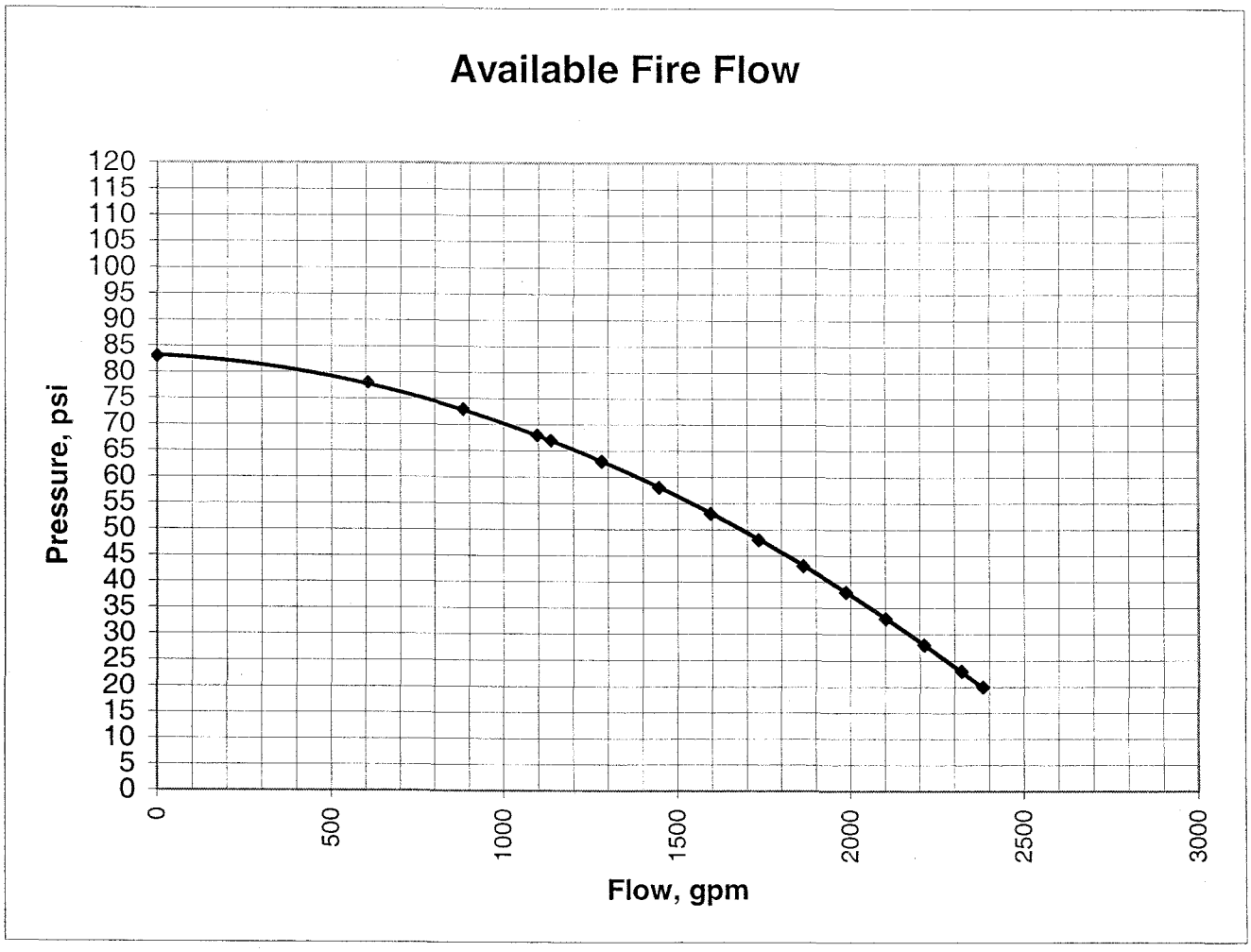
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	83.0	Pitot Pressure (psi)	52
Residual Pressure (psi)	67.0	**Flow (gpm)**	**1136**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

	Coefficient of Discharge		PlantPRO HFD = 0.845
19%	(0.9 Typical)	0.845	Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 2381 gpm **Calculated Flow at 20 psi 2381 gpm**



Fire Flow Report

Test 23

Location: Granada Dr and Palmeras Dr SE Corner

Date: 11/11/2004 Time: 3:55 PM

Test Performed by: Mark Knutson

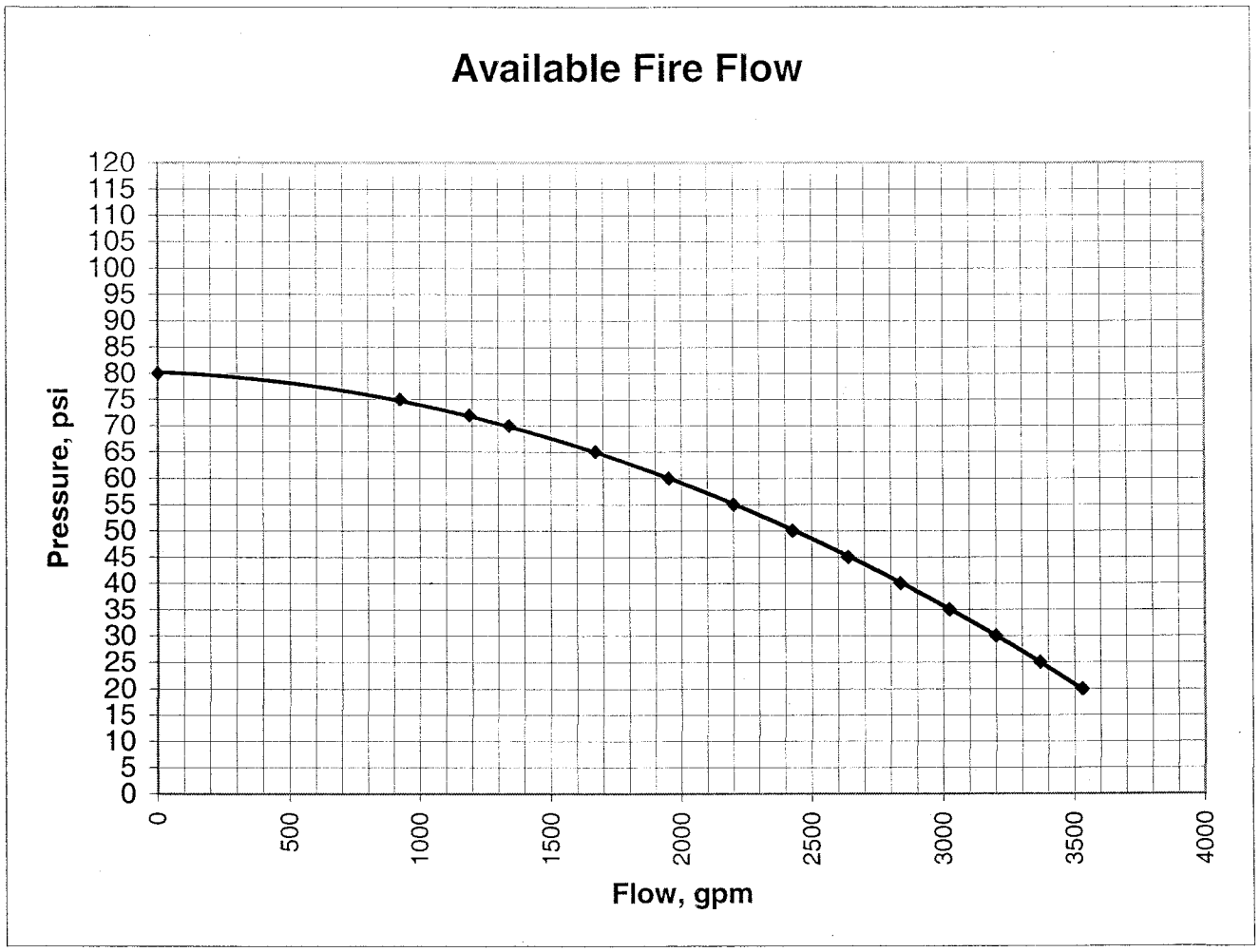
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	80.0	Pitot Pressure (psi)	57
Residual Pressure (psi)	72.0	**Flow (gpm)**	**1189**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
10% (0.9 Typical)	0.845	Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3531 gpm **Calculated Flow at 20 psi 3531 gpm**



Fire Flow Report
TEST 24

Location: Willow Brook by lot 18202

Date: 11/11/2004 Time: 3:30 PM

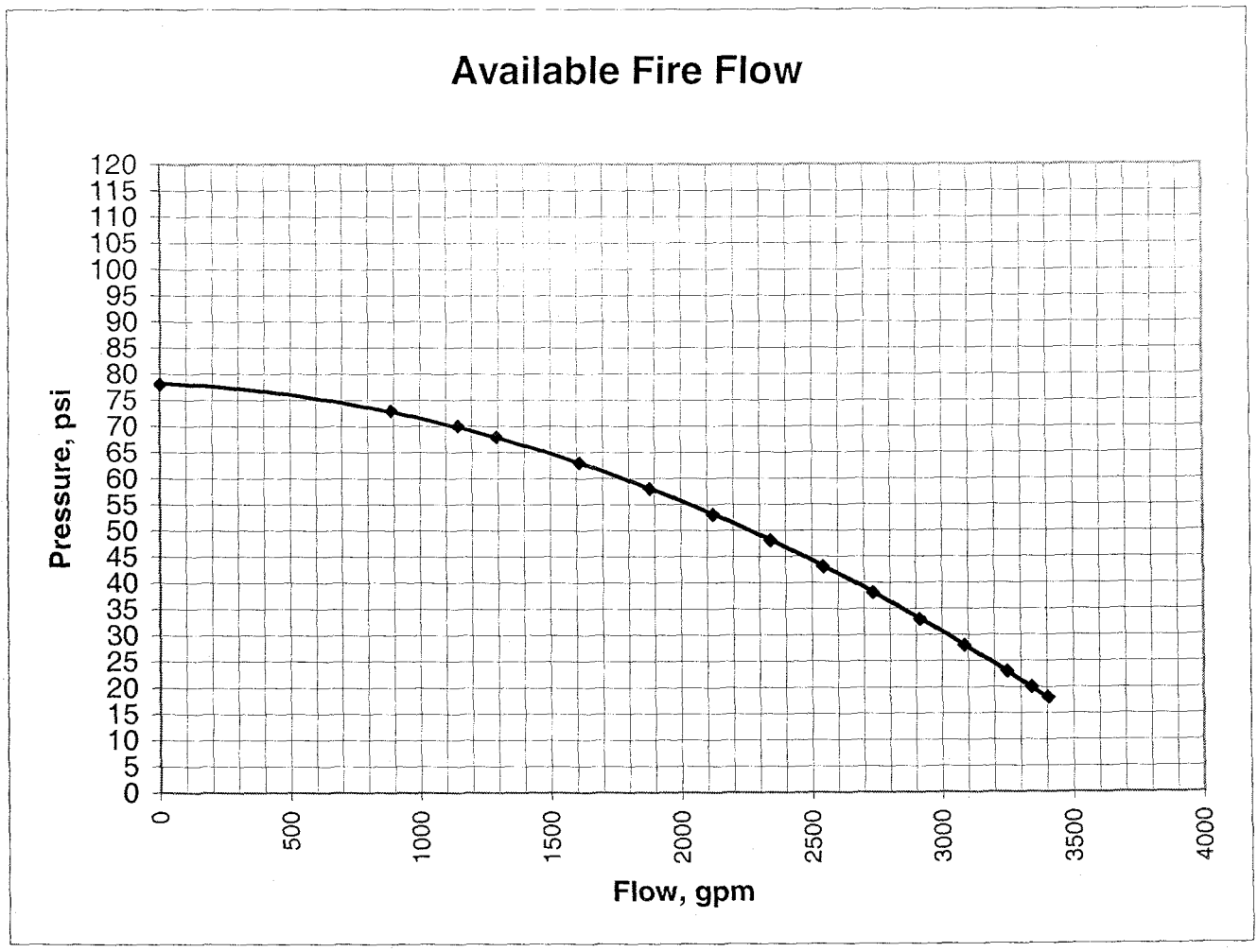
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	78.0	Pitot Pressure (psi)	53
Residual Pressure (psi)	70.0	**Flow (gpm)**	**1147**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge 10% (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 3343 gpm **Calculated Flow at 20 psi 3343 gpm**



Fire Flow Report
TEST 25

Location: Appaloosa Drive by House #9621

Date: 11/11/2004 Time: 2:20 PM

Test Performed by: Mark Knutson

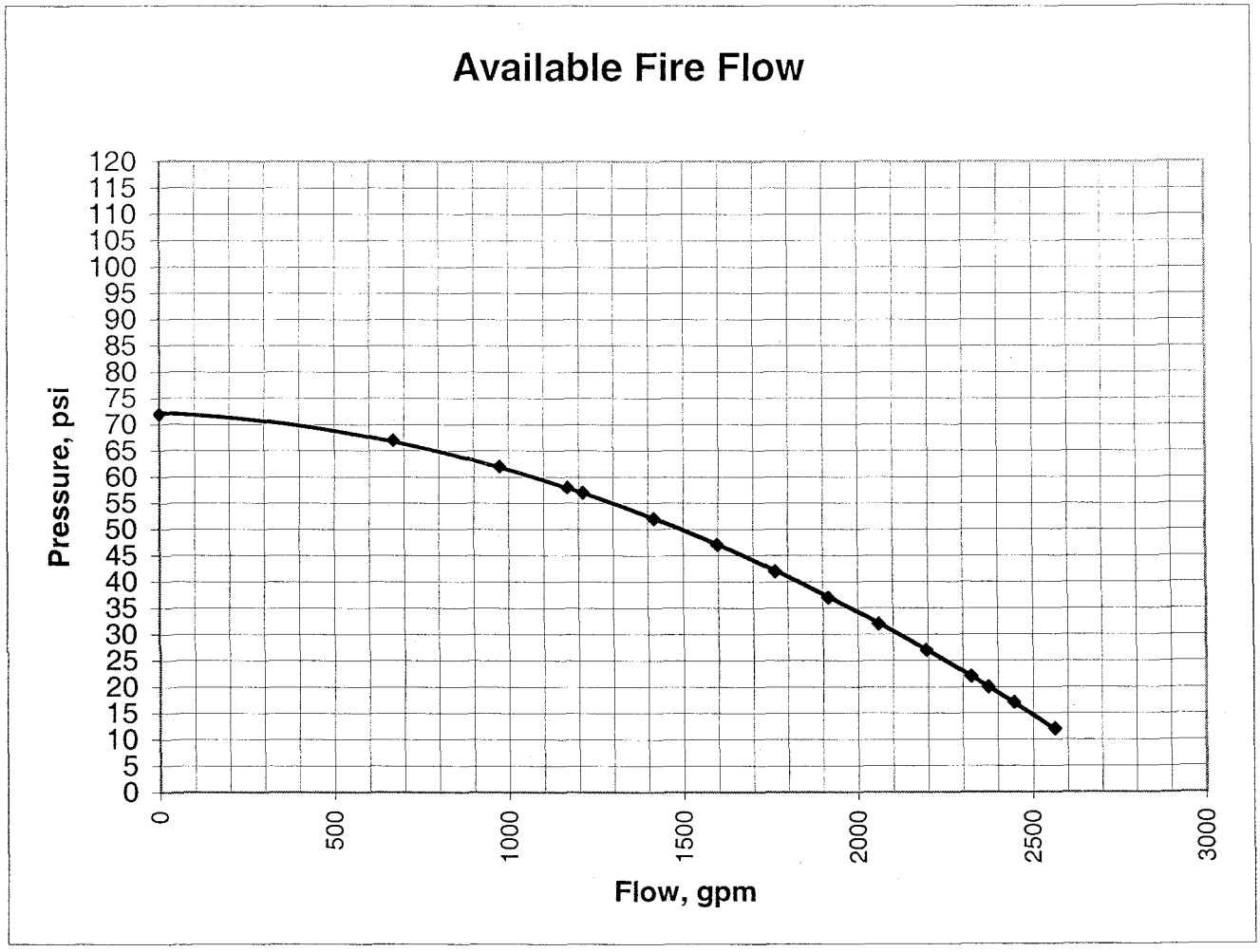
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0	Pitot Pressure (psi)	55
Residual Pressure (psi)	58.0	**Flow (gpm)**	**1168**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
19%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi 2373 gpm **Calculated Flow at 20 psi 2373 gpm**



Fire Flow Report
TEST 26

Location: County Club Drive by House #9560

Date: 11/11/2004 Time: 2:40 PM

Test Performed by: Mark Knutson

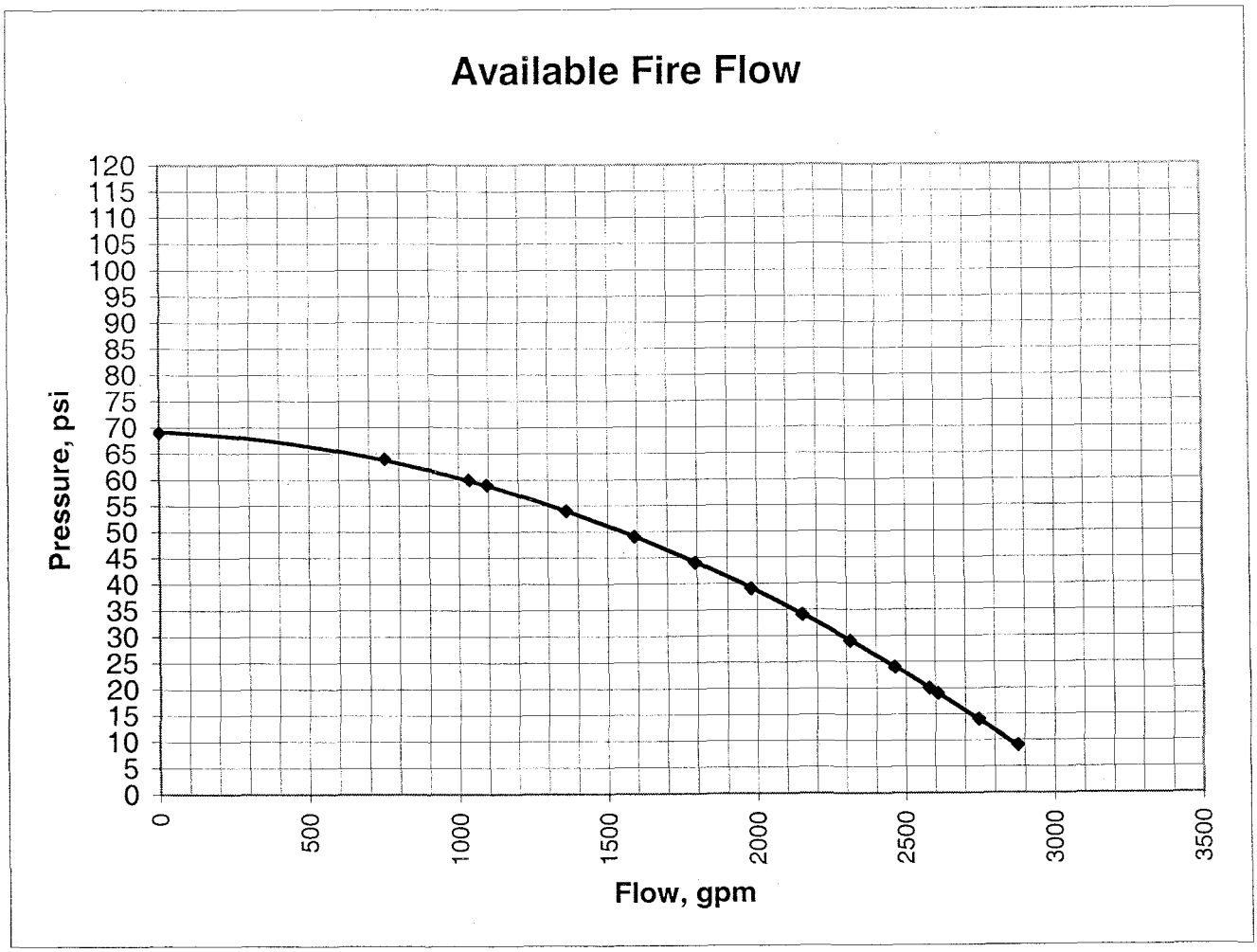
Arizona-American Water Company

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	69.0	Pitot Pressure (psi)	43
Residual Pressure (psi)	60.0	**Flow (gpm)**	**1033**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
13%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet		
(2.5 in. Typical)		2.5

Calculated Flow at 20 psi 2580 gpm **Calculated Flow at 20 psi 2580 gpm**



Fire Flow Report

TEST 27

Location: Willow Creek Cr. South of Saddle Ridge Dr.

Date: 11/11/2004 Time: 3:10 PM

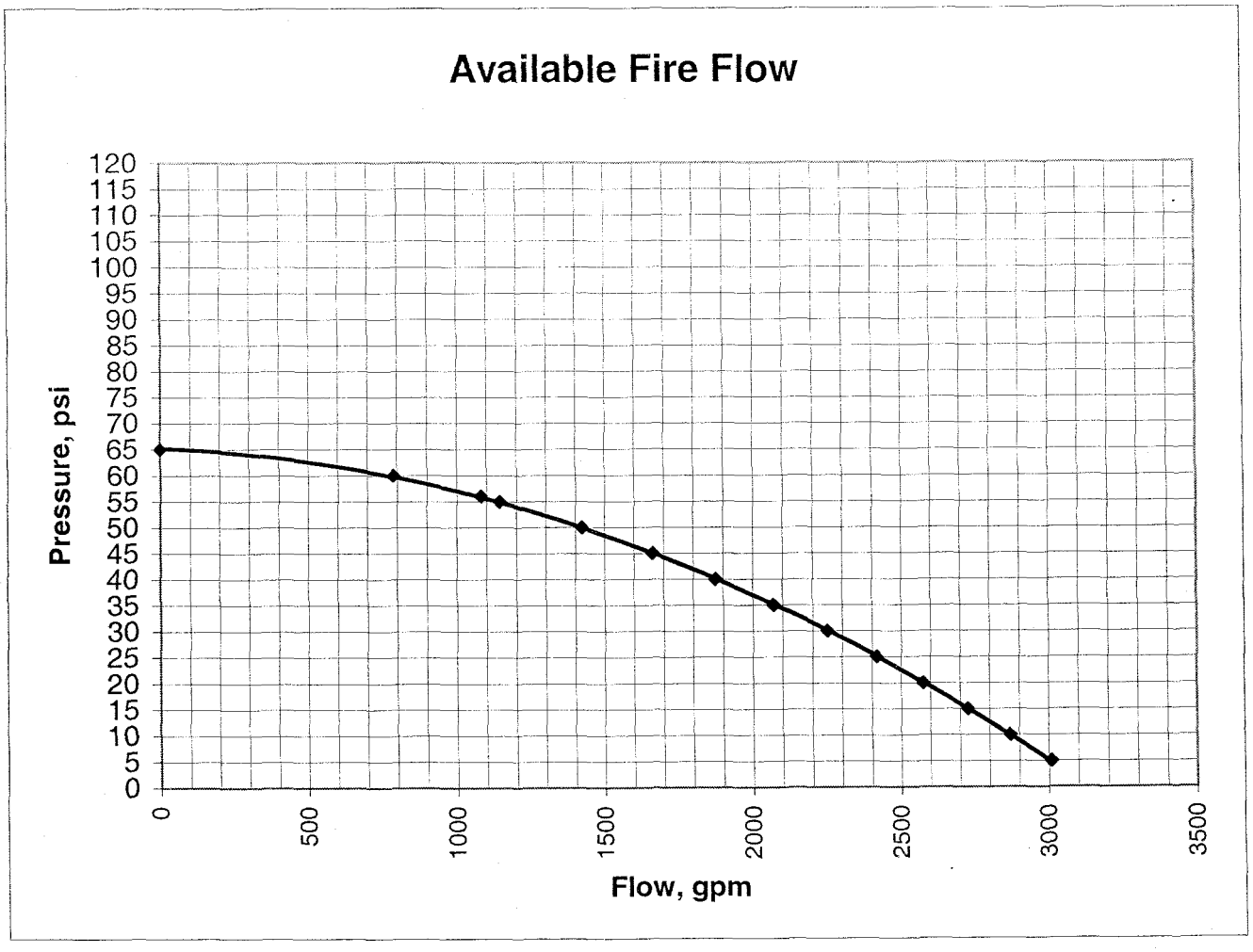
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	65.0	Pitot Pressure (psi)	47
Residual Pressure (psi)	56.0	Flow (gpm)	1080

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
14%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi 2576 gpm **Calculated Flow at 20 psi 2576 gpm**



Fire Flow Report

TEST 28

Location: Palo verde Drive by House #19413

Date: 11/11/2004 Time: 2:55 PM

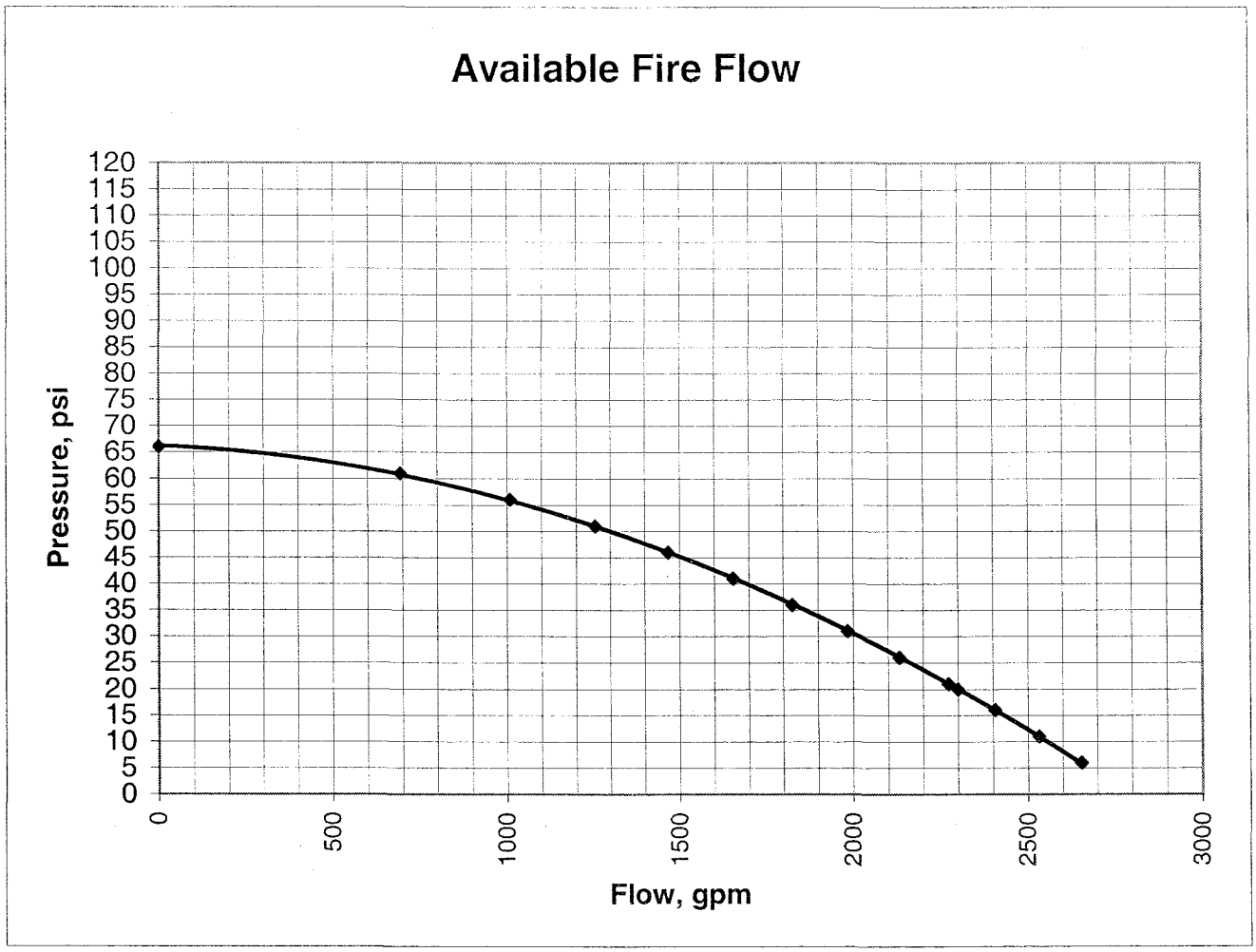
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	66.0	Pitot Pressure (psi)	41
Residual Pressure (psi)	56.0	**Flow (gpm)**	1009

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

Coefficient of Discharge		PlantPRO HFD = 0.845
15%	(0.9 Typical)	0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)		2.5

Calculated Flow at 20 psi 2300 gpm **Calculated Flow at 20 psi 2300 gpm**



Fire Flow Report

Test 29

Arizona-American Water Company

Location: Greer East of 112th on North side
Date: 11/8/2004 Time:10:15 AM
Test Performed by: Mark Knutson

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	74.0	Pitot Pressure (psi)	25
Residual Pressure (psi)	54.0	**Flow (gpm)**	**788**

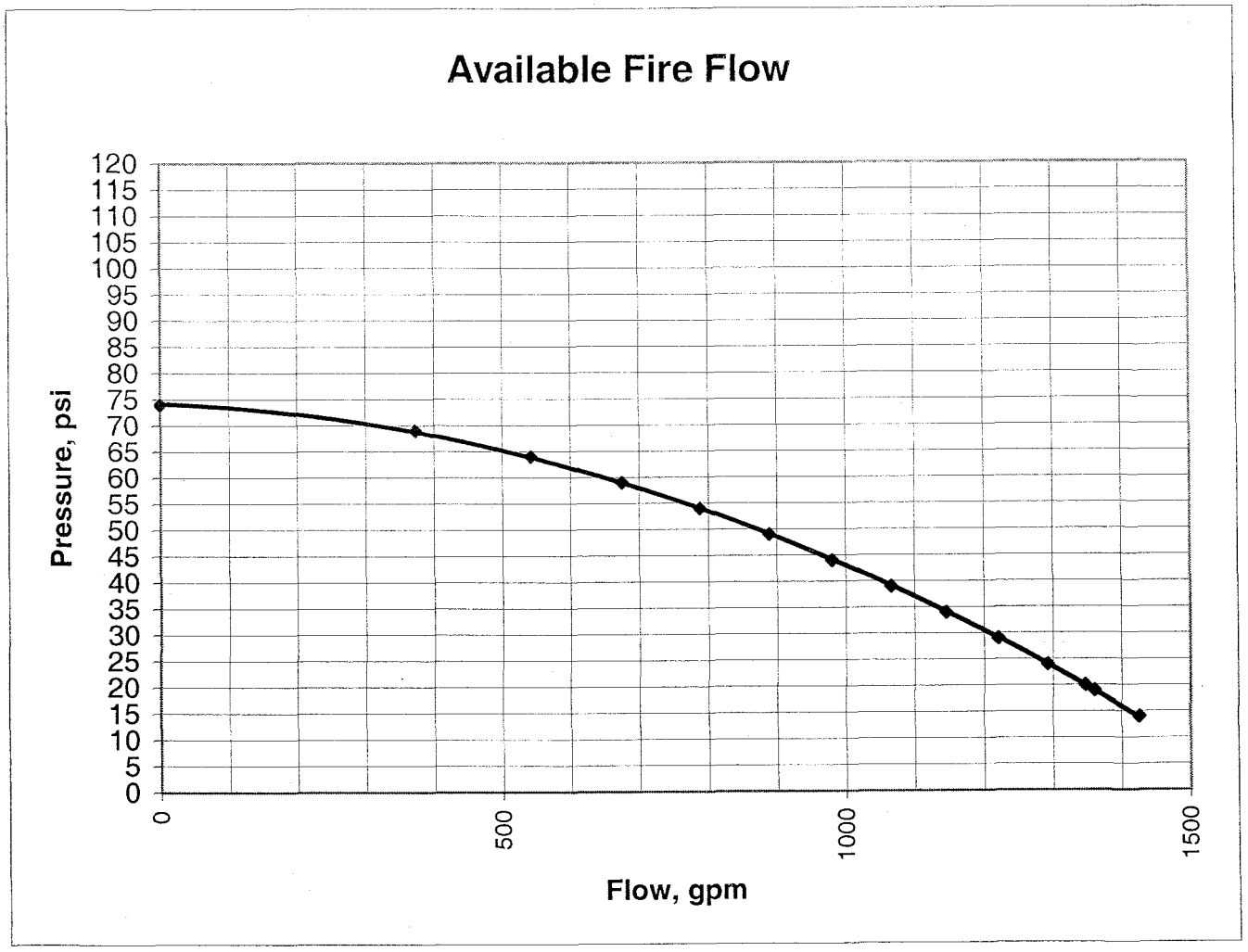
Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

27%

Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi **1347 gpm**

Calculated Flow at 20 **psi** **1347 gpm**



Fire Flow Report

Test 29

Arizona-American Water Company

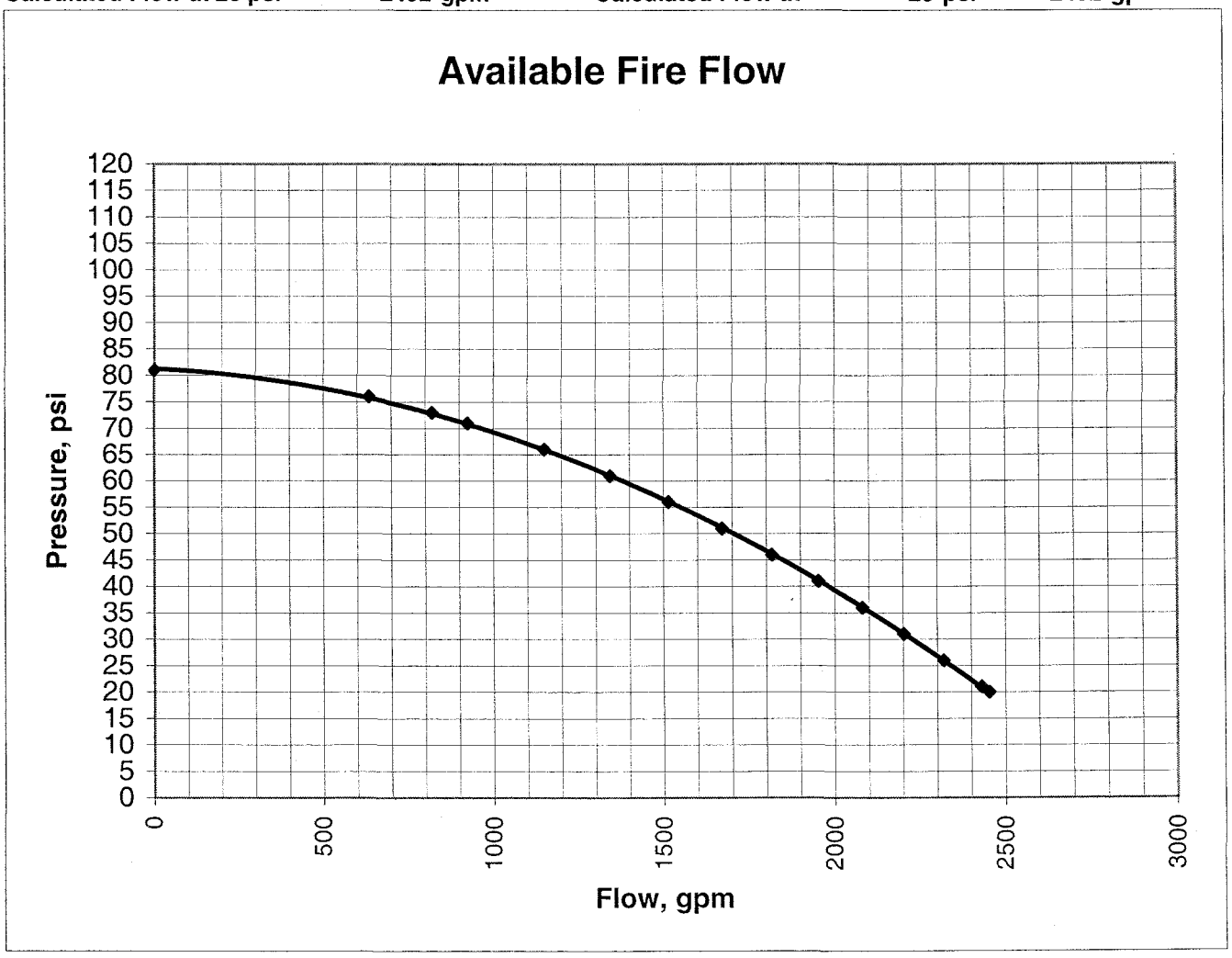
Location: Alley west of 111th Ave
Date: 2/1/2005 Time: 9:40 a.m.
Test Performed by: Mark Knutson & Jeremiah Mecham

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	81.0	Pitot Pressure (psi)	27
Residual Pressure (psi)	73.0	**Flow (gpm)**	**819**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

10%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 2452 gpm **Calculated Flow at 20 psi 2452 gpm**



Fire Flow Report

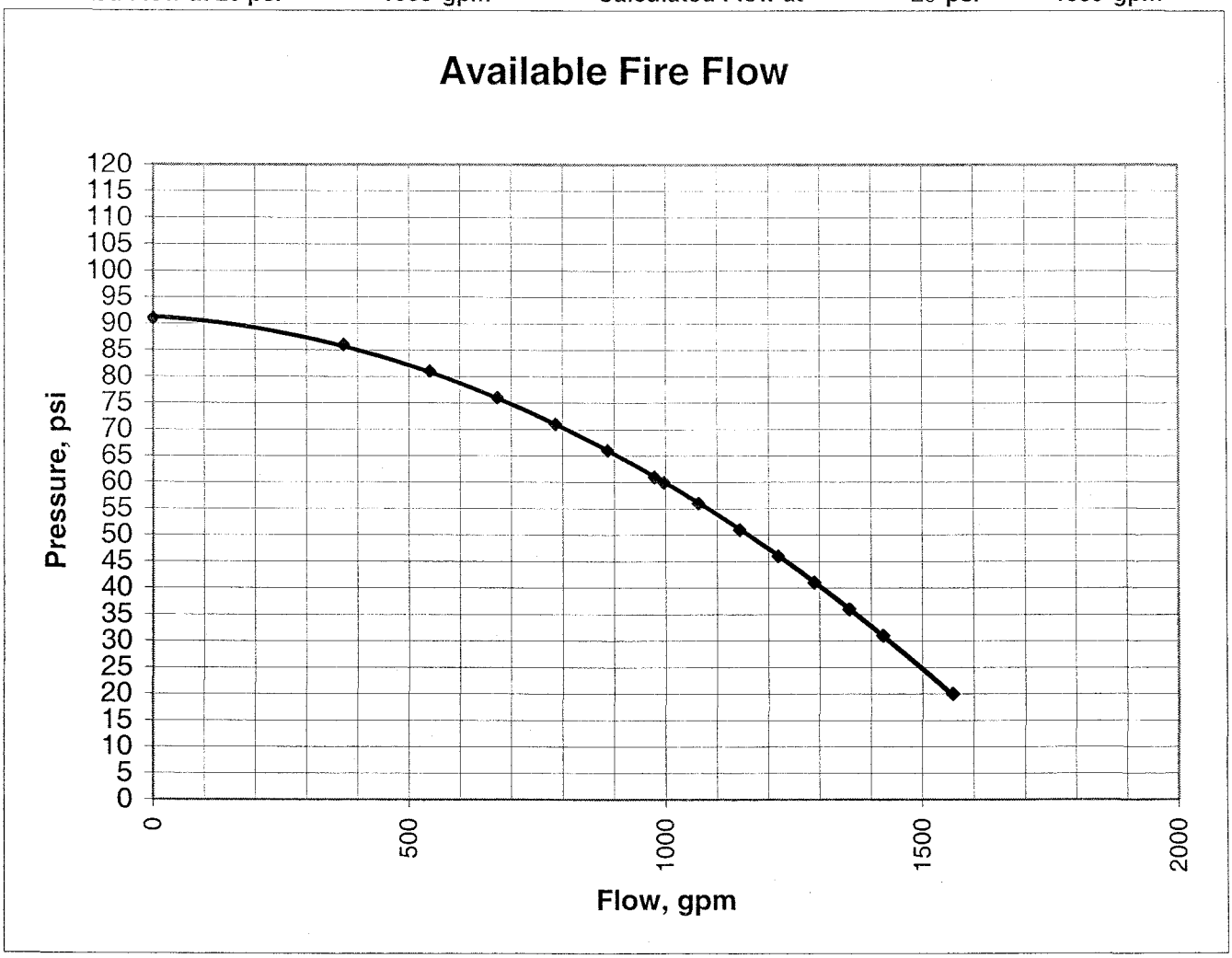
Test 30

Arizona-American Water Company

Location: Coyote Lakes - Lainie Ct
Date: 12/14/2004 Time:1210 PM
Test Performed by: Jeremiah Mecham & Jennifer Hill

Residual Hydrant		**Flow Hydrant**		
Static Pressure (psi)	91.0	Pitot Pressure (psi)	40	
Residual Pressure (psi)	60.0	**Flow (gpm)**	**996**	
Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)	34%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
		Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 1559 gpm **Calculated Flow at 20 psi 1559 gpm**



Fire Flow Report

Test 31

Arizona-American Water Company

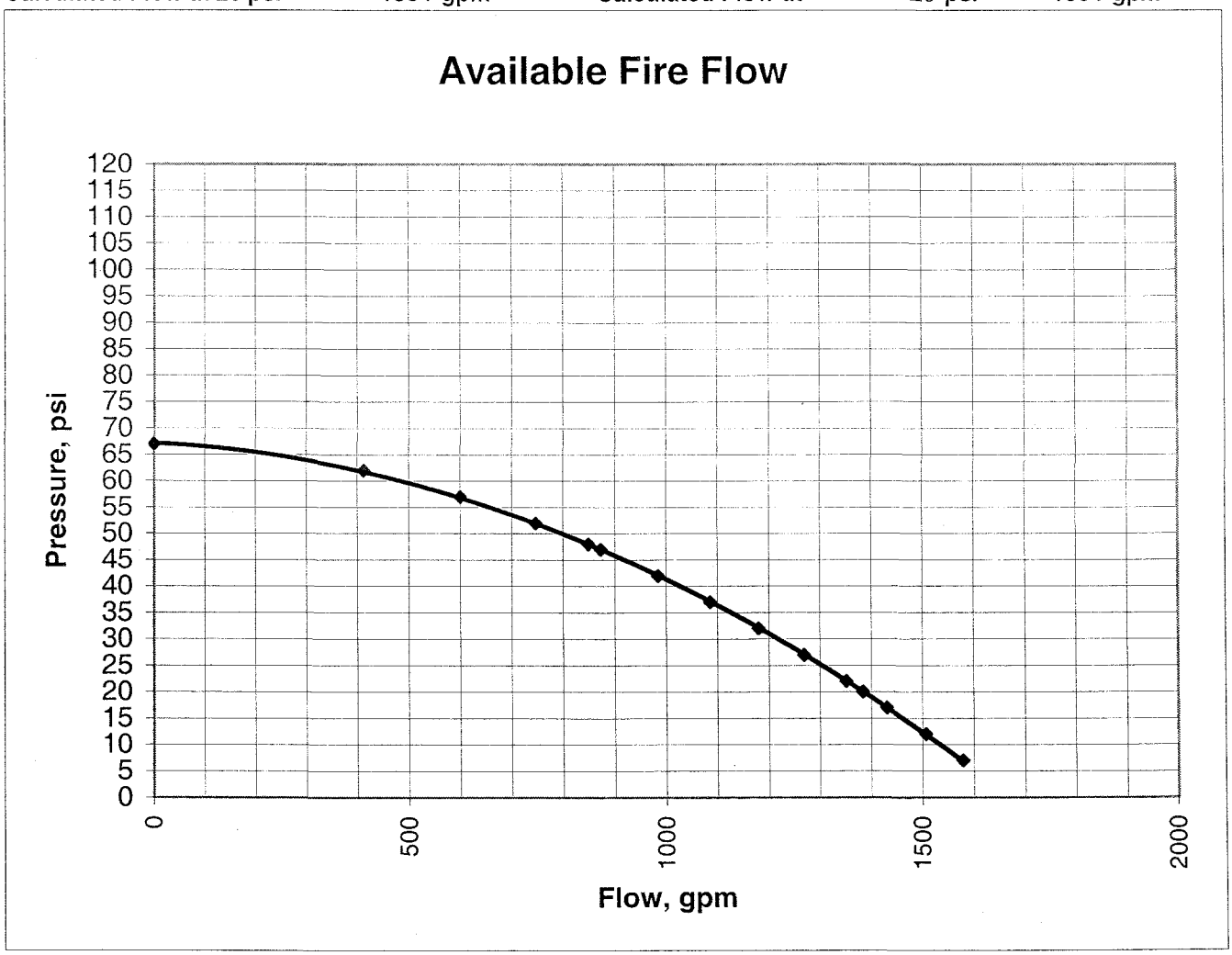
Location: Coyote Lakes - 115th Ave south of Coyote Lake Pkwy
Date: 12/14/2004 Time:1246 PM
Test Performed by: Jeremiah Mecham & Jennifer Hill

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	67.0	Pitot Pressure (psi)	29
Residual Pressure (psi)	48.0	**Flow (gpm)**	**848**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

28%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 1384 gpm **Calculated Flow at 20 psi 1384 gpm**



Fire Flow Report

Test 32

Arizona-American Water Company

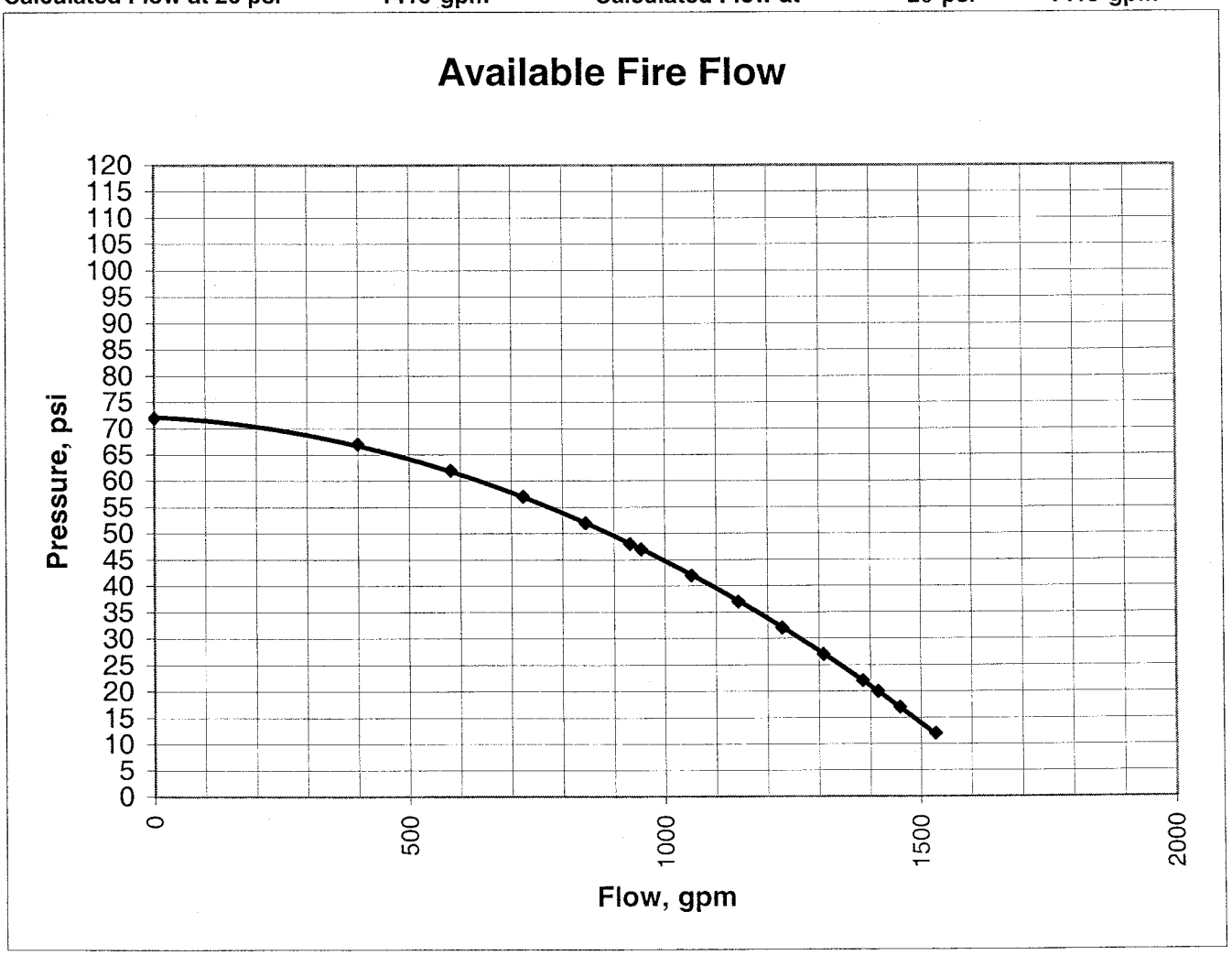
Location: Organ Pipe Drive north of Garnette
Date: 2/1/2005 Time: 10:40 a.m.
Test Performed by: Mark Knutson & Jeremiah Mecham

Residual Hydrant		**Flow Hydrant**	
Static Pressure (psi)	72.0	Pitot Pressure (psi)	35
Residual Pressure (psi)	48.0	**Flow (gpm)**	**932**

Residual pressure should be at least 25% less than static, otherwise more hydrants need to be flowed. OR flow total demand necessary for fire-fighting. (NFPA 14)

33%	Coefficient of Discharge (0.9 Typical)	0.845	PlantPRO HFD = 0.845 Typ = 0.90
	Diameter of Outlet (2.5 in. Typical)	2.5	

Calculated Flow at 20 psi 1415 gpm **Calculated Flow at 20 psi 1415 gpm**



SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	1000 gpm
Pump 2	1000 gpm
Pump 3	1000 gpm
Pump 4	
Pump 5	
Pump 6	
Pump 7	
Pump 8	

WATER PLANT NO 1

DATE: 11-8-04

RECORDED BY: DANNY ZAMORA

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
1 11	08:55	✓								82	77	823	981
2	09:00	✓								83	75	863	1011
3 10	09:25	✓								79	83	924	750
4	09:30	✓								77	84	1030	770
5	09:55	✓								82	82	825	849
6 29	10:00	✓								78	80	999	893
7	10:25	✓								85	81	770	873
8	10:30	✓								79	80	935	919
9	10:45	✓								82	82	844	860
10	10:50	✓								83	81	825	879
11	11:10	✓								82	86	800	727
12 1	11:15	✓								80	82	890	820
13 4	01:25	✓								84	82	834	850
14	01:30	✓								80	92	949	884
15 5	01:50									80	81	Ø	Ø

11 tests were performed on 11/8/04

11/8/04

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

16	01:55	✓								85	80	863	Ø
17 6	02:00									78	78	Ø	Ø
18	02:05	✓								83	82	936	882
19 7	02:22	✓								84	83	863	884
20	02:27	✓								83	82	896	906
21 18	02:38									84	84	Ø	Ø
22	02:43									84	84	Ø	Ø

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	1000
Pump 2	1000
Pump 3	1750
Pump 4	2450
Pump 5	
Pump 6	
Pump 7	
Pump 8	

Flowmeter not working

Pump 1 & 2 designed for 1000 gpm @ 180' TDH
Pump #3 1750 @ 195'
Pump #4 2450 @ 120'

WATER PLANT NO 2

DATE: 11 - 8 - 2004

RECORDED BY: Jason Kriess

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
1	9:00 AM	✓								90 PSI	84 PSI	300 ?	?
2	9:30 AM	✓								88 PSI	84 PSI		
3	10:00 AM		✓							92 PSI	86 PSI		
4	10:30 AM	✓								88 PSI	86 PSI		
5	10:50 AM	✓								90 PSI	86 PSI		
6	11:15 AM	✓								86 PSI	90 PSI		
7	1:30 PM	✓								90 PSI	94 PSI		
8	1:53 PM	✓								88 PSI	90 PSI		
9	2:06 PM		✓							88 PSI	90 PSI		
10	2:28	✓								90 PSI	82 PSI		
11	2:43	✓								94 PSI	92 PSI		

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

PRV @ Florida Well

Pump Capacities

Pump 1	
Pump 2	
Pump 3	
Pump 4	
Pump 5	
Pump 6	
Pump 7	
Pump 8	

WATER PLANT NO S.C. 2.2

DATE: 11/8/04

RECORDED BY: _____

		Pumps On								UPSTREAM PSI ~~Pressure (psi)~~		DOWN STREAM PSI ~~Flow (gpm)~~	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
*	8:55AM									76 psi		88 psi	
*	9:00AM									62 psi		83 psi	
	9:05AM									82 psi		85 psi	
	9:10AM									76 psi		86 psi	
	9:15AM									73 psi		84 psi	
	9:20AM									psi		psi	
*	9:25AM									74 psi		84 psi	
*	9:30AM									60 psi		82 psi	
*	9:55AM									79 psi		89 psi	
*	10:00AM									59 psi		76 psi	
*	10:25AM									76 psi		84 psi	
*	10:30AM									56 psi		84 psi	
*	10:45AM									76 psi		86 psi	
*	10:50AM									76 psi		84 psi	
*	11:10AM									80 psi		84 psi	

F 29
10:15

U. 75 psi
D. 86 psi

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

										UPSTREAM PSI		DOWN STREAM psi	
*	11:15am									76 psi		87 psi	

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	900
Pump 2	1800
Pump 3	1800
Pump 4	1800
Pump 5	
Pump 6	
Pump 7	
Pump 8	

WATER PLANT NO 3

DATE: 11-8-04

RECORDED BY: Kenny Thomas

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
1	9:00am		✓	✓						80	73	1252	1517
2	9:30am		✓							76	74	1421	1504
3	10:00am		✓							80	75	1309	1537
4	10:20am		✓	✓						81	75	1250	1465
5	10:50am		✓	✓						79	79	1323	1289
6	11:15am		✓							78	79	1344	1302
7	1:25pm		✓	✓						81	80	1175	1219
8	1:45pm		✓							79	78	1234	1220
9	2:00pm		✓	✓						78	77	1307	1334
10	2:20pm		✓							79	78	1160	1283
11	2:45pm									82	80	1088	1210

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	[illegible]
Pump 2	2000
Pump 3	2000
Pump 4	2000
Pump 5	[illegible]
Pump 6	2000
Pump 7	
Pump 8	

WATER PLANT NO 6

DATE: 11-8-04

RECORDED BY: Roy Perez Jr.

			Pumps On								Pressure (psi)				Flow (gpm)	
	Flow Test #	Time	1	2	3	4	5	B 6	7	8	Before Test		After Test		Before Test	After test
1	9:00	8:58						✓			LZ 62	HZ 72	60	84	2050	2284
2	9:30	9:25						✓			62	88	60	84	2082	2218
3	10:00	9:55						✓			62	84	62	84	2223	2315
	10:30	10:25						✓			64	82	62	84	2451	2358
	10:50	10:45						✓			64	86	60	86	2260	2178
	11:20	11:15						✓			64	86	64	86	2251	2270
	1:15	1:10						✓			62	84	62	84	2200	2220
	1:55	1:50						✓			62	82	62	82	2257	2265
	2:05	2:00						✓			62	82	62	82	2210	2240
	2:25	2:20						✓			62	82	62	82	1939	2010
	2:45	2:40						✓			62	82	62	82	1984	1970

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

WATER PLANT NO 5 SC

DATE: 11-8-04

RECORDED BY: TB

Pump Capacities

Model Pumps 5, 6, 7, 8

Pump 1	2250 GPM
Pump 2	2000 GPM
Pump 3	O.O.S.
Pump 4	O.O.S.
Pump 5	O.O.S.
Pump 6	2000 GPM
Pump 7	2000 GPM
Pump 8	2000 GPM

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
1	9:00am	✓	✓	O	O	S	✓			LZ.64 /HZ.87	LZ.68 /HZ 80	LZ.794/HZ.1781	LZ.1743/HZ 2284
2	9:30am	✓	✓				✓			LZ.60 /HZ.86	LZ.61 /HZ.86	LZ.883 /HZ.1973	LZ.894 /HZ.1970
3	10:00am	✓	✓					*✓		LZ.64 /HZ.80	LZ.65 /HZ.75	LZ.808/HZ.0	LZ.1880/HZ.0 2287* 10:03am *
4	10:38am	✓								LZ.69 /HZ.79	LZ.59 /HZ.79	LZ.1695 /HZ.0	LZ.902 /HZ.0
5	10:55am	✓								LZ.62 / HZ.80	LZ.65 / HZ.83	LZ.854 /HZ.0	LZ.797 /HZ.0
6	11:15am	✓								LZ.65 /HZ.80	LZ.63 /HZ.83	LZ.1825 /HZ.0	LZ.855 /HZ.0
7	1:31 pm	✓								LZ.66/HZ.84	LZ.64 /HZ.82	LZ.820 /HZ.0	LZ.853/HZ.0
8	1:55 pm	✓								LZ.64/HZ.87	LZ.66/HZ.87	LZ.860 /HZ.0	LZ.811 /HZ.0
9	2:05pm	✓								LZ.61 /HZ.82	LZ.62 /HZ.78	LZ.895/HZ.0	LZ.885/HZ.0
10	2:30pm	✓								LZ.65 /HZ.86	LZ.66 /HZ.88	LZ.820 /HZ.0	LZ.810/HZ.0
11	2:41 pm	✓								LZ.60 /HZ.87	LZ.64 /HZ.89	LZ.790 /HZ.0	LZ.854/HZ.0

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	1000 gpm
Pump 2	1000 gpm
Pump 3	1000 gpm
Pump 4	
Pump 5	
Pump 6	
Pump 7	
Pump 8	

WATER PLANT NO 1

DATE: 11-11-04

RECORDED BY: Jason Kriess

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	**Time**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Before Test**	**After Test**	**Before Test**	**After test**
9	8:44 AM	✓								75 PSI	75 PSI	885	878
8	9:05	✓								78 PSI	76 PSI	810	916
12	9:30	✓								75 PSI	75 PSI	869	840
15	9:50	✓								75 PSI	73 PSI	835	970
18	10:00	✓								78 PSI	70 PSI	785	1015
17	10:30	✓								75 PSI	74	789	915
16	10:45									78 PSI	80 PSI	670	0
14	11:00	✓								80 PSI	75 PSI	0	855

WP3

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	900
Pump 2	1800
Pump 3	1800
Pump 4	1800
Pump 5	
Pump 6	
Pump 7	
Pump 8	

WATER PLANT NO 3

DATE: 11/11/04

RECORDED BY: _____

pump 2 on.

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
NPM 7 (8:50)	8:44	✓	✓							70	70	1323	1364
8 (9:10)	9:04	✓								70	70	1263	1459
12 (9:27)	9:31	✓								70	70	1284	1305
15 (9:40)	9:56	✓								72	72	1325	1214
18 (10:05)	9:59	✓								72	66	1252	1597
17 (10:25)	10:26	✓								70	70	1272	1453
16 (10:45)	10:46	✓								74	72	1157	1433
14 (11:10)	11:10	✓								76	70	1116	1347
19	12:30		✓							76	74	2126	2297
WP 8 20	1:10		✓							70	76	2499	2060
21	1:35		✓							74	72	2168	2445
22	1:55		✓							76	74	2054	2331
25	2:15		✓							74	74	2237	2030
26	2:36		✓							76	72	2152	2395
28	2:55		✓							78	74	1992	2244

Pump#183

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

	Time	1	2	3	4	5				Before	After	Flow (GPM) Before	After
27	3:11		✓							74	72	2187	2331
24	3:29		✓							76	72	1919	2325
22	3:45		✓							76	76	1970	2149

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	2250 GPM
Pump 2	2000 GPM
Pump 3	O.O.S.
Pump 4	O.O.S.
Pump 5	2000 GPM
Pump 6	2000 GPM
Pump 7	2000 GPM
Pump 8	2000 GPM

WATER PLANT NO 5 SC

DATE: 11-11-04

RECORDED BY: TB

		Pumps On								Pressure (psi)		Flow (gpm)	
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test	After Test	Before Test	After test
1 9	8:35 am		✓	O.O.S			✓			LZ. 64 /HZ. 84	LZ. 64 /HZ. 89	LZ. 1080 /HZ. 2085	LZ. 1066 /HZ. 1826
2 8	9:00 am		✓				✓			LZ. 66 /HZ. 86	LZ. 61 /HZ. 81	LZ. 1053/HZ. 1970	LZ. 1112 /HZ. 2213
3 12	9:20 am		✓				✓			LZ. 64 /HZ. 84	LZ. 61 /HZ. 84	LZ. 1071 /HZ. 2130	LZ. 1119 /HZ. 2102
4 15	9:40 am		✓				✓			LZ. 63 /HZ. 86	LZ. 59 /HZ. 87	LZ. 1090 /HZ. 2009	LZ. 1143 /HZ. 1877
5 18	9:58 am		✓			✓	✓	✓		LZ. 64 /HZ. 76	LZ. 58 /HZ. 70	LZ. 1095 /HZ. 0	LZ. 1148 /HZ. 5387 HIGH ZONE CYCLING. THREE BOOSTERS RUN 15 SECONDS
6 17	10:22 am		✓							LZ. 65 /HZ. 76	LZ. 75 /HZ. 61	LZ. 1066 /HZ. 0	LZ. 1139 /HZ. 0
7 16	10:43 am		✓							LZ. 68 /HZ. 82	LZ. 62 /HZ. 82	LZ. 1016 /HZ. 0	LZ. 1118 /HZ. 0
8 14	11:00 am		✓							LZ. 67 /HZ. 82	LZ. 57 /HZ. 77	LZ. 1043/HZ. 0	LZ. 1183 /HZ. 0
9 19	12:37 pm		✓							LZ. 67 /HZ. 82	LZ. 67 /HZ. 77	LZ. 1042/HZ. 0	LZ. 1058/HZ. 0
10 20	1:05 pm		✓			✓				LZ. 66 /HZ. 85	LZ. 67 /HZ. 86	LZ. 1068 /HZ. 2350	LZ. 1048 /HZ. 2290
11 [illegible]	1:32 pm		✓							LZ. 67 /HZ. 83	LZ. 67 /HZ. 75	LZ. 1058 /HZ. 0	LZ. 1058/HZ. 0
12 [illegible]	1:49 pm		✓							LZ. 65 /HZ. 86	LZ. 63 /HZ. 79	LZ. 1096/HZ. 0	LZ. 1115 /HZ. 0
13 [illegible]	2:10 pm		✓			✓				LZ. 62 /HZ. 78	LZ. 65 /HZ. 87	LZ. 1133 /HZ. 0	LZ. 1082 /HZ. 2347
14 [illegible]	2:35 pm		✓							LZ. 67 /HZ. 83	LZ. 65 /HZ. 76	LZ. 1043 /HZ. 0	LZ. 1086 /HZ. 0
15 28	2:51 pm		✓							LZ. 67 /HZ. 87	LZ. 67 /HZ. 81	LZ. 1056 /HZ. 0	LZ. 1058 /HZ. 0

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

	TIME									B.T PSI	AT PSI	B.T. GPM	A.T. GPM
16	3:07 pm		✓	O.S.						LZ.64 /HZ. 85	LZ.64 /HZ. 79	LZ.1099 /HZ. 0	LZ.1098 /HZ. 0
17	3:29 pm		✓			✓				LZ.68 /HZ. 89	LZ.63 /HZ. 90	LZ.1031 /HZ. 0	LZ.1108 /HZ. 2233
18	3:46 pm		✓							LZ.63 /HZ. 76	LZ.68 /HZ. 89	LZ.1115 /HZ. 0	LZ.1025 /HZ. 0

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Pump Capacities

Pump 1	2000
Pump 2	2000
Pump 3	2000
Pump 4	O.O.S
Pump 5	2000
Pump 6	2000
Pump 7	-NA-
Pump 8	-NA-

WATER PLANT NO #6

DATE: 11-11-04

RECORDED BY: Roy Perez, Jr.

		Pumps On								Pressure (psi)				Flow (gpm)			
Flow Test #	Time	1	2	3	4	5	6	7	8	Before Test		After Test		Before Test		After test	
										LZ	HZ	LZ	HZ	LZ	HZ	LZ	HZ
8:40	8:33						✓			64	86	60	84	0	2092	0	1881
9:10	9:00						✓			62	86	64	86	0	2010	0	2340
9:26	9:20						✓			64	86	64	86	0	2190	0	2213
9:45	9:40						✓			64	84	64	84	0	2210	0	2250
10:00	9:50						✓			62	86	62	86	0	1989	0	2000
10:25	10:20						✓			64	80	64	82	0	2411	0	2438
10:45	10:40						✓			66	86	66	86	0	2142	0	2160
11:00	10:56						✓			66	86	66	86	0	2157	0	2182
12:30	12:25						✓			64	86	64	86	0	2290	0	2319
1:05	12:55						✓			64	84	64	84	0	2270	0	2204
1:37	1:30						✓			66	86	66	86	0	2179	0	2270
1:50	1:40						✓			66	86	66	86	0	1981	0	2007
2:10	2:05						✓			66	86	66	86	0	2300	0	2280
2:35	2:30						✓			66	86	66	86	0	2130	0	2170
2:55	2:50						✓			66	86	66	86	0	2158	0	2050

WP 6
11/11/04

SUN CITY FIRE FLOW STUDY
FLOW TEST DATA

Flow Test	Time	1	2	3	4	5	6	7	8	PSi Before LZ	PSi Before HZ	PSi After LZ	PSi After HZ	Flow Before LZ	Flow Before HZ	Flow After LZ	Flow After HZ
23 3:08	3:00						✓			64	84	64	84	0	2245	0	2147
24 3:30	3:20						✓			64	84	64	84	0	1864	0	2055
25 3:45	3:40						✓			64	84	64	84	0	2270	0	1914

D

APPENDIX D

DETAIL OF ESTIMATED COSTS OF RECOMMENDED IMPROVEMENTS

APPENDIX D
ARIZONA AMERICAN WATER COMPANY

SUN CITY DISTRICT PROPOSED IMPROVEMENTS

COST ESTIMATE

No.	Description	Quantity	Unit	Size	Unit Price	Construction	Engineering	TOTAL
1	**Sun City/Youngtown Pressure Reducing/Pressure Sustaining Valve modification**	1	LS			$ 10,000		**$ 10,000**
2	**Piping Improvements - Youngtown Commercial**							
	Install new 10" pipe in Grand Avenue west connecting to 10" in 111th Avenue	1,050	LF	10"	$ 66	$ 69,300	$ 6,930	$ 76,230
	Install new 6" pipe in 113th Avenue connecting to new 10" pipe in Grand	272	LF	6"	$ 46	$ 12,512	$ 1,251	$ 13,763
	Connect 6" pipe in 111th Avenue with 10" pipe in 111th Avenue	1	LS	NA	$ 10,000	$ 10,000	$ 1,000	$ 11,000
	Connect 6" pipe to 6" pipe at 113th Drive and 113th Lane	1	LS	NA	$ 5,000	$ 5,000	$ 500	$ 5,500
	In stall new 6" pipe in 113th Ave at Spanish Gardens	498	LF	6"	$ 46	$ 22,908	$ 2,291	$ 25,199
	Install new 6" pipe in Tennesse Avenue	775	LF	6"	$ 46	$ 35,650	$ 3,565	$ 39,215
	Install new 6" pipe in Wisconsin	498	LF	6"	$ 47	$ 23,406	$ 2,341	$ 25,747
	Install Fire Hydrants in Youngtown Commercial Area	11	EA	NA	$ 5,000	$ 55,000	$ 5,500	$ 60,500
	Subtotal Item 2					**$ 233,776**	**$ 23,378**	**$ 257,154**
3	**Youngtown Neighborhood Commercial - 111th Ave south of Youngtown Ave**							
	Replace existing 2" and 4" with 8" piping; connect to existing 6"	700	LF	8"	$ 56	$ 39,200	$ 3,920	$ 43,120
	Install new Fire Hydrants	4	EA	NA	$ 5,000	$ 20,000	$ 2,000	$ 22,000
	Subtotal Item 3					**$ 59,200**	**$ 5,920**	**$ 65,120**
4	**Youngtown Residential**							
	replace 4" with 6" in Illinois; install new 6" connecting to 6" in 114th Dr	1,400	LF	6"	$ 46	$ 64,400	$ 6,440	$ 70,840
	Install Fire Hydrant	1	EA	NA	$ 5,000	$ 5,000	$ -	$ 5,000
	Subtotal Item 4							**$ 75,840**
4a	Youngtown - Install Fire hydrants on existing pipe	56	EA	NA	$ 5,000	$ 280,000		**$ 280,000**
4b	Youngtown - Install new 6" pipe for Fire Hydrants	15,271	LF	6"	$ 46	$ 702,466	$ -	$ 702,466
	Youngtown - Fire Hydrants	45	EA	NA	$ 5,000	$ 225,000	$ -	$ 225,000
	Subtotal Item 4							**$ 927,466**
5	**Sun City Residential**							
	Replace 4" with 6" in N. Cherry Hills Drive	5,200	LF	6"	$ 46	$ 239,200	$ 23,920	$ 263,120
	Install Fire Hydrants - Cherry Hills Dr	3	EA	NA	$ 5,000	$ 15,000	$ -	$ 15,000
	Replace 4" in N. Pebble Beach Dr. with 6"	1,400	LF	6"	$ 46	$ 64,400	$ 6,440	$ 70,840
	Install Fire Hydrant - Pebble Beach	1	EA	NA	$ 5,000	$ 5,000	$ -	$ 5,000
	Subtotal Item 5					$ 323,600	$ 30,360	**$ 353,960**
5a	Install Fire Hydrants on existing piping	52	EA		$ 5,000	$ 260,000		**$ 260,000**
5b	Sun City - Install new 6" pipe for Fire Hydrants	14,197	LF	6"	$ 46	$ 653,062	$ -	$ 653,062
	Sun City - Fire Hydrants	23	EA	NA	$ 5,000	$ 115,000	$ -	$ 115,000
	Subtotal Item 5c							**$ 768,062**
6	**City of Peoria - Paradise MHP**							
	Replace 6" with 8" pipe connecting Paradise MHP on Union Hills	1,250	LF	8"	$ 56	$ 70,000	$ 7,000	$ 77,000
	Loop 6" pipe in north part of Paradise MHP	1	LS		$ 5,000	$ 5,000	$ 500	$ 5,500
	Subtotal Item 6					$ 75,000	$ 7,500	**$ 82,500**
	TOTAL							**$ 3,080,102**

E

APPENDIX E

MODEL OUTPUT

MAXIMUM DAY EXISTING 2004

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1119	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	62.15	J-4083
J-171	High	true	1,000.00	2,103.76	1,008.08	2,111.83	20.00	20.00	J-4078
J-329	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	24.08	J-4083
J-978	High	true	1,000.00	2,294.80	1,007.27	2,302.07	20.00	20.00	J-4078
J-446	Low	true	1,000.00	2,475.83	1,037.75	2,513.58	20.00	20.00	J-4083
J-204	High	true	1,000.00	2,673.71	1,000.00	2,673.71	20.00	20.00	J-4078
PH15	Low	true	1,000.00	3,165.89	1,011.91	3,177.80	20.00	20.00	J-4083
J-465	Low	true	1,000.00	3,935.91	1,005.05	3,940.96	20.00	20.00	J-4083
J-793	High	true	1,000.00	2,815.06	1,018.77	2,833.84	20.00	20.00	J-4078
J-1023	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	37.51	J-4078
J-351	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	42.09	J-4083
J-1045	Low	true	1,000.00	2,502.93	1,004.64	2,507.57	20.00	20.00	J-4083
J-548	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	21.86	J-4083
J-1257	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	45.13	J-4083
J-165	Low	true	1,000.00	4,916.38	1,002.22	4,918.60	20.00	20.00	J-4083
J-625	High	true	1,000.00	1,563.72	1,002.83	1,566.55	20.00	20.00	J-4078
J-827	High	true	1,000.00	2,836.67	1,010.70	2,847.37	20.00	20.00	J-4078
J-821	High	true	1,000.00	1,809.63	1,007.27	1,816.90	20.00	20.00	J-4078
J-537	High	true	1,000.00	3,639.77	1,004.64	3,644.41	20.00	20.00	J-4078
J-868	High	true	1,000.00	1,464.42	1,004.85	1,469.26	20.00	20.00	J-4078
J-859	High	true	1,000.00	4,286.62	1,007.87	4,294.49	20.00	20.00	J-4078
J-1063	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	63.14	J-4083
J-272	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.21	J-4083
J-1227	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	65.62	J-4078
J-812	Low	true	1,000.00	4,374.76	1,005.25	4,380.00	20.00	20.00	J-4083
J-903	High	true	1,000.00	3,529.79	1,007.27	3,537.05	20.00	20.00	J-4078
J-1118	High	true	1,000.00	5,000.00	1,003.84	5,003.84	20.00	44.56	J-4078
J-202	High	true	1,000.00	2,798.83	1,014.54	2,813.36	20.00	20.00	J-4078
J-891	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	59.14	J-4083
J-167	Low	true	1,000.00	4,606.69	1,007.87	4,614.56	20.00	20.00	J-4083
J-1327	High	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	35.11	J-4078
J-442	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	58.65	J-4083
J-947	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.59	J-4083
J-866	Low	true	1,000.00	4,130.98	1,013.53	4,144.51	20.00	20.00	J-4083
FH18	Low	true	1,000.00	2,464.11	1,000.00	2,464.11	20.00	20.00	J-4083
J-918	Low	true	1,000.00	4,527.10	1,014.33	4,541.43	20.00	20.00	J-4083
J-246	High	true	1,000.00	4,318.11	1,002.22	4,320.34	20.00	20.00	J-4078
J-1028	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	56.62	J-4078
J-840	High	true	1,000.00	2,373.90	1,007.27	2,381.17	20.00	20.00	J-4078
J-1314	Low	true	1,000.00	5,000.00	1,018.98	5,018.98	20.00	57.69	J-4083
J-928	High	true	1,000.00	2,765.75	1,008.08	2,773.82	20.00	20.00	J-4078
J-407	Low	true	1,000.00	4,911.13	1,010.30	4,921.43	20.00	20.00	J-4083
J-1035	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	66.31	J-4083
J-926	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	30.77	J-4083
J-1030	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	58.50	J-4083
J-979	Low	true	1,000.00	2,928.22	1,005.05	2,933.27	20.00	20.00	J-4083
J-835	High	true	1,000.00	3,105.83	1,012.92	3,118.76	20.00	20.00	J-4078
J-945	Low	true	1,000.00	3,204.35	1,011.91	3,216.26	20.00	20.00	J-4083
FH26	High	true	1,000.00	5,000.00	1,007.67	5,007.67	20.00	38.38	J-4078
J-871	Low	true	1,000.00	2,002.62	1,030.69	2,033.31	20.00	20.00	J-4083
J-896	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	38.45	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-316	YT	true	1,000.00	3,184.57	1,011.51	3,196.08	20.00	20.00	J-4060
J-661	High	true	1,000.00	5,000.00	1,024.83	5,024.83	20.00	56.45	J-4078
J-509	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	26.70	J-4083
J-323	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	26.30	J-4083
J-370	Low	true	1,000.00	4,789.67	1,002.22	4,791.89	20.00	20.00	J-4083
J-355	High	true	1,000.00	3,949.10	1,000.00	3,949.10	20.00	20.00	J-4078
J-969	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	58.45	J-3975
J-1231	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	54.03	J-4083
J-792	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	65.70	J-4083
J-617	High	true	1,000.00	3,877.44	1,004.64	3,882.09	20.00	20.00	J-4078
J-1139	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	55.69	J-4083
J-1007	High	true	1,000.00	5,000.00	1,018.17	5,018.17	20.00	51.26	J-4078
J-155	Low	true	1,000.00	2,555.91	1,000.00	2,555.91	20.00	20.00	J-4083
J-674	High	true	1,000.00	4,218.51	1,012.31	4,230.82	20.00	20.00	J-4078
J-457	High	true	1,000.00	3,196.04	1,007.27	3,203.31	20.00	20.00	J-4078
J-245	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	34.48	J-4078
J-1032	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	57.43	J-4083
J-360	High	true	1,000.00	4,097.66	1,010.90	4,108.56	20.00	20.00	J-4078
J-104	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	23.96	J-4078
J-129	High	true	1,000.00	2,278.20	1,016.76	2,294.95	20.00	20.00	J-4078
J-865	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	26.74	J-4083
J-936	Low	true	1,000.00	1,966.49	1,000.00	1,966.49	20.00	20.00	J-4083
J-314	YT	true	1,000.00	2,997.19	1,003.63	3,000.83	20.00	20.00	J-4060
J-1238	High	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	65.49	J-4078
J-848	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	31.95	J-4083
J-1325	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.14	J-4083
J-445	Low	true	1,000.00	4,468.14	1,017.16	4,485.30	20.00	20.00	J-4083
J-998	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	43.17	J-4083
J-964	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	49.87	J-4078
J-96	High	true	1,000.00	2,011.29	1,007.27	2,018.56	20.00	20.00	J-4078
J-1217	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	56.29	J-4083
J-956	Low	true	1,000.00	4,467.77	1,020.59	4,488.36	20.00	20.00	J-4083
J-348	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	59.01	J-4083
J-396	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	41.92	J-4083
J-719	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	52.64	J-4083
J-882	Low	true	1,000.00	4,027.47	1,005.05	4,032.51	20.00	20.00	J-4083
J-156	Low	true	1,000.00	3,886.11	1,011.91	3,898.02	20.00	20.00	J-4083
J-498	YT	true	1,000.00	3,845.82	1,042.19	3,888.02	20.00	20.00	J-4060
J-809	High	true	1,000.00	5,000.00	1,004.85	5,004.85	20.00	49.40	J-4078
J-554	Low	true	1,000.00	5,000.00	1,018.98	5,018.98	20.00	41.54	J-4083
J-605	Low	true	1,000.00	3,757.81	1,009.29	3,767.10	20.00	20.00	J-4083
J-1003	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	55.59	J-4083
J-429	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	41.61	J-4083
J-922	Low	true	1,000.00	4,046.14	1,000.00	4,046.14	20.00	20.00	J-4083
J-533	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	37.87	J-4083
J-470	Low	true	1,000.00	4,234.99	1,002.83	4,237.81	20.00	20.00	J-4083
J-1038	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	41.78	J-4078
J-904	YT	true	1,000.00	1,523.56	1,004.85	1,528.40	20.00	20.00	J-4060
J-670	Low	true	1,000.00	3,505.01	1,008.48	3,513.48	20.00	20.00	J-4083
J-992	Low	true	1,000.00	3,763.31	1,000.00	3,763.31	20.00	20.00	J-4083
J-602	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	37.65	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
PH7	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	58.96	J-4083
J-797	High	true	1,000.00	4,716.31	1,008.48	4,724.79	20.00	20.00	J-4078
J-666	High	true	1,000.00	3,444.09	1,008.08	3,452.17	20.00	20.00	J-4078
J-1179	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	38.33	J-4083
J-324	High	true	1,000.00	3,942.14	1,004.24	3,946.38	20.00	20.00	J-4078
J-1084	Zone	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	64.71	J-3975
J-381	High	true	1,000.00	4,720.21	1,011.71	4,731.92	20.00	20.00	J-4078
J-1102	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	52.52	J-4083
J-1107	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	36.54	J-4078
J-1049	Low	true	1,000.00	4,104.61	1,020.59	4,125.21	20.00	20.00	J-4083
J-723	Low	true	1,000.00	4,199.71	1,017.36	4,217.07	20.00	20.00	J-4083
J-513	Low	true	1,000.00	3,077.88	1,005.25	3,083.13	20.00	20.00	J-4083
J-667	High	true	1,000.00	4,703.13	1,002.83	4,705.95	20.00	20.00	J-4078
J-318	High	true	1,000.00	4,968.99	1,010.90	4,979.90	20.00	20.00	J-4078
J-746	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	47.43	J-4083
J-624	High	true	1,000.00	3,652.34	1,002.83	3,655.17	20.00	20.00	J-4078
J-379	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	50.64	J-4083
J-389	Zone	true	1,000.00	3,191.41	1,014.33	3,205.74	20.00	20.00	J-3975
J-1117	Low	true	1,000.00	4,782.47	1,020.59	4,803.06	20.00	20.00	J-4083
J-1148	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	69.86	J-4083
J-471	High	true	1,000.00	1,805.30	1,007.67	1,812.97	20.00	20.00	J-4078
J-421	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	53.40	J-4078
J-725	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	60.79	J-4078
J-137	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	26.10	J-4083
J-238	High	true	1,000.00	5,000.00	1,028.47	5,028.47	20.00	56.72	J-4078
J-837	Low	true	1,000.00	4,285.89	1,010.30	4,296.19	20.00	20.00	J-4083
J-473	Low	true	1,000.00	3,711.30	1,010.50	3,721.80	20.00	20.00	J-4083
J-977	YT	true	1,000.00	4,468.02	1,008.28	4,476.29	20.00	20.00	J-4060
J-1154	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	28.22	J-4078
J-141	Low	true	1,000.00	2,828.25	1,008.88	2,837.13	20.00	20.00	J-4083
J-380	High	true	1,000.00	5,000.00	1,024.63	5,024.63	20.00	48.08	J-4078
J-510	Low	true	1,000.00	3,723.88	1,017.36	3,741.24	20.00	20.00	J-4083
J-917	Low	true	1,000.00	3,338.50	1,004.64	3,343.14	20.00	20.00	J-4083
J-1153	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	60.95	J-4083
J-271	Low	true	1,000.00	3,596.07	1,000.00	3,596.07	20.00	20.00	J-4083
J-647	High	true	1,000.00	3,305.42	1,008.08	3,313.50	20.00	20.00	J-4078
J-190	Low	true	1,000.00	2,949.59	1,008.88	2,958.47	20.00	20.00	J-4083
J-373	High	true	1,000.00	4,080.57	1,012.92	4,093.49	20.00	20.00	J-4078
J-1040	Low	true	1,000.00	4,546.39	1,000.00	4,546.39	20.00	20.00	J-4083
J-806	High	true	1,000.00	4,334.47	1,016.35	4,350.83	20.00	20.00	J-4078
J-1330	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	69.66	J-4078
J-847	High	true	1,000.00	3,266.60	1,004.24	3,270.84	20.00	20.00	J-4078
J-339	High	true	1,000.00	2,936.65	1,012.92	2,949.57	20.00	20.00	J-4078
J-718	High	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	42.02	J-4078
J-892	Low	true	1,000.00	3,280.88	1,000.00	3,280.88	20.00	20.00	J-4083
J-742	YT	true	1,000.00	2,762.70	1,008.48	2,771.17	20.00	20.00	J-4060
J-1094	Low	true	1,000.00	5,000.00	1,017.56	5,017.56	20.00	54.38	J-4083
J-1188	Low	true	1,000.00	3,989.26	1,009.29	3,998.54	20.00	20.00	J-4083
FH2	Low	true	1,000.00	3,818.36	1,000.00	3,818.36	20.00	20.00	J-4083
PH30	High	true	1,000.00	1,738.77	1,012.72	1,751.49	20.00	20.00	J-4078
PH14	Low	true	1,000.00	3,866.21	1,017.16	3,883.37	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1141	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	40.11	J-4078
J-1078	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.37	J-4083
J-1126	High	true	1,000.00	2,370.97	1,009.08	2,380.06	20.00	20.00	J-4078
J-392	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	21.47	J-4078
J-663	Zone	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	63.77	J-3975
J-1006	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	51.72	J-4083
J-795	Low	true	1,000.00	4,715.82	1,015.54	4,731.37	20.00	20.00	J-4083
J-535	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	62.38	J-4083
J-629	High	true	1,000.00	2,687.01	1,002.83	2,689.84	20.00	20.00	J-4078
J-1213	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	52.95	J-4083
J-1219	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	41.17	J-4078
J-123	High	true	1,000.00	2,951.05	1,004.44	2,955.49	20.00	20.00	J-4078
J-322	Low	true	1,000.00	5,000.00	1,022.81	5,022.81	20.00	25.08	J-4083
J-1259	Low	true	1,000.00	5,000.00	1,018.98	5,018.98	20.00	58.19	J-4083
J-305	YT	true	1,000.00	3,577.27	1,003.63	3,580.90	20.00	20.00	J-4060
J-546	Low	true	1,000.00	3,985.84	1,007.87	3,993.71	20.00	20.00	J-4083
J-1279	High	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	47.39	J-4078
J-1062	Low	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	60.77	J-4083
J-1269	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	60.64	J-4083
J-254	YT	true	1,000.00	2,637.94	1,004.85	2,642.78	20.00	20.00	J-4060
J-41	Low	true	1,000.00	3,919.43	1,000.00	3,919.43	20.00	20.00	J-4083
J-568	High	true	1,000.00	3,834.59	1,021.00	3,855.59	20.00	20.00	J-4078
J-98	YT	true	1,000.00	3,819.21	1,008.48	3,827.69	20.00	20.00	J-4060
J-828	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	59.34	J-3975
J-492	High	true	1,000.00	2,485.96	1,004.85	2,490.81	20.00	20.00	J-4078
J-844	YT	true	1,000.00	2,831.05	1,011.51	2,842.56	20.00	20.00	J-4060
J-604	High	true	1,000.00	2,451.29	1,000.00	2,451.29	20.00	20.00	J-4078
J-417	High	true	1,000.00	2,674.32	1,003.84	2,678.15	20.00	20.00	J-4078
J-1097	Low	true	1,000.00	3,849.98	1,005.65	3,855.63	20.00	20.00	J-4083
J-1304	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	35.52	J-4078
J-411	Low	true	1,000.00	4,534.18	1,008.68	4,542.86	20.00	20.00	J-4083
J-1059	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	32.14	J-4078
J-178	YT	false	1,000.00	797.58	1,017.56	815.14	20.00	20.00	J-4060
J-948	Low	true	1,000.00	3,891.97	1,000.00	3,891.97	20.00	20.00	J-4083
J-861	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	31.91	J-4083
PH26	High	true	1,000.00	5,000.00	1,007.67	5,007.67	20.00	40.09	J-4078
J-919	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	47.07	J-4078
J-308	YT	true	1,000.00	2,720.03	1,004.85	2,724.88	20.00	20.00	J-4060
J-741	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	28.13	J-4083
FH30	High	true	1,000.00	1,744.69	1,006.30	1,750.99	20.00	20.00	J-4078
J-715	High	true	1,000.00	2,406.74	1,012.92	2,419.66	20.00	20.00	J-4078
J-1271	High	true	1,000.00	5,000.00	1,018.98	5,018.98	20.00	64.46	J-4078
J-241	High	true	1,000.00	2,238.77	1,002.22	2,240.99	20.00	20.00	J-4078
J-1309	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	25.57	J-4083
J-296	YT	true	1,000.00	2,247.92	1,004.85	2,252.77	20.00	20.00	J-4060
J-481	Low	true	1,000.00	4,582.28	1,002.22	4,584.50	20.00	20.00	J-4083
J-109	YT	true	1,000.00	2,241.82	1,005.85	2,247.68	20.00	20.00	J-4060
J-571	Low	true	1,000.00	3,952.64	1,005.65	3,958.29	20.00	20.00	J-4083
J-1332	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	69.92	J-4078
J-825	Low	true	1,000.00	4,455.93	1,004.85	4,460.78	20.00	20.00	J-4083
J-390	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	24.11	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-310	YT	true	1,000.00	3,347.17	1,011.51	3,358.67	20.00	20.00	J-4060
J-346	Low	true	1,000.00	4,076.17	1,010.30	4,086.47	20.00	20.00	J-4083
J-735	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	34.38	J-4078
J-805	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	58.74	J-4078
J-873	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	56.55	J-4083
J-353	High	true	1,000.00	3,879.76	1,008.08	3,887.84	20.00	20.00	J-4078
J-745	High	true	1,000.00	3,386.72	1,011.91	3,398.63	20.00	20.00	J-4078
J-1223	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	62.63	J-4083
J-779	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	58.60	J-4083
J-487	YT	true	1,000.00	2,580.44	1,011.51	2,591.95	20.00	20.00	J-4060
J-1224	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	62.88	J-4083
J-759	Low	true	1,000.00	2,730.10	1,005.25	2,735.35	20.00	20.00	J-4083
J-289	Low	true	1,000.00	4,985.23	1,002.22	4,987.45	20.00	20.00	J-4083
J-662	High	true	1,000.00	5,000.00	1,024.23	5,024.23	20.00	71.35	J-4078
J-335	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	38.01	J-4078
J-216	High	true	1,000.00	4,617.19	1,007.27	4,624.46	20.00	20.00	J-4078
J-1011	High	true	1,000.00	4,387.70	1,000.00	4,387.70	20.00	20.00	J-4078
J-1056	High	true	1,000.00	5,000.00	1,003.84	5,003.84	20.00	47.44	J-4078
J-912	Low	true	1,000.00	3,295.17	1,000.00	3,295.17	20.00	20.00	J-4083
J-1050	High	true	1,000.00	2,557.62	1,000.00	2,557.62	20.00	20.00	J-4078
J-814	High	true	1,000.00	2,112.67	1,002.83	2,115.50	20.00	20.00	J-4078
J-343	Low	true	1,000.00	5,000.00	1,016.15	5,016.15	20.00	57.85	J-4083
J-968	Low	true	1,000.00	4,530.64	1,019.58	4,550.22	20.00	20.00	J-4083
J-824	High	true	1,000.00	2,794.92	1,004.64	2,799.57	20.00	20.00	J-4078
J-149	High	true	1,000.00	3,919.43	1,009.08	3,928.52	20.00	20.00	J-4078
J-262	High	true	1,000.00	2,603.39	1,012.72	2,616.11	20.00	20.00	J-4078
FH16	Low	true	1,000.00	4,971.19	1,000.00	4,971.19	20.00	20.00	J-4083
J-502	High	true	1,000.00	4,047.12	1,008.68	4,055.80	20.00	20.00	J-4078
J-306	Low	true	1,000.00	4,335.20	1,010.30	4,345.50	20.00	20.00	J-4083
J-902	Low	true	1,000.00	4,808.11	1,020.59	4,828.70	20.00	20.00	J-4083
J-811	High	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	29.70	J-4078
J-1298	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	59.17	J-4083
J-1106	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	60.03	J-4078
J-1125	High	true	1,000.00	3,488.77	1,012.72	3,501.49	20.00	20.00	J-4078
J-855	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	48.98	J-4078
J-728	Low	true	1,000.00	4,208.98	1,016.55	4,225.54	20.00	20.00	J-4083
J-950	Low	true	1,000.00	3,896.48	1,011.91	3,908.40	20.00	20.00	J-4083
J-340	High	true	1,000.00	5,000.00	1,024.02	5,024.02	20.00	50.42	J-4078
J-1209	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	63.22	J-4083
J-1065	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	45.92	J-4083
J-1212	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	22.41	J-4083
J-1074	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	51.47	J-4083
J-1037	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	58.64	J-4083
J-529	Low	true	1,000.00	3,397.83	1,005.65	3,403.48	20.00	20.00	J-4083
J-714	High	true	1,000.00	3,132.08	1,004.24	3,136.32	20.00	20.00	J-4078
J-412	Low	true	1,000.00	4,516.72	1,006.46	4,523.18	20.00	20.00	J-4083
J-438	Low	true	1,000.00	4,859.62	1,007.87	4,867.49	20.00	20.00	J-4083
J-600	Low	true	1,000.00	3,584.84	1,017.56	3,602.40	20.00	20.00	J-4083
J-1273	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	64.91	J-4078
J-1068	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.34	J-4083
J-706	Low	true	1,000.00	4,427.98	1,005.65	4,433.63	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-888	High	true	1,000.00	1,570.43	1,007.27	1,577.70	20.00	20.00	J-4078
J-397	Low	true	1,000.00	4,205.08	1,010.30	4,215.37	20.00	20.00	J-4083
J-1128	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	61.88	J-4083
J-1165	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	50.49	J-4078
J-1071	High	true	1,000.00	5,000.00	1,012.31	5,012.31	20.00	36.13	J-4078
J-504	Low	true	1,000.00	3,987.43	1,016.55	4,003.98	20.00	20.00	J-4083
J-965	High	true	1,000.00	4,723.63	1,024.63	4,748.26	20.00	20.00	J-4078
J-1163	High	true	1,000.00	1,130.34	1,011.71	1,142.05	20.00	20.00	J-4078
J-71	High	true	1,000.00	2,005.13	1,007.27	2,012.39	20.00	20.00	J-4078
J-790	Low	true	1,000.00	5,000.00	1,027.66	5,027.66	20.00	61.05	J-4083
J-1288	High	true	1,000.00	4,823.24	1,000.00	4,823.24	20.00	20.00	J-4078
J-212	Low	true	1,000.00	2,981.20	1,005.65	2,986.85	20.00	20.00	J-4083
J-424	Low	true	1,000.00	3,947.02	1,004.85	3,951.87	20.00	20.00	J-4083
J-985	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	37.12	J-4083
J-1091	Low	true	1,000.00	3,752.81	1,010.09	3,762.90	20.00	20.00	J-4083
J-1114	High	true	1,000.00	5,000.00	1,018.17	5,018.17	20.00	41.32	J-4078
J-1109	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.25	J-4078
J-702	High	true	1,000.00	2,508.18	1,002.83	2,511.01	20.00	20.00	J-4078
J-284	YT	true	1,000.00	4,077.39	1,005.65	4,083.05	20.00	20.00	J-4060
J-1162	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	51.41	J-4078
J-511	High	true	1,000.00	2,355.84	1,007.27	2,363.10	20.00	20.00	J-4078
J-419	High	true	1,000.00	1,635.38	1,014.94	1,650.32	20.00	20.00	J-4078
J-836	High	true	1,000.00	2,974.73	1,002.83	2,977.56	20.00	20.00	J-4078
J-1142	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	30.64	J-4078
J-1067	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	27.97	J-4078
J-59	High	true	1,000.00	2,370.00	1,012.92	2,382.92	20.00	20.00	J-4078
J-1151	High	true	1,000.00	4,102.30	1,009.29	4,111.58	20.00	20.00	J-4078
J-830	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	32.64	J-4083
J-1195	Low	true	1,000.00	5,000.00	1,018.37	5,018.37	20.00	52.67	J-4083
J-280	YT	true	1,000.00	2,828.86	1,004.85	2,833.70	20.00	20.00	J-4060
J-628	High	true	1,000.00	4,422.61	1,009.29	4,431.89	20.00	20.00	J-4078
J-782	High	true	1,000.00	3,691.04	1,000.00	3,691.04	20.00	20.00	J-4078
J-285	YT	true	1,000.00	4,258.06	1,005.65	4,263.71	20.00	20.00	J-4060
J-326	Low	true	1,000.00	3,763.06	1,010.30	3,773.36	20.00	20.00	J-4083
J-1235	Low	true	1,000.00	3,894.65	1,000.00	3,894.65	20.00	20.00	J-4083
J-739	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.05	J-4078
J-885	High	true	1,000.00	5,000.00	1,015.75	5,015.75	20.00	48.48	J-4078
J-1057	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	35.33	J-4078
J-850	High	true	1,000.00	2,559.57	1,005.25	2,564.82	20.00	20.00	J-4078
J-1147	Low	true	1,000.00	3,740.85	1,009.29	3,750.13	20.00	20.00	J-4083
J-955	Low	true	1,000.00	5,000.00	1,020.59	5,020.59	20.00	61.49	J-4083
J-692	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	58.99	J-4078
J-244	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	26.25	J-4078
J-248	Low	true	1,000.00	3,139.53	1,000.00	3,139.53	20.00	20.00	J-4083
J-1077	Low	true	1,000.00	3,893.68	1,005.65	3,899.33	20.00	20.00	J-4083
J-194	Low	true	1,000.00	1,008.24	1,000.00	1,008.24	20.00	20.00	J-4083
J-1220	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	63.19	J-4083
J-664	High	true	1,000.00	3,903.44	1,015.34	3,918.79	20.00	20.00	J-4078
J-967	Low	true	1,000.00	4,448.12	1,011.91	4,460.03	20.00	20.00	J-4083
J-832	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	27.52	J-4083
J-416	High	true	1,000.00	3,144.53	1,003.84	3,148.37	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-578	High	true	1,000.00	4,672.61	1,008.68	4,681.29	20.00	20.00	J-4078
J-488	Low	true	1,000.00	2,762.82	1,008.48	2,771.30	20.00	20.00	J-4083
J-1020	High	true	1,000.00	3,892.09	1,016.76	3,908.85	20.00	20.00	J-4078
J-615	High	true	1,000.00	2,432.86	1,008.08	2,440.94	20.00	20.00	J-4078
J-450	Low	true	1,000.00	4,842.29	1,014.33	4,856.62	20.00	20.00	J-4083
J-1031	Low	true	1,000.00	4,280.27	1,010.50	4,290.77	20.00	20.00	J-4083
J-1190	High	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	24.27	J-4078
J-1326	Low	true	1,000.00	5,000.00	1,037.75	5,037.75	20.00	61.91	J-4083
J-788	High	true	1,000.00	5,000.00	1,018.37	5,018.37	20.00	36.97	J-4078
J-113	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	65.15	J-4078
J-293	YT	true	1,000.00	3,572.39	1,008.48	3,580.87	20.00	20.00	J-4060
J-408	Low	true	1,000.00	4,932.62	1,010.30	4,942.91	20.00	20.00	J-4083
J-780	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	53.20	J-4083
FH22	High	true	1,000.00	2,265.26	1,005.25	2,270.51	20.00	20.00	J-4078
J-221	Low	true	1,000.00	4,176.64	1,016.55	4,193.19	20.00	20.00	J-4083
J-1022	Low	true	1,000.00	2,291.08	1,008.48	2,299.56	20.00	20.00	J-4083
J-623	High	true	1,000.00	3,377.81	1,004.64	3,382.45	20.00	20.00	J-4078
J-1178	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	43.24	J-4083
J-916	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	38.77	J-4083
J-640	Low	true	1,000.00	5,000.00	1,006.26	5,006.26	20.00	58.89	J-4083
J-452	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	53.39	J-4083
J-826	High	true	1,000.00	3,565.19	1,010.70	3,575.88	20.00	20.00	J-4078
J-543	High	true	1,000.00	3,417.48	1,014.54	3,432.02	20.00	20.00	J-4078
J-359	High	true	1,000.00	3,406.25	1,012.92	3,419.17	20.00	20.00	J-4078
J-342	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	28.78	J-4083
J-1167	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	47.50	J-4083
J-426	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	50.58	J-4083
J-894	High	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	45.18	J-4078
J-1282	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	68.67	J-4083
J-961	High	true	1,000.00	3,911.13	1,009.29	3,920.42	20.00	20.00	J-4078
J-1221	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	25.78	J-4083
J-542	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	42.71	J-4083
J-461	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	55.41	J-4078
J-1095	Low	true	1,000.00	2,834.72	1,000.00	2,834.72	20.00	20.00	J-4083
J-586	YT	true	1,000.00	2,789.55	1,005.85	2,795.41	20.00	20.00	J-4060
J-649	Zone	true	1,000.00	4,888.92	1,008.48	4,897.40	20.00	20.00	J-3975
J-1081	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	66.47	J-4078
J-418	High	true	1,000.00	4,757.57	1,000.00	4,757.57	20.00	20.00	J-4078
J-665	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	52.10	J-4078
J-1249	YT	true	1,000.00	1,913.51	1,003.63	1,917.15	20.00	20.00	J-4060
J-1251	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	48.30	J-4083
J-503	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	43.64	J-4078
J-881	YT	true	1,000.00	1,989.87	1,004.85	1,994.71	20.00	20.00	J-4060
J-1080	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	62.82	J-4083
J-101	Low	true	1,000.00	4,765.14	1,006.26	4,771.40	20.00	20.00	J-4083
J-1204	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	66.86	J-4083
J-959	Low	true	1,000.00	3,674.07	1,005.65	3,679.73	20.00	20.00	J-4083
J-975	Low	true	1,000.00	3,904.54	1,017.36	3,921.90	20.00	20.00	J-4083
J-1206	Low	true	1,000.00	5,000.00	1,019.78	5,019.78	20.00	55.84	J-4083
J-557	High	true	1,000.00	3,238.65	1,010.90	3,249.55	20.00	20.00	J-4078
J-1027	Low	true	1,000.00	4,258.42	1,009.29	4,267.71	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-886	High	true	1,000.00	4,597.41	1,016.35	4,613.76	20.00	20.00	J-4078
J-879	High	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	55.35	J-4078
J-704	Low	true	1,000.00	5,000.00	1,030.69	5,030.69	20.00	61.40	J-4083
J-354	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	46.27	J-4078
J-1328	High	true	1,000.00	5,000.00	1,020.39	5,020.39	20.00	56.48	J-4078
J-486	Low	true	1,000.00	4,583.86	1,007.87	4,591.74	20.00	20.00	J-4083
J-686	High	true	1,000.00	3,688.96	1,004.64	3,693.61	20.00	20.00	J-4078
J-525	Low	true	1,000.00	4,421.88	1,006.26	4,428.13	20.00	20.00	J-4083
J-1112	High	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	51.16	J-4078
J-983	High	true	1,000.00	5,000.00	1,015.54	5,015.54	20.00	30.35	J-4078
J-1002	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	57.18	J-4083
J-393	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	34.12	J-4083
J-747	High	true	1,000.00	3,947.02	1,004.24	3,951.26	20.00	20.00	J-4078
J-833	High	true	1,000.00	3,997.56	1,016.76	4,014.31	20.00	20.00	J-4078
J-1033	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	62.17	J-4083
J-1311	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	58.03	J-4083
PH2	Low	true	1,000.00	3,871.58	1,014.33	3,885.92	20.00	20.00	J-4083
J-1110	Low	true	1,000.00	5,000.00	1,027.66	5,027.66	20.00	63.25	J-4083
PH22	High	true	1,000.00	2,286.01	1,005.25	2,291.26	20.00	20.00	J-4078
J-820	Low	true	1,000.00	2,683.35	1,018.98	2,702.33	20.00	20.00	J-4083
J-170	High	true	1,000.00	2,002.56	1,008.08	2,010.64	20.00	20.00	J-4078
J-1170	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	59.79	J-4078
J-549	Low	true	1,000.00	4,617.92	1,000.00	4,617.92	20.00	20.00	J-4083
J-750	High	true	1,000.00	4,761.48	1,005.25	4,766.72	20.00	20.00	J-4078
J-436	Low	true	1,000.00	2,869.63	1,004.64	2,874.27	20.00	20.00	J-4083
J-815	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	61.00	J-4083
J-1203	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	68.33	J-4083
J-401	Low	true	1,000.00	4,525.27	1,000.00	4,525.27	20.00	20.00	J-4083
J-711	High	true	1,000.00	4,389.04	1,011.51	4,400.54	20.00	20.00	J-4078
J-567	High	true	1,000.00	5,000.00	1,021.00	5,021.00	20.00	56.73	J-4078
J-819	High	true	1,000.00	3,359.62	1,005.25	3,364.87	20.00	20.00	J-4078
J-538	High	true	1,000.00	3,631.84	1,004.64	3,636.48	20.00	20.00	J-4078
J-467	Zone	true	1,000.00	3,234.99	1,015.34	3,250.33	20.00	20.00	J-3975
J-726	High	true	1,000.00	2,399.29	1,012.92	2,412.21	20.00	20.00	J-4078
J-594	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	25.03	J-4083
J-658	Zone	true	1,000.00	4,415.53	1,005.45	4,420.98	20.00	20.00	J-3975
J-1323	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	59.64	J-4083
J-409	Low	true	1,000.00	3,111.14	1,008.48	3,119.62	20.00	20.00	J-4083
J-358	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	35.37	J-4083
J-84	Low	true	1,000.00	3,036.01	1,010.09	3,046.10	20.00	20.00	J-4083
J-1019	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	47.10	J-4078
J-875	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	51.54	J-4078
J-1268	Low	true	1,000.00	5,000.00	1,019.78	5,019.78	20.00	58.18	J-4083
J-1216	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	51.77	J-4083
J-560	Low	true	1,000.00	3,076.54	1,002.83	3,079.36	20.00	20.00	J-4083
J-269	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	74.73	J-4083
J-587	High	true	1,000.00	3,422.12	1,004.64	3,426.76	20.00	20.00	J-4078
J-1061	Low	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	43.53	J-4083
J-451	Low	true	1,000.00	3,956.30	1,005.65	3,961.95	20.00	20.00	J-4083
J-698	High	true	1,000.00	4,979.25	1,005.25	4,984.50	20.00	20.00	J-4078
J-695	Low	true	1,000.00	4,031.74	1,005.05	4,036.79	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1289	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.60	J-4078
J-1287	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	26.68	J-4083
J-1191	Low	true	1,000.00	4,254.52	1,008.88	4,263.40	20.00	20.00	J-4083
J-1160	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	63.54	J-4083
J-988	High	true	1,000.00	2,493.65	1,004.64	2,498.30	20.00	20.00	J-4078
J-701	High	true	1,000.00	3,783.94	1,000.00	3,783.94	20.00	20.00	J-4078
J-372	High	true	1,000.00	3,411.38	1,012.92	3,424.30	20.00	20.00	J-4078
J-1334	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	49.17	J-4083
J-653	High	true	1,000.00	3,392.82	1,007.67	3,400.49	20.00	20.00	J-4078
J-517	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	59.63	J-4083
J-1133	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	56.63	J-4083
J-1222	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	42.99	J-4083
J-846	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	27.80	J-4078
J-1226	Low	true	1,000.00	5,000.00	1,029.88	5,029.88	20.00	64.93	J-4083
J-1329	High	true	1,000.00	5,000.00	1,009.69	5,009.69	20.00	24.93	J-4078
J-972	High	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	63.77	J-4078
J-804	Low	true	1,000.00	4,609.25	1,017.16	4,626.41	20.00	20.00	J-4083
PH6	Low	true	1,000.00	4,807.01	1,002.22	4,809.23	20.00	20.00	J-4083
J-1098	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	50.28	J-4078
J-317	YT	true	1,000.00	2,734.86	1,011.51	2,746.37	20.00	20.00	J-4060
J-395	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	43.40	J-4083
J-632	High	true	1,000.00	3,004.64	1,008.08	3,012.71	20.00	20.00	J-4078
J-13	YT	false	1,000.00	930.21	1,005.65	935.86	20.00	20.00	J-4060
J-931	High	true	1,000.00	3,595.21	1,004.64	3,599.86	20.00	20.00	J-4078
J-415	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	33.71	J-4083
J-1207	Low	true	1,000.00	4,340.70	1,009.29	4,349.98	20.00	20.00	J-4083
J-1089	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	58.48	J-3975
J-657	High	true	1,000.00	2,654.79	1,004.64	2,659.43	20.00	20.00	J-4078
J-1158	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	61.91	J-4083
FH15	Low	true	1,000.00	3,161.74	1,011.91	3,173.65	20.00	20.00	J-4083
J-459	High	true	1,000.00	2,370.85	1,004.85	2,375.69	20.00	20.00	J-4078
J-530	Low	true	1,000.00	5,000.00	1,003.63	5,003.63	20.00	52.09	J-4083
J-1070	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	60.89	J-4083
J-1175	High	true	1,000.00	3,624.76	1,007.27	3,632.02	20.00	20.00	J-4078
J-1124	High	true	1,000.00	1,802.00	1,014.94	1,816.94	20.00	20.00	J-4078
J-1318	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	58.32	J-4083
J-1294	Low	true	1,000.00	5,000.00	1,009.21	5,009.21	20.00	51.25	J-4083
J-930	High	true	1,000.00	5,000.00	1,006.66	5,006.66	20.00	41.66	J-4078
J-477	Low	true	1,000.00	4,407.59	1,011.91	4,419.50	20.00	20.00	J-4083
J-863	High	true	1,000.00	4,792.48	1,024.63	4,817.11	20.00	20.00	J-4078
J-851	High	true	1,000.00	1,957.28	1,007.27	1,964.54	20.00	20.00	J-4078
J-1331	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	76.63	J-4078
J-592	Low	true	1,000.00	3,882.81	1,000.00	3,882.81	20.00	20.00	J-4083
J-1252	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	50.37	J-4083
J-834	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	56.53	J-4078
J-350	Low	true	1,000.00	3,540.89	1,006.46	3,547.35	20.00	20.00	J-4083
J-744	High	true	1,000.00	1,902.83	1,002.83	1,905.66	20.00	20.00	J-4078
J-635	High	true	1,000.00	4,705.69	1,004.24	4,709.93	20.00	20.00	J-4078
J-990	High	true	1,000.00	2,227.42	1,009.29	2,236.70	20.00	20.00	J-4078
J-676	Low	true	1,000.00	4,838.99	1,000.00	4,838.99	20.00	20.00	J-4083
J-1130	High	true	1,000.00	5,000.00	1,012.31	5,012.31	20.00	54.62	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-934	Low	true	1,000.00	2,708.74	1,005.65	2,714.39	20.00	20.00	J-4083
J-311	YT	true	1,000.00	3,236.82	1,005.65	3,242.47	20.00	20.00	J-4060
J-1244	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	63.38	J-4083
J-1228	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	35.33	J-4078
J-1069	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	24.18	J-4078
J-808	High	true	1,000.00	3,293.95	1,000.00	3,293.95	20.00	20.00	J-4078
J-775	Low	true	1,000.00	2,530.15	1,000.00	2,530.15	20.00	20.00	J-4083
J-1324	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	42.85	J-4083
J-743	High	true	1,000.00	1,745.42	1,002.83	1,748.25	20.00	20.00	J-4078
J-1242	Low	true	1,000.00	4,274.41	1,005.65	4,280.07	20.00	20.00	J-4083
J-906	High	true	1,000.00	2,665.04	1,000.00	2,665.04	20.00	20.00	J-4078
J-1276	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	54.50	J-4083
J-224	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	42.09	J-4083
J-341	High	true	1,000.00	5,000.00	1,024.02	5,024.02	20.00	21.20	J-4078
J-327	Low	true	1,000.00	3,647.95	1,010.30	3,658.25	20.00	20.00	J-4083
J-108	YT	true	1,000.00	2,311.58	1,005.85	2,317.44	20.00	20.00	J-4060
J-607	High	true	1,000.00	2,287.35	1,007.27	2,294.62	20.00	20.00	J-4078
J-1196	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	54.06	J-4083
J-724	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	67.98	J-4078
J-107	High	true	1,000.00	3,780.76	1,000.00	3,780.76	20.00	20.00	J-4078
J-151	High	true	1,000.00	4,173.34	1,000.00	4,173.34	20.00	20.00	J-4078
J-321	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	35.47	J-4078
J-456	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	46.44	J-4078
J-428	Low	true	1,000.00	3,933.59	1,002.22	3,935.81	20.00	20.00	J-4083
J-614	High	true	1,000.00	2,839.84	1,008.08	2,847.92	20.00	20.00	J-4078
J-803	High	true	1,000.00	3,018.19	1,008.68	3,026.87	20.00	20.00	J-4078
J-368	Low	true	1,000.00	4,794.56	1,010.30	4,804.85	20.00	20.00	J-4083
J-971	Low	true	1,000.00	5,000.00	1,030.69	5,030.69	20.00	54.22	J-4083
J-531	Low	true	1,000.00	3,646.97	1,004.64	3,651.62	20.00	20.00	J-4083
J-558	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	20.52	J-4083
J-541	Low	true	1,000.00	4,613.04	1,005.05	4,618.08	20.00	20.00	J-4083
J-366	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	52.69	J-4083
J-572	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	38.26	J-4083
J-601	Low	true	1,000.00	4,553.96	1,016.55	4,570.51	20.00	20.00	J-4083
J-402	High	true	1,000.00	2,691.53	1,012.72	2,704.25	20.00	20.00	J-4078
J-1237	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	48.23	J-4083
J-1172	Low	true	1,000.00	5,000.00	1,020.59	5,020.59	20.00	64.10	J-4083
J-996	YT	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	30.40	J-4060
J-1013	High	true	1,000.00	5,000.00	1,009.89	5,009.89	20.00	34.49	J-4078
J-555	Low	true	1,000.00	4,965.82	1,007.87	4,973.69	20.00	20.00	J-4083
J-288	Low	true	1,000.00	5,000.00	1,002.22	5,002.22	20.00	23.99	J-4083
J-794	High	true	1,000.00	3,497.07	1,018.77	3,515.85	20.00	20.00	J-4078
J-1150	High	true	1,000.00	3,802.00	1,000.00	3,802.00	20.00	20.00	J-4078
J-1029	High	true	1,000.00	5,000.00	1,006.66	5,006.66	20.00	39.54	J-4078
J-619	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	25.83	J-4078
J-583	High	true	1,000.00	2,191.16	1,008.08	2,199.24	20.00	20.00	J-4078
J-523	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	38.14	J-4083
J-496	Zone	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	22.60	J-3975
J-681	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	38.36	J-4083
J-1315	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	58.36	J-4083
FH21	High	true	1,000.00	2,852.05	1,008.48	2,860.53	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-705	Low	true	1,000.00	2,584.47	1,000.00	2,584.47	20.00	20.00	J-4083
J-449	Low	true	1,000.00	4,850.83	1,014.33	4,865.16	20.00	20.00	J-4083
J-331	Low	true	1,000.00	2,646.55	1,030.08	2,676.63	20.00	20.00	J-4083
J-364	Low	true	1,000.00	4,531.74	1,007.87	4,539.61	20.00	20.00	J-4083
J-1101	Low	true	1,000.00	2,903.08	1,004.64	2,907.72	20.00	20.00	J-4083
J-500	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	60.80	J-4083
J-422	High	true	1,000.00	3,655.03	1,008.08	3,663.10	20.00	20.00	J-4078
J-278	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	50.33	J-4083
J-66	High	true	1,000.00	1,802.61	1,007.67	1,810.28	20.00	20.00	J-4078
J-319	YT	true	1,000.00	3,742.19	1,008.48	3,750.67	20.00	20.00	J-4060
J-762	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	62.34	J-4083
J-388	High	true	1,000.00	2,814.09	1,012.72	2,826.81	20.00	20.00	J-4078
J-260	High	true	1,000.00	2,522.83	1,012.72	2,535.55	20.00	20.00	J-4078
J-283	Low	true	1,000.00	4,175.78	1,010.30	4,186.08	20.00	20.00	J-4083
J-484	High	true	1,000.00	3,425.66	1,000.00	3,425.66	20.00	20.00	J-4078
J-188	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	22.68	J-4083
J-760	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	31.64	J-4078
J-1246	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	62.91	J-4083
J-987	Low	true	1,000.00	2,831.97	1,024.23	2,856.20	20.00	20.00	J-4083
J-544	High	true	1,000.00	2,231.20	1,005.45	2,236.65	20.00	20.00	J-4078
J-1000	YT	true	1,000.00	3,023.07	1,003.63	3,026.71	20.00	20.00	J-4060
J-1140	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	46.69	J-4083
J-588	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	63.63	J-4083
J-145	Low	true	1,000.00	3,095.70	1,000.00	3,095.70	20.00	20.00	J-4083
FH5	Low	true	1,000.00	4,993.90	1,010.09	5,003.99	20.00	20.00	J-4083
J-1058	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	45.81	J-4083
J-1048	Low	true	1,000.00	5,000.00	1,020.59	5,020.59	20.00	27.13	J-4083
J-656	Low	true	1,000.00	3,945.07	1,005.05	3,950.12	20.00	20.00	J-4083
J-749	Low	true	1,000.00	4,981.20	1,010.30	4,991.50	20.00	20.00	J-4083
PH13	Low	true	1,000.00	4,601.93	1,013.53	4,615.46	20.00	20.00	J-4083
J-639	Low	true	1,000.00	3,752.69	1,006.26	3,758.94	20.00	20.00	J-4083
J-1055	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	26.85	J-4083
J-506	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	27.11	J-4083
J-646	High	true	1,000.00	3,536.13	1,029.07	3,565.20	20.00	20.00	J-4078
J-237	High	true	1,000.00	2,515.63	1,002.22	2,517.85	20.00	20.00	J-4078
PH5	Low	true	1,000.00	4,516.60	1,007.87	4,524.48	20.00	20.00	J-4083
J-989	High	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	30.72	J-4078
J-131	High	true	1,000.00	2,302.25	1,005.25	2,307.49	20.00	20.00	J-4078
J-400	Low	true	1,000.00	4,144.17	1,006.46	4,150.63	20.00	20.00	J-4083
J-298	YT	true	1,000.00	3,654.79	1,003.63	3,658.42	20.00	20.00	J-4060
J-1319	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	76.35	J-4078
J-608	High	true	1,000.00	2,965.09	1,002.83	2,967.91	20.00	20.00	J-4078
J-962	Low	true	1,000.00	4,014.65	1,000.00	4,014.65	20.00	20.00	J-4083
J-1005	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	50.63	J-4083
J-869	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	69.83	J-4078
J-556	Low	true	1,000.00	3,974.49	1,007.87	3,982.36	20.00	20.00	J-4083
J-527	YT	true	1,000.00	1,964.05	1,017.56	1,981.61	20.00	20.00	J-4060
J-576	Low	true	1,000.00	4,914.06	1,008.48	4,922.54	20.00	20.00	J-4083
J-822	YT	true	1,000.00	2,505.31	1,017.56	2,522.87	20.00	20.00	J-4060
J-785	Low	true	1,000.00	4,109.62	1,007.87	4,117.49	20.00	20.00	J-4083
J-613	High	true	1,000.00	1,927.98	1,007.67	1,935.65	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-313	High	true	1,000.00	1,814.33	1,002.22	1,816.55	20.00	20.00	J-4078
J-1169	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	40.42	J-4083
J-490	High	true	1,000.00	1,688.29	1,007.27	1,695.56	20.00	20.00	J-4078
J-1115	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	41.43	J-4083
J-655	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	22.38	J-3975
J-1187	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	67.23	J-4083
J-659	High	true	1,000.00	2,083.25	1,007.67	2,090.92	20.00	20.00	J-4078
J-590	High	true	1,000.00	2,147.34	1,010.09	2,157.43	20.00	20.00	J-4078
J-99	YT	true	1,000.00	3,824.46	1,008.48	3,832.94	20.00	20.00	J-4060
J-570	YT	true	1,000.00	2,966.80	1,003.63	2,970.43	20.00	20.00	J-4060
PH12	Low	true	1,000.00	1,007.08	1,000.00	1,007.08	20.00	20.00	J-4083
J-1127	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	53.87	J-4083
J-1009	High	true	1,000.00	3,296.39	1,000.00	3,296.39	20.00	20.00	J-4078
J-765	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	22.80	J-4083
J-182	High	true	1,000.00	5,000.00	1,007.67	5,007.67	20.00	42.98	J-4078
PH20	High	true	1,000.00	2,922.73	1,004.44	2,927.17	20.00	20.00	J-4078
J-1264	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.58	J-4083
J-877	High	true	1,000.00	2,910.16	1,012.92	2,923.08	20.00	20.00	J-4078
PH18	Low	true	1,000.00	2,711.30	1,005.25	2,716.55	20.00	20.00	J-4083
J-153	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	63.39	J-4083
J-1026	High	true	1,000.00	4,888.92	1,000.00	4,888.92	20.00	20.00	J-4078
J-1008	High	true	1,000.00	1,673.58	1,002.83	1,676.41	20.00	20.00	J-4078
J-710	High	true	1,000.00	1,595.95	1,002.22	1,598.17	20.00	20.00	J-4078
J-907	Low	true	1,000.00	5,000.00	1,016.96	5,016.96	20.00	61.00	J-4083
J-303	YT	true	1,000.00	3,421.63	1,008.48	3,430.11	20.00	20.00	J-4060
J-949	Low	true	1,000.00	2,972.53	1,011.91	2,984.45	20.00	20.00	J-4083
J-270	High	true	1,000.00	1,610.53	1,007.27	1,617.80	20.00	20.00	J-4078
J-447	Low	true	1,000.00	3,591.80	1,004.85	3,596.64	20.00	20.00	J-4083
J-807	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.32	J-4083
J-1171	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	34.11	J-4083
J-448	Low	true	1,000.00	3,802.98	1,004.85	3,807.82	20.00	20.00	J-4083
J-1090	High	true	1,000.00	1,610.05	1,014.94	1,624.99	20.00	20.00	J-4078
J-1159	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	60.12	J-4083
J-163	Low	true	1,000.00	3,467.90	1,000.00	3,467.90	20.00	20.00	J-4083
J-1247	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	51.85	J-4078
J-72	High	true	1,000.00	2,003.42	1,007.27	2,010.69	20.00	20.00	J-4078
J-60	High	true	1,000.00	2,373.66	1,000.00	2,373.66	20.00	20.00	J-4078
J-371	Low	true	1,000.00	4,420.29	1,010.30	4,430.58	20.00	20.00	J-4083
J-709	High	true	1,000.00	1,631.84	1,002.22	1,634.06	20.00	20.00	J-4078
J-800	Low	true	1,000.00	4,346.44	1,014.33	4,360.77	20.00	20.00	J-4083
J-81	Low	true	1,000.00	3,999.27	1,000.00	3,999.27	20.00	20.00	J-4083
J-1121	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	62.88	J-4083
J-236	High	true	1,000.00	3,071.66	1,012.52	3,084.17	20.00	20.00	J-4078
J-612	High	true	1,000.00	2,179.44	1,007.67	2,187.11	20.00	20.00	J-4078
J-852	Low	true	1,000.00	4,296.51	1,016.55	4,313.06	20.00	20.00	J-4083
J-518	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	59.34	J-4078
J-1076	Low	true	1,000.00	1,531.86	1,005.65	1,537.51	20.00	20.00	J-4083
J-683	High	true	1,000.00	2,500.85	1,007.27	2,508.12	20.00	20.00	J-4078
J-884	Low	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	61.75	J-4083
J-1333	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	50.91	J-4083
J-691	High	true	1,000.00	3,875.49	1,012.31	3,887.80	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1302	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	41.63	J-4083
J-946	Low	true	1,000.00	2,448.24	1,011.91	2,460.15	20.00	20.00	J-4083
J-910	Low	true	1,000.00	3,111.21	1,006.46	3,117.67	20.00	20.00	J-4083
J-755	High	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	34.19	J-4078
J-895	High	true	1,000.00	1,451.66	1,008.68	1,460.34	20.00	20.00	J-4078
J-1200	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.13	J-4083
J-499	Low	true	1,000.00	4,289.80	1,024.23	4,314.02	20.00	20.00	J-4083
J-378	High	true	1,000.00	3,105.35	1,012.92	3,118.27	20.00	20.00	J-4078
J-1017	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	37.20	J-4083
J-864	High	true	1,000.00	5,000.00	1,015.75	5,015.75	20.00	51.24	J-4078
J-80	High	true	1,000.00	2,270.75	1,007.27	2,278.02	20.00	20.00	J-4078
J-240	High	true	1,000.00	2,386.60	1,002.22	2,388.82	20.00	20.00	J-4078
J-431	High	true	1,000.00	2,980.10	1,004.24	2,984.34	20.00	20.00	J-4078
J-521	YT	true	1,000.00	3,027.83	1,004.85	3,032.68	20.00	20.00	J-4060
J-1321	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	58.49	J-4078
J-817	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	49.96	J-4078
J-226	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	49.28	J-4078
J-831	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	63.83	J-4083
J-1149	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	56.28	J-4078
J-267	High	true	1,000.00	2,953.61	1,012.72	2,966.33	20.00	20.00	J-4078
J-1100	High	false	1,000.00	980.10	1,007.27	987.37	20.00	20.00	J-4078
J-1015	YT	true	1,000.00	2,185.79	1,004.85	2,190.64	20.00	20.00	J-4060
J-813	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.06	J-4083
J-1285	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	39.65	J-4083
J-1299	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	31.45	J-4078
J-294	YT	true	1,000.00	3,550.41	1,008.48	3,558.89	20.00	20.00	J-4060
J-933	High	true	1,000.00	3,272.22	1,004.24	3,276.46	20.00	20.00	J-4078
J-127	Low	true	1,000.00	4,709.72	1,013.53	4,723.24	20.00	20.00	J-4083
J-1261	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	30.64	J-4078
J-654	High	true	1,000.00	4,283.69	1,014.54	4,298.23	20.00	20.00	J-4078
J-991	Low	true	1,000.00	3,850.10	1,000.00	3,850.10	20.00	20.00	J-4083
J-915	Low	true	1,000.00	5,000.00	1,020.59	5,020.59	20.00	64.12	J-4083
J-290	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	51.18	J-4083
J-1018	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	41.97	J-4083
J-751	High	true	1,000.00	4,017.58	1,005.25	4,022.83	20.00	20.00	J-4078
J-937	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	63.04	J-4083
J-1303	Low	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	55.06	J-4083
J-781	High	true	1,000.00	3,124.39	1,012.72	3,137.11	20.00	20.00	J-4078
J-1082	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	28.11	J-4078
J-406	YT	true	1,000.00	3,463.87	1,003.63	3,467.50	20.00	20.00	J-4060
J-552	Zone	true	1,000.00	5,000.00	1,005.45	5,005.45	20.00	60.84	J-3975
J-575	Low	true	1,000.00	3,866.82	1,000.00	3,866.82	20.00	20.00	J-4083
J-858	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	59.14	J-4078
J-976	YT	true	1,000.00	3,032.84	1,003.63	3,036.47	20.00	20.00	J-4060
J-648	High	true	1,000.00	3,654.54	1,008.08	3,662.62	20.00	20.00	J-4078
J-953	High	true	1,000.00	5,000.00	1,012.31	5,012.31	20.00	32.74	J-4078
J-547	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	63.55	J-4083
J-263	High	true	1,000.00	3,035.77	1,012.72	3,048.49	20.00	20.00	J-4078
J-480	Low	true	1,000.00	4,916.26	1,010.50	4,926.76	20.00	20.00	J-4083
FH6	Low	true	1,000.00	4,290.65	1,006.26	4,296.91	20.00	20.00	J-4083
J-777	Low	true	1,000.00	3,694.09	1,006.46	3,700.55	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-901	Low	true	1,000.00	4,776.61	1,020.59	4,797.20	20.00	20.00	J-4083
J-312	High	true	1,000.00	1,792.18	1,002.22	1,794.40	20.00	20.00	J-4078
J-1233	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	45.37	J-4083
J-1263	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	53.21	J-4083
J-491	High	true	1,000.00	2,195.07	1,007.27	2,202.34	20.00	20.00	J-4078
J-464	Low	true	1,000.00	4,851.81	1,010.50	4,862.30	20.00	20.00	J-4083
PH25	High	true	1,000.00	2,611.08	1,003.84	2,614.92	20.00	20.00	J-4078
J-249	Low	true	1,000.00	3,146.61	1,000.00	3,146.61	20.00	20.00	J-4083
J-580	High	true	1,000.00	2,880.98	1,000.00	2,880.98	20.00	20.00	J-4078
FH20	High	true	1,000.00	2,520.45	1,004.44	2,524.89	20.00	20.00	J-4078
J-75	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	35.87	J-4083
J-650	High	true	1,000.00	2,149.90	1,000.00	2,149.90	20.00	20.00	J-4078
J-818	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	39.28	J-4078
J-1267	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.98	J-4083
J-1290	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	40.25	J-4083
J-973	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	35.83	J-4078
J-83	Low	true	1,000.00	2,969.85	1,010.09	2,979.94	20.00	20.00	J-4083
J-330	Low	true	1,000.00	3,633.42	1,010.30	3,643.72	20.00	20.00	J-4083
J-1135	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	54.65	J-4083
J-786	High	true	1,000.00	2,846.19	1,008.08	2,854.27	20.00	20.00	J-4078
J-982	High	true	1,000.00	5,000.00	1,015.54	5,015.54	20.00	50.60	J-4078
J-636	High	true	1,000.00	5,000.00	1,009.89	5,009.89	20.00	28.46	J-4078
J-1092	Low	true	1,000.00	3,620.36	1,000.00	3,620.36	20.00	20.00	J-4083
J-1272	High	true	1,000.00	4,597.53	1,018.77	4,616.31	20.00	20.00	J-4078
J-574	Low	true	1,000.00	4,515.38	1,007.87	4,523.25	20.00	20.00	J-4083
J-121	High	true	1,000.00	2,446.41	1,012.31	2,458.73	20.00	20.00	J-4078
J-634	High	true	1,000.00	4,613.04	1,007.67	4,620.71	20.00	20.00	J-4078
J-203	High	true	1,000.00	2,492.68	1,000.00	2,492.68	20.00	20.00	J-4078
J-1270	Zone	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	54.42	J-3975
J-534	Low	true	1,000.00	4,568.60	1,005.65	4,574.26	20.00	20.00	J-4083
J-333	High	true	1,000.00	3,889.65	1,012.92	3,902.57	20.00	20.00	J-4078
J-1137	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	60.98	J-4083
J-707	High	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	43.29	J-4078
J-1295	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	61.84	J-4083
J-898	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	52.43	J-4083
J-1275	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	27.17	J-4078
J-566	YT	true	1,000.00	3,107.42	1,004.85	3,112.27	20.00	20.00	J-4060
J-85	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	31.19	J-4083
J-924	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	48.79	J-4078
J-1277	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	58.29	J-4078
J-76	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	35.60	J-4083
FH17	Low	true	1,000.00	2,940.67	1,005.65	2,946.33	20.00	20.00	J-4083
J-501	YT	true	1,000.00	3,367.43	1,003.53	3,370.96	20.00	20.00	J-4060
J-1305	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	61.02	J-4083
J-374	High	true	1,000.00	2,574.95	1,007.27	2,582.22	20.00	20.00	J-4078
J-596	Low	true	1,000.00	4,763.92	1,022.81	4,786.73	20.00	20.00	J-4083
J-1054	High	true	1,000.00	5,000.00	1,020.79	5,020.79	20.00	67.65	J-4078
J-562	High	true	1,000.00	4,869.39	1,009.29	4,878.67	20.00	20.00	J-4078
J-1173	Low	true	1,000.00	5,000.00	1,031.09	5,031.09	20.00	56.42	J-4083
J-1104	High	true	1,000.00	3,419.31	1,000.00	3,419.31	20.00	20.00	J-4078
J-103	High	true	1,000.00	3,129.39	1,012.72	3,142.11	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-437	High	true	1,000.00	4,327.88	1,000.00	4,327.88	20.00	20.00	J-4078
J-259	High	true	1,000.00	3,813.97	1,012.72	3,826.68	20.00	20.00	J-4078
J-469	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	30.78	J-4083
J-258	High	true	1,000.00	3,160.64	1,012.72	3,173.36	20.00	20.00	J-4078
J-328	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	32.16	J-4083
J-295	YT	true	1,000.00	3,848.75	1,008.48	3,857.23	20.00	20.00	J-4060
J-551	Zone	true	1,000.00	5,000.00	1,005.45	5,005.45	20.00	27.80	J-3975
J-1245	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.02	J-4083
J-564	High	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	53.22	J-4078
J-540	High	true	1,000.00	4,142.58	1,004.24	4,146.82	20.00	20.00	J-4078
J-769	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	47.76	J-4078
J-208	High	true	1,000.00	5,000.00	1,007.67	5,007.67	20.00	42.22	J-4078
J-939	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	46.52	J-4078
J-309	YT	true	1,000.00	3,368.90	1,004.85	3,373.74	20.00	20.00	J-4060
J-1205	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	58.01	J-4083
J-338	High	true	1,000.00	3,333.01	1,012.92	3,345.93	20.00	20.00	J-4078
J-1185	High	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	47.54	J-4078
J-468	High	true	1,000.00	3,421.14	1,015.34	3,436.49	20.00	20.00	J-4078
J-1218	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	28.50	J-4078
J-444	High	true	1,000.00	3,684.33	1,022.41	3,706.74	20.00	20.00	J-4078
J-694	High	true	1,000.00	2,744.14	1,015.34	2,759.48	20.00	20.00	J-4078
J-100	Low	true	1,000.00	4,784.91	1,006.26	4,791.17	20.00	20.00	J-4083
J-669	High	true	1,000.00	4,907.23	1,002.83	4,910.05	20.00	20.00	J-4078
J-791	High	true	1,000.00	5,000.00	1,015.54	5,015.54	20.00	42.88	J-4078
J-508	Zone	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	34.72	J-3975
J-404	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	42.72	J-4083
J-1193	High	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	65.14	J-4078
J-593	High	true	1,000.00	4,724.61	1,014.54	4,739.15	20.00	20.00	J-4078
J-524	Low	true	1,000.00	4,282.10	1,004.64	4,286.75	20.00	20.00	J-4083
J-1274	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	60.28	J-4078
J-810	High	true	1,000.00	3,336.06	1,022.41	3,358.47	20.00	20.00	J-4078
J-958	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	24.78	J-4078
J-784	Low	true	1,000.00	3,606.45	1,000.00	3,606.45	20.00	20.00	J-4083
J-199	Low	true	1,000.00	4,209.59	1,011.91	4,221.51	20.00	20.00	J-4083
J-878	YT	true	1,000.00	1,646.24	1,031.09	1,677.33	20.00	20.00	J-4060
J-1291	Low	true	1,000.00	3,631.23	1,017.56	3,648.79	20.00	20.00	J-4083
J-454	Zone	true	1,000.00	3,879.40	1,005.65	3,885.05	20.00	20.00	J-3975
J-960	Low	true	1,000.00	3,590.82	1,005.65	3,596.47	20.00	20.00	J-4083
J-638	High	true	1,000.00	4,235.35	1,011.71	4,247.06	20.00	20.00	J-4078
J-1236	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	39.99	J-4078
J-768	High	true	1,000.00	4,038.82	1,012.31	4,051.13	20.00	20.00	J-4078
J-597	Low	true	1,000.00	3,554.32	1,002.83	3,557.15	20.00	20.00	J-4083
J-766	High	true	1,000.00	2,586.30	1,002.83	2,589.13	20.00	20.00	J-4078
J-1145	Low	true	1,000.00	3,811.77	1,008.88	3,820.65	20.00	20.00	J-4083
J-752	High	true	1,000.00	3,114.01	1,008.08	3,122.09	20.00	20.00	J-4078
J-727	High	true	1,000.00	2,865.23	1,012.92	2,878.15	20.00	20.00	J-4078
J-581	High	true	1,000.00	2,561.65	1,002.83	2,564.47	20.00	20.00	J-4078
J-756	High	true	1,000.00	3,284.67	1,009.29	3,293.95	20.00	20.00	J-4078
J-347	Low	true	1,000.00	3,727.66	1,010.30	3,737.96	20.00	20.00	J-4083
J-1111	Low	true	1,000.00	5,000.00	1,048.25	5,048.25	20.00	63.19	J-4083
J-282	Low	true	1,000.00	3,903.32	1,010.30	3,913.62	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1039	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	68.55	J-4083
J-243	Low	true	1,000.00	5,000.00	1,020.59	5,020.59	20.00	20.08	J-4083
J-689	Low	true	1,000.00	2,957.15	1,019.99	2,977.14	20.00	20.00	J-4083
J-773	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	58.07	J-3975
J-514	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	34.75	J-4083
J-264	High	true	1,000.00	2,759.40	1,012.72	2,772.12	20.00	20.00	J-4078
J-1146	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	21.86	J-4083
PH23	High	true	1,000.00	4,360.35	1,005.25	4,365.60	20.00	20.00	J-4078
J-943	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	46.45	J-4083
J-479	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	62.34	J-4083
J-159	Low	true	1,000.00	2,737.67	1,005.25	2,742.92	20.00	20.00	J-4083
J-585	YT	true	1,000.00	2,099.06	1,005.65	2,104.71	20.00	20.00	J-4060
J-423	Low	true	1,000.00	2,464.05	1,016.96	2,481.01	20.00	20.00	J-4083
J-385	Low	true	1,000.00	4,031.98	1,005.25	4,037.23	20.00	20.00	J-4083
J-1157	Zone	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	33.91	J-3975
J-642	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	29.31	J-4083
J-1306	Low	true	1,000.00	5,000.00	1,026.65	5,026.65	20.00	45.26	J-4083
J-111	High	true	1,000.00	2,881.23	1,008.48	2,889.70	20.00	20.00	J-4078
J-1184	High	true	1,000.00	3,944.82	1,012.72	3,957.54	20.00	20.00	J-4078
J-1186	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	27.90	J-4078
J-474	Low	true	1,000.00	5,000.00	1,016.15	5,016.15	20.00	33.86	J-4083
J-1286	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	33.70	J-4083
J-336	High	true	1,000.00	3,489.75	1,012.72	3,502.46	20.00	20.00	J-4078
J-789	High	true	1,000.00	2,925.05	1,003.84	2,928.88	20.00	20.00	J-4078
J-1161	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	57.51	J-4078
J-1105	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	49.28	J-4083
J-307	YT	true	1,000.00	2,548.83	1,004.85	2,553.67	20.00	20.00	J-4060
J-887	High	true	1,000.00	4,203.49	1,016.35	4,219.84	20.00	20.00	J-4078
J-856	High	true	1,000.00	4,061.28	1,004.24	4,065.52	20.00	20.00	J-4078
J-644	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	47.11	J-4083
J-1240	High	true	1,000.00	5,000.00	1,018.37	5,018.37	20.00	40.49	J-4078
J-399	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	38.86	J-4083
J-512	High	true	1,000.00	2,170.53	1,007.27	2,177.80	20.00	20.00	J-4078
J-286	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	47.88	J-4083
J-256	YT	true	1,000.00	2,143.07	1,005.85	2,148.92	20.00	20.00	J-4060
J-536	Low	true	1,000.00	4,991.94	1,010.50	5,002.44	20.00	20.00	J-4083
J-854	High	true	1,000.00	4,739.50	1,008.08	4,747.58	20.00	20.00	J-4078
J-787	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	44.92	J-4083
J-997	High	true	1,000.00	5,000.00	1,028.47	5,028.47	20.00	53.29	J-4078
J-1296	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	67.31	J-4083
J-86	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	32.42	J-4083
J-1194	High	true	1,000.00	5,000.00	1,015.75	5,015.75	20.00	51.83	J-4078
J-671	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	37.81	J-4083
J-565	High	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	23.14	J-4078
J-927	High	true	1,000.00	5,000.00	1,018.17	5,018.17	20.00	45.09	J-4078
J-857	High	true	1,000.00	2,547.12	1,000.00	2,547.12	20.00	20.00	J-4078
J-443	High	true	1,000.00	3,949.71	1,022.41	3,972.12	20.00	20.00	J-4078
J-1301	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	53.84	J-4083
J-611	High	true	1,000.00	3,763.18	1,000.00	3,763.18	20.00	20.00	J-4078
J-700	High	true	1,000.00	2,812.13	1,005.25	2,817.38	20.00	20.00	J-4078
J-905	YT	true	1,000.00	2,292.72	1,004.85	2,297.57	20.00	20.00	J-4060

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1182	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	24.51	J-4078
J-1088	Low	true	1,000.00	5,000.00	1,031.09	5,031.09	20.00	59.30	J-4083
J-908	Low	true	1,000.00	3,396.73	1,016.55	3,413.28	20.00	20.00	J-4083
J-363	Low	true	1,000.00	4,819.09	1,007.87	4,826.97	20.00	20.00	J-4083
J-143	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	32.74	J-4078
J-966	High	true	1,000.00	1,389.16	1,000.20	1,389.36	20.00	20.00	J-4078
J-598	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	24.12	J-4083
J-1004	High	true	1,000.00	2,397.46	1,012.31	2,409.78	20.00	20.00	J-4078
J-453	Low	true	1,000.00	3,998.05	1,005.65	4,003.70	20.00	20.00	J-4083
J-1256	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	41.37	J-4083
J-679	High	true	1,000.00	1,841.43	1,002.22	1,843.65	20.00	20.00	J-4078
J-740	Low	true	1,000.00	3,654.66	1,017.36	3,672.02	20.00	20.00	J-4083
PH24	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	28.92	J-4078
J-1053	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	45.92	J-4078
J-673	High	true	1,000.00	3,887.94	1,012.31	3,900.25	20.00	20.00	J-4078
J-582	YT	true	1,000.00	4,136.72	1,000.00	4,136.72	20.00	20.00	J-4060
J-410	Low	true	1,000.00	2,907.96	1,008.48	2,916.44	20.00	20.00	J-4083
J-1041	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	27.61	J-4083
J-1234	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.17	J-4083
J-482	Low	true	1,000.00	3,261.29	1,002.22	3,263.51	20.00	20.00	J-4083
J-883	Low	true	1,000.00	3,661.38	1,005.05	3,666.42	20.00	20.00	J-4083
J-1155	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	46.64	J-4083
J-697	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	56.98	J-3975
J-1113	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	34.77	J-4078
J-177	High	true	1,000.00	2,838.50	1,000.00	2,838.50	20.00	20.00	J-4078
J-345	High	true	1,000.00	3,877.69	1,004.64	3,882.33	20.00	20.00	J-4078
J-1201	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	56.60	J-4083
J-337	High	true	1,000.00	4,269.16	1,012.72	4,281.88	20.00	20.00	J-4078
J-1278	High	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	48.92	J-4078
J-1052	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	46.29	J-4083
J-801	High	true	1,000.00	2,052.98	1,002.83	2,055.80	20.00	20.00	J-4078
J-432	High	true	1,000.00	3,180.18	1,004.24	3,184.42	20.00	20.00	J-4078
J-1202	Low	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	52.44	J-4083
J-493	Low	true	1,000.00	3,194.46	1,002.83	3,197.28	20.00	20.00	J-4083
J-774	High	true	1,000.00	3,203.37	1,008.08	3,211.44	20.00	20.00	J-4078
J-1122	Low	true	1,000.00	2,899.54	1,013.53	2,913.06	20.00	20.00	J-4083
J-1129	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	59.95	J-4078
J-1166	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	59.58	J-4083
J-1010	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	55.43	J-4078
J-539	YT	true	1,000.00	3,390.01	1,008.48	3,398.49	20.00	20.00	J-4060
J-1103	High	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	51.44	J-4078
J-1208	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	28.42	J-4083
J-522	YT	true	1,000.00	3,278.56	1,004.85	3,283.41	20.00	20.00	J-4060
J-332	High	true	1,000.00	5,000.00	1,021.60	5,021.60	20.00	44.87	J-4078
J-678	High	true	1,000.00	2,054.08	1,002.22	2,056.30	20.00	20.00	J-4078
J-1099	Low	true	1,000.00	5,000.00	1,002.22	5,002.22	20.00	52.32	J-4083
J-684	High	true	1,000.00	2,321.05	1,007.27	2,328.31	20.00	20.00	J-4078
J-352	High	true	1,000.00	4,310.06	1,008.08	4,318.13	20.00	20.00	J-4078
J-764	Low	true	1,000.00	3,430.79	1,011.91	3,442.70	20.00	20.00	J-4083
J-532	YT	true	1,000.00	3,007.20	1,000.00	3,007.20	20.00	20.00	J-4060
FH19	High	true	1,000.00	2,813.35	1,000.00	2,813.35	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1266	High	true	1,000.00	5,000.00	1,009.69	5,009.69	20.00	35.91	J-4078
J-255	YT	true	1,000.00	2,680.42	1,004.85	2,685.27	20.00	20.00	J-4060
J-618	Low	true	1,000.00	4,056.40	1,016.55	4,072.95	20.00	20.00	J-4083
J-1066	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	46.13	J-4083
J-235	High	true	1,000.00	3,206.54	1,005.25	3,211.79	20.00	20.00	J-4078
J-420	High	true	1,000.00	1,516.42	1,014.94	1,531.36	20.00	20.00	J-4078
J-1260	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	41.30	J-4083
J-870	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	38.99	J-4078
J-951	Low	true	1,000.00	2,795.78	1,007.87	2,803.65	20.00	20.00	J-4083
J-1215	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	60.08	J-4083
J-963	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	63.70	J-4083
J-433	Low	true	1,000.00	4,578.12	1,029.47	4,607.60	20.00	20.00	J-4083
J-413	Low	true	1,000.00	2,285.77	1,010.30	2,296.06	20.00	20.00	J-4083
J-994	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	27.67	J-4083
J-223	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	50.53	J-4083
J-225	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	54.66	J-4078
J-860	High	true	1,000.00	5,000.00	1,012.31	5,012.31	20.00	30.08	J-4078
J-993	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.63	J-4078
PH17	Low	true	1,000.00	3,077.51	1,005.65	3,083.17	20.00	20.00	J-4083
J-276	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	21.94	J-4083
J-375	High	true	1,000.00	3,358.28	1,000.00	3,358.28	20.00	20.00	J-4078
J-712	Zone	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	48.04	J-3975
J-736	High	true	1,000.00	4,007.08	1,008.68	4,015.76	20.00	20.00	J-4078
J-1199	Low	true	1,000.00	1,674.44	1,000.00	1,674.44	20.00	20.00	J-4083
J-776	Low	true	1,000.00	3,029.97	1,000.00	3,029.97	20.00	20.00	J-4083
J-802	YT	true	1,000.00	2,060.79	1,042.19	2,102.98	20.00	20.00	J-4060
J-186	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	32.34	J-4078
J-853	Low	true	1,000.00	3,697.63	1,016.55	3,714.19	20.00	20.00	J-4083
J-932	Low	true	1,000.00	3,335.82	1,029.47	3,365.29	20.00	20.00	J-4083
J-1079	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.75	J-4083
J-721	High	true	1,000.00	2,944.82	1,008.08	2,952.90	20.00	20.00	J-4078
J-938	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	31.51	J-4078
J-729	Low	true	1,000.00	2,964.11	1,016.55	2,980.67	20.00	20.00	J-4083
J-344	High	true	1,000.00	3,818.60	1,004.64	3,823.25	20.00	20.00	J-4078
J-125	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	61.68	J-4083
J-716	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	29.48	J-4078
J-995	High	true	1,000.00	5,000.00	1,024.63	5,024.63	20.00	53.65	J-4078
J-651	High	true	1,000.00	4,088.26	1,016.76	4,105.01	20.00	20.00	J-4078
J-981	High	true	1,000.00	3,152.34	1,003.84	3,156.18	20.00	20.00	J-4078
J-1322	Low	true	1,000.00	5,000.00	1,037.75	5,037.75	20.00	64.92	J-4083
J-297	Low	true	1,000.00	4,072.51	1,003.63	4,076.14	20.00	20.00	J-4083
J-620	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	54.21	J-4078
J-485	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	59.97	J-4083
J-606	Low	true	1,000.00	3,555.91	1,009.29	3,565.19	20.00	20.00	J-4083
J-734	High	true	1,000.00	2,993.04	1,003.84	2,996.88	20.00	20.00	J-4078
J-1229	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	39.13	J-4083
J-1177	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	50.40	J-4083
J-1016	YT	true	1,000.00	2,791.99	1,005.65	2,797.64	20.00	20.00	J-4060
J-147	High	true	1,000.00	2,537.48	1,004.44	2,541.92	20.00	20.00	J-4078
J-872	Low	true	1,000.00	2,798.46	1,004.85	2,803.31	20.00	20.00	J-4083
J-505	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	40.64	J-4083

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-440	Low	true	1,000.00	2,793.09	1,017.16	2,810.25	20.00	20.00	J-4083
J-1036	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	59.71	J-4078
J-1337	High	true	1,000.00	5,000.00	1,004.85	5,004.85	20.00	45.35	J-4078
J-78	High	true	1,000.00	3,086.06	1,012.72	3,098.78	20.00	20.00	J-4078
J-1310	Low	true	1,000.00	5,000.00	1,030.28	5,030.28	20.00	57.23	J-4083
PH16	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	23.29	J-4083
J-455	Low	true	1,000.00	4,685.79	1,014.33	4,700.12	20.00	20.00	J-4083
J-362	Low	true	1,000.00	4,191.16	1,010.30	4,201.46	20.00	20.00	J-4083
J-1060	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	53.15	J-4083
J-799	Low	true	1,000.00	4,814.33	1,011.91	4,826.24	20.00	20.00	J-4083
J-980	Low	true	1,000.00	3,904.05	1,000.00	3,904.05	20.00	20.00	J-4083
J-699	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	56.63	J-4078
J-391	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	58.49	J-4078
J-738	Low	true	1,000.00	2,862.49	1,006.26	2,868.75	20.00	20.00	J-4083
J-1232	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	40.96	J-4083
J-279	YT	true	1,000.00	3,002.08	1,004.85	3,006.92	20.00	20.00	J-4060
J-732	High	true	1,000.00	3,275.39	1,008.08	3,283.47	20.00	20.00	J-4078
J-1284	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	50.23	J-4083
J-1096	Low	true	1,000.00	3,773.07	1,005.65	3,778.72	20.00	20.00	J-4083
J-475	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	35.68	J-4083
J-478	YT	true	1,000.00	2,825.44	1,008.48	2,833.92	20.00	20.00	J-4060
J-367	Low	true	1,000.00	4,920.90	1,010.30	4,931.19	20.00	20.00	J-4083
J-913	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	40.81	J-4083
J-737	High	true	1,000.00	2,530.70	1,004.64	2,535.34	20.00	20.23	J-4078
J-829	High	true	1,000.00	4,038.09	1,009.29	4,047.37	20.00	20.00	J-4078
J-838	High	true	1,000.00	1,745.85	1,007.27	1,753.12	20.00	20.00	J-4078
J-563	High	true	1,000.00	3,022.22	1,009.29	3,031.50	20.00	20.00	J-4078
FH12	Low	true	1,000.00	2,536.56	1,000.00	2,536.56	20.00	20.00	J-4083
J-893	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	62.94	J-4083
J-1012	High	true	1,000.00	5,000.00	1,004.85	5,004.85	20.00	50.58	J-4078
J-1241	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	36.96	J-4083
J-954	Low	true	1,000.00	4,064.70	1,014.33	4,079.03	20.00	20.00	J-4083
J-462	Low	true	1,000.00	2,646.30	1,000.00	2,646.30	20.00	20.00	J-4083
J-1120	High	true	1,000.00	5,000.00	1,009.08	5,009.08	20.00	55.12	J-4078
J-841	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	64.03	J-4083
J-253	Low	true	1,000.00	3,930.79	1,037.75	3,968.54	20.00	20.00	J-4083
J-197	Low	true	1,000.00	2,796.75	1,019.99	2,816.74	20.00	20.00	J-4083
J-1047	Low	true	1,000.00	5,000.00	1,029.07	5,029.07	20.00	56.13	J-4083
J-595	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	59.71	J-4083
J-1313	Low	true	1,000.00	5,000.00	1,018.98	5,018.98	20.00	55.33	J-4083
J-356	YT	false	1,000.00	975.65	1,005.85	981.50	20.00	20.00	J-4060
J-1072	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	62.06	J-4078
J-334	High	true	1,000.00	4,347.17	1,007.27	4,354.44	20.00	20.00	J-4078
J-717	High	true	1,000.00	4,483.64	1,011.51	4,495.15	20.00	20.00	J-4078
J-1338	High	false	1,000.00	638.46	1,000.20	638.66	20.00	20.00	J-4078
J-1262	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	58.02	J-4078
J-874	High	true	1,000.00	3,990.97	1,012.92	4,003.89	20.00	20.00	J-4078
J-1214	Low	true	1,000.00	5,000.00	1,025.03	5,025.03	20.00	44.58	J-4083
J-1198	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.07	J-4083
J-495	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	20.54	J-4078
J-1189	Low	true	1,000.00	4,684.81	1,009.29	4,694.10	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-292	YT	true	1,000.00	2,725.10	1,004.85	2,729.94	20.00	20.00	J-4060
J-591	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.22	J-4083
J-105	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	37.27	J-4078
J-1025	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	45.28	J-4083
J-430	Low	true	1,000.00	3,678.22	1,000.00	3,678.22	20.00	20.00	J-4083
J-1051	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	46.44	J-4083
J-472	High	true	1,000.00	1,772.09	1,007.67	1,779.77	20.00	20.00	J-4078
J-489	Low	true	1,000.00	2,924.62	1,008.48	2,933.10	20.00	20.00	J-4083
J-1138	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	52.81	J-4083
J-1143	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.87	J-4083
J-693	High	true	1,000.00	3,281.49	1,016.76	3,298.25	20.00	20.00	J-4078
J-909	Low	true	1,000.00	4,553.10	1,016.55	4,569.66	20.00	20.00	J-4083
J-1297	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	33.01	J-4078
J-1123	Low	true	1,000.00	4,169.68	1,017.56	4,187.24	20.00	20.00	J-4083
J-1316	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	53.51	J-4078
J-900	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	40.99	J-4083
J-210	High	true	1,000.00	4,481.69	1,005.25	4,486.94	20.00	20.00	J-4078
PH21	High	true	1,000.00	2,829.35	1,016.35	2,845.70	20.00	20.00	J-4078
J-233	High	true	1,000.00	5,000.00	1,024.83	5,024.83	20.00	54.16	J-4078
J-767	High	true	1,000.00	3,722.78	1,003.84	3,726.61	20.00	20.00	J-4078
J-609	High	true	1,000.00	2,618.90	1,002.83	2,621.72	20.00	20.00	J-4078
J-668	Low	true	1,000.00	3,378.91	1,016.55	3,395.46	20.00	20.00	J-4083
J-553	Low	true	1,000.00	3,322.27	1,018.98	3,341.24	20.00	20.00	J-4083
PH4	Low	true	1,000.00	3,432.86	1,000.00	3,432.86	20.00	20.00	J-4083
J-1075	Low	true	1,000.00	5,000.00	1,016.96	5,016.96	20.00	60.85	J-4083
J-660	High	true	1,000.00	4,621.83	1,004.24	4,626.07	20.00	20.00	J-4078
J-275	Low	true	1,000.00	5,000.00	1,030.08	5,030.08	20.00	54.21	J-4083
J-641	Low	true	1,000.00	4,163.45	1,017.36	4,180.81	20.00	20.00	J-4083
J-1044	High	true	1,000.00	5,000.00	1,009.08	5,009.08	20.00	55.53	J-4078
J-713	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	56.36	J-4083
J-920	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	50.35	J-4083
J-631	High	true	1,000.00	5,000.00	1,020.39	5,020.39	20.00	20.56	J-4078
J-1307	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	35.62	J-4078
J-839	High	true	1,000.00	2,262.45	1,007.27	2,269.72	20.00	20.00	J-4078
J-1253	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	39.86	J-4083
FH28	High	true	1,000.00	2,958.50	1,012.31	2,970.81	20.00	20.00	J-4078
J-1046	YT	true	1,000.00	1,746.03	1,017.56	1,763.60	20.00	20.00	J-4060
J-466	Low	true	1,000.00	3,233.64	1,015.54	3,249.19	20.00	20.00	J-4083
J-584	High	true	1,000.00	1,969.97	1,005.45	1,975.42	20.00	20.00	J-4078
J-1116	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	58.65	J-4083
J-287	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	22.32	J-4083
J-1180	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	62.05	J-4083
PH27	High	true	1,000.00	4,463.87	1,007.27	4,471.13	20.00	20.00	J-4078
J-696	Zone	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	58.14	J-3975
J-637	High	true	1,000.00	3,870.61	1,009.89	3,880.50	20.00	20.00	J-4078
J-1164	High	true	1,000.00	5,000.00	1,015.75	5,015.75	20.00	52.26	J-4078
J-387	High	true	1,000.00	2,039.37	1,012.72	2,052.09	20.00	20.00	J-4078
J-929	Low	true	1,000.00	5,000.00	1,031.09	5,031.09	20.00	55.59	J-4083
J-621	High	true	1,000.00	4,476.07	1,005.25	4,481.32	20.00	20.00	J-4078
J-952	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	58.97	J-4078
J-843	High	true	1,000.00	2,434.94	1,010.90	2,445.84	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1258	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	29.88	J-4083
J-761	High	true	1,000.00	3,264.89	1,008.08	3,272.97	20.00	20.00	J-4078
J-247	High	true	1,000.00	2,800.78	1,002.22	2,803.00	20.00	20.00	J-4078
J-1255	Low	true	1,000.00	3,972.90	1,008.88	3,981.78	20.00	20.00	J-4083
J-610	High	true	1,000.00	3,878.42	1,012.92	3,891.34	20.00	20.00	J-4078
J-377	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	47.62	J-4078
J-320	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	60.55	J-4078
J-720	Low	true	1,000.00	3,967.29	1,004.64	3,971.93	20.00	20.00	J-4083
J-589	High	true	1,000.00	2,404.79	1,010.09	2,414.88	20.00	20.00	J-4078
J-281	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	49.40	J-4078
J-315	YT	true	1,000.00	3,243.65	1,003.63	3,247.29	20.00	20.00	J-4060
J-758	High	true	1,000.00	2,529.91	1,000.00	2,529.91	20.00	20.00	J-4078
J-633	High	true	1,000.00	5,000.00	1,007.67	5,007.67	20.00	48.08	J-4078
J-519	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	27.41	J-4078
J-1174	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	20.10	J-4078
J-957	Low	true	1,000.00	3,162.60	1,000.00	3,162.60	20.00	20.00	J-4083
J-425	Low	true	1,000.00	3,587.16	1,004.85	3,592.00	20.00	20.00	J-4083
J-616	High	true	1,000.00	3,326.29	1,004.64	3,330.94	20.00	20.00	J-4078
J-731	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	52.20	J-4083
J-299	Low	true	1,000.00	2,876.59	1,010.30	2,886.88	20.00	20.00	J-4083
J-1281	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	58.77	J-4083
J-899	Low	true	1,000.00	2,284.97	1,006.46	2,291.43	20.00	20.00	J-4083
J-435	Low	true	1,000.00	3,361.08	1,004.64	3,365.73	20.00	20.00	J-4083
J-1292	Low	true	1,000.00	5,000.00	1,019.18	5,019.18	20.00	62.62	J-4083
J-1021	High	true	1,000.00	3,814.70	1,016.76	3,831.45	20.00	20.00	J-4078
J-1043	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	43.34	J-4083
J-1254	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	42.17	J-4083
J-1064	High	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	45.70	J-4078
J-1197	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	61.98	J-4083
J-526	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	26.93	J-4078
J-1108	High	true	1,000.00	3,401.61	1,012.31	3,413.93	20.00	20.00	J-4078
J-1152	Low	true	1,000.00	2,747.62	1,024.23	2,771.85	20.00	20.00	J-4083
J-1243	YT	true	1,000.00	2,615.48	1,005.85	2,621.33	20.00	20.00	J-4060
J-569	YT	true	1,000.00	3,117.07	1,003.63	3,120.70	20.00	20.00	J-4060
J-376	High	true	1,000.00	3,603.64	1,000.00	3,603.64	20.00	20.00	J-4078
J-261	High	true	1,000.00	2,918.58	1,012.72	2,931.30	20.00	20.00	J-4078
J-441	Low	true	1,000.00	4,611.08	1,031.70	4,642.78	20.00	20.00	J-4083
J-184	Low	true	1,000.00	4,370.12	1,006.26	4,376.38	20.00	20.00	J-4083
J-1239	High	true	1,000.00	5,000.00	1,024.63	5,024.63	20.00	52.15	J-4078
J-1134	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	53.47	J-4078
J-251	High	true	1,000.00	3,375.24	1,002.22	3,377.46	20.00	20.00	J-4078
J-357	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	24.73	J-4083
J-753	Low	true	1,000.00	3,339.36	1,007.87	3,347.23	20.00	20.00	J-4083
J-867	Low	true	1,000.00	4,009.77	1,002.22	4,011.99	20.00	20.00	J-4083
J-1280	High	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	46.58	J-4078
J-1211	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	35.97	J-4083
J-520	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	34.80	J-4078
J-516	Low	true	1,000.00	4,739.75	1,006.26	4,746.00	20.00	20.00	J-4083
J-626	High	true	1,000.00	1,574.71	1,002.83	1,577.53	20.00	20.00	J-4078
J-382	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	48.41	J-4083
J-403	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.94	J-4078

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-652	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	58.47	J-4078
J-796	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	38.25	J-4083
J-1293	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	49.68	J-4078
J-161	High	true	1,000.00	1,613.28	1,002.83	1,616.11	20.00	20.00	J-4078
J-763	Low	true	1,000.00	4,987.79	1,005.05	4,992.84	20.00	20.00	J-4083
J-561	Low	true	1,000.00	4,854.00	1,014.33	4,868.34	20.00	20.00	J-4083
J-627	High	true	1,000.00	3,349.61	1,009.29	3,358.90	20.00	20.00	J-4078
J-169	High	true	1,000.00	3,059.33	1,012.31	3,071.64	20.00	20.00	J-4078
J-778	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	64.34	J-4083
J-772	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	32.32	J-4083
J-229	High	true	1,000.00	5,000.00	1,010.90	5,010.90	20.00	55.79	J-4078
J-703	High	true	1,000.00	3,530.27	1,004.64	3,534.92	20.00	20.00	J-4078
J-1300	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	67.28	J-4078
J-677	Low	true	1,000.00	4,242.92	1,000.00	4,242.92	20.00	20.00	J-4083
J-1320	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	40.00	J-4078
J-218	Low	true	1,000.00	3,123.78	1,005.65	3,129.43	20.00	20.00	J-4083
J-265	High	true	1,000.00	3,278.69	1,012.72	3,291.41	20.00	20.00	J-4078
J-1335	High	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	75.20	J-4078
J-507	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	26.96	J-4083
J-1087	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	61.35	J-4083
J-1132	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	68.85	J-4083
J-816	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	61.09	J-4083
J-257	YT	true	1,000.00	1,591.55	1,008.48	1,600.03	20.00	20.00	J-4060
J-999	Low	true	1,000.00	2,499.88	1,000.00	2,499.88	20.00	20.00	J-4083
J-890	High	true	1,000.00	5,000.00	1,024.63	5,024.63	20.00	31.09	J-4078
J-770	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	49.36	J-4078
J-349	Low	true	1,000.00	4,091.55	1,005.05	4,096.60	20.00	20.00	J-4083
J-730	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	66.21	J-4083
J-577	Low	true	1,000.00	3,371.46	1,007.87	3,379.33	20.00	20.00	J-4083
J-1168	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	46.30	J-4083
J-133	High	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	31.63	J-4078
J-1156	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	60.09	J-4083
J-645	High	true	1,000.00	3,736.08	1,021.00	3,757.08	20.00	20.00	J-4078
J-369	Low	true	1,000.00	4,432.74	1,002.22	4,434.96	20.00	20.00	J-4083
J-1073	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	29.18	J-4083
J-1042	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	62.47	J-4083
J-880	Low	true	1,000.00	3,057.13	1,006.66	3,063.79	20.00	20.00	J-4083
J-434	Low	true	1,000.00	4,470.46	1,011.91	4,482.37	20.00	20.00	J-4083
J-771	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	63.97	J-4083
J-559	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	64.22	J-4083
J-1131	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	51.74	J-4083
J-1136	Low	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	49.68	J-4083
J-494	Low	true	1,000.00	4,385.74	1,002.83	4,388.57	20.00	20.00	J-4083
J-603	High	true	1,000.00	3,221.07	1,002.83	3,223.90	20.00	20.00	J-4078
J-206	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.24	J-4083
J-842	High	true	1,000.00	2,196.84	1,008.08	2,204.91	20.00	20.00	J-4078
J-497	Low	true	1,000.00	5,000.00	1,016.96	5,016.96	20.00	60.86	J-4083
J-849	Low	true	1,000.00	2,186.58	1,017.16	2,203.74	20.00	20.00	J-4083
J-798	High	true	1,000.00	3,109.37	1,008.48	3,117.85	20.00	20.00	J-4078
J-1034	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	50.87	J-4083
J-222	Low	true	1,000.00	4,126.34	1,016.55	4,142.90	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-483	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	34.12	J-4078
J-630	High	true	1,000.00	2,281.74	1,002.83	2,284.56	20.00	20.00	J-4078
J-227	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	32.60	J-4083
J-325	High	true	1,000.00	4,415.53	1,004.24	4,419.77	20.00	20.00	J-4078
J-476	Low	true	1,000.00	4,859.99	1,011.91	4,871.90	20.00	20.00	J-4083
FH7	Low	true	1,000.00	5,000.00	1,006.30	5,006.30	20.00	60.45	J-4083
J-180	High	true	1,000.00	2,854.37	1,008.48	2,862.85	20.00	20.00	J-4078
J-897	High	true	1,000.00	5,000.00	1,024.63	5,024.63	20.00	49.10	J-4078
J-974	High	true	1,000.00	5,000.00	1,021.00	5,021.00	20.00	46.42	J-4078
J-228	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	37.05	J-4083
J-361	Low	true	1,000.00	4,954.59	1,010.30	4,964.89	20.00	20.00	J-4083
J-708	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	48.08	J-4083
J-112	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	51.18	J-4078
J-1265	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	41.88	J-4083
J-550	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	27.60	J-4083
J-733	High	true	1,000.00	2,976.44	1,008.08	2,984.52	20.00	20.00	J-4078
J-685	High	true	1,000.00	3,236.33	1,000.00	3,236.33	20.00	20.00	J-4078
J-940	Low	true	1,000.00	5,000.00	1,031.09	5,031.09	20.00	56.38	J-4083
FH24	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	29.67	J-4078
J-1001	YT	true	1,000.00	4,465.94	1,008.28	4,474.22	20.00	20.00	J-4060
FH14	Low	true	1,000.00	4,861.82	1,020.59	4,882.41	20.00	20.00	J-4083
J-384	YT	true	1,000.00	2,880.13	1,008.48	2,888.61	20.00	20.00	J-4060
J-439	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	42.52	J-4083
J-925	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	50.47	J-4078
J-220	High	true	1,000.00	3,008.30	1,012.31	3,020.62	20.00	20.00	J-4078
J-545	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	26.16	J-4083
J-823	YT	true	1,000.00	3,836.55	1,008.48	3,845.03	20.00	20.00	J-4060
J-643	Low	true	1,000.00	4,222.53	1,002.83	4,225.36	20.00	20.00	J-4083
J-680	Low	true	1,000.00	4,217.16	1,017.36	4,234.53	20.00	20.00	J-4083
J-1093	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	33.34	J-4078
J-923	High	true	1,000.00	2,285.64	1,009.29	2,294.93	20.00	20.00	J-4078
J-266	High	true	1,000.00	2,565.31	1,012.72	2,578.03	20.00	20.00	J-4078
J-274	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	51.93	J-4083
J-722	High	true	1,000.00	2,758.42	1,008.08	2,766.50	20.00	20.00	J-4078
J-120	High	true	1,000.00	2,361.45	1,012.31	2,373.76	20.00	20.00	J-4078
J-1014	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	56.37	J-4078
J-1083	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	40.02	J-4078
J-405	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	54.27	J-4083
J-889	Low	true	1,000.00	5,000.00	1,027.66	5,027.66	20.00	66.58	J-4083
J-458	High	true	1,000.00	2,363.89	1,004.85	2,368.74	20.00	20.00	J-4078
J-914	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	53.82	J-4078
J-675	Low	true	1,000.00	2,391.11	1,017.16	2,408.27	20.00	20.00	J-4083
J-1181	Low	true	1,000.00	3,134.77	1,000.00	3,134.77	20.00	20.00	J-4083
J-1225	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	55.09	J-4083
J-1210	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	49.82	J-4083
J-1230	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	56.54	J-4083
J-173	Low	true	1,000.00	2,482.30	1,000.00	2,482.30	20.00	20.00	J-4083
J-1144	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	42.19	J-4083
J-414	Low	true	1,000.00	4,407.72	1,006.46	4,414.18	20.00	20.00	J-4083
J-862	High	true	1,000.00	4,654.79	1,012.92	4,667.71	20.00	20.00	J-4078
J-365	Low	true	1,000.00	4,484.86	1,017.36	4,502.23	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1317	High	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	48.98	J-4078
J-1308	Low	true	1,000.00	4,707.15	1,000.00	4,707.15	20.00	20.00	J-4083
PH19	High	true	1,000.00	3,015.01	1,009.08	3,024.10	20.00	20.00	J-4078
J-748	High	true	1,000.00	3,635.50	1,004.24	3,639.74	20.00	20.00	J-4078
J-690	High	true	1,000.00	4,561.40	1,012.31	4,573.72	20.00	20.00	J-4078
J-427	Low	true	1,000.00	4,988.77	1,004.85	4,993.62	20.00	20.00	J-4083
J-921	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	47.59	J-4083
J-528	Low	true	1,000.00	3,402.59	1,005.65	3,408.24	20.00	20.00	J-4083
J-573	Low	true	1,000.00	3,977.05	1,016.55	3,993.61	20.00	20.00	J-4083
J-398	Low	true	1,000.00	4,906.86	1,010.30	4,917.16	20.00	20.00	J-4083
J-682	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	24.01	J-4083
J-986	Low	true	1,000.00	4,190.92	1,017.36	4,208.28	20.00	20.00	J-4083
J-970	Low	true	1,000.00	3,856.20	1,000.00	3,856.20	20.00	20.00	J-4083
J-515	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	23.24	J-4083
J-119	Low	true	1,000.00	3,919.80	1,014.33	3,934.13	20.00	20.00	J-4083
J-1086	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	63.38	J-4083
J-1248	High	true	1,000.00	5,000.00	1,015.75	5,015.75	20.00	52.58	J-4078
J-672	Low	true	1,000.00	4,929.93	1,010.30	4,940.23	20.00	20.00	J-4083
J-579	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	31.10	J-4078
J-783	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	42.46	J-4078
J-757	High	true	1,000.00	1,863.40	1,000.00	1,863.40	20.00	20.00	J-4078
J-622	High	true	1,000.00	3,066.16	1,005.25	3,071.41	20.00	20.00	J-4078
J-383	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	20.51	J-4083
J-1283	High	false	1,000.00	893.16	1,005.25	898.41	20.00	20.00	J-4078
J-1085	High	true	1,000.00	2,587.16	1,007.27	2,594.43	20.00	20.00	J-4078
J-97	High	true	1,000.00	2,059.75	1,007.27	2,067.02	20.00	20.00	J-4078
J-942	Low	true	1,000.00	3,982.91	1,014.33	3,997.24	20.00	20.00	J-4083
J-250	High	true	1,000.00	4,124.27	1,002.22	4,126.49	20.00	20.00	J-4078
J-935	Low	true	1,000.00	2,189.09	1,000.00	2,189.09	20.00	20.00	J-4083
J-1176	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	45.85	J-4083
J-304	YT	true	1,000.00	3,759.28	1,008.48	3,767.76	20.00	20.00	J-4060
J-394	Low	true	1,000.00	4,776.49	1,011.91	4,788.40	20.00	20.00	J-4083
J-754	Low	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	41.87	J-4083
J-1312	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	63.62	J-4083
J-1336	High	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	74.00	J-4078
J-1192	Low	true	1,000.00	4,385.99	1,008.88	4,394.87	20.00	20.00	J-4083
J-944	Low	true	1,000.00	2,184.20	1,017.36	2,201.57	20.00	20.00	J-4083
J-941	Low	true	1,000.00	3,734.25	1,014.33	3,748.59	20.00	20.00	J-4083
J-301	High	true	1,000.00	1,944.52	1,012.72	1,957.24	20.00	20.00	J-4078
J-1250	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	47.63	J-4083
J-876	Low	true	1,000.00	5,000.00	1,005.05	5,005.05	20.00	64.00	J-4083
J-115	Low	true	1,000.00	3,876.47	1,000.00	3,876.47	20.00	20.00	J-4083
J-463	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	26.21	J-4083
J-2831	YT	true	1,000.00	4,877.20	1,002.83	4,880.02	20.00	20.00	J-4060
J-2923	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	55.69	J-4083
J-2730	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	55.99	J-4083
J-2858	High	true	1,000.00	3,402.83	1,004.44	3,407.27	20.00	20.00	J-4078
J-2914	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	67.03	J-4083
J-2977	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	34.07	J-4083
J-2981	High	true	1,000.00	3,327.03	1,004.44	3,331.47	20.00	20.00	J-4078
J-2884	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	35.63	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3010	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	68.07	J-4083
J-2973	High	true	1,000.00	2,313.84	1,000.00	2,313.84	20.00	20.00	J-4078
J-2974	High	true	1,000.00	5,000.00	1,009.69	5,009.69	20.00	55.24	J-4078
J-2865	YT	true	1,000.00	4,336.43	1,008.28	4,344.70	20.00	20.00	J-4060
J-2905	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.16	J-4083
J-2946	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	32.45	J-4083
J-2697	Low	true	1,000.00	3,246.46	1,011.31	3,257.77	20.00	20.00	J-4083
J-2832	High	true	1,000.00	3,148.19	1,000.00	3,148.19	20.00	20.00	J-4078
J-2898	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	39.07	J-4083
J-2883	YT	true	1,000.00	4,486.57	1,008.28	4,494.85	20.00	20.00	J-4060
J-2690	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	56.08	J-4083
J-2925	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	64.25	J-4083
J-2866	YT	true	1,000.00	4,361.69	1,008.28	4,369.97	20.00	20.00	J-4060
J-3001	High	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	64.01	J-4078
J-2902	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	23.95	J-4083
J-2829	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	47.66	J-4078
J-2891	Low	true	1,000.00	5,000.00	1,026.04	5,026.04	20.00	74.93	J-4083
J-2827	Low	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	58.35	J-4083
J-2816	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	33.08	J-4083
J-2813	High	true	1,000.00	3,695.43	1,033.11	3,728.54	20.00	20.00	J-4078
J-2988	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	36.39	J-4083
J-2795	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	34.97	J-4083
J-2976	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	25.13	J-4083
J-2999	Low	true	1,000.00	5,000.00	1,009.29	5,009.29	20.00	31.77	J-4083
J-2862	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	40.02	J-4078
J-2984	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	32.63	J-4083
J-2684	High	true	1,000.00	4,295.65	1,004.44	4,300.10	20.00	20.00	J-4078
J-2868	Low	true	1,000.00	5,000.00	1,016.15	5,016.15	20.00	37.68	J-4083
J-2968	High	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	66.84	J-4078
J-2772	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	44.91	J-4083
J-2703	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	23.15	J-4083
J-2935	High	true	1,000.00	4,354.49	1,012.72	4,367.21	20.00	20.00	J-4078
J-2941	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	25.02	J-4078
J-2817	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	29.65	J-4083
J-2864	YT	true	1,000.00	4,510.38	1,008.28	4,518.65	20.00	20.00	J-4060
J-2848	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	44.33	J-4083
J-2689	Low	true	1,000.00	4,904.79	1,008.76	4,913.55	20.00	20.00	J-4083
J-3006	Low	true	1,000.00	2,347.05	1,014.13	2,361.18	20.00	20.00	J-4083
J-2799	High	true	1,000.00	3,294.19	1,012.72	3,306.91	20.00	20.00	J-4078
J-3012	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	44.01	J-4083
J-2819	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	33.15	J-4083
J-2830	Low	true	1,000.00	4,894.04	1,002.83	4,896.87	20.00	20.00	J-4083
J-2808	High	true	1,000.00	4,800.29	1,024.63	4,824.92	20.00	20.00	J-4078
J-2855	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	43.54	J-4083
J-2767	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	31.51	J-4083
J-2844	Low	true	1,000.00	4,065.92	1,017.16	4,083.08	20.00	20.00	J-4083
J-2726	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	49.28	J-4083
J-2886	High	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	54.78	J-4078
J-2959	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	56.24	J-4078
J-2965	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	39.12	J-4083
J-2802	High	true	1,000.00	5,000.00	1,016.76	5,016.76	20.00	36.68	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2753	High	true	1,000.00	2,803.10	1,004.44	2,807.54	20.00	20.00	J-4078
J-2788	High	true	1,000.00	2,599.73	1,020.39	2,620.12	20.00	20.00	J-4078
J-2699	Low	true	1,000.00	4,344.97	1,016.55	4,361.52	20.00	20.00	J-4083
J-3004	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	62.90	J-4083
J-2696	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	48.88	J-4083
J-2770	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	22.31	J-4083
J-2768	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	29.61	J-4083
J-2920	High	true	1,000.00	2,060.42	1,000.00	2,060.42	20.00	20.00	J-4078
J-3019	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.62	J-4083
J-2809	High	true	1,000.00	5,000.00	1,024.63	5,024.63	20.00	50.95	J-4078
J-2678	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	44.92	J-4078
J-2955	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	37.43	J-4083
J-2704	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	47.05	J-4083
J-2779	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	45.47	J-4083
J-2834	High	true	1,000.00	3,838.50	1,005.25	3,843.75	20.00	20.00	J-4078
J-2854	High	true	1,000.00	3,729.86	1,016.76	3,746.61	20.00	20.00	J-4078
J-2741	Low	true	1,000.00	4,923.95	1,016.55	4,940.50	20.00	20.00	J-4083
J-2823	YT	true	1,000.00	4,393.07	1,008.28	4,401.34	20.00	20.00	J-4060
J-2778	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	33.42	J-4083
J-2745	High	true	1,000.00	2,025.27	1,002.22	2,027.49	20.00	20.00	J-4078
J-2713	Low	true	1,000.00	4,420.17	1,016.55	4,436.72	20.00	20.00	J-4083
J-2759	Low	true	1,000.00	3,285.03	1,010.00	3,295.03	20.00	20.00	J-4083
J-2707	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	46.97	J-4083
J-3008	High	true	1,000.00	3,106.45	1,012.31	3,118.76	20.00	20.00	J-4078
J-2818	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	34.95	J-4083
J-2975	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	28.46	J-4083
J-2961	High	true	1,000.00	4,671.39	1,020.39	4,691.78	20.00	20.00	J-4078
J-2857	High	true	1,000.00	3,520.39	1,004.44	3,524.83	20.00	20.00	J-4078
J-2718	High	true	1,000.00	5,000.00	1,028.47	5,028.47	20.00	58.94	J-4078
J-2963	High	true	1,000.00	4,118.29	1,004.44	4,122.73	20.00	20.00	J-4078
J-2757	High	true	1,000.00	5,000.00	1,009.69	5,009.69	20.00	55.12	J-4078
J-3018	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	66.91	J-4083
J-2812	High	true	1,000.00	4,941.41	1,033.11	4,974.51	20.00	20.00	J-4078
J-2996	High	true	1,000.00	3,056.88	1,004.44	3,061.33	20.00	20.00	J-4078
J-2960	High	true	1,000.00	3,150.39	1,012.72	3,163.11	20.00	20.00	J-4078
J-3016	High	true	1,000.00	5,000.00	1,024.23	5,024.23	20.00	73.24	J-4078
J-2683	High	true	1,000.00	4,283.08	1,004.44	4,287.52	20.00	20.00	J-4078
J-2978	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	25.29	J-4083
J-2701	High	true	1,000.00	4,043.46	1,002.22	4,045.68	20.00	20.00	J-4078
J-2734	High	true	1,000.00	2,848.88	1,004.44	2,853.32	20.00	20.00	J-4078
J-2872	High	true	1,000.00	3,274.29	1,012.72	3,287.01	20.00	20.00	J-4078
J-2932	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.52	J-4083
J-2934	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	33.33	J-4078
J-2771	Low	true	1,000.00	4,896.73	1,008.76	4,905.49	20.00	20.00	J-4083
J-2801	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	59.51	J-4078
J-2751	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	33.59	J-4083
J-2728	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	58.93	J-4083
J-3000	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	61.14	J-4083
J-2747	High	true	1,000.00	3,462.77	1,020.39	3,483.16	20.00	20.00	J-4078
J-2803	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	21.48	J-4083
J-3011	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	69.54	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2949	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	48.08	J-4083
J-2797	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	29.87	J-4083
J-2930	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	37.75	J-4083
J-2691	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	56.93	J-4083
J-2901	High	true	1,000.00	4,543.70	1,012.72	4,556.42	20.00	20.00	J-4078
J-2716	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	56.36	J-4083
J-2755	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	44.38	J-4083
J-2951	Low	true	1,000.00	5,000.00	1,030.08	5,030.08	20.00	54.59	J-4083
J-2793	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	26.83	J-4083
J-2881	High	true	1,000.00	3,940.43	1,005.25	3,945.68	20.00	20.00	J-4078
J-2766	Low	true	1,000.00	5,000.00	1,007.87	5,007.87	20.00	53.41	J-4083
J-2887	Low	true	1,000.00	5,000.00	1,027.66	5,027.66	20.00	63.99	J-4083
J-2942	High	true	1,000.00	3,677.37	1,012.72	3,690.09	20.00	20.00	J-4078
J-2851	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	22.38	J-4083
J-2889	High	true	1,000.00	3,311.77	1,020.39	3,332.16	20.00	20.00	J-4078
J-2711	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	49.69	J-4083
J-2810	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	27.72	J-4083
J-2958	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	22.99	J-4083
J-2760	Low	true	1,000.00	3,607.42	1,010.00	3,617.42	20.00	20.00	J-4083
J-2910	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	24.69	J-4078
J-2840	High	true	1,000.00	2,414.92	1,020.39	2,435.31	20.00	20.00	J-4078
J-2970	High	true	1,000.00	5,000.00	1,011.71	5,011.71	20.00	55.60	J-4078
J-2735	High	true	1,000.00	2,947.57	1,004.44	2,952.01	20.00	20.00	J-4078
J-2954	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	35.72	J-4083
J-2992	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	50.69	J-4083
J-2758	High	true	1,000.00	5,000.00	1,009.69	5,009.69	20.00	45.59	J-4078
J-2985	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	30.25	J-4083
J-2957	YT	true	1,000.00	3,909.18	1,000.00	3,909.18	20.00	20.00	J-4060
J-2762	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	40.05	J-4083
J-2677	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	45.06	J-4078
J-2995	Low	true	1,000.00	5,000.00	1,017.56	5,017.56	20.00	20.49	J-4083
J-2924	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	47.24	J-4083
J-2686	Low	true	1,000.00	4,920.29	1,008.76	4,929.05	20.00	20.00	J-4083
J-2807	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	39.26	J-4083
J-2983	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	22.76	J-4083
J-2909	High	true	1,000.00	4,590.82	1,011.51	4,602.33	20.00	20.00	J-4078
J-2966	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	47.17	J-4083
J-2945	Low	true	1,000.00	3,495.73	1,010.30	3,506.02	20.00	20.00	J-4083
J-2874	High	true	1,000.00	2,970.82	1,012.72	2,983.54	20.00	20.00	J-4078
J-2847	Low	true	1,000.00	5,000.00	1,016.96	5,016.96	20.00	60.20	J-4083
J-2702	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	22.76	J-4083
J-2710	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	53.63	J-4083
J-2994	High	true	1,000.00	5,000.00	1,015.75	5,015.75	20.00	50.78	J-4078
J-2850	High	true	1,000.00	3,509.64	1,004.44	3,514.08	20.00	20.00	J-4078
J-2907	High	true	1,000.00	4,083.50	1,004.44	4,087.94	20.00	20.00	J-4078
J-2952	High	true	1,000.00	3,222.05	1,004.44	3,226.49	20.00	20.00	J-4078
J-3017	Low	true	1,000.00	5,000.00	1,030.69	5,030.69	20.00	64.88	J-4083
J-2749	High	true	1,000.00	3,524.29	1,004.44	3,528.73	20.00	20.00	J-4078
J-2821	High	true	1,000.00	2,755.25	1,020.39	2,775.64	20.00	20.00	J-4078
J-2695	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	49.25	J-4083
J-2794	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	68.74	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3005	High	true	1,000.00	3,161.74	1,004.44	3,166.18	20.00	20.00	J-4078
J-2841	High	true	1,000.00	3,895.26	1,020.39	3,915.65	20.00	20.00	J-4078
J-2742	YT	true	1,000.00	4,440.67	1,008.28	4,448.95	20.00	20.00	J-4060
J-2890	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	60.32	J-4083
J-2825	High	true	1,000.00	2,181.03	1,020.39	2,201.42	20.00	20.00	J-4078
J-2776	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	47.91	J-4083
J-2936	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	30.64	J-4083
J-2680	High	true	1,000.00	3,890.38	1,004.44	3,894.82	20.00	20.00	J-4078
J-2849	High	true	1,000.00	3,335.94	1,004.44	3,340.38	20.00	20.00	J-4078
J-2870	High	true	1,000.00	4,675.78	1,020.39	4,696.17	20.00	20.00	J-4078
J-2727	Low	true	1,000.00	5,000.00	1,007.47	5,007.47	20.00	60.30	J-4083
J-2681	High	true	1,000.00	3,890.87	1,004.44	3,895.31	20.00	20.00	J-4078
J-2700	Low	true	1,000.00	4,318.24	1,016.55	4,334.79	20.00	20.00	J-4083
J-2938	High	true	1,000.00	4,883.55	1,009.29	4,892.83	20.00	20.00	J-4078
J-2769	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	48.53	J-4083
J-2853	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	66.74	J-4078
J-2971	High	true	1,000.00	2,859.50	1,011.71	2,871.21	20.00	20.00	J-4078
J-2897	High	true	1,000.00	3,197.75	1,020.39	3,218.14	20.00	20.00	J-4078
J-2863	YT	true	1,000.00	4,971.44	1,003.63	4,975.07	20.00	20.00	J-4060
J-2733	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.68	J-4083
J-2774	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	59.24	J-4083
J-2743	YT	true	1,000.00	4,459.35	1,008.28	4,467.63	20.00	20.00	J-4060
J-2698	Low	true	1,000.00	3,251.10	1,011.31	3,262.40	20.00	20.00	J-4083
J-2789	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	43.07	J-4083
J-2926	High	true	1,000.00	4,026.61	1,012.72	4,039.33	20.00	20.00	J-4078
J-2756	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	39.73	J-4083
J-2979	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	36.23	J-4083
J-2750	High	true	1,000.00	3,921.75	1,004.44	3,926.19	20.00	20.00	J-4078
J-2933	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	64.09	J-4083
J-2694	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	64.42	J-4083
J-2989	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	29.59	J-4083
J-2761	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	45.14	J-4083
J-2878	High	true	1,000.00	3,526.86	1,012.72	3,539.57	20.00	20.00	J-4078
J-2896	High	true	1,000.00	4,668.21	1,020.39	4,688.60	20.00	20.00	J-4078
J-2856	High	true	1,000.00	3,301.76	1,002.22	3,303.98	20.00	20.00	J-4078
J-2873	High	true	1,000.00	3,346.56	1,012.72	3,359.28	20.00	20.00	J-4078
J-2842	High	true	1,000.00	3,858.64	1,020.39	3,879.03	20.00	20.00	J-4078
J-2931	Low	true	1,000.00	5,000.00	1,008.28	5,008.28	20.00	60.34	J-4083
J-2922	High	true	1,000.00	2,161.99	1,000.00	2,161.99	20.00	20.00	J-4078
J-2732	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	65.67	J-4083
J-2859	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	42.16	J-4083
J-2717	YT	false	1,000.00	884.83	1,016.96	901.78	20.00	20.00	J-4060
J-3007	High	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	51.81	J-4078
J-2911	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	39.19	J-4083
J-2754	High	true	1,000.00	3,047.00	1,004.44	3,051.44	20.00	20.00	J-4078
J-2811	Low	true	1,000.00	5,000.00	1,002.22	5,002.22	20.00	39.53	J-4083
J-2838	High	true	1,000.00	2,254.64	1,020.39	2,275.03	20.00	20.00	J-4078
J-2815	High	true	1,000.00	3,096.92	1,020.39	3,117.31	20.00	20.00	J-4078
J-2777	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	65.62	J-4083
J-2882	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	62.16	J-4083
J-2791	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	41.82	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2826	High	true	1,000.00	2,214.97	1,020.39	2,235.36	20.00	20.00	J-4078
J-2824	YT	true	1,000.00	4,392.58	1,008.28	4,400.85	20.00	20.00	J-4060
J-2908	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	57.09	J-4078
J-2784	High	true	1,000.00	3,269.29	1,004.44	3,273.73	20.00	20.00	J-4078
J-2845	Low	true	1,000.00	5,000.00	1,026.65	5,026.65	20.00	51.78	J-4083
J-2937	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	67.16	J-4083
J-2775	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.35	J-4083
J-3009	High	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	28.14	J-4078
J-2929	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	37.30	J-4083
J-2921	Low	true	1,000.00	5,000.00	1,027.66	5,027.66	20.00	63.07	J-4083
J-2731	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	52.83	J-4083
J-2764	High	true	1,000.00	3,359.99	1,004.44	3,364.43	20.00	20.00	J-4078
J-2943	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	47.70	J-4083
J-2852	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	35.05	J-4083
J-2715	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	63.78	J-4083
J-2800	High	true	1,000.00	3,333.98	1,012.72	3,346.70	20.00	20.00	J-4078
J-2998	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	25.99	J-4083
J-2912	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	30.19	J-4083
J-2846	High	true	1,000.00	5,000.00	1,015.95	5,015.95	20.00	23.53	J-4078
J-2919	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	45.46	J-4083
J-3002	High	true	1,000.00	5,000.00	1,015.95	5,015.95	20.00	64.38	J-4078
J-2746	High	true	1,000.00	2,078.61	1,002.22	2,080.83	20.00	20.00	J-4078
J-2820	YT	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	21.73	J-4060
J-2786	High	true	1,000.00	2,533.20	1,020.39	2,553.59	20.00	20.00	J-4078
J-2918	High	true	1,000.00	3,155.27	1,004.44	3,159.71	20.00	20.00	J-4078
J-2875	High	true	1,000.00	2,932.25	1,000.00	2,932.25	20.00	20.00	J-4078
J-2899	High	true	1,000.00	2,806.03	1,004.44	2,810.47	20.00	20.00	J-4078
J-2903	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.91	J-4078
J-2871	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	25.77	J-4083
J-2950	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	34.87	J-4083
J-2904	High	true	1,000.00	4,316.41	1,000.00	4,316.41	20.00	20.00	J-4078
J-2916	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	67.04	J-4083
J-2748	High	true	1,000.00	3,958.86	1,020.39	3,979.25	20.00	20.00	J-4078
J-2906	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	54.38	J-4083
J-2982	High	true	1,000.00	4,015.62	1,004.44	4,020.07	20.00	20.00	J-4078
J-2879	High	true	1,000.00	3,875.00	1,012.72	3,887.72	20.00	20.00	J-4078
J-2940	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	62.11	J-4083
J-2804	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	24.38	J-4083
J-2805	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	38.12	J-4083
J-2900	High	true	1,000.00	3,335.21	1,004.44	3,339.65	20.00	20.00	J-4078
J-2991	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	35.82	J-4083
J-2814	High	true	1,000.00	3,917.97	1,020.39	3,938.36	20.00	20.00	J-4078
J-2836	High	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	35.96	J-4078
J-2972	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.14	J-4078
J-3013	Zone	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	63.34	J-3975
J-2877	High	true	1,000.00	3,185.79	1,012.72	3,198.51	20.00	20.00	J-4078
J-2980	High	true	1,000.00	3,179.57	1,004.44	3,184.01	20.00	20.00	J-4078
J-2928	High	true	1,000.00	5,000.00	1,015.54	5,015.54	20.00	42.95	J-4078
J-2893	YT	true	1,000.00	4,372.93	1,003.63	4,376.56	20.00	20.00	J-4060
J-2876	High	true	1,000.00	3,307.49	1,012.72	3,320.21	20.00	20.00	J-4078
J-2785	High	true	1,000.00	2,478.88	1,020.39	2,499.27	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2709	YT	true	1,000.00	4,719.97	1,045.02	4,764.99	20.00	20.00	J-4060
J-2953	High	true	1,000.00	4,671.14	1,020.39	4,691.53	20.00	20.00	J-4078
J-2783	High	true	1,000.00	3,685.30	1,004.44	3,689.74	20.00	20.00	J-4078
J-2736	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.66	J-4078
J-2833	Low	true	1,000.00	5,000.00	1,018.37	5,018.37	20.00	63.74	J-4083
J-2895	High	true	1,000.00	2,650.64	1,020.39	2,671.02	20.00	20.00	J-4078
J-2962	High	true	1,000.00	4,716.80	1,020.39	4,737.19	20.00	20.00	J-4078
J-2969	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	48.89	J-4083
J-2744	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	44.41	J-4078
J-2839	High	true	1,000.00	2,244.87	1,020.39	2,265.26	20.00	20.00	J-4078
J-2724	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	40.24	J-4078
J-2787	High	true	1,000.00	2,801.76	1,020.39	2,822.15	20.00	20.00	J-4078
J-3003	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	30.76	J-4083
J-2913	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	45.38	J-4083
J-2880	Low	true	1,000.00	5,000.00	1,030.69	5,030.69	20.00	65.00	J-4083
J-2737	Low	true	1,000.00	5,000.00	1,010.30	5,010.30	20.00	23.77	J-4083
J-2765	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	63.46	J-4083
J-2892	High	true	1,000.00	3,507.81	1,012.72	3,520.53	20.00	20.00	J-4078
J-2948	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	35.76	J-4083
J-2720	Low	true	1,000.00	3,775.64	1,008.48	3,784.11	20.00	20.00	J-4083
J-2947	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	44.47	J-4083
J-2692	Low	true	1,000.00	5,000.00	1,016.55	5,016.55	20.00	38.82	J-4083
J-2939	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	44.58	J-4083
J-2964	High	true	1,000.00	3,166.02	1,020.39	3,186.41	20.00	20.00	J-4078
J-2997	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	60.72	J-4078
J-2739	High	true	1,000.00	2,182.74	1,002.22	2,184.96	20.00	20.00	J-4078
J-2869	High	true	1,000.00	1,958.25	1,002.22	1,960.47	20.00	20.00	J-4078
J-2798	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	28.79	J-4083
J-2780	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	21.94	J-4083
J-2790	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	42.01	J-4083
J-2993	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	26.19	J-4078
J-2828	High	true	1,000.00	2,533.08	1,020.39	2,553.47	20.00	20.00	J-4078
J-2705	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	47.04	J-4083
J-2885	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	37.84	J-4078
J-2714	Low	true	1,000.00	5,000.00	1,023.62	5,023.62	20.00	62.76	J-4083
J-2782	High	true	1,000.00	5,000.00	1,021.60	5,021.60	20.00	42.96	J-4078
J-2888	High	true	1,000.00	3,140.01	1,020.39	3,160.40	20.00	20.00	J-4078
J-2894	High	true	1,000.00	4,146.97	1,005.25	4,152.22	20.00	20.00	J-4078
J-2792	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	24.10	J-4083
J-2781	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	20.91	J-4083
J-2725	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	53.46	J-4083
J-2861	High	true	1,000.00	5,000.00	1,024.23	5,024.23	20.00	66.33	J-4078
J-2867	High	true	1,000.00	3,883.79	1,020.39	3,904.18	20.00	20.00	J-4078
J-2837	Low	true	1,000.00	5,000.00	1,029.07	5,029.07	20.00	67.33	J-4083
J-2822	Low	true	1,000.00	4,159.42	1,003.63	4,163.06	20.00	20.00	J-4083
J-2990	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	35.73	J-4083
J-2956	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	48.80	J-4083
J-2693	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	64.36	J-4083
J-2738	High	true	1,000.00	2,139.28	1,002.22	2,141.50	20.00	20.00	J-4078
J-2915	Low	true	1,000.00	3,744.39	1,000.00	3,744.39	20.00	20.00	J-4083
J-2917	High	true	1,000.00	3,184.69	1,004.44	3,189.13	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2763	High	true	1,000.00	3,406.86	1,004.44	3,411.30	20.00	20.00	J-4078
J-2944	Low	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	49.77	J-4083
J-2927	High	true	1,000.00	4,641.36	1,020.39	4,661.75	20.00	20.00	J-4078
J-2835	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	24.28	J-4078
J-2986	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	32.79	J-4083
J-2806	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	37.62	J-4083
J-2843	Low	true	1,000.00	5,000.00	1,017.16	5,017.16	20.00	30.52	J-4083
J-3392	High	true	1,000.00	1,786.07	1,002.22	1,788.29	20.00	20.00	J-4078
J-3457	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	42.90	J-4083
J-3402	High	true	1,000.00	1,763.00	1,002.22	1,765.22	20.00	20.00	J-4078
J-3375	Low	true	1,000.00	5,000.00	1,006.26	5,006.26	20.00	58.89	J-4083
J-3433	YT	true	1,000.00	2,661.38	1,005.85	2,667.23	20.00	20.00	J-4060
J-3422	Low	true	1,000.00	5,000.00	1,025.24	5,025.24	20.00	55.89	J-4083
J-3441	Low	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	50.04	J-4083
J-3464	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	64.76	J-4083
J-3442	Low	true	1,000.00	5,000.00	1,008.28	5,008.28	20.00	51.29	J-4083
J-3443	High	true	1,000.00	5,000.00	1,003.84	5,003.84	20.00	47.76	J-4078
J-3404	High	true	1,000.00	1,765.75	1,002.22	1,767.97	20.00	20.00	J-4078
J-3429	High	true	1,000.00	1,771.24	1,002.22	1,773.46	20.00	20.00	J-4078
J-3419	High	true	1,000.00	1,767.27	1,002.22	1,769.49	20.00	20.00	J-4078
J-3417	High	true	1,000.00	1,765.69	1,002.22	1,767.91	20.00	20.00	J-4078
J-3430	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	46.95	J-4083
J-3420	High	true	1,000.00	1,776.12	1,002.22	1,778.34	20.00	20.00	J-4078
J-3388	High	true	1,000.00	1,868.41	1,002.22	1,870.63	20.00	20.00	J-4078
J-3383	YT	true	1,000.00	4,535.40	1,045.02	4,580.42	20.00	20.00	J-4060
J-3397	High	true	1,000.00	1,792.85	1,002.22	1,795.07	20.00	20.00	J-4078
J-3448	High	true	1,000.00	4,309.08	1,005.65	4,314.73	20.00	20.00	J-4078
J-3480	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	67.80	J-4083
J-3431	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	47.88	J-4083
J-3460	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.72	J-4083
J-3475	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	59.86	J-4083
J-3401	High	true	1,000.00	1,808.78	1,002.22	1,811.00	20.00	20.00	J-4078
J-3435	Low	true	1,000.00	5,000.00	1,002.22	5,002.22	20.00	50.77	J-4083
J-3412	High	true	1,000.00	1,931.64	1,002.22	1,933.86	20.00	20.00	J-4078
J-3451	YT	true	1,000.00	4,571.05	1,005.65	4,576.70	20.00	20.00	J-4060
J-3427	High	true	1,000.00	5,000.00	1,003.84	5,003.84	20.00	48.36	J-4078
J-3439	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	60.54	J-4083
J-3370	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	65.99	J-4083
J-3445	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	53.58	J-4078
J-3423	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	45.35	J-4083
J-3411	High	true	1,000.00	1,834.23	1,002.22	1,836.45	20.00	20.00	J-4078
J-3391	High	true	1,000.00	1,891.24	1,002.22	1,893.46	20.00	20.00	J-4078
J-3367	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	44.99	J-4083
J-3379	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	35.94	J-4078
J-3398	High	true	1,000.00	1,873.60	1,002.22	1,875.82	20.00	20.00	J-4078
J-3424	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	46.10	J-4083
J-3421	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	28.89	J-4083
J-3466	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	68.73	J-4083
J-3449	High	true	1,000.00	3,416.50	1,005.65	3,422.16	20.00	20.00	J-4078
J-3437	Low	true	1,000.00	5,000.00	1,006.26	5,006.26	20.00	51.86	J-4083
J-3418	High	true	1,000.00	1,777.10	1,002.22	1,779.32	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3393	High	true	1,000.00	1,799.19	1,002.22	1,801.42	20.00	20.00	J-4078
J-3382	YT	true	1,000.00	4,439.45	1,045.02	4,484.47	20.00	20.00	J-4060
J-3380	YT	true	1,000.00	4,581.54	1,005.65	4,587.20	20.00	20.00	J-4060
J-3458	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	64.18	J-4083
FH31	High	true	1,000.00	1,824.83	1,001.10	1,825.93	20.00	20.00	J-4078
J-3408	High	true	1,000.00	1,918.09	1,002.22	1,920.31	20.00	20.00	J-4078
J-3374	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	70.19	J-4083
J-3438	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	45.69	J-4083
J-3471	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	62.42	J-4083
J-3384	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	50.75	J-4078
J-3403	YT	true	1,000.00	4,068.85	1,011.51	4,080.35	20.00	20.00	J-4060
J-3425	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	58.96	J-4083
J-3416	High	true	1,000.00	1,868.53	1,002.22	1,870.75	20.00	20.00	J-4078
J-3378	High	true	1,000.00	1,778.56	1,002.22	1,780.79	20.00	20.00	J-4078
J-3409	Low	true	1,000.00	5,000.00	1,036.34	5,036.34	20.00	54.16	J-4083
J-3385	High	true	1,000.00	1,800.66	1,002.22	1,802.88	20.00	20.00	J-4078
J-3462	Low	true	1,000.00	5,000.00	1,003.92	5,003.92	20.00	54.91	J-4083
J-3440	Low	true	1,000.00	5,000.00	1,016.96	5,016.96	20.00	59.32	J-4083
J-3453	Low	true	1,000.00	5,000.00	1,019.78	5,019.78	20.00	62.33	J-4083
J-3395	High	true	1,000.00	1,781.13	1,002.22	1,783.35	20.00	20.00	J-4078
J-3399	High	true	1,000.00	1,828.13	1,002.22	1,830.35	20.00	20.00	J-4078
J-3406	YT	true	1,000.00	2,559.57	1,005.65	2,565.22	20.00	20.00	J-4060
J-3452	YT	true	1,000.00	4,632.81	1,005.65	4,638.47	20.00	20.00	J-4060
J-3447	Low	true	1,000.00	5,000.00	1,002.22	5,002.22	20.00	50.70	J-4083
J-3474	Low	true	1,000.00	5,000.00	1,009.49	5,009.49	20.00	58.03	J-4083
J-3368	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	44.06	J-4083
J-3456	High	true	1,000.00	5,000.00	1,014.54	5,014.54	20.00	52.78	J-4078
J-3387	High	true	1,000.00	1,857.67	1,002.22	1,859.89	20.00	20.00	J-4078
J-3454	Low	true	1,000.00	5,000.00	1,002.83	5,002.83	20.00	59.30	J-4083
J-3389	High	true	1,000.00	1,765.63	1,002.22	1,767.85	20.00	20.00	J-4078
J-3366	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	46.66	J-4083
J-3455	Low	true	1,000.00	5,000.00	1,014.33	5,014.33	20.00	60.32	J-4083
J-3465	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	60.85	J-4083
J-3405	YT	true	1,000.00	4,433.59	1,005.65	4,439.25	20.00	20.00	J-4060
J-3463	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	24.46	J-4078
J-3377	High	true	1,000.00	1,780.33	1,002.22	1,782.56	20.00	20.00	J-4078
J-3476	High	true	1,000.00	5,000.00	1,008.68	5,008.68	20.00	36.76	J-4078
J-3396	High	true	1,000.00	1,851.81	1,002.22	1,854.03	20.00	20.00	J-4078
J-3468	High	true	1,000.00	5,000.00	1,010.70	5,010.70	20.00	54.72	J-4078
J-3386	High	true	1,000.00	1,810.18	1,002.22	1,812.40	20.00	20.00	J-4078
J-3470	High	true	1,000.00	5,000.00	1,015.54	5,015.54	20.00	53.94	J-4078
J-3477	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	68.80	J-4083
J-3413	High	true	1,000.00	1,784.06	1,002.22	1,786.28	20.00	20.00	J-4078
J-3467	Low	true	1,000.00	5,000.00	1,010.50	5,010.50	20.00	61.81	J-4083
J-3381	Low	true	1,000.00	4,566.16	1,005.65	4,571.81	20.00	20.00	J-4083
J-3410	High	true	1,000.00	1,895.39	1,002.22	1,897.61	20.00	20.00	J-4078
PH31	High	true	1,000.00	1,818.24	1,002.22	1,820.46	20.00	20.00	J-4078
J-3426	Low	true	1,000.00	5,000.00	1,002.22	5,002.22	20.00	51.44	J-4083
J-3364	Low	true	1,000.00	5,000.00	1,014.94	5,014.94	20.00	58.87	J-4083
J-3400	High	true	1,000.00	1,830.75	1,002.22	1,832.97	20.00	20.00	J-4078
J-3473	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	61.96	J-4083

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3479	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	29.84	J-4083
J-3446	Low	true	1,000.00	5,000.00	1,032.70	5,032.70	20.00	63.66	J-4083
J-3469	High	true	1,000.00	1,797.36	1,002.22	1,799.58	20.00	20.00	J-4078
J-3444	High	true	1,000.00	5,000.00	1,003.84	5,003.84	20.00	49.11	J-4078
J-3432	Low	true	1,000.00	5,000.00	1,004.04	5,004.04	20.00	46.54	J-4083
J-3472	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	65.21	J-4083
J-3461	YT	true	1,000.00	4,092.41	1,011.51	4,103.91	20.00	20.00	J-4060
J-3436	Low	true	1,000.00	5,000.00	1,006.26	5,006.26	20.00	51.92	J-4083
J-3390	High	true	1,000.00	1,880.86	1,002.22	1,883.08	20.00	20.00	J-4078
J-3450	YT	true	1,000.00	2,715.21	1,005.85	2,721.06	20.00	20.00	J-4060
J-3680	High	true	1,000.00	4,418.70	1,005.25	4,423.95	20.00	20.00	J-4078
J-3626	High	true	1,000.00	4,471.92	1,002.22	4,474.14	20.00	20.00	J-4078
J-3682	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	31.16	J-4078
J-3638	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	33.74	J-4078
J-3637	High	true	1,000.00	5,000.00	1,009.08	5,009.08	20.00	55.63	J-4078
J-3693	Low	true	1,000.00	5,000.00	1,017.56	5,017.56	20.00	77.19	J-4083
J-3610	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	59.65	J-4083
J-3649	Zone	true	1,000.00	5,000.00	1,005.45	5,005.45	20.00	59.96	J-3975
J-3669	High	true	1,000.00	4,400.51	1,005.25	4,405.76	20.00	20.00	J-4078
J-3648	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.99	J-4078
J-3655	Low	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	61.75	J-4083
J-3697	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	46.87	J-4083
J-3606	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	59.95	J-4078
J-3681	Low	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	61.73	J-4083
J-3703	Low	true	1,000.00	5,000.00	1,029.88	5,029.88	20.00	68.14	J-4083
J-3707	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	45.10	J-4083
J-3643	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	59.22	J-4078
J-3619	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	35.32	J-4078
J-3651	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	59.88	J-4083
J-3620	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	34.32	J-4078
J-3679	High	true	1,000.00	4,302.61	1,012.72	4,315.33	20.00	20.00	J-4078
J-3677	Low	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	48.16	J-4083
J-3663	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.19	J-4078
J-3674	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	25.52	J-4078
J-3642	High	true	1,000.00	5,000.00	1,008.08	5,008.08	20.00	47.16	J-4078
J-3676	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	33.97	J-4078
J-3629	Low	true	1,000.00	5,000.00	1,017.36	5,017.36	20.00	43.05	J-4083
J-3628	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.71	J-4083
J-3658	High	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	39.48	J-4078
J-3599	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.59	J-4078
J-3687	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	34.52	J-4078
J-3657	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	65.74	J-4083
J-3672	High	true	1,000.00	5,000.00	1,024.02	5,024.02	20.00	54.42	J-4078
J-3630	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	41.44	J-4078
J-3656	Low	true	1,000.00	5,000.00	1,018.98	5,018.98	20.00	59.29	J-4083
J-3666	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	74.49	J-4078
J-3627	High	true	1,000.00	4,452.39	1,002.22	4,454.61	20.00	20.00	J-4078
J-3686	High	true	1,000.00	5,000.00	1,005.25	5,005.25	20.00	40.90	J-4078
J-3640	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	59.24	J-4078
J-3696	Low	true	1,000.00	5,000.00	1,011.51	5,011.51	20.00	56.75	J-4083
J-3605	High	true	1,000.00	5,000.00	1,004.24	5,004.24	20.00	60.22	J-4078

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3653	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.43	J-4078
J-3665	High	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	84.24	J-4078
J-3636	High	true	1,000.00	5,000.00	1,005.45	5,005.45	20.00	45.22	J-4078
J-3691	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.46	J-4083
J-3661	High	true	1,000.00	4,894.78	1,020.39	4,915.17	20.00	20.00	J-4078
J-3654	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	70.85	J-4078
J-3650	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	62.60	J-4083
J-3695	High	true	1,000.00	4,501.22	1,012.72	4,513.94	20.00	20.00	J-4078
J-3624	High	true	1,000.00	5,000.00	1,012.92	5,012.92	20.00	51.96	J-4078
J-3660	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.70	J-4078
J-3625	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	43.38	J-4083
J-3644	High	true	1,000.00	5,000.00	1,015.54	5,015.54	20.00	54.28	J-4078
J-3600	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.50	J-4078
J-3652	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	63.01	J-4083
J-3631	Low	true	1,000.00	5,000.00	1,011.91	5,011.91	20.00	64.14	J-4083
J-3645	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.87	J-4083
J-3668	High	true	1,000.00	5,000.00	1,008.48	5,008.48	20.00	62.38	J-4078
J-3632	High	true	1,000.00	3,992.92	1,004.44	3,997.36	20.00	20.00	J-4078
J-3601	High	true	1,000.00	4,957.52	1,020.39	4,977.91	20.00	20.00	J-4078
J-3634	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	33.92	J-4078
J-3678	High	true	1,000.00	4,713.87	1,020.39	4,734.26	20.00	20.00	J-4078
J-3675	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	28.65	J-4078
J-3659	High	true	1,000.00	5,000.00	1,007.27	5,007.27	20.00	33.59	J-4078
J-3635	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	34.60	J-4078
J-3701	High	true	1,000.00	5,000.00	1,010.09	5,010.09	20.00	78.41	J-4078
J-3639	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	36.76	J-4078
J-3664	High	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	34.66	J-4078
J-3685	Low	true	1,000.00	5,000.00	1,011.10	5,011.10	20.00	69.90	J-4083
J-3641	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	67.17	J-4083
J-3688	High	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	37.28	J-4078
J-3839	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	55.61	J-4078
J-3841	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	58.68	J-4083
J-3840	High	true	1,000.00	5,000.00	1,015.34	5,015.34	20.00	55.25	J-4078
J-3838	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.54	J-3975
J-3844	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.17	J-4083
J-3857	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.76	J-4083
J-3858	Zone	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	85.42	J-3975
J-3907	Low	true	1,000.00	1,764.47	1,008.48	1,772.94	20.00	20.00	J-4083
J-3886	Low	true	1,000.00	1,943.73	1,000.00	1,943.73	20.00	20.00	J-4083
J-3891	Low	true	1,000.00	1,102.91	1,000.00	1,102.91	20.00	20.00	J-4083
J-3874	Low	true	1,000.00	2,061.58	1,006.26	2,067.84	20.00	20.00	J-4083
J-3892	Low	true	1,000.00	1,814.09	1,002.83	1,816.91	20.00	20.00	J-4083
J-3871	YT	true	1,000.00	1,690.80	1,004.85	1,695.64	20.00	20.00	J-4060
J-3879	Low	true	1,000.00	1,570.80	1,002.83	1,573.63	20.00	20.00	J-4083
J-3908	Low	true	1,000.00	1,955.93	1,008.48	1,964.41	20.00	20.00	J-4083
J-3870	YT	true	1,000.00	2,227.05	1,011.51	2,238.56	20.00	20.00	J-4060
J-3909	Low	true	1,000.00	5,000.00	1,004.85	5,004.85	20.00	59.63	J-4083
J-3893	YT	false	1,000.00	149.05	1,042.19	191.24	20.00	20.00	J-4060
J-3887	YT	true	1,000.00	2,058.72	1,003.63	2,062.35	20.00	20.00	J-4060
J-3877	YT	true	1,000.00	1,778.63	1,011.51	1,790.13	20.00	20.00	J-4060
J-3904	Low	true	1,000.00	2,872.19	1,011.31	2,883.50	20.00	20.00	J-4083

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3917	Low	true	1,000.00	3,375.37	1,008.48	3,383.85	20.00	20.00	J-4083
J-3883	Low	true	1,000.00	1,423.89	1,000.00	1,423.89	20.00	20.00	J-4083
J-3872	YT	true	1,000.00	2,418.09	1,003.63	2,421.72	20.00	20.00	J-4060
J-3875	YT	true	1,000.00	1,626.04	1,004.85	1,630.88	20.00	20.00	J-4060
J-3865	YT	true	1,000.00	1,681.82	1,017.56	1,699.39	20.00	20.00	J-4060
J-3899	Low	true	1,000.00	1,087.16	1,005.65	1,092.81	20.00	20.00	J-4083
J-3898	Low	true	1,000.00	1,850.52	1,014.94	1,865.46	20.00	20.00	J-4083
J-3902	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	61.83	J-4083
J-3894	YT	true	1,000.00	1,772.58	1,003.63	1,776.22	20.00	20.00	J-4060
J-3889	Low	true	1,000.00	1,519.53	1,004.64	1,524.17	20.00	20.00	J-4083
J-3876	YT	true	1,000.00	3,966.43	1,004.85	3,971.28	20.00	20.00	J-4060
J-3910	YT	false	1,000.00	476.35	1,004.85	481.19	20.00	20.00	J-4060
J-3888	YT	true	1,000.00	2,082.64	1,003.63	2,086.28	20.00	20.00	J-4060
J-3905	Low	true	1,000.00	5,000.00	1,014.13	5,014.13	20.00	58.35	J-4083
J-3897	Low	true	1,000.00	1,775.88	1,008.48	1,784.36	20.00	20.00	J-4083
J-3915	Low	true	1,000.00	1,908.33	1,008.48	1,916.80	20.00	20.00	J-4083
J-3911	YT	false	1,000.00	998.69	1,004.85	1,003.53	20.00	20.00	J-4060
J-3903	Low	true	1,000.00	3,893.31	1,004.64	3,897.95	20.00	20.00	J-4083
J-3921	Low	true	1,000.00	5,000.00	1,014.94	5,014.94	20.00	57.35	J-4083
J-3906	Low	true	1,000.00	5,000.00	1,013.32	5,013.32	20.00	57.48	J-4083
J-3882	Low	true	1,000.00	1,601.62	1,005.65	1,607.28	20.00	20.00	J-4083
J-3878	YT	true	1,000.00	2,187.01	1,003.63	2,190.65	20.00	20.00	J-4060
J-3913	Low	true	1,000.00	1,953.92	1,004.64	1,958.56	20.00	20.00	J-4083
J-3912	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.47	J-4083
J-3863	Low	true	1,000.00	1,757.81	1,000.00	1,757.81	20.00	20.00	J-4083
J-3884	Low	true	1,000.00	5,000.00	1,013.32	5,013.32	20.00	55.47	J-4083
J-3919	Low	true	1,000.00	5,000.00	1,006.46	5,006.46	20.00	65.85	J-4083
J-3896	Low	true	1,000.00	2,962.52	1,011.31	2,973.83	20.00	20.00	J-4083
J-3873	YT	true	1,000.00	1,980.84	1,000.00	1,980.84	20.00	20.00	J-4060
J-3914	Low	true	1,000.00	5,000.00	1,014.94	5,014.94	20.00	56.47	J-4083
J-3895	Low	true	1,000.00	2,490.30	1,011.31	2,501.60	20.00	20.00	J-4083
J-3885	Low	true	1,000.00	5,000.00	1,013.32	5,013.32	20.00	57.41	J-4083
J-3920	Low	false	1,000.00	461.24	1,006.46	467.70	20.00	20.00	J-4083
J-3881	Low	true	1,000.00	2,071.17	1,004.85	2,076.01	20.00	20.00	J-4083
J-3880	Low	true	1,000.00	2,087.40	1,002.22	2,089.62	20.00	20.00	J-4083
J-3918	Low	true	1,000.00	3,075.44	1,008.48	3,083.92	20.00	20.00	J-4083
J-3916	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	56.58	J-4083
J-3900	Low	true	1,000.00	1,761.11	1,005.65	1,766.76	20.00	20.00	J-4083
J-3963	YT	true	1,000.00	1,826.05	1,008.48	1,834.53	20.00	20.00	J-4060
J-3953	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3955	Low	true	1,000.00	5,000.00	1,005.65	5,005.65	20.00	81.77	J-4083
J-3956	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	12.98	J-3975
J-3957	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	12.98	J-3975
J-3958	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	12.98	J-3975
J-3959	Zone	true	1,000.00	1,688.87	1,000.00	1,688.87	20.00	20.00	J-3975
J-3961	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3962	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3965	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3966	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.83	J-3975
J-3967	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.60	J-3975
J-3968	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3969	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3970	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3971	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3972	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3973	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3974	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3975	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3974
J-3976	Zone	true	1,000.00	5,000.00	1,004.44	5,004.44	20.00	85.66	J-3975
J-3977	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	85.60	J-3975
J-3978	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	85.42	J-3975
J-3979	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	85.26	J-3975
J-3980	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	56.94	J-3975
J-3981	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.11	J-3975
J-3983	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.14	J-3975
J-3984	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	57.17	J-3975
J-3985	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4078
J-3986	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4078
J-3987	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4078
J-3988	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4078
J-3989	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.14	J-4078
J-3990	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.28	J-4078
J-3991	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.28	J-4078
J-3992	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.20	J-4078
J-3993	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3994	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3995	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3996	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.57	J-3975
J-3997	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.60	J-3975
J-3998	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	64.64	J-3975
J-3999	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-4000	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-4001	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-4002	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	54.94	J-3975
J-4003	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	54.99	J-3975
J-4004	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	55.02	J-3975
J-4005	Low	true	1,000.00	5,000.00	1,004.64	5,004.64	20.00	69.51	J-4083
J-4006	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4083
J-4007	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4083
J-4008	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4083
J-4009	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4083
J-4010	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	66.81	J-4083
J-4011	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	67.91	J-4083
J-4012	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	68.16	J-4083
J-4013	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	68.40	J-4083
J-4014	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	39.31	J-4083
J-4015	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	45.04	J-4083
J-4016	Low	true	1,000.00	5,000.00	1,008.88	5,008.88	20.00	54.40	J-4083
J-3428	High	true	1,000.00	1,755.98	1,002.22	1,758.20	20.00	20.00	J-4078
J-4017	High	true	1,000.00	1,917.85	1,002.22	1,920.07	20.00	20.00	J-4078
J-4018	High	true	1,000.00	2,640.01	1,003.84	2,643.85	20.00	20.00	J-4078
J-4019	High	true	1,000.00	3,974.61	1,012.72	3,987.33	20.00	20.00	J-4078

Scenario: Maximum Day Existing 2004
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-69	High	true	1,000.00	2,562.50	1,002.22	2,564.72	20.00	20.00	J-4078
J-4020	Zone	true	1,000.00	5,000.00	1,012.72	5,012.72	20.00	32.03	J-3975
J-4021	High	true	1,000.00	1,876.71	1,005.45	1,882.16	20.00	20.00	J-4078
PH11	YT	true	1,000.00	3,301.15	1,000.00	3,301.15	20.00	20.00	J-4060
FH11	YT	true	1,000.00	2,297.36	1,000.00	2,297.36	20.00	20.00	J-4060
J-4022	Low	true	1,000.00	3,006.10	1,000.00	3,006.10	20.00	20.00	J-4083
FH9	Low	true	1,000.00	2,979.49	1,000.00	2,979.49	20.00	20.00	J-4083
J-4024	Low	true	1,000.00	2,793.46	1,000.00	2,793.46	20.00	20.00	J-4083
PH9	Low	true	1,000.00	2,771.73	1,000.00	2,771.73	20.00	20.00	J-4083
J-5000	YT	true	1,000.00	1,971.56	1,000.00	1,971.56	20.00	20.00	J-4060
FH29	YT	true	1,000.00	1,594.12	1,000.00	1,594.12	20.00	20.00	J-4060
J-4028	YT	true	1,000.00	1,878.05	1,000.00	1,878.05	20.00	20.00	J-4060
PH29	YT	true	1,000.00	1,542.36	1,000.00	1,542.36	20.00	20.00	J-4060
J-2682	Low	true	1,000.00	3,216.19	1,004.85	3,221.03	20.00	20.00	J-4083
J-4023	YT	true	1,000.00	3,687.01	1,000.00	3,687.01	20.00	20.00	J-4060
J-2860	YT	true	1,000.00	4,443.11	1,008.28	4,451.39	20.00	20.00	J-4060
J-4025	Zone	true	1,000.00	3,689.57	1,008.48	3,698.05	20.00	20.00	J-3975
PH3	YT	true	1,000.00	3,638.18	1,000.00	3,638.18	20.00	20.00	J-4060
J-4026	YT	true	1,000.00	2,874.27	1,008.48	2,882.75	20.00	20.00	J-4060
FH3	YT	true	1,000.00	2,824.46	1,000.00	2,824.46	20.00	20.00	J-4060
J-4029	YT	true	1,000.00	4,535.40	1,000.00	4,535.40	20.00	20.00	J-4060
PH10	YT	true	1,000.00	4,433.47	1,000.00	4,433.47	20.00	20.00	J-4060
FH10	YT	true	1,000.00	4,462.65	1,000.00	4,462.65	20.00	20.00	J-4060
J-4030	Low	true	1,000.00	5,000.00	1,013.53	5,013.53	20.00	21.33	J-4083
FH13	Low	true	1,000.00	4,936.77	1,000.00	4,936.77	20.00	20.00	J-4083
FH8	Low	true	1,000.00	3,336.67	1,000.00	3,336.67	20.00	20.00	J-4083
J-4034	Low	true	1,000.00	4,605.23	1,000.00	4,605.23	20.00	20.00	J-4083
J-4036	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	28.43	J-4083
FH1	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	25.66	J-4083
J-4038	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	22.14	J-4083
PH1	Low	true	1,000.00	4,977.05	1,008.76	4,985.81	20.00	20.00	J-4083
J-2987	Low	true	1,000.00	5,000.00	1,008.76	5,008.76	20.00	30.78	J-4083
J-291	YT	true	1,000.00	3,164.18	1,000.00	3,164.18	20.00	20.00	J-4060
J-4040	Low	true	1,000.00	4,265.75	1,000.00	4,265.75	20.00	20.00	J-4083
FH4	Low	true	1,000.00	4,197.51	1,000.00	4,197.51	20.00	20.00	J-4083
J-4033	Low	true	1,000.00	4,124.76	1,000.00	4,124.76	20.00	20.00	J-4083
PH8	Low	true	1,000.00	4,056.15	1,000.00	4,056.15	20.00	20.00	J-4083
J-4037	YT	true	1,000.00	2,148.56	1,000.00	2,148.56	20.00	20.00	J-4060
J-3434	Low	true	1,000.00	5,000.00	1,027.05	5,027.05	20.00	61.55	J-4083
J-4039	Low	true	1,000.00	2,970.83	1,000.00	2,970.83	20.00	20.00	J-4083
FH23	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	34.64	J-4078
J-4041	High	true	1,000.00	2,295.17	1,000.00	2,295.17	20.00	20.00	J-4078
FH25	High	true	1,000.00	2,258.79	1,000.00	2,258.79	20.00	20.00	J-4078
J-4042	High	true	1,000.00	4,788.33	1,000.00	4,788.33	20.00	20.00	J-4078
FH27	High	true	1,000.00	4,460.45	1,000.00	4,460.45	20.00	20.00	J-4078
J-4043	High	true	1,000.00	2,985.84	1,000.00	2,985.84	20.00	20.00	J-4078
PH28	High	true	1,000.00	2,885.99	1,000.00	2,885.99	20.00	20.00	J-4078
J-4045	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	23.29	J-4078
J-4046	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	68.46	J-4083
J-4044	YT	false	1,000.00	689.42	1,002.02	691.44	20.00	20.00	J-4060
J-4047	YT	true	1,000.00	2,525.02	1,000.00	2,525.02	20.00	20.00	J-4060

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-4048	YT	true	1,000.00	1,263.73	1,000.00	1,263.73	20.00	20.00	J-4060
J-4049	YT	true	1,000.00	1,942.32	1,000.00	1,942.32	20.00	20.00	J-4060
J-4050	YT	false	1,000.00	889.95	1,000.00	889.95	20.00	20.00	J-4060
J-4051	YT	false	1,000.00	874.85	1,000.00	874.85	20.00	20.00	J-4060
J-4052	YT	false	1,000.00	881.16	1,000.00	881.16	20.00	20.00	J-4060
J-4053	YT	true	1,000.00	2,048.16	1,000.00	2,048.16	20.00	20.00	J-4060
J-4054	YT	false	1,000.00	144.21	1,000.00	144.21	20.00	20.00	J-4060
J-4055	YT	true	1,000.00	1,838.81	1,002.02	1,840.83	20.00	20.00	J-4060
J-4056	Low	true	1,000.00	2,673.10	1,002.02	2,675.11	20.00	20.00	J-4083
J-4057	Low	true	1,000.00	2,390.08	1,002.02	2,392.09	20.00	20.00	J-4083
J-4058	Low	true	1,000.00	2,585.33	1,002.02	2,587.35	20.00	20.00	J-4083
J-4059	YT	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	59.90	J-4060
J-4060	YT	false	1,000.00	0.00	1,000.00	0.00	20.00	-497.12	J-878
J-4061	YT	true	1,000.00	1,145.39	1,000.00	1,145.39	20.00	20.00	J-4060
J-4062	YT	true	1,000.00	1,005.77	1,000.00	1,005.77	20.00	20.00	J-4060
J-4063	YT	true	1,000.00	1,124.54	1,000.00	1,124.54	20.00	20.00	J-4060
J-4064	YT	false	1,000.00	971.47	1,000.00	971.47	20.00	20.00	J-4060
J-4065	YT	true	1,000.00	3,517.09	1,000.00	3,517.09	20.00	20.00	J-4060
J-4066	YT	true	1,000.00	1,213.78	1,000.00	1,213.78	20.00	20.00	J-4060
J-4067	YT	true	1,000.00	1,266.97	1,000.00	1,266.97	20.00	20.00	J-4060
J-4068	YT	true	1,000.00	1,279.24	1,000.00	1,279.24	20.00	20.00	J-4060
J-4069	YT	true	1,000.00	1,614.50	1,000.00	1,614.50	20.00	20.00	J-4060
J-4070	YT	true	1,000.00	1,081.91	1,000.00	1,081.91	20.00	20.00	J-4060
J-4071	YT	true	1,000.00	2,105.71	1,000.00	2,105.71	20.00	20.00	J-4060
J-4072	YT	true	1,000.00	2,178.41	1,000.00	2,178.41	20.00	20.00	J-4060
J-4073	High	true	1,000.00	2,149.90	1,000.00	2,149.90	20.00	20.00	J-4078
J-4074	High	true	1,000.00	1,935.79	1,000.00	1,935.79	20.00	20.00	J-4078
J-4075	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.72	J-4083
J-4076	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.50	J-4083
J-4077	Low	true	1,000.00	4,832.52	1,000.00	4,832.52	20.00	20.00	J-4083
J-4078	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-525.24	J-4088
J-4079	Low	true	1,000.00	4,077.39	1,000.00	4,077.39	20.00	20.00	J-4083
J-4080	Low	true	1,000.00	2,399.29	1,000.00	2,399.29	20.00	20.00	J-4083
J-4081	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	50.44	J-4083
J-4082	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	42.22	J-4083
J-4083	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	-480.24	J-4007
J-4094	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-507.50	J-4078
J-4091	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-509.23	J-4078
J-4088	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-511.83	J-4078
J-4085	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-510.10	J-4078
J-4086	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-510.96	J-4078
J-4087	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-510.10	J-4078
J-4092	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-509.66	J-4078
J-4089	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-511.40	J-4078
J-4090	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-508.37	J-4078
J-4084	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-509.66	J-4078
J-4093	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-508.37	J-4078
J-4106	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-507.50	J-4078
J-4107	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-508.37	J-4078
J-4108	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-508.37	J-4078
J-4109	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-507.50	J-4078

Scenario: Maximum Day Existing 2004
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-4110	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-509.23	J-4078
J-4111	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-508.80	J-4078
J-4112	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-510.53	J-4078
J-4113	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-510.10	J-4078
J-4114	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-508.37	J-4078
J-4115	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-505.77	J-4078
J-4116	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-504.91	J-4078
J-4117	High	false	1,000.00	0.00	1,000.00	0.00	20.00	-505.77	J-4078
PH32	High	true	1,000.00	1,594.24	1,000.00	1,594.24	20.00	20.00	J-4078
FH32	High	true	1,000.00	1,544.43	1,000.00	1,544.43	20.00	20.00	J-4078

MAX DAY FUTURE BUILDOUT TEST

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
FH1	Low	true	1,000.00	4,056.03	1,007.82	4,063.85	20.00	20.00	J-4007
FH2	Low	true	1,000.00	2,428.71	1,000.00	2,428.71	20.00	20.00	J-4007
FH3	YT	true	1,000.00	2,142.58	1,000.00	2,142.58	20.00	20.00	J-4026
FH4	Low	true	1,000.00	2,835.94	1,000.00	2,835.94	20.00	20.00	J-4007
FH5	Low	true	1,000.00	3,190.43	1,009.80	3,200.23	20.00	20.00	J-4007
FH6	Low	true	1,000.00	2,777.47	1,006.08	2,783.54	20.00	20.00	J-4007
FH7	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	21.39	J-4007
FH8	Low	true	1,000.00	2,012.45	1,000.00	2,012.45	20.00	20.00	J-4007
FH9	Low	true	1,000.00	1,832.34	1,000.00	1,832.34	20.00	20.00	J-4007
FH10	YT	true	1,000.00	3,281.74	1,000.00	3,281.74	20.00	20.00	J-3380
FH11	YT	true	1,000.00	2,250.98	1,000.00	2,250.98	20.00	20.00	J-108
FH12	Low	true	1,000.00	1,706.60	1,000.00	1,706.60	20.00	20.00	J-4007
FH13	Low	true	1,000.00	3,487.55	1,000.00	3,487.55	20.00	20.00	J-4007
FH14	Low	true	1,000.00	2,964.11	1,019.99	2,984.10	20.00	20.00	J-4007
FH15	Low	true	1,000.00	2,136.72	1,011.56	2,148.28	20.00	20.00	J-4007
FH16	Low	true	1,000.00	3,123.54	1,000.00	3,123.54	20.00	20.00	J-4007
FH17	Low	true	1,000.00	2,045.29	1,005.49	2,050.78	20.00	20.00	J-4007
FH18	Low	true	1,000.00	1,739.87	1,000.00	1,739.87	20.00	20.00	J-4007
FH19	High	true	1,000.00	1,889.28	1,000.00	1,889.28	20.00	20.00	J-3986
FH20	High	true	1,000.00	2,322.40	1,003.85	2,326.25	20.00	20.00	J-3986
FH21	High	true	1,000.00	2,217.41	1,008.23	2,225.64	20.00	20.00	J-3986
FH22	High	true	1,000.00	1,691.04	1,005.10	1,696.14	20.00	20.00	J-3986
FH23	High	true	1,000.00	4,192.87	1,000.00	4,192.87	20.00	20.00	J-3986
FH24	High	true	1,000.00	3,707.52	1,006.30	3,713.82	20.00	20.00	J-3986
FH25	High	true	1,000.00	1,541.87	1,000.00	1,541.87	20.00	20.00	J-3986
FH26	High	true	1,000.00	4,866.70	1,007.45	4,874.15	20.00	20.00	J-3986
FH27	High	true	1,000.00	2,240.97	1,000.00	2,240.97	20.00	20.00	J-3986
FH28	High	true	1,000.00	1,968.02	1,011.96	1,979.97	20.00	20.00	J-3986
FH29	YT	true	1,000.00	1,129.09	1,000.00	1,129.09	20.00	20.00	J-5000
FH30	High	true	1,000.00	1,252.32	1,012.35	1,264.67	20.00	20.00	J-3986
FH31	High	true	1,000.00	1,412.48	1,002.16	1,414.63	20.00	20.00	J-3986
FH32	High	true	1,000.00	1,028.87	1,000.00	1,028.87	20.00	20.00	J-3986
J-13	YT	true	1,000.00	2,065.92	1,005.49	2,071.41	20.00	20.00	J-4050
J-41	Low	true	1,000.00	2,509.03	1,000.00	2,509.03	20.00	20.00	J-4007
J-59	High	true	1,000.00	1,551.64	1,012.54	1,564.18	20.00	20.00	J-3986
J-60	High	true	1,000.00	1,554.08	1,000.00	1,554.08	20.00	20.00	J-3986
J-66	High	true	1,000.00	1,189.09	1,007.45	1,196.54	20.00	20.00	J-3986
J-69	High	true	1,000.00	1,944.58	1,002.16	1,946.74	20.00	20.00	J-3986
J-71	High	true	1,000.00	1,389.53	1,007.06	1,396.58	20.00	20.00	J-3986
J-72	High	true	1,000.00	1,388.43	1,007.06	1,395.48	20.00	20.00	J-3986
J-75	Low	true	1,000.00	3,724.09	1,000.00	3,724.09	20.00	20.00	J-4007
J-76	Low	true	1,000.00	3,712.37	1,000.00	3,712.37	20.00	20.00	J-4007
J-78	High	true	1,000.00	3,528.69	1,012.35	3,541.03	20.00	20.00	J-3986
J-80	High	true	1,000.00	1,603.88	1,007.06	1,610.94	20.00	20.00	J-3986
J-81	Low	true	1,000.00	2,625.24	1,000.00	2,625.24	20.00	20.00	J-4007
J-83	Low	true	1,000.00	2,041.99	1,009.80	2,051.79	20.00	20.00	J-4007
J-84	Low	true	1,000.00	2,084.84	1,009.80	2,094.64	20.00	20.00	J-4007
J-85	Low	true	1,000.00	3,503.17	1,007.64	3,510.82	20.00	20.00	J-4007
J-86	Low	true	1,000.00	3,541.38	1,007.64	3,549.03	20.00	20.00	J-4008
J-96	High	true	1,000.00	1,446.29	1,007.06	1,453.35	20.00	20.00	J-3986
J-97	High	true	1,000.00	1,484.56	1,007.06	1,491.61	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-98	YT	true	1,000.00	2,490.60	1,008.23	2,498.83	20.00	20.00	J-99
J-99	YT	true	1,000.00	2,489.75	1,008.23	2,497.98	20.00	20.00	J-98
J-100	Low	true	1,000.00	3,060.30	1,006.08	3,066.38	20.00	20.00	J-4007
J-101	Low	true	1,000.00	3,048.83	1,006.08	3,054.90	20.00	20.00	J-4007
J-103	High	true	1,000.00	2,253.30	1,012.35	2,265.64	20.00	20.00	J-3986
J-104	High	true	1,000.00	3,764.53	1,008.23	3,772.76	20.00	20.00	J-3986
J-105	High	true	1,000.00	4,421.88	1,008.23	4,430.11	20.00	20.00	J-3986
J-107	High	true	1,000.00	2,441.16	1,000.00	2,441.16	20.00	20.00	J-3986
J-108	YT	true	1,000.00	2,282.71	1,005.68	2,288.40	20.00	20.00	FH11
J-109	YT	true	1,000.00	2,249.39	1,005.68	2,255.07	20.00	20.00	J-256
J-111	High	true	1,000.00	2,240.05	1,008.23	2,248.28	20.00	20.00	J-3986
J-112	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	33.32	J-3986
J-113	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	59.26	J-3986
J-115	Low	true	1,000.00	2,464.60	1,000.00	2,464.60	20.00	20.00	J-4007
J-119	Low	true	1,000.00	2,472.66	1,013.92	2,486.57	20.00	20.00	J-4007
J-120	High	true	1,000.00	1,669.61	1,011.96	1,681.57	20.00	20.00	J-3986
J-121	High	true	1,000.00	1,735.06	1,011.96	1,747.01	20.00	20.00	J-3986
J-123	High	true	1,000.00	2,724.00	1,004.31	2,728.31	20.00	20.00	J-3986
J-125	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	23.69	J-4007
J-127	Low	true	1,000.00	3,445.07	1,013.13	3,458.20	20.00	20.00	J-4007
J-129	High	true	1,000.00	1,700.81	1,016.27	1,717.07	20.00	20.00	J-3986
J-131	High	true	1,000.00	1,720.15	1,005.10	1,725.25	20.00	20.00	J-3986
J-133	High	true	1,000.00	3,831.79	1,004.51	3,836.30	20.00	20.00	J-3986
J-137	Low	true	1,000.00	3,336.43	1,000.00	3,336.43	20.00	20.00	J-4007
J-141	Low	true	1,000.00	1,740.23	1,008.62	1,748.86	20.00	20.00	J-4007
J-143	High	true	1,000.00	3,816.41	1,005.10	3,821.50	20.00	20.00	J-3986
J-145	Low	true	1,000.00	2,161.01	1,000.00	2,161.01	20.00	20.00	J-4007
J-147	High	true	1,000.00	2,338.22	1,004.31	2,342.53	20.00	20.00	J-3986
J-149	High	true	1,000.00	2,637.33	1,008.82	2,646.15	20.00	20.00	J-3986
J-151	High	true	1,000.00	2,662.23	1,000.00	2,662.23	20.00	20.00	J-3986
J-153	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	26.73	J-4007
J-155	Low	true	1,000.00	1,718.63	1,000.00	1,718.63	20.00	20.00	J-4007
J-156	Low	true	1,000.00	2,588.38	1,011.56	2,599.94	20.00	20.00	J-4007
J-159	Low	true	1,000.00	1,916.75	1,005.10	1,921.84	20.00	20.00	J-4007
J-161	High	true	1,000.00	1,063.54	1,002.74	1,066.28	20.00	20.00	J-3986
J-163	Low	true	1,000.00	2,396.91	1,000.00	2,396.91	20.00	20.00	J-4007
J-165	Low	true	1,000.00	3,136.72	1,002.16	3,138.87	20.00	20.00	J-4007
J-167	Low	true	1,000.00	2,971.31	1,007.64	2,978.96	20.00	20.00	J-4007
J-169	High	true	1,000.00	2,031.25	1,011.96	2,043.21	20.00	20.00	J-3986
J-170	High	true	1,000.00	1,325.44	1,007.84	1,333.28	20.00	20.00	J-3986
J-171	High	true	1,000.00	1,393.49	1,007.84	1,401.33	20.00	20.00	J-3986
J-173	Low	true	1,000.00	1,751.95	1,000.00	1,751.95	20.00	20.00	J-4007
J-177	High	true	1,000.00	1,906.62	1,000.00	1,906.62	20.00	20.00	J-3986
J-178	YT	true	1,000.00	4,360.11	1,017.05	4,377.16	20.00	20.00	J-4060
J-180	High	true	1,000.00	2,222.96	1,008.23	2,231.19	20.00	20.00	J-3986
J-182	High	true	1,000.00	5,000.00	1,007.45	5,007.45	20.00	27.34	J-3986
J-184	Low	true	1,000.00	2,823.00	1,006.08	2,829.07	20.00	20.00	J-4007
J-186	High	true	1,000.00	3,890.87	1,007.06	3,897.93	20.00	20.00	J-3986
J-188	Low	true	1,000.00	3,257.81	1,009.80	3,267.61	20.00	20.00	J-4007
J-190	Low	true	1,000.00	1,811.40	1,008.62	1,820.03	20.00	20.00	J-4007
J-194	Low	true	1,000.00	1,419.98	1,000.00	1,419.98	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-197	Low	true	1,000.00	2,007.93	1,019.40	2,027.34	20.00	20.00	J-4007
J-199	Low	true	1,000.00	2,781.98	1,011.56	2,793.55	20.00	20.00	J-4007
J-202	High	true	1,000.00	1,900.76	1,014.11	1,914.87	20.00	20.00	J-3986
J-203	High	true	1,000.00	1,603.52	1,000.00	1,603.52	20.00	20.00	J-3986
J-204	High	true	1,000.00	1,721.44	1,000.00	1,721.44	20.00	20.00	J-3986
J-206	Low	true	1,000.00	3,210.33	1,000.00	3,210.33	20.00	20.00	J-4007
J-208	High	true	1,000.00	5,000.00	1,007.45	5,007.45	20.00	24.85	J-3986
J-210	High	true	1,000.00	2,851.81	1,005.10	2,856.90	20.00	20.00	J-3986
J-212	Low	true	1,000.00	2,072.08	1,005.49	2,077.57	20.00	20.00	J-4008
J-216	High	true	1,000.00	2,513.18	1,007.06	2,520.24	20.00	20.00	J-3986
J-218	Low	true	1,000.00	2,168.82	1,005.49	2,174.31	20.00	20.00	J-4007
J-220	High	true	1,000.00	2,002.07	1,011.96	2,014.03	20.00	20.00	J-3986
J-221	Low	true	1,000.00	2,714.60	1,016.07	2,730.67	20.00	20.00	J-4007
J-222	Low	true	1,000.00	2,684.81	1,016.07	2,700.89	20.00	20.00	J-4007
J-223	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	20.47	J-4007
J-224	Low	true	1,000.00	4,326.17	1,000.00	4,326.17	20.00	20.00	J-4007
J-225	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	46.35	J-3986
J-226	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	37.75	J-3986
J-227	Low	true	1,000.00	3,813.48	1,031.75	3,845.23	20.00	20.00	J-4007
J-228	Low	true	1,000.00	4,043.70	1,031.75	4,075.45	20.00	20.00	J-4007
J-229	High	true	1,000.00	5,000.00	1,010.58	5,010.58	20.00	44.42	J-3986
J-233	High	true	1,000.00	5,000.00	1,024.11	5,024.11	20.00	35.57	J-3986
J-235	High	true	1,000.00	2,063.23	1,005.10	2,068.33	20.00	20.00	J-3986
J-236	High	true	1,000.00	1,975.71	1,012.15	1,987.86	20.00	20.00	J-3986
J-237	High	true	1,000.00	1,915.16	1,002.16	1,917.32	20.00	20.00	J-3986
J-238	High	true	1,000.00	5,000.00	1,027.64	5,027.64	20.00	45.02	J-3986
J-240	High	true	1,000.00	1,822.88	1,002.16	1,825.03	20.00	20.00	J-3986
J-241	High	true	1,000.00	1,716.53	1,002.16	1,718.68	20.00	20.37	J-3986
J-243	Low	true	1,000.00	3,044.43	1,019.99	3,064.43	20.00	20.00	J-4007
J-244	High	true	1,000.00	3,656.74	1,000.00	3,656.74	20.00	20.00	J-3986
J-245	High	true	1,000.00	4,176.76	1,012.54	4,189.30	20.00	20.00	J-3986
J-246	High	true	1,000.00	3,060.06	1,002.16	3,062.21	20.00	20.00	J-3986
J-247	High	true	1,000.00	2,050.41	1,002.16	2,052.57	20.00	20.00	J-3986
J-248	Low	true	1,000.00	2,115.97	1,000.00	2,115.97	20.00	20.00	J-4007
J-249	Low	true	1,000.00	2,126.22	1,000.00	2,126.22	20.00	20.00	J-4007
J-250	High	true	1,000.00	2,932.13	1,002.16	2,934.29	20.00	20.00	J-3986
J-251	High	true	1,000.00	2,496.09	1,002.16	2,498.25	20.00	20.00	J-3986
J-253	Low	true	1,000.00	2,436.16	1,036.65	2,472.81	20.00	20.00	J-4007
J-254	YT	true	1,000.00	1,972.78	1,004.70	1,977.48	20.00	20.00	J-296
J-255	YT	true	1,000.00	2,021.24	1,004.70	2,025.94	20.00	20.00	J-296
J-256	YT	true	1,000.00	2,206.12	1,005.68	2,211.80	20.00	20.00	J-109
J-257	YT	true	1,000.00	1,696.90	1,008.23	1,705.13	20.00	20.00	J-3871
J-258	High	true	1,000.00	2,269.41	1,012.35	2,281.76	20.00	20.00	J-3986
J-259	High	true	1,000.00	2,731.57	1,012.35	2,743.92	20.00	20.00	J-3986
J-260	High	true	1,000.00	1,801.33	1,012.35	1,813.68	20.00	20.00	J-3986
J-261	High	true	1,000.00	2,081.42	1,012.35	2,093.77	20.00	20.00	J-3986
J-262	High	true	1,000.00	1,858.64	1,012.35	1,870.99	20.00	20.00	J-3986
J-263	High	true	1,000.00	2,162.11	1,012.35	2,174.46	20.00	20.00	J-3986
J-264	High	true	1,000.00	1,968.99	1,012.35	1,981.34	20.00	20.00	J-3986
J-265	High	true	1,000.00	2,331.79	1,012.35	2,344.14	20.00	20.00	J-3986
J-266	High	true	1,000.00	1,831.60	1,012.35	1,843.95	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-267	High	true	1,000.00	2,105.22	1,012.35	2,117.57	20.00	20.00	J-3986
J-269	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	71.10	J-4007
J-270	High	true	1,000.00	1,373.41	1,007.06	1,380.47	20.00	20.00	J-3986
J-271	Low	true	1,000.00	2,292.85	1,000.00	2,292.85	20.00	20.00	J-4007
J-272	Low	true	1,000.00	3,752.32	1,000.00	3,752.32	20.00	20.00	J-4007
J-274	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	20.42	J-4007
J-275	Low	true	1,000.00	4,501.22	1,029.20	4,530.42	20.00	20.00	J-4007
J-276	Low	true	1,000.00	3,208.86	1,010.00	3,218.86	20.00	20.00	J-4007
J-278	Low	true	1,000.00	4,919.43	1,000.00	4,919.43	20.00	20.00	J-4007
J-279	YT	true	1,000.00	2,149.29	1,004.70	2,154.00	20.00	20.00	J-280
J-280	YT	true	1,000.00	2,020.39	1,004.70	2,025.09	20.00	20.00	J-279
J-281	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	34.42	J-3986
J-282	Low	true	1,000.00	2,473.14	1,010.00	2,483.14	20.00	20.00	J-4007
J-283	Low	true	1,000.00	2,623.41	1,010.00	2,633.41	20.00	20.00	J-4007
J-284	YT	true	1,000.00	3,021.61	1,005.49	3,027.09	20.00	20.00	J-498
J-285	YT	true	1,000.00	3,144.04	1,005.49	3,149.53	20.00	20.00	J-3403
J-286	Low	true	1,000.00	4,196.78	1,007.64	4,204.42	20.00	20.00	J-4007
J-287	Low	true	1,000.00	3,264.77	1,007.64	3,272.41	20.00	20.00	J-4007
J-288	Low	true	1,000.00	3,281.49	1,002.16	3,283.65	20.00	20.00	J-4007
J-289	Low	true	1,000.00	3,176.88	1,002.16	3,179.04	20.00	20.00	J-4007
J-290	Low	true	1,000.00	5,000.00	1,031.75	5,031.75	20.00	22.77	J-4007
J-291	YT	true	1,000.00	2,203.49	1,000.00	2,203.49	20.00	20.00	J-905
J-292	YT	true	1,000.00	1,860.66	1,004.70	1,865.36	20.00	20.00	J-905
J-293	YT	true	1,000.00	2,300.54	1,008.23	2,308.77	20.00	20.00	J-539
J-294	YT	true	1,000.00	2,337.04	1,008.23	2,345.27	20.00	20.00	J-501
J-295	YT	true	1,000.00	2,536.62	1,008.23	2,544.85	20.00	20.00	J-294
J-296	YT	true	1,000.00	1,610.11	1,004.70	1,614.81	20.00	20.00	J-255
J-297	Low	true	1,000.00	2,712.28	1,003.53	2,715.81	20.00	20.00	J-4007
J-298	YT	true	1,000.00	2,441.16	1,003.53	2,444.69	20.00	20.00	J-501
J-299	Low	true	1,000.00	1,893.86	1,010.00	1,903.86	20.00	20.00	J-4007
J-301	High	true	1,000.00	1,395.26	1,012.35	1,407.61	20.00	20.00	J-3986
J-303	YT	true	1,000.00	2,252.93	1,008.23	2,261.16	20.00	20.00	J-1015
J-304	YT	true	1,000.00	2,482.67	1,008.23	2,490.90	20.00	20.00	J-303
J-305	YT	true	1,000.00	2,311.58	1,003.53	2,315.11	20.00	20.00	J-539
J-306	Low	true	1,000.00	2,716.80	1,010.00	2,726.79	20.00	20.00	J-4007
J-307	YT	true	1,000.00	1,689.27	1,004.70	1,693.97	20.00	20.00	J-308
J-308	YT	true	1,000.00	1,822.75	1,004.70	1,827.46	20.00	20.00	J-307
J-309	YT	true	1,000.00	2,361.69	1,004.70	2,366.40	20.00	20.00	J-291
J-310	YT	true	1,000.00	2,529.42	1,011.17	2,540.59	20.00	20.00	PH11
J-311	YT	true	1,000.00	2,610.84	1,005.49	2,616.33	20.00	20.00	J-317
J-312	High	true	1,000.00	1,389.71	1,002.16	1,391.87	20.00	20.00	J-3986
J-313	High	true	1,000.00	1,406.74	1,002.16	1,408.89	20.00	20.00	J-3986
J-314	YT	true	1,000.00	1,924.99	1,003.53	1,928.52	20.00	20.00	J-315
J-315	YT	true	1,000.00	2,072.39	1,003.53	2,075.92	20.00	20.00	J-314
J-316	YT	true	1,000.00	2,303.47	1,011.17	2,314.64	20.00	20.00	J-487
J-317	YT	true	1,000.00	2,449.10	1,011.17	2,460.27	20.00	20.00	J-108
J-318	High	true	1,000.00	3,250.49	1,010.58	3,261.07	20.00	20.00	J-3986
J-319	YT	true	1,000.00	2,401.37	1,008.23	2,409.60	20.00	20.00	J-406
J-320	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	54.07	J-3986
J-321	High	true	1,000.00	4,757.81	1,004.12	4,761.93	20.00	20.00	J-3986
J-322	Low	true	1,000.00	3,687.50	1,022.15	3,709.65	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-323	Low	true	1,000.00	3,731.93	1,013.92	3,745.85	20.00	20.00	J-4007
J-324	High	true	1,000.00	3,110.23	1,004.12	3,114.35	20.00	20.00	J-3986
J-325	High	true	1,000.00	3,495.36	1,004.12	3,499.48	20.00	20.00	J-3986
J-326	Low	true	1,000.00	2,463.14	1,010.00	2,473.13	20.00	20.00	J-4007
J-327	Low	true	1,000.00	2,394.59	1,010.00	2,404.59	20.00	20.00	J-4007
J-328	Low	true	1,000.00	3,714.84	1,009.80	3,724.64	20.00	20.00	J-4007
J-329	Low	true	1,000.00	3,432.86	1,009.80	3,442.66	20.00	20.00	J-4007
J-330	Low	true	1,000.00	2,382.87	1,010.00	2,392.87	20.00	20.00	J-4007
J-331	Low	true	1,000.00	1,780.64	1,029.20	1,809.84	20.00	20.00	J-4007
J-332	High	true	1,000.00	5,000.00	1,020.97	5,020.97	20.00	32.21	J-3986
J-333	High	true	1,000.00	2,601.44	1,012.54	2,613.98	20.00	20.00	J-3986
J-334	High	true	1,000.00	2,839.48	1,007.06	2,846.53	20.00	20.00	J-3986
J-335	High	true	1,000.00	4,867.19	1,007.06	4,874.24	20.00	20.00	J-3986
J-336	High	true	1,000.00	2,543.21	1,012.35	2,555.56	20.00	20.00	J-3986
J-337	High	true	1,000.00	3,306.89	1,012.35	3,319.23	20.00	20.00	J-3986
J-338	High	true	1,000.00	2,224.73	1,012.54	2,237.28	20.00	20.00	J-3986
J-339	High	true	1,000.00	1,958.25	1,012.54	1,970.80	20.00	20.00	J-3986
J-340	High	true	1,000.00	5,000.00	1,023.32	5,023.32	20.00	43.76	J-3986
J-341	High	true	1,000.00	3,491.21	1,023.32	3,514.54	20.00	20.00	J-3986
J-342	Low	true	1,000.00	3,458.85	1,010.19	3,469.05	20.00	20.00	J-4007
J-343	Low	true	1,000.00	5,000.00	1,015.68	5,015.68	20.00	27.19	J-4007
J-344	High	true	1,000.00	2,445.68	1,004.51	2,450.19	20.00	20.00	J-3986
J-345	High	true	1,000.00	2,488.04	1,004.51	2,492.55	20.00	20.00	J-3986
J-346	Low	true	1,000.00	2,589.11	1,010.00	2,599.11	20.00	20.00	J-4007
J-347	Low	true	1,000.00	2,391.30	1,010.00	2,401.29	20.00	20.00	J-4007
J-348	Low	true	1,000.00	5,000.00	1,004.90	5,004.90	20.00	31.91	J-4007
J-349	Low	true	1,000.00	2,733.40	1,004.90	2,738.30	20.00	20.00	J-4007
J-350	Low	true	1,000.00	2,348.51	1,006.27	2,354.78	20.00	20.00	J-4007
J-351	Low	true	1,000.00	3,871.34	1,006.27	3,877.61	20.00	20.00	J-4007
J-352	High	true	1,000.00	3,032.23	1,007.84	3,040.07	20.00	20.00	J-3986
J-353	High	true	1,000.00	2,742.19	1,007.84	2,750.03	20.00	20.00	J-3986
J-354	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	26.98	J-3986
J-355	High	true	1,000.00	2,581.91	1,000.00	2,581.91	20.00	20.00	J-3986
J-356	YT	true	1,000.00	2,376.89	1,005.68	2,382.58	20.00	20.00	J-13
J-357	Low	true	1,000.00	3,718.75	1,000.00	3,718.75	20.00	20.00	J-4007
J-358	Low	true	1,000.00	3,889.89	1,016.66	3,906.55	20.00	20.00	J-4007
J-359	High	true	1,000.00	2,219.36	1,012.54	2,231.90	20.00	20.00	J-3986
J-360	High	true	1,000.00	2,711.55	1,010.58	2,722.13	20.00	20.00	J-3986
J-361	Low	true	1,000.00	3,036.74	1,010.00	3,046.74	20.00	20.00	J-4007
J-362	Low	true	1,000.00	2,645.39	1,010.00	2,655.38	20.00	20.00	J-4007
J-363	Low	true	1,000.00	3,090.21	1,007.64	3,097.85	20.00	20.00	J-4007
J-364	Low	true	1,000.00	2,928.59	1,007.64	2,936.23	20.00	20.00	J-4007
J-365	Low	true	1,000.00	2,917.85	1,016.86	2,934.70	20.00	20.00	J-4007
J-366	Low	true	1,000.00	4,454.59	1,016.86	4,471.45	20.00	20.00	J-4007
J-367	Low	true	1,000.00	3,011.35	1,010.00	3,021.35	20.00	20.00	J-4007
J-368	Low	true	1,000.00	2,947.39	1,010.00	2,957.38	20.00	20.00	J-4007
J-369	Low	true	1,000.00	2,869.14	1,002.16	2,871.30	20.00	20.00	J-4007
J-370	Low	true	1,000.00	3,070.43	1,002.16	3,072.59	20.00	20.00	J-4007
J-371	Low	true	1,000.00	2,754.52	1,010.00	2,764.51	20.00	20.00	J-4007
J-372	High	true	1,000.00	2,228.27	1,012.54	2,240.82	20.00	20.00	J-3986
J-373	High	true	1,000.00	2,692.87	1,012.54	2,705.42	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-374	High	true	1,000.00	1,914.25	1,007.06	1,921.30	20.00	20.00	J-3986
J-375	High	true	1,000.00	2,992.19	1,000.00	2,992.19	20.00	20.00	J-3986
J-376	High	true	1,000.00	2,284.42	1,000.00	2,284.42	20.00	20.00	J-3986
J-377	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	23.66	J-3986
J-378	High	true	1,000.00	2,021.73	1,012.54	2,034.27	20.00	20.00	J-3986
J-379	Low	true	1,000.00	4,250.98	1,006.27	4,257.25	20.00	20.00	J-4007
J-380	High	true	1,000.00	5,000.00	1,023.91	5,023.91	20.00	38.23	J-3986
J-381	High	true	1,000.00	3,261.23	1,011.37	3,272.60	20.00	20.00	J-3986
J-382	Low	true	1,000.00	4,516.60	1,013.92	4,530.52	20.00	20.00	J-4007
J-383	Low	true	1,000.00	3,206.30	1,013.92	3,220.22	20.00	20.00	J-4007
J-384	YT	true	1,000.00	2,011.35	1,008.23	2,019.58	20.00	20.00	J-3963
J-385	Low	true	1,000.00	2,720.09	1,005.10	2,725.19	20.00	20.00	J-4007
J-387	High	true	1,000.00	1,461.73	1,012.35	1,474.08	20.00	20.00	J-3986
J-388	High	true	1,000.00	2,019.10	1,012.35	2,031.45	20.00	20.00	J-3986
J-389	Zone	true	1,000.00	2,199.59	1,013.92	2,213.50	20.00	20.00	J-3975
J-390	Low	true	1,000.00	3,464.23	1,031.75	3,495.99	20.00	20.00	J-4007
J-391	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	48.19	J-3986
J-392	High	true	1,000.00	3,596.80	1,007.84	3,604.64	20.00	20.00	J-3986
J-393	Low	true	1,000.00	3,776.56	1,011.56	3,788.13	20.00	20.00	J-4007
J-394	Low	true	1,000.00	3,208.07	1,011.56	3,219.64	20.00	20.00	J-4008
J-395	Low	true	1,000.00	4,160.32	1,011.56	4,171.88	20.00	20.00	J-4007
J-396	Low	true	1,000.00	4,089.00	1,011.56	4,100.56	20.00	20.00	J-4007
J-397	Low	true	1,000.00	2,650.15	1,010.00	2,660.14	20.00	20.00	J-4007
J-398	Low	true	1,000.00	3,012.94	1,010.00	3,022.94	20.00	20.00	J-4007
J-399	Low	true	1,000.00	3,960.00	1,011.56	3,971.56	20.00	20.37	J-4007
J-400	Low	true	1,000.00	2,710.45	1,006.27	2,716.72	20.00	20.00	J-4007
J-401	Low	true	1,000.00	2,933.11	1,000.00	2,933.11	20.00	20.00	J-4007
J-402	High	true	1,000.00	1,767.52	1,012.35	1,779.87	20.00	20.00	J-3986
J-403	High	true	1,000.00	4,221.68	1,000.00	4,221.68	20.00	20.00	J-3986
J-404	Low	true	1,000.00	4,145.74	1,011.56	4,157.30	20.00	20.00	J-4007
J-405	Low	true	1,000.00	4,948.27	1,011.56	4,959.84	20.00	20.00	J-4008
J-406	YT	true	1,000.00	2,229.61	1,003.53	2,233.14	20.00	20.00	J-569
J-407	Low	true	1,000.00	3,025.39	1,010.00	3,035.39	20.00	20.00	J-4007
J-408	Low	true	1,000.00	3,015.38	1,010.00	3,025.38	20.00	20.00	J-4007
J-409	Low	true	1,000.00	2,069.40	1,008.23	2,077.63	20.00	20.00	J-4007
J-410	Low	true	1,000.00	1,944.82	1,008.23	1,953.06	20.00	20.00	J-4008
J-411	Low	true	1,000.00	2,928.96	1,008.43	2,937.38	20.00	20.00	J-4007
J-412	Low	true	1,000.00	2,920.53	1,006.27	2,926.80	20.00	20.00	J-4008
J-413	Low	true	1,000.00	1,539.31	1,010.00	1,549.30	20.00	20.00	J-4007
J-414	Low	true	1,000.00	2,862.55	1,006.27	2,868.82	20.00	20.00	J-4007
J-415	Low	true	1,000.00	3,574.34	1,000.00	3,574.34	20.00	20.00	J-4007
J-416	High	true	1,000.00	2,146.00	1,003.72	2,149.72	20.00	20.00	J-3986
J-417	High	true	1,000.00	1,816.53	1,003.72	1,820.25	20.00	20.00	J-3986
J-418	High	true	1,000.00	3,398.19	1,000.00	3,398.19	20.00	20.00	J-3986
J-419	High	true	1,000.00	1,240.05	1,014.50	1,254.56	20.00	20.00	J-3986
J-420	High	true	1,000.00	1,163.67	1,014.50	1,178.17	20.00	20.00	J-3986
J-421	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	34.07	J-3986
J-422	High	true	1,000.00	2,523.32	1,007.84	2,531.16	20.00	20.00	J-3986
J-423	Low	true	1,000.00	1,703.67	1,016.46	1,720.14	20.00	20.00	J-4007
J-424	Low	true	1,000.00	2,589.36	1,004.70	2,594.06	20.00	20.00	J-4007
J-425	Low	true	1,000.00	2,376.53	1,004.70	2,381.23	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-426	Low	true	1,000.00	4,315.43	1,010.19	4,325.62	20.00	20.00	J-4007
J-427	Low	true	1,000.00	3,177.61	1,004.70	3,182.32	20.00	20.00	J-4007
J-428	Low	true	1,000.00	2,578.13	1,002.16	2,580.28	20.00	20.00	J-4007
J-429	Low	true	1,000.00	3,863.28	1,004.51	3,867.79	20.00	20.00	J-4007
J-430	Low	true	1,000.00	2,429.50	1,000.00	2,429.50	20.00	20.00	J-4008
J-431	High	true	1,000.00	2,334.35	1,004.12	2,338.47	20.00	20.00	J-3986
J-432	High	true	1,000.00	2,494.38	1,004.12	2,498.50	20.00	20.00	J-3986
J-433	Low	true	1,000.00	3,002.93	1,028.62	3,031.55	20.00	20.00	J-4007
J-434	Low	true	1,000.00	2,944.21	1,011.56	2,955.78	20.00	20.00	J-4007
J-435	Low	true	1,000.00	2,234.31	1,004.51	2,238.82	20.00	20.00	J-4007
J-436	Low	true	1,000.00	1,935.00	1,004.51	1,939.51	20.00	20.00	J-4007
J-437	High	true	1,000.00	2,880.37	1,000.00	2,880.37	20.00	20.00	J-3986
J-438	Low	true	1,000.00	3,113.40	1,007.64	3,121.05	20.00	20.00	J-4007
J-439	Low	true	1,000.00	3,891.36	1,016.66	3,908.02	20.00	20.00	J-4007
J-440	Low	true	1,000.00	1,771.85	1,016.66	1,788.51	20.00	20.00	J-4007
J-441	Low	true	1,000.00	2,990.66	1,030.77	3,021.43	20.00	20.00	J-4007
J-442	Low	true	1,000.00	4,892.09	1,016.86	4,908.95	20.00	20.00	J-4007
J-443	High	true	1,000.00	2,705.81	1,021.76	2,727.57	20.00	20.00	J-3986
J-444	High	true	1,000.00	2,518.68	1,021.76	2,540.43	20.00	20.00	J-3986
J-445	Low	true	1,000.00	2,741.58	1,016.66	2,758.24	20.00	20.00	J-4007
J-446	Low	true	1,000.00	1,570.01	1,036.65	1,606.66	20.00	20.00	J-4007
J-447	Low	true	1,000.00	2,375.98	1,004.70	2,380.68	20.00	20.00	J-4007
J-448	Low	true	1,000.00	2,497.68	1,004.70	2,502.38	20.00	20.00	J-4007
J-449	Low	true	1,000.00	3,172.12	1,013.92	3,186.04	20.00	20.00	J-4007
J-450	Low	true	1,000.00	3,163.82	1,013.92	3,177.73	20.00	20.00	J-4007
J-451	Low	true	1,000.00	2,614.38	1,005.49	2,619.87	20.00	20.00	J-4007
J-452	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	25.59	J-4007
J-453	Low	true	1,000.00	2,834.38	1,005.49	2,839.86	20.00	20.00	J-4007
J-454	Zone	true	1,000.00	2,740.00	1,005.49	2,745.49	20.00	20.77	J-3975
J-455	Low	true	1,000.00	3,075.44	1,013.92	3,089.36	20.00	20.00	J-4007
J-456	High	true	1,000.00	5,000.00	1,007.06	5,007.06	20.00	36.02	J-3986
J-457	High	true	1,000.00	2,146.48	1,007.06	2,153.54	20.00	20.00	J-3986
J-458	High	true	1,000.00	1,637.76	1,004.70	1,642.46	20.00	20.00	J-3986
J-459	High	true	1,000.00	1,647.34	1,004.70	1,652.04	20.00	20.00	J-3986
J-461	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	52.88	J-3986
J-462	Low	true	1,000.00	1,800.96	1,000.00	1,800.96	20.00	20.00	J-4007
J-463	Low	true	1,000.00	3,257.03	1,010.19	3,267.22	20.00	20.00	J-4007
J-464	Low	true	1,000.00	2,993.04	1,010.19	3,003.23	20.00	20.00	J-4007
J-465	Low	true	1,000.00	2,641.72	1,004.90	2,646.62	20.00	20.00	J-4007
J-466	Low	true	1,000.00	2,200.01	1,015.09	2,215.10	20.00	20.00	J-4007
J-467	Zone	true	1,000.00	2,468.02	1,014.90	2,482.91	20.00	20.00	J-3975
J-468	High	true	1,000.00	2,624.51	1,014.90	2,639.41	20.00	20.00	J-3986
J-469	Low	true	1,000.00	3,582.03	1,002.74	3,584.78	20.00	20.00	J-4007
J-470	Low	true	1,000.00	3,122.19	1,002.74	3,124.94	20.00	20.00	J-4007
J-471	High	true	1,000.00	1,193.54	1,007.45	1,200.99	20.00	20.00	J-3986
J-472	High	true	1,000.00	1,170.78	1,007.45	1,178.22	20.00	20.00	J-3986
J-473	Low	true	1,000.00	2,429.63	1,010.19	2,439.82	20.00	20.00	J-4007
J-474	Low	false	1,000.00	3,817.78	1,015.68	3,833.46	20.00	19.44	J-4007
J-475	Low	true	1,000.00	3,828.86	1,011.56	3,840.42	20.00	20.00	J-4007
J-476	Low	true	1,000.00	3,173.95	1,011.56	3,185.51	20.00	20.00	J-4007
J-477	Low	true	1,000.00	2,901.98	1,011.56	2,913.54	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-478	YT	true	1,000.00	2,150.64	1,008.23	2,158.87	20.00	20.00	J-2717
J-479	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	39.58	J-4007
J-480	Low	true	1,000.00	3,154.42	1,010.19	3,164.61	20.00	20.00	J-4007
J-481	Low	true	1,000.00	2,955.44	1,002.16	2,957.60	20.00	20.00	J-4007
J-482	Low	true	1,000.00	2,175.05	1,002.16	2,177.20	20.00	20.00	J-4007
J-483	High	true	1,000.00	4,266.85	1,007.06	4,273.90	20.00	20.00	J-3986
J-484	High	true	1,000.00	2,208.86	1,000.00	2,208.86	20.00	20.00	J-3986
J-485	Low	true	1,000.00	5,000.00	1,007.64	5,007.64	20.00	20.46	J-4007
J-486	Low	true	1,000.00	2,974.00	1,007.64	2,981.64	20.00	20.00	J-4007
J-487	YT	true	1,000.00	1,782.90	1,011.17	1,794.07	20.00	20.00	J-3870
J-488	Low	true	1,000.00	1,798.95	1,008.23	1,807.18	20.00	20.00	J-4007
J-489	Low	true	1,000.00	1,879.27	1,008.23	1,887.50	20.00	20.00	J-4007
J-490	High	true	1,000.00	1,406.98	1,007.06	1,414.04	20.00	20.00	J-3986
J-491	High	true	1,000.00	1,632.45	1,007.06	1,639.50	20.00	20.00	J-3986
J-492	High	true	1,000.00	1,717.22	1,004.70	1,721.93	20.00	20.00	J-3986
J-493	Low	true	1,000.00	2,116.46	1,002.74	2,119.20	20.00	20.00	J-4007
J-494	Low	true	1,000.00	2,829.96	1,002.74	2,832.70	20.00	20.00	J-4007
J-495	High	true	1,000.00	3,685.55	1,011.17	3,696.72	20.00	20.00	J-3986
J-496	Zone	true	1,000.00	3,795.65	1,011.17	3,806.83	20.00	20.00	J-3975
J-497	Low	true	1,000.00	5,000.00	1,016.46	5,016.46	20.00	32.75	J-4007
J-498	YT	true	1,000.00	2,958.01	1,040.96	2,998.97	20.00	20.00	J-284
J-499	Low	true	1,000.00	2,925.05	1,023.52	2,948.57	20.00	20.00	J-4007
J-500	Low	true	1,000.00	4,755.13	1,009.21	4,764.34	20.00	20.00	J-4007
J-501	YT	true	1,000.00	2,226.44	1,003.53	2,229.97	20.00	20.00	J-294
J-502	High	true	1,000.00	2,791.38	1,008.43	2,799.81	20.00	20.00	J-3986
J-503	High	true	1,000.00	5,000.00	1,008.43	5,008.43	20.00	26.71	J-3986
J-504	Low	true	1,000.00	2,617.74	1,016.07	2,633.81	20.00	20.00	J-4007
J-505	Low	true	1,000.00	3,807.37	1,016.07	3,823.45	20.00	20.00	J-4007
J-506	Low	true	1,000.00	3,312.89	1,000.00	3,312.89	20.00	20.00	J-4007
J-507	Low	true	1,000.00	3,287.50	1,010.19	3,297.69	20.00	20.00	J-4007
J-508	Zone	true	1,000.00	4,507.32	1,011.17	4,518.50	20.00	20.00	J-3975
J-509	Low	true	1,000.00	3,441.04	1,016.86	3,457.90	20.00	20.00	J-4007
J-510	Low	true	1,000.00	2,497.68	1,016.86	2,514.54	20.00	20.00	J-4007
J-511	High	true	1,000.00	1,683.47	1,007.06	1,690.53	20.00	20.00	J-3986
J-512	High	true	1,000.00	1,554.99	1,007.06	1,562.05	20.00	20.00	J-3986
J-513	Low	true	1,000.00	2,111.33	1,005.10	2,116.42	20.00	20.00	J-4007
J-514	Low	true	1,000.00	3,656.98	1,000.00	3,656.98	20.00	20.00	J-4007
J-515	Low	true	1,000.00	3,313.96	1,013.92	3,327.88	20.00	20.00	J-4007
J-516	Low	true	1,000.00	3,029.54	1,006.08	3,035.62	20.00	20.00	J-4007
J-517	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	20.64	J-4007
J-518	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	49.86	J-3986
J-519	High	true	1,000.00	3,898.19	1,007.84	3,906.03	20.00	20.00	J-3986
J-520	High	true	1,000.00	4,138.92	1,000.00	4,138.92	20.00	20.00	J-3986
J-521	YT	true	1,000.00	2,021.36	1,004.70	2,026.07	20.00	20.00	J-532
J-522	YT	true	1,000.00	2,217.77	1,004.70	2,222.48	20.00	20.00	J-521
J-523	Low	true	1,000.00	3,766.36	1,004.51	3,770.87	20.00	20.00	J-4007
J-524	Low	true	1,000.00	2,803.59	1,004.51	2,808.10	20.00	20.00	J-4007
J-525	Low	true	1,000.00	2,852.29	1,006.08	2,858.37	20.00	20.00	J-4007
J-526	High	true	1,000.00	4,288.21	1,004.12	4,292.32	20.00	20.00	J-3986
J-527	YT	true	1,000.00	2,988.65	1,017.05	3,005.70	20.00	20.00	J-1046
J-528	Low	true	1,000.00	2,286.32	1,005.49	2,291.80	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-529	Low	true	1,000.00	2,271.61	1,005.49	2,277.09	20.00	20.00	J-4007
J-530	Low	true	1,000.00	4,249.15	1,003.53	4,252.67	20.00	20.00	J-4007
J-531	Low	true	1,000.00	2,391.05	1,004.51	2,395.56	20.00	20.00	J-4007
J-532	YT	true	1,000.00	1,995.18	1,000.00	1,995.18	20.00	20.00	J-521
J-533	Low	true	1,000.00	4,090.45	1,005.49	4,095.94	20.00	20.00	J-4007
J-534	Low	true	1,000.00	3,003.42	1,005.49	3,008.91	20.00	20.00	J-4007
J-535	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	35.09	J-4007
J-536	Low	true	1,000.00	3,058.35	1,010.19	3,068.54	20.00	20.00	J-4007
J-537	High	true	1,000.00	2,346.19	1,004.51	2,350.70	20.00	20.00	J-3986
J-538	High	true	1,000.00	2,339.84	1,004.51	2,344.35	20.00	20.00	J-3986
J-539	YT	true	1,000.00	2,174.26	1,008.23	2,182.49	20.00	20.00	J-293
J-540	High	true	1,000.00	3,266.48	1,004.12	3,270.60	20.00	20.00	J-3986
J-541	Low	true	1,000.00	3,052.73	1,004.90	3,057.63	20.00	20.00	J-4007
J-542	Low	true	1,000.00	4,266.11	1,004.90	4,271.01	20.00	20.00	J-4007
J-543	High	true	1,000.00	2,402.40	1,014.11	2,416.52	20.00	20.00	J-3986
J-544	High	true	1,000.00	1,567.99	1,005.29	1,573.29	20.00	20.00	J-3986
J-545	Low	true	1,000.00	3,483.03	1,004.90	3,487.93	20.00	20.00	J-4007
J-546	Low	true	1,000.00	2,617.92	1,007.64	2,625.56	20.00	20.00	J-4007
J-547	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	38.70	J-4007
J-548	Low	true	1,000.00	3,348.63	1,011.56	3,360.20	20.00	20.00	J-4007
J-549	Low	true	1,000.00	3,067.02	1,000.00	3,067.02	20.00	20.00	J-4008
J-550	Low	true	1,000.00	3,530.52	1,004.90	3,535.42	20.00	20.00	J-4008
J-551	Zone	true	1,000.00	3,797.24	1,005.29	3,802.53	20.00	20.00	J-3975
J-552	Zone	true	1,000.00	5,000.00	1,005.29	5,005.29	20.00	42.30	J-3975
J-553	Low	true	1,000.00	2,153.99	1,018.42	2,172.42	20.00	20.00	J-4007
J-554	Low	true	1,000.00	4,340.58	1,018.42	4,359.00	20.00	20.00	J-4007
J-555	Low	true	1,000.00	3,174.19	1,007.64	3,181.84	20.00	20.00	J-4007
J-556	Low	true	1,000.00	2,606.32	1,007.64	2,613.97	20.00	20.00	J-4007
J-557	High	true	1,000.00	2,064.58	1,010.58	2,075.16	20.00	20.00	J-3986
J-558	Low	true	1,000.00	3,217.16	1,011.56	3,228.73	20.00	20.00	J-4007
J-559	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	37.55	J-4007
J-560	Low	true	1,000.00	2,764.77	1,002.74	2,767.51	20.00	20.00	J-4007
J-561	Low	true	1,000.00	3,143.55	1,013.92	3,157.47	20.00	20.00	J-4007
J-562	High	true	1,000.00	3,415.04	1,009.02	3,424.06	20.00	20.00	J-3986
J-563	High	true	1,000.00	2,100.22	1,009.02	2,109.24	20.00	20.00	J-3986
J-564	High	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	41.35	J-3986
J-565	High	true	1,000.00	3,615.60	1,014.11	3,629.71	20.00	20.00	J-3986
J-566	YT	true	1,000.00	2,211.79	1,004.70	2,216.50	20.00	20.00	J-296
J-567	High	true	1,000.00	5,000.00	1,020.38	5,020.38	20.00	47.72	J-3986
J-568	High	true	1,000.00	2,620.73	1,020.38	2,641.11	20.00	20.00	J-3986
J-569	YT	true	1,000.00	2,052.12	1,003.53	2,055.65	20.00	20.00	J-570
J-570	YT	true	1,000.00	2,037.84	1,003.53	2,041.37	20.00	20.00	J-569
J-571	Low	true	1,000.00	2,672.24	1,005.49	2,677.73	20.00	20.00	J-4007
J-572	Low	true	1,000.00	3,708.37	1,016.07	3,724.45	20.00	20.00	J-4007
J-573	Low	true	1,000.00	2,612.43	1,016.07	2,628.50	20.00	20.00	J-4007
J-574	Low	true	1,000.00	2,928.83	1,007.64	2,936.48	20.00	20.00	J-4007
J-575	Low	true	1,000.00	2,547.85	1,000.00	2,547.85	20.00	20.00	J-4007
J-576	Low	true	1,000.00	3,472.78	1,008.23	3,481.01	20.00	20.00	J-4007
J-577	Low	true	1,000.00	2,248.54	1,007.64	2,256.18	20.00	20.00	J-4007
J-578	High	true	1,000.00	3,227.29	1,008.43	3,235.72	20.00	20.00	J-3986
J-579	High	true	1,000.00	4,270.02	1,000.00	4,270.02	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-580	High	true	1,000.00	1,930.54	1,000.00	1,930.54	20.00	20.00	J-3986
J-581	High	true	1,000.00	1,719.54	1,002.74	1,722.29	20.00	20.00	J-3986
J-582	YT	true	1,000.00	2,907.59	1,000.00	2,907.59	20.00	20.00	J-522
J-583	High	true	1,000.00	1,546.88	1,007.84	1,554.71	20.00	20.00	J-3986
J-584	High	true	1,000.00	1,384.95	1,005.29	1,390.24	20.00	20.00	J-3986
J-585	YT	true	1,000.00	2,413.82	1,005.49	2,419.31	20.00	20.00	J-586
J-586	YT	true	1,000.00	3,272.58	1,005.68	3,278.27	20.00	20.00	J-3450
J-587	High	true	1,000.00	2,200.44	1,004.51	2,204.95	20.00	20.00	J-3986
J-588	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	30.48	J-4007
J-589	High	true	1,000.00	1,598.39	1,009.80	1,608.19	20.00	20.00	J-3986
J-590	High	true	1,000.00	1,427.07	1,009.80	1,436.87	20.00	20.00	J-3986
J-591	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.19	J-4007
J-592	Low	true	1,000.00	2,469.36	1,000.00	2,469.36	20.00	20.00	J-4007
J-593	High	true	1,000.00	3,275.76	1,014.11	3,289.87	20.00	20.00	J-3986
J-594	Low	true	1,000.00	3,218.88	1,010.19	3,229.07	20.00	20.00	J-4007
J-595	Low	true	1,000.00	5,000.00	1,008.23	5,008.23	20.00	42.50	J-4007
J-596	Low	true	1,000.00	3,311.52	1,022.15	3,333.67	20.00	20.00	J-4007
J-597	Low	true	1,000.00	2,340.33	1,002.74	2,343.08	20.00	20.00	J-4007
J-598	Low	true	1,000.00	3,744.26	1,008.23	3,752.49	20.00	20.00	J-4007
J-600	Low	true	1,000.00	2,307.74	1,017.05	2,324.79	20.00	20.00	J-4007
J-601	Low	true	1,000.00	2,893.80	1,016.07	2,909.87	20.00	20.00	J-4007
J-602	Low	true	1,000.00	4,013.92	1,016.07	4,029.99	20.00	20.00	J-4007
J-603	High	true	1,000.00	2,224.12	1,002.74	2,226.86	20.00	20.00	J-3986
J-604	High	true	1,000.00	1,691.04	1,000.00	1,691.04	20.00	20.00	J-3986
J-605	Low	true	1,000.00	2,398.93	1,009.02	2,407.94	20.00	20.00	J-4007
J-606	Low	true	1,000.00	2,286.93	1,009.02	2,295.94	20.00	20.00	J-4007
J-607	High	true	1,000.00	1,521.24	1,007.06	1,528.30	20.00	20.00	J-3986
J-608	High	true	1,000.00	2,123.90	1,002.74	2,126.65	20.00	20.00	J-3986
J-609	High	true	1,000.00	1,870.73	1,002.74	1,873.47	20.00	20.00	J-3986
J-610	High	true	1,000.00	2,578.74	1,012.54	2,591.28	20.00	20.00	J-3986
J-611	High	true	1,000.00	2,501.22	1,000.00	2,501.22	20.00	20.00	J-3986
J-612	High	true	1,000.00	1,445.98	1,007.45	1,453.43	20.00	20.00	J-3986
J-613	High	true	1,000.00	1,272.77	1,007.45	1,280.21	20.00	20.00	J-3986
J-614	High	true	1,000.00	1,975.77	1,007.84	1,983.61	20.00	20.00	J-3986
J-615	High	true	1,000.00	1,683.29	1,007.84	1,691.13	20.00	20.00	J-3986
J-616	High	true	1,000.00	2,129.64	1,004.51	2,134.15	20.00	20.00	J-3986
J-617	High	true	1,000.00	2,487.30	1,004.51	2,491.81	20.00	20.00	J-3986
J-618	Low	true	1,000.00	2,582.89	1,016.07	2,598.96	20.00	20.00	J-4007
J-619	High	true	1,000.00	4,005.00	1,008.23	4,013.24	20.00	20.00	J-3986
J-620	High	true	1,000.00	5,000.00	1,008.23	5,008.23	20.00	40.74	J-3986
J-621	High	true	1,000.00	2,865.97	1,005.10	2,871.06	20.00	20.00	J-3986
J-622	High	true	1,000.00	1,963.62	1,005.10	1,968.72	20.00	20.00	J-3986
J-623	High	true	1,000.00	2,161.25	1,004.51	2,165.76	20.00	20.00	J-3986
J-624	High	true	1,000.00	2,531.49	1,002.74	2,534.24	20.00	20.00	J-3986
J-625	High	true	1,000.00	1,032.14	1,002.74	1,034.88	20.00	20.00	J-3986
J-626	High	true	1,000.00	1,039.37	1,002.74	1,042.11	20.00	20.00	J-3986
J-627	High	true	1,000.00	2,328.86	1,009.02	2,337.87	20.00	20.00	J-3986
J-628	High	true	1,000.00	3,109.86	1,009.02	3,118.88	20.00	20.00	J-3986
J-629	High	true	1,000.00	1,920.41	1,002.74	1,923.15	20.00	20.00	J-3986
J-630	High	true	1,000.00	1,625.12	1,002.74	1,627.87	20.00	20.00	J-3986
J-631	High	true	1,000.00	3,537.11	1,019.80	3,556.91	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-632	High	true	1,000.00	2,016.60	1,007.84	2,024.44	20.00	20.00	J-3986
J-633	High	true	1,000.00	5,000.00	1,007.45	5,007.45	20.00	36.42	J-3986
J-634	High	true	1,000.00	3,180.79	1,007.45	3,188.23	20.00	20.00	J-3986
J-635	High	true	1,000.00	3,710.94	1,004.12	3,715.05	20.00	20.00	J-3986
J-636	High	true	1,000.00	3,627.20	1,009.60	3,636.80	20.00	20.00	J-3986
J-637	High	true	1,000.00	2,484.38	1,009.60	2,493.98	20.00	20.00	J-3986
J-638	High	true	1,000.00	2,919.92	1,011.37	2,931.29	20.00	20.00	J-3986
J-639	Low	true	1,000.00	2,462.89	1,006.08	2,468.97	20.00	20.00	J-4007
J-640	Low	true	1,000.00	4,944.34	1,006.08	4,950.41	20.00	20.00	J-4007
J-641	Low	true	1,000.00	2,811.65	1,016.86	2,828.50	20.00	20.00	J-4007
J-642	Low	true	1,000.00	3,501.71	1,000.00	3,501.71	20.00	20.00	J-4008
J-643	Low	true	1,000.00	2,734.50	1,002.74	2,737.24	20.00	20.00	J-4007
J-644	Low	true	1,000.00	4,090.82	1,008.23	4,099.05	20.00	20.00	J-4007
J-645	High	true	1,000.00	2,486.82	1,020.38	2,507.20	20.00	20.00	J-3986
J-646	High	true	1,000.00	2,349.85	1,028.22	2,378.08	20.00	20.00	J-3986
J-647	High	true	1,000.00	2,198.73	1,007.84	2,206.57	20.00	20.00	J-3986
J-648	High	true	1,000.00	2,438.23	1,007.84	2,446.07	20.00	20.00	J-3986
J-649	Zone	true	1,000.00	3,585.08	1,008.23	3,593.31	20.00	20.00	J-3975
J-650	High	true	1,000.00	1,503.17	1,000.00	1,503.17	20.00	20.00	J-3986
J-651	High	true	1,000.00	3,169.80	1,016.27	3,186.07	20.00	20.00	J-3986
J-652	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	52.70	J-3986
J-653	High	true	1,000.00	2,284.91	1,007.45	2,292.36	20.00	20.00	J-3986
J-654	High	true	1,000.00	2,929.93	1,014.11	2,944.04	20.00	20.00	J-3986
J-655	Zone	true	1,000.00	3,526.49	1,014.11	3,540.60	20.00	20.00	J-3975
J-656	Low	true	1,000.00	2,651.37	1,004.90	2,656.27	20.00	20.00	J-4007
J-657	High	true	1,000.00	1,693.61	1,004.51	1,698.12	20.00	20.47	J-3986
J-658	Zone	true	1,000.00	3,105.71	1,005.29	3,111.01	20.00	20.00	J-3975
J-659	High	true	1,000.00	1,383.20	1,007.45	1,390.65	20.00	20.00	J-3986
J-660	High	true	1,000.00	3,663.09	1,004.12	3,667.20	20.00	20.00	J-3986
J-661	High	true	1,000.00	5,000.00	1,024.11	5,024.11	20.00	40.46	J-3986
J-662	High	true	1,000.00	5,000.00	1,023.52	5,023.52	20.00	68.13	J-3986
J-663	Zone	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	63.76	J-3975
J-664	High	true	1,000.00	2,944.95	1,014.90	2,959.84	20.00	20.00	J-3986
J-665	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	33.58	J-3986
J-666	High	true	1,000.00	2,321.66	1,007.84	2,329.50	20.00	20.00	J-3986
J-667	High	true	1,000.00	3,259.89	1,002.74	3,262.63	20.00	20.00	J-3986
J-668	Low	true	1,000.00	2,240.60	1,016.07	2,256.67	20.00	20.00	J-4007
J-669	High	true	1,000.00	3,409.79	1,002.74	3,412.53	20.00	20.00	J-3986
J-670	Low	true	1,000.00	2,293.82	1,008.23	2,302.06	20.00	20.00	J-4007
J-671	Low	true	1,000.00	3,678.59	1,008.23	3,686.82	20.00	20.00	J-4007
J-672	Low	true	1,000.00	3,030.52	1,010.00	3,040.51	20.00	20.00	J-4007
J-673	High	true	1,000.00	2,596.80	1,011.96	2,608.76	20.00	20.00	J-3986
J-674	High	true	1,000.00	2,822.02	1,011.96	2,833.98	20.00	20.00	J-3986
J-675	Low	true	1,000.00	1,525.45	1,016.66	1,542.11	20.00	20.00	J-4007
J-676	Low	true	1,000.00	2,972.17	1,000.00	2,972.17	20.00	20.00	J-4007
J-677	Low	true	1,000.00	2,863.40	1,000.00	2,863.40	20.00	20.00	J-4007
J-678	High	true	1,000.00	1,574.46	1,002.16	1,576.62	20.00	20.00	J-3986
J-679	High	true	1,000.00	1,422.73	1,002.16	1,424.89	20.00	20.00	J-3986
J-680	Low	true	1,000.00	2,756.47	1,016.86	2,773.33	20.00	20.00	J-4007
J-681	Low	true	1,000.00	3,775.64	1,016.86	3,792.49	20.00	20.00	J-4007
J-682	Low	true	1,000.00	3,412.96	1,000.00	3,412.96	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-683	High	true	1,000.00	1,669.66	1,007.06	1,676.72	20.00	20.00	J-3986
J-684	High	true	1,000.00	1,546.33	1,007.06	1,553.38	20.00	20.00	J-3986
J-685	High	true	1,000.00	2,410.52	1,000.00	2,410.52	20.00	20.00	J-3986
J-686	High	true	1,000.00	2,369.63	1,004.51	2,374.14	20.00	20.00	J-3986
J-689	Low	true	1,000.00	2,115.60	1,019.40	2,135.00	20.00	20.00	J-4007
J-690	High	true	1,000.00	3,352.91	1,011.96	3,364.86	20.00	20.00	J-3986
J-691	High	true	1,000.00	2,965.58	1,011.96	2,977.53	20.00	20.00	J-3986
J-692	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	52.75	J-3986
J-693	High	true	1,000.00	2,477.54	1,016.27	2,493.81	20.00	20.00	J-3986
J-694	High	true	1,000.00	2,075.81	1,014.90	2,090.70	20.00	20.00	J-3986
J-695	Low	true	1,000.00	2,694.46	1,004.90	2,699.36	20.00	20.00	J-4007
J-696	Zone	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	37.84	J-3975
J-697	Zone	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	36.05	J-3975
J-698	High	true	1,000.00	3,958.98	1,005.10	3,964.08	20.00	20.00	J-3986
J-699	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	50.54	J-3986
J-700	High	true	1,000.00	1,794.80	1,005.10	1,799.90	20.00	20.00	J-3986
J-701	High	true	1,000.00	2,531.49	1,000.00	2,531.49	20.00	20.00	J-3986
J-702	High	true	1,000.00	1,790.16	1,002.74	1,792.91	20.00	20.00	J-3986
J-703	High	true	1,000.00	2,274.05	1,004.51	2,278.56	20.00	20.00	J-3986
J-704	Low	true	1,000.00	5,000.00	1,029.79	5,029.79	20.00	29.53	J-4007
J-705	Low	true	1,000.00	1,649.60	1,000.00	1,649.60	20.00	20.00	J-4007
J-706	Low	true	1,000.00	3,148.19	1,005.49	3,153.68	20.00	20.00	J-4007
J-707	High	true	1,000.00	4,845.46	1,005.49	4,850.95	20.00	20.00	J-3986
J-708	Low	true	1,000.00	4,616.46	1,000.00	4,616.46	20.00	20.00	J-4007
J-709	High	true	1,000.00	1,264.89	1,002.16	1,267.05	20.00	20.00	J-3986
J-710	High	true	1,000.00	1,234.13	1,002.16	1,236.29	20.00	20.00	J-3986
J-711	High	true	1,000.00	3,213.26	1,011.17	3,224.43	20.00	20.00	J-3986
J-712	Zone	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	30.02	J-3975
J-713	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	23.49	J-4007
J-714	High	true	1,000.00	2,453.25	1,004.12	2,457.36	20.00	20.00	J-3986
J-715	High	true	1,000.00	1,607.67	1,012.54	1,620.21	20.00	20.00	J-3986
J-716	High	true	1,000.00	3,995.85	1,000.00	3,995.85	20.00	20.00	J-3986
J-717	High	true	1,000.00	3,264.40	1,011.17	3,275.58	20.00	20.00	J-3986
J-718	High	true	1,000.00	4,959.47	1,014.11	4,973.58	20.00	20.00	J-3986
J-719	Low	true	1,000.00	4,316.89	1,004.51	4,321.40	20.00	20.00	J-4007
J-720	Low	true	1,000.00	2,588.99	1,004.51	2,593.50	20.00	20.00	J-4007
J-721	High	true	1,000.00	2,021.73	1,007.84	2,029.57	20.00	20.00	J-3986
J-722	High	true	1,000.00	1,868.77	1,007.84	1,876.61	20.00	20.00	J-3986
J-723	Low	true	1,000.00	2,803.96	1,016.86	2,820.81	20.00	20.00	J-4007
J-724	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	63.57	J-3986
J-725	High	true	1,000.00	5,000.00	1,008.23	5,008.23	20.00	50.49	J-3986
J-726	High	true	1,000.00	1,602.84	1,012.54	1,615.39	20.00	20.00	J-3986
J-727	High	true	1,000.00	1,911.07	1,012.54	1,923.62	20.00	20.00	J-3986
J-728	Low	true	1,000.00	2,672.24	1,016.07	2,688.31	20.00	20.00	J-4007
J-729	Low	true	1,000.00	1,912.35	1,016.07	1,928.43	20.00	20.00	J-4007
J-730	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	41.09	J-4007
J-731	Low	true	1,000.00	4,811.77	1,016.66	4,828.43	20.00	20.00	J-4007
J-732	High	true	1,000.00	2,088.26	1,007.84	2,096.10	20.00	20.00	J-3986
J-733	High	true	1,000.00	1,891.97	1,007.84	1,899.81	20.00	20.00	J-3986
J-734	High	true	1,000.00	2,038.45	1,003.72	2,042.18	20.00	20.00	J-3986
J-735	High	true	1,000.00	4,383.55	1,008.43	4,391.97	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-736	High	true	1,000.00	2,746.58	1,008.43	2,755.01	20.00	20.00	J-3986
J-737	High	true	1,000.00	1,623.90	1,004.51	1,628.41	20.00	20.00	J-3986
J-738	Low	true	1,000.00	1,924.13	1,006.08	1,930.21	20.00	20.00	J-4007
J-739	High	true	1,000.00	3,511.23	1,000.00	3,511.23	20.00	20.00	J-3986
J-740	Low	true	1,000.00	2,477.78	1,016.86	2,494.64	20.00	20.00	J-4007
J-741	Low	true	1,000.00	3,478.15	1,000.00	3,478.15	20.00	20.00	J-4007
J-742	YT	true	1,000.00	1,874.08	1,008.23	1,882.32	20.00	20.00	J-279
J-743	High	true	1,000.00	1,150.15	1,002.74	1,152.89	20.00	20.00	J-3986
J-744	High	true	1,000.00	1,255.05	1,002.74	1,257.80	20.00	20.00	J-3986
J-745	High	true	1,000.00	2,173.34	1,011.56	2,184.90	20.00	20.00	J-3986
J-746	Low	true	1,000.00	4,465.82	1,016.66	4,482.48	20.00	20.00	J-4007
J-747	High	true	1,000.00	3,097.78	1,004.12	3,101.89	20.00	20.00	J-3986
J-748	High	true	1,000.00	2,849.85	1,004.12	2,853.97	20.00	20.00	J-3986
J-749	Low	true	1,000.00	3,070.31	1,010.00	3,080.31	20.00	20.00	J-4007
J-750	High	true	1,000.00	3,060.30	1,005.10	3,065.40	20.00	20.00	J-3986
J-751	High	true	1,000.00	2,584.59	1,005.10	2,589.69	20.00	20.00	J-3986
J-752	High	true	1,000.00	2,087.04	1,007.84	2,094.88	20.00	20.00	J-3986
J-753	Low	true	1,000.00	2,225.71	1,007.64	2,233.35	20.00	20.00	J-4007
J-754	Low	true	1,000.00	3,863.40	1,008.43	3,871.83	20.00	20.00	J-4007
J-755	High	true	1,000.00	4,685.55	1,016.86	4,702.40	20.00	20.00	J-3986
J-756	High	true	1,000.00	2,274.66	1,009.02	2,283.67	20.00	20.00	J-3986
J-757	High	false	1,000.00	1,726.44	1,000.00	1,726.44	20.00	19.84	J-3986
J-758	High	true	1,000.00	1,887.57	1,000.00	1,887.57	20.00	20.00	J-3986
J-759	Low	true	1,000.00	1,888.79	1,005.10	1,893.89	20.00	20.00	J-4007
J-760	High	true	1,000.00	4,382.32	1,007.84	4,390.16	20.00	20.00	J-3986
J-761	High	true	1,000.00	2,182.01	1,007.84	2,189.85	20.00	20.00	J-3986
J-762	Low	true	1,000.00	5,000.00	1,004.90	5,004.90	20.00	37.50	J-4007
J-763	Low	true	1,000.00	3,287.11	1,004.90	3,292.01	20.00	20.00	J-4007
J-764	Low	true	1,000.00	2,226.56	1,011.56	2,238.13	20.00	20.00	J-4007
J-765	Low	true	1,000.00	3,293.34	1,013.92	3,307.25	20.00	20.00	J-4007
J-766	High	true	1,000.00	1,847.23	1,002.74	1,849.97	20.00	20.00	J-3986
J-767	High	true	1,000.00	2,555.91	1,003.72	2,559.63	20.00	20.00	J-3986
J-768	High	true	1,000.00	2,900.88	1,011.96	2,912.84	20.00	20.00	J-3986
J-769	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	27.06	J-3986
J-770	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	29.56	J-3986
J-771	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	36.05	J-4007
J-772	Low	true	1,000.00	3,642.70	1,011.56	3,654.26	20.00	20.00	J-4007
J-773	Zone	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	37.63	J-3975
J-774	High	true	1,000.00	2,025.63	1,007.84	2,033.47	20.00	20.00	J-3986
J-775	Low	true	1,000.00	1,727.42	1,000.00	1,727.42	20.00	20.00	J-4007
J-776	Low	true	1,000.00	2,043.09	1,000.00	2,043.09	20.00	20.00	J-4007
J-777	Low	true	1,000.00	2,472.78	1,006.27	2,479.05	20.00	20.00	J-4007
J-778	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	38.76	J-4007
J-779	Low	true	1,000.00	4,888.55	1,016.86	4,905.41	20.00	20.00	J-4007
J-780	Low	true	1,000.00	4,450.44	1,006.27	4,456.71	20.00	20.00	J-4007
J-781	High	true	1,000.00	2,256.10	1,012.35	2,268.45	20.00	20.00	J-3986
J-782	High	true	1,000.00	2,567.87	1,000.00	2,567.87	20.00	20.00	J-3986
J-783	High	true	1,000.00	5,000.00	1,008.43	5,008.43	20.00	30.24	J-3986
J-784	Low	true	1,000.00	2,387.94	1,000.00	2,387.94	20.00	20.00	J-4007
J-785	Low	true	1,000.00	2,689.33	1,007.64	2,696.98	20.00	20.00	J-4007
J-786	High	true	1,000.00	1,917.72	1,007.84	1,925.56	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-787	Low	true	1,000.00	4,025.64	1,002.74	4,028.38	20.00	20.00	J-4007
J-788	High	true	1,000.00	4,513.92	1,017.84	4,531.75	20.00	20.00	J-3986
J-789	High	true	1,000.00	1,988.59	1,003.72	1,992.31	20.00	20.00	J-3986
J-790	Low	true	1,000.00	5,000.00	1,026.85	5,026.85	20.00	31.07	J-4007
J-791	High	true	1,000.00	5,000.00	1,015.09	5,015.09	20.00	22.95	J-3986
J-792	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	39.12	J-4007
J-793	High	true	1,000.00	1,884.77	1,018.23	1,902.99	20.00	20.00	J-3986
J-794	High	true	1,000.00	2,345.58	1,018.23	2,363.81	20.00	20.00	J-3986
J-795	Low	true	1,000.00	3,061.77	1,015.09	3,076.86	20.00	20.00	J-4007
J-796	Low	true	1,000.00	3,973.63	1,016.07	3,989.71	20.00	20.00	J-4007
J-797	High	true	1,000.00	3,858.28	1,008.23	3,866.51	20.00	20.00	J-3986
J-798	High	true	1,000.00	2,298.34	1,008.23	2,306.57	20.00	20.00	J-3986
J-799	Low	true	1,000.00	3,163.67	1,011.56	3,175.24	20.00	20.00	J-4007
J-800	Low	true	1,000.00	2,878.66	1,013.92	2,892.58	20.00	20.00	J-4007
J-801	High	true	1,000.00	1,459.78	1,002.74	1,462.52	20.00	20.00	J-3986
J-802	YT	true	1,000.00	2,384.16	1,040.96	2,425.12	20.00	20.00	J-4054
J-803	High	true	1,000.00	2,079.10	1,008.43	2,087.53	20.00	20.00	J-3986
J-804	Low	true	1,000.00	3,063.48	1,016.66	3,080.14	20.00	20.00	J-4007
J-805	High	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	48.63	J-3986
J-806	High	true	1,000.00	3,381.23	1,015.88	3,397.10	20.00	20.00	J-3986
J-807	Low	true	1,000.00	3,093.02	1,000.00	3,093.02	20.00	20.00	J-4007
J-808	High	true	1,000.00	2,186.52	1,000.00	2,186.52	20.00	20.00	J-3986
J-809	High	true	1,000.00	5,000.00	1,004.70	5,004.70	20.00	38.97	J-3986
J-810	High	true	1,000.00	2,271.97	1,021.76	2,293.73	20.00	20.00	J-3986
J-811	High	true	1,000.00	3,725.34	1,011.56	3,736.91	20.00	20.00	J-3986
J-812	Low	true	1,000.00	2,916.99	1,005.10	2,922.09	20.00	20.00	J-4007
J-813	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.13	J-4007
J-814	High	true	1,000.00	1,396.64	1,002.74	1,399.38	20.00	20.00	J-3986
J-815	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	30.83	J-4007
J-816	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	31.06	J-4007
J-817	High	true	1,000.00	5,000.00	1,008.43	5,008.43	20.00	38.46	J-3986
J-818	High	true	1,000.00	4,282.23	1,005.10	4,287.32	20.00	20.00	J-3986
J-819	High	true	1,000.00	2,177.18	1,005.10	2,182.28	20.00	20.00	J-3986
J-820	Low	true	1,000.00	1,752.44	1,018.42	1,770.87	20.00	20.00	J-4007
J-821	High	true	1,000.00	1,374.76	1,007.06	1,381.81	20.00	20.00	J-3986
J-822	YT	true	1,000.00	3,165.53	1,017.05	3,182.58	20.00	20.00	J-4047
J-823	YT	true	1,000.00	2,573.85	1,008.23	2,582.08	20.00	20.00	J-4026
J-824	High	true	1,000.00	1,791.99	1,004.51	1,796.50	20.00	20.00	J-3986
J-825	Low	true	1,000.00	2,880.68	1,004.70	2,885.38	20.00	20.00	J-4007
J-826	High	true	1,000.00	2,435.67	1,010.39	2,446.06	20.00	20.00	J-3986
J-827	High	true	1,000.00	1,925.41	1,010.39	1,935.80	20.00	20.00	J-3986
J-828	Zone	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	39.44	J-3975
J-829	High	true	1,000.00	2,810.55	1,009.02	2,819.56	20.00	20.00	J-3986
J-830	Low	true	1,000.00	3,819.70	1,013.92	3,833.62	20.00	20.00	J-4007
J-831	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	32.72	J-4007
J-832	Low	true	1,000.00	3,458.98	1,011.56	3,470.55	20.00	20.00	J-4007
J-833	High	true	1,000.00	3,162.84	1,016.27	3,179.11	20.00	20.00	J-3986
J-834	High	true	1,000.00	5,000.00	1,016.27	5,016.27	20.00	50.08	J-3986
J-835	High	true	1,000.00	2,020.02	1,012.54	2,032.56	20.00	20.00	J-3986
J-836	High	true	1,000.00	2,133.06	1,002.74	2,135.80	20.00	20.00	J-3986
J-837	Low	true	1,000.00	2,676.76	1,010.00	2,686.75	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-838	High	true	1,000.00	1,288.33	1,007.06	1,295.39	20.00	20.00	J-3986
J-839	High	true	1,000.00	1,580.87	1,007.06	1,587.93	20.00	20.00	J-3986
J-840	High	true	1,000.00	1,671.94	1,007.06	1,678.99	20.00	20.00	J-3986
J-841	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	36.16	J-4007
J-842	High	true	1,000.00	1,504.79	1,007.84	1,512.63	20.00	20.00	J-3986
J-843	High	true	1,000.00	1,596.00	1,010.58	1,606.58	20.00	20.00	J-3986
J-844	YT	true	1,000.00	1,958.62	1,011.17	1,969.79	20.00	20.00	J-4053
J-846	High	true	1,000.00	3,977.54	1,012.54	3,990.08	20.00	20.00	J-3986
J-847	High	true	1,000.00	2,518.86	1,004.12	2,522.98	20.00	20.00	J-3986
J-848	Low	true	1,000.00	3,441.16	1,000.00	3,441.16	20.00	20.00	J-4007
J-849	Low	true	1,000.00	1,399.90	1,016.66	1,416.56	20.00	20.00	J-4007
J-850	High	true	1,000.00	1,636.84	1,005.10	1,641.94	20.00	20.00	J-3986
J-851	High	true	1,000.00	1,375.85	1,007.06	1,382.91	20.00	20.00	J-3986
J-852	Low	true	1,000.00	2,783.57	1,016.07	2,799.64	20.00	20.00	J-4007
J-853	Low	true	1,000.00	2,432.31	1,016.07	2,448.38	20.00	20.00	J-4007
J-854	High	true	1,000.00	3,383.30	1,007.84	3,391.14	20.00	20.00	J-3986
J-855	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	38.05	J-3986
J-856	High	true	1,000.00	3,216.06	1,004.12	3,220.18	20.00	20.00	J-3986
J-857	High	true	1,000.00	1,769.65	1,000.00	1,769.65	20.00	20.00	J-3986
J-858	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	51.27	J-3986
J-859	High	true	1,000.00	3,290.41	1,007.64	3,298.05	20.00	20.00	J-3986
J-860	High	true	1,000.00	4,038.33	1,011.96	4,050.29	20.00	20.00	J-3986
J-861	Low	true	1,000.00	3,627.20	1,011.56	3,638.76	20.00	20.00	J-4007
J-862	High	true	1,000.00	3,111.33	1,012.54	3,123.87	20.00	20.00	J-3986
J-863	High	true	1,000.00	3,209.96	1,023.91	3,233.87	20.00	20.00	J-3986
J-864	High	true	1,000.00	5,000.00	1,015.29	5,015.29	20.00	40.53	J-3986
J-865	Low	true	1,000.00	3,902.10	1,013.13	3,915.23	20.00	20.00	J-4007
J-866	Low	true	1,000.00	3,238.89	1,013.13	3,252.02	20.00	20.00	J-4007
J-867	Low	true	1,000.00	2,619.26	1,002.16	2,621.42	20.00	20.00	J-4007
J-868	High	false	1,000.00	990.72	1,004.70	995.43	20.00	20.00	J-3986
J-869	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	65.93	J-3986
J-870	High	true	1,000.00	4,988.77	1,004.12	4,992.89	20.00	20.00	J-3986
J-871	Low	true	1,000.00	1,740.23	1,029.79	1,770.03	20.00	20.00	J-4007
J-872	Low	true	1,000.00	1,887.33	1,004.70	1,892.03	20.00	20.00	J-4007
J-873	Low	true	1,000.00	4,693.36	1,000.00	4,693.36	20.00	20.00	J-4007
J-874	High	true	1,000.00	2,637.45	1,012.54	2,650.00	20.00	20.00	J-3986
J-875	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	36.68	J-3986
J-876	Low	true	1,000.00	5,000.00	1,004.90	5,004.90	20.00	40.27	J-4007
J-877	High	true	1,000.00	1,891.91	1,012.54	1,904.45	20.00	20.00	J-3986
J-878	YT	true	1,000.00	5,000.00	1,030.18	5,030.18	20.00	22.29	J-585
J-879	High	true	1,000.00	5,000.00	1,002.74	5,002.74	20.00	48.26	J-3986
J-880	Low	true	1,000.00	2,534.30	1,006.47	2,540.77	20.00	20.00	J-4007
J-881	YT	true	1,000.00	1,608.40	1,004.70	1,613.10	20.00	20.00	J-4063
J-882	Low	true	1,000.00	2,697.02	1,004.90	2,701.92	20.00	20.00	J-4007
J-883	Low	true	1,000.00	2,472.05	1,004.90	2,476.95	20.00	20.00	J-4007
J-884	Low	true	1,000.00	5,000.00	1,019.40	5,019.40	20.00	45.11	J-4007
J-885	High	true	1,000.00	5,000.00	1,015.29	5,015.29	20.00	36.74	J-3986
J-886	High	true	1,000.00	3,328.74	1,015.88	3,344.61	20.00	20.00	J-3986
J-887	High	true	1,000.00	3,103.76	1,015.88	3,119.64	20.00	20.00	J-3986
J-888	High	true	1,000.00	1,211.97	1,007.06	1,219.03	20.00	20.00	J-3986
J-889	Low	true	1,000.00	5,000.00	1,026.85	5,026.85	20.00	41.66	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-890	High	true	1,000.00	3,929.20	1,023.91	3,953.11	20.00	20.00	J-3986
J-891	Low	true	1,000.00	4,466.06	1,002.74	4,468.81	20.00	20.00	J-4007
J-892	Low	true	1,000.00	2,127.50	1,000.00	2,127.50	20.00	20.00	J-4007
J-893	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	33.25	J-4007
J-894	High	true	1,000.00	5,000.00	1,002.74	5,002.74	20.00	27.71	J-3986
J-895	High	true	1,000.00	1,543.82	1,008.43	1,552.25	20.00	20.00	J-3986
J-896	High	true	1,000.00	4,971.19	1,004.12	4,975.31	20.00	20.00	J-3986
J-897	High	true	1,000.00	5,000.00	1,023.91	5,023.91	20.00	40.36	J-3986
J-898	Low	true	1,000.00	4,411.50	1,006.27	4,417.77	20.00	20.00	J-4007
J-899	Low	true	1,000.00	1,564.27	1,006.27	1,570.54	20.00	20.00	J-4007
J-900	Low	false	1,000.00	4,216.67	1,016.66	4,233.33	20.00	19.52	J-4007
J-901	Low	true	1,000.00	2,941.53	1,019.99	2,961.52	20.00	20.00	J-4007
J-902	Low	true	1,000.00	2,962.77	1,019.99	2,982.76	20.00	20.00	J-4007
J-903	High	true	1,000.00	2,284.55	1,007.06	2,291.60	20.00	20.00	J-3986
J-904	YT	true	1,000.00	1,390.75	1,004.70	1,395.45	20.00	20.00	J-3910
J-905	YT	true	1,000.00	1,559.69	1,004.70	1,564.40	20.00	20.00	J-4072
J-906	High	true	1,000.00	1,715.76	1,000.00	1,715.76	20.00	20.00	J-3986
J-907	Low	true	1,000.00	5,000.00	1,016.46	5,016.46	20.00	34.29	J-4007
J-908	Low	true	1,000.00	2,166.63	1,016.07	2,182.70	20.00	20.00	J-4007
J-909	Low	true	1,000.00	2,938.35	1,016.07	2,954.43	20.00	20.00	J-4007
J-910	Low	true	1,000.00	2,092.16	1,006.27	2,098.44	20.00	20.00	J-4007
J-912	Low	true	1,000.00	2,194.34	1,000.00	2,194.34	20.00	20.00	J-4007
J-913	Low	true	1,000.00	3,942.38	1,000.00	3,942.38	20.00	20.00	J-4007
J-914	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	32.31	J-3986
J-915	Low	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	36.65	J-4007
J-916	Low	true	1,000.00	3,936.33	1,016.07	3,952.40	20.00	20.00	J-4007
J-917	Low	true	1,000.00	2,235.84	1,004.51	2,240.35	20.00	20.00	J-4007
J-918	Low	true	1,000.00	2,947.14	1,013.92	2,961.06	20.00	20.00	J-4007
J-919	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	29.55	J-3986
J-920	Low	true	1,000.00	4,274.17	1,003.92	4,278.09	20.00	20.00	J-4007
J-921	Low	true	1,000.00	4,046.14	1,010.00	4,056.14	20.00	20.00	J-4007
J-922	Low	true	1,000.00	2,661.87	1,000.00	2,661.87	20.00	20.00	J-4007
J-923	High	true	1,000.00	1,584.72	1,009.02	1,593.73	20.00	20.00	J-3986
J-924	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	32.48	J-3986
J-925	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	35.56	J-3986
J-926	Low	true	1,000.00	3,480.96	1,006.27	3,487.23	20.00	20.00	J-4007
J-927	High	true	1,000.00	5,000.00	1,017.64	5,017.64	20.00	21.24	J-3986
J-928	High	true	1,000.00	1,825.00	1,007.84	1,832.84	20.00	20.88	J-3986
J-929	Low	true	1,000.00	5,000.00	1,030.18	5,030.18	20.00	21.32	J-4007
J-930	High	true	1,000.00	4,977.30	1,006.47	4,983.76	20.00	20.00	J-3986
J-931	High	true	1,000.00	2,317.02	1,004.51	2,321.52	20.00	20.00	J-3986
J-932	Low	true	1,000.00	2,246.09	1,028.62	2,274.71	20.00	20.00	J-4007
J-933	High	true	1,000.00	2,566.53	1,004.12	2,570.64	20.00	20.00	J-3986
J-934	Low	true	1,000.00	1,835.57	1,005.49	1,841.06	20.00	20.00	J-4007
J-935	Low	true	1,000.00	1,499.69	1,000.00	1,499.69	20.00	20.00	J-4007
J-936	Low	true	1,000.00	1,311.83	1,000.00	1,311.83	20.00	20.00	J-4007
J-937	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	25.96	J-4007
J-938	High	true	1,000.00	3,966.31	1,004.51	3,970.82	20.00	20.00	J-3986
J-939	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	29.18	J-3986
J-940	Low	true	1,000.00	5,000.00	1,030.18	5,030.18	20.00	23.54	J-4007
J-941	Low	true	1,000.00	2,364.56	1,013.92	2,378.48	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-942	Low	true	1,000.00	2,511.23	1,013.92	2,525.15	20.00	20.00	J-4007
J-943	Low	true	1,000.00	4,054.44	1,000.00	4,054.44	20.00	20.00	J-4007
J-944	Low	true	1,000.00	1,500.06	1,016.86	1,516.92	20.00	20.00	J-4007
J-945	Low	true	1,000.00	2,058.11	1,011.56	2,069.67	20.00	20.00	J-4007
J-946	Low	true	1,000.00	1,632.32	1,011.56	1,643.89	20.00	20.00	J-4007
J-947	Low	true	1,000.00	3,804.95	1,000.00	3,804.95	20.00	20.00	J-4007
J-948	Low	true	1,000.00	2,812.26	1,000.00	2,812.26	20.00	20.00	J-4007
J-949	Low	true	1,000.00	2,021.06	1,011.56	2,032.62	20.00	20.00	J-4007
J-950	Low	true	1,000.00	2,599.06	1,011.56	2,610.62	20.00	20.00	J-4007
J-951	Low	true	1,000.00	1,888.00	1,007.64	1,895.64	20.00	20.00	J-4007
J-952	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	50.09	J-3986
J-953	High	true	1,000.00	4,258.79	1,011.96	4,270.75	20.00	20.00	J-3986
J-954	Low	true	1,000.00	2,569.95	1,013.92	2,583.86	20.00	20.00	J-4007
J-955	Low	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	31.29	J-4007
J-956	Low	true	1,000.00	2,752.44	1,019.99	2,772.43	20.00	20.00	J-4007
J-957	Low	true	1,000.00	2,141.60	1,000.00	2,141.60	20.00	20.00	J-4007
J-958	High	true	1,000.00	4,203.61	1,005.10	4,208.71	20.00	20.00	J-3986
J-959	Low	true	1,000.00	2,616.21	1,005.49	2,621.70	20.00	20.00	J-4007
J-960	Low	true	1,000.00	2,491.09	1,005.49	2,496.58	20.00	20.00	J-4007
J-961	High	true	1,000.00	2,718.63	1,009.02	2,727.64	20.00	20.00	J-3986
J-962	Low	true	1,000.00	2,746.95	1,000.00	2,746.95	20.00	20.00	J-4007
J-963	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	46.15	J-4007
J-964	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	36.64	J-3986
J-965	High	true	1,000.00	3,167.11	1,023.91	3,191.03	20.00	20.00	J-3986
J-966	High	true	1,000.00	1,976.81	1,000.20	1,977.00	20.00	20.00	J-3986
J-967	Low	true	1,000.00	2,934.94	1,011.56	2,946.50	20.00	20.00	J-4007
J-968	Low	true	1,000.00	3,035.52	1,019.01	3,054.53	20.00	20.00	J-4007
J-969	Zone	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	38.51	J-3975
J-970	Low	true	1,000.00	2,472.53	1,000.00	2,472.53	20.00	20.00	J-4007
J-971	Low	true	1,000.00	5,000.00	1,029.79	5,029.79	20.00	27.49	J-4007
J-972	High	true	1,000.00	5,000.00	1,019.40	5,019.40	20.00	56.22	J-3986
J-973	High	true	1,000.00	4,735.60	1,000.00	4,735.60	20.00	20.00	J-3986
J-974	High	true	1,000.00	5,000.00	1,020.38	5,020.38	20.00	36.96	J-3986
J-975	Low	true	1,000.00	2,573.55	1,016.86	2,590.40	20.00	20.00	J-4007
J-976	YT	true	1,000.00	1,546.45	1,003.53	1,549.98	20.00	20.00	J-4071
J-977	YT	true	1,000.00	2,809.08	1,008.04	2,817.12	20.00	20.00	J-1000
J-978	High	true	1,000.00	1,687.82	1,007.06	1,694.88	20.00	20.22	J-3986
J-979	Low	true	1,000.00	2,002.99	1,004.90	2,007.89	20.00	20.00	J-4007
J-980	Low	true	1,000.00	2,482.67	1,000.00	2,482.67	20.00	20.00	J-4007
J-981	High	true	1,000.00	2,150.88	1,003.72	2,154.60	20.00	20.00	J-3986
J-982	High	true	1,000.00	5,000.00	1,015.09	5,015.09	20.00	37.69	J-3986
J-983	High	true	1,000.00	4,004.88	1,015.09	4,019.97	20.00	20.00	J-3986
J-985	Low	true	1,000.00	3,940.67	1,016.86	3,957.53	20.00	20.00	J-4007
J-986	Low	true	1,000.00	2,822.94	1,016.86	2,839.79	20.00	20.00	J-4007
J-987	Low	true	1,000.00	1,936.16	1,023.52	1,959.68	20.00	20.00	J-4007
J-988	High	true	1,000.00	1,601.32	1,004.51	1,605.83	20.00	20.00	J-3986
J-989	High	true	1,000.00	3,920.17	1,011.56	3,931.73	20.00	20.00	J-3986
J-990	High	true	1,000.00	1,544.80	1,009.02	1,553.82	20.00	20.00	J-3986
J-991	Low	true	1,000.00	2,565.19	1,000.00	2,565.19	20.00	20.00	J-4008
J-992	Low	true	1,000.00	2,549.93	1,000.00	2,549.93	20.00	20.00	J-4007
J-993	High	true	1,000.00	4,608.40	1,000.00	4,608.40	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-994	Low	true	1,000.00	3,394.65	1,000.00	3,394.65	20.00	20.00	J-4007
J-995	High	true	1,000.00	5,000.00	1,023.91	5,023.91	20.00	43.30	J-3986
J-996	YT	true	1,000.00	3,490.72	1,006.27	3,496.99	20.00	20.00	J-315
J-997	High	true	1,000.00	5,000.00	1,027.64	5,027.64	20.00	42.55	J-3986
J-998	Low	true	1,000.00	3,915.16	1,002.74	3,917.91	20.00	20.00	J-4007
J-999	Low	true	1,000.00	1,700.01	1,000.00	1,700.01	20.00	20.00	J-4007
J-1000	YT	true	1,000.00	1,465.58	1,003.53	1,469.10	20.00	20.00	J-5000
J-1001	YT	true	1,000.00	2,806.88	1,008.04	2,814.92	20.00	20.00	J-1000
J-1002	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	23.87	J-4007
J-1003	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	21.09	J-4007
J-1004	High	true	1,000.00	1,597.17	1,011.96	1,609.12	20.00	20.00	J-3986
J-1005	Low	true	1,000.00	4,281.25	1,006.27	4,287.52	20.00	20.00	J-4007
J-1006	Low	true	1,000.00	4,319.34	1,006.27	4,325.61	20.00	20.00	J-4007
J-1007	High	true	1,000.00	5,000.00	1,017.64	5,017.64	20.00	36.42	J-3986
J-1008	High	true	1,000.00	2,285.03	1,002.74	2,287.78	20.00	20.00	J-3986
J-1009	High	true	1,000.00	2,212.77	1,000.00	2,212.77	20.00	20.00	J-3986
J-1010	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	44.68	J-3986
J-1011	High	true	1,000.00	2,922.36	1,000.00	2,922.36	20.00	20.00	J-3986
J-1012	High	true	1,000.00	5,000.00	1,004.70	5,004.70	20.00	42.77	J-3986
J-1013	High	true	1,000.00	4,196.29	1,009.60	4,205.89	20.00	20.00	J-3986
J-1014	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	47.43	J-3986
J-1015	YT	true	1,000.00	1,444.89	1,004.70	1,449.59	20.00	20.00	J-303
J-1016	YT	true	1,000.00	1,930.42	1,005.49	1,935.91	20.00	20.00	J-4055
J-1017	Low	true	1,000.00	3,492.55	1,008.62	3,501.18	20.00	20.00	J-4007
J-1018	Low	true	1,000.00	3,723.14	1,008.62	3,731.77	20.00	20.00	J-4007
J-1019	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	29.56	J-3986
J-1020	High	true	1,000.00	2,958.25	1,016.27	2,974.52	20.00	20.00	J-3986
J-1021	High	true	1,000.00	2,898.19	1,016.27	2,914.46	20.00	20.00	J-3986
J-1022	Low	true	1,000.00	1,527.47	1,008.23	1,535.70	20.00	20.00	J-4007
J-1023	High	true	1,000.00	4,952.15	1,004.12	4,956.26	20.00	20.00	J-3986
J-1025	Low	true	1,000.00	4,348.63	1,016.86	4,365.49	20.00	20.00	J-4007
J-1026	High	true	1,000.00	2,957.76	1,000.00	2,957.76	20.00	20.00	J-3986
J-1027	Low	true	1,000.00	2,692.69	1,009.02	2,701.70	20.00	20.00	J-4007
J-1028	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	50.71	J-3986
J-1029	High	true	1,000.00	4,792.24	1,006.47	4,798.70	20.00	20.00	J-3986
J-1030	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	26.32	J-4007
J-1031	Low	true	1,000.00	2,649.05	1,010.19	2,659.24	20.00	20.00	J-4007
J-1032	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	24.41	J-4007
J-1033	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	45.25	J-4007
J-1034	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	23.23	J-4007
J-1035	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	40.99	J-4007
J-1036	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	53.85	J-3986
J-1037	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	26.07	J-4007
J-1038	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	25.68	J-3986
J-1039	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	43.83	J-4007
J-1040	Low	true	1,000.00	2,814.09	1,000.00	2,814.09	20.00	20.00	J-4007
J-1041	Low	true	1,000.00	3,651.25	1,000.00	3,651.25	20.00	20.00	J-4007
J-1042	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	44.48	J-4007
J-1043	Low	true	1,000.00	4,108.33	1,011.56	4,119.90	20.00	20.43	J-4007
J-1044	High	true	1,000.00	5,000.00	1,008.82	5,008.82	20.00	34.30	J-3986
J-1045	Low	true	1,000.00	1,705.38	1,004.51	1,709.89	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1046	YT	true	1,000.00	2,125.37	1,017.05	2,142.42	20.00	20.00	J-3865
J-1047	Low	true	1,000.00	5,000.00	1,028.22	5,028.22	20.00	23.50	J-4007
J-1048	Low	true	1,000.00	3,255.49	1,019.99	3,275.49	20.00	20.00	J-4007
J-1049	Low	true	1,000.00	2,547.73	1,019.99	2,567.72	20.00	20.00	J-4007
J-1050	High	true	1,000.00	1,771.12	1,000.00	1,771.12	20.00	20.00	J-3986
J-1051	Low	true	1,000.00	4,254.39	1,013.92	4,268.31	20.00	20.00	J-4007
J-1052	Low	true	1,000.00	4,251.22	1,013.92	4,265.14	20.00	20.00	J-4007
J-1053	High	true	1,000.00	5,000.00	1,008.23	5,008.23	20.00	23.47	J-3986
J-1054	High	true	1,000.00	5,000.00	1,020.19	5,020.19	20.00	62.38	J-3986
J-1055	Low	true	1,000.00	3,264.65	1,010.00	3,274.64	20.00	20.00	J-4007
J-1056	High	true	1,000.00	5,000.00	1,003.72	5,003.72	20.00	33.65	J-3986
J-1057	High	true	1,000.00	4,463.87	1,000.00	4,463.87	20.00	20.00	J-3986
J-1058	Low	true	1,000.00	4,244.02	1,013.92	4,257.94	20.00	20.00	J-4007
J-1059	High	true	1,000.00	4,012.94	1,004.51	4,017.45	20.00	20.00	J-3986
J-1060	Low	true	1,000.00	5,000.00	1,022.93	5,022.93	20.00	24.76	J-4007
J-1061	Low	true	1,000.00	4,487.79	1,005.10	4,492.89	20.00	20.00	J-4007
J-1062	Low	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	37.82	J-4007
J-1063	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	28.07	J-4007
J-1064	High	true	1,000.00	5,000.00	1,002.74	5,002.74	20.00	26.06	J-3986
J-1065	Low	true	1,000.00	4,234.50	1,013.92	4,248.41	20.00	20.00	J-4007
J-1066	Low	true	1,000.00	4,475.10	1,000.00	4,475.10	20.00	20.00	J-4007
J-1067	High	true	1,000.00	3,621.09	1,004.51	3,625.60	20.00	20.00	J-3986
J-1068	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	39.04	J-4007
J-1069	High	true	1,000.00	3,622.44	1,000.00	3,622.44	20.00	20.00	J-3986
J-1070	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	31.04	J-4007
J-1071	High	true	1,000.00	4,624.76	1,011.96	4,636.71	20.00	20.00	J-3986
J-1072	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	54.45	J-3986
J-1073	Low	true	1,000.00	4,020.02	1,010.78	4,030.80	20.00	20.00	J-4008
J-1074	Low	true	1,000.00	4,750.00	1,006.27	4,756.27	20.00	21.62	J-4007
J-1075	Low	true	1,000.00	5,000.00	1,016.46	5,016.46	20.00	32.72	J-4007
J-1076	Low	true	1,000.00	3,157.96	1,005.49	3,163.45	20.00	20.00	J-4007
J-1077	Low	true	1,000.00	3,017.58	1,005.49	3,023.07	20.00	20.00	J-4007
J-1078	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	38.42	J-4007
J-1079	Low	true	1,000.00	3,763.67	1,000.00	3,763.67	20.00	20.00	J-4007
J-1080	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	28.54	J-4007
J-1081	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	60.51	J-3986
J-1082	High	true	1,000.00	3,999.02	1,000.00	3,999.02	20.00	20.00	J-3986
J-1083	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	25.58	J-3986
J-1084	Zone	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	60.18	J-3975
J-1085	High	true	1,000.00	1,811.71	1,007.06	1,818.76	20.00	20.00	J-3986
J-1086	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	28.20	J-4007
J-1087	Low	true	1,000.00	5,000.00	1,007.64	5,007.64	20.00	23.13	J-4007
J-1088	Low	true	1,000.00	5,000.00	1,030.18	5,030.18	20.00	27.77	J-4007
J-1089	Zone	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	38.54	J-3975
J-1090	High	true	1,000.00	1,225.77	1,014.50	1,240.27	20.00	20.00	J-3986
J-1091	Low	true	1,000.00	2,516.85	1,009.80	2,526.65	20.00	20.00	J-4007
J-1092	Low	true	1,000.00	2,458.13	1,000.00	2,458.13	20.00	20.00	J-4007
J-1093	High	true	1,000.00	4,191.89	1,007.06	4,198.95	20.00	20.00	J-3986
J-1094	Low	true	1,000.00	4,209.23	1,017.05	4,226.28	20.00	20.00	J-4007
J-1095	Low	true	1,000.00	1,867.37	1,000.00	1,867.37	20.00	20.00	J-4007
J-1096	Low	true	1,000.00	2,887.09	1,005.49	2,892.57	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1097	Low	true	1,000.00	2,703.25	1,005.49	2,708.74	20.00	20.00	J-4007
J-1098	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	34.79	J-3986
J-1099	Low	true	1,000.00	4,372.07	1,002.16	4,374.23	20.00	20.00	J-4007
J-1100	High	true	1,000.00	1,359.13	1,007.06	1,366.19	20.00	20.00	J-3986
J-1101	Low	true	1,000.00	1,961.55	1,004.51	1,966.06	20.00	20.00	J-4007
J-1102	Low	true	1,000.00	4,439.21	1,000.00	4,439.21	20.00	20.00	J-4007
J-1103	High	true	1,000.00	5,000.00	1,002.74	5,002.74	20.00	36.90	J-3986
J-1104	High	true	1,000.00	2,186.34	1,000.00	2,186.34	20.00	20.00	J-3986
J-1105	Low	true	1,000.00	4,895.26	1,022.93	4,918.20	20.00	20.00	J-4007
J-1106	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	53.63	J-3986
J-1107	High	true	1,000.00	4,973.14	1,008.43	4,981.57	20.00	20.00	J-3986
J-1108	High	true	1,000.00	2,281.13	1,011.96	2,293.08	20.00	20.00	J-3986
J-1109	High	true	1,000.00	4,566.16	1,000.00	4,566.16	20.00	20.00	J-3986
J-1110	Low	true	1,000.00	5,000.00	1,026.85	5,026.85	20.00	36.15	J-4007
J-1111	Low	true	1,000.00	5,000.00	1,046.84	5,046.84	20.00	34.77	J-4007
J-1112	High	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	30.69	J-3986
J-1113	High	true	1,000.00	4,243.90	1,000.00	4,243.90	20.00	20.00	J-3986
J-1114	High	true	1,000.00	4,881.35	1,017.64	4,898.99	20.00	20.00	J-3986
J-1115	Low	true	1,000.00	4,304.20	1,022.93	4,327.13	20.00	20.00	J-4007
J-1116	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	26.09	J-4007
J-1117	Low	true	1,000.00	2,939.45	1,019.99	2,959.45	20.00	20.00	J-4007
J-1118	High	true	1,000.00	5,000.00	1,003.72	5,003.72	20.00	26.82	J-3986
J-1119	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	20.68	J-4007
J-1120	High	true	1,000.00	5,000.00	1,008.82	5,008.82	20.00	33.86	J-3986
J-1121	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	32.29	J-4007
J-1122	Low	true	1,000.00	1,926.33	1,013.13	1,939.46	20.00	20.00	J-4007
J-1123	Low	true	1,000.00	2,967.41	1,017.05	2,984.46	20.00	20.00	J-4007
J-1124	High	true	1,000.00	1,346.13	1,014.50	1,360.63	20.00	20.00	J-3986
J-1125	High	true	1,000.00	2,481.93	1,012.35	2,494.28	20.00	20.00	J-3986
J-1126	High	true	1,000.00	1,647.48	1,008.82	1,656.30	20.00	20.00	J-3986
J-1127	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	28.15	J-4007
J-1128	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	45.19	J-4007
J-1129	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	53.68	J-3986
J-1130	High	true	1,000.00	5,000.00	1,011.96	5,011.96	20.00	51.54	J-3986
J-1131	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	20.89	J-4007
J-1132	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	44.99	J-4007
J-1133	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	29.11	J-4007
J-1134	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.81	J-3986
J-1135	Low	true	1,000.00	5,000.00	1,022.93	5,022.93	20.00	27.10	J-4007
J-1136	Low	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	20.73	J-4007
J-1137	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	24.07	J-4007
J-1138	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	27.75	J-4007
J-1139	Low	true	1,000.00	5,000.00	1,031.75	5,031.75	20.00	31.11	J-4007
J-1140	Low	true	1,000.00	4,259.03	1,000.00	4,259.03	20.00	20.00	J-4007
J-1141	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	22.18	J-3986
J-1142	High	true	1,000.00	3,915.04	1,004.51	3,919.55	20.00	20.00	J-3986
J-1143	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	30.23	J-4007
J-1144	Low	true	1,000.00	3,677.61	1,008.62	3,686.24	20.00	20.00	J-4007
J-1145	Low	true	1,000.00	2,305.36	1,008.62	2,313.98	20.00	20.00	J-4007
J-1146	Low	true	1,000.00	3,229.13	1,009.02	3,238.14	20.00	20.00	J-4007
J-1147	Low	true	1,000.00	2,405.40	1,009.02	2,414.41	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1148	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	46.28	J-4007
J-1149	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	50.01	J-3986
J-1150	High	true	1,000.00	2,638.55	1,000.00	2,638.55	20.00	20.00	J-3986
J-1151	High	true	1,000.00	2,894.29	1,009.02	2,903.30	20.00	20.00	J-3986
J-1152	Low	true	1,000.00	1,837.52	1,023.52	1,861.04	20.00	20.00	J-4007
J-1153	Low	true	1,000.00	5,000.00	1,004.90	5,004.90	20.00	33.79	J-4007
J-1154	High	true	1,000.00	3,986.33	1,000.00	3,986.33	20.00	20.00	J-3986
J-1155	Low	true	1,000.00	4,330.32	1,000.00	4,330.32	20.00	20.00	J-4007
J-1156	Low	true	1,000.00	5,000.00	1,007.64	5,007.64	20.00	20.60	J-4007
J-1157	Zone	true	1,000.00	4,379.40	1,011.17	4,390.57	20.00	20.00	J-3975
J-1158	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	26.21	J-4007
J-1159	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	42.36	J-4008
J-1160	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	46.26	J-4007
J-1161	High	true	1,000.00	5,000.00	1,016.27	5,016.27	20.00	51.35	J-3986
J-1162	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	34.88	J-3986
J-1163	High	false	1,000.00	756.93	1,011.37	768.30	20.00	20.00	J-3986
J-1164	High	true	1,000.00	5,000.00	1,015.29	5,015.29	20.00	41.73	J-3986
J-1165	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	40.40	J-3986
J-1166	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	30.80	J-4007
J-1167	Low	true	1,000.00	4,115.85	1,009.80	4,125.65	20.00	20.00	J-4007
J-1168	Low	true	1,000.00	4,250.98	1,013.92	4,264.89	20.00	20.00	J-4007
J-1169	Low	true	1,000.00	3,876.95	1,016.86	3,893.81	20.00	20.00	J-4007
J-1170	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	52.62	J-3986
J-1171	Low	true	1,000.00	3,619.87	1,000.00	3,619.87	20.00	20.00	J-4008
J-1172	Low	true	1,000.00	5,000.00	1,019.99	5,019.99	20.00	37.26	J-4007
J-1173	Low	true	1,000.00	5,000.00	1,030.18	5,030.18	20.00	23.76	J-4007
J-1174	High	true	1,000.00	3,391.24	1,007.06	3,398.29	20.00	20.00	J-3986
J-1175	High	true	1,000.00	2,461.67	1,007.06	2,468.73	20.00	20.00	J-3986
J-1176	Low	true	1,000.00	4,243.65	1,013.92	4,257.57	20.00	20.00	J-4007
J-1177	Low	true	1,000.00	4,859.62	1,004.90	4,864.52	20.00	20.00	J-4008
J-1178	Low	true	1,000.00	3,727.05	1,008.62	3,735.68	20.00	20.00	J-4007
J-1179	Low	true	1,000.00	3,528.93	1,008.62	3,537.55	20.00	20.00	J-4007
J-1180	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	35.88	J-4007
J-1181	Low	true	1,000.00	2,536.99	1,000.00	2,536.99	20.00	20.00	J-4007
J-1182	High	true	1,000.00	3,653.81	1,007.84	3,661.65	20.00	20.00	J-3986
J-1184	High	true	1,000.00	3,003.66	1,012.35	3,016.01	20.00	20.00	J-3986
J-1185	High	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	24.30	J-3986
J-1186	High	true	1,000.00	3,903.32	1,008.43	3,911.75	20.00	20.00	J-3986
J-1187	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	40.22	J-4007
J-1188	Low	true	1,000.00	2,557.25	1,009.02	2,566.27	20.00	20.00	J-4007
J-1189	Low	true	1,000.00	3,015.63	1,009.02	3,024.64	20.00	20.00	J-4007
J-1190	High	true	1,000.00	3,772.22	1,016.86	3,789.07	20.00	20.00	J-3986
J-1191	Low	true	1,000.00	2,556.89	1,008.62	2,565.51	20.00	20.00	J-4007
J-1192	Low	true	1,000.00	2,624.63	1,008.62	2,633.26	20.00	20.00	J-4007
J-1193	High	true	1,000.00	5,000.00	1,019.40	5,019.40	20.00	58.72	J-3986
J-1194	High	true	1,000.00	5,000.00	1,015.29	5,015.29	20.00	40.51	J-3986
J-1195	Low	true	1,000.00	5,000.00	1,017.84	5,017.84	20.00	23.70	J-4007
J-1196	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	28.01	J-4007
J-1197	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	45.37	J-4007
J-1198	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.54	J-4007
J-1199	Low	true	1,000.00	2,601.32	1,000.00	2,601.32	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1200	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	29.86	J-4007
J-1201	Low	true	1,000.00	5,000.00	1,022.93	5,022.93	20.00	30.25	J-4007
J-1202	Low	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	26.07	J-4008
J-1203	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	44.05	J-4007
J-1204	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	44.38	J-4007
J-1205	Low	true	1,000.00	5,000.00	1,031.75	5,031.75	20.00	35.76	J-4007
J-1206	Low	true	1,000.00	5,000.00	1,019.21	5,019.21	20.00	33.79	J-4007
J-1207	Low	true	1,000.00	2,735.35	1,009.02	2,744.37	20.00	20.00	J-4007
J-1208	Low	true	1,000.00	3,419.56	1,009.02	3,428.57	20.00	20.00	J-4007
J-1209	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	44.49	J-4008
J-1210	Low	true	1,000.00	4,779.30	1,013.92	4,793.21	20.00	20.00	J-4008
J-1211	Low	true	1,000.00	3,620.12	1,009.02	3,629.13	20.00	20.00	J-4007
J-1212	Low	true	1,000.00	3,254.64	1,009.02	3,263.66	20.00	20.00	J-4007
J-1213	Low	true	1,000.00	4,370.73	1,000.00	4,370.73	20.00	20.00	J-4007
J-1214	Low	true	1,000.00	4,602.30	1,024.30	4,626.60	20.00	20.00	J-4007
J-1215	Low	true	1,000.00	5,000.00	1,007.64	5,007.64	20.00	20.57	J-4008
J-1216	Low	true	1,000.00	4,356.69	1,006.27	4,362.96	20.00	20.00	J-4007
J-1217	Low	true	1,000.00	4,577.76	1,006.27	4,584.03	20.00	20.00	J-4007
J-1218	High	true	1,000.00	4,015.62	1,012.54	4,028.17	20.00	20.00	J-3986
J-1219	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	23.48	J-3986
J-1220	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	44.96	J-4008
J-1221	Low	true	1,000.00	3,413.82	1,016.86	3,430.67	20.00	20.00	J-4007
J-1222	Low	true	1,000.00	3,907.72	1,006.27	3,913.99	20.00	20.00	J-4007
J-1223	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	36.01	J-4007
J-1224	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	41.68	J-4007
J-1225	Low	true	1,000.00	4,746.83	1,009.02	4,755.84	20.00	20.00	J-4007
J-1226	Low	true	1,000.00	5,000.00	1,029.01	5,029.01	20.00	36.63	J-4008
J-1227	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	59.22	J-3986
J-1228	High	true	1,000.00	4,844.48	1,008.43	4,852.91	20.00	20.00	J-3986
J-1229	Low	true	1,000.00	3,813.72	1,016.86	3,830.58	20.00	20.00	J-4007
J-1230	Low	true	1,000.00	4,720.22	1,016.86	4,737.07	20.00	20.00	J-4007
J-1231	Low	true	1,000.00	5,000.00	1,004.90	5,004.90	20.00	23.05	J-4007
J-1232	Low	true	1,000.00	3,807.37	1,016.07	3,823.45	20.00	20.00	J-4007
J-1233	Low	true	1,000.00	4,007.45	1,006.27	4,013.72	20.00	20.00	J-4007
J-1234	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.66	J-4008
J-1235	Low	true	1,000.00	2,659.42	1,000.00	2,659.42	20.00	20.00	J-4007
J-1236	High	true	1,000.00	4,507.81	1,000.00	4,507.81	20.00	20.00	J-3986
J-1237	Low	true	1,000.00	4,136.23	1,006.27	4,142.50	20.00	20.00	J-4007
J-1238	High	true	1,000.00	5,000.00	1,007.64	5,007.64	20.00	58.79	J-3986
J-1239	High	true	1,000.00	5,000.00	1,023.91	5,023.91	20.00	39.39	J-3986
J-1240	High	true	1,000.00	4,821.78	1,017.84	4,839.61	20.00	20.00	J-3986
J-1241	Low	true	1,000.00	3,997.80	1,005.49	4,003.29	20.00	20.00	J-4007
J-1242	Low	true	1,000.00	2,953.61	1,005.49	2,959.10	20.00	20.00	J-4007
J-1243	YT	true	1,000.00	3,279.66	1,005.68	3,285.35	20.00	20.00	J-3406
J-1244	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	26.67	J-4007
J-1245	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	42.72	J-4007
J-1246	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	43.50	J-4007
J-1247	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	42.23	J-3986
J-1248	High	true	1,000.00	5,000.00	1,015.29	5,015.29	20.00	41.91	J-3986
J-1249	YT	true	1,000.00	1,232.12	1,003.53	1,235.64	20.00	20.00	J-3873
J-1250	Low	true	1,000.00	4,122.80	1,009.80	4,132.60	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1251	Low	true	1,000.00	4,163.57	1,013.72	4,177.29	20.00	20.00	J-4007
J-1252	Low	true	1,000.00	4,281.01	1,013.72	4,294.73	20.00	20.00	J-4007
J-1253	Low	true	1,000.00	3,858.15	1,016.86	3,875.01	20.00	20.00	J-4007
J-1254	Low	true	1,000.00	3,919.56	1,016.86	3,936.41	20.00	20.00	J-4007
J-1255	Low	true	1,000.00	2,395.63	1,008.62	2,404.25	20.00	20.00	J-4007
J-1256	Low	true	1,000.00	3,643.43	1,008.62	3,652.06	20.00	20.00	J-4007
J-1257	Low	true	1,000.00	4,178.35	1,016.86	4,195.20	20.00	20.00	J-4007
J-1258	Low	true	1,000.00	3,597.53	1,000.00	3,597.53	20.00	20.00	J-4008
J-1259	Low	true	1,000.00	5,000.00	1,018.42	5,018.42	20.00	38.91	J-4007
J-1260	Low	true	1,000.00	3,820.31	1,008.23	3,828.54	20.00	20.00	J-4007
J-1261	High	true	1,000.00	4,409.67	1,005.10	4,414.76	20.00	20.00	J-3986
J-1262	High	true	1,000.00	5,000.00	1,016.27	5,016.27	20.00	51.90	J-3986
J-1263	Low	true	1,000.00	4,969.97	1,009.80	4,979.77	20.00	20.00	J-4007
J-1264	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.46	J-4007
J-1265	Low	true	1,000.00	4,132.57	1,016.07	4,148.64	20.00	20.00	J-4007
J-1266	High	true	1,000.00	4,322.88	1,009.41	4,332.28	20.00	20.00	J-3986
J-1267	Low	true	1,000.00	3,660.65	1,000.00	3,660.65	20.00	20.00	J-4007
J-1268	Low	true	1,000.00	5,000.00	1,019.21	5,019.21	20.00	38.69	J-4008
J-1269	Low	true	1,000.00	5,000.00	1,031.75	5,031.75	20.00	40.47	J-4007
J-1270	Zone	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	41.84	J-3975
J-1271	High	true	1,000.00	5,000.00	1,018.42	5,018.42	20.00	58.27	J-3986
J-1272	High	true	1,000.00	3,110.35	1,018.23	3,128.58	20.00	20.00	J-3986
J-1273	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	58.98	J-3986
J-1274	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	55.65	J-3986
J-1275	High	true	1,000.00	3,716.67	1,008.43	3,725.10	20.00	20.00	J-3986
J-1276	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	26.46	J-4007
J-1277	High	true	1,000.00	5,000.00	1,016.27	5,016.27	20.00	52.35	J-3986
J-1278	High	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	36.93	J-3986
J-1279	High	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	31.69	J-3986
J-1280	High	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	31.79	J-3986
J-1281	Low	true	1,000.00	5,000.00	1,016.07	5,016.07	20.00	37.69	J-4007
J-1282	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	44.16	J-4007
J-1283	High	false	1,000.00	579.10	1,005.10	584.20	20.00	20.00	J-3986
J-1284	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	35.90	J-4007
J-1285	Low	true	1,000.00	3,902.71	1,000.00	3,902.71	20.00	20.00	J-4007
J-1286	Low	true	1,000.00	3,713.01	1,016.86	3,729.87	20.00	20.00	J-4007
J-1287	Low	true	1,000.00	3,503.42	1,009.80	3,513.22	20.00	20.00	J-4007
J-1288	High	true	1,000.00	3,436.65	1,000.00	3,436.65	20.00	20.00	J-3986
J-1289	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	42.51	J-3986
J-1290	Low	true	1,000.00	4,131.84	1,009.80	4,141.64	20.00	20.00	J-4007
J-1291	Low	true	1,000.00	2,338.81	1,017.05	2,355.86	20.00	20.00	J-4007
J-1292	Low	true	1,000.00	5,000.00	1,018.62	5,018.62	20.00	23.14	J-4007
J-1293	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	33.64	J-3986
J-1294	Low	true	1,000.00	4,387.82	1,009.21	4,397.03	20.00	20.00	J-4007
J-1295	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	43.51	J-4007
J-1296	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	24.73	J-4007
J-1297	High	true	1,000.00	4,582.03	1,011.17	4,593.20	20.00	20.00	J-3986
J-1298	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	44.94	J-4007
J-1299	High	true	1,000.00	3,936.28	1,004.51	3,940.79	20.00	20.00	J-3986
J-1300	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	62.03	J-3986
J-1301	Low	true	1,000.00	4,418.46	1,000.00	4,418.46	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-1302	Low	true	1,000.00	3,835.82	1,016.07	3,851.89	20.00	20.00	J-4007
J-1303	Low	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	30.71	J-4007
J-1304	High	true	1,000.00	4,831.05	1,016.27	4,847.32	20.00	20.00	J-3986
J-1305	Low	true	1,000.00	5,000.00	1,009.80	5,009.80	20.00	37.99	J-4007
J-1306	Low	true	1,000.00	4,387.33	1,025.87	4,413.20	20.00	20.00	J-4007
J-1307	High	true	1,000.00	4,251.46	1,007.06	4,258.52	20.00	20.00	J-3986
J-1308	Low	true	1,000.00	3,086.91	1,000.00	3,086.91	20.00	20.00	J-4007
J-1309	Low	true	1,000.00	3,418.95	1,016.86	3,435.80	20.00	20.00	J-4007
J-1310	Low	true	1,000.00	5,000.00	1,029.40	5,029.40	20.00	30.66	J-4007
J-1311	Low	true	1,000.00	5,000.00	1,016.07	5,016.07	20.00	37.93	J-4007
J-1312	Low	true	1,000.00	5,000.00	1,009.02	5,009.02	20.00	35.16	J-4007
J-1313	Low	true	1,000.00	5,000.00	1,018.42	5,018.42	20.00	39.33	J-4007
J-1314	Low	true	1,000.00	5,000.00	1,018.42	5,018.42	20.00	39.55	J-4007
J-1315	Low	true	1,000.00	5,000.00	1,016.07	5,016.07	20.00	37.66	J-4007
J-1316	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	36.12	J-3986
J-1317	High	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	36.17	J-3986
J-1318	Low	true	1,000.00	4,820.00	1,000.00	4,820.00	20.00	21.19	J-4007
J-1319	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	74.99	J-3986
J-1320	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	24.97	J-3986
J-1321	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	52.68	J-3986
J-1322	Low	true	1,000.00	5,000.00	1,036.65	5,036.65	20.00	36.55	J-4007
J-1323	Low	true	1,000.00	5,000.00	1,016.07	5,016.07	20.00	38.39	J-4007
J-1324	Low	true	1,000.00	4,271.97	1,016.07	4,288.04	20.00	20.00	J-4007
J-1325	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	45.68	J-4007
J-1326	Low	true	1,000.00	5,000.00	1,036.65	5,036.65	20.00	31.58	J-4007
J-1327	High	true	1,000.00	4,776.37	1,016.86	4,793.22	20.00	20.00	J-3986
J-1328	High	true	1,000.00	5,000.00	1,019.80	5,019.80	20.00	41.41	J-3986
J-1329	High	true	1,000.00	3,613.77	1,009.41	3,623.18	20.00	20.00	J-3986
J-1330	High	true	1,000.00	5,000.00	1,004.31	5,004.31	20.00	65.62	J-3986
J-1331	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	75.38	J-3986
J-1332	High	true	1,000.00	5,000.00	1,004.31	5,004.31	20.00	64.90	J-3986
J-1333	Low	true	1,000.00	4,968.99	1,005.49	4,974.48	20.00	20.00	J-4007
J-1334	Low	true	1,000.00	4,634.28	1,005.49	4,639.77	20.00	20.00	J-4007
J-1335	High	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	73.55	J-3986
J-1336	High	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	72.14	J-3986
J-1337	High	true	1,000.00	5,000.00	1,004.70	5,004.70	20.00	33.06	J-3986
J-1338	High	false	1,000.00	456.86	1,000.20	457.06	20.00	20.00	J-3986
J-2677	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.50	J-3986
J-2678	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.24	J-3986
J-2680	High	true	1,000.00	2,637.70	1,004.31	2,642.01	20.00	20.00	J-3986
J-2681	High	true	1,000.00	2,637.94	1,004.31	2,642.25	20.00	20.00	J-3986
J-2682	Low	true	1,000.00	2,219.54	1,004.70	2,224.25	20.00	20.00	J-4007
J-2683	High	true	1,000.00	2,899.66	1,004.31	2,903.97	20.00	20.00	J-3986
J-2684	High	true	1,000.00	2,908.08	1,004.31	2,912.39	20.00	20.00	J-3986
J-2686	Low	true	1,000.00	3,888.79	1,007.82	3,896.61	20.00	20.00	J-4007
J-2689	Low	true	1,000.00	3,883.30	1,007.82	3,891.12	20.00	20.00	J-4007
J-2690	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	22.60	J-4007
J-2691	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	24.18	J-4007
J-2692	Low	true	1,000.00	3,727.66	1,016.07	3,743.73	20.00	20.00	J-4007
J-2693	Low	true	1,000.00	5,000.00	1,016.86	5,016.86	20.00	29.56	J-4007
J-2694	Low	true	1,000.00	5,000.00	1,016.86	5,016.86	20.00	29.72	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2695	Low	true	1,000.00	4,212.28	1,010.98	4,223.26	20.00	20.00	J-4007
J-2696	Low	true	1,000.00	4,190.92	1,010.98	4,201.89	20.00	20.00	J-4008
J-2697	Low	true	1,000.00	2,560.06	1,010.98	2,571.03	20.00	20.00	J-4007
J-2698	Low	true	1,000.00	2,562.93	1,010.98	2,573.90	20.00	20.00	J-4007
J-2699	Low	true	1,000.00	2,812.01	1,016.07	2,828.08	20.00	20.00	J-4007
J-2700	Low	true	1,000.00	2,796.20	1,016.07	2,812.28	20.00	20.00	J-4007
J-2701	High	true	1,000.00	2,886.60	1,002.16	2,888.75	20.00	20.00	J-3986
J-2702	Low	true	1,000.00	3,989.99	1,007.82	3,997.81	20.00	20.00	J-4007
J-2703	Low	true	1,000.00	3,998.29	1,007.82	4,006.11	20.00	20.00	J-4007
J-2704	Low	true	1,000.00	4,096.68	1,013.72	4,110.40	20.00	20.00	J-4007
J-2705	Low	true	1,000.00	4,096.07	1,009.80	4,105.87	20.00	20.00	J-4007
J-2707	Low	true	1,000.00	4,649.90	1,007.82	4,657.72	20.00	20.00	J-4007
J-2709	YT	true	1,000.00	3,394.65	1,043.71	3,438.36	20.00	20.00	J-3893
J-2710	Low	true	1,000.00	4,490.72	1,005.49	4,496.21	20.00	20.00	J-4007
J-2711	Low	true	1,000.00	4,252.08	1,005.49	4,257.56	20.00	20.00	J-4008
J-2713	Low	true	1,000.00	2,861.94	1,016.07	2,878.01	20.00	20.00	J-4007
J-2714	Low	true	1,000.00	5,000.00	1,022.93	5,022.93	20.00	40.42	J-4007
J-2715	Low	true	1,000.00	5,000.00	1,022.93	5,022.93	20.00	42.71	J-4007
J-2716	Low	true	1,000.00	4,686.77	1,005.49	4,692.26	20.00	20.00	J-4007
J-2717	YT	true	1,000.00	1,932.86	1,008.23	1,941.09	20.00	20.00	J-478
J-2718	High	true	1,000.00	5,000.00	1,027.64	5,027.64	20.00	48.52	J-3986
J-2720	Low	true	1,000.00	2,595.34	1,008.23	2,603.57	20.00	20.00	J-4007
J-2724	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	25.03	J-3986
J-2725	Low	true	1,000.00	4,999.63	1,016.66	5,016.29	20.00	20.00	J-4007
J-2726	Low	true	1,000.00	4,665.28	1,016.66	4,681.94	20.00	20.00	J-4007
J-2727	Low	false	1,000.00	5,066.67	1,011.76	5,078.43	20.00	16.41	J-4007
J-2728	Low	true	1,000.00	4,763.18	1,041.16	4,804.34	20.00	20.00	J-4007
J-2730	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	27.12	J-4007
J-2731	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	22.55	J-4007
J-2732	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	35.78	J-4007
J-2733	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	27.08	J-4007
J-2734	High	true	1,000.00	1,956.73	1,004.31	1,961.04	20.00	20.00	J-3986
J-2735	High	true	1,000.00	2,024.66	1,004.31	2,028.97	20.00	20.00	J-3986
J-2736	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	48.70	J-3986
J-2737	Low	true	1,000.00	3,120.24	1,010.00	3,130.24	20.00	20.00	J-4007
J-2738	High	true	1,000.00	1,640.01	1,002.16	1,642.17	20.00	20.00	J-3986
J-2739	High	true	1,000.00	1,669.68	1,002.16	1,671.83	20.00	20.00	J-3986
J-2741	Low	true	1,000.00	3,148.68	1,016.07	3,164.75	20.00	20.00	J-4007
J-2742	YT	true	1,000.00	2,806.88	1,008.04	2,814.92	20.00	20.00	J-2743
J-2743	YT	true	1,000.00	2,813.35	1,008.04	2,821.39	20.00	20.00	J-2742
J-2744	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	33.64	J-3986
J-2745	High	true	1,000.00	1,559.33	1,002.16	1,561.48	20.00	20.00	J-3986
J-2746	High	true	1,000.00	1,597.90	1,002.16	1,600.06	20.00	20.00	J-3986
J-2747	High	true	1,000.00	2,439.33	1,019.80	2,459.13	20.00	20.00	J-3986
J-2748	High	true	1,000.00	2,773.44	1,019.80	2,793.23	20.00	20.00	J-3986
J-2749	High	true	1,000.00	2,394.16	1,004.31	2,398.48	20.00	20.00	J-3986
J-2750	High	true	1,000.00	2,658.81	1,004.31	2,663.13	20.00	20.00	J-3986
J-2751	Low	true	1,000.00	4,239.26	1,007.82	4,247.08	20.00	20.00	J-4007
J-2753	High	true	1,000.00	1,989.14	1,004.31	1,993.45	20.00	20.00	J-3986
J-2754	High	true	1,000.00	2,100.04	1,004.31	2,104.35	20.00	20.00	J-3986
J-2755	Low	true	1,000.00	4,533.69	1,007.82	4,541.51	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2756	Low	true	1,000.00	4,399.90	1,007.82	4,407.72	20.00	20.00	J-4007
J-2757	High	true	1,000.00	5,000.00	1,009.41	5,009.41	20.00	38.66	J-3986
J-2758	High	true	1,000.00	5,000.00	1,009.41	5,009.41	20.00	21.59	J-3986
J-2759	Low	true	1,000.00	2,173.95	1,010.00	2,183.95	20.00	20.00	J-4007
J-2760	Low	true	1,000.00	2,364.99	1,010.00	2,374.99	20.00	20.00	J-4007
J-2761	Low	true	1,000.00	4,568.11	1,007.82	4,575.93	20.00	20.00	J-4007
J-2762	Low	true	1,000.00	4,417.24	1,007.82	4,425.06	20.00	20.00	J-4007
J-2763	High	true	1,000.00	2,310.30	1,004.31	2,314.61	20.00	20.00	J-3986
J-2764	High	true	1,000.00	2,277.47	1,004.31	2,281.78	20.00	20.00	J-3986
J-2765	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	27.30	J-4007
J-2766	Low	true	1,000.00	4,527.22	1,007.64	4,534.87	20.00	20.00	J-4007
J-2767	Low	true	1,000.00	4,184.57	1,007.82	4,192.39	20.00	20.00	J-4007
J-2768	Low	true	1,000.00	4,142.82	1,007.82	4,150.64	20.00	20.00	J-4008
J-2769	Low	true	1,000.00	4,154.30	1,006.27	4,160.57	20.00	20.00	J-4007
J-2770	Low	true	1,000.00	3,987.18	1,007.82	3,995.00	20.00	20.00	J-4007
J-2771	Low	true	1,000.00	3,885.86	1,007.82	3,893.68	20.00	20.00	J-4007
J-2772	Low	true	1,000.00	4,542.24	1,007.82	4,550.06	20.00	20.00	J-4007
J-2774	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	29.35	J-4007
J-2775	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	27.63	J-4007
J-2776	Low	true	1,000.00	4,152.34	1,010.19	4,162.54	20.00	20.00	J-4007
J-2777	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	38.19	J-4007
J-2778	Low	true	1,000.00	4,226.44	1,007.82	4,234.26	20.00	20.00	J-4007
J-2779	Low	true	1,000.00	4,538.57	1,007.82	4,546.39	20.00	20.00	J-4007
J-2780	Low	true	1,000.00	3,522.58	1,013.13	3,535.72	20.00	20.00	J-4007
J-2781	Low	true	1,000.00	3,558.47	1,013.13	3,571.60	20.00	20.00	J-4007
J-2782	High	true	1,000.00	5,000.00	1,020.97	5,020.97	20.00	28.35	J-3986
J-2783	High	true	1,000.00	2,497.44	1,004.31	2,501.75	20.00	20.00	J-3986
J-2784	High	true	1,000.00	2,223.33	1,004.31	2,227.64	20.00	20.00	J-3986
J-2785	High	true	1,000.00	1,632.14	1,019.80	1,651.94	20.00	20.00	J-3986
J-2786	High	true	1,000.00	1,671.26	1,019.80	1,691.06	20.00	20.00	J-3986
J-2787	High	true	1,000.00	1,864.87	1,019.80	1,884.66	20.00	20.00	J-3986
J-2788	High	true	1,000.00	1,716.53	1,019.80	1,736.32	20.00	20.34	J-3986
J-2789	Low	true	1,000.00	3,924.80	1,009.21	3,934.02	20.00	20.00	J-4007
J-2790	Low	true	1,000.00	3,881.10	1,009.21	3,890.32	20.00	20.00	J-4007
J-2791	Low	true	1,000.00	3,860.96	1,009.80	3,870.76	20.00	20.00	J-4007
J-2792	Low	true	1,000.00	3,674.56	1,005.49	3,680.05	20.00	20.00	J-4008
J-2793	Low	true	1,000.00	4,006.59	1,005.49	4,012.08	20.00	20.00	J-4007
J-2794	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	26.17	J-4007
J-2795	Low	true	1,000.00	4,293.95	1,007.82	4,301.77	20.00	20.00	J-4007
J-2797	Low	true	1,000.00	4,141.97	1,007.82	4,149.79	20.00	20.00	J-4007
J-2798	Low	true	1,000.00	4,121.58	1,007.82	4,129.40	20.00	20.00	J-4007
J-2799	High	true	1,000.00	2,336.06	1,012.35	2,348.41	20.00	20.00	J-3986
J-2800	High	true	1,000.00	2,389.16	1,012.35	2,401.51	20.00	20.00	J-3986
J-2801	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	53.27	J-3986
J-2802	High	true	1,000.00	4,893.55	1,016.27	4,909.82	20.00	20.00	J-3986
J-2803	Low	true	1,000.00	3,966.80	1,007.82	3,974.62	20.00	20.00	J-4007
J-2804	Low	true	1,000.00	4,028.56	1,007.82	4,036.38	20.00	20.00	J-4007
J-2805	Low	true	1,000.00	3,742.68	1,009.21	3,751.89	20.00	20.00	J-4007
J-2806	Low	true	1,000.00	3,719.24	1,009.21	3,728.45	20.00	20.00	J-4007
J-2807	Low	true	1,000.00	3,773.68	1,009.21	3,782.89	20.00	20.00	J-4007
J-2808	High	true	1,000.00	3,339.11	1,023.91	3,363.02	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2809	High	true	1,000.00	5,000.00	1,023.91	5,023.91	20.00	37.22	J-3986
J-2810	Low	true	1,000.00	4,099.00	1,007.82	4,106.82	20.00	20.00	J-4008
J-2811	Low	true	1,000.00	3,772.34	1,002.16	3,774.49	20.00	20.00	J-4007
J-2812	High	true	1,000.00	3,610.72	1,032.14	3,642.86	20.00	20.00	J-3986
J-2813	High	true	1,000.00	2,676.51	1,032.14	2,708.66	20.00	20.00	J-3986
J-2814	High	true	1,000.00	2,734.74	1,019.80	2,754.54	20.00	20.00	J-3986
J-2815	High	true	1,000.00	2,104.61	1,019.80	2,124.41	20.00	20.00	J-3986
J-2816	Low	true	1,000.00	4,225.71	1,007.82	4,233.53	20.00	20.00	J-4007
J-2817	Low	true	1,000.00	4,143.56	1,007.82	4,151.38	20.00	20.00	J-4007
J-2818	Low	true	1,000.00	4,269.29	1,007.82	4,277.11	20.00	20.00	J-4008
J-2819	Low	true	1,000.00	4,225.83	1,007.82	4,233.65	20.00	20.00	J-4007
J-2820	YT	true	1,000.00	3,260.01	1,006.27	3,266.28	20.00	20.00	J-996
J-2821	High	true	1,000.00	1,881.84	1,019.80	1,901.63	20.00	20.00	J-3986
J-2822	Low	true	1,000.00	2,738.16	1,003.53	2,741.69	20.00	20.00	J-4007
J-2823	YT	true	1,000.00	2,788.82	1,008.04	2,796.85	20.00	20.00	J-2824
J-2824	YT	true	1,000.00	2,782.23	1,008.04	2,790.26	20.00	20.00	J-2823
J-2825	High	true	1,000.00	1,418.34	1,019.80	1,438.13	20.00	20.00	J-3986
J-2826	High	true	1,000.00	1,442.26	1,019.80	1,462.06	20.00	20.00	J-3986
J-2827	Low	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	37.18	J-4007
J-2828	High	true	1,000.00	1,668.33	1,019.80	1,688.13	20.00	20.00	J-3986
J-2829	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	29.27	J-3986
J-2830	Low	true	1,000.00	3,225.95	1,002.74	3,228.70	20.00	20.00	J-4007
J-2831	YT	true	1,000.00	3,335.82	1,002.74	3,338.56	20.00	20.00	J-2957
J-2832	High	true	1,000.00	2,282.71	1,000.00	2,282.71	20.00	20.00	J-3986
J-2833	Low	true	1,000.00	5,000.00	1,017.84	5,017.84	20.00	41.92	J-4007
J-2834	High	true	1,000.00	2,919.68	1,005.10	2,924.77	20.00	20.00	J-3986
J-2835	High	true	1,000.00	3,647.95	1,007.84	3,655.79	20.00	20.00	J-3986
J-2836	High	true	1,000.00	4,822.75	1,011.17	4,833.93	20.00	20.00	J-3986
J-2837	Low	true	1,000.00	5,000.00	1,028.22	5,028.22	20.00	43.27	J-4007
J-2838	High	true	1,000.00	1,470.28	1,019.80	1,490.07	20.00	20.00	J-3986
J-2839	High	true	1,000.00	1,463.38	1,019.80	1,483.18	20.00	20.00	J-3986
J-2840	High	true	1,000.00	1,584.23	1,019.80	1,604.02	20.00	20.00	J-3986
J-2841	High	true	1,000.00	2,720.58	1,019.80	2,740.38	20.00	20.00	J-3986
J-2842	High	true	1,000.00	2,698.24	1,019.80	2,718.04	20.00	20.00	J-3986
J-2843	Low	true	1,000.00	3,577.88	1,016.66	3,594.54	20.00	20.00	J-4007
J-2844	Low	true	1,000.00	2,694.95	1,016.66	2,711.61	20.00	20.00	J-4007
J-2845	Low	true	1,000.00	5,000.00	1,025.87	5,025.87	20.00	21.07	J-4008
J-2846	High	true	1,000.00	3,269.53	1,015.48	3,285.02	20.00	20.00	J-3986
J-2847	Low	true	1,000.00	5,000.00	1,016.46	5,016.46	20.00	31.87	J-4007
J-2848	Low	true	1,000.00	4,253.66	1,016.66	4,270.32	20.00	20.00	J-4007
J-2849	High	true	1,000.00	2,263.06	1,004.31	2,267.37	20.00	20.00	J-3986
J-2850	High	true	1,000.00	2,380.86	1,004.31	2,385.17	20.00	20.00	J-3986
J-2851	Low	true	1,000.00	3,995.48	1,007.82	4,003.30	20.00	20.00	J-4007
J-2852	Low	true	1,000.00	4,295.04	1,007.82	4,302.86	20.00	20.00	J-4007
J-2853	High	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	66.49	J-3986
J-2854	High	true	1,000.00	2,829.59	1,016.27	2,845.86	20.00	20.00	J-3986
J-2855	Low	true	1,000.00	3,948.24	1,004.51	3,952.75	20.00	20.00	J-4007
J-2856	High	true	1,000.00	2,440.92	1,002.16	2,443.07	20.00	20.00	J-3986
J-2857	High	true	1,000.00	2,384.89	1,004.31	2,389.20	20.00	20.00	J-3986
J-2858	High	true	1,000.00	2,306.82	1,004.31	2,311.14	20.00	20.00	J-3986
J-2859	Low	true	1,000.00	3,886.60	1,010.19	3,896.79	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2860	YT	true	1,000.00	2,832.64	1,008.04	2,840.68	20.00	20.00	J-2823
J-2861	High	true	1,000.00	5,000.00	1,023.52	5,023.52	20.00	62.39	J-3986
J-2862	High	true	1,000.00	5,000.00	1,016.27	5,016.27	20.00	25.01	J-3986
J-2863	YT	true	1,000.00	3,205.20	1,003.53	3,208.73	20.00	20.00	J-2864
J-2864	YT	true	1,000.00	2,912.84	1,008.04	2,920.88	20.00	20.00	J-2860
J-2865	YT	true	1,000.00	2,719.48	1,008.04	2,727.52	20.00	20.00	J-3888
J-2866	YT	true	1,000.00	2,734.62	1,008.04	2,742.66	20.00	20.00	J-2865
J-2867	High	true	1,000.00	2,719.48	1,019.80	2,739.28	20.00	20.00	J-3986
J-2868	Low	true	1,000.00	3,912.30	1,015.68	3,927.98	20.00	20.00	J-4007
J-2869	High	true	1,000.00	1,512.82	1,002.16	1,514.97	20.00	20.00	J-3986
J-2870	High	true	1,000.00	3,379.52	1,019.80	3,399.31	20.00	20.00	J-3986
J-2871	Low	true	1,000.00	3,574.66	1,005.49	3,580.15	20.00	20.00	J-4007
J-2872	High	true	1,000.00	2,390.32	1,012.35	2,402.67	20.00	20.00	J-3986
J-2873	High	true	1,000.00	2,458.01	1,012.35	2,470.36	20.00	20.00	J-3986
J-2874	High	true	1,000.00	2,122.38	1,012.35	2,134.72	20.00	20.00	J-3986
J-2875	High	true	1,000.00	2,093.57	1,000.00	2,093.57	20.00	20.00	J-3986
J-2876	High	true	1,000.00	2,369.26	1,012.35	2,381.61	20.00	20.00	J-3986
J-2877	High	true	1,000.00	2,287.60	1,012.35	2,299.95	20.00	20.00	J-3986
J-2878	High	true	1,000.00	2,618.04	1,012.35	2,630.39	20.00	20.00	J-3986
J-2879	High	true	1,000.00	2,934.81	1,012.35	2,947.16	20.00	20.00	J-3986
J-2880	Low	true	1,000.00	5,000.00	1,029.79	5,029.79	20.00	38.33	J-4007
J-2881	High	true	1,000.00	3,004.52	1,005.10	3,009.61	20.00	20.00	J-3986
J-2882	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	32.12	J-4008
J-2883	YT	true	1,000.00	2,813.11	1,008.04	2,821.15	20.00	20.00	J-2866
J-2884	High	true	1,000.00	4,070.31	1,004.31	4,074.62	20.00	20.00	J-3986
J-2885	High	true	1,000.00	4,217.77	1,012.35	4,230.12	20.00	20.00	J-3986
J-2886	High	true	1,000.00	5,000.00	1,002.74	5,002.74	20.00	44.38	J-3986
J-2887	Low	true	1,000.00	5,000.00	1,026.85	5,026.85	20.00	37.18	J-4007
J-2888	High	true	1,000.00	2,110.23	1,019.80	2,130.03	20.00	20.00	J-3986
J-2889	High	true	1,000.00	2,246.58	1,019.80	2,266.38	20.00	20.00	J-3986
J-2890	Low	true	1,000.00	4,448.97	1,002.74	4,451.72	20.00	20.00	J-4007
J-2891	Low	true	1,000.00	5,000.00	1,025.28	5,025.28	20.00	31.73	J-4007
J-2892	High	true	1,000.00	2,505.01	1,012.35	2,517.35	20.00	20.00	J-3986
J-2893	YT	true	1,000.00	2,835.08	1,003.53	2,838.61	20.00	20.00	J-3872
J-2894	High	true	1,000.00	3,176.27	1,005.10	3,181.37	20.00	20.00	J-3986
J-2895	High	true	1,000.00	1,753.05	1,019.80	1,772.85	20.00	20.00	J-3986
J-2896	High	true	1,000.00	3,372.56	1,019.80	3,392.35	20.00	20.00	J-3986
J-2897	High	true	1,000.00	2,182.98	1,019.80	2,202.78	20.00	20.00	J-3986
J-2898	Low	true	1,000.00	3,754.88	1,004.51	3,759.39	20.00	20.00	J-4007
J-2899	High	true	1,000.00	1,910.71	1,004.31	1,915.02	20.00	20.00	J-3986
J-2900	High	true	1,000.00	2,262.57	1,004.31	2,266.89	20.00	20.00	J-3986
J-2901	High	true	1,000.00	3,263.18	1,012.35	3,275.53	20.00	20.00	J-3986
J-2902	Low	true	1,000.00	4,028.93	1,007.82	4,036.75	20.00	20.00	J-4007
J-2903	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	45.65	J-3986
J-2904	High	true	1,000.00	2,872.44	1,000.00	2,872.44	20.00	20.00	J-3986
J-2905	Low	true	1,000.00	4,424.07	1,000.00	4,424.07	20.00	20.00	J-4007
J-2906	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.64	J-4007
J-2907	High	true	1,000.00	2,765.01	1,004.31	2,769.33	20.00	20.00	J-3986
J-2908	High	true	1,000.00	5,000.00	1,005.10	5,005.10	20.00	50.85	J-3986
J-2909	High	true	1,000.00	3,517.21	1,011.17	3,528.38	20.00	20.00	J-3986
J-2910	High	true	1,000.00	3,693.60	1,012.35	3,705.95	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2911	Low	true	1,000.00	4,381.84	1,007.82	4,389.66	20.00	20.00	J-4007
J-2912	Low	true	1,000.00	4,162.84	1,007.82	4,170.66	20.00	20.00	J-4007
J-2913	Low	true	1,000.00	3,839.72	1,008.62	3,848.35	20.00	20.00	J-4007
J-2914	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	42.03	J-4007
J-2915	Low	true	1,000.00	2,860.96	1,000.00	2,860.96	20.00	20.00	J-4007
J-2916	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	41.78	J-4007
J-2917	High	true	1,000.00	2,164.18	1,004.31	2,168.50	20.00	20.00	J-3986
J-2918	High	true	1,000.00	2,147.71	1,004.31	2,152.02	20.00	20.00	J-3986
J-2919	Low	true	1,000.00	4,554.93	1,007.82	4,562.75	20.00	20.00	J-4007
J-2920	High	true	1,000.00	1,438.70	1,000.00	1,438.70	20.00	20.00	J-3986
J-2921	Low	true	1,000.00	5,000.00	1,026.85	5,026.85	20.00	36.37	J-4007
J-2922	High	true	1,000.00	1,422.42	1,000.00	1,422.42	20.00	20.00	J-3986
J-2923	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	27.35	J-4007
J-2924	Low	true	1,000.00	4,389.16	1,016.86	4,406.02	20.00	20.00	J-4007
J-2925	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	37.62	J-4007
J-2926	High	true	1,000.00	2,959.47	1,012.35	2,971.82	20.00	20.00	J-3986
J-2927	High	true	1,000.00	3,366.46	1,019.80	3,386.25	20.00	20.00	J-3986
J-2928	High	true	1,000.00	5,000.00	1,015.09	5,015.09	20.00	22.45	J-3986
J-2929	Low	true	1,000.00	3,847.90	1,011.56	3,859.46	20.00	20.00	J-4007
J-2930	Low	true	1,000.00	3,632.32	1,010.00	3,642.32	20.00	20.00	J-4007
J-2931	Low	true	1,000.00	4,886.72	1,008.04	4,894.75	20.00	20.00	J-4007
J-2932	Low	true	1,000.00	3,915.65	1,000.00	3,915.65	20.00	20.00	J-4007
J-2933	Low	true	1,000.00	5,000.00	1,013.72	5,013.72	20.00	27.34	J-4007
J-2934	High	true	1,000.00	3,910.28	1,004.31	3,914.59	20.00	20.00	J-3986
J-2935	High	true	1,000.00	3,089.84	1,012.35	3,102.19	20.00	20.00	J-3986
J-2936	Low	true	1,000.00	3,584.23	1,016.66	3,600.89	20.00	20.00	J-4007
J-2937	Low	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	42.13	J-4007
J-2938	High	true	1,000.00	3,424.56	1,009.02	3,433.58	20.00	20.00	J-3986
J-2939	Low	true	1,000.00	4,008.30	1,005.49	4,013.79	20.00	20.00	J-4007
J-2940	Low	true	1,000.00	5,000.00	1,013.72	5,013.72	20.00	24.55	J-4007
J-2941	High	true	1,000.00	3,932.62	1,012.35	3,944.97	20.00	20.00	J-3986
J-2942	High	true	1,000.00	2,581.30	1,012.35	2,593.65	20.00	20.00	J-3986
J-2943	Low	true	1,000.00	4,053.59	1,010.00	4,063.59	20.00	20.00	J-4007
J-2944	Low	true	1,000.00	4,249.51	1,008.23	4,257.74	20.00	20.00	J-4007
J-2945	Low	true	1,000.00	2,178.71	1,010.00	2,188.71	20.00	20.00	J-4008
J-2946	Low	true	1,000.00	4,203.25	1,007.82	4,211.07	20.00	20.00	J-4007
J-2947	Low	true	1,000.00	4,513.06	1,007.82	4,520.88	20.00	20.00	J-4007
J-2948	Low	true	1,000.00	4,285.16	1,007.82	4,292.98	20.00	20.00	J-4007
J-2949	Low	true	1,000.00	4,341.67	1,000.00	4,341.67	20.00	20.00	J-4007
J-2950	Low	true	1,000.00	3,572.02	1,010.00	3,582.02	20.00	20.00	J-4007
J-2951	Low	true	1,000.00	4,536.74	1,029.20	4,565.95	20.00	20.00	J-4007
J-2952	High	true	1,000.00	2,187.50	1,004.31	2,191.81	20.00	20.00	J-3986
J-2953	High	true	1,000.00	3,374.76	1,019.80	3,394.55	20.00	20.00	J-3986
J-2954	Low	true	1,000.00	3,635.25	1,005.49	3,640.74	20.00	20.00	J-4008
J-2955	Low	true	1,000.00	3,681.52	1,008.23	3,689.75	20.00	20.00	J-4007
J-2956	Low	true	1,000.00	4,742.43	1,007.82	4,750.25	20.00	20.00	J-4007
J-2957	YT	true	1,000.00	2,584.05	1,000.00	2,584.05	20.00	20.00	J-304
J-2958	Low	true	1,000.00	3,995.73	1,007.82	4,003.55	20.00	20.00	J-4007
J-2959	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	46.20	J-3986
J-2960	High	true	1,000.00	2,252.44	1,012.35	2,264.79	20.00	20.00	J-3986
J-2961	High	true	1,000.00	3,377.20	1,019.80	3,396.99	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-2962	High	true	1,000.00	3,414.06	1,019.80	3,433.86	20.00	20.00	J-3986
J-2963	High	true	1,000.00	2,792.85	1,004.31	2,797.16	20.00	20.00	J-3986
J-2964	High	true	1,000.00	2,123.05	1,019.80	2,142.84	20.00	20.00	J-3986
J-2965	Low	true	1,000.00	4,412.48	1,007.82	4,420.30	20.00	20.00	J-4007
J-2966	Low	true	1,000.00	4,663.82	1,007.82	4,671.64	20.00	20.00	J-4007
J-2968	High	true	1,000.00	5,000.00	1,013.72	5,013.72	20.00	58.55	J-3986
J-2969	Low	true	1,000.00	4,236.45	1,016.86	4,253.31	20.00	20.00	J-4007
J-2970	High	true	1,000.00	5,000.00	1,011.37	5,011.37	20.00	45.37	J-3986
J-2971	High	true	1,000.00	1,877.99	1,011.37	1,889.36	20.00	20.00	J-3986
J-2972	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	60.71	J-3986
J-2973	High	true	1,000.00	1,578.06	1,000.00	1,578.06	20.00	20.00	J-3986
J-2974	High	true	1,000.00	5,000.00	1,009.41	5,009.41	20.00	38.38	J-3986
J-2975	Low	true	1,000.00	4,117.68	1,007.82	4,125.50	20.00	20.00	J-4007
J-2976	Low	true	1,000.00	4,046.88	1,007.82	4,054.70	20.00	20.00	J-4007
J-2977	Low	true	1,000.00	4,250.61	1,007.82	4,258.43	20.00	20.00	J-4007
J-2978	Low	true	1,000.00	4,048.71	1,007.82	4,056.53	20.00	20.00	J-4007
J-2979	Low	true	1,000.00	4,306.27	1,007.82	4,314.09	20.00	20.00	J-4007
J-2980	High	true	1,000.00	2,162.72	1,004.31	2,167.03	20.00	20.00	J-3986
J-2981	High	true	1,000.00	2,262.02	1,004.31	2,266.34	20.00	20.00	J-3986
J-2982	High	true	1,000.00	2,722.90	1,004.31	2,727.21	20.00	20.00	J-3986
J-2983	Low	true	1,000.00	3,994.51	1,007.82	4,002.33	20.00	20.00	J-4007
J-2984	Low	true	1,000.00	4,218.02	1,007.82	4,225.84	20.00	20.00	J-4007
J-2985	Low	true	1,000.00	4,156.62	1,007.82	4,164.44	20.00	20.00	J-4007
J-2986	Low	true	1,000.00	4,220.46	1,007.82	4,228.28	20.00	20.00	J-4007
J-2987	Low	true	1,000.00	4,169.31	1,007.82	4,177.13	20.00	20.00	J-4007
J-2988	Low	true	1,000.00	4,311.40	1,007.82	4,319.22	20.00	20.00	J-4007
J-2989	Low	true	1,000.00	4,141.85	1,007.82	4,149.67	20.00	20.00	J-4007
J-2990	Low	true	1,000.00	4,301.88	1,007.82	4,309.70	20.00	20.00	J-4007
J-2991	Low	true	1,000.00	4,301.51	1,007.82	4,309.33	20.00	20.00	J-4007
J-2992	Low	true	1,000.00	4,253.42	1,006.27	4,259.69	20.00	20.00	J-4007
J-2993	High	true	1,000.00	3,862.55	1,012.54	3,875.09	20.00	20.00	J-3986
J-2994	High	true	1,000.00	5,000.00	1,015.29	5,015.29	20.00	35.47	J-3986
J-2995	Low	true	1,000.00	3,143.31	1,017.05	3,160.36	20.00	20.00	J-4007
J-2996	High	true	1,000.00	2,104.49	1,004.31	2,108.80	20.00	20.00	J-3986
J-2997	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	54.53	J-3986
J-2998	Low	true	1,000.00	3,292.11	1,000.00	3,292.11	20.00	20.00	J-4007
J-2999	Low	true	1,000.00	3,519.29	1,009.02	3,528.30	20.00	20.00	J-4007
J-3000	Low	true	1,000.00	5,000.00	1,016.07	5,016.07	20.00	40.03	J-4007
J-3001	High	true	1,000.00	5,000.00	1,019.40	5,019.40	20.00	59.78	J-3986
J-3002	High	true	1,000.00	5,000.00	1,015.48	5,015.48	20.00	58.01	J-3986
J-3003	Low	true	1,000.00	3,557.74	1,000.00	3,557.74	20.00	20.00	J-4007
J-3004	Low	true	1,000.00	5,000.00	1,009.80	5,009.80	20.00	38.96	J-4007
J-3005	High	true	1,000.00	2,170.47	1,004.31	2,174.78	20.00	20.00	J-3986
J-3006	Low	true	1,000.00	1,956.97	1,013.72	1,970.69	20.00	20.00	J-4007
J-3007	High	true	1,000.00	5,000.00	1,016.66	5,016.66	20.00	46.98	J-3986
J-3008	High	true	1,000.00	2,063.11	1,011.96	2,075.07	20.00	20.00	J-3986
J-3009	High	true	1,000.00	4,045.90	1,016.86	4,062.75	20.00	20.00	J-3986
J-3010	Low	true	1,000.00	5,000.00	1,009.02	5,009.02	20.00	41.15	J-4007
J-3011	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	65.25	J-3986
J-3012	Low	true	1,000.00	4,419.19	1,016.66	4,435.85	20.00	20.00	J-4007
J-3013	Zone	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	47.00	J-3975

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3016	High	true	1,000.00	5,000.00	1,023.52	5,023.52	20.00	71.09	J-3986
J-3017	Low	true	1,000.00	5,000.00	1,029.79	5,029.79	20.00	38.00	J-4007
J-3018	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	38.73	J-4008
J-3019	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	41.16	J-4007
J-3364	Low	true	1,000.00	5,000.00	1,014.50	5,014.50	20.00	21.80	J-4008
J-3366	Low	true	1,000.00	4,332.89	1,000.00	4,332.89	20.00	20.00	J-4007
J-3367	Low	true	1,000.00	4,340.82	1,016.86	4,357.68	20.00	20.00	J-4007
J-3368	Low	true	1,000.00	4,312.87	1,016.86	4,329.72	20.00	20.00	J-4007
J-3370	Low	true	1,000.00	5,000.00	1,009.21	5,009.21	20.00	23.92	J-4007
J-3374	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	47.21	J-4007
J-3375	Low	true	1,000.00	4,943.12	1,006.08	4,949.19	20.00	20.00	J-4007
J-3377	High	true	1,000.00	1,379.64	1,002.16	1,381.79	20.00	20.00	J-3986
J-3378	High	true	1,000.00	1,378.17	1,002.16	1,380.33	20.00	20.00	J-3986
J-3379	High	true	1,000.00	4,538.82	1,000.00	4,538.82	20.00	20.00	J-3986
J-3380	YT	true	1,000.00	3,414.18	1,005.49	3,419.67	20.00	20.00	J-3405
J-3381	Low	true	1,000.00	3,383.30	1,005.49	3,388.79	20.00	20.00	J-4007
J-3382	YT	true	1,000.00	3,206.30	1,043.71	3,250.01	20.00	20.00	J-4037
J-3383	YT	true	1,000.00	3,291.02	1,043.71	3,334.72	20.00	20.00	J-3382
J-3384	High	true	1,000.00	5,000.00	1,008.43	5,008.43	20.00	39.87	J-3986
J-3385	High	true	1,000.00	1,394.96	1,002.16	1,397.11	20.00	20.00	J-3986
J-3386	High	true	1,000.00	1,401.37	1,002.16	1,403.52	20.00	20.00	J-3986
J-3387	High	true	1,000.00	1,439.94	1,002.16	1,442.10	20.00	20.00	J-3986
J-3388	High	true	1,000.00	1,447.20	1,002.16	1,449.36	20.00	20.00	J-3986
J-3389	High	true	1,000.00	1,368.77	1,002.16	1,370.93	20.00	20.00	J-3986
J-3390	High	true	1,000.00	1,457.52	1,002.16	1,459.68	20.00	20.00	J-3986
J-3391	High	true	1,000.00	1,464.42	1,002.16	1,466.57	20.00	20.00	J-3986
J-3392	High	true	1,000.00	1,383.97	1,002.16	1,386.13	20.00	20.00	J-3986
J-3393	High	true	1,000.00	1,393.37	1,002.16	1,395.53	20.00	20.00	J-3986
J-3395	High	true	1,000.00	1,379.94	1,002.16	1,382.10	20.00	20.00	J-3986
J-3396	High	true	1,000.00	1,435.24	1,002.16	1,437.40	20.00	20.00	J-3986
J-3397	High	true	1,000.00	1,388.67	1,002.16	1,390.83	20.00	20.00	J-3986
J-3398	High	true	1,000.00	1,451.66	1,002.16	1,453.82	20.00	20.00	J-3986
J-3399	High	true	1,000.00	1,417.18	1,002.16	1,419.33	20.00	20.00	J-3986
J-3400	High	true	1,000.00	1,417.24	1,002.16	1,419.39	20.00	20.00	J-3986
J-3401	High	true	1,000.00	1,401.12	1,002.16	1,403.28	20.00	20.00	J-3986
J-3402	High	true	1,000.00	1,367.55	1,002.16	1,369.71	20.00	20.00	J-3986
J-3403	YT	true	1,000.00	2,962.77	1,011.17	2,973.94	20.00	20.00	J-285
J-3404	High	true	1,000.00	1,370.12	1,002.16	1,372.27	20.00	20.00	J-3986
J-3405	YT	true	1,000.00	3,280.64	1,005.49	3,286.13	20.00	20.00	J-285
J-3406	YT	true	1,000.00	3,225.83	1,005.49	3,231.32	20.00	20.00	J-4044
J-3408	High	true	1,000.00	1,483.15	1,002.16	1,485.31	20.00	20.00	J-3986
J-3409	Low	true	1,000.00	4,522.10	1,035.28	4,557.38	20.00	20.00	J-4007
J-3410	High	true	1,000.00	1,466.00	1,002.16	1,468.16	20.00	20.00	J-3986
J-3411	High	true	1,000.00	1,417.91	1,002.16	1,420.06	20.00	20.00	J-3986
J-3412	High	true	1,000.00	1,493.29	1,002.16	1,495.44	20.00	20.00	J-3986
J-3413	High	true	1,000.00	1,381.65	1,002.16	1,383.81	20.00	20.00	J-3986
J-3416	High	true	1,000.00	1,445.19	1,002.16	1,447.35	20.00	20.00	J-3986
J-3417	High	true	1,000.00	1,370.24	1,002.16	1,372.40	20.00	20.00	J-3986
J-3418	High	true	1,000.00	1,376.34	1,002.16	1,378.50	20.00	20.00	J-3986
J-3419	High	true	1,000.00	1,371.15	1,002.16	1,373.31	20.00	20.00	J-3986
J-3420	High	true	1,000.00	1,375.06	1,002.16	1,377.22	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3421	Low	true	1,000.00	3,629.52	1,016.86	3,646.37	20.00	20.00	J-4007
J-3422	Low	true	1,000.00	4,665.04	1,024.50	4,689.54	20.00	20.00	J-4007
J-3423	Low	true	1,000.00	4,008.42	1,003.92	4,012.34	20.00	20.00	J-4007
J-3424	Low	true	1,000.00	4,044.19	1,003.92	4,048.11	20.00	20.00	J-4007
J-3425	Low	true	1,000.00	4,399.17	1,002.74	4,401.91	20.00	20.00	J-4007
J-3426	Low	true	1,000.00	4,316.90	1,002.16	4,319.05	20.00	20.00	J-4007
J-3427	High	true	1,000.00	5,000.00	1,003.72	5,003.72	20.00	34.30	J-3986
J-3428	High	true	1,000.00	1,354.74	1,002.16	1,356.89	20.00	20.00	J-3986
J-3429	High	true	1,000.00	1,371.70	1,002.16	1,373.86	20.00	20.00	J-3986
J-3430	Low	true	1,000.00	4,095.21	1,003.92	4,099.13	20.00	20.00	J-4007
J-3431	Low	true	1,000.00	4,135.99	1,003.92	4,139.91	20.00	20.00	J-4008
J-3432	Low	true	1,000.00	4,064.70	1,003.92	4,068.62	20.00	20.00	J-4007
J-3433	YT	true	1,000.00	3,245.12	1,005.68	3,250.80	20.00	20.00	J-4049
J-3434	Low	true	1,000.00	4,815.19	1,026.26	4,841.45	20.00	20.00	J-4007
J-3435	Low	true	1,000.00	4,275.88	1,002.16	4,278.03	20.00	20.00	J-4007
J-3436	Low	true	1,000.00	4,357.06	1,006.08	4,363.13	20.00	20.00	J-4007
J-3437	Low	true	1,000.00	4,363.52	1,006.08	4,369.60	20.00	20.00	J-4007
J-3438	Low	true	1,000.00	4,022.95	1,003.92	4,026.87	20.00	20.00	J-4007
J-3439	Low	true	1,000.00	4,780.27	1,002.74	4,783.02	20.00	20.00	J-4007
J-3440	Low	true	1,000.00	5,000.00	1,016.46	5,016.46	20.00	30.89	J-4007
J-3441	Low	true	1,000.00	4,229.98	1,008.43	4,238.41	20.00	20.00	J-4008
J-3442	Low	true	1,000.00	4,199.71	1,008.04	4,207.74	20.00	20.00	J-4007
J-3443	High	true	1,000.00	5,000.00	1,003.72	5,003.72	20.00	31.96	J-3986
J-3444	High	true	1,000.00	5,000.00	1,003.72	5,003.72	20.00	34.22	J-3986
J-3445	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	44.12	J-3986
J-3446	Low	true	1,000.00	5,000.00	1,031.75	5,031.75	20.00	46.21	J-4007
J-3447	Low	true	1,000.00	4,262.21	1,002.16	4,264.36	20.00	20.00	J-4007
J-3448	High	true	1,000.00	3,079.10	1,005.49	3,084.59	20.00	20.00	J-3986
J-3449	High	true	1,000.00	2,446.05	1,005.49	2,451.53	20.00	20.00	J-3986
J-3450	YT	true	1,000.00	3,238.28	1,005.68	3,243.97	20.00	20.00	J-3433
J-3451	YT	true	1,000.00	3,510.01	1,005.49	3,515.50	20.00	20.00	J-3870
J-3452	YT	true	1,000.00	3,674.68	1,005.49	3,680.17	20.00	20.00	J-3451
J-3453	Low	true	1,000.00	5,000.00	1,019.21	5,019.21	20.00	47.04	J-4007
J-3454	Low	true	1,000.00	4,535.40	1,002.74	4,538.14	20.00	20.00	J-4007
J-3455	Low	true	1,000.00	5,000.00	1,013.92	5,013.92	20.00	42.30	J-4007
J-3456	High	true	1,000.00	5,000.00	1,014.11	5,014.11	20.00	44.23	J-3986
J-3457	Low	true	1,000.00	3,736.21	1,008.62	3,744.83	20.00	20.00	J-4007
J-3458	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	34.94	J-4007
J-3460	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.22	J-4007
J-3461	YT	true	1,000.00	3,497.80	1,011.17	3,508.97	20.00	20.00	J-3877
J-3462	Low	true	1,000.00	4,593.02	1,003.92	4,596.94	20.00	20.00	J-4007
J-3463	High	true	1,000.00	3,731.93	1,000.00	3,731.93	20.00	20.00	J-3986
J-3464	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	35.58	J-4007
J-3465	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	26.67	J-4007
J-3466	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	41.37	J-4007
J-3467	Low	true	1,000.00	5,000.00	1,010.19	5,010.19	20.00	38.18	J-4007
J-3468	High	true	1,000.00	5,000.00	1,010.39	5,010.39	20.00	47.03	J-3986
J-3469	High	true	1,000.00	1,390.50	1,002.16	1,392.66	20.00	20.00	J-3986
J-3470	High	true	1,000.00	5,000.00	1,015.09	5,015.09	20.00	43.56	J-3986
J-3471	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	45.41	J-4007
J-3472	Low	true	1,000.00	5,000.00	1,009.80	5,009.80	20.00	41.47	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3473	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	27.66	J-4007
J-3474	Low	true	1,000.00	4,698.12	1,009.21	4,707.33	20.00	20.00	J-4007
J-3475	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	20.00	J-4007
J-3476	High	true	1,000.00	4,608.15	1,008.43	4,616.58	20.00	20.00	J-3986
J-3477	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	26.23	J-4007
J-3479	Low	true	1,000.00	3,624.88	1,009.80	3,634.68	20.00	20.00	J-4007
J-3480	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	38.90	J-4007
J-3599	High	true	1,000.00	4,615.48	1,000.00	4,615.48	20.00	20.00	J-3986
J-3600	High	true	1,000.00	4,601.32	1,000.00	4,601.32	20.00	20.00	J-3986
J-3601	High	true	1,000.00	3,703.25	1,019.80	3,723.04	20.00	20.00	J-3986
J-3605	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	53.53	J-3986
J-3606	High	true	1,000.00	5,000.00	1,004.12	5,004.12	20.00	53.11	J-3986
J-3610	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	20.69	J-4007
J-3619	High	true	1,000.00	4,057.62	1,000.00	4,057.62	20.00	20.00	J-3986
J-3620	High	true	1,000.00	4,007.32	1,000.00	4,007.32	20.00	20.00	J-3986
J-3624	High	true	1,000.00	5,000.00	1,012.54	5,012.54	20.00	37.16	J-3986
J-3625	Low	true	1,000.00	4,478.64	1,007.82	4,486.46	20.00	20.00	J-4007
J-3626	High	true	1,000.00	3,162.11	1,002.16	3,164.27	20.00	20.00	J-3986
J-3627	High	true	1,000.00	3,151.37	1,002.16	3,153.52	20.00	20.00	J-3986
J-3628	Low	true	1,000.00	4,339.36	1,000.00	4,339.36	20.00	20.00	J-4007
J-3629	Low	true	1,000.00	4,297.49	1,016.86	4,314.34	20.00	20.00	J-4007
J-3630	High	true	1,000.00	4,406.13	1,005.10	4,411.22	20.00	20.00	J-3986
J-3631	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	37.26	J-4007
J-3632	High	true	1,000.00	2,705.08	1,004.31	2,709.39	20.00	20.00	J-3986
J-3634	High	true	1,000.00	4,101.07	1,012.35	4,113.42	20.00	20.00	J-3986
J-3635	High	true	1,000.00	4,101.32	1,012.35	4,113.67	20.00	20.00	J-3986
J-3636	High	true	1,000.00	4,657.96	1,005.29	4,663.25	20.00	20.00	J-3986
J-3637	High	true	1,000.00	5,000.00	1,008.82	5,008.82	20.00	34.36	J-3986
J-3638	High	true	1,000.00	3,972.90	1,004.31	3,977.21	20.00	20.00	J-3986
J-3639	High	true	1,000.00	4,136.47	1,012.35	4,148.82	20.00	20.00	J-3986
J-3640	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	52.92	J-3986
J-3641	Low	true	1,000.00	5,000.00	1,013.13	5,013.13	20.00	23.97	J-4007
J-3642	High	true	1,000.00	5,000.00	1,007.84	5,007.84	20.00	25.62	J-3986
J-3643	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	53.03	J-3986
J-3644	High	true	1,000.00	5,000.00	1,015.09	5,015.09	20.00	43.45	J-3986
J-3645	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.60	J-4007
J-3648	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	69.02	J-3986
J-3649	Zone	true	1,000.00	5,000.00	1,005.29	5,005.29	20.00	39.92	J-3975
J-3650	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	45.32	J-4007
J-3651	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	21.21	J-4007
J-3652	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	45.00	J-4007
J-3653	High	true	1,000.00	4,435.30	1,000.00	4,435.30	20.00	20.00	J-3986
J-3654	High	true	1,000.00	5,000.00	1,004.31	5,004.31	20.00	66.73	J-3986
J-3655	Low	true	1,000.00	5,000.00	1,009.80	5,009.80	20.00	39.04	J-4007
J-3656	Low	true	1,000.00	5,000.00	1,018.42	5,018.42	20.00	42.59	J-4007
J-3657	Low	true	1,000.00	5,000.00	1,011.56	5,011.56	20.00	39.39	J-4007
J-3658	High	true	1,000.00	4,595.58	1,013.72	4,609.30	20.00	20.00	J-3986
J-3659	High	true	1,000.00	4,186.04	1,007.06	4,193.09	20.00	20.00	J-3986
J-3660	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	72.67	J-3986
J-3661	High	true	1,000.00	3,570.07	1,019.80	3,589.86	20.00	20.00	J-3986
J-3663	High	true	1,000.00	4,139.89	1,000.00	4,139.89	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3664	High	true	1,000.00	3,983.64	1,004.31	3,987.95	20.00	20.00	J-3986
J-3665	High	true	1,000.00	5,000.00	1,009.80	5,009.80	20.00	83.22	J-3986
J-3666	High	true	1,000.00	5,000.00	1,004.31	5,004.31	20.00	70.29	J-3986
J-3668	High	true	1,000.00	5,000.00	1,008.23	5,008.23	20.00	56.74	J-3986
J-3669	High	true	1,000.00	2,821.66	1,005.10	2,826.75	20.00	20.00	J-3986
J-3672	High	true	1,000.00	5,000.00	1,023.32	5,023.32	20.00	51.20	J-3986
J-3674	High	true	1,000.00	3,976.20	1,012.35	3,988.54	20.00	20.00	J-3986
J-3675	High	true	1,000.00	3,976.81	1,012.35	3,989.16	20.00	20.00	J-3986
J-3676	High	true	1,000.00	4,105.71	1,012.35	4,118.06	20.00	20.00	J-3986
J-3677	Low	true	1,000.00	4,839.60	1,005.10	4,844.70	20.00	20.00	J-4007
J-3678	High	true	1,000.00	3,604.74	1,019.80	3,624.53	20.00	20.00	J-3986
J-3679	High	true	1,000.00	3,255.37	1,012.35	3,267.72	20.00	20.00	J-3986
J-3680	High	true	1,000.00	2,837.77	1,005.10	2,842.86	20.00	20.00	J-3986
J-3681	Low	true	1,000.00	5,000.00	1,012.35	5,012.35	20.00	23.74	J-4008
J-3682	High	true	1,000.00	3,944.58	1,012.35	3,956.93	20.00	20.00	J-3986
J-3685	Low	true	1,000.00	5,000.00	1,010.78	5,010.78	20.00	44.86	J-4007
J-3686	High	true	1,000.00	4,446.29	1,005.10	4,451.38	20.00	20.00	J-3986
J-3687	High	true	1,000.00	4,097.41	1,012.35	4,109.76	20.00	20.00	J-3986
J-3688	High	true	1,000.00	4,195.31	1,012.35	4,207.66	20.00	20.00	J-3986
J-3691	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.40	J-4007
J-3693	Low	true	1,000.00	5,000.00	1,017.05	5,017.05	20.00	31.20	J-4007
J-3695	High	true	1,000.00	3,172.24	1,012.35	3,184.59	20.00	20.00	J-3986
J-3696	Low	true	1,000.00	5,000.00	1,011.17	5,011.17	20.00	41.50	J-4007
J-3697	Low	true	1,000.00	4,648.56	1,007.82	4,656.38	20.00	20.00	J-4007
J-3701	High	true	1,000.00	5,000.00	1,009.80	5,009.80	20.00	77.80	J-3986
J-3703	Low	true	1,000.00	5,000.00	1,029.01	5,029.01	20.00	41.82	J-4008
J-3707	Low	true	1,000.00	4,516.36	1,007.82	4,524.18	20.00	20.00	J-4007
J-3838	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.55	J-3975
J-3839	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	53.70	J-3986
J-3840	High	true	1,000.00	5,000.00	1,014.90	5,014.90	20.00	52.88	J-3986
J-3841	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	44.54	J-4007
J-3844	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	41.24	J-4007
J-3857	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.65	J-4007
J-3858	Zone	true	1,000.00	5,000.00	1,004.31	5,004.31	20.00	85.42	J-3975
J-3863	Low	true	1,000.00	1,224.82	1,000.00	1,224.82	20.00	20.00	J-4007
J-3865	YT	true	1,000.00	2,106.20	1,017.05	2,123.25	20.00	20.00	J-1046
J-3870	YT	true	1,000.00	1,503.48	1,011.17	1,514.65	20.00	20.00	J-487
J-3871	YT	true	1,000.00	1,662.66	1,004.70	1,667.36	20.00	20.00	J-3875
J-3872	YT	true	1,000.00	1,610.90	1,003.53	1,614.43	20.00	20.00	J-3894
J-3873	YT	true	1,000.00	1,282.20	1,000.00	1,282.20	20.00	20.00	J-1249
J-3874	Low	true	1,000.00	1,413.57	1,006.08	1,419.65	20.00	20.00	J-4007
J-3875	YT	true	1,000.00	1,545.47	1,004.70	1,550.18	20.00	20.00	J-3871
J-3876	YT	true	1,000.00	2,833.50	1,004.70	2,838.20	20.00	20.00	J-4023
J-3877	YT	true	1,000.00	2,100.10	1,011.17	2,111.27	20.00	20.00	J-3461
J-3878	YT	true	1,000.00	1,396.48	1,003.53	1,400.01	20.00	20.00	J-4028
J-3879	Low	true	1,000.00	1,049.13	1,002.74	1,051.88	20.00	20.00	J-4007
J-3880	Low	true	1,000.00	1,432.98	1,002.16	1,435.14	20.00	20.00	J-4007
J-3881	Low	true	1,000.00	1,425.72	1,004.70	1,430.42	20.00	20.00	J-4007
J-3882	Low	true	1,000.00	1,090.82	1,005.49	1,096.31	20.00	20.00	J-4007
J-3883	Low	true	1,000.00	2,567.81	1,000.00	2,567.81	20.00	20.00	J-4007
J-3884	Low	true	1,000.00	4,628.17	1,012.94	4,641.11	20.00	20.00	J-4007

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3885	Low	true	1,000.00	4,787.60	1,012.94	4,800.53	20.00	20.00	J-4007
J-3886	Low	true	1,000.00	1,341.61	1,000.00	1,341.61	20.00	20.00	J-4008
J-3887	YT	true	1,000.00	1,309.27	1,003.53	1,312.79	20.00	20.00	J-4028
J-3888	YT	true	1,000.00	1,298.46	1,003.53	1,301.99	20.00	20.00	J-5000
J-3889	Low	true	1,000.00	1,033.05	1,004.51	1,037.56	20.00	20.00	J-4007
J-3891	Low	true	1,000.00	2,255.86	1,000.00	2,255.86	20.00	20.00	J-4007
J-3892	Low	true	1,000.00	2,151.55	1,002.74	2,154.29	20.00	20.00	J-4007
J-3893	YT	true	1,000.00	2,854.49	1,040.96	2,895.46	20.00	20.00	J-4054
J-3894	YT	true	1,000.00	1,557.43	1,003.53	1,560.96	20.00	20.00	J-4069
J-3895	Low	true	1,000.00	2,055.54	1,010.98	2,066.52	20.00	20.00	J-4007
J-3896	Low	true	1,000.00	2,370.48	1,010.98	2,381.46	20.00	20.00	J-4007
J-3897	Low	true	1,000.00	1,197.27	1,008.23	1,205.50	20.00	20.00	J-4007
J-3898	Low	true	1,000.00	1,219.73	1,014.50	1,234.23	20.00	20.00	J-4007
J-3899	Low	true	1,000.00	1,270.14	1,005.49	1,275.63	20.00	20.00	J-4007
J-3900	Low	true	1,000.00	1,220.95	1,005.49	1,226.44	20.00	20.00	J-4007
J-3902	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	27.19	J-4007
J-3903	Low	true	1,000.00	3,109.37	1,004.51	3,113.88	20.00	20.00	J-4007
J-3904	Low	true	1,000.00	2,307.86	1,010.98	2,318.84	20.00	20.00	J-4007
J-3905	Low	true	1,000.00	4,900.88	1,013.72	4,914.60	20.00	20.00	J-4007
J-3906	Low	true	1,000.00	4,792.85	1,012.94	4,805.78	20.00	20.00	J-4008
J-3907	Low	true	1,000.00	1,207.95	1,008.23	1,216.18	20.00	20.00	J-4007
J-3908	Low	true	1,000.00	1,336.24	1,008.23	1,344.47	20.00	20.00	J-4007
J-3909	Low	true	1,000.00	4,987.55	1,004.70	4,992.25	20.00	20.00	J-4007
J-3910	YT	true	1,000.00	1,281.31	1,004.70	1,286.02	20.00	20.00	J-904
J-3911	YT	true	1,000.00	1,249.15	1,004.70	1,253.85	20.00	20.00	J-3910
J-3912	Low	true	1,000.00	4,769.29	1,000.00	4,769.29	20.00	20.00	J-4007
J-3913	Low	true	1,000.00	1,353.76	1,004.51	1,358.27	20.00	20.00	J-4007
J-3914	Low	true	1,000.00	4,787.35	1,014.50	4,801.86	20.00	20.00	J-4007
J-3915	Low	true	1,000.00	1,306.70	1,008.23	1,314.93	20.00	20.00	J-4007
J-3916	Low	true	1,000.00	4,695.80	1,000.00	4,695.80	20.00	20.00	J-4007
J-3917	Low	true	1,000.00	2,029.97	1,008.23	2,038.20	20.00	20.00	J-4007
J-3918	Low	true	1,000.00	1,937.01	1,008.23	1,945.24	20.00	20.00	J-4007
J-3919	Low	true	1,000.00	5,000.00	1,006.27	5,006.27	20.00	34.08	J-4007
J-3920	Low	false	1,000.00	216.63	1,006.27	222.90	20.00	20.00	J-4007
J-3921	Low	false	1,000.00	5,066.67	1,014.50	5,081.17	20.00	16.80	J-4007
J-3953	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3955	Low	true	1,000.00	5,000.00	1,005.49	5,005.49	20.00	34.56	J-4007
J-3956	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	12.98	J-3975
J-3957	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	12.98	J-3975
J-3958	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	12.98	J-3975
J-3959	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	33.81	J-3975
J-3961	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3962	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3963	YT	true	1,000.00	1,843.75	1,008.23	1,851.98	20.00	20.00	J-257
J-3965	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	9.09	J-3975
J-3966	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	36.87	J-3975
J-3967	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	37.11	J-3975
J-3968	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3969	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3970	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3971	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-3972	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3973	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3974	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3975	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3974
J-3976	Zone	true	1,000.00	5,000.00	1,004.31	5,004.31	20.00	85.65	J-3975
J-3977	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	85.54	J-3975
J-3978	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	85.20	J-3975
J-3979	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	84.92	J-3975
J-3980	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	42.71	J-3975
J-3981	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.02	J-3975
J-3983	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.04	J-3975
J-3984	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	43.06	J-3975
J-3985	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3986
J-3986	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3987
J-3987	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3986
J-3988	High	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3986
J-3989	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	53.32	J-3986
J-3990	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	53.59	J-3986
J-3991	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	53.58	J-3986
J-3992	High	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	53.37	J-3986
J-3993	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3994	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3995	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-3996	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	72.83	J-3975
J-3997	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	72.97	J-3975
J-3998	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	72.97	J-3975
J-3999	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-4000	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-4001	Zone	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-3975
J-4002	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	41.13	J-3975
J-4003	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	41.12	J-3975
J-4004	Zone	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	41.11	J-3975
J-4005	Low	true	1,000.00	5,000.00	1,004.51	5,004.51	20.00	48.40	J-4007
J-4006	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4007
J-4007	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4008
J-4008	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4007
J-4009	Low	false	1,000.00	0.00	1,000.00	0.00	20.00	4.33	J-4007
J-4010	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	45.77	J-4007
J-4011	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	47.81	J-4007
J-4012	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	47.85	J-4007
J-4013	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	48.05	J-4008
J-4014	Low	true	1,000.00	4,175.29	1,000.00	4,175.29	20.00	20.00	J-4007
J-4015	Low	true	1,000.00	3,849.61	1,008.62	3,858.23	20.00	20.00	J-4007
J-4016	Low	true	1,000.00	4,508.79	1,008.62	4,517.41	20.00	20.00	J-4007
J-4017	High	true	1,000.00	1,480.65	1,002.16	1,482.81	20.00	20.00	J-3986
J-4018	High	true	1,000.00	1,790.47	1,003.72	1,794.19	20.00	20.00	J-3986
J-4019	High	true	1,000.00	2,937.99	1,012.35	2,950.34	20.00	20.00	J-3986
J-4020	Zone	true	1,000.00	3,982.30	1,012.35	3,994.65	20.00	20.00	J-3975
J-4021	High	true	1,000.00	1,319.52	1,005.29	1,324.81	20.00	20.00	J-3986
J-4022	Low	true	1,000.00	1,847.78	1,000.00	1,847.78	20.00	20.00	J-4007
J-4023	YT	true	1,000.00	2,623.17	1,000.00	2,623.17	20.00	20.00	J-309

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-4024	Low	true	1,000.00	1,723.02	1,000.00	1,723.02	20.00	20.00	J-4007
J-4025	Zone	true	1,000.00	2,485.96	1,000.00	2,485.96	20.00	20.00	J-3975
J-4026	YT	true	1,000.00	2,195.80	1,000.00	2,195.80	20.00	20.00	FH3
J-4028	YT	true	1,000.00	1,200.62	1,000.00	1,200.62	20.00	20.00	PH29
J-4029	YT	true	1,000.00	3,281.37	1,000.00	3,281.37	20.00	20.00	PH10
J-4030	Low	true	1,000.00	3,544.68	1,000.00	3,544.68	20.00	20.00	J-4007
J-4033	Low	true	1,000.00	2,246.34	1,000.00	2,246.34	20.00	20.00	J-4007
J-4034	Low	true	1,000.00	2,675.66	1,000.00	2,675.66	20.00	20.00	J-4007
J-4036	Low	true	1,000.00	4,117.68	1,007.82	4,125.50	20.00	20.00	J-4007
J-4037	YT	true	1,000.00	1,563.96	1,000.00	1,563.96	20.00	20.00	J-3382
J-4038	Low	true	1,000.00	3,978.15	1,007.82	3,985.97	20.00	20.00	J-4007
J-4039	Low	true	1,000.00	2,882.93	1,000.00	2,882.93	20.00	20.00	J-4007
J-4040	Low	true	1,000.00	2,875.98	1,000.00	2,875.98	20.00	20.00	J-4007
J-4041	High	true	1,000.00	1,554.08	1,000.00	1,554.08	20.00	20.00	J-3986
J-4042	High	true	1,000.00	2,281.62	1,000.00	2,281.62	20.00	20.00	J-3986
J-4043	High	true	1,000.00	1,983.52	1,000.00	1,983.52	20.00	20.00	J-3986
J-4044	YT	true	1,000.00	1,722.90	1,000.00	1,722.90	20.00	20.00	J-3406
J-4045	High	true	1,000.00	3,805.67	1,000.00	3,805.67	20.00	20.00	J-3986
J-4046	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	40.79	J-4007
J-4047	YT	true	1,000.00	3,186.65	1,000.00	3,186.65	20.00	20.00	J-4048
J-4048	YT	true	1,000.00	1,361.21	1,000.00	1,361.21	20.00	20.00	J-4047
J-4049	YT	true	1,000.00	1,629.27	1,000.00	1,629.27	20.00	20.00	J-3433
J-4050	YT	true	1,000.00	1,824.34	1,000.00	1,824.34	20.00	20.00	J-4051
J-4051	YT	true	1,000.00	1,833.86	1,000.00	1,833.86	20.00	20.00	J-4050
J-4052	YT	true	1,000.00	2,091.37	1,000.00	2,091.37	20.00	20.00	J-4051
J-4053	YT	true	1,000.00	1,378.91	1,000.00	1,378.91	20.00	20.00	J-844
J-4054	YT	true	1,000.00	2,474.43	1,000.00	2,474.43	20.00	20.00	J-802
J-4055	YT	true	1,000.00	1,508.67	1,000.00	1,508.67	20.00	20.00	J-1016
J-4056	Low	true	1,000.00	2,047.49	1,000.00	2,047.49	20.00	20.00	J-4007
J-4057	Low	true	1,000.00	1,936.58	1,000.00	1,936.58	20.00	20.00	J-4007
J-4058	Low	true	1,000.00	2,075.68	1,000.00	2,075.68	20.00	20.00	J-4007
J-4059	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	25.59	J-4007
J-4060	YT	true	1,000.00	3,571.90	1,000.00	3,571.90	20.00	20.00	J-527
J-4061	YT	true	1,000.00	2,124.15	1,000.00	2,124.15	20.00	20.00	J-4052
J-4062	YT	true	1,000.00	2,475.22	1,000.00	2,475.22	20.00	20.00	J-356
J-4063	YT	true	1,000.00	1,563.11	1,000.00	1,563.11	20.00	20.00	J-881
J-4064	YT	true	1,000.00	2,660.03	1,000.00	2,660.03	20.00	20.00	J-4062
J-4065	YT	true	1,000.00	3,420.65	1,000.00	3,420.65	20.00	20.00	J-4064
J-4066	YT	true	1,000.00	2,314.33	1,000.00	2,314.33	20.00	20.00	J-4067
J-4067	YT	true	1,000.00	2,299.80	1,000.00	2,299.80	20.00	20.00	J-4066
J-4068	YT	true	1,000.00	2,172.00	1,000.00	2,172.00	20.00	20.00	J-4069
J-4069	YT	true	1,000.00	1,929.08	1,000.00	1,929.08	20.00	20.00	J-3894
J-4070	YT	true	1,000.00	2,229.13	1,000.00	2,229.13	20.00	20.00	J-4071
J-4071	YT	true	1,000.00	2,161.99	1,000.00	2,161.99	20.00	20.00	J-4070
J-4072	YT	true	1,000.00	1,519.23	1,000.00	1,519.23	20.00	20.00	J-905
J-4073	High	true	1,000.00	1,503.05	1,000.00	1,503.05	20.00	20.00	J-3986
J-4074	High	true	1,000.00	1,370.18	1,000.00	1,370.18	20.00	20.00	J-3986
J-4075	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	25.06	J-4007
J-4076	Low	true	1,000.00	3,350.95	1,000.00	3,350.95	20.00	20.00	J-4007
J-4077	Low	true	1,000.00	3,325.13	1,000.00	3,325.13	20.00	20.00	J-4007
J-4078	High	true	1,000.00	1,409.36	1,000.00	1,409.36	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
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Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
J-4079	Low	true	1,000.00	2,090.94	1,000.00	2,090.94	20.00	20.00	J-4007
J-4080	Low	true	1,000.00	1,645.14	1,000.00	1,645.14	20.00	20.00	J-4007
J-4081	Low	true	1,000.00	5,000.00	1,000.00	5,000.00	20.00	22.36	J-4007
J-4082	Low	true	1,000.00	4,336.91	1,000.00	4,336.91	20.00	20.00	J-4007
J-4083	Low	true	1,000.00	3,262.21	1,000.00	3,262.21	20.00	20.00	J-4007
J-4084	High	true	1,000.00	2,048.71	1,000.00	2,048.71	20.00	20.00	J-3986
J-4085	High	true	1,000.00	1,949.28	1,000.00	1,949.28	20.00	20.00	J-3986
J-4086	High	true	1,000.00	1,759.89	1,000.00	1,759.89	20.00	20.00	J-3986
J-4087	High	true	1,000.00	1,716.53	1,000.00	1,716.53	20.00	21.11	J-3986
J-4088	High	true	1,000.00	1,679.69	1,000.00	1,679.69	20.00	20.00	J-3986
J-4089	High	true	1,000.00	1,577.21	1,000.00	1,577.21	20.00	20.00	J-3986
J-4090	High	true	1,000.00	2,252.26	1,000.00	2,252.26	20.00	20.00	J-3986
J-4091	High	true	1,000.00	2,303.22	1,000.00	2,303.22	20.00	20.00	J-3986
J-4092	High	true	1,000.00	1,691.71	1,000.00	1,691.71	20.00	20.00	J-3986
J-4093	High	true	1,000.00	1,814.82	1,000.00	1,814.82	20.00	20.00	J-3986
J-4094	High	true	1,000.00	3,142.58	1,000.00	3,142.58	20.00	20.00	J-3986
J-4106	High	true	1,000.00	2,289.18	1,000.00	2,289.18	20.00	20.00	J-3986
J-4107	High	true	1,000.00	2,432.62	1,000.00	2,432.62	20.00	20.00	J-3986
J-4108	High	true	1,000.00	2,748.78	1,000.00	2,748.78	20.00	20.00	J-3986
J-4109	High	true	1,000.00	2,238.65	1,000.00	2,238.65	20.00	20.00	J-3986
J-4110	High	true	1,000.00	2,476.20	1,000.00	2,476.20	20.00	20.00	J-3986
J-4111	High	true	1,000.00	2,386.47	1,000.00	2,386.47	20.00	20.00	J-3986
J-4112	High	true	1,000.00	2,288.21	1,000.00	2,288.21	20.00	20.00	J-3986
J-4113	High	true	1,000.00	2,320.80	1,000.00	2,320.80	20.00	20.00	J-3986
J-4114	High	true	1,000.00	2,536.50	1,000.00	2,536.50	20.00	20.00	J-3986
J-4115	High	true	1,000.00	3,018.68	1,000.00	3,018.68	20.00	20.00	J-3986
J-4116	High	true	1,000.00	3,504.52	1,000.00	3,504.52	20.00	20.00	J-3986
J-4117	High	true	1,000.00	3,703.37	1,000.00	3,703.37	20.00	20.00	J-3986
J-5000	YT	true	1,000.00	1,191.35	1,000.00	1,191.35	20.00	20.00	FH29
PH1	Low	true	1,000.00	3,922.36	1,007.82	3,930.18	20.00	20.00	J-4007
PH2	Low	true	1,000.00	2,443.73	1,013.92	2,457.64	20.00	20.00	J-4007
PH3	YT	true	1,000.00	2,447.27	1,000.00	2,447.27	20.00	20.00	J-823
PH4	Low	true	1,000.00	2,375.31	1,000.00	2,375.31	20.00	20.00	J-4007
PH5	Low	true	1,000.00	2,919.92	1,007.64	2,927.57	20.00	20.00	J-4007
PH6	Low	true	1,000.00	3,075.81	1,002.16	3,077.96	20.00	20.00	J-4007
PH7	Low	true	1,000.00	4,930.18	1,012.35	4,942.52	20.00	20.00	J-4007
PH8	Low	true	1,000.00	2,223.02	1,000.00	2,223.02	20.00	20.00	J-4007
PH9	Low	true	1,000.00	1,710.33	1,000.00	1,710.33	20.00	20.00	J-4007
PH10	YT	true	1,000.00	3,188.11	1,000.00	3,188.11	20.00	20.00	J-4029
PH11	YT	true	1,000.00	2,483.76	1,000.00	2,483.76	20.00	20.00	J-310
PH12	Low	true	1,000.00	1,413.97	1,000.00	1,413.97	20.00	20.00	J-4007
PH13	Low	true	1,000.00	3,387.94	1,013.13	3,401.07	20.00	20.00	J-4007
PH14	Low	true	1,000.00	2,398.74	1,016.66	2,415.40	20.00	20.00	J-4007
PH15	Low	true	1,000.00	2,135.56	1,011.56	2,147.12	20.00	20.00	J-4007
PH16	Low	true	1,000.00	3,240.72	1,000.00	3,240.72	20.00	20.00	J-4007
PH17	Low	true	1,000.00	2,138.31	1,005.49	2,143.79	20.00	20.00	J-4007
PH18	Low	true	1,000.00	1,899.41	1,005.10	1,904.51	20.00	20.00	J-4007
PH19	High	true	1,000.00	2,022.34	1,008.82	2,031.16	20.00	20.00	J-3986
PH20	High	true	1,000.00	2,697.51	1,004.31	2,701.82	20.00	20.00	J-3986
PH21	High	true	1,000.00	2,203.49	1,015.88	2,219.37	20.00	20.00	J-3986
PH22	High	true	1,000.00	1,707.82	1,005.10	1,712.92	20.00	20.00	J-3986

Scenario: Max Day Future Buildout Test
Fire Flow Analysis
Fire Flow Report

Label	Zone	Satisfies Fire Flow Constraints?	Needed Fire Flow (gpm)	Available Fire Flow (gpm)	Total Flow Needed (gpm)	Total Flow Available (gpm)	Residual Pressure (psi)	Calculated Residual Pressure (psi)	Minimum Zone Junction
PH23	High	true	1,000.00	2,772.22	1,005.10	2,777.31	20.00	20.00	J-3986
PH24	High	true	1,000.00	3,656.25	1,004.51	3,660.76	20.00	20.00	J-3986
PH25	High	true	1,000.00	1,770.39	1,003.72	1,774.11	20.00	20.00	J-3986
PH26	High	true	1,000.00	5,000.00	1,007.45	5,007.45	20.00	21.20	J-3986
PH27	High	true	1,000.00	2,459.47	1,007.06	2,466.53	20.00	20.00	J-3986
PH28	High	true	1,000.00	1,953.37	1,000.00	1,953.37	20.00	20.00	J-3986
PH29	YT	true	1,000.00	1,137.05	1,000.00	1,137.05	20.00	20.00	J-4028
PH30	High	true	1,000.00	1,248.96	1,012.35	1,261.31	20.00	20.00	J-3986
PH31	High	true	1,000.00	1,405.70	1,002.16	1,407.86	20.00	20.00	J-3986
PH32	High	true	1,000.00	1,061.40	1,000.00	1,061.40	20.00	20.00	J-3986