6-4-2014

City of Challis v. Consent of Governed Caucus Clerk's Record v. 1 Dckt. 41956

Vol. 1 of 2

41956
Custer County Case CV-2013-120

IN THE

SUPREME COURT

OF THE

STATE OF IDAHO

THE CITY OF CHALLIS, an Idaho municipal corporation,

Petitioner/Respondent

vs.

CONSENT OF THE GOVERNED CAUCUS, an Idaho unincorporated nonprofit association; and CLARENCE LEUZINGER, an individual

Respondents/Appellants.

CLERK'S RECORD ON APPEAL

Appealed from the District Court of the Seventh Judicial District of the State of Idaho, in and for the County of Custer

Before the Honorable Alan C. Stephens, District Judge

David P. Claiborne
Attorney at Law

Attorney for Appellant

Paul J. Fitzer
Attorney at Law

Attorney for Respondent

41956

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THE CITY OF CHALLIS, an Idaho municipal corporation

Petitioner/Respondent,

vs.

CONSENT OF THE GOVERNED CAUCUS, an Idaho unincorporated nonprofit association; and CLARENCE LEUZINGER, an individual,

Respondents/Appellants.

SUPREME COURT NO. 41956

Custer County Case CV-2013-120

Appeal from the District Court of the Seventh Judicial District of the State of Idaho, in and for the County of Custer;

Before the Honorable Alan C. Stephens, District Judge.

Attorney for Appellant: DAVID P. CLAIBORNE, ESQ., 1101 W. RIVER ST, STE. 110, PO BOX 7985, BOISE, ID 83707

Attorney for Respondent: PAUL J. FITZER, ESQ., 950 WEST BANNOCK STREET, SUITE 520, BOISE, ID 83702

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IN THE SUPREME COURT OF THE STATE OF IDAHO
****

THE CITY OF CHALLIS, an Idaho municipal corporation, Petitioner/Respondent, vs. CONSENT OF THE GOVERNED CAUCUS, an Idaho unincorporated nonprofit association; and CLARENCE LEUZINGER, an individual, Respondents/Appellants.	SUPREME COURT NO. 41956 Custer County No. CV-2013-120

CLERK'S RECORD ON APPEAL

Appeal from the District Court of the Seventh Judicial District of the State of Idaho, in and for the County of Custer;

Before the Honorable Alan C. Stephens, District Judge.

APPEARANCES:

Attorney for Appellant: DAVID P. CLAIBORNE, ESQ., 1101 W. RIVER ST, STE. 110, PO BOX 7985, BOISE, ID 83707

Attorney for Respondent: PAUL J. FITZER, ESQ., 950 WEST BANNOCK STREET, SUITE 520, BOISE, ID 83702

City Of Challis vs. Consent of the Governed Caucus,, Clarence Leuzinger

Date	Code	User		Judge
8/29/2013	NCOC	DENAY	New Case Filed - Other Claims	Joel E Tingey
	PETN	LAILA	Petition for Judicial Confirmation	Joel E Tingey
		LAILA	Filing: L3 - Appeal or petition for judicial review or cross appeal or cross-petition from commission, board, or body to district court Paid by: Bonney, Stephanie J Esq (attorney for City Of Challis) Receipt number: 0001210 Dated: 9/4/2013 Amount: $.00 (Cash) For: City Of Challis (subject)	Joel E Tingey
	APER	LAILA	Plaintiff: City Of Challis Appearance Stephanie J Bonney Esq	Joel E Tingey
9/9/2013	NOHR	DENAY	Notice Of Hearing	Joel E Tingey
	HRSC	DENAY	Hearing Scheduled (Judicial Review 10/16/2013 02:00 PM)	Joel E Tingey
10/1/2013	NOAP	LAILA	Notice Of Appearance-Claiborne	Joel E Tingey
	ANSW	LAILA	Answer-Claiborne	Joel E Tingey
	MOTN	LAILA	Verified Motion to Vacate and Reset Hearing; Motion for Expedited Telephonic Hearing	Joel E Tingey
	NOSV	LAILA	Notice Of Service-Respondents' First Set of Discovery Requests	Joel E Tingey
		LAILA	Filing: I1 - Initial Appearance by persons other than the plaintiff or petitioner Paid by: Jim R Bennetts Receipt number: 0001327 Dated: 10/1/2013 Amount: $66.00 (Check) For: Consent of the Governed Caucus, (other party) and Leuzinger, Clarence (other party)	Joel E Tingey
	APER	LAILA	Defendant: Consent of the Governed Caucus, Appearance David P Claiborne Esq	Joel E Tingey
	APER	LAILA	Defendant: Leuzinger, Clarence Appearance David P Claiborne Esq	Joel E Tingey
0/2/2013	MEMO	LAILA	Memorandum in Support of Judicial Confirmation	Joel E Tingey
	AFFD	LAILA	Affidavit of Kellie Wahlstrom	Joel E Tingey
	AFFD	LAILA	Affidavit of Paul J Fitzer	Joel E Tingey
	AFFD	LAILA	Affidavit of Donald Acheson	Joel E Tingey
0/9/2013	OBJE	LAILA	Objection to Respondents' Motion to Vacate and Reset Hearing	Joel E Tingey
0/10/2013	AFFD	LAILA	Affidavit of David P Claiborne	Joel E Tingey
0/11/2013	STIP	LAILA	Stipulation to Vacate and Reset Hearing on Judicial Review	Joel E Tingey
	HRVC	LAILA	Hearing result for Judicial Review scheduled on 10/16/2013 02:00 PM: Hearing Vacated	Joel E Tingey
	ORDR	LAILA	Order Vacating Hearing	Joel E Tingey
0/16/2013	HRSC	LAILA	Hearing Scheduled (Status 11/20/2013 02:00 PM)	Joel E Tingey

City Of Challis vs. Consent of the Governed Caucus,, Clarence Leuzinger

Date	Code	User		Judge
10/18/2013	HRVC	LAILA	Hearing result for Status scheduled on 11/20/2013 02:00 PM: Hearing Vacated	Joel E Tingey
	HRSC	LAILA	Hearing Scheduled (Judicial Confirmation 11/20/2013 02:00 PM)	Joel E Tingey
	NOTC	LAILA	Notice-Judicial Confirmation	Joel E Tingey
10/31/2013	NOSV	LAILA	Notice Of Service Of Discovery Responses	Joel E Tingey
11/7/2013	CHJG	LAILA	Change Assigned Judge (batch process)	
11/14/2013	AFFD	LAILA	Second Affidavit of David P Claiborne	Alan C Stephens
11/15/2013	STIP	LAILA	Second Stipulation to Reset Hearing on Judicial Confirmation	Alan C Stephens
	CONT	LAILA	Continued (Judicial Confirmation 01/15/2014 02:00 PM)	Alan C Stephens
11/16/2013	HRSC	LAILA	Hearing Scheduled (Status 11/20/2013 02:00 PM)	Alan C Stephens
11/20/2013	HRHD	LAILA	Hearing result for Status scheduled on 11/20/2013 02:00 PM: Hearing Held	Alan C Stephens
11/21/2013	NOSV	LAILA	Notice Of Service Of Discovery Responses-Fitzer	Alan C Stephens
11/22/2013	CONT	LAILA	Continued (Judicial Confirmation 01/17/2014 09:00 AM)	Alan C Stephens
11/26/2013	ORDR	LAILA	Order Continuing Hearing on Judicial Confirmation	Alan C Stephens
	ORDR	LAILA	Order Continuing Hearing on Judicial Confirmation	Alan C Stephens
	MINE	LAILA	Minute Entry	Alan C Stephens
1/17/2014	HRHD	LAILA	Hearing result for Judicial Confirmation scheduled on 01/17/2014 09:00 AM: Hearing Held	Alan C Stephens
1/28/2014	TRAN	TAMMY	Transcript Filed for Hearing on January 17 2014	Alan C Stephens
1/31/2014	MISC	LAILA	Closing Argument and Proposed Findings of Fact, Conclusions of Law-Petitioner	Alan C Stephens
	MISC	LAILA	Respondents' Final Argument	Alan C Stephens
	MISC	LAILA	Respondents' Proposed Findings of Fact and Conclusions of Law	Alan C Stephens
2/4/2014	MINE	TAMMY	Minute Entry	Alan C Stephens
2/5/2014	ORDR	TAMMY	Decision and Order	Alan C Stephens
	CDIS	TAMMY	Civil Disposition entered for: Consent of the Governed Caucus,, Defendant; Leuzinger, Clarence, Defendant; City Of Challis, Plaintiff. Filing date: 2/5/2014	Alan C Stephens
	STAT	TAMMY	STATUS CHANGED: Closed	Alan C Stephens
2/10/2014	NOTA	LAILA	NOTICE OF APPEAL	Alan C Stephens
	APSC	LAILA	Appealed To The Supreme Court	Alan C Stephens
	STAT	LAILA	STATUS CHANGED: Inactive	Alan C Stephens

City Of Challis vs. Consent of the Governed Caucus,, Clarence Leuzinger

Date	Code	User		Judge
3/10/2014		LAILA	Filing: L4 - Appeal, Civil appeal or cross-appeal to Supreme Court Paid by: Claiborne, David P Esq (attorney for Consent of the Governed Caucus,) Receipt number: 0000294 Dated: 3/11/2014 Amount: $109.00 (Check) For: Consent of the Governed Caucus, (defendant)	Alan C Stephens
3/12/2014	BONT	TAMMY	Bond Posted for Transcript (Receipt 300 Dated 3/12/2014 for 100.00)	Alan C Stephens
	CCOA	TAMMY	Clerk's Certificate Of Appeal	Alan C Stephens
3/19/2014	JDMT	TAMMY	Judgment	Alan C Stephens
3/20/2014	MOTN	TAMMY	Motion to Augment Record on Appeal	Alan C Stephens
3/24/2014	NOTC	TAMMY	Notice Of Non-Opposition Re: Petitioner-Respondendts on Appeal's Motion to Augment Record on Appeal	Alan C Stephens
	ORDR	TAMMY	Order Conditionally Dismissing Appeal	Alan C Stephens
3/25/2014	NOTA	TAMMY	AMENDED NOTICE OF APPEAL	Alan C Stephens
	RESP	TAMMY	Response To Order Conditionally Dismissing Appeal	Alan C Stephens
	NOTC	TAMMY	Notice of Transcript Lodged	Alan C Stephens
	TRAN	TAMMY	Transcript Filed	Alan C Stephens
4/2/2014	ORDR	TAMMY	Order to Augment Record on Appeal	Alan C Stephens
4/24/2014	ORDR	LAILA	Order to Withdraw Conditional Dismissal and Reinstate Appeal	Alan C Stephens
4/29/2014	CLCS	LAILA	Clerk's Certificate	Alan C Stephens
	NOTC	LAILA	Notice of Lodging of Clerk's Record and Reporter's Transcript	Alan C Stephens
	CERT	LAILA	Certificate Of Service	Alan C Stephens

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Attorneys for Petitioner

This case has been assigned to:

Honorable Joel E. Tingey
District Judge

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re:	Case No. CV-2013-120
THE CITY OF CHALLIS, an Idaho municipal corporation,	PETITION FOR JUDICIAL CONFIRMATION
Petitioner.	Fee Category: U Exempt Per I.C. §67-2301

COMES NOW the Petitioner, City of Challis, Custer County, Idaho, an Idaho municipal corporation (the "Petitioner"), by and through its undersigned attorneys, and petitions this Court, pursuant to the Idaho Judicial Confirmation Law, Idaho Code Sections 7-1301 through 7-1312, inclusive, for a judicial examination and determination of the authority of Petitioner to issue its promissory note, water revenue bond, or other evidence of such indebtedness, as an "ordinary and necessary expense" of the Petitioner authorized by the general laws of the State, within the meaning of Article 8, Section 3, Idaho Constitution. In support thereof, Petitioner represents as follows:

I.

This action is in the nature of a proceeding in rem, and jurisdiction of all parties interested will be obtained by publication and posting as provided in Sections 7-1305 and 7-1306, Idaho Code.

II.

Petitioner is an incorporated city duly organized, existing, and operating pursuant to Title 50, Idaho Code, and as such is a "political subdivision" within the definition contained in Section 7-1303(6), Idaho Code. Petitioner is authorized to institute a judicial confirmation proceeding pursuant to Section 7-1304, Idaho Code. Petitioner's governing body has adopted a resolution authorizing the filing of this Petition for Judicial Confirmation at least fourteen (14) days following a public hearing duly held and conducted pursuant to publication of notice containing the date, time, and place of such hearing and a summary of the matter at least fifteen (15) days prior to the date set for the public hearing in a newspaper of general circulation within Petitioner, in the form and content described in Section 7-1306(2), Idaho Code.

III.

Petitioner is authorized by law to own, operate, and maintain, and has for many years owned, operated, and maintained, a public drinking water supply system (the "System"). The System serves the entire City of Challis, Idaho.

IV.

As owner and operator of the System, Petitioner is charged with the duty of maintaining safe and reliable water services for the City and its residents, and to do so in a manner that does not jeopardize Petitioner's drinking water supply. In furtherance of that responsibility, the City

retained the services of Riedesel Engineering, a professional consulting civil engineering firm duly authorized and licensed to practice in Idaho (the "Engineer"), to conduct a study of the System for the purpose of determining the adequacy of the System for present and future needs. The Engineer performed a study entitled "City of Challis Water Facility Plan Study" (the "Study").

The Study determined that the City's potable water system does not meet the State of Idaho requirements for Ground Water Source Redundancy and Redundant Fire Flow Capacity (IDAPA 58.01.08.501). The Study also found that in violation of Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08.552), several areas of the water distribution system have incorrect pressure due to undersized piping. This creates risk of backflow contamination in a public drinking water system and presents a public health concern. Additionally, the undersized piping and dead end lines generates insufficient fire flow to fire hydrants in the City.

In order to achieve compliance with state law and obtain the required amount of clean drinking water and fire flow, the Engineer recommended that the City immediately upgrade the most critical sections of the piping network and install new telemetry to enable the City to monitor the system and provide for intrusion alarms.

Based upon the Engineer's recommendation contained in the Study, the Mayor and Council of Petitioner have determined that transmission lines must be improved and new telemetry installed to meet the present and immediate needs of the City in order for the System to remain functional and adequate to meet the existing requirements of the System and maintain supplies for clean drinking water and fire flow protection.

V.

Petitioner's Mayor and Council have identified that additional infrastructure is essential to existing public water supply needs of the City and its residents. Accordingly, the upgrade of undersized waterlines and the installation of new telemetry (hereinafter "Project") has been planned.

The location of these improvements will be within the City. The improvements must be constructed for the purpose of meeting state drinking water standards and current fire supply requirements in order to protect and preserve the health and welfare of the Petitioner's population.

VI.

The total estimated cost of the Project, including legal services, interest on borrowed funds during construction, contingencies, and related costs, has been estimated by the Engineer as $8,078,877. Petitioner does not have funds available to it within its present budget or its budget for the next fiscal year to pay for the Project and has determined that a portion of such cost, in an amount not to exceed $3,200,000, must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner.

VII.

Pursuant to Sections 39-7601 through 39-7605, Idaho Code, and rules and regulations promulgated pursuant thereto, the State has established a Drinking Water Loan Program for the purpose, among other purposes, of making loans to municipalities for the financing of water system improvements to facilitate compliance with national and state water and fire flow standards.

VIII.

In order to finance the cost of the Project, Petitioner will make application to the State for a loan from the Drinking Water Loan Program referred to above. In the alternative, the City will issue a promissory note, water revenue bond, or other evidence of indebtedness to a qualified third party.

IX.

The promissory note, or other evidence of indebtedness, if entered into by Petitioner, would be in a principal amount not to exceed $3,200,000, payable over a 30-year period from System revenues and other lawfully available funds of Petitioner, and would constitute an indebtedness of Petitioner extending beyond the current year's revenues of Petitioner. No approving vote of the electors of Petitioner has been sought or obtained.

X.

Article 8, Section 3, Idaho Constitution, provides that no county, city, or other political subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3, contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state...."

XI.

Petitioner, by and through its Mayor and Council, has determined that the proposed indebtedness for the financing of the Project constitutes an ordinary and necessary expense of the

Petitioner authorized by the general laws of the State, within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The proposed expenditure is necessary to protect the health, safety, and welfare of the inhabitants of the Petitioner and to comply with state drinking water standards and comply with fire flow standards.

B. The proposed expenditure is for the construction of necessary upgrades and improvements to existing City services in order to provide and adequate water supply and fire storage for the City's existing domestic water system, as opposed to the purpose of undertaking a new endeavor.

C. The proposed Project is authorized by the general laws of the State.

D. Petitioner has operated the existing System for many years and has determined that the Project is indispensable to the efficient continued provision of water services in a manner to provide adequate supplies to meet the City's current municipal and fire supply needs.

E. The cost of the Project is not grossly disproportionate to the Petitioner's overall budget.

XII.

Petitioner seeks a determination of the validity of the proposed indebtedness, including the Petitioner's proposed pledge to repay the loan from System revenues, in view of:

A. The legal issue, arising under Article 8, Section 3, Idaho Constitution, as to whether or not the proposed promissory note or other obligation evidencing such indebtedness constitutes an "ordinary and necessary expense" of Petitioner, authorized by the general laws of the State, for which an approving vote of the electors is not required.

XIII.

Judicial examination and confirmation pursuant to this Petition would serve an important public purpose by providing an early determination of the validity of the power of Petitioner to issue its promissory note or other evidence thereof, and to pledge to repay said obligations from the revenues of the Petitioner's System and other lawfully available funds of Petitioner, all as provided by the Judicial Confirmation Act and in particular Section 7-1302, Idaho Code.

WHEREFORE, Petitioner prays (1) for an order setting the date and time of a hearing herein and directing the giving of notice hereof as provided by law, and (2) for a judicial examination and determination of the validity of the power and authority of Petitioner (a) to incur indebtedness in the amount not to exceed $3,200,000 without the approval of the electors of Petitioner at a special election as an "ordinary and necessary expense" authorized by the general laws of the State, and to issue its evidence of such indebtedness to the State, (b) to issue a promissory note or other evidence of such indebtedness, and (c) to pledge its System revenues and other lawfully available funds of Petitioner to the payment of such indebtedness; and a declaration that the evidence of indebtedness thereof, when issued pursuant to such authority, will be valid and binding special obligations of Petitioner, payable in accordance with its terms.

DATED this 27th day of August, 2013.

MOORE SMITH BUXTON & TURCKE, CHARTERED

Stephanie J. Bonney
Attorney for Petitioner

VERIFICATION

STATE OF IDAHO)
) ss.
County of Custer)

MARK LUPHER, being first duly sworn, deposes and says: That he is the Mayor of the City of Challis, Idaho; that he has read the foregoing Petition, knows the contents thereof, and believes the same to be true and correct.

Mark Lupher

SUBSCRIBED AND SWORN TO before me this 29 day of August, 2013.

KELLIE WAHLSTROM
Notary Public
State of Idaho

Kellie Wahlstrom
Notary Public for the State of Idaho
residing at Challis, Idaho
My Commission expires 10-13-17

MY COMMISSION EXPIRES
October 13, 2017
BONDED THRU NOTARY PUBLIC UNDERWRITERS

DAVID P. CLAIBORNE
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Attorneys for Respondents

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re: **THE CITY OF CHALLIS**, an Idaho municipal corporation, Petitioner; vs. **CONSENT OF THE GOVERNED CAUCUS**, an Idaho unincorporated nonprofit association; and **CLARENCE LEUZINGER**, an individual; Respondents.	Case No. CV-2013-120 **ANSWER**

COME NOW the Respondents, Consent of the Governed Caucus and Clarence Leuzinger, by and through their attorneys of record, Sawtooth Law Offices, PLLC, and as a response and answer to the *Petition for Judicial Confirmation* filed August 29, 2013 (herein "*Petition*"), hereby answer and allege as follows:

STANDING OF RESPONDENTS

1

Consent of the Governed Caucus is an unincorporated nonprofit associated existing in the State of Idaho with its principal office in Challis, Idaho. Its membership consists of persons that are property owners in Challis, Idaho, taxpayers in Challis, Idaho, elector in Challis, Idaho, and rate payers of the City of Challis Public Drinking Water System.

2

Clarence Leuzinger is an individual and resident of the State of Idaho, residing in Challis, Idaho. Mr. Leuzinger is chairman of the Consent of the Governed Caucus, and is himself a property owner, taxpayer and elector in Challis, Idaho, and a rate payer of the City of Challis Public Drinking Water System.

RULE 12 DEFENSES

3

The *Petition* fails to state a claim upon which relief can be granted and therefore ought to be dismissed pursuant to Rule 12(b)(6) of the IDAHO RULES OF CIVIL PROCEDURE.

GENERAL DENIALS

4

Consent of the Governed Caucus and Clarence Leuzinger (herein collectively "Respondents") deny each and every allegation and averment of the *Petition* not expressly admitted herein.

5

Respondents admit paragraphs I, II, III, VII, and X of the *Petition*.

6

Respondents deny paragraphs IV, V, VI, VIII, IX, XI, XII, and XIII of the *Petition.*

7

Respondents deny each and every allegation and averment of the *Petition* not above-addressed.

AFFIRMATIVE DEFENSES

8

The proposed bond, obligation or agreement for which Petitioner seeks judicial confirmation is not permissible under the general laws of the State of Idaho.

9

The proposed bond, obligation or agreement for which Petitioner seeks judicial confirmation is not an ordinary and necessary expense authorized by the general laws of the State of Idaho.

10

The proposed purpose and use of the funds which Petitioner seeks to obtain by a proposed bond, obligation or agreement is discretionary in nature, and not mandatory.

11

The Idaho Judicial Confirmation Law is not constitutional, on its face or as applied.

12

Respondents have not substantially complied with the Idaho Judicial Confirmation Law.

//

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13

Pursuant to Rule 11 of the IDAHO RULES OF CIVIL PROCEDURE, all possible affirmative defenses may not have been alleged and set forth herein because sufficient facts are not available at this time to form an adequate factual basis for the defenses, after Respondents have made reasonable inquiry to obtain such facts. Therefore, Respondents reserve the right to raise additional affirmative defenses as fact-gathering and discovery in this matter progresses.

COURT COSTS AND ATTORNEY FEES

14

Pursuant to IDAHO CODE §§ 7-1313, 12-101, and/or Rule 54(d) of the IDAHO RULES OF CIVIL PROCEDURE, Respondents are entitled to an award of litigation expenses and court costs incurred relative to the defense of this action.

15

In order to defend against this action, Respondents have retained the attorney services of Sawtooth Law Offices, PLLC.

16

Pursuant to IDAHO CODE §§ 7-1313, 12-120, 12-121, and/or 12-123 and/or Rule 54(e) of the IDAHO RULES OF CIVIL PROCEDURE, Respondents are entitled to an award of litigation expenses and reasonable attorney fees incurred relative to the defense of this action.

WHEREFORE, Respondents **PRAY** that Petitioners take nothing in or by way of the *Petition*, that the same be dismissed with prejudice, and that Respondents be awarded their court costs, reasonable litigation expenses and reasonable attorney fees incurred herein.

DATED this 1st day of October, 2013.

SAWTOOTH LAW OFFICES, PLLC

by: _____
David P. Claiborne

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on the following on this 1st day of October, 2013 by the following method:

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- [ ] U.S. First Class Mail, Postage Prepaid
- [ ] U.S. Certified Mail, Postage Prepaid
- [ ] Federal Express
- [ ] Hand Delivery
- [X] Facsimile
- [ ] Electronic Mail or CM/ECF

HONORABLE JOEL E. TINGEY
DISTRICT JUDGE
Bonneville County Courthouse
605 N. Capital Ave.
Idaho Falls, ID 83402
Telephone: (208) 529-1350
Facsimile: (208) 524-7909
E-Mail: msouthwick@co.bonneville.id.us
Courtesy Copy - Judge's Chambers

- [ ] U.S. First Class Mail, Postage Prepaid
- [ ] U.S. Certified Mail, Postage Prepaid
- [ ] Federal Express
- [ ] Hand Delivery
- [X] Facsimile
- [ ] Electronic Mail or CM/ECF

_____
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Attorneys for Respondents

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE

STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re: **THE CITY OF CHALLIS**, an Idaho municipal corporation, Petitioner; vs. **CONSENT OF THE GOVERNED CAUCUS**, an Idaho unincorporated nonprofit association; and **CLARENCE LEUZINGER**, an individual; Respondents.	Case No. CV-2013-120 **VERIFIED MOTION TO VACATE AND RESET HEARING, MOTION FOR EXPEDITED TELEPHONIC HEARING**

COME NOW the Respondents, Consent of the Governed Caucus and Clarence Leuzinger, by and through their attorneys of record, Sawtooth Law Offices, PLLC, and, **PURSUANT TO** the Idaho Judicial Confirmation Law and Rules 6, 7 and 16 of the IDAHO RULES OF CIVIL PROCEDURE,

HEREBY MOVE THE COURT to vacate the hearing on Petitioner's *Petition for Judicial Confirmation* and reset said hearing, for the reasons set forth herein:

1. This action for judicial confirmation was originally filed August 29, 2013 in Custer County, Idaho.

2. On September 9, 2013, *Notice* was first filed of record of a hearing on the request for judicial confirmation, said hearing to be held October 16, 2013 at 2:00 p.m.

3. On today's date, October 1, 2013, undersigned counsel has entered an appearance for a group of many Challis, Idaho citizens opposing the request for judicial confirmation. An *Answer* is being filed herewith contesting Petitioner's requested relief and seeking dismissal of this action. The Respondents contest the legal and factual basis for the requested judicial confirmation.

4. At present, Respondents anticipate presenting no less than eight lay witnesses to provide factual testimony in contravention of the factual allegations of Petitioner. Undersigned counsel anticipates it will take four to five hours to present said testimony.

5. At present, Respondents anticipate presenting one expert witness, in the field of engineering, to provide factual and opinion testimony in contravention of the factual allegations of Petitioner. Undersigned counsel anticipates it will take two hours to present said testimony. Additionally, given prior commitments of the expert witness, he is not available to attend the hearing on October 16, 2013.

6. Based on the above and foregoing, undersigned counsel verily believes it will take one day to present evidence on behalf of Respondents. Undersigned counsel is unaware of the length

of time Petitioner will require to present its case-in-chief. Clearly, evidence in this action cannot be entirely received on the afternoon of October 16, 2013.

7. The Idaho Judicial Confirmation Law, at IDAHO CODE § 7-1310, provides that "[t]he Idaho rules of civil procedure shall govern in matters of pleadings **and practice** where not otherwise specified herein." (Emphasis added). Respondents desire to exercise their rights under the Idaho Rules of Civil Procedure to conduct some written discovery (interrogatories, requests for production, requests for admission) before a hearing in this action. Respondents ought to be afforded sufficient time to do so before hearing is required.

8. Undersigned counsel was first contacted by Respondents on September 23, 2013. Undersigned counsel was retained by respondents on September 30, 2013. As such, undersigned counsel is still in the process of obtaining all necessary facts, information and documents in order to fully understand the circumstances of this action, and as such believes additional time is needed to prepare for hearing on Petitioner's request for judicial confirmation.

9. By reason of the above and foregoing circumstances, Respondents request that the October 16, 2013 hearing be vacated and reset to a date and time convenient to the Court and counsel. Respondents are mindful that this matter is of great public concern, and therefore suggest the hearing be reset for December, 2013.

10. Undersigned counsel verily believes that the above and foregoing will avoid any significant prejudice to any parties to this action, promote the orderly and efficient administration of justice, and fulfill the public interest in this action.

11. Undersigned counsel certifies that this motion is not being brought in bad faith or to unnecessarily delay disposition of this action.

12. Consideration and resolution of this motion is requested on an expedited basis. To the extent necessary, telephonic hearing, on shortened time, is respectfully requested, and undersigned counsel can arrange a conference call for said purpose.

13. A proposed order is submitted herewith.

DATED this 1st day of October, 2013.

SAWTOOTH LAW OFFICES, PLLC

by: _____
David P. Claiborne

VERIFICATION

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

David P. Claiborne, of Sawtooth Law Offices, PLLC, being sworn, having read the foregoing says that the facts set forth herein are true, accurate, and complete to the best of his knowledge and belief.

_____
David P. Claiborne

SUBSCRIBED AND SWORN to before me this 1st day of October, 2013.

KATIE R. KELLY NOTARY PUBLIC STATE OF IDAHO

_____
NOTARY PUBLIC
Residing at Oasis, ID
My commission expires 2/20/14

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on the following on this 1st day of October, 2013 by the following method:

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Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re:	Case No. CV 2013-120
THE CITY OF CHALLIS, an Idaho municipal corporation,	MEMORANDUM IN SUPPORT OF JUDICIAL CONFIRMATION
Petitioner.	

I.
Statement of the Case

Petitioner, the City of Challis, Custer County, Idaho (the "Petitioner"), by its City Council (the "Council"), has filed this action pursuant to Sections 7-1301 through 7-1312, Idaho Code, seeking judicial confirmation of the authority of the Petitioner to incur an indebtedness with the State of Idaho, Department of Environmental Quality (the "State"), to execute and deliver its promissory note, issue revenue bonds, or other evidence of such indebtedness as an "ordinary and necessary

expense" of the Petitioner, authorized by the general laws of the State of Idaho, within the meaning of Article 8, Section 3, of the Idaho Constitution.

Petitioner seeks to incur an indebtedness in a principal amount estimated to be $3,200,000, for the purpose of paying the costs of necessary improvements to its existing domestic water system as set forth in the verified Petition and in the Affidavit of Donald Acheson, Riedesel Engineering ("Riedesel"), on file herein, together with costs incidental thereto (the "Project"). The Council has determined that the Project is required in order for the existing System to remain available and functional to meet the immediate needs of Petitioner, to comply with applicable statutory water system and other environmental standards, and to prevent contamination of the City's drinking water supply therein protecting the health, safety, and welfare of the inhabitants of the Petitioner. Finally, the Council has determined that the incurring of an indebtedness in a principal amount estimated to be $3,200,000, the execution of a promissory note or other evidence of indebtedness pursuant thereto will constitute an "ordinary and necessary expense" of Petitioner for which no approving vote of the electors is required. Petitioner seeks confirmation of that determination from this Court pursuant to the Judicial Confirmation Law, Chapter 7, Title 13, Idaho Code.

II.

Statement of Facts

Petitioner, a municipal corporation organized under the laws of the State of Idaho, is a "political subdivision" within the meaning of Section 7-1303(6), Idaho Code, and has for many years owned, operated, and maintained, a public drinking water supply system (the "System") pursuant to the statutory authority of Title 50, Chapters 3 and 10, Idaho Code, and related statutes. The System

serves the area of the Petitioner, and Petitioner is the owner and operator of the domestic water system for Petitioner's inhabitants. Affidavit of Donald Acheson¶¶ 3, 4.

Riedesel was retained to complete a City of Challis Water Facility Plan to assess the ability of the existing System to meet present and future demand, together with the performance of the System and its components with respect to standards established by the State of Idaho through its Department of Environmental Quality ("DEQ") and the United States Environmental Protection Agency ("EPA"). Affidavit of Donald Acheson¶ 1, 5-9. The Study unequivocally showed that the City's potable water system does not meet the State of Idaho requirements for Ground Water Source Redundancy and Redundant Fire Flow Capacity. (IDAPA 58.01.08.501). The Study also found the System in violation of Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08.552).

The City's water supply comes from the unprotected Garden Creek Watershed and two existing ground water wells. The Garden Creek surface water source is susceptible to contamination from the watershed. Additionally, the City is not able to provide adequate fire flows due to the use of existing old and dead-end water mains, and small diameter un-looped lines. There are old, improperly space hydrants connected to four inch water mains. Four inch water mains are wholly inadequate and precluded by law as six inch mains are minimum width necessary to provide the minimum supply for fire suppression. The City does not have sufficient right to groundwater to expand that source as a replacement to the Garden Creek Slow Sand Filter to meet either its current or design year water demand, and the surface water will likely be unable to meet the summertime peak demand without rationing.[1] The City must improve its pressure zones to meet current

1 The City currently has groundwater and surface water rights totaling 2.79 million gallons per day (MGD).

standards necessitating four new formal pressure zones when it switches to a sole groundwater supply. The residential services and meters installed with the 1980s capital project are aged, unlikely within AWWA accuracy ranges, in some instances completely non-functional, and thus need to replaced. Further, there are even further aged pipes that were not replaced in the 1980s that need immediate replacement. Affidavit of Donald Acheson¶¶ 4-10; see also "City of Challis Water Facility Plan, (the "Study").

Such low pressure due to undersized piping and the other aforementioned deficiencies creates a risk of backflow contamination in the public drinking water system, which presents a public health concern and generates insufficient fire flow. In order to achieve compliance with state law and obtain the required amount of clean drinking water and fire flow, improvements and upgrades as identified in the Study are required to protect and preserve the health of the City's population. Affidavit of Donald Acheson, P.E., ¶ 4-10. The improvements will be installed in accordance with State of Idaho, Department of Environmental Quality ("DEQ") requirements. Affidavit of Donald Acheson, P.E., ¶¶ 13. Such improvements to the domestic water system and related facilities within the City are necessary for the purpose of preserving the health, safety, and welfare of the Petitioner's population. Affidavit of Donald Acheson, P.E., ¶¶ 11. The total estimated cost of the Project, including interest on borrowed funds during construction, contingencies, and related costs, has been estimated by the Engineer as $8,078,877. Affidavit of Donald Acheson, P.E., ¶¶ 15.

Petitioner does not have funds available to it within its present budget or its budget for the next fiscal year to pay for the Project and has determined that a portion of such cost, in an amount

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Projected year 2030 demand is 2.57

estimated to be $3,200,000 must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner. Affidavit of Donald Acheson, P.E., ¶¶ 16. A promissory note or other form of indebtedness would constitute an indebtedness of Petitioner extending beyond its current year's revenues. Petitioner has not sought or obtained an approving vote of the electors at a special election called for the purpose of approving such indebtedness, nor has Petitioner made provision for the levying of an annual property tax to constitute a sinking fund for the payment of the interest on or principal of such indebtedness.

Petitioner has, however, determined that such indebtedness constitutes an "ordinary and necessary expense" of Petitioner authorized by the general laws of the state, within the meaning of Article 8, Section 3, of the Idaho Constitution, for which no approving vote of the electors is required, and that the indebtedness so incurred can be retired from the revenues of the System over a term which may be less than, but will not exceed forty (40) years, without the necessity of levying a special property tax.

III.

Legal Issues

The legal issues presented to this Court are: (1) whether Petitioner's Council was correct in its determination that a promissory note or other evidence of indebtedness, if executed by Petitioner, would constitute an ordinary and necessary expense authorized by the general laws of the state within the meaning of Article 8, Section 3, Idaho Constitution; (2) whether Petitioner may validly cause to be issued its promissory note or other evidence of indebtedness and to pledge its System revenues and other lawfully available funds of Petitioner to repay the indebtedness; and, (3) whether

the promissory note or other evidence thereof, will otherwise constitute valid and binding special obligations of Petitioner.

It is Petitioner's contention that a promissory note or other form of indebtedness does constitute an ordinary and necessary expense, for which no approving vote of the electors is required; that the promissory note or other evidence of such indebtedness would be valid, payable, and secured, and that the promissory note or other form of indebtedness, when duly executed by Petitioner and the State, would constitute valid and binding special obligations of the Petitioner.

IV.

The Judicial Confirmation Law

The Idaho Legislature, in 1988, enacted a statutory judicial confirmation procedure for fiscal obligations of political subdivisions, including cities, of the State. This procedure is codified as Sections 7-1301 through 7-1312, Idaho Code, and is hereafter referred to as the "Judicial Confirmation Law." The Legislature's purpose in enacting the Judicial Confirmation Law is set forth in subsections 1, 2, and 3 of Section 7-1302, Idaho Code, as follows:

> The legislature of the state of Idaho determines, finds and declares in connection with this chapter:
>
> (1) An early judicial examination into and determination of the validity of the power of any political subdivision to issue bonds or obligations and execute any agreements or security instruments therefor promotes the health, safety and welfare of the people of the state.
>
> (2) The provision in this chapter of the purposes, powers, duties, privileges, immunities, rights, liabilities and disabilities pertaining to issuance of bonds or execution of obligations by political subdivisions will serve a public function and effect a public purpose.

(3) Any notice provided for in this chapter is reasonably calculated to inform each person of interest in any proceedings thereunder which may directly and adversely affect his legally protected interests, if any.

Section 7-1304, Idaho Code, provides that the governing body of a political subdivision may file or cause to be filed a petition in the district court for a judicial examination and determination of the validity of any bond or obligation, or of any agreement or security instrument related thereto. The filing of the petition must be authorized by resolution or ordinance of the governing body after conducting a public hearing upon at least fifteen (15) days prior published notice of the time, place, and summary of the matter in a newspaper of general circulation within the jurisdiction, which notice must comply with certain form and content requirements, and at least fourteen (14) days must elapse between conduct of the public hearing and passage of the resolution or ordinance. Section 7-1304, Idaho Code. Section 7-1305, Idaho Code, provides that the action shall be in the nature of a proceeding in rem, and jurisdiction of all parties interested may be had by publication and posting. Jurisdiction is complete upon such publication and posting. Section 7-1306(3), Idaho Code. Any owner of property, taxpayer, elector, or ratepayer within the political subdivision, or any other person who has an interest in the bond, obligation, agreement, or security, may appear in the action. Section 7-1307, Idaho Code. Once jurisdiction has been obtained through posting and publication, the court "shall examine into and determine all matters and things affecting each question submitted, shall make such findings with reference thereto and render such judgment and decree thereon as the case warrants." Section 7-1308(1), Idaho Code.

The Judicial Confirmation Law thus provides a method by which a political subdivision may bring a legal issue affecting any obligation, or agreement relating thereto, before a court of law and

obtain a judicial determination as to its validity. The procedure is similar to a quiet title action, probate proceeding, or similar proceeding whereby jurisdiction of the subject matter is obtained by publication and posting. Many Idaho statutes confer jurisdiction upon a court by a similar process, but perhaps the most closely analogous statutes to the Judicial Confirmation Law are Sections 43-406 through 43-408, Idaho Code, which provide for in rem proceedings for the judicial examination, approval, and confirmation of irrigation district bonds. These statutes have been in force in Idaho since 1903 and, like the Judicial Confirmation Law, are intended to facilitate the issuance of bonds by providing a means of settling questions of the validity thereof. American Falls Reservoir District v. Thrall, 39 Idaho 105, 228 P. 236 (1924); Emmett Irr. Dist. v. Shane, 19 Idaho 332, 113 P. 444 (1911). There thus exists under Idaho law well-established precedent for in rem judicial confirmation proceedings.

As shown by the affidavit of City Clerk Kellie Wahlstrom on file herein, the Petitioner has complied with all procedural requirements necessary to maintain this proceeding. Notice of hearing as required by Section 7-1304, Idaho Code, was duly published, in the manner required by Section 7-1306, Idaho Code, in Challis Messenger, a newspaper of general circulation within Petitioner's boundaries and the official newspaper of Petitioner, at least fifteen (15) days prior to the public hearing. Affidavit of Kellie Wahlstrom, ¶ 3. A public hearing, pursuant to the published notice, was duly held and conducted before the Council on August 13, 2013. Id. at ¶ 4. Following this public hearing, after the passage of fourteen (14) days, the Council duly adopted Resolution No. 25-082713 on August 27, 2013, making findings and authorizing the filing of a petition for judicial confirmation. Id. at ¶5. Following the filing of the Petition with this Court, notice of hearing before

the Court was duly published once a week for three weeks and posted for at least 30 days as provided by Section 7-1306, Idaho Code. The Court has, as a matter of law, obtained jurisdiction over the subject matter herein.

V.

The "Ordinary and Necessary Expenses" Exception is Applicable to the Proposed Indebtedness

Article 8, Section 3, of the Idaho Constitution, provides that no county, city, etc., shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided for it for such year, without the assent of two-thirds of the qualified electors thereof voting at an election held for that purpose, "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state . . .."

This section of the Constitution thus permits a city to incur an indebtedness or obligation, without an approving vote of the electors, exceeding the revenue for the current year, where the expense (i) is both ordinary and necessary, and (ii) is authorized by the general laws of the state. The issue of whether an expense is "ordinary and necessary" within this provision of the Constitution has been before the Idaho Supreme Court on numerous occasions. Although the Court has refused to establish formal "bright line" tests for determination of that issue, and has frequently indicated that the validity of each expenditure must be determined on a case-by-case basis, the Court has recognized certain general rules or criteria.

First, the Court has held that an expense is ordinary if in the ordinary course of municipal business, or in the maintenance of municipal property, it may be and is likely to become necessary. City of Boise v. Frazier, 143 Idaho 1, 137 P.3d 388, 391 (2006); Thomas v. Glindeman, 33 Idaho

394, 195 P. 92 (1921); Hanson v. City of Idaho Falls, 92 Idaho 512, 446 P.2d 634 (1968). "Necessary" generally means "indispensable." City of Pocatello v. Peterson, 93 Idaho 774, 473 P.2d 644 (1970); Hanson v. City of Idaho Falls, supra. The impact a proposed expenditure may have on public safety is fundamental to the determination of whether a project is necessary. City of Boise, supra. If the expense is necessary to protect the health and safety of the inhabitants of the municipality, it is both ordinary and necessary. Thomas v. Glindeman, supra. Furthermore, an expense, though out of the ordinary, will nevertheless be "ordinary and necessary" for purposes of the constitutional proviso if it is for the purpose of repairing damage done to municipal property or improving it in such manner as to render it serviceable to the municipality. City of Pocatello v. Peterson, supra; Hickey v. City of Nampa, 22 Idaho 41, 124 P. 280 (1912). Thus, a repair or reconstruction may occur only at infrequent intervals and still be ordinary and necessary. Improvement and rehabilitation of property to comply with state safety standards has been held to constitute an ordinary and necessary expense. Board of County Comr's v. Idaho Health Facilities Authority, 96 Idaho 498, 531 P.2d 588 (1975).

Not only repairs, but also expansion and replacement of existing property or services with completely new facilities, may constitute ordinary and necessary expenses. City of Pocatello v. Peterson, supra. Thus, in Hickey v. City of Nampa, supra, the city was permitted to replace outmoded and unserviceable wooden water pipes with new iron pipe and equip and improve a pumping station, and in City of Pocatello v. Peterson, the city's replacement of its existing airport terminal system with an entirely new structure was upheld. In Loomis v. City of Hailey, 119 Idaho

434, 807 P.2d 1272 (1991), the Court stated that an expenditure which is incurred for the purpose of repairing a public work is ordinary and necessary.

Additionally, the cost of services required by municipalities may constitute ordinary and necessary expenses. In Butler v. Lewiston, 11 Idaho 393, 83 P. 234 (1905), the city was permitted to pay the salaries of city officers and employees. See also Corum v. Common School District, 55 Idaho 725, 47 P.2d 889 (1935) (school teacher salaries held to be ordinary and necessary). And in Harrison v. City of Idaho Falls, 92 Idaho 512, 446 P.2d 634 (1968), the cost of establishing a retirement fund for policemen was held to be ordinary and necessary.

Elimination of potential tort liability also was emphasized in City of Pocatello v. Peterson. Cf. Asson v. City of Burley, 105 Idaho 432, 670 P.2d 889 (1983).

As the Supreme Court more recently explained,

> In order for an expenditure to qualify as "necessary" as the word is used in the proviso clause to Article VIII, § 3 of the Idaho Constitution, there must exist a necessity for making the expenditure at or during such year. **The required urgency can result from a number of causes, such as threats to public safety, the need for repairs, maintenance, or preservation of existing property, or a legal obligation to make the expenditure without delay.**

City of Boise, supra, 137 P.3d at 393-394 (citations omitted) (emphasis included). Great deference will be given to a determination of the elected officials of the public body that such expenditures are both ordinary and necessary. Board of County Commr's v. Idaho Health Facilities Authority, supra.

In addition, the Idaho Supreme Court has, in determining whether an expenditure is ordinary and necessary, considered the amount of the proposed expenditure in proportion to the revenues for that year. Asson v. City of Burley, supra. In Asson, the expense for electrical "project capability" (which was many times the total annual budgets of the cities involved) was characterized by the

Court as "a colossal undertaking, fraught with financial risk," with open-ended liability, no city ownership, and no guarantee of electricity. Therefore, the Court held that the expenditure was not "ordinary." In contrast, the Petitioner's proposed expenditure is "ordinary." The proposed expenditure is in a fixed amount with minimal financial risk, is not disproportionate to the over-all budget, and will result in City-owned public improvements.

Idaho District Courts have applied the general rules and criteria established by the Idaho Supreme Court and held the construction of improvements to existing public facilities, including the construction of new public facilities, to be "ordinary and necessary." See e.g. In re: City of Burley, Idaho, Case No. CV-2012-549 (5th Judicial District, August 31, 2012) (improvements to wastewater/sewer collection system held to be an ordinary and necessary expense.); In re: City of Newdale, Idaho, Case No. CV-09-339 (7th Judicial District, August 28, 2009)(construction of a new 200,000 gallon water storage reservoir, rehabilitation of existing wells, and installation of standby power at well held to be an ordinary and necessary expense); In re: City of Soda Springs, Idaho, Case No. CV 2010-213 (6th Judicial District, September 15, 2010) (improvements to wastewater/sewer collection system, held to be an ordinary and necessary expense.); In re: Southside Water and Sewer District, Case No. CV-2010-483 (1st Judicial District, May 27, 2010) (improvements to wastewater/sewer collection system held to be an ordinary and necessary expense); In re: City of Inkom, Idaho, Case No. 2006-1545OC (6th Judicial District, May 30, 2006)(installation of chemical feed equipment, replacement of existing water mains, construction of a new 200,000 gallon water storage reservoir, installation of water meters, repair and upgrades to existing water supply wells and booster pumping facility, and installation of a disinfection system held to be an

ordinary and necessary expense); Affidavit of Stephanie J. Bonney, Exhibits A-E.

The Project proposed to be acquired by the Petitioner meets the various criteria articulated by the Idaho Supreme Court to qualify under the "ordinary and necessary expense" exception. The Petitioner's Council has determined that the expense for improvements to Petitioner's existing System is necessary to protect the public health and safety and comply with applicable environmental health standards and regulations and safe drinking water standards and regulations. City of Boise, supra; Board of County Commr's v. Idaho Health Facilities Authority, supra. Petitioner is obligated to perform and incur expenditures immediately to protect the City's water supplies and provide sufficient fire flow. City of Boise, supra, 137 P.3d at 391, 392; Affidavit of Donald Acheson, P.E. ¶¶ 8-11, 13. Though not a regularly recurring expense, the Project is for the purpose of making immediate and necessary repairs to the existing System so as to continue existing domestic water services of the City so that public water services are available and usable to the Petitioner and Petitioner's inhabitants. (City of Boise, supra; City of Pocatello v. Peterson, supra; Hickey v. City of Nampa, supra).

The Petitioner has a long-standing involvement in the enterprise; the expense does not involve a new service; and the Project represents needed improvements to the existing water system and facilities in order to comply with applicable laws and provide a safe and sufficient domestic water system. The amount to be financed is not disproportionate to Petitioner's over-all current budget.

The Project is expressly authorized by the general laws of the State (Sections 50-323, 50-1032, 50-1033, Idaho Code). Section 50-323, Idaho Code provides that Petitioner is

> empowered to establish, create, develop, maintain and operate domestic water systems; provide for domestic water from wells, streams, water sheds or any other source, provide for storage, treatment and transmission of the same to the inhabitants of the City; and to do all things necessary to protect the source of water from contamination.

Section 50-1030(a), Idaho Code, provides that, Petitioner may fund such acquisition, operation, repair and maintenance of water systems within or outside Petitioner's boundaries, giving the express authority to cities to,

> acquire by gift or purchase and to construct, reconstruct, improve, better or extend any works within or without the city, or partially within or partially without the city, or within any part of the city, and acquire by gift or purchase lands or rights in lands or water rights in connection therewith, including easements, rights-of-way, contract rights, leases, franchises, approaches, dams and reservoirs; to sell excess or surplus water under such terms as are in compliance with section 42-222, Idaho Code, and deemed advisable by the city; to lease any portion of the excess or surplus capacity of any such works to any party located within or without the city, subject to the following conditions: that such capacity shall be returned or replaced by the lessee when and as needed by such city for the purposes set forth in section 50-1028, Idaho Code, as determined by the city; that the city shall not be made subject to any debt or liability thereby; and the city shall not pledge any of its faith or credit in aid to such lessee;

The Project is immediately needed for Petitioner to meet its obligations to provide safe and reliable water services, protect Petitioner's drinking water supply, and provide adequate fireflow. In short, it is indispensable to the continued operation of Petitioner's water system. The Project thus meets the criteria articulated by the Idaho Supreme Court to constitute the obligation as an "ordinary and necessary expense" of the Petitioner.

VI.

The Petitioner May Validly Issue its Promissory Note and Pledge its Water Revenues to Repay the Indebtedness

Article 12, Section 4 of the Idaho Constitution says that "cities . . . may contract indebtedness for school, water, sanitary and illuminating purposes . . ." (emphasis added). That this means more than "bonded" indebtedness is apparent from several sections of the Idaho Code. Section 50-237 provides that "all cities may borrow money and pledge the credit, revenue and public property of the corporation for the payment thereof, in the manner provided by law, and to evidence the same by issuance of bonds, notes or warrants" (emphasis added). Section 50-1033 says that cities may apply the revenue of "works" (various utilities) "(c) to pay and discharge notes, bonds or other obligations and interest thereon, not issued under this act for the payment of which the revenue of such works ... may have been pledged, charged or encumbered ..." (emphasis added). Thus it is apparent that Idaho cities have authority to contract obligations and to secure them with instruments other than bonds, including promissory notes.

As noted above, Idaho Code Section 50-237 broadly authorizes cities to pledge public revenues to pay notes or warrants as well as bonds. Section 50-1033 of the Revenue Bond Act confirms this when it says that cities may apply revenue of "works" "(c) to pay and discharge notes, bonds or other obligations and interest thereon, not issued under this act for the payment of which the revenue of such works . . . may have been pledged, charged, or encumbered." Because this section speaks of notes and warrants, it cannot refer solely to revenue bonds under Idaho Code Section 50-1036. It must also refer to legal pledges of revenues to non-bond obligations. This is further bolstered by Idaho Code Section 50-301, which empowers cities to "acquire, hold, lease and convey property, real and personal," and to "erect buildings or structures of any kind needful for the uses or purposes of the city;" and to "exercise all powers and perform all functions of local self-government

in city affairs as are not specifically prohibited by or in conflict with the general laws or the constitution of the state of Idaho." Cities would find it very difficult to exercise this broad authority without the ability to enter into a variety of debt financing arrangements and to use various revenues as payment.

It is apparent, then, that Idaho cities may issue obligations other than revenue bonds, may pledge utility revenues to pay those obligations, and, where the indebtedness so incurred is "ordinary and necessary," may do so without a vote of the electorate.

VII.

Time is of the Essence

As set forth in the Verified Petition on file herein, the Project is indispensable to the provision of domestic water services to Petitioner's citizens and is immediately needed to meet current needs of Petitioner's citizens in a manner that does not submit the Petitioner to legal liability and does not jeopardize Petitioner's drinking water supply. Time is of the essence in the determination of this matter.

VIII.

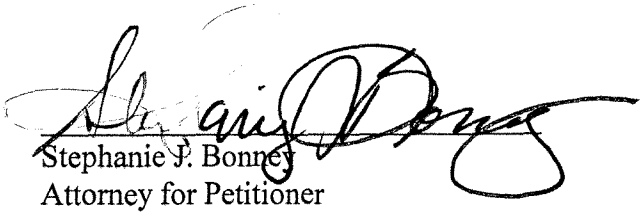
Conclusion

Express legislative authority exists for the Petitioner to undertake the Project, to borrow money therefor, to issue and deliver its promissory note or other evidence of indebtedness, to pledge to repay the same from its water revenues or other lawfully available funds of Petitioner. Such expenditures constitute ordinary and necessary expenses of the Petitioner for which no voter

approval is required under Article 8, Section 3, Idaho Constitution. The promissory note will, when executed and delivered, constitute valid and binding special obligations of the Petitioner, enforceable in accordance with their terms. For the reasons stated herein and based on supporting documentation filed herewith, Petitioner respectfully requests that its Petition for Judicial Confirmation be granted.

Respectfully submitted this 1st day of October, 2013.

MOORE SMITH BUXTON & TURCKE, CHTD.



Stephanie J. Bonney
Attorney for Petitioner

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **MEMORANDUM I SUPPORT OF JUDICIAL CONFIRMATION** this 1st day of October, 2013 served upon the following individuals and in the corresponding manner:

David P. Claiborne
Sawtooth Law Offices
1101 W. River Street, Suite 110
PO Box 7985
Boise, ID 83707

✓ via U.S. Mail
___ via Hand Delivery
___ via Overnight Delivery
___ via Facsimile: (208)629-7559
___ via Email: david@sawtoothlaw.com

Hon. Joel Tingey
Custer County Courthouse
P.O. Box 385
Challis, ID 83226

✓ via U.S. Mail
___ via Hand Delivery
___ via Overnight Delivery
___ via Facsimile: (208)879-5246
___ via Email:

for
Paul J. Fitzer

PAUL J. FITZER #5675
STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
Facsimile: (208) 331-1202
e-mail: pjf@msbtlaw.com
sjb@msbtlaw.com

Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re:	Case No. CV 2013-120
THE CITY OF CHALLIS, an Idaho municipal corporation,	AFFIDAVIT OF KELLIE WAHLSTROM
Petitioner.	

STATE OF IDAHO)
) ss.
County of Gooding)

KELLIE WAHLSTROM, being first duly sworn on oath, deposes and says:

1. I am and at all times material hereto have been the duly appointed, qualified, and acting City Clerk of the City of Challis, Custer County, Idaho (the "City"). As such, I am the custodian of the official records of the City, including the records of the City Council of the City of Challis (the "Council").

ORIGINAL

2. The City Council established August 13, 2013 5:00 o'clock P.M., or as soon thereafter as the matter may be heard at the Challis City Hall, 721 E. Main Avenue, Challis, Idaho 83226, as the date, time, and place of a public hearing to consider the adoption of a resolution authorizing the filing of a petition for judicial confirmation, and directed that notice thereof be given in the manner provided by Section 7-1304 and 7-1306, Idaho Code.

3. The notice of hearing, as authorized and approved by the Council, in the size, format, and location required by Sections 7-1304 and 7-1306, Idaho Code, was published in the main news section of Challis Messenger, a newspaper of general circulation within the City and the official newspaper thereof, on July 18, 2013, which was at least 15 days before the public hearing, as shown by the Affidavit of Publication, a true and correct copy of which is annexed hereto as Exhibit "A" to this Affidavit.

4. On August 13, 2013, pursuant to the public notice described above, a public hearing was held by the Council to consider whether it should adopt a resolution authorizing the filing of a petition for judicial confirmation for the purposes set forth in the notice of hearing, a true and correct copy of the minutes of the August 13, 2013, meeting are annexed hereto as Exhibit "B" to this Affidavit.

5. At least 14 days after conducting the public hearing described in paragraph 4 above, the Council, at a meeting of the Council duly held and conducted on August 27, 2013 adopted Resolution No. 25-082713, making findings and declarations with respect to the financing of services for improvements to the City's existing public water system and authorizing the filing of a petition for judicial confirmation with respect thereto. A true and correct copy of

Resolution No. 25-082713 and accompanying attachments is annexed hereto as Exhibit "C" to this Affidavit.

6. Subsequent to the filing of the Petition for Judicial Confirmation by the City on August 29, 2013, a true and correct copy of the Notice of Filing of Petition for Judicial Confirmation duly posted as required by law at the offices of the City at 21 E. Main Avenue, Challis, Idaho 83226 on September 12, 2013, which was at least 30 days prior to the date established for the hearing in this matter as prescribed by Section 7-1306, Idaho Code.

7. The Notice, dated September 9, 2013 invites any interested party to appear or answer the Petition filed at any time prior to the date set for hearing on the Petition, which has been set for the 16th day of October, 2013 at 2:00 o'clock P.M. at the Custer Counter Courthouse at 801 E. Avenue, Challis 83226. A true and correct copy of the Notice is annexed hereto as Exhibit "D" to this Affidavit.

8. The total revenues and funds of the City, duly budgeted by the Council for the 2012-2013 Fiscal Year of the City, including revenues from the City's public water and other revenue-producing systems, are $1,635,423.00.

9. The City has continuously owned and operated its public water system for at least 30 years.

DATED this 30th day of September, 2013.

Kellie Wahlstrom
KELLIE WAHLSTROM

SUBSCRIBED AND SWORN TO BEFORE me this 30th day of September, 2013.

Notary Public in and for the
State of Idaho, residing at
Boise therein.
My Commission expires: 8-8-2018

(SEAL)

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **AFFIDAVIT OF KELLIE WAHLSTROM** this 1st day of October, 2013 served upon the following individuals and in the corresponding manner:

David P. Claiborne
Sawtooth Law Offices
1101 W. River Street, Suite 110
PO Box 7985
Boise, ID 83707

✓ via U.S. Mail
____ via Hand Delivery
____ via Overnight Delivery
____ via Facsimile: (208)629-7559
____ via Email: david@sawtoothlaw.com

Hon. Joel Tingey
Custer County Courthouse
P.O. Box 385
Challis, ID 83226

✓ via U.S. Mail
____ via Hand Delivery
____ via Overnight Delivery
____ via Facsimile: (208)879-5246
____ via Email:

Paul J. Fitzer

AFFIDAVIT OF PUBLICATION

State of Idaho, County of Custer, ss:

I, Susan Callahan, representing the Challis Messenger, a weekly newspaper, published at Challis, Idaho, do solemnly swear that the notice hereto attached and made a part hereof, was published in the regular and entire issue of the Challis Messenger for 1 consecutive weeks, commencing with the issue dated 7/25 2013 and ending with the issue dated _____ 20____

Susan Callahan

STATE OF IDAHO)
)
COUNTY OF CUSTER)

On this 29th day of July in the year of 2013, before me, a Notary Public, personally appeared Susan Callahan, known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Rina Sue Tappan
Notary Public for Idaho
Residing at Challis, ID
My commission expires: 12-8-14

CITY OF CHALLIS
NOTICE OF HEARING TO CONSIDER A RESOLUTION AUTHORIZING THE FILING OF A PETITION FOR JUDICIAL CONFIRMATION UNDER THE IDAHO JUDICIAL CONFIRMATION LAW

NOTICE IS HEREBY GIVEN that on Tuesday, the 13th day of August, 2013, at 5:00 o'clock P.M., or as soon thereafter as the matter may be heard, at the Challis City Hall, 721 Main Street, Challis, Idaho, the City Council of the City of Challis, Idaho (the "City"), will conduct a public hearing to consider the adoption of a resolution authorizing the filing of a petition for judicial confirmation under the Idaho Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code.

The proposed petition would seek judicial confirmation of the power of the City (1) to incur an indebtedness as an "ordinary and necessary expense" of the City authorized by the general laws of the State, within the meaning of Article 8, Section 3, of the Idaho Constitution, in a principal amount not to exceed $3,200,000, for the purchase of improvements to the City's water system; (2) to issue revenue bonds or other evidence of indebtedness of the City for the same, for the purpose of financing the cost of necessary improvements to the public water system of the City; and (3) to pledge the City's water system revenues for the payment of such indebtedness for a term of not more than thirty (30) years.

Information relating to the proposed petition is available at the office of the City Clerk, Challis City Hall, 721 Main Street, Challis, Idaho, during normal business hours of the City. Interested persons are encouraged to attend the public hearing and to present comments. Comments may also be submitted in writing to the Mayor and Council, City of Challis, P.O. Box 587, Challis, Idaho 83226.

DATED the 10th day of July, 2013.

CITY OF CHALLIS
Custer County, Idaho

By: City Clerk

STATE OF IDAHO
NOTARY
PUBLIC
RINA SUE TAPPAN

EXHIBIT "A"

CITY OF CHALLIS
NOTICE OF HEARING TO CONSIDER A RESOLUTION AUTHORIZING THE FILING OF A PETITION FOR JUDICIAL CONFIRMATION UNDER THE IDAHO JUDICIAL CONFIRMATION LAW

NOTICE IS HEREBY GIVEN that on Tuesday, the 13th day of August, 2013, at 5:00 o'clock P.M., or as soon thereafter as the matter may be heard, at the Challis City Hall, 721 Main Street, Challis, Idaho, the City Council of the City of Challis, Idaho (the "City"), will conduct a public hearing to consider the adoption of a resolution authorizing the filing of a petition for judicial confirmation under the Idaho Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code.

The proposed petition would seek judicial confirmation of the power of the City (1) to incur an indebtedness as an "ordinary and necessary expense" of the City authorized by the general laws of the State, within the meaning of Article 8, Section 3, of the Idaho Constitution, in a principal amount not to exceed $3,200,000, for the purchase of improvements to the City's water system; (2) to issue revenue bonds or other evidence of indebtedness of the City for the same, for the purpose of financing the cost of necessary improvements to the public water system of the City; and (3) to pledge the City's water system revenues for the payment of such indebtedness for a term of not more than thirty (30) years.

Information relating to the proposed petition is available at the office of the City Clerk, Challis City Hall, 721 Main Street, Challis, Idaho, during normal business hours of the City. Interested persons are encouraged to attend the public hearing and to present comments. Comments may also be submitted in writing to the Mayor and Council, City of Challis, P.O. Box 587, Challis, Idaho 83226.

DATED the 10th day of July, 2013.

EXHIBIT "A"

CITY OF CHALLIS
Custer County, Idaho

By: City Clerk

RECORD OF PROCEEDINGS
August 13, 2013

PUBLIC HEARING

COUNCIL PRESENT:	Mayor Mark Lupher, Councilman Chuck Felton, Councilman Ike Funkhouser, Councilman Terry Harrison
COUNCIL ABSENT:	Councilwoman Meghan Kircher
EMPLOYEES PRESENT:	Kellie Wahlstrom/City Clerk-Treasurer
VISITORS:	Laurie Matthews, James A. Nord, Robert Werner, Connie Floyd, Milton Floyd, Travis Hardy, Clarence Leuzinger, Eileen Hardy, Todd Adams-Challis Messenger, Claire Fernandez, Jay Cook
VISITORS (who didn't sign in)	Marty Gergen-Riedesel Engineering, Stephanie Bonney-Moore Smith Buxton & Turcke, Chartered

Tonight's meeting(s) were held outside on the front sidewalk as the electricity was out.

Mayor, Mark Lupher called the August 13, 2013 public hearing to order at 5:01 p.m.

Councilwoman, Meghan Kircher is not available at tonight's meeting as she is having heart surgery on Wednesday.

AMENDMENTS TO AGENDA
None

PETITIONS, APPLICATIONS, APPEALS & COMMUNICATIONS
Judicial Confirmation Process – Water Project, Phase 1

Mayor Lupher asked if there was any written comments. Deloris Ivie submitted a letter which Mayor Lupher read. This letter is on record in the City Clerk's office.

Speaking in Favor of the Judicial Confirmation
Laurie Matthews – no testimony

Speaking in Opposition of the Judicial Confirmation
James A. Nord – no testimony, but said it would put a drain on his bank account with increasing the water bills, so he apposed.

Robert Werner – judicial confirmation doesn't allow for public input

Connie Floyd – on a fixed income, feels the City should live within their means

Milton Floyd – same as Connie, feels the water bill is high enough

Travis Hardy – worries with such a big increase in the water bill and worries about the future

EXHIBIT "B"

Clarence Leuzinger – doesn't like the way the Council has handled this situation, feels the City has had plenty of time to put this topic to the people

Eileen Hardy – hasn't had time to attend previous meetings and would like to pole the representatives as to how they feel, is there a need right now

Close Public Hearing

Todd Adams – no testimony, here representing the Challis Messenger
Claire Fernandez – no testimony
Jay Cook – no testimony

Stephanie Bonney was willing to talk with the citizens about their concerns and answer questions during the hearing. There is another special meeting at 6:00 p.m. and she is willing to comment and answer questions again for citizens that arrive after this meeting is closed.

Meeting adjourned 6:00 p.m.

Mark Lupher
Mayor, Mark Lupher

Kellie Wahlstrom
City Clerk, Kellie Wahlstrom

EXHIBIT "B"

CITY OF CHALLIS

RECORD OF PROCEEDINGS
August 13, 2013

SPECIAL MEETING

COUNCIL PRESENT: Mayor Mark Lupher, Councilman Chuck Felton, Councliman Ike Funkhouser, Councilman Terry Harrison

COUNCIL ABSENT: Councilwoman Meghan Kircher

EMPLOYEES PRESENT: Kellie Wahlstrom/City Clerk-Treasurer

VISITORS: Karma Bragg, Helen Winegarner, Michael Barrett, Brett Plummer, James A. Nord, Eileen Hardy, Jay Cook, Travis Hardy, Rick Miller, Don Acheson-Riedesel Engineering, Robert Werner, Todd Adams-Challis Messenger, Stephanie Bonney-Moore Smith Buxton & Turcke, Chartered

VISITORS (who didn't sign in) Marty Gergen-Riedesel Engineering

Tonight's meeting(s) were held outside on the front sidewalk as the electricity was out.

Mayor, Mark Lupher called the August 13, 2013 special meeting to order at 6:00 p.m.

Councilwoman, Meghan Kircher is not available at tonight's meeting as she is having heart surgery on Wednesday.

AMENDMENTS TO AGENDA
None

PETITIONS, APPLICATIONS, APPEALS & COMMUNICATIONS
Judicial Confirmation – Water Project, Phase 1
Stephanie Bonney, Moore Smith Buxton & Turcke, Chartered
Ms. Bonney was present to answer and comment on questions and concerns regarding the judicial confirmation process. She also had a judicial confirmation outline available for residents.

Meeting adjourned 7:00 p.m.

Mayor, Mark Lupher

City Clerk, Kellie Wahlstrom

EXHIBIT "B"

RESOLUTION NO. 25-082713

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CHALLIS, IDAHO, MAKING FINDINGS AND DECLARATIONS WITH RESPECT TO FINANCING IMPROVEMENTS TO THE CITY'S PUBLIC WATER SYSTEM FACILITIES; APPROVING AND AUTHORIZING, SUBJECT TO JUDICIAL CONFIRMATION, THE EXECUTION OF A PROMISSORY NOTE FOR THE FINANCING OF THE IMPROVEMENTS; AUTHORIZING THE FILING OF A PETITION FOR JUDICIAL CONFIRMATION IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR CHALLIS COUNTY; PROVIDING FOR RELATED MATTERS; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the City of Challis, Custer County, Idaho (the "City"), is a municipal corporation duly organized and operating under the laws of the State of Idaho, and has for many years owned and operated a public water system (the "System"); and

WHEREAS, the Mayor and Council of the City have determined that certain improvements to the System (the "Project") are required in order for the System to remain functional and adequate to meet the current needs of the City and to comply with currently applicable state water system requirements; and

WHEREAS, the estimated cost of the Project to the City (exclusive of grants and other state and federal contributions) is $3,200,000; and

WHEREAS, the City does not have sufficient funds available in its current fiscal year's budget to finance the cost of the Project, and the Mayor and Council have determined that it is necessary to finance the cost thereof from future years' System revenues and other lawfully available funds of Petitioner; and

WHEREAS, the Mayor and Council have further determined that it is in the best interests of the City to finance the cost of the Project through a promissory note from the State of Idaho, Department of Environmental Quality (the "State"), or in the alternative, through the issuance of water revenue bonds, or other evidence of such indebtedness; and

WHEREAS, the financing of the costs of the Project in the manner described would create an indebtedness or liability of the City exceeding the current year's revenues; and

WHEREAS, the Mayor and Council have determined that the cost of the Project, and the proposed loan obligation to be incurred to finance the same, constitute "ordinary and necessary expenses" of the City authorized by the general laws of the State within the meaning of Article 8, Section 3, of the Idaho Constitution, for which no approving vote of the electors is required; and

WHEREAS, the Mayor and Council, on August 13, 2013, held and conducted a public hearing, pursuant to at least fifteen (15) days' published notice in the manner required by Sections

EXHIBIT "C"

7-1304 and 7-1306, Idaho Code, on the question of whether the Council should adopt a resolution authorizing the filing of a petition with the District Court of the Seventh Judicial District of the State of Idaho, in and for the County of Custer, seeking judicial confirmation of the proposed loan agreement and the incurring of such indebtedness as an "ordinary and necessary expense" within the meaning of Article 8, Section 3, of the Idaho Constitution, pursuant to the Judicial Confirmation Law; and

WHEREAS, at least fourteen (14) days has elapsed following such public hearing, and the Mayor and Council have determined that it is in the best interests of the City and the public health, safety, and welfare for the City to file a petition for judicial confirmation pursuant to the Judicial Confirmation Law upon the question of the authority of the City to incur such indebtedness, to issue its promissory note, water revenue bond, or other evidence thereof, and to pledge its System revenues and other lawfully available funds of the City as security for the payment thereof.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHALLIS, IDAHO, as follows:

Section 1: The foregoing recitations are hereby adopted as findings of fact by the Council.

Section 2: Subject to the entry of a final order of the District Court of the Seventh Judicial District of the State of Idaho, in and for the County of Custer (the "District Court"), confirming the authority of the City to issue a promissory note or water revenue bonds, or such other evidence of indebtedness and the Mayor is hereby authorized to execute the same for and on behalf of the City. The appropriate officials of the City are hereby further authorized to execute such additional documents and certifications as may be required to carry out the intent of this Resolution.

Section 3: The Petition for Judicial Confirmation (the "Petition"), substantially in the form which is annexed hereto as Exhibit "A" and by reference made a part hereof, is hereby approved, and the Mayor is authorized to execute the verification of the same.

Section 4: The law firm of Moore Smith Buxton & Turcke, Chartered, Boise, Idaho, is hereby authorized to file the Petition on behalf of the City in the District Court, and to take all actions necessary with respect thereto in order to obtain a judgment of the District Court in accordance with the prayer of the Petition.

Section 5: The Council hereby finds and declares that the indebtedness referenced herein, and any evidence of indebtedness executed pursuant thereto, for the financing of the Project, constitute an ordinary and necessary expense of the City authorized by the general laws of the State of Idaho within the meaning of Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors of the City is required, for the following reasons:

EXHIBIT "C"

A. The proposed expenditure is necessary to protect the health, safety, and welfare of the inhabitants of the Petitioner and to comply with state water system requirements.

B. The proposed expenditure is for the construction of necessary upgrades and improvements to existing City services in order to provide water services, as opposed to the purpose of undertaking a new endeavor.

C. The proposed Project is authorized by the general laws of the State.

D. Petitioner has operated the existing System for many years and has determined that the Project is indispensable to the efficient continued provision of water services in a manner to provide adequate water services and a safe public drinking water supply.

E. The cost of the Project is not grossly disproportionate to the Petitioner's overall budget.

Section 6: This Resolution shall take effect and be in force immediately upon its passage and approval.

DATED this 27th day of August, 2013.

CITY OF CHALLIS

By _____
Mayor

ATTEST:

_____
City Clerk

EXHIBIT "C"

STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
Facsimile: (208) 331-1202
e-mail: sjb@msbtlaw.com

Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE

STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re:	Case No. _____
THE CITY OF CHALLIS, an Idaho municipal corporation,	PETITION FOR JUDICIAL CONFIRMATION
Petitioner.	Fee Category: U Exempt Per I.C. §67-2301

COMES NOW the Petitioner, City of Challis, Custer County, Idaho, an Idaho municipal corporation (the "Petitioner"), by and through its undersigned attorneys, and petitions this Court, pursuant to the Idaho Judicial Confirmation Law, Idaho Code Sections 7-1301 through 7-1312, inclusive, for a judicial examination and determination of the authority of Petitioner to issue its promissory note, water revenue bond, or other evidence of such indebtedness, as an "ordinary and necessary expense" of the Petitioner authorized by the general laws of the State, within the meaning of Article 8, Section 3, Idaho Constitution. In support thereof, Petitioner represents as follows:

EXHIBIT "C"

EXHIBIT "A"

I.

This action is in the nature of a proceeding in rem, and jurisdiction of all parties interested will be obtained by publication and posting as provided in Sections 7-1305 and 7-1306, Idaho Code.

II.

Petitioner is an incorporated city duly organized, existing, and operating pursuant to Title 50, Idaho Code, and as such is a "political subdivision" within the definition contained in Section 7-1303(6), Idaho Code. Petitioner is authorized to institute a judicial confirmation proceeding pursuant to Section 7-1304, Idaho Code. Petitioner's governing body has adopted a resolution authorizing the filing of this Petition for Judicial Confirmation at least fourteen (14) days following a public hearing duly held and conducted pursuant to publication of notice containing the date, time, and place of such hearing and a summary of the matter at least fifteen (15) days prior to the date set for the public hearing in a newspaper of general circulation within Petitioner, in the form and content described in Section 7-1306(2), Idaho Code.

III.

Petitioner is authorized by law to own, operate, and maintain, and has for many years owned, operated, and maintained, a public drinking water supply system (the "System"). The System serves the entire City of Challis, Idaho.

IV.

As owner and operator of the System, Petitioner is charged with the duty of maintaining safe and reliable water services for the City and its residents, and to do so in a manner that does not jeopardize Petitioner's drinking water supply. In furtherance of that responsibility, the City

EXHIBIT "C"

EXHIBIT "A"

retained the services of Riedesel Engineering, a professional consulting civil engineering firm duly authorized and licensed to practice in Idaho (the "Engineer"), to conduct a study of the System for the purpose of determining the adequacy of the System for present and future needs. The Engineer performed a study entitled "City of Challis Water Facility Plan Study" (the "Study").

The Study determined that the City's potable water system does not meet the State of Idaho requirements for Ground Water Source Redundancy and Redundant Fire Flow Capacity (IDAPA 58.01.08.501). The Study also found that in violation of Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08.552), several areas of the water distribution system have incorrect pressure due to undersized piping. This creates risk of backflow contamination in a public drinking water system and presents a public health concern. Additionally, the undersized piping and dead end lines generates insufficient fire flow to fire hydrants in the City.

In order to achieve compliance with state law and obtain the required amount of clean drinking water and fire flow, the Engineer recommended that the City immediately upgrade the most critical sections of the piping network and install new telemetry to enable the City to monitor the system and provide for intrusion alarms.

Based upon the Engineer's recommendation contained in the Study, the Mayor and Council of Petitioner have determined that transmission lines must be improved and new telemetry installed to meet the present and immediate needs of the City in order for the System to remain functional and adequate to meet the existing requirements of the System and maintain supplies for clean drinking water and fire flow protection.

EXHIBIT "A"

EXHIBIT "C"

V.

Petitioner's Mayor and Council have identified that additional infrastructure is essential to existing public water supply needs of the City and its residents. Accordingly, the upgrade of undersized waterlines and the installation of new telemetry (hereinafter "Project") has been planned.

The location of these improvements will be within the City. The improvements must be constructed for the purpose of meeting state drinking water standards and current fire supply requirements in order to protect and preserve the health and welfare of the Petitioner's population.

VI.

The total estimated cost of the Project, including legal services, interest on borrowed funds during construction, contingencies, and related costs, has been estimated by the Engineer as $8,078,877. Petitioner does not have funds available to it within its present budget or its budget for the next fiscal year to pay for the Project and has determined that a portion of such cost, in an amount not to exceed $3,200,000, must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner.

VII.

Pursuant to Sections 39-7601 through 39-7605, Idaho Code, and rules and regulations promulgated pursuant thereto, the State has established a Drinking Water Loan Program for the purpose, among other purposes, of making loans to municipalities for the financing of water system improvements to facilitate compliance with national and state water and fire flow standards.

EXHIBIT "C"

EXHIBIT "A"

VIII.

In order to finance the cost of the Project, Petitioner will make application to the State for a loan from the Drinking Water Loan Program referred to above. In the alternative, the City will issue a promissory note, water revenue bond, or other evidence of indebtedness to a qualified third party.

IX.

The promissory note, or other evidence of indebtedness, if entered into by Petitioner, would be in a principal amount not to exceed $3,200,000, payable over a 30-year period from System revenues and other lawfully available funds of Petitioner, and would constitute an indebtedness of Petitioner extending beyond the current year's revenues of Petitioner. No approving vote of the electors of Petitioner has been sought or obtained.

X.

Article 8, Section 3, Idaho Constitution, provides that no county, city, or other political subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3, contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state...."

XI.

Petitioner, by and through its Mayor and Council, has determined that the proposed indebtedness for the financing of the Project constitutes an ordinary and necessary expense of the

EXHIBIT "C"

EXHIBIT "A"

Petitioner authorized by the general laws of the State, within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The proposed expenditure is necessary to protect the health, safety, and welfare of the inhabitants of the Petitioner and to comply with state drinking water standards and comply with fire flow standards.

B. The proposed expenditure is for the construction of necessary upgrades and improvements to existing City services in order to provide and adequate water supply and fire storage for the City's existing domestic water system, as opposed to the purpose of undertaking a new endeavor.

C. The proposed Project is authorized by the general laws of the State.

D. Petitioner has operated the existing System for many years and has determined that the Project is indispensable to the efficient continued provision of water services in a manner to provide adequate supplies to meet the City's current municipal and fire supply needs.

E. The cost of the Project is not grossly disproportionate to the Petitioner's overall budget.

XII.

Petitioner seeks a determination of the validity of the proposed indebtedness, including the Petitioner's proposed pledge to repay the loan from System revenues, in view of:

A. The legal issue, arising under Article 8, Section 3, Idaho Constitution, as to whether or not the proposed promissory note or other obligation evidencing such indebtedness constitutes an "ordinary and necessary expense" of Petitioner, authorized by the general laws of the State, for which an approving vote of the electors is not required.

EXHIBIT "C"

EXHIBIT "A"

XIII.

Judicial examination and confirmation pursuant to this Petition would serve an important public purpose by providing an early determination of the validity of the power of Petitioner to issue its promissory note or other evidence thereof, and to pledge to repay said obligations from the revenues of the Petitioner's System and other lawfully available funds of Petitioner, all as provided by the Judicial Confirmation Act and in particular Section 7-1302, Idaho Code.

WHEREFORE, Petitioner prays (1) for an order setting the date and time of a hearing herein and directing the giving of notice hereof as provided by law, and (2) for a judicial examination and determination of the validity of the power and authority of Petitioner (a) to incur indebtedness in the amount not to exceed $3,200,000 without the approval of the electors of Petitioner at a special election as an "ordinary and necessary expense" authorized by the general laws of the State, and to issue its evidence of such indebtedness to the State, (b) to issue a promissory note or other evidence of such indebtedness, and (c) to pledge its System revenues and other lawfully available funds of Petitioner to the payment of such indebtedness; and a declaration that the evidence of indebtedness thereof, when issued pursuant to such authority, will be valid and binding special obligations of Petitioner, payable in accordance with its terms.

DATED this 27th day of August, 2013.

MOORE SMITH BUXTON & TURCKE,
CHARTERED

Stephanie J. Bonney
Attorney for Petitioner

EXHIBIT "A"

EXHIBIT "C"

VERIFICATION

STATE OF IDAHO)
) ss.
County of Custer)

MARK LUPHER, being first duly sworn, deposes and says: That he is the Mayor of the City of Challis, Idaho; that he has read the foregoing Petition, knows the contents thereof, and believes the same to be true and correct.

_____
Mark Lupher

SUBSCRIBED AND SWORN TO before me this ___ day of August, 2013.

_____
Notary Public for the State of Idaho
residing at _____
My Commission expires _____

EXHIBIT "C"

EXHIBIT "A"

STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
Facsimile: (208) 331-1202
e-mail: sjb@msbtlaw.com

Attorneys for Petitioner

EXHIBIT "D"

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re:	)	Case No. CV 2013-120
THE CITY OF CHALLIS An Idaho municipal corporation,	)	
Petitioner.	)	

NOTICE IS HEREBY GIVEN that the City of Challis, Custer County, Idaho (the "City"), has petitioned, pursuant to Idaho Code § 7-1301, et. seq. for seek judicial confirmation of the power of the City (1) to incur an indebtedness as an "ordinary and necessary expense" of the City authorized by the general laws of the State, within the meaning of Article 8, Section 3, of the Idaho Constitution, in a principal amount not to exceed $3,200,000, for the purchase of improvements to the public water system of the City; (2) to issue revenue bonds or other evidence of indebtedness of the City for the same, for the purpose of financing the cost of necessary improvements to the public water system; and (3) to pledge the City's water system revenues for the payment of such indebtedness for a term of years.

Interested parties who wish to review the Petition may do so during normal business hours at the City Municipal Building, 721 E. Main Avenue, Challis, Idaho.

Any interested party may appear by written appearance or answer to the Petition filed with the Clerk of the above-entitled Court at any time prior to the date set for hearing on the Petition, which has been set for the 16th day of October, 2013, at 2:00 o'clock P.M., or as soon thereafter as the matter may be heard, at the Custer County Courthouse, 801 E. Avenue, Challis, Idaho, 83226.

DATED this 9th day of September, 2013.

CLERK OF THE DISTRICT COURT

PAUL J. FITZER #5675
STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
Facsimile: (208) 331-1202
e-mail: pjf@msbtlaw.com
sjb@msbtlaw.com

Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE

STATE OF IDAHO, IN AND FOR THE COUNTY OF GOODING

In re:	)	Case No.CV 2013-120
	)	
THE CITY OF CHALLIS, an Idaho municipal corporation,	)	AFFIDAVIT OF PAUL J. FITZER
	)	
Petitioner.	)	
	)	

STATE OF IDAHO)
) ss.
County of Ada)

PAUL J. FITZER, being first duly sworn on oath, deposes and says:

1. I am an attorney employed by Moore Smith Buxton & Turcke, Chartered, attorneys for the City of Challis, Idaho in the above-entitled case.

ORIGINAL

2. A true and correct copy of the Findings of Fact and Conclusions of Law entered in the matter of In re: City of Burley, Idaho, Case No. CV-2012-549 (5th Judicial District, August 31, 2012) (improvements to wastewater/sewer collection system held to be an ordinary and necessary expense), is attached to my Affidavit as Exhibit "A".

3. A true and correct copy of the Findings of Fact and Conclusions of Law entered in the matter of In re: City of Newdale, Idaho, Case No. CV-09-339 (7th Judicial District, August 28, 2009)(construction of a new 200,000 gallon water storage reservoir, rehabilitation of existing wells, and installation of standby power at well held to be an ordinary and necessary expense), is attached to my Affidavit as Exhibit "B".

4. A true and correct copy of the Findings of Fact and Conclusions of Law entered in the matter of In re: City of Soda Springs, Idaho, Case No. CV 2010-213 (6th Judicial District, September 15, 2010) (improvements to wastewater/sewer collection system, held to be an ordinary and necessary expense), is attached to my Affidavit as Exhibit "C".

5. A true and correct copy of the Findings of Fact and Conclusions of Law entered in the matters of In re: Southside Water and Sewer District, Case No. CV-2010-483 (1st Judicial District, May 27, 2010) (improvements to wastewater/sewer collection system held to be an ordinary and necessary expense), is attached to my Affidavit as Exhibit "D".

6. A true and correct copy of the Findings of Fact and Conclusions of Law entered in the matter of In re: City of Inkom, Idaho, Case No. 2006-1545OC (6th Judicial District, May 30, 2006)(installation of chemical feed equipment, replacement of existing water mains, construction

of a new 200,000 gallon water storage reservoir, installation of water meters, repair and upgrades to existing water supply wells and booster pumping facility, and installation of a disinfection system held to be an ordinary and necessary expense), is attached to my Affidavit as Exhibit "E".

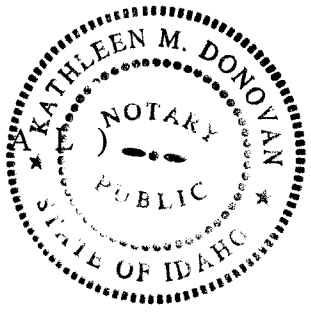
DATED this 1st day of October, 2013.

Paul J. Fitzer

SUBSCRIBED AND SWORN TO BEFORE me this 1st day of October, 2013.

Notary Public in and for the State of Idaho,
Residing at Boise, ID
My Commission expires: 08/08/2018

(S E A L)



CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **AFFIDAVIT OF PAUL J. FITZER** this 1st day of October, 2013 served upon the following individuals and in the corresponding manner:

David P. Claiborne
Sawtooth Law Offices
1101 W. River Street, Suite 110
PO Box 7985
Boise, ID 83707

✓ via U.S. Mail
____ via Hand Delivery
____ via Overnight Delivery
____ via Facsimile: (208)629-7559
____ via Email: david@sawtoothlaw.com

Hon. Joel Tingey
Custer County Courthouse
P.O. Box 385
Challis, ID 83226

✓ via U.S. Mail
____ via Hand Delivery
____ via Overnight Delivery
____ via Facsimile: (208)879-5246
____ via Email:

Paul J. Fitzer

EXHIBIT "A"

STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
Facsimile: (208) 331-1202
e-mail: sjb@msbtlaw.com

Attorneys for Petitioner

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CASSIA

In re:	)	Case No. CV-2012-549
	)	
THE CITY OF BURLEY,	)	
an Idaho municipal corporation,	)	FINDINGS OF FACT AND
	)	CONCLUSIONS OF LAW
Petitioner.	)	
	)	

This matter having come duly and regularly before this Court for hearing on August 31, 2012, and Petitioner having submitted a verified Petition for Judicial Confirmation ("Petition"), and a memorandum of law and affidavits in support of its Petition, and it appearing that proper notice of the filing of the Petition for Judicial Confirmation has been given as provided in Title 7, Chapter 13, Idaho Code, and the Court having examined the allegations of the Petition, the exhibits annexed thereto, and the memorandum of law and affidavits in support thereof, and the matter having been fully submitted; the Court, being fully advised in the premises, now makes the following:

EXHIBIT "A"

FINDINGS OF FACT

I.

Petitioner, the City of Burley, Cassia and Minidoka Counties, Idaho (the "Petitioner"), is a political subdivision within the definition contained in Section 7-1303(6), Idaho Code, and has filed this action pursuant to Sections 7-1301, et seq., Idaho Code (the "Judicial Confirmation Law"), seeking judicial confirmation of the validity of a certain Loan Agreement (the "Loan Agreement") and of the issuance of its promissory note or other evidence of indebtedness, between the Petitioner and the Idaho Bond Bank Authority (the "IBBA"), whereby Petitioner seeks to borrow funds for improvements to Petitioner's wastewater/sewer collection and treatment system, to cause to be issued its promissory note or other evidence of indebtedness, and pledge the net revenues of its sewer system and other lawfully available funds of Petitioner to the payment thereof.

II.

Pursuant to Section 7-1304, Idaho Code, the City Council ("City Council") of Petitioner, on April 17, 2012, held and conducted a public hearing to consider whether it should adopt a resolution authorizing the filing of a petition under the Judicial Confirmation Law. A notice of the public hearing, in the form and content described in Section 7-1306(2), Idaho Code, setting forth the time, place, and summary of the matter, was published once in the *Weekly News Journal*, a newspaper of general circulation within Petitioner's boundaries and the official newspaper of Petitioner, at least fifteen (15) days prior to the public hearing. Following the public hearing, and after the passage of at least fourteen (14) days, the City Council, on May 14,

2012, adopted Resolution No. 4-12, authorizing the filing of a petition for judicial confirmation and making certain findings and determinations.

III.

Pursuant to Sections 7-1305 and 7-1306, Idaho Code, notice of the filing of the Petition for Judicial Confirmation was duly served by publication once a week for three (3) consecutive weeks by three (3) weekly insertions in the *Weekly News Journal*, a newspaper of general circulation within Petitioner, and by posting in a prominent place at or near the main door of the administrative office of Petitioner at least thirty (30) days prior to the date fixed in the notice of hearing on the Petition, all as more fully shown by the Affidavit of Melanie Haynes on file herein.

IV.

Petitioner has submitted with its Petition for Judicial Confirmation a copy of the proposed Loan Agreement between Petitioner and the IBBA, which Petitioner proposes to execute. Petitioner has also submitted an Affidavit of Melanie Haynes, with exhibits, an Affidavit of Bradley S. Bjerke, P.E., with exhibits, and an Affidavit of Stephanie J. Bonney, with exhibits. Petitioner's proof was unopposed and the documents are conclusively deemed to be true and correct in accordance with their terms.

V.

Petitioner owns, maintains, and operates, and has for many years owned, maintained, and operated, pursuant to Title 50, Chapters 3 and 10, Idaho Code, a wastewater/sewer collection and treatment system (the "System") for the provision of sewer services to its residents. The System serves the City and is the sole provider of public sewer service in the sewered areas of the City.

EXHIBIT "A"

VI.

The City's System consists of an industrial wastewater treatment plant ("IWTP"), a municipal wastewater treatment plant ("MWTP"), and a collection system. Effluent is discharged from both the IWTP and the MWTP to the Snake River pursuant to a National Pollutant Discharge Elimination System ("NPDES") permit for each wastewater treatment plant.

Petitioner retained the services of Forsgren Associates, a civil engineering firm duly licensed to practice in Idaho ("Forsgren"), to conduct a study of the System for the purpose of determining the adequacy of the System for present and future needs. Forsgren performed a study entitled "City of Burley Wastewater Treatment Plant Facilities Planning Study with Municipal Wastewater Treatment Plant Update" (the "Study") in 2010. The City also hired Forsgren to prepare a Preliminary Engineering Report (PER), design plans, and specifications for improvements to the IWTP in 2011. The PER, design plans, and specifications were completed in December, 2011.

The PER determined that improvements must be made to IWTP to allow it to function effectively and efficiently, and to eliminate the NPDES violations at the MWTP caused by the diversion of waste from the IWTP. The recommended improvements generally consist of adding aeration basin volume, replacing clarifier equipment, replacing pumps and piping, and adding new dewatering equipment, blowers, and an effluent monitoring system ("Project").

VII.

Based on the Study and the PER, improvements are needed for the City to upgrade the safety, condition and performance of the System to meet existing needs of the System. Without upgrades, the System will not be able to meet current needs, the Petitioner will not be able to

comply with existing legal obligations to provide adequate sewer service, the Petitioner will continue to violate its NPDES permit, and the Snake River will be at risk of contamination. The deficiencies in the System threaten public health, subject the Petitioner to legal liability, and must be addressed immediately.

Petitioner's City Council has identified the Project as essential to existing sewer collection and sewer treatment of Petitioner and its residents. The Project is for sewage collection and treatment infrastructure and related facilities within the City for the purpose of meeting the City's existing legal obligation to comply with environmental regulations, complying with the requirements of its NPDES permit, protecting against contamination of the Snake River, and protecting and preserving the health and welfare of the Petitioner's population. Without upgrades, the System will be at risk of not meeting current needs, the City will be subject to legal liability and the Snake River will be at risk of contamination.

VIII.

The total cost of the Project has been estimated as $6,000,000. Petitioner does not have the additional funds of $6,000,000 available to it within its present budget to meet the additional cost of the Project, and has determined that such cost must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner.

IX.

In order to finance the cost of the Project, Petitioner has made application to the IBBA for a loan. The IBBA has determined that Petitioner is eligible for such loan and has indicated its approval of such loan, substantially on the terms and conditions set forth in the draft Loan Agreement which is annexed to Petitioner's verified Petition herein.

EXHIBIT "A"

X.

Petitioner does not have the necessary $6,000,000 available in its current funds or in its System revenues for the current or ensuing fiscal year, and therefore must finance the costs over a term of years. Petitioner has determined to finance the cost of the Project by entering into the Loan Agreement with the IBBA, pursuant to which the IBBA will loan to Petitioner the $6,000,000 required to finance the Project, and the Petitioner will issue its promissory note or other evidence of such indebtedness and will repay the loan over a term not to exceed 20 years from System revenues together with other lawfully available funds of Petitioner.

XI.

The loan, if incurred pursuant to the proposed Loan Agreement, and the promissory note or other evidence of indebtedness thereof, would constitute an indebtedness of Petitioner extending beyond its current year's revenues. Petitioner has not sought or obtained an approving vote of the electors at a special election called for the purpose of approving such indebtedness, nor has Petitioner made provision for the levying of an annual property tax to constitute a sinking fund for the payment of the interest on or principal of such indebtedness.

XII.

Article 8, Section 3, Idaho Constitution, provides, in relevant part, that no county, city, or other political subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3,

contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state . . . ."

XIII.

Petitioner, by and through its City Council, has determined that the proposed Loan Agreement for the financing of the Project and the promissory note to be issued pursuant thereto constitute "ordinary and necessary expenses" of Petitioner within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The legal issue, arising under Article 8, Section 3, Idaho Constitution, as to whether or not the proposed loan agreement and any promissory note or other obligation evidencing such agreement constitutes an "ordinary and necessary expense" of Petitioner, authorized by the general laws of the State, for which an approving vote of the electors is not required.

B. The requirement contained in the IBBA's proposed Loan Agreement that judicial confirmation of the validity of the Loan Agreement be obtained as a condition precedent to the execution of the Loan Agreement.

XIV.

Petitioner's City Council has determined that the loan obligation may be validly secured by Petitioner's execution of the proposed Loan Agreement, by the issue of its promissory note, and by repayment of the same from its System revenues and other lawfully available funds of Petitioner.

Based upon the foregoing Findings of Fact, the Court now makes the following:

EXHIBIT "A"

CONCLUSIONS OF LAW

I.

Proceedings under the Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code, are proceedings in rem, and jurisdiction of the subject matter and of all interested parties is lawfully obtained through publication and posting as provided therein. Publication and posting as authorized by the Judicial Confirmation Law is a valid method of vesting jurisdiction of this Court over all interested parties and over the subject matter.

II.

Jurisdiction of this Court over the subject matter of the Petition for Judicial Confirmation and over all interested parties has, as a matter of law, been obtained herein by publication and posting as provided by law.

III.

The Judicial Confirmation Law is valid and constitutional.

IV.

The allegations of the Petition for Judicial Confirmation are deemed to be admitted by all interested parties who failed to appear in objection thereto. This Court is authorized to render the judgment as prayed for in Petitioner's Petition for Judicial Confirmation and as set forth hereinafter.

V.

The Project proposed to be made by Petitioner, and the indebtedness proposed to be incurred therefor, meets the criteria articulated by the Idaho Supreme Court to qualify under the "ordinary and necessary expenses" exception to Article 8, Section 3, Idaho Constitution.

EXHIBIT "A"

VI.

As "ordinary and necessary expenses" within the meaning of Article 8, Section 3, Idaho Constitution, no approval of the electors of Petitioner at a special election called for such purpose is required.

VII.

The Loan Agreement, when duly executed by Petitioner and the IBBA and the promissory note when issued pursuant thereto will be valid and binding special obligations of Petitioner, payable in accordance with their terms.

VIII.

Petitioner may validly pledge its sewer system revenues and other lawfully available funds of Petitioner appropriated by Petitioner for such purpose, as security for its required payments under the Loan Agreement.

Based on the Findings of Fact and Conclusions of Law, and good cause appearing therefor,

THE COURT HEREBY DIRECTS that Judgment be entered in accordance with the Petition for Judicial Confirmation, to the effect that the Loan Agreement constitutes a valid, binding, and enforceable obligation of Petitioner and may be entered into and performed in accordance with its terms.

DATED this 31st day of August, 2012.

District Judge

EXHIBIT "B"

STEPHANIE J. BONNEY, ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
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e-mail: sjb@msbtlaw.com

Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF FREMONT

In re:	)	Case No.CV 09-339
	)	
THE CITY OF NEWDALE, an Idaho municipal corporation,	)	FINDINGS OF FACT AND CONCLUSIONS OF LAW
	)	
Petitioner.	)	
	)	

This matter having come on duly and regularly before this Court for hearing on August 25, 2009, and Petitioner having submitted a verified Petition for Judicial Confirmation ("Petition"), and a memorandum of law and affidavits in support of its Petition, and it appearing that proper notice of the filing of the Petition for Judicial Confirmation has been given as provided in Title 7, Chapter 13, Idaho Code, and the Court having examined the allegations of the Petition, the exhibits annexed thereto, the memorandum of law and affidavits in support thereof, the testimony of citizens in opposition to the Petition and the exhibits submitted by citizens in opposition to the Petition, and the matter having been fully submitted; the Court, being fully advised in the premises, now makes the following:

EXHIBIT "B"

FINDINGS OF FACT

I.

Petitioner, City of Newdale, Fremont County, Idaho (the "Petitioner"), is a political subdivision within the definition contained in Section 7-1303(6), Idaho Code, and has filed this action pursuant to Sections 7-1301, et seq., Idaho Code (the "Judicial Confirmation Law"), seeking judicial confirmation of the validity of a certain Loan Agreement (the "Loan Agreement") and of the issuance of its promissory note or other evidence of indebtedness, between the Petitioner and the State of Idaho, Department of Environmental Quality (the "State"), whereby Petitioner seeks to borrow funds for improvements to Petitioner's domestic water system, to cause to be issued its promissory note or other evidence of indebtedness, and pledge the net revenues of its water system and other lawfully available funds of Petitioner to the payment thereof.

II.

Pursuant to Section 7-1304, Idaho Code, the City Council (the "Council") of Petitioner, on June 9, 2009, held and conducted a public hearing to consider whether it should adopt a resolution authorizing the filing of a petition under the Judicial Confirmation Law. A notice of the public hearing, in the form and content described in Section 7-1306(2), Idaho Code, setting forth the time, place, and summary of the matter, was published once in The Standard Journal, a newspaper of general circulation within Petitioner's boundaries and the official newspaper of Petitioner, at least fifteen (15) days prior to the public hearing. Following the public hearing, and after the passage of at least fourteen (14) days, the Council, on June 24, 2009, adopted

EXHIBIT "B"

Resolution No. 115, authorizing the filing of a petition for judicial confirmation and making certain findings and determinations.

III.

Pursuant to Sections 7-1305 and 7-1306, Idaho Code, notice of the filing of the Petition for Judicial Confirmation was duly served by publication once a week for three (3) consecutive weeks by three (3) weekly insertions in The Standard Journal, a newspaper of general circulation within Petitioner, and by posting in a prominent place at or near the main door of the administrative office of Petitioner at least thirty (30) days prior to the date fixed in the notice of hearing on the Petition, all as more fully shown by the Affidavit of City Clerk Susan Lott, the Affidavit of Publication, and the Affidavit of Posting of Notice on file herein.

IV.

Petitioner has submitted with its Petition for Judicial Confirmation a copy of the proposed Loan Agreement between Petitioner and the State, which Petitioner proposes to execute. Petitioner has also submitted an Affidavit of City Clerk Susan Lott with exhibits, an Affidavit of Posting, and an Affidavit of City Engineer Winston Dryer, P.E., with exhibits. Petitioner's proof was unopposed and the documents are conclusively deemed to be true and correct in accordance with their terms.

V.

Petitioner owns, maintains, and operates, and has for many years owned, maintained, and operated, pursuant to Title 50, Chapters 3 and 10, Idaho Code, a water system (the "System") for the provision of domestic water services to its residents. The System serves the City and is the sole provider of domestic water services in Newdale, Idaho.

EXHIBIT "B"

VI.

The main components of the City's System consist of two operating wells, a distribution system of 4"-8" PVC and cast iron piping with a 10" transmission line between the City Shop Well and a water storage reservoir located 1.5 miles east of Newdale, serving approximately 378 residents, including commercial businesses and households. The existing system has been in service since the 1960's, and was last upgraded about 17 years ago.

The Dyer Group, LLC performed a Water Facilities Improvement Study for the City of Newdale, Idaho in May (the "Study"), to assess the ability of the existing System to meet present and future demand, together with performance of the System and its components with respect to standards established by the State of Idaho through its Department of Environmental Quality ("DEQ") and the United States Environmental Protection Agency ("EPA").

The Study showed that the City's drinking water regularly exceeds the Environmental Protection Agency's ("EPA") maximum contaminate level (MCL) for arsenic and fluoride. Arsenic test results over the past four years shows a range of 9 parts per billion (ppb) to 13 ppb, with a current annual average of 10.8 ppb. The MCL for arsenic is 10.0 ppb. Fluoride has ranged from 3.1 parts per million (ppm) to 5.0 ppm, with a current annual average of 4.5 ppm. The EPA MCL for fluoride is 4.0 ppm.

On January 31, 2006, the City entered into a Compliance Agreement with the Department of Environmental Quality ("DEQ") for the violation of arsenic standards. Under the Compliance Agreement, Newdale must engineer and construct a treatment system as soon as possible to address the arsenic contamination.

EXHIBIT "B"

VII.

Based on the Study and other available information, Petitioner's Mayor and Council have identified a central adsorptive media water treatment plant to reduce or eliminate the high concentrations of arsenic an fluoride, construction of a new 200,000 gallon steel storage reservoir, rehabilitation of both existing water supply wells, and installation of a standby power generator at the Highway 33 well. (hereinafter, collectively, the "Project"), as essential to existing domestic water system needs of Petitioner and its residents.

Such improvements to domestic water system and related facilities within the City are necessary for the purpose of preserving the health, safety, and welfare of the Petitioner's population.

VIII.

The total cost of the Project has been estimated as $1,192,000. Petitioner does not have funds available to it within its present budget to meet the cost of the Project, and has determined that such cost must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner. The loan agreement provides funding for the Project.

IX.

In order to finance the cost of the Project, Petitioner has made application to the State for a loan. The State has determined that Petitioner is eligible for such loan and has indicated its approval of such loan, substantially on the terms and conditions set forth in the draft Loan Agreement which is annexed to Petitioner's verified Petition herein.

EXHIBIT "B"

X.

Petitioner does not have the necessary $1,192,000 available in its current funds or in its System revenues for the current or ensuing fiscal year, and therefore must finance the costs over a term of years. Petitioner has determined to finance the cost of the Project by entering into the Loan Agreement with the State, pursuant to which the State will loan to Petitioner the $1,200,000 required to finance the Project, with $600,000 of principal loan forgiveness, and the Petitioner will issue its promissory note or other evidence of such indebtedness and will repay the loan over a term not to exceed 20 years from System revenues together with other lawfully available funds of Petitioner.

XI.

The loan, if incurred pursuant to the proposed Loan Agreement, and the promissory note or other evidence of indebtedness thereof, would constitute an indebtedness of Petitioner extending beyond its current year's revenues. Petitioner has not sought or obtained an approving vote of the electors at a special election called for the purpose of approving such indebtedness, nor has Petitioner made provision for the levying of an annual property tax to constitute a sinking fund for the payment of the interest on or principal of such indebtedness.

XII.

Article 8, Section 3, Idaho Constitution, provides, in relevant part, that no county, city, or other political subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3,

contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state . . . ."

XIII.

Petitioner, by and through its Council, has determined that the proposed Loan Agreement for the financing of the Project Services and the promissory note to be issued pursuant thereto constitute "ordinary and necessary expenses" of Petitioner within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The legal issue, arising under Article 8, Section 3, Idaho Constitution, as to whether or not the proposed loan agreement and any promissory note or other obligation evidencing such agreement constitutes an "ordinary and necessary expense" of Petitioner, authorized by the general laws of the State, for which an approving vote of the electors is not required.

B. The requirement contained in the State's proposed Loan Agreement that judicial confirmation of the validity of the Loan Agreement be obtained as a condition precedent to the execution of the Loan Agreement.

XIV.

Petitioner's Council has determined that the loan obligation may be validly secured by Petitioner's execution of the proposed Loan Agreement, by the issue of its promissory note and by repayment of the same from its System revenues and other lawfully available funds of Petitioner.

Based upon the foregoing Findings of Fact, the Court now makes the following:

EXHIBIT "B"

CONCLUSIONS OF LAW

I.

Proceedings under the Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code, are proceedings in rem, and jurisdiction of the subject matter and of all interested parties is lawfully obtained through publication and posting as provided therein. Publication and posting as authorized by the Judicial Confirmation Law is a valid method of vesting jurisdiction of this Court over all interested parties and over the subject matter.

II.

Jurisdiction of this Court over the subject matter of the Petition for Judicial Confirmation and over all interested parties has, as a matter of law, been obtained herein by publication and posting as provided by law.

III.

The Judicial Confirmation Law is valid and constitutional.

IV.

The allegations of the Petition for Judicial Confirmation are deemed to be admitted by all interested parties who failed to appear in objection thereto. This Court is authorized to render the judgment as prayed for in Petitioner's Petition for Judicial Confirmation and as set forth hereinafter.

V.

The Project proposed to be made by Petitioner, and the indebtedness proposed to be incurred therefor, meets the criteria articulated by the Idaho Supreme Court to qualify under the "ordinary and necessary expenses" exception to Article 8, Section 3, Idaho Constitution. The

EXHIBIT "B"

Idaho Supreme Court has held that the impact of a proposed expenditure on public safety is fundamental to the determination of whether a project is "necessary." *City of Boise v. Frazier*, 143 Idaho 1, 137 P.3d 388 (2006). If the expense is necessary to protect the health and safety of the inhabitants of the municipality, it is both "ordinary and necessary." *Thomas v. Glindeman*, 33 Idaho 394, 195 P. 92 (1921). In this case, Petitioner has established by affidavit (as cited in the Findings of Fact) that the proposed Loan Agreement and Project are "ordinary and necessary expenses" as articulated by the Idaho Supreme Court.

VI.

As "ordinary and necessary expenses" within the meaning of Article 8, Section 3, Idaho Constitution, no approval of the electors of Petitioner at a special election called for such purpose is required.

VII.

The Loan Agreement, when duly executed by Petitioner and the State and the promissory note when issued pursuant thereto will be valid and binding special obligations of Petitioner, payable in accordance with their terms.

VIII.

Petitioner may validly pledge its water system revenues and other lawfully available funds of Petitioner appropriated by Petitioner for such purpose, as security for its required payments under the Loan Agreement.

Based on the Findings of Fact and Conclusions of Law, and good cause appearing therefor,

EXHIBIT "B"

THE COURT HEREBY DIRECTS that Judgment be entered in accordance with the Petition for Judicial Confirmation, to the effect that the Loan Agreement constitutes a valid, binding, and enforceable obligation of Petitioner and may be entered into and performed in accordance with its terms.

DATED this 28th day of August, 2009.

Greg Moeller
District Judge

EXHIBIT "C"

IN THE CITY COURT OF THE SIXTH JUDICIAL DISTRICT OF THE

STATE OF IDAHO, IN AND FOR THE COUNTY OF CARIBOU

In Re:	Case No. CV-2010-213
THE CITY OF SODA SPRINGS, an Idaho municipal corporation,	FINDINGS OF FACT AND CONCLUSIONS OF LAW
Petitioner.	

This matter having come duly and regularly before this Court for hearing on September 1, 2010, and Petitioner having submitted a verified Petition for Judicial Confirmation ("Petition"), and a memorandum of law and affidavits in support of its Petition, and it appearing that proper notice of the filing of the Petition for Judicial Confirmation has been given as provided in Title 7, Chapter 13, Idaho Code, and the Court having examined the allegations of the Petition, the exhibits annexed thereto, and the memorandum of law and affidavits in support thereof, and the matter having been fully submitted; the Court, being fully advised in the premises, now makes the following:

FINDINGS OF FACT

I.

Petitioner, the City of Soda Springs, Caribou County, Idaho (the "Petitioner"), is a political subdivision within the definition contained in Section 7-1303(6), Idaho Code, and has filed this action pursuant to Sections 7-1301, et çq, Idaho Code (the "Judicial Confirmation Law"), seeking judicial confirmation of the validity of a certain Loan Agreement (the "Loan

EXHIBIT "C"

Agreement") and of the issuance of its promissory note or other evidence of indebtedness, between the Petitioner and the State of Idaho, Department of Environmental Quality (the "State"), whereby Petitioner seeks to borrow funds for improvements to Petitioner's wastewater/sewer collection and treatment system, to cause to be issued its promissory note or other evidence of indebtedness, and pledge the net revenues of its sewer system and other lawfully available funds of Petitioner to the payment thereof.

II.

Pursuant to Section 7-1304, Idaho Code, the City Council ("City Council") of Petitioner, on June 2, 2010, held and conducted a public hearing to consider whether it should adopt a resolution authorizing the filing of a petition under the Judicial Confirmation Law. A notice of the public hearing, in the form and content described in Section 7-1306(2), Idaho Code, setting forth the time, place, and summary of the matter, was published once in the Caribou County Sun, a newspaper of general circulation within Petitioner's boundaries and the official newspaper of Petitioner, at least fifteen (15) days prior to the public hearing. Following the public hearing, and after the passage of at least fourteen (14) days, the City Council, on June 23, 2010, adopted Resolution No. 2010-3, authorizing the filing of a petition for judicial confirmation and making certain findings and determinations.

III.

Pursuant to Sections 7-1305 and 7-1306, Idaho Code, notice of the filing of the Petition for Judicial Confirmation was duly served by publication once a week for three (3) consecutive weeks by three (3) weekly insertions in the Caribou County Sun, a newspaper of general

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circulation within Petitioner, and by posting in a prominent place at or near the main door of the administrative office of Petitioner at least thirty (30) days prior to the date fixed in the notice of hearing on the Petition, all as more fully shown by the Affidavits of Posting and Publication on file herein.

IV.

Petitioner has submitted with its Petition for Judicial Confirmation a copy of the proposed Loan Agreement between Petitioner and the State, which Petitioner proposes to execute. Petitioner has also submitted an Affidavit of Posting, an Affidavit of Tausha Vorwaller, with exhibits, and an Affidavit of Brent E. Crowther, P.E., with exhibits. Petitioner's proof was unopposed and the documents are conclusively deemed to be true and correct in accordance with their terms.

V.

Petitioner owns, maintains, and operates, and has for many years owned, maintained, and operated, pursuant to Title 50, Chapters 3 and 10, Idaho Code, a wastewater/sewer collection and treatment system (the "System") for the provision of sewer services to its residents. The System serves the City and is the sole provider of public sewer service in the sewered areas of the City.

VI.

The City's System consists of approximately 16.5 miles of 8 inch to 15 inch diameter gravity sewer collection lines; three sewer collection pumping stations; an extended aeration activated sludge wastewater treatment plant; and a 15 inch diameter concrete outfall discharge line to the Bear River. Effluent is released to the Bear River pursuant to a NPDES permit.

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Petitioner retained the services of Keller Associates, a civil engineering firm duly licensed to practice in Idaho ("Keller"), to conduct a study of the System for the purpose of determining the adequacy of the System for present and future needs. Keller performed a study entitled "Soda Springs Wastewater Facilities Planning Study" (the "Study") in 2006. The Study determined that the City's existing plant process units are outdated and do not operate efficiently.

The City has consistently exceeded the NPDES ammonia limit by a significant margin in the previous six years. Further, the NPDES permit will be revised to regulate the discharge of phosphorus, and the City's wastewater treatment plant will not be able to meet more stringent phosphorus limits. The City's wastewater treatment plant also uses chlorine for disinfection, and the effluent must then be dechlorinated to meet the low chlorine residual permit limit of 0.09 mg/l. Consequently, Keller recommended that the City's wastewater treatment plant be retrofitted and rehabilitated with an extended air bioselector plant, utilizing river discharge.

In April, 2009, the City hired Forsgren Associates, Inc. ("Forsgren"), a civil engineering firm duly licensed to practice in Idaho (the "Engineer") to perform an independent value analysis review of the Study and Keller's wastewater treatment facility design. The Engineer concurred with Keller's recommendation that an extended air bioselector plant with river discharge was a viable alternative along with several other treatment processes.

VII.

Based on the Study, Forsgren's independent value analysis review, and Forsgren's technical memorandum, improvements are needed for the City to upgrade the safety, condition and performance of the System to meet existing needs of the System. Without upgrades, the

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System will not be able to meet current needs, the Petitioner will not be able to comply with existing legal obligations to provide adequate sewer service, the Petitioner will continue to violate its NPDES permit, and the Bear River will be at risk of contamination. The deficiencies in the System threaten public health, subject the Petitioner to legal liability, and must be addressed immediately.

Petitioner's City Council has identified the following improvements (the "Project") as essential to existing sewer collection and sewer treatment of Petitioner and its residents: the construction and installation of a headworks building with septic receiving and grit removal, rotating aerators, two parallel sets of basins, and two clarifiers with equipment and disinfection. The loan agreement provides funding for the Project.

The Project is for sewage collection and treatment infrastructure and related facilities within the City for the purpose of meeting the City's existing legal obligation to comply with environmental regulations, complying with the requirements of its NPDES permit, protecting against contamination of the Bear River, and protecting and preserving the health and welfare of the Petitioner's population. Without upgrades, the System will be at risk of not meeting current needs, the City will be subject to legal liability and the Bear River will be at risk of contamination.

VIII.

The total cost of the Project has been estimated as $11,880,000. Petitioner does not have the additional funds of $5,300,000 available to it within its present budget to meet the additional

EXHIBIT "C"

cost of the Project, and has determined that such cost must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner.

IX.

In order to finance the cost of the Project, Petitioner has made application to the State for a loan. The State has determined that Petitioner is eligible for such loan and has indicated its approval of such loan, substantially on the terms and conditions set forth in the draft Loan Agreement which is annexed to Petitioner's verified Petition herein.

X.

Petitioner does not have the necessary $5,300,000 available in its current funds or in its System revenues for the current or ensuing fiscal year, and therefore must finance the costs over a term of years. Petitioner has determined to finance the cost of the Project by entering into the Loan Agreement with the State, pursuant to which the State will loan to Petitioner the $5,300,000 required to finance the Project, and the Petitioner will issue its promissory note or other evidence of such indebtedness and will repay the loan over a term not to exceed 20 years from System revenues together with other lawfully available funds of Petitioner.

XI.

The loan, if incurred pursuant to the proposed Loan Agreement, and the promissory note or other evidence of indebtedness thereof, would constitute an indebtedness of Petitioner extending beyond its current year's revenues. Petitioner has not sought or obtained an approving vote of the electors at a special election called for the purpose of approving such indebtedness,

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nor has Petitioner made provision for the levying of an annual property tax to constitute a sinking fund for the payment of the interest on or principal of such indebtedness.

XII.

Article 8, Section 3, Idaho Constitution, provides, in relevant part, that no county, city, or other political subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3, contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state. . . ."

XIII.

Petitioner, by and through its City Council, has determined that the proposed Loan Agreement for the financing of the Project and the promissory note to be issued pursuant thereto constitute "ordinary and necessary expenses" of Petitioner within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The legal issue, arising under Article 8, Section 3, Idaho Constitution, as to whether or not the proposed loan agreement and any promissory note or other obligation evidencing such agreement constitutes an "ordinary and necessary expense" of Petitioner, authorized by the general laws of the State, for which an approving vote of the electors is not required.

EXHIBIT "C"

B. The requirement contained in the State's proposed Loan Agreement that judicial confirmation of the validity of the Loan Agreement be obtained as a condition precedent to the execution of the Loan Agreement.

XIV.

Petitioner's City Council has determined that the loan obligation may be validly secured by Petitioner's execution of the proposed Loan Agreement, by the issue of its promissory note, and by repayment of the same from its System revenues and other lawfully available funds of Petitioner.

Based upon the foregoing Findings of Fact, the Court now makes the following:

CONCLUSIONS OF LAW

I.

Proceedings under the Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code, are proceedings in rem, and jurisdiction of the subject matter and of all interested parties is lawfully obtained through publication and posting as provided therein. Publication and posting as authorized by the Judicial Confirmation Law is a valid method of vesting jurisdiction of this Court over all interested parties and over the subject matter.

II.

Jurisdiction of this Court over the subject matter of the Petition for Judicial Confirmation and over all interested parties has, as a matter of law, been obtained herein by publication and posting as provided by law.

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III.

The Judicial Confirmation Law is valid and constitutional.

IV.

The allegations of the Petition for Judicial Confirmation are deemed to be admitted by all interested parties who failed to appear in objection thereto. This Court is authorized to render the judgment as prayed for in Petitioner's Petition for Judicial Confirmation and as set forth hereinafter.

V.

The Project proposed to be made by Petitioner, and the indebtedness proposed to be incurred therefor, meets the criteria articulated by the Idaho Supreme Court to qualify under the "ordinary and necessary expenses" exception to Article 8, Section 3, Idaho Constitution.

VI.

As "ordinary and necessary expenses" within the meaning of Article 8, Section 3, Idaho Constitution, no approval of the electors of Petitioner at a special election called for such purpose is required.

VII.

The Loan Agreement, when duly executed by Petitioner and the State and the promissory note when issued pursuant thereto will be valid and binding special obligations of Petitioner, payable in accordance with their terms.

EXHIBIT "C"

VIII.

Petitioner may validly pledge its sewer system revenues and other lawfully available funds of Petitioner appropriated by Petitioner for such purpose, as security for its required payments under the Loan Agreement.

Based on the Findings of Fact and Conclusions of Law, and good cause appearing therefor,

THE COURT HEREBY DIRECTS that Judgment be entered in accordance with the Petition for Judicial Confirmation, to the effect that the Loan Agreement constitutes a valid, binding, and enforceable obligation of Petitioner and may be entered into and performed in accordance with its terms.

DATED this 15th day of September, 2010.

Mitchell W. Brown

MITCHELL W. BROWN
District Judge

EXHIBIT "C"

CERTIFICATE OF MAILING

I hereby certify that on September 15, 2010, a true and correct copy of the Findings of Fact and Conclusions of Law was served upon the following persons via fax transmittal:

STEPHANIE J BONNEY
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 WEST BANNOCK STREET, SUITE 520
BOISE ID 83702
Fax No. (208) 331-1202

VEDA MASCARENAS, CLERK

BY Sharon L Wells
SHARON L. WELLS

DEPUTY CLERK

EXHIBIT "C"

STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
Telephone: (208) 331-1800
Facsimile: (208) 331-1202
e-mail: sjb@msbtlaw.com

Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SIXTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF CARIBOU

In re:	Case No. CV-2010-213
THE CITY OF SODA SPRINGS, an Idaho municipal corporation,	JUDGMENT
Petitioner.	

The Court having entered its Findings of Fact and Conclusions of Law in the above-entitled action, and good cause appearing therefor,

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED:

(1) The Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code, is valid and constitutional.

(2) The proposed Loan Agreement between the City of Soda Springs, Caribou County, Idaho and the State of Idaho, Department of Environmental Quality, as Exhibit "A" to the Petition for Judicial Confirmation filed in this matter, and lodged on July 1, 2010, and the promissory note issued pursuant thereto, constitute valid "ordinary and necessary expenses"

ORIGINAL

EXHIBIT "C"

CERTIFICATE OF MAILING

I hereby certify that on Wednesday, September 15, 2010, a true and correct copy of the Judgment was served by placing the same in the respective courthouse mail boxes or by regular postal service to the following:

(208) 331-1202

MOORE SMITH BUXTON & TURCKE, CHARTERED
STEPHANIE J BONNEY
950 WEST BANNOCK STREET, SUITE 520
BOISE ID 83702

VEDA MASCARENAS, CLERK
BY _____
DEPUTY CLERK

EXHIBIT "C"

within the meaning of Article 8, Section 3, Idaho Constitution, for which no approval of the City's electors is required;

(3) The proposed Loan Agreement, when duly executed and delivered, and the promissory note or other evidence of indebtedness, to be issued pursuant thereto, will, when executed, issued, and delivered, constitute valid and enforceable special obligations of the Petitioner, enforceable in accordance with their terms; and

(4) The City may validly pledge its sewer revenues and other lawfully available funds of the City appropriated by the City Council for such purpose as security for the payments required under the Loan Agreement and the promissory note issued pursuant thereto.

DATED this 15th day of September, 2010.

Michael W. Brown
District Judge

EXHIBIT D"

STEPHANIE J. BONNEY ISB #6037
MOORE SMITH BUXTON & TURCKE, CHARTERED
950 W. Bannock Street, Suite 520
Boise, Idaho 83702
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Attorneys for Petitioner

IN THE DISTRICT COURT OF THE FIRST JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF BONNER

In re:	)	Case No. CV-2010-483
	)	
SOUTHSIDE WATER AND SEWER DISTRICT, an Idaho political subdivision,	)	FINDINGS OF FACT AND CONCLUSIONS OF LAW
	)	
Petitioner.	)	

This matter having come on duly and regularly before this Court for hearing on May 19, 2010, and Petitioner having submitted a verified Petition for Judicial Confirmation ("Petition"), and a memorandum of law and affidavits in support of its Petition, and it appearing that proper notice of the filing of the Petition for Judicial Confirmation has been given as provided in Title 7, Chapter 13, Idaho Code, and the Court having examined the allegations of the Petition, the exhibits annexed thereto, and the memorandum of law and affidavits in support thereof, and the matter having been fully submitted; the Court, being fully advised in the premises, now makes the following:

EXHIBIT D"

FINDINGS OF FACT

I.

Petitioner, Southside Water and Sewer District, Bonner County, Idaho (the "Petitioner"), is a political subdivision within the definition contained in Section 7-1303(6), Idaho Code, and has filed this action pursuant to Sections 7-1301, et seq., Idaho Code (the "Judicial Confirmation Law"), seeking judicial confirmation of the validity of a certain Loan Agreement (the "Loan Agreement") and of the issuance of its promissory note or other evidence of indebtedness, between the Petitioner and the State of Idaho, Department of Environmental Quality (the "State"), whereby Petitioner seeks to borrow funds for improvements to Petitioner's wastewater/sewer collection and treatment system, to cause to be issued its promissory note or other evidence of indebtedness, and pledge the net revenues of its sewer system and other lawfully available funds of Petitioner to the payment thereof.

II.

Pursuant to Section 7-1304, Idaho Code, the Board of Directors (the "Board") of Petitioner, on February 18, 2010, held and conducted a public hearing to consider whether it should adopt a resolution authorizing the filing of a petition under the Judicial Confirmation Law. A notice of the public hearing, in the form and content described in Section 7-1306(2), Idaho Code, setting forth the time, place, and summary of the matter, was published once in the Bonner County Daily Bee, a newspaper of general circulation within Petitioner's boundaries and the official newspaper of Petitioner, at least fifteen (15) days prior to the public hearing. Following the public hearing, and after the passage of at least fourteen (14) days, the Board, on _____, 2010, adopted Resolution No. ____, authorizing the filing of a petition for judicial confirmation and making certain findings and determinations.

EXHIBIT D"

III.

Pursuant to Sections 7-1305 and 7-1306, Idaho Code, notice of the filing of the Petition for Judicial Confirmation was duly served by publication once a week for three (3) consecutive weeks by three (3) weekly insertions in the Bonner County Daily Bee, a newspaper of general circulation within Petitioner, and by posting in a prominent place at or near the main door of the administrative office of Petitioner at least thirty (30) days prior to the date fixed in the notice of hearing on the Petition, all as more fully shown by the Affidavit of Posting and Publication on file herein.

IV.

Petitioner has submitted with its Petition for Judicial Confirmation a copy of the proposed Loan Agreement between Petitioner and the State, which Petitioner proposes to execute. Petitioner has also submitted an Affidavit of Posting and Publication, with exhibits, and an Affidavit of Paul Klatt, P.E., with exhibits. Petitioner's proof was unopposed and the documents are conclusively deemed to be true and correct in accordance with their terms.

V.

Petitioner owns, maintains, and operates, and has for many years owned, maintained, and operated, pursuant to Title 42, Chapter 32, Idaho Code, a wastewater/sewer collection and treatment system (the "System") for the provision of sewer services to its residents. The System serves the District and is the sole provider of public sewer service in the sewered areas of the District.

VI.

Petitioner's System consists of a collection system, treatment lagoons, and a wastewater land application site where treated effluent is dispersed, by above ground irrigation equipment, and absorbed by an agricultural crop.

EXHIBIT D"

Petitioner retained J-U-B Engineers, Inc. for the purpose of preparing a Plan entitled "Southside Water and Sewer District Wastewater Facility Plan Update (the "Plan") to assess the ability of the existing System to meet present and future demand and the feasibility of upgrading the existing System to provide sewer services to residents that have paid for or been assessed, through a local improvement district ("LID"), for sewer hookups. Based on the results of the Plan, Petitioner has determined that a number of improvements to the System are needed to accommodate the prepaid hookups, comply with the requirements of its Wastewater Land Application Permit ("WLAP"), and protect against potential pollution from septic systems, which have, and continue to be installed due to the existing sewer moratorium.

VII.

Based on the Plan, improvements are needed for the District to provide for treatment of sewer to residents that have already purchased sewer hookups and to upgrade the safety, condition and performance of the System to meet existing needs of the System. Without upgrades, the System will not be able to meet current needs, the Petitioner will not be able to comply with existing legal obligations to provide sewer service, the Petitioner will be at risk at violating the terms of its WLAP, and Petitioner's public drinking water supply will be at risk of contamination. The deficiencies in the System threaten public health and subject the Petitioner to legal liability.

Petitioner's Board has identified the following improvements (the "Project") as essential to existing sewer collection, sewer treatment and public water supply needs of Petitioner and its residents: the construction and installation of the infrastructure needed for the Project consists of (a) acquiring adjacent property to apply treated effluent to approximately seven additional acres of

land, (b) acquiring adjacent property to serve as a required buffer, and (c) rebuilding Lift Station #6 to accommodate the increase in capacity. The loan agreement provides funding for the Project.

The Project is for sewage collection and treatment infrastructure and related facilities within the District for the purpose of meeting the District's existing legal obligations, complying with the requirements of its WLAP, protecting against groundwater contamination from septic systems and WLAP violations, and protecting and preserving the health and welfare of the Petitioner's population. Without upgrades, the System will be at risk of not meeting current needs, and the Petitioner's public drinking water supply will be at risk of contamination.

VIII.

The total cost of the Project has been estimated as $850,000. Petitioner does not have funds available to it within its present budget to meet the cost of the Project, and has determined that such cost must be financed over a term of years from the revenues of the System and other lawfully available funds of Petitioner.

IX.

In order to finance the cost of the Project, Petitioner has made application to the State for a loan. The State has determined that Petitioner is eligible for such loan and has indicated its approval of such loan, substantially on the terms and conditions set forth in the draft Loan Agreement which is annexed to Petitioner's verified Petition herein.

X.

Petitioner does not have the necessary $850,000 available in its current funds or in its System revenues for the current or ensuing fiscal year, and therefore must finance the costs over a term of years. Petitioner has determined to finance the cost of the Project by entering into the Loan

EXHIBIT D"

Agreement with the State, pursuant to which the State will loan to Petitioner the $850,000 required to finance the Project, and the Petitioner will issue its promissory note or other evidence of such indebtedness and will repay the loan over a term not to exceed 20 years from System revenues together with other lawfully available funds of Petitioner.

XI.

The loan, if incurred pursuant to the proposed Loan Agreement, and the promissory note or other evidence of indebtedness thereof, would constitute an indebtedness of Petitioner extending beyond its current year's revenues. Petitioner has not sought or obtained an approving vote of the electors at a special election called for the purpose of approving such indebtedness, nor has Petitioner made provision for the levying of an annual property tax to constitute a sinking fund for the payment of the interest on or principal of such indebtedness.

XII.

Article 8, Section 3, Idaho Constitution, provides, in relevant part, that no county, city, or other political subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3, contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state . . . ."

XIII.

Petitioner, by and through its Board, has determined that the proposed Loan Agreement for the financing of the Project and the promissory note to be issued pursuant thereto constitute

"ordinary and necessary expenses" of Petitioner within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The legal issue, arising under Article 8, Section 3, Idaho Constitution, as to whether or not the proposed loan agreement and any promissory note or other obligation evidencing such agreement constitutes an "ordinary and necessary expense" of Petitioner, authorized by the general laws of the State, for which an approving vote of the electors is not required.

B. The requirement contained in the State's proposed Loan Agreement that judicial confirmation of the validity of the Loan Agreement be obtained as a condition precedent to the execution of the Loan Agreement.

XIV.

Petitioner's Board has determined that the loan obligation may be validly secured by Petitioner's execution of the proposed Loan Agreement, by the issue of its promissory note, and by repayment of the same from its System revenues and other lawfully available funds of Petitioner.

Based upon the foregoing Findings of Fact, the Court now makes the following:

CONCLUSIONS OF LAW

I.

Proceedings under the Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code, are proceedings in rem, and jurisdiction of the subject matter and of all interested parties is lawfully obtained through publication and posting as provided therein. Publication and posting as authorized

EXHIBIT D"

by the Judicial Confirmation Law is a valid method of vesting jurisdiction of this Court over all interested parties and over the subject matter.

II.

Jurisdiction of this Court over the subject matter of the Petition for Judicial Confirmation and over all interested parties has, as a matter of law, been obtained herein by publication and posting as provided by law.

III.

The Judicial Confirmation Law is valid and constitutional.

IV.

The allegations of the Petition for Judicial Confirmation are deemed to be admitted by all interested parties who failed to appear in objection thereto. This Court is authorized to render the judgment as prayed for in Petitioner's Petition for Judicial Confirmation and as set forth hereinafter.

V.

The Project proposed to be made by Petitioner, and the indebtedness proposed to be incurred therefor, meets the criteria articulated by the Idaho Supreme Court to qualify under the "ordinary and necessary expenses" exception to Article 8, Section 3, Idaho Constitution.

VI.

As "ordinary and necessary expenses" within the meaning of Article 8, Section 3, Idaho Constitution, no approval of the electors of Petitioner at a special election called for such purpose is required.

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VII.

The Loan Agreement, when duly executed by Petitioner and the State and the promissory note when issued pursuant thereto will be valid and binding special obligations of Petitioner, payable in accordance with their terms.

VIII.

Petitioner may validly pledge its sewer system revenues and other lawfully available funds of Petitioner appropriated by Petitioner for such purpose, as security for its required payments under the Loan Agreement.

Based on the Findings of Fact and Conclusions of Law, and good cause appearing therefor,

THE COURT HEREBY DIRECTS that Judgment be entered in accordance with the Petition for Judicial Confirmation, to the effect that the Loan Agreement constitutes a valid, binding, and enforceable obligation of Petitioner and may be entered into and performed in accordance with its terms.

DATED this 27th day of May, 2010.

/s/ JUDGE VERBY
District Judge

EXHIBIT "E"

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Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SIXTH JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF BANNOCK

In re: THE CITY OF INKOM, an Idaho municipal corporation, Petitioner.	Case No. CV 2006 1545 OC FINDINGS OF FACT AND CONCLUSIONS OF LAW

This matter having come on duly and regularly before this Court for hearing on May 30, 2006, and Petitioner having submitted a verified Amended Petition for Judicial Confirmation ("Petition"), and a memorandum of law and affidavits in support of its Petition, and it appearing that proper notice of the filing of the Petition for Judicial Confirmation has been given

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as provided in Title 7, Chapter 13, Idaho Code, and the Court having examined the allegations of the Petition, the exhibits annexed thereto, and the memorandum of law and affidavits in support thereof, and the matter having been fully submitted; the Court, being fully advised in the premises, now makes the following:

FINDINGS OF FACT

I.

Petitioner, the City of Inkom, Bannock County, Idaho (the "Petitioner"), is a political subdivision within the definition contained in Section 7-1303(6), Idaho Code, and has filed this action pursuant to Sections 7-1301, et seq., Idaho Code (the "Judicial Confirmation Law"), seeking judicial confirmation of the validity of a certain Loan Offer, Acceptance and Contract (the "Loan Agreement") and of the issuance of its promissory note or other evidence of indebtedness, between the Petitioner and State of Idaho, Department of Environmental Quality (the "State"), whereby Petitioner seeks to borrow funds for improvements to Petitioner's domestic water system facilities, to cause to be issued its promissory note or other evidence of indebtedness, and to pledge the net revenues of its water system to the payment thereof.

II.

Pursuant to Section 7-1304, Idaho Code, the City Council (the "Council") of Petitioner, on March 14, 2006, held and

EXHIBIT "E"

conducted a public hearing to consider whether it should adopt a resolution authorizing the filing of a petition under the Judicial Confirmation Law. A notice of the public hearing, in the form and content described in Section 7-1306(2), Idaho Code, setting forth the time, place, and summary of the matter, was published once in The Idaho Journal, a newspaper of general circulation within Petitioner's boundaries and the official newspaper of Petitioner, at least fifteen (15) days prior to the public hearing. Following the public hearing, and after the passage of at least fourteen (14) days, the Council, on March 28, 2006, adopted Resolution No. 279, authorizing the filing of a petition for judicial confirmation and making certain findings and determinations.

III.

Pursuant to Sections 7-1305 and 7-1306, Idaho Code, notice of the filing of the Petition for Judicial Confirmation was duly served by publication once a week for three (3) consecutive weeks by three (3) weekly insertions in The Idaho Journal, a newspaper of general circulation within Petitioner, and by posting in a prominent place at or near the main door of the administrative office of Petitioner at least thirty (30) days prior to the date fixed in the notice of hearing on the Petition, all as more fully shown by the Affidavit of City Clerk Marilyn Brown, the Affidavit of Publication, and the Affidavit of Posting of Notice on file herein.

EXHIBIT "E"

IV.

Petitioner has submitted with its Petition for Judicial Confirmation a copy of the proposed Loan Agreement between Petitioner and the State, which Petitioner proposes to execute. Petitioner has also submitted an Affidavit of City Clerk Marilyn Brown with exhibits, an Affidavit of Posting, and an Affidavit of City Engineer Winston R. Dyer, P.E. Petitioner's proof was unopposed and the documents are conclusively deemed to be true and correct in accordance with their terms.

V.

Petitioner owns, maintains, and operates, and has for many years owned, maintained, and operated, pursuant to Sections 50-323, 50-1032, and 50-1033, Idaho Code, a domestic water supply, storage, and distribution system (the "System") for the provision of domestic water services to its residents. The System serves the entire City and is the sole provider of domestic water for approximately 290 residential households and businesses.

VI.

Petitioner's System currently consists of two water supply wells, two storage reservoirs and distribution facilities. The System is not currently metered. Petitioner, through its Mayor and City Council, engaged Winston R. Dyer, P.E. (the "Engineer") to conduct a study of the System for the purpose of determining the adequacy of the System for present and future needs. The Engineer performed a Water Facilities Improvement Study for the

EXHIBIT "E"

City of Inkom, Idaho, in 2005 (the "Study"), for Petitioner. Based upon the Study, the Engineer determined that certain components of the System have become outmoded and inadequate for the present and future needs of the City and are in need of upgrade or replacement in order for the System to comply with applicable water quality regulations and standards; and to remain functional and adequate to meet the immediate and projected requirements of the System. The Engineer has recommended installation of chemical feed equipment, replacement of existing undersized water mains, construction of a new 200,000 gallon storage reservoir, installation of water meters throughout the System, improvements to existing wells and booster pump facility equipment that have outlived its useful life, and installation of a disinfection system (the "Improvements"). The Engineer has determined that if the Improvements are not installed, the existing System will be at risk of having drinking water that exceeds the United States Environmental Protection Agency's ("EPA") established maximum contaminant level for dissolved copper, disruption of the water supply through depletion of existing storage volumes, substandard system pressure and flow from deteriorating and undersized distribution piping in certain areas, and potential bacteriological contamination of the water supply from the lack of adequate disinfection treatment equipment. The Engineer has further reported that the installation of the Improvements is the most cost effective

solution for Petitioner to meet the immediate needs of Petitioner's System and inhabitants.

VII.

As a result of the report and recommendation of the Engineer, Petitioner's Mayor and Council have determined that certain improvements to the City's System are required to meet immediate fire flow demand, water quality, pressure, supply, conservation, and distribution needs. Petitioner has determined that the following improvements are required in order for the System to remain functional and adequate to meet the existing and projected needs of Petitioner and its water users: (1) installation of chemical feed equipment on water supply wells to meet EPA and Idaho Department of Environmental Quality ("DEQ" or "State") health and environmental requirements; (2) distribution system improvements to restore existing piping and comply with DEQ water pressure standards to achieve adequate pressure for fire protection and water distribution; (3) storage capacity to provide water supply that meets equalization, fire reserve, emergency storage and peak use requirements; (4) water meters to detect leaks, prevent backflow contamination, reduce demand on the water supply and encourage water conservation; (5) improvements to the two existing water supply wells and booster pumping facility to replace outmoded equipment and restore facilities to their intended capabilities to meet water supply needs; and (6) installation of a disinfection system to prevent

bacterial contamination of the Petitioner's water supply and protect Petitioner's inhabitants.

VIII.

The total cost of the Improvements, including acquisition and construction, engineering and legal services, interest on borrowed funds during construction, contingencies, and related costs, excluding grants and other state and federal contributions, has been estimated by the Engineer as $900,000. Petitioner does not have funds available to it within its present budget to meet its share of the cost of the Improvements, and has determined that such cost must be financed over a term of years from the revenues of the System.

IX.

Pursuant to Sections 39-7601 through 39-7605, Idaho Code, and rules and regulations promulgated pursuant thereto, the State has established a Drinking Water Loan Account for the purpose, among other purposes, of making loans to municipalities for the financing public water system facilities. In order to finance the cost of the Improvements, Petitioner has made application to the State for a loan from the Drinking Water Loan Account referred to above. The State has determined that Petitioner is eligible for such loan and has indicated its approval of such loan, substantially on the terms and conditions set forth in the draft Loan Agreement which is annexed to Petitioner's verified Petition herein.

EXHIBIT "E"

X.

Petitioner does not have the necessary $900,000 available in its current funds or in its anticipated water revenues for the current or ensuing fiscal year, and therefore must finance the costs over a term of years. Petitioner has determined to finance the cost of the Improvements by entering into the Loan Agreement with the State, pursuant to which the State will loan to Petitioner the $900,000 required to finance the Improvements, and the Petitioner will issue its promissory note or other evidence of such indebtedness and will repay the loan over a 20-year period from water System revenues.

XI.

The loan, if incurred pursuant to the proposed Loan Agreement, and the promissory note or other evidence of indebtedness thereof, would constitute an indebtedness of Petitioner extending beyond its current year's revenues. Petitioner has not sought or obtained an approving vote of the electors at a special election called for the purpose of approving such indebtedness, nor has Petitioner made provision for the levying of an annual property tax to constitute a sinking fund for the payment of the interest on or principal of such indebtedness.

XII.

Article 8, Section 3, Idaho Constitution, provides, in relevant part, that no county, city, or other political

subdivision shall incur any indebtedness or liability, in any manner or for any purpose, exceeding in that year the income and revenue provided to it for such year, without the assent of two-thirds (or, in the case of certain revenue bonds, the assent of the majority) of the qualified electors thereof voting at an election held for that purpose, but said Article 8, Section 3, contains the following exception: "provided, that this section shall not be construed to apply to the ordinary and necessary expenses authorized by the general laws of the state . . . ."

XIII.

Petitioner, by and through its Council, has determined that the proposed Loan Agreement for the financing of the Improvements and the promissory note to be issued pursuant thereto constitute "ordinary and necessary expenses" of Petitioner within the meaning of the above-quoted proviso to Article 8, Section 3, Idaho Constitution, for which no approving vote of the electors is required. This determination is based upon the following factors:

A. The proposed expenditure is necessary to protect the health and safety of the inhabitants of the Petitioner and to comply with state and federal health, safety, and environmental standards.

B. The proposed expenditure is for the purpose of repairing, rehabilitating, maintaining, and replacing existing City services in order to render them

serviceable, as opposed to the construction of wholly new facilities.

C. The proposed Improvements are authorized by the general laws of the State.

D. Petitioner has operated the existing System for many years and has determined that the Improvements are indispensable to the efficient continued operation of the System.

E. The amount of the proposed indebtedness is not disproportionate to the Petitioner's overall budget for the year.

XIV.

Petitioner's City Council has determined that the loan obligation may be validly secured by Petitioner's execution of the proposed Loan Agreement, by the issue of its promissory note pursuant thereto, and by repayment of the same from its water System revenues.

Based upon the foregoing Findings of Fact, the Court now makes the following:

CONCLUSIONS OF LAW

I.

Proceedings under the Judicial Confirmation Law, Title 7, Chapter 13, Idaho Code, are proceedings in rem, and jurisdiction

of the subject matter and of all interested parties is lawfully obtained through publication and posting as provided therein. Publication and posting as authorized by the Judicial Confirmation Law is a valid method of vesting jurisdiction of this Court over all interested parties and over the subject matter.

II.

Jurisdiction of this Court over the subject matter of the Petition for Judicial Confirmation and over all interested parties has, as a matter of law, been obtained herein by publication and posting as provided by law.

III.

The Judicial Confirmation Law is valid and constitutional.

IV.

The allegations of the Petition for Judicial Confirmation are deemed to be admitted by all interested parties who failed to appear in objection thereto. This Court is authorized to render the judgment as prayed for in Petitioner's Petition for Judicial Confirmation and as set forth hereinafter.

V.

All of the Improvements proposed to be made by Petitioner, and the indebtedness proposed to be incurred therefor, meet the criteria articulated by the Idaho Supreme Court to qualify under the "ordinary and necessary expenses" exception to Article 8, Section 3, Idaho Constitution.

EXHIBIT "E"

VI.

As "ordinary and necessary expenses" within the meaning of Article 8, Section 3, Idaho Constitution, no approval of the electors of Petitioner at a special election called for such purpose is required.

VII.

The Loan Agreement, when duly executed by Petitioner and the State, and the promissory note, when issued pursuant thereto, will be valid and binding special obligations of Petitioner, payable in accordance with their terms.

VIII.

Petitioner may validly pledge its water System revenues as security for its required payments under the Loan Agreement.

Based on the Findings of Fact and Conclusions of Law, and good cause appearing therefor,

THE COURT HEREBY DIRECTS that Judgment be entered in accordance with the Petition for Judicial Confirmation, to the effect that the Loan Agreement constitutes a valid, binding, and enforceable obligation of Petitioner and may be entered into and performed in accordance with its terms.

DATED this 30 day of May, 2006.

N. Randy Smith
District Judge

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Attorneys for Petitioner

IN THE DISTRICT COURT OF THE SEVENTH JUDICIAL DISTRICT OF THE

STATE OF IDAHO, IN AND FOR THE COUNTY OF CUSTER

In re:	)	Case No.CV 2013-120
	)	
THE CITY OF CHALLIS	)	AFFIDAVIT OF
an Idaho municipal	)	DONALD ACHESON
corporation,	)	
	)	
Petitioner.	)	
	)	

STATE OF IDAHO)
) ss.
County of Gooding)

DONALD ACHESON, being first duly sworn on oath, deposes and says:

1. On or about December 2011, the City of Challis, Idaho (the "City") contracted with Riedesel Engineering to prepare a Challis Water System Facility Plan along with the supplemental information and emergency protocol for the City's existing water system (DEQ No. 11-13-19) (the "Study") attached hereto as "Exhibit A" and by this reference is fully incorporated herein. I am and at all times pertinent hereto have been the duly appointed,

qualified, and acting City Engineer of the City of Challis, Custer County, Idaho (the "City") specifically as it pertains to this project and the Study on behalf of Riedesel Engineering. I am a professional engineer duly licensed and practicing in the State of Idaho.

2. As the City Engineer in this capacity, I have personal knowledge of the matters affecting the City's public water supply and distribution system as set forth in this affidavit and the conclusions drawn therefrom in the Study.

3. Existing Water System. For a complete analysis of the existing water system, please refer to Chapter 3.3 of the Study. Serving the entire City of Challis, the City has owned and operated its community water system (the "System") for many years. The City has surface and groundwater sources for drinking water. The surface water source comes from a slow sand filter treatment plant. Garden Creek supplies the treatment plant. The City uses this source from about March to December. It supplies the Old Town portion of the distribution system. The City has the water right to divert 1.58 CFS from Garden Creek and the diversion rate is regulated at the control structure on Garden Creek. Peak flow from this source is about 950 GPM. The peak flow from the treatment plant can exceed the diversion rate because diverted water creates a reservoir above the surface of the filter media. The reservoir plus the stored treated water in the clear well allows the treatment plant to meet City demands exceeding the diversion rate at Garden Creek. The City has (4) groundwater wells of which only 2 are currently in service. Neither well supply is currently disinfected. Challis has 2.73 CFS in water right for its west and east wells.

4. The most recent water system facility plan and resulting improvement project performed for the City dates from 1981 and is approximately 30 years old. City staff has

expressed concerns about the current system which creates water quantity and quality problems including:

a. The City's water supply comes from the unprotected Garden Creek Watershed and from two existing ground water wells. The Garden Creek surface water source is susceptible to contamination from the watershed.

b. The City is not able to provide adequate fire flows due to the use of existing old and dead end water mains, and small diameter un-looped lines. See IDAPA 58.01.08.501.

c. There are old, improperly spaced hydrants connected to 4" water mains. (4" mains do not meet current law as a minimum of 6" mains must be utilized to provide the minimum supply for fire suppression). See IDAPA 58.01.08.552.

d. The City does not have sufficient right to groundwater to expand that source as a replacement to Garden Creek to meet either its current or design year water demand.

e. Depending on the water year, the surface water source cannot meet the summertime peak demand without rationing.

f. The City did not have a plan to anticipate water demands and provide water services for future growth.

g. Any extension of service to supply additional demands or future growth cannot be considered without an approved facility plan. IDAPA 58.01.08.502.01.

h. The residential services and meters installed with the 1980s capital project are aged and need to be replaced.

i. Aged pipes not replaced in the 1980s project are in desperate need of replacement.

5. As owner and operator of the System, the City is charged with the duty of maintaining safe and reliable water services for the City and its residents, and to do so in a manner that does not jeopardize Petitioner's drinking water supply. In furtherance of that responsibility, the City retained the services of Riedesel Engineering, a professional consulting civil engineering firm duly authorized and licensed to practice in Idaho (the "Engineer"), to conduct a study of the System for the purpose of determining the adequacy of the System for present and future needs.

6. We, at Riedesel Engineering, performed the Study in 2011 and 2012 in order to assess the ability of the existing System to meet present and future demands, together with performance of the System and its components with respect to standards established by the State of Idaho through its Department of Environmental Quality ("DEQ") and the United States Environmental Protection Agency ("EPA").

7. The Study and proposed Project, Recommended Project 1 (RP1), for improvements to the existing Water System are the result of rigorous analysis of a number of critical factors including an evaluation of the existing Water System, compliance with health and environmental standards, environmental compatibility, cost effectiveness, compatibility with existing systems, public acceptability, and implementation considerations. We focused on five main areas for improvement:

a. Drinking water sources

b. Potable storage

c. Distribution system

d. Metering

e. Telemetry

8. The Study concludes that the City's water system does not meet the State of Idaho requirements for Ground Water Source Redundancy and Redundant Fire Flow Capacity. (IDAPA 58.01.08.501). The Study also found that in violation of Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08.552) several areas of the water distribution system have low pressure due to undersized piping. This creates risk of backflow contamination in a public drinking water system and presents a public health concern. Additionally, the undersized piping generates insufficient fire flow to the fire hydrants in the City.

9. In order to achieve compliance with state law and obtain the required amount of clean drinking water and fire flow, the Study recommended the following ranking of priority needs of the System:

a. Replace the surface water source with a new groundwater source in the Garden Creek aquifer system.

b. Construction of distribution system improvements to tie the Old Town system into the new groundwater system, eliminate 4-inch pipes and the fire hydrants that tie to them, install new and properly spaced fire hydrants, and tie-in dead

end lines. Add pressure reducing stations and isolation valves to create (4) pressure zones which eliminates service areas that are over-pressurized.

c. Install a telemetry system to improve supervisory control and data acquisition to protect the water system.

10. In particular, the elements of Recommended Project 1 include:

• Metering. The Project replaces all the meters in the City with new automated meter read (AMR) equipment taking the first steps to recover the estimated 4% lost water identified by Idaho Rural Water. The Project allows the City to read every meter every month, reduce the staffing requirements to bill for water, increase the accuracy of that billing, and provide the data needed to do a water audit.

• Source Water. The Project allows the City to curtail use of the Garden Creek surface water source and source water treatment. 2 new wells - one in the Garden Creek Aquifer system that recovers the lost output of West Well #1 and one in the Salmon Aquifer System – will replace the curtailed Garden Creek water source. The City will abandon the slow sand filter but retain the surface water right. The Project solves the susceptibility issue of the unprotected Garden Creek watershed by moving all of the City's drinking water sources to groundwater.

• Distribution System. The Project includes all the modeled pipeline changes and additions needed to meet the year 2030 design population and with total reliance on groundwater. 4 pressure zones will be formally established with new pressure reducing stations and isolation valves. The system will have new, properly spaced hydrants on new pipelines and add hydrants where needed to improve hydrant spacing on the existing pipelines. The Project solves the

pressure zone issues with the existing distribution system, solves the fire hydrant spacing issue, and allows the City to meet the projected drinking water demands of the year 2030 population. The City will be able to meet the requirements of the design fire flow and duration.

• Distribution System Alternatives. The Project includes new transmission pipeline to provide water and firefighting service to the Challis Airport. The transmission lines also allow for development in the east and west corridors parallel to US 93, and for the annexation of the Butts Subdivision into the City. The Project meets the City goals of serving the Airport and providing for future growth.

• Telemetry. The Project connects the City's key facilities into an integrated network that provides enhanced supervisory control and data acquisition (SCADA). Key facilities include the new and existing groundwater wells, and East and West Reservoirs. Telemetry will provide better security for the drinking water system, and City staff will be able to access the SCADA system remotely to evaluate and respond to alarm conditions. The Project improves the operation and security of the drinking water system.

11. These improvements and upgrades are needed to protect and preserve the public health, safety, and welfare of the City's population, and comply with state drinking water and fire flow standards. Without upgrades, these deficiencies in the Water System threaten public health and subject the City to legal liability.

12. Based upon my recommendation contained in the Study, the Mayor and Council of the City have determined that these improvements are necessary to satisfy increasing potable water demand, provide fire flow protection, and eliminate public health concerns.

13. The improvements will be installed in accordance with State of Idaho, Department of Environmental Quality ("DEQ") requirements.

14. If the proposed System improvements are not made, the City and its inhabitants will suffer the following consequences:

a. Existing Water System facilities will not be capable of meeting the needs of users for fire flow and citizen demand for potable water.

b. Public health and safety will be at risk due to backflow contamination.

c. The City has potential legal liability, including fines.

15. The total estimated cost of Recommended Project 1 is estimated at $ 8,078,877. The City does not have funds available to it within its present budget or its budget for the next fiscal year to pay for the Project and has determined that a portion of such cost, in an amount not to exceed must be financed over a term of years from the revenues of the System and other lawfully available funds of the City.

16. Recommended Project #1 (RP1) is a plan for the development of the City of Challis from now to the 2030 design year. RP1 addresses health and safety issues, operation and maintenance improvements, and expansion of the water system to serve the airport and growth of the community. RP1 needs strategic implementation for prudent implementation. "Prudent implementation" has these elements in order of priority:

a. Address health and safety concerns

b. Focus on items that will reduce the operation and maintenance (O&M) costs of the system

c. Expand the water system to serve the airport and other areas of interest to the City as the need and demand for service occur

The City of Challis is proceeding with a revised project based on "prudent implementation". Basically, the revised project does not address the growth or expansion portions of Recommended Project 1. The revised project includes:

a. Old Town Distribution System Improvements. Replace all 4-inch pipes with 6-inch or larger; install new properly spaced hydrants; loop dead end pipes; install pressure reduction stations; roadway pavement replacement for pipeline trenching.

b. Airport Water Line Fire Fighting Extension. Extend new 6 and 8-inch mains to the airport and install new fire hydrants.

c. Metering and Telemetry. Replace all exiting water meters with new automated read equipment; metering reading software and accounting system training and coordination; upgrade water system supervisory control and data acquisition (SCADA) system.

17. The City does not have sufficient funds in its current budget to construct the Project; therefore the City must borrow money in an amount estimated to be $3,200,000 so that it can complete the Project in the most timely and efficient manner thereby allowing the City to provide safe and sufficient water services.

18. It is my professional opinion, based on my understanding of the City's existing Water System and the Study accomplished by Riedesel Engineering, that the improvements described above are essential for the City to improve the Water System so it may comply with

health and environmental standards, provide a safe and sufficient water collection and treatment system, protect against contamination of the City's drinking water supply, and meet its obligations to its citizens; and, that it may do so in the most cost effective manner. The proposed expenditure is for the construction of necessary and indispensable upgrades and improvements to existing City services in order to provide an adequate water supply and fire storage for the City's existing water system, as opposed to the purpose of undertaking a new endeavor.

DATED this 1 day of October, 2013.

DONALD ACHESON

SUBSCRIBED AND SWORN TO BEFORE me this 1st day of October, 2013.

AIDA ZUKIC
NOTARY PUBLIC
STATE OF IDAHO

Notary Public in and for the
State of Idaho, residing at
Twin Falls therein.
My Commission expires: May 1, 2018

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **AFFIDAVIT OF DONALD ACHESON** this 1st day of October, 2013 served upon the following individuals and in the corresponding manner:

David P. Claiborne Sawtooth Law Offices 1101 W. River Street, Suite 110 PO Box 7985 Boise, ID 83707	✓ via U.S. Mail ___ via Hand Delivery ___ via Overnight Delivery ___ via Facsimile: (208)629-7559 ___ via Email: david@sawtoothlaw.com
Hon. Joel Tingey Custer County Courthouse P.O. Box 385 Challis, ID 83226	✓ via U.S. Mail ___ via Hand Delivery ___ via Overnight Delivery ___ via Facsimile: (208)879-5246 ___ via Email:

Paul J. Fitzer

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

900 North Skyline Dr., Suite B • Idaho Falls, Idaho 83402 • (208) 528-2650

C.L. "Butch" Otter, Governor
Curt Fransen, Director

August 23, 2012

Mayor Mark Lupher
City of Challis
PO Box 587
Challis, ID 83226

Re: City of Challis Water System Facility Plan, Custer County, DEQ No. 11-13-19

Dear Mayor Lupher:

We have reviewed the City of Challis Water System Facility Plan along with the supplemental information and the emergency protocol prepared by Donald G. Acheson of Riedesel Engineering. We hereby **approve** the Water System Facility Plan as fulfilling the technical portion of the Facility Plan. If the city wishes to pursue a construction loan from the DEQ's Drinking Water State Revolving Loan Fund (SRF) an environmental information document must be completed and approved by the Department prior to being eligible for funding. Please forward the water system improvement engineering plans and specifications for the water system improvements when available.

If you have any questions regarding this letter or if we can be of further assistance, please call me at (208) 528-2650.

Sincerely,

Carlin Feisthamel, P.E.
Water Quality Engineer

cc: Greg Eager, P.E., Regional Engineering Manager, DEQ-IF
Donald G. Acheson, P.E. Project Engineer, Riedesel Engineering

AUG 27 2012

EXHIBIT "A"

2012AGD2824

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SUPPLEMENTARY INFORMATION
CHALLIS WATER SYSTEM FACILITY PLAN
FEBRUARY, 2012

RIEDESEL Engineering

202 Falls Avenue
Twin Falls, ID 83301
208-733-2446

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4.1.4 Recommended Project 1 without Garden Creek Slow Sand Filter – Modifications for West Well Source Failure 9

EXHIBIT "A"

This supplement responds to a clarification request by the reviewer of the facility plan submitted to the Department of Environmental Quality, Idaho Falls Regional Office. The request for clarification has (3) parts:

1. H2O Map. Information to decipher the hydraulic model extended period simulations depicting the response of the existing and future distribution systems under a peak day load with a fire flow demand. Appendix 1 to this supplement contains this information. The appendix information translates the reports in Appendix F – Sections 1.1 and 2.1 of the facility plan.

2. Loss of Source. Determination of the existing and future distribution system response to peak day demand with (1) of the water sources non-operational meeting the requirements of IDAPA 58.01.08.501.17 – Ground Water Source Redundancy, as follows:

   17. Ground Water Source Redundancy. *New community water systems served by ground water shall have a minimum of two (2) sources if they are intended to serve more than twenty-five (25) connections or equivalent dwelling units (EDUs). Under normal operating conditions, with any source out of service, the remaining source(s) shall be capable of providing either the peak hour demand of the system or a minimum of the maximum day demand plus equalization storage. See Subsection 501.18 for general design and redundancy requirements concerning fire flow capacity.*

3. Loss of Source Duration. IDAPA 58.01.08.501.17 does not specify duration. Based on a phone call to Carlin Fiesthamel, IDEQ-IFRO, the duration of a source outage is the time it takes to get the source back on line. We interpret this to be a non-emergency repair of the source equipment, such as pumping equipment, motor, controls, etc. A conversation with Mr. Corey Rice, Water & Wastewater Superintendant for the City of Challis indicates that he is able to restore pumping equipment in 3 days or less.

We used 72 hour duration of a source outage at peak day (3 consecutive peak days of source outage) to simulate the response of the water system. Appendix 2 to this supplement contains simulation data from the hydraulic model supporting the findings.

1 PEAK HOUR DEMAND OR MAXIMUM DAY PLUS EQUALIZATION STORAGE

1.1 Peak Hour Demand – Existing and Future System

We analyzed the peak hour demand for Challis' existing water system to be about 1,950 GPM, occurring at 04:00 hours[1]. For the design year and design year population we project peak hour demand at about 2,700 GPM[2].

1.2 Maximum Day Plus Equalization Storage – Existing and Future System

We analyzed Challis' existing peak day demand to be 1,862,150 gallons per day[3]. For the design year and design year population we project peak day demand at about 2.57MG[4].

2 RECOMMENDED PROJECT 1 SYSTEM RESPONSE TO A WATER SOURCE FAILURE

2.1 Description of Sources and the Distribution System

Recommended Project #1 (RP1) includes changes to the distribution system and the drinking water sources[5]. The Garden Creek Slow Sand Filter (GCSSF) is not an operational part of RP1. The total capacity of all these sources is as follows[6]:

• Required Peak Hour Demand (All as GPM)	<2,700.0>
• Peak output from West Wells	1,100.0
• Peak output from East Wells	1,200.0
• <Deficit>, Overage	<400.0>

Based on output capacities, the water sources for the existing system cannot meet the letter of IDAPA 58.01.08.501.17 for peak hour demand with all sources operational.

The worst case for the system occurs when one of the higher producing East Wells is not in service:

• Required Peak Hour Demand (All as GPM)	<2,700.0>
• Peak output from West Wells	1,100.0
• Peak output from East Wells	600.0

[1] Water System Facility Plan (WSFP), Section 3.3.3.5, page 30
[2] WSFP, Section 4.2, page 41
[3] WSFP, Section, Section 3.3.3.5, Table, page 31.
[4] WSFP, Section 4.2, page 41
[5] WSFP, Section 7.1.1, page 54
[6] WSFP, Section 7.2.1, page 56

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- <Deficit>, Overage <1,000.0>

The RP1 cannot meet the statute with (1) non-operational source.

An analysis of peak day plus equalization storage follows:

- Required Peak Day Demand (All as Gallons per Day) <2,570,000.0>
- Total Equalization Storage 400,000.0
- Peak output West Wells 1,584,000.0
- Peak output from East Wells 1,728,000.0
- <Deficit>, Overage 1,142,000.0

The worst case for the system occurs when one of the higher producing East Wells is not in service:

- Required Peak Day Demand (All as Gallons per Day) <2,570,000.0>
- Total Equalization Storage 400,000.0
- Peak output West Wells 1,584,000.0
- Peak output from East Wells 864,000.0
- <Deficit>, Overage 278,000.0

While pump capacity plus storage meets the letter of the code as shown above, the placement of the water sources may not allow the system to operate in accordance with IDAPA 58.01.08.501.17. An example of this is that the East Wells cannot supply the West Reservoir to make up a deficit in the Upper and Mid Cyprus pressure zones during an outage of a West Well source. Challis basically has (2) water systems. The west system can supply the east, but not vice versa.

The purpose of the analysis that continues below is to test the system performance. I performed tests using the same facility plan hydraulic model modified with a 72-hour duration with (3) consecutive peak days.

2.2 Source Failure and Response

There are (2) combinations of single source failure in RP1- failure of one of the wells in the Garden Creek Aquifer system, and failure of one of the wells in the Salmon Aquifer system.

2.2.1 Failure of a West Well

RP1 cannot meet peak day demand without both of the West Wells for 72-hour duration. Under peak day demand with only 500 GPM supplying the West Reservoir, the storage is exhausted after about 4 hours of demand. There is no interconnection between the SAS sources and the West Reservoir to make up this deficit.

2.2.2 Options for Failure of a West Well

There are (3) modifications to RP1 to meet IDAPA 58.01.08.501.17:

1. Increase the storage in West Reservoir from 0.2MG to about 1.5MG to provide enough storage for the 72 hour demand.
2. Do not increase storage but install a booster station near East Reservoir connecting to West Reservoir to make up the deficit in flow from GCAS. The pump station would require about 90 HP to provide about 1,000 GPM peak flow at about 250 feet total pumping head.
3. Incorporate the GCSSF into RP1 as an emergency source to handle this kind of outage.

Note that additional groundwater development in GCAS is not included in the list above. We do not recommend further development other than replacing West Well 1[7].

2.2.3 Failure of an East Well

Even with both West Wells operating, RP1 cannot meet the statute with one source in the SAS not operational for 72 hour duration. The 72 hour demand exhausts the storage of either West or East Reservoir.

2.2.4 Options for Failure an East Well

There are (3) modifications to RP1 to meet IDAPA 58.01.08.501.17:

1. Increase the storage in West Reservoir from 0.2MG to about 0.6MG to provide enough storage for the 72 hour demand.
2. Drill a 3rd source in the SAS to make up the deficit.
3. Incorporate the GCSSF into RP1 as an emergency source to handle this kind of outage.

2.3 Recommendations

The least cost option for Challis is to retain the GCSSF to help the City meet IDAPA 58.01.08.501.17. Operationally, retaining GCSSF requires regular maintenance and sampling of the source to make sure it is available and safe to use when needed. The interval needed for filter cleaning would be increased from once a year to probably once every 2-3 years or longer. Observation and testing will determine the cleaning cycle. Retaining GCSSF is Riedesel's recommendation for meeting the letter and intent of the statute.

If the City determines not to retain GCSSF as an emergency source, we will provide an additional supplement discussing the scope and financial analyses to meet a non-concurrent source failure in either the GCAS or SAS wells. Since there is no way to

[7] WSFP, Section 5.3.1, page 49

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predict an East Well or West Well failure, the system must be able to meet either condition. Construction required to meet either condition requires:

- Expansion of West Reservoir storage to 1.5 MG, or
- Booster pump station at East Reservoir and expansion of West Reservoir to 0.6MG, or
- Booster pump station at East Reservoir and addition of a 3rd SAS well.

3 APPENDIX 1

3.1 DECIPHERING INNOVYZE H2O MAP™ EXTENDED PERIOD SIMULATION (FIREFLOW DEMAND)

3.1.1 H2O MAO REPORT EXPLANATION

3.1.2 RP1 EXTENDED PERIOD SIMULATION DATA – FIREFLOW EXAMPLE

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		***HYDRAULIC MODEL***		***SAS GCAS 26JUL11***									
2		***HYDRAULIC MODEL DATA BASE:***		***FIREFLOW DESIGN (ACTIVE FIREFLOW)***									
3	**DECIPHERING THE H2O MAP FIRE FLOW REPORT -** The chart is a portion of the PDF titled "RP1 EXTENDED SIMULATION DATA -FIREFLOW" found in Appendix F, Section 2 - Proposed Water System Hydraulic Analyses. The format of this explanation is a copy of the EXCEL Workbook into which I pasted the H2O Map report. I will be deciphering (3) lines of that report. The (3) lines show examples nodes in the hydraulic model that have fire flow demand (line 6, ID#112 - line 8, ID#118), and a node that only has a peak hour demand (line 7, ID#116).												
4	**FIRE FLOW SIMULATION WITH THE HYDRAULIC MODEL -** In the facility plan, I determined the time of day for the peak flow in Challis occurs at 04:00, or 4 AM. All fire flow simulations are run fro a 2-hour duration starting at 04:00. The fire flow demand base on the IFC and Chief Launna Gunderson is 1,500 GPM. The minimum residual pressure at any of the nodes in the system is 20 PSI. The fire flow demand is loaded at the fire hydrants in the existing system and at key representative nodes in the future pipe network. We use key nodes because we don't know where new fire hydrant will ultimately be placed. The hydraulic model adequately represents the response of the distribution system during a fire flow stress without the extra encumbrance of hypothetical hydrants. The fire flow simulation runs concurrently with the peak day demands starting at 04:00. Peak day demands are placed on both nodes representing hydrants and nodes representing common localized demands.												

5	ID	Total Demand (gpm)	Critical Node 1 ID	Critical Node 1 Pressure (psi)	Critical Node 1 Head (ft)	Adjusted Fire-Flow (gpm)	Available Flow at Hydrant (gpm)	Critical Node 2 ID	Critical Node 2 Pressure (psi)	Critical Node 2 Head (ft)	Adjusted Available Flow (gpm)	Design Flow (gpm)
6	112.00	1,512.82	110	33.75	5,374.89	2,060.48	2,550.67	110	4.9	5,308.31	2,060.50	2,060.48
7	116.00	1.77	170	40	5,193.31		3,175.67	116	20.1	5,302.39	1.77	1.77
8	118.00	1,505.69	118	35.7	5,294.40	2,090.12	2,088.76	118	20.04	5,258.26	2,089.99	2,089.99

9	**LINE 6 - FIRE FLOW WITH PEAK DAY DEMAND -** Node ID#112 shows a total demand of 1,512.28 GPM. The demand is 1,500 GPM fire flow with 12.28 GPM peak day demand at this node. When node ID#112 is loaded with the demand, the "Critical Node 1" in the model is node ID#110 which is the node in the model that has the lowest pressure for the demand at node ID#112. Pressure at this node is 33.75 PSI and exceeds the 20 PSI minimum. The "Adjusted Fire Flow" is the flow that could be drawn form ID#112 and have node ID#110 still be at 20 PSI. The model shows that ID#112 could be loaded at 2,060.48 GPM. Since I am only interested in the demand node and the Critical Node 1, the rest of the data in the report is interesting but not essential to meet IDAPA. Reviewing the entire report, "RP1 EXTENDED SIMULATION DATA -FIREFLOW", shows that the entire distribution system can meet the 1,500 GPM fire flow demand with peak day load and still have all the Critical Node 1 pressures be at or above 20 PSI.
10	**LINE 7 - PEAK DAY DEMAND -** Node ID#116 shows a total demand of 1.77 GPM. The demand is the peak day demand at this node.
11	**LINE 8 - FIRE FLOW WITH PEAK DAY DEMAND -** Node ID#118 shows a total demand of 1,505.69 GPM. The demand is 1,500 GPM fire flow with 5.69 GPM peak day demand at this node. When node ID#118 is loaded with the demand, the "Critical Node 1" in the model is node ID#118 which is the node in the model that has the lowest pressure for the demand at node ID#118. Pressure at this node is 35.7 PSI and exceeds the 20 PSI minimum. The "Adjusted Fire Flow" is the flow that could be drawn form ID#118 and have node ID#118 still be at 20 PSI. The model shows that ID#118 could be loaded at 2,090.12 GPM. load and still have all the Critical Node 1 pressures be at or above 20 PSI.

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LOCATION: Z:\1668-Challis Facilty Plan\FACILITY PLAN\WFP DOCUMENT\DEQ COMMENT ADDITION 2FEB12\DEQ RESPONSE 1668 - MODEL SAS GCAS 26JUL11 INFORMATION
SHEET: SAS GCAS 26JUL11 MODEL (15)
DATE: 2/2/2012
PAGE 1 OF 1

CHALLIS WATER SYSTEM FACILITY PLAN – FEBRUARY 2012
Supplement Detailing System Recommended Project Response to Meet IDAPA 58.01.08.501.17 – Groundwater Redundancy

REVIEW #1

1. The City will install a new well in both the Garden Creek Aquifer System (GCAS) and the Salmon Aquifer System (SAS)
2. The **retain** the Garden Creek Slow Sand Filter operational as an emergency source

SYSTEM	PEAK DAY	PEAK HR.	LOSS OF A SOURCE IN GCAS	SYSTEM CHANGES	LOSS OF A SOURCE IN SAS	SYSTEM CHANGES
RP1	2.57MG	2,700 GPM	Total water production – 2,650 GPM: 950 GPM from GCSSF, 500 GPM from remaining West Well, and 1,200 GPM from both SAS wells.	The system meets IDAPA 58.01.08.501.17. No changes.	Total water production – 2,650 GPM: 950 GPM from GCSSF, 1,100 GPM both West Wells, and 600 GPM from remaining SAS wells.	The system meets IDAPA 58.01.08.501.17. No changes.

REVIEW #2

1. The City will install a new well in both the Garden Creek Aquifer System (GCAS) and the Salmon Aquifer System (SAS)
2. The City will **abandon** the Garden Creek Slow Sand Filter

SYSTEM	PEAK DAY	PEAK HR.	LOSS OF A SOURCE IN GCAS	SYSTEM CHANGES	LOSS OF A SOURCE IN SAS	SYSTEM CHANGES
RP1	2.57MG	2,700 GPM	Total water production – 2,650 GPM: 500 GPM from remaining West Well, and 1,200 GPM from both SAS wells.	Groundwater sources alone cannot meet peak hour flow. System must rely on groundwater sources and storage. Upper and Mid Cyprus pressure zones rely on the output of the West Wells. With one source down, the system requires either a larger reservoir or a booster at East Reservoir to supply water from SAS to West Reservoir to make up the deficit. Minimum upgraded reservoir size is about 1.5 MG with total system storage at 1.7MG. Estimated construction cost $1.3M. Minimum booster to supply West Reservoir from East Reservoir is 90 HP. The pumping plant would require (2) pumps, standby electrical supply, building, controls, etc. Estimated construction cost $0.5M. Does not include O&M costs.	Total water production – 2,650 GPM: 1,100 GPM both West Wells, and 600 GPM from remaining SAS wells.	Groundwater sources alone cannot meet peak hour flow. System must rely on groundwater sources and storage. Existing storage (0.4MG) is not sufficient. With one source down, the system requires either a larger reservoir or an additional SAS source. West reservoir needs to be increased to 0.6MG. Total system storage 1.0MG. Estimated construction cost $0.4M. Construction cost for 3rd SAS source is about $0.5M. Does not include O&M costs.

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CHALLIS WATER SYSTEM FACILITY PLAN – FEBRUARY 2012
Supplement Detailing System Recommended Project Response to Meet IDAPA 58.01.08.501.17 – Groundwater Redundancy

REVIEW #3 – OPTIONS

1. Non-Concurrent Failure – The ability to handle a water source loss in either the Garden Creek Aquifer System (GCAS) or the Salmon Aquifer System (SAS). Since one cannot predict which source may fail, the overall water system needs to perform under either condition.

OPTIONS	DESCRIPTION	COMPONENTS	OPERATION AND MAINTENANCE	ESTIMATED COSTS
1	Retain GCSSF	Existing System. New diversion to allow restoration of Garden Creek and participation of conservation service in drilling a new Garden Creek Well.	1. Routine and periodic testing 2. Routine and periodic filter cleaning 3. Routine and periodic maintenance of disinfection system	No additional cost.
2	Non-Concurrent Failure without GCSSF	Expansion of West Reservoir to 1.5MG	1. Adjust operation to maintain tank turn over (freshness) 2. Routine and periodic maintenance of level controls and other equipment 3. Site security	Estimated $1.3M construction cost
3	Non-Concurrent Failure without GCSSF	Booster duplex 90HP booster station at East Reservoir and increase West Reservoir storage to 0.6MG. Protects against a failure of either a West Well or an East Well.	1. Demand and electrical costs for pumps and HVAC equipment 2. Pump, valve, and control maintenance 3. Routine and periodic maintenance of level controls and other equipment 4. Site security	Estimated $0.4M tank construction + $0.5M booster station construction. Total ~$1.0M.
4	Non-Concurrent Failure without GCSSF	Booster duplex 90HP booster station at East Reservoir and 3rd well in SAS. Protects against a failure of either a West Well or a East Well	1. Demand and electrical costs for pumps and HVAC equipment 2. Pump, valve, and control maintenance 3. Routine and periodic maintenance of level controls and other equipment 5. Site security	Estimated $0.5M booster station construction + $0.5M 3rd East Well. Total ~$1.0M.

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Available Report Types

The following report types are available from the Output Report Manager. Choose a report for more information:

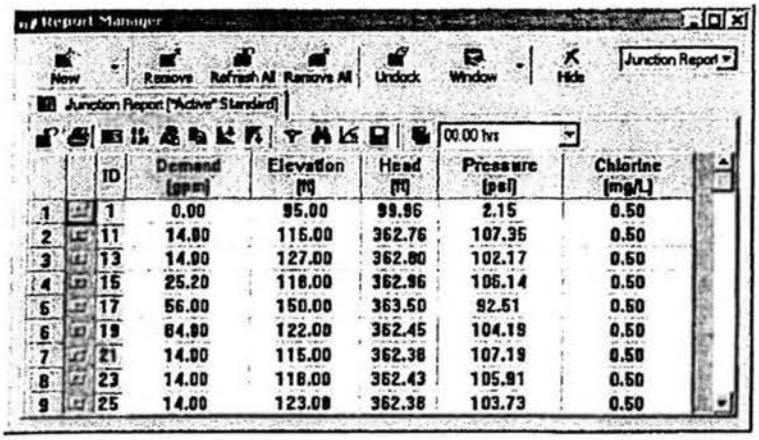
Junction Report	Range Report(s)
Pipe Report	Fireflow Report(s)
Valve Report	Energy Cost
Tank Report	Energy Summary
Pump Report	Demand Cost
Multi-Species	Sustainability

Click on the Report Modification buttons below to learn more about each icon.

Junction Report

Shows standard (hydraulic and water quality) simulation results at any simulation timestep for all junction nodes in tabular format. The node report displays one record for each node in the current H2OMAP project. Junction node report columns include the node identifier, demand, elevation, grade, pressure, and water quality analysis variable.

The following variables are displayed on the Junction Report in the Output Report Manager for all or selected junctions:



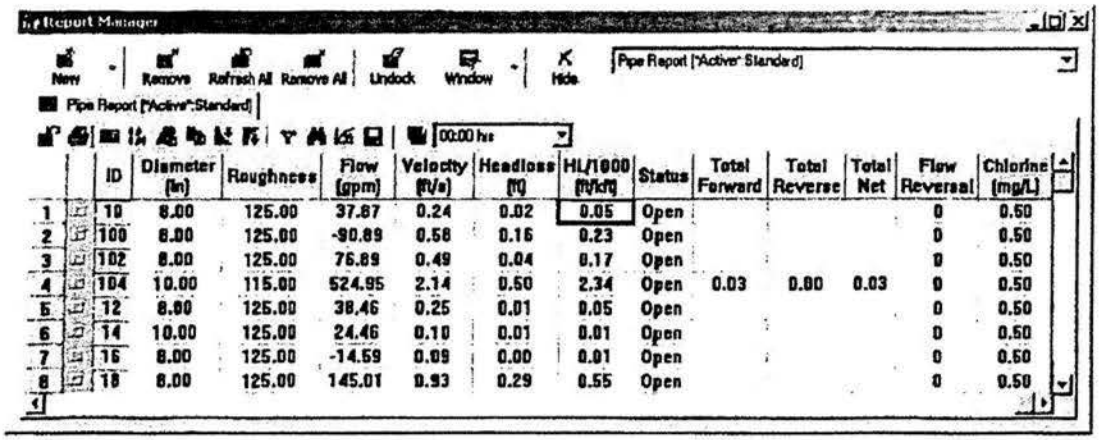
	ID	Demand (gpm)	Elevation (ft)	Head (ft)	Pressure (psi)	Chlorine (mg/L)
1	1	0.00	95.00	99.96	2.15	0.50
2	11	14.00	116.00	362.76	107.35	0.50
3	13	14.00	127.00	362.80	102.17	0.50
4	15	25.20	118.00	362.96	105.14	0.50
5	17	56.00	150.00	363.50	92.51	0.50
6	19	84.00	122.00	362.45	104.19	0.50
7	21	14.00	115.00	362.38	107.19	0.50
8	23	14.00	118.00	362.43	105.91	0.50
9	25	14.00	123.00	362.38	103.73	0.50

1. **ID** - Junction node identifier.
2. **Demand** - External demand (+ outflow; - inflow) at the current simulation time step, flow units.
3. **Elevation** - Junction node elevation, ft (m).
4. **Grade** - Junction node hydraulic grade at the current simulation time step, ft (m).
5. **Pressure** - Junction node pressure (pressure head for SI units) at the current simulation time step, psi (m).
6. **Water Quality** - Vary depending on the type of water quality analysis performed: constituent concentration for chemical propagation analysis (concentration units), flow weighted average water age for water age analysis (age units), or percentage of water (source contribution) for source tracing analysis (%).

Pipe Report

Shows standard (hydraulic and water quality) simulation results at any simulation timestep for all pipes in tabular format. The pipe report displays one record for each pipe in the current H2OMAP project. Pipe report columns include the pipe identifier, from and to nodes, length, diameter, flow, velocity, headloss, headloss per 1000/feet, and water quality analysis variable. Total forward flow, total backward flow, and total net flow are available for pipes that include flow totalizers.

The following variables are displayed on the Pipe Report in the Output Report Manager for all or selected pipes:



	ID	Diameter (in)	Roughness	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	HL/1000 (ft/kft)	Status	Total Forward	Total Reverse	Total Net	Flow Reversal	Chlorine (mg/L)
1	10	8.00	125.00	37.87	0.24	0.02	0.05	Open				0	0.50
2	100	8.00	125.00	-90.89	0.58	0.16	0.23	Open				0	0.50
3	102	8.00	125.00	76.89	0.49	0.04	0.17	Open				0	0.50
4	104	10.00	115.00	524.95	2.14	0.50	2.34	Open	0.03	0.00	0.03	0	0.50
5	12	8.00	125.00	38.46	0.25	0.01	0.05	Open				0	0.50
6	14	10.00	125.00	24.46	0.10	0.01	0.01	Open				0	0.50
7	16	8.00	125.00	-14.59	0.09	0.00	0.01	Open				0	0.50
8	18	8.00	125.00	145.01	0.93	0.29	0.55	Open				0	0.50

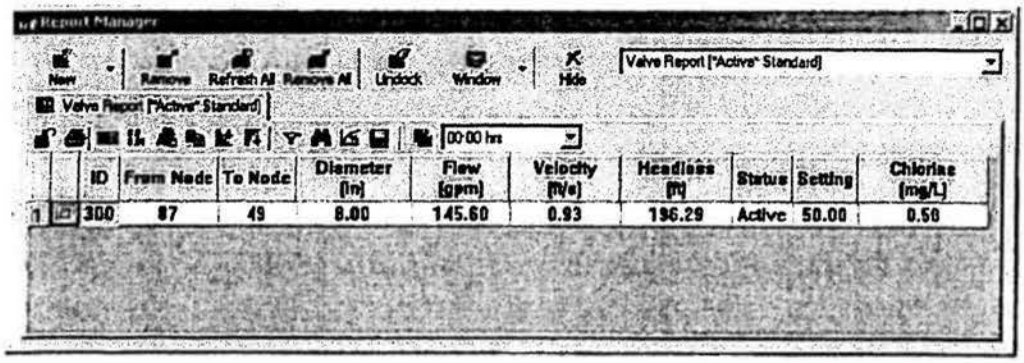
1. **ID** - Pipe identifier.
2. **From Node** - ID of beginning node.
3. **To Node** - ID of ending node.
4. **Length** - Pipe length, ft (m).
5. **Diameter** - Inside pipe diameter, in (mm).
6. **Flow** - Volumetric flow rate at the selected simulation time step, flow units.
7. **Velocity** - Flow velocity at the selected simulation time step, ft/sec (m/sec).
8. **Headloss** - Head lost due to friction across the pipe at the selected time step, ft (m).
9. **HL/1000** - Headloss per 1,000 length units across the pipe (hydraulic slope), ft/1,000 ft (m/1,000m).
10. **Total Forward Flow** - Accumulated flow volume metered in the From-Node to To-Node (forward) direction for the duration of the EPS, MG (ML).
11. **Total Reverse Flow** - Accumulated flow volume metered in the To-Node to From-Node (reverse) direction for the duration of the EPS, MG (ML).
12. **Total Net Flow** - Net flow volume metered for the duration of the EPS, MG (ML).
13. **Flow Reversal** - Total number of times that the direction of flow has changed in the pipe.
14. **Water Quality** - Vary depending on the type of water quality analysis performed: average constituent concentration for chemical propagation analysis (concentration units), flow weighted average water age for water age analysis (age units), or percentage of water (source contribution) for source tracing analysis (%).

(Note: Items 10 to 12 are only available for pipes equipped with flow totalizers during an EPS.)

Valve Report

Shows standard (hydraulic and water quality) simulation results at any simulation timestep for all control valves in tabular format. The valve report displays one record for each valve in the current H2OMAP project. Valve report columns include the valve identifier, from and to nodes, diameter, flow, velocity, headloss, and water quality analysis variable.

The following variables are displayed on the Valve Report in the Output Report Manager for all or selected valves:



	ID	From Node	To Node	Diameter (in)	Flow (gpm)	Velocity (ft/s)	Headloss (ft)	Status	Setting	Chlorine (mg/L)
1	300	87	49	8.00	145.60	0.93	196.29	Active	50.00	0.50

1. **ID** - Valve identifier.
2. **From Node** - ID of beginning node.
3. **To Node** - ID of ending node.
4. **Diameter** - Valve diameter, in (mm).
5. **Flow** - Volumetric flow rate at the current simulation time step, flow units.

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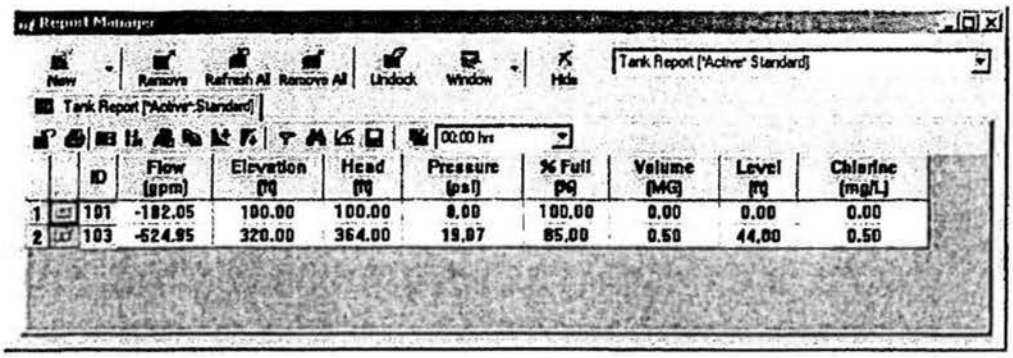
6. **Velocity** - Flow velocity at the current simulation time step, ft/sec (m/sec).
7. **Headloss** - Head lost across the valve at the current simulation time step, ft (m).
8. **Water Quality** - Vary depending on the type of water quality analysis performed: average constituent concentration for chemical propagation analysis (concentration units), flow weighted average water age for water age analysis (age units), or percentage of water (source contribution) for source tracing analysis (%).

Tank Report

Shows standard (hydraulic and water quality) simulation results at any simulation timestep for all storage nodes in tabular format. The node report displays one record for each storage node in the current H2OMAP project. Storage node report columns include the node identifier, demand, elevation, grade, pressure, percent full, and water quality analysis variable.

The following variables are displayed on the Tank Report in the Output Report Manager for all tanks:

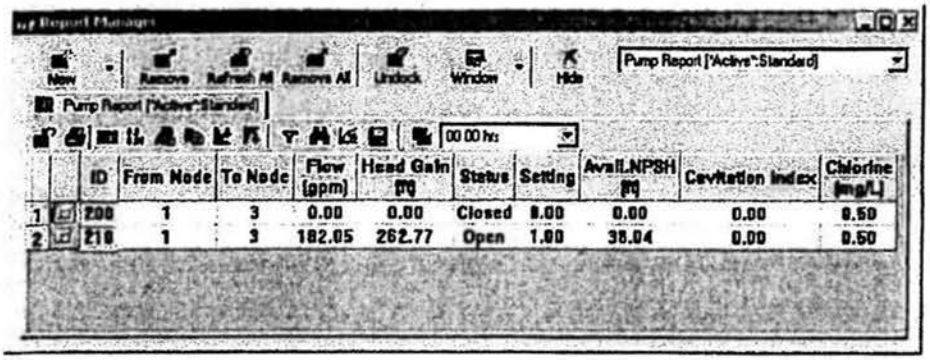


1. **ID** - Junction node identifier.
2. **Demand** - Volumetric flow rate (+ filling; - draining) at the current simulation time step, flow units.
3. **Elevation** - Node elevation, ft (m).
4. **Head** - Node hydraulic grade at the current simulation time step, ft (m).
5. **Pressure** - Node pressure (pressure head for SI units) at the current simulation time step, psi (m).
6. **% Full** - Percentage full by water volume at the current simulation time step, %.
7. **Water Quality** - Vary depending on the type of water quality analysis performed: constituent concentration for chemical propagation analysis (concentration units), flow weighted average water age for water age analysis (age units), or percentage of water (source contribution) for source tracing analysis (%).

Pump Report

Shows standard (hydraulic and water quality) simulation results at any simulation timestep for all pumps in tabular format. The pump report displays one record for each pump in the current H2OMAP project. Pump report columns include the pump identifier, from and to nodes, flow, headloss, and water quality analysis variable. Available net positive suction head (NPSH) and cavitation index are available for pumps that include an NPSH curve.

The following variables are displayed on the Pump Report in the Output Report Manager for all or selected pumps:



1. **ID** - Pump identifier.
2. **From Node** - ID of beginning node.
3. **To Node** - ID of ending node.
4. **Flow** - Volumetric flow rate at the selected simulation time step, flow units.
5. **Headloss** - Head gain imparted by the pump at the selected time step, ft (m).
6. **Available NPSH** - Available Net Positive Suction Head, ft (m).

7. **Cavitation Index** - Ratio of the available NPSH to the required NPSH.

8. **Water Quality** - Vary depending on the type of water quality analysis performed: average constituent concentration for chemical propagation analysis (concentration units), flow weighted average water age for water age analysis (age units), or percentage of water (source contribution) for source tracing analysis (%).

(Note: If the required NPSH curve for a specific pump is not supplied by the user, then H2OMAP will only compute the available NPSH and the cavitation index will not be reported.)

(Note: If the suction piping diameter for a specific pump is not supplied by the user or if the pump is connected directly to a storage node (i.e., upstream node is a storage node), then H2OMAP will not compute the available NPSH.)

Range

The Range Report (for pipes, pumps, valves, junctions, and tanks) displays the maximum, minimum and average values (and the difference between the maximum and minimum values) for the output variables during the entire extended period simulation period. One record is displayed for each component of the selected component type.

Ranges allow the user to see, in a report format, the maximum and minimum values experienced at any element in the system over the EPS. For example, in a Junction report, the user is able to get a print out of the maximum and minimum pressures experienced at any of the junction nodes. The range report is important when considering system fatigue.

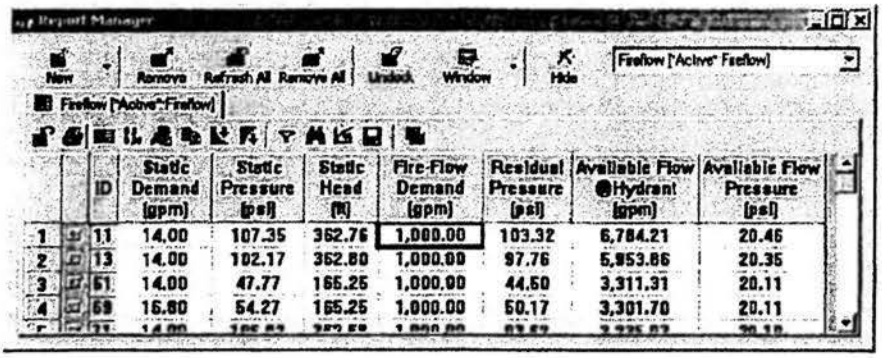
Fireflow

The Fire Flow report is used to display, query, and report fire flow simulation results for all fire flow nodes (active junction nodes assigned a fire flow demand at the time the fire flow simulation was run). Two types of fireflow reports are generated for each fireflow simulation.

The first report is a standard fire flow simulation. This report includes static demand, static pressure, fire flow demand, residual pressure, available flow at the hydrant and pressure at the available flow. The second report is the Fireflow design report. The contents of this report are different, depending whether the Minimum Design Pressure at the bottom of the Fireflow tab of the Run Manager dialog box is checked or not checked. Click here to learn more about the Fireflow Design Report.

Fireflow Report

The following variables are displayed in the Standard Fireflow Report in the Output Report Manager for all junction nodes that have been assigned fire demands. The Fireflow report contains the same information, regardless if the Minimum Design Pressure design flow calculation is checked or not:



	ID	Static Demand (gpm)	Static Pressure (psi)	Static Head (ft)	Fire Flow Demand (gpm)	Residual Pressure (psi)	Available Flow @Hydrant (gpm)	Available Flow Pressure (psi)
1	11	14.00	107.35	362.76	1,000.00	103.32	6,784.21	20.46
2	13	14.00	102.17	362.80	1,000.00	97.76	6,953.86	20.35
3	61	14.00	47.77	165.25	1,000.00	44.60	3,311.31	20.11
4	69	16.80	54.27	165.25	1,000.00	50.17	3,301.70	20.11

1. **ID** - Junction node identifier.

2. **Static Demand** - The nodal demand at the fire flow simulation timestep. This value corresponds to the baseline demand at the specified timestep.

3. **Static Pressure** - The nodal calculated pressure for the static demand at the fire flow simulation timestep.

4. **Fire Flow Demand** - The user specified fire flow demand at the current node when the hydrant is flowing.

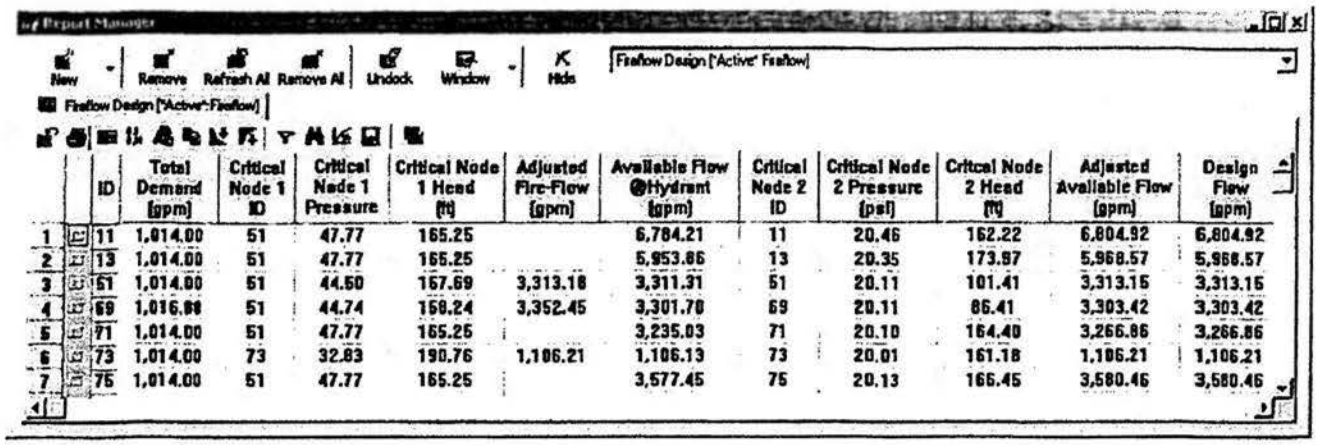
5. **Residual Pressure** - The residual pressure at the current junction which includes both the fire flow demand plus the static demand. This pressure value assumes that only the current hydrant (node) is subjected to the assigned fire demand and that no other fire demands are considered in generating this value.

6. **Available Flow @ Hydrant** - The maximum flow that is available while maintaining the user-specified minimum residual pressure at the current node, assuming that only this hydrant (node) is flowing.

7. **Available Flow Pressure** - Residual pressure calculated for the available flow at the current hydrant (node). This value should equal the residual pressure specified by the user.

Fireflow Design Report

The fire flow design report will generate a report that determines the minimum pressures in the critical node searching range and returns a Design Flow to be used as a maximum available fire flow in order to maintain minimum pressures in the distribution system.

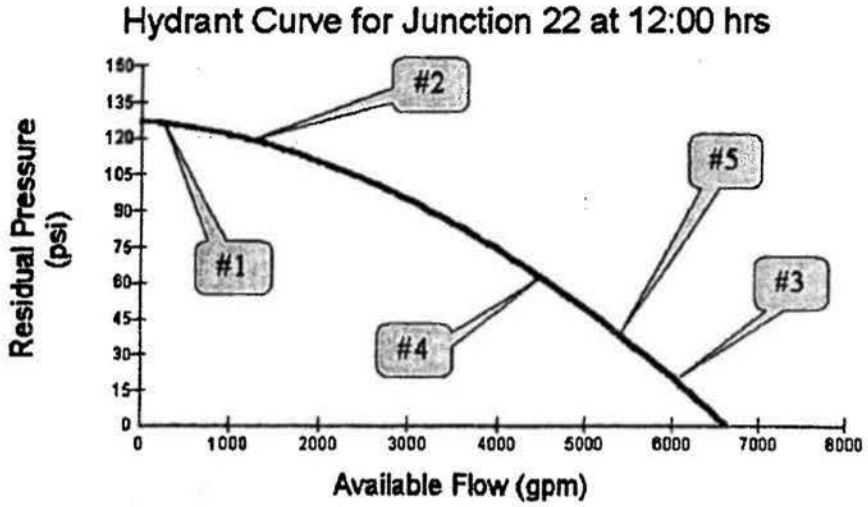


	ID	Total Demand (gpm)	Critical Node 1 ID	Critical Node 1 Pressure	Critical Node 1 Head (ft)	Adjusted Fire-Flow (gpm)	Available Flow @Hydrant (gpm)	Critical Node 2 ID	Critical Node 2 Pressure (psi)	Critical Node 2 Head (ft)	Adjusted Available Flow (gpm)	Design Flow (gpm)
1	11	1,014.00	51	47.77	165.25		6,784.21	11	20.46	162.22	6,804.92	6,804.92
2	13	1,014.00	51	47.77	165.25		5,953.86	13	20.35	173.87	5,968.57	5,968.57
3	51	1,014.00	51	44.50	157.69	3,313.16	3,311.31	51	20.11	101.41	3,313.15	3,313.15
4	69	1,016.88	51	44.74	158.24	3,352.45	3,301.70	69	20.11	86.41	3,303.42	3,303.42
5	71	1,014.00	51	47.77	165.25		3,235.03	71	20.10	164.40	3,266.86	3,266.86
6	73	1,014.00	73	32.83	190.76	1,106.21	1,106.13	73	20.01	161.18	1,106.21	1,106.21
7	75	1,014.00	51	47.77	165.25		3,577.45	75	20.13	166.45	3,580.46	3,580.46

1. **ID** - Junction node identifier.
2. **Total Demand** - The nodal demand at the fire flow simulation timestep. This value corresponds to the baseline demand for the selected timestep plus the assigned fireflow demand.
3. **Critical Node 1 ID** - The junction with the lowest pressure within our Critical Node Searching Range assigned by the user under the fireflow tab of the Run Manager.
4. **Critical Node 1 Pressure** - The pressure of the Critical Node when the Total Demand is flowing from the fire node.
5. **Critical Node 1 Head** - The pressure head of the Critical Node when the Total Demand is flowing from the fire node.
6. **Adjusted Fireflow** - The hydrant flow required to reduce Critical Node 1 to the *Minimum Design Pressure* value assigned under the fireflow tab of the Run Manager. For example, if the minimum design pressure was set at 20 psi, then this is the flow value generated from the fire node to achieve 20 psi at Critical Node 1.
7. **Available Flow @ Hydrant** - The flow required to get the selected fire node to the specified *Residual Pressure*.
8. **Critical Node 2 ID** - The junction with the lowest pressure within the Critical Node Searching Range when the Available Flow at the fire node is applied. In other words, when the available flow is delivered from the selected fire node, this junction has the lowest pressure out of all the values in the Critical Node Searching Range.
9. **Critical Node 2 Pressure** - The pressure of Critical Node 2 when the Available Flow is flowing from selected fire node.
10. **Critical Node 2 Head** - The pressure head of the Critical Node when the Total Demand is flowing from the fire node.
11. **Adjusted Available Flow** - The hydrant flow required to achieve the *Minimum Design Pressure* at Critical Node 2.
12. **Design Flow** - The final adjusted flow at the hydrant to maintain the specified minimum design pressure at ALL locations within the Critical Node Searching Range. This final flow is the least of the two Flow Conditions. Therefore, it is the flow which recognizes the more sensitive of the two Critical Nodes to help make recommendations to reflect actual system capabilities and expectations.

Fireflows Explained

While the contents of a fireflow report may appear confusing, one need only to create a Hydrant Curve of a junction node to fully understand what the reports are telling us. Junction 22 was used to make the hydrant curve below. We will use this graph and the values shown in the tables above to illustrate the results from the fireflow output reports.



1. **Static Demand/Static Pressure** - This point represent the static demand and static pressure (200 gpm, 126.72 psi)
2. **Fire Demand/Fire Pressure** - This point represents the static demand plus fire flow demand and the resulting pressure (1,200 gpm, 120 psi).

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3. **Available Flow/Available Pressure** - This point represents the available flow from the hydrant to generate the *Residual Pressure* (6,013 gpm, 20 psi).

4. **Adjusted Fire Flow/Design Pressure at Critical Node 1** - This point represents the maximum allowable flow to exit Junction 22 in order to achieve the *Minimum Design Pressure* at Critical Node 1 (4,494.77 gpm to reach 20 psi at Junction 13).

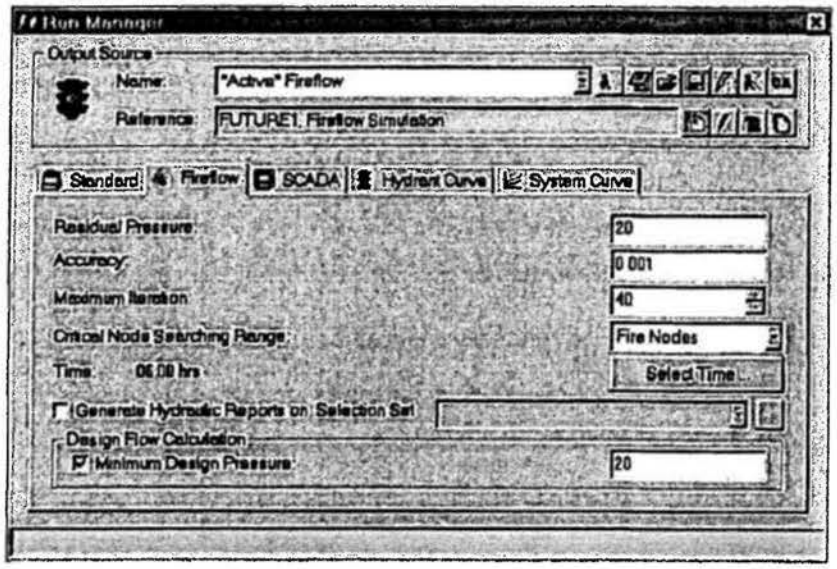
Note: At this juncture in the Fireflow Design Report, the fire node is then allowed to flow at the *Available Flow @ Hydrant* value. When this value is applied, the simulation will now look for the worst case pressure in the Critical Node Searching Range. This worst case node is referred to as Critical Node 2.

5. **Adjusted Available Flow/Design Pressure at Critical Node 2** - This point represents the maximum allowable flow to exit Junction 22 in order to maintain the *Minimum Design Pressure* at Critical Node 2 (5,419.42 gpm to reach 20 psi at Junction 23).

In final, point #4 is ultimately the *Design Flow* as it is the least flow value of all considered residual pressures. This is the value that an engineer would provide to a local fire department by saying this is the maximum (theoretical) flow possible at the subject junction in order to maintain 20 psi at all times in the distribution system.

Hydraulic Reports on Selection Sets

Hydraulic reports for various user specified data elements including pipes, pumps, valves, junctions, tanks and reservoirs may also be generated while conducting a Fire Flow analysis in H2OMAP. This capability is important to review/evaluate system hydraulic performance (e.g., pipe velocities, junction pressures, etc.) under fire flow conditions. In order to generate such reports check the Generate Hydraulic Reports on Selection Set option. Using the Browse button select the elements graphically on your Map that you want to create a hydraulic report for. Click here to learn more about the element selection process.

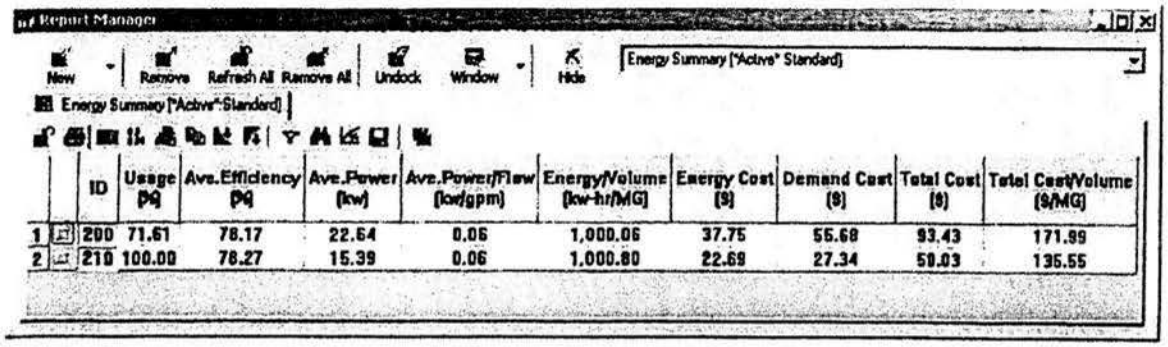


You may select any element type from your map for inclusion in the hydraulic report. These elements should be included in the Selection Set. For each fire flow junction node, H2OMAP will calculate and present hydraulic results for each element included in the Selection Set. The hydraulic results are available from the Output Report Manager.

Energy Summary

Displays summary results of an energy cost analysis for the simulation period. One record for each pump assigned energy data prior to running the energy management simulation will be displayed in the Energy Summary report. Results displayed for each pump include average pump usage (as a percentage of time used over the simulation duration), average efficiency, average power, average power per unit, energy vs. volume ratio, total energy consumption cost, total demand cost, total operating cost, and total cost per unit volume.

The following summary information is displayed on the Energy Summary Report in the Output Report Manager for all pumps assigned energy data:



	ID	Usage [%]	Ave.Efficiency [%]	Ave.Power [kw]	Ave.Power/Flow [kw/gpm]	Energy/Volume [kw-hr/MG]	Energy Cost [$]	Demand Cost [$]	Total Cost [$]	Total Cost/Volume [$/MG]
1	200	71.61	78.17	22.64	0.06	1,000.06	37.75	55.68	93.43	171.99
2	210	100.00	78.27	15.39	0.06	1,000.80	22.69	27.34	50.03	135.55

1. ID - Pump identifier.

2. **Percent Pump Usage** - Percentage of time the pump is used (turned on) during the simulation period, percent (%).

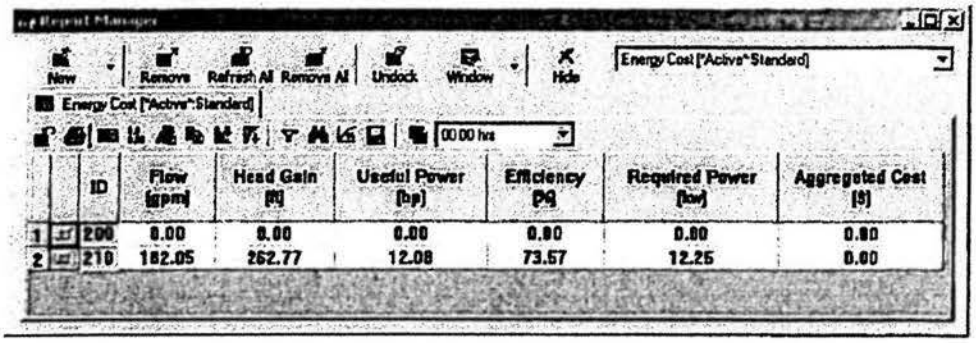
3. **Average Efficiency** - Average active (when pump is on) pump efficiency for the simulation period, percent (%).

4. **Average Power** - Average active (when the pump is on) pump required power for the simulation period, kW.
5. **Average Power/Unit Flow** - Average required power per unit of flow rate pumped for the simulation period, kW/flow unit.
6. **Average Energy/Unit Volume** - Average energy consumed per unit volume of water pumped for the simulation period, kW-hr/MG (or kW-hr/ML).
7. **Energy Cost** - Total cumulative pump energy operating cost reported for the simulation period, $ (or other cost unit).
8. **Demand Cost** - Total demand (charge) cost for the simulation period, $ (or other cost unit).
9. **Total Cost** - Sum of energy and demand cost, $ (or other cost unit).
10. **Total Cost per Unit Volume** - Total pumping cost per unit flow volume pumped for the simulation period, $/MG ($/ML).

Energy Cost

Displays results of an energy cost simulation for any time period. The Energy Cost report displays one record for each pump assigned energy data prior to running the energy management simulation. Results displayed for each pump include pump flow, head, useful power, efficiency, required power, and total operating cost up to each simulation time period.

The following summary information is displayed on the Energy Cost Report in the Output Report Manager for all pumps assigned energy data:

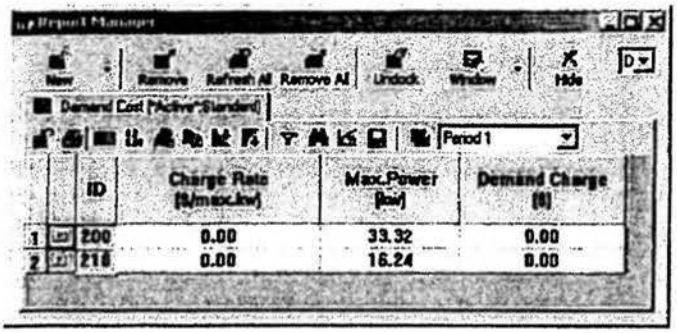


	ID	Flow (gpm)	Head Gain (ft)	Useful Power (hp)	Efficiency (%)	Required Power (kw)	Aggregated Cost ($)
1	200	0.00	0.00	0.00	0.00	0.00	0.00
2	210	182.05	262.77	12.08	73.57	12.25	0.00

1. **ID** - Pump identifier.
2. **Flow** - Pump discharge flow at the current simulation time step, flow units.
3. **Head** - Pump discharge head at the current simulation time step, ft (m).
4. **Useful Power** - Pump calculated useful power at the current simulation time step, hp (kW)
5. **Efficiency** - Pump efficiency at the current simulation time step, percent (%).
6. **Required Power** - Required pump power at the current simulation time step, kW.
7. **Aggregated Cost** - Cumulative pump energy consumption cost reported at the current simulation time step, $ (or other cost unit).

Demand Cost Report

The following variables are displayed on the Demand Cost Report in the Output Report Manager for all pumps assigned energy data and specifically, demand charge patterns:

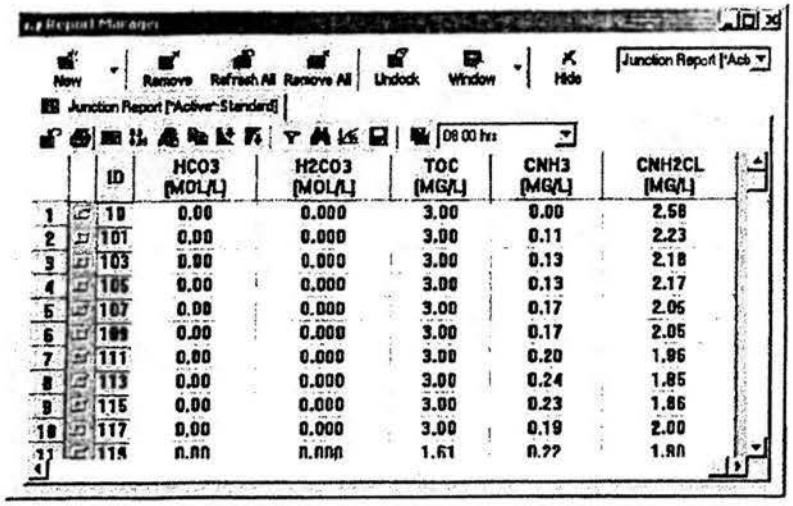


	ID	Charge Rate ($/max.kw)	Max.Power (kw)	Demand Charge ($)
1	200	0.00	33.32	0.00
2	210	0.00	16.24	0.00

1. **Charge Rate** - The demand charge rate for each billing period based on peak power usage, $ or other cost unit per max. kW.
2. **Maximum Power** - The maximum power used by the pump during each billing period, kW.
3. **Demand Rate** - The demand charge applied for the billing period, $ (or other cost unit).

Multi-Species Reports

Multi-Species water quality model report information will be appended, like any other water quality report, to the element hydraulic data tables.



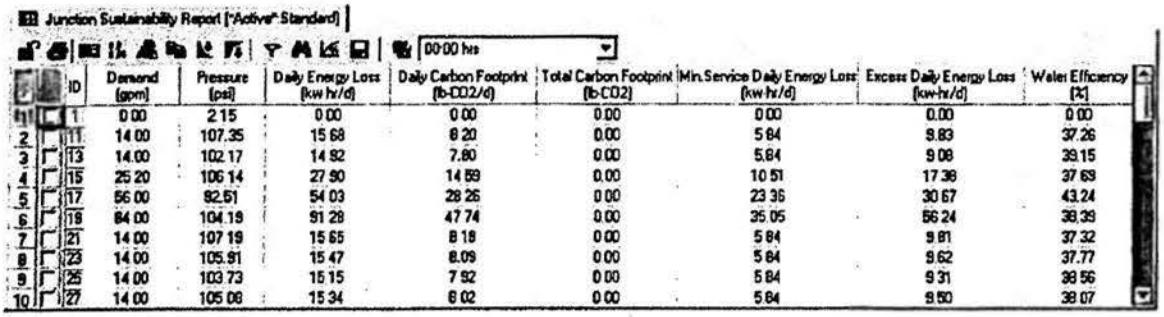
	ID	HCO3 (MOL/L)	H2CO3 (MOL/L)	TOC (MG/L)	CNH3 (MG/L)	CNH2CL (MG/L)
1	10	0.00	0.000	3.00	0.00	2.58
2	101	0.00	0.000	3.00	0.11	2.23
3	103	0.00	0.000	3.00	0.13	2.18
4	105	0.00	0.000	3.00	0.13	2.17
5	107	0.00	0.000	3.00	0.17	2.05
6	109	0.00	0.000	3.00	0.17	2.05
7	111	0.00	0.000	3.00	0.20	1.96
8	113	0.00	0.000	3.00	0.24	1.85
9	115	0.00	0.000	3.00	0.23	1.86
10	117	0.00	0.000	3.00	0.19	2.00
11	119	0.00	0.000	1.61	0.22	1.80

Multi-Species water quality will be reported on the species defined in the Multi-Species Model Dialog Box - Species Tab and the report will vary according to the number and type of species defined. For additional information see the Multi-Species Water Quality Modeling Overview.

Sustainability Reports

Sustainability Reports: A Sustainability analysis is conducted in conjunction with the Standard EPS Analysis. Hence in addition to all the standard report types, Sustainability Analysis provides the following additional report types. See: Sustainability Modeling

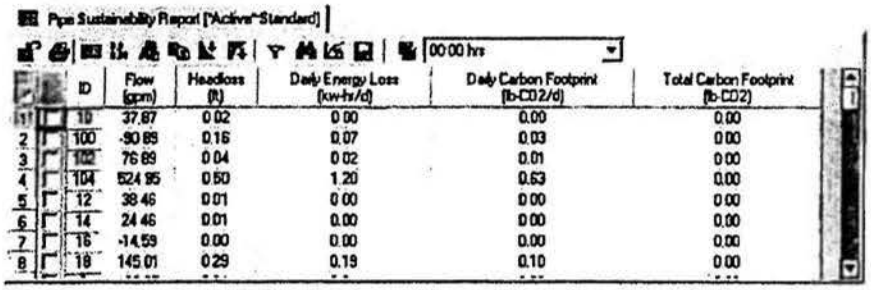
Junction Sustainability Report



	ID	Demand (gpm)	Pressure (psi)	Daily Energy Loss (kw-hr/d)	Daily Carbon Footprint (lb-CO2/d)	Total Carbon Footprint (lb-CO2)	Min. Service Daily Energy Loss (kw-hr/d)	Excess Daily Energy Loss (kw-hr/d)	Water Efficiency (%)
1	1	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00
2	11	14.00	107.35	15.68	8.20	0.00	5.84	9.83	37.26
3	13	14.00	102.17	14.92	7.80	0.00	5.84	9.08	39.15
4	15	25.20	106.14	27.90	14.59	0.00	10.51	17.39	37.69
5	17	56.00	92.51	54.03	28.26	0.00	23.36	30.67	43.24
6	19	84.00	104.19	91.28	47.74	0.00	35.05	56.24	38.39
7	21	14.00	107.19	15.65	8.18	0.00	5.84	9.81	37.32
8	23	14.00	105.91	15.47	8.09	0.00	5.84	9.62	37.77
9	25	14.00	103.73	15.15	7.92	0.00	5.84	9.31	38.56
10	27	14.00	105.06	15.34	8.02	0.00	5.84	9.50	38.07

- **ID** - Junction ID
- **Demand** - Junction Demand.
- **Pressure** - Junction Pressure.
- **Daily Energy Loss** - Daily energy loss in kiloWatt-hours per day.
- **Daily Carbon Footprint** - Daily Carbon Footprint in pounds or kilograms of CO_2 per day
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.
- **Minimum Service Daily Energy Loss** - Daily energy loss at minimum daily service pressure requirements in kiloWatt-hours per day.
- **Excess Daily Energy Loss** - Excess daily energy loss above minimum daily service pressure requirements in kiloWatt-hours per day.
- **Water Efficiency** - Percent Water Efficiency

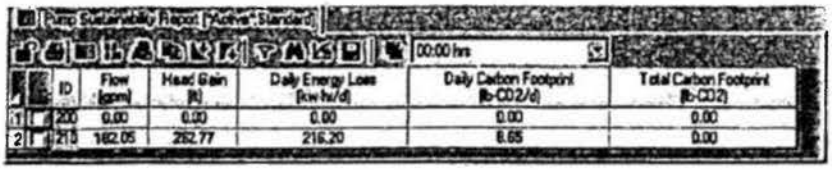
Pipe Sustainability Report



	ID	Flow (gpm)	Headloss (ft)	Daily Energy Loss (kw-hr/d)	Daily Carbon Footprint (lb-CO2/d)	Total Carbon Footprint (lb-CO2)
1	10	37.87	0.02	0.00	0.00	0.00
2	100	-90.89	0.16	0.07	0.03	0.00
3	102	76.89	0.04	0.02	0.01	0.00
4	104	524.95	0.50	1.20	0.53	0.00
5	12	38.46	0.01	0.00	0.00	0.00
6	14	24.46	0.01	0.00	0.00	0.00
7	16	-14.59	0.00	0.00	0.00	0.00
8	18	145.01	0.29	0.19	0.10	0.00

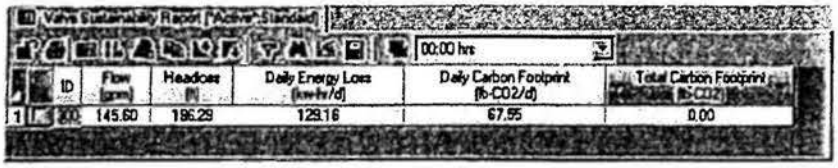
- **ID** - Pipe ID
- **Flow** - Pipe Flow.
- **Headloss** - Pipe Headloss.
- **Daily Energy Loss** - Daily rate of energy Loss in kiloWatt-hours per day.
- **Daily Carbon Footprint** - Daily rate of Carbon Footprint in pounds or kilograms of CO_2 per day
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.

Pump Sustainability Report



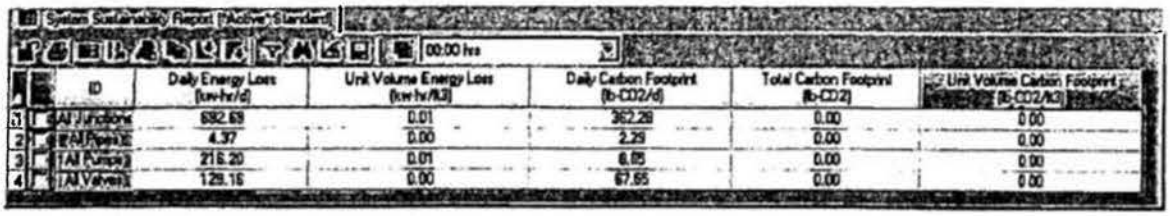
- **ID** - Pump ID
- **Flow** - Pump Flow.
- **Head Gain** - Pump Head Gain.
- **Daily Energy Loss** - Daily energy Loss in kiloWatt-hours per day.
- **Daily Carbon Footprint** - Daily Carbon Footprint in pounds or kilograms of CO_2 per day
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.

Valve Sustainability Report



- **ID** - Valve ID
- **Flow** - Valve Flow.
- **Headloss** - Valve Headloss.
- **Daily Energy Loss** - Daily energy Loss in kiloWatt-hours per day.
- **Daily Carbon Footprint** - Daily Carbon Footprint in pounds or kilograms of CO_2 per day
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.

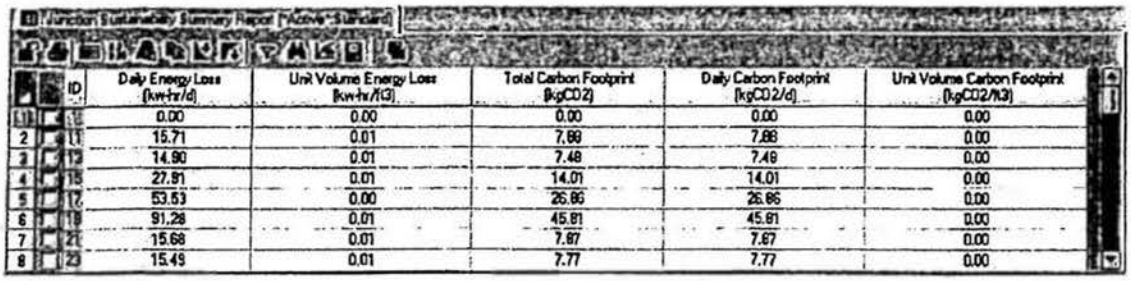
System Sustainability Report



- **ID** - Element Type
- **Daily Energy Loss** - Daily rate of energy Loss in kiloWatt-hours per day.
- **Unit Volume Energy Loss** - Unit Volume Energy Loss in kiloWatt-hours per unit flow volume.
- **Daily Carbon Footprint** - Daily rate of Carbon Footprint in pounds or kilograms of CO_2 per day
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.
- **Unit Volume Carbon Footprint** - Unit Volume Carbon Footprint in pounds or kilograms of CO_2 per unit.

EXHIBIT "A"

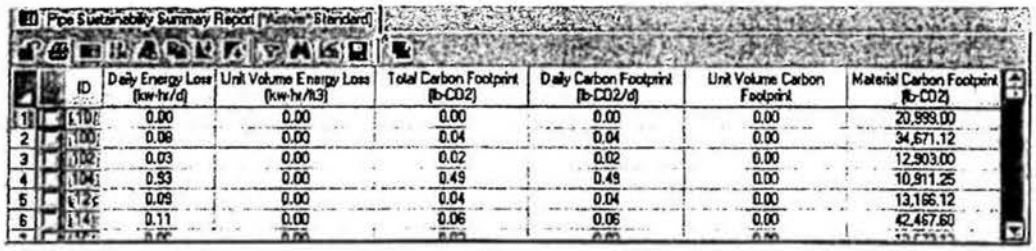
Junction Sustainability Summary Report



ID	Daily Energy Loss (kw-hr/d)	Unit Volume Energy Loss (kw-hr/ft3)	Total Carbon Footprint (lbCO2)	Daily Carbon Footprint (lbCO2/d)	Unit Volume Carbon Footprint (lbCO2/ft3)
10	0.00	0.00	0.00	0.00	0.00
11	15.71	0.01	7.86	7.86	0.00
12	14.90	0.01	7.48	7.48	0.00
15	27.91	0.01	14.01	14.01	0.00
17	53.53	0.00	26.86	26.86	0.00
19	91.28	0.01	45.81	45.81	0.00
21	15.68	0.01	7.87	7.87	0.00
23	15.49	0.01	7.77	7.77	0.00

- **ID** - Junction ID
- **Daily Energy Loss** - Daily rate of energy Loss in kiloWatt-hours per day.
- **Unit Volume Energy Loss** - Unit Volume Energy Loss in kiloWatt-hours per unit flow volume.
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.
- **Daily Carbon Footprint** - Daily rate of Carbon Footprint in pounds or kilograms of CO_2 per day
- **Unit Volume Carbon Footprint** - Unit Volume Carbon Footprint in pounds or kilograms of CO_2 per unit flow volume.

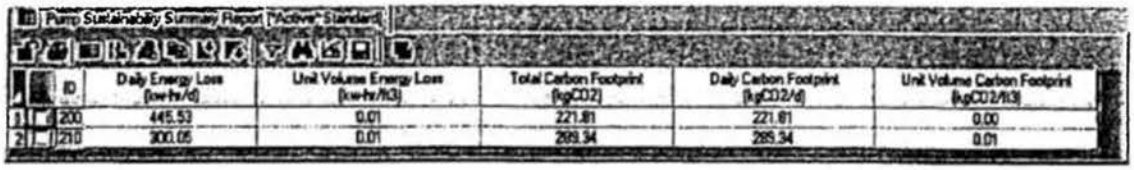
Pipe Sustainability Summary Report



ID	Daily Energy Loss (kw-hr/d)	Unit Volume Energy Loss (kw-hr/ft3)	Total Carbon Footprint (lb-CO2)	Daily Carbon Footprint (lb-CO2/d)	Unit Volume Carbon Footprint	Material Carbon Footprint (lb-CO2)
100	0.00	0.00	0.00	0.00	0.00	20,999.00
102	0.08	0.00	0.04	0.04	0.00	34,671.12
104	0.03	0.00	0.02	0.02	0.00	12,903.00
112	0.93	0.00	0.49	0.49	0.00	10,911.25
114	0.09	0.00	0.04	0.04	0.00	13,166.12
	0.11	0.00	0.06	0.06	0.00	42,467.60

- **ID** - Pipe ID
- **Daily energy Loss** - Daily rate of energy Loss in kiloWatt-hours per day.
- **Unit Volume Energy Loss** - Unit Volume Energy Loss in kiloWatt-hours per unit flow volume.
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.
- **Daily Carbon Footprint** - Daily rate of Carbon Footprint in pounds or kilograms of CO_2 per day
- **Unit Volume Carbon Footprint** - Unit Volume Carbon Footprint in pounds or kilograms of CO_2 per unit flow volume.
- **Material Carbon Footprint** - Material Carbon Footprint in pounds or kilograms of CO_2.

Pump Sustainability Summary Report

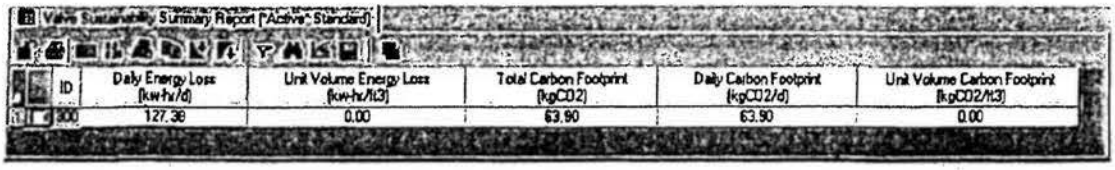


ID	Daily Energy Loss (kw-hr/d)	Unit Volume Energy Loss (kw-hr/ft3)	Total Carbon Footprint (lbCO2)	Daily Carbon Footprint (lbCO2/d)	Unit Volume Carbon Footprint (lbCO2/ft3)
200	445.53	0.01	221.81	221.81	0.00
210	300.05	0.01	269.34	269.34	0.01

- **ID** - Pump ID
- **Daily Energy Loss** - Daily rate of energy Loss in kiloWatt-hours per day.
- **Unit Volume Energy Loss** - Unit Volume Energy Loss in kiloWatt-hours per unit flow volume.
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.
- **Daily Carbon Footprint** - Daily rate of Carbon Footprint in pounds or kilograms of CO_2 per day
- **Unit Volume Carbon Footprint** - Unit Volume Carbon Footprint in pounds or kilograms of CO_2 per unit flow volume.

Valve Sustainability Summary Report

EXHIBIT "A"



Valve Sustainability Summary Report (Active - Standard)

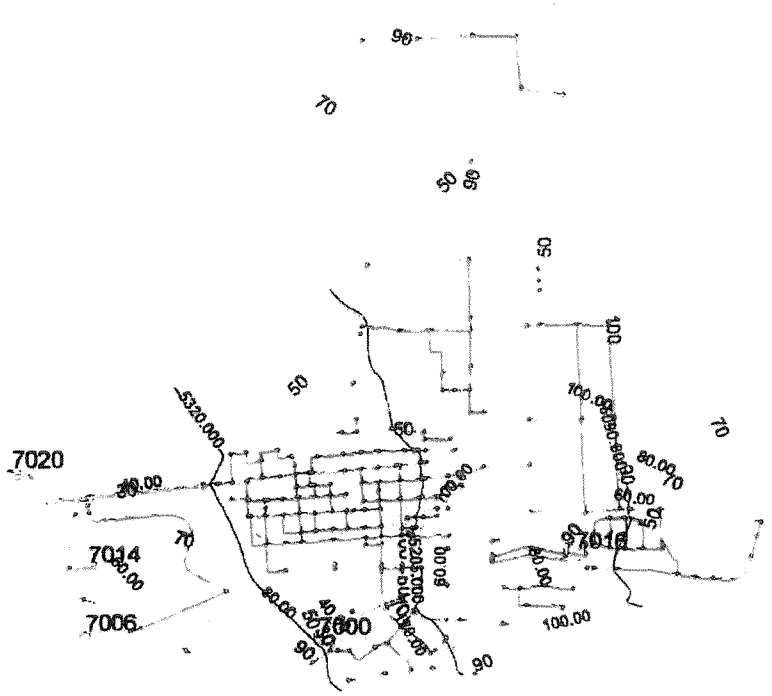
ID	Daily Energy Loss (kw-hr/d)	Unit Volume Energy Loss (kw-hr/ft3)	Total Carbon Footprint (kgCO2)	Daily Carbon Footprint (kgCO2/d)	Unit Volume Carbon Footprint (kgCO2/ft3)
300	127.38	0.00	63.90	63.90	0.00

- **ID** - Valve ID
- **Daily Energy Loss** - Daily rate of energy Loss in kiloWatt-hours per day.
- **Unit Volume Energy Loss** - Unit Volume Energy Loss in kiloWatt-hours per unit flow volume.
- **Total Carbon Footprint** - Total Carbon Footprint in pounds or kilograms of CO_2.
- **Daily Carbon Footprint** - Daily rate of Carbon Footprint in pounds or kilograms of CO_2 per day
- **Unit Volume Carbon Footprint** - Unit Volume Carbon Footprint in pounds or kilograms of CO_2 per unit flow volume.

EXHIBIT "A"

162

RP1 SUPPLEMENTAL 6FEB12 - SYSTEM WITH GCSSF AS EMERGENCY - PERFORMANCE WITHOUT (1) EAST WELL



JUNCTION (VALUE)
- Less than 40
- Greater than 40

TANK (MOTYPE)
- Active Tank
- Domain Tank
- Active Reservoir
- Domain Reservoir

PIPE (VALUE)
- Less than 4
- 4~5
- 5~7
- 7~9
- 9~11
- 11~13
- 13
- Greater than 13

PUMP (MOTYPE)
- Active
- Domain

VALVE (MOTYPE)
- Active
- Domain

18 (Demand7) (VALUE)
- 20
- 24
- 28
- 32
- 36
- 40

12 (Elevation) (VALUE)
- 5090
- 5205
- 5320

14 (Min. Pressure at 28:00 hrs) (VALL
- 30
- 50
- 70
- 90
- 100

Prepared By: RIEDESEL ENGINERING, INC.

Date: Wednesday, February 08, 2012

4 APPENDIX 2

4.1 HYDRAULIC MODEL SIMUALTION RESULTS

4.1.1 Matrix of Options

4.1.2 Recommended Project 1 Retaining Garden Creek Slow Sand Filter

4.1.3 Recommended Project 1 without Garden Creek Slow Sand Filter – Modifications for East Well Source Failure

4.1.4 Recommended Project 1 without Garden Creek Slow Sand Filter – Modifications for West Well Source Failure

EXHIBIT "A"

CHALLIS WATER SYSTEM FACILITY PLAN – FEBRUARY 2012
Supplement Detailing System Recommended Project Response to Meet IDAPA 58.01.08.501.17 – Groundwater Redundancy

REVIEW #1

1. The City will install a new well in both the Garden Creek Aquifer System (GCAS) and the Salmon Aquifer System (SAS)
2. The **retain** the Garden Creek Slow Sand Filter operational as an emergency source

SYSTEM	PEAK DAY	PEAK HR.	LOSS OF A SOURCE IN GCAS	SYSTEM CHANGES	LOSS OF A SOURCE IN SAS	SYSTEM CHANGES
RP1	2.57MG	2,700 GPM	Total water production – 2,650 GPM: 950 GPM from GCSSF, 500 GPM from remaining West Well, and 1,200 GPM from both SAS wells.	The system meets IDAPA 58.01.08.501.17. No changes.	Total water production – 2,650 GPM: 950 GPM from GCSSF, 1,100 GPM both West Wells, and 600 GPM from remaining SAS wells.	The system meets IDAPA 58.01.08.501.17. No changes.

REVIEW #2

1. The City will install a new well in both the Garden Creek Aquifer System (GCAS) and the Salmon Aquifer System (SAS)
2. The City will **abandon** the Garden Creek Slow Sand Filter

SYSTEM	PEAK DAY	PEAK HR.	LOSS OF A SOURCE IN GCAS	SYSTEM CHANGES	LOSS OF A SOURCE IN SAS	SYSTEM CHANGES
RP1	2.57MG	2,700 GPM	Total water production – 2,650 GPM: 500 GPM from remaining West Well, and 1,200 GPM from both SAS wells.	Groundwater sources alone cannot meet peak hour flow. System must rely on groundwater sources and storage. Upper and Mid Cyprus pressure zones rely on the output of the West Wells. With one source down, the system requires either a larger reservoir or a booster at East Reservoir to supply water from SAS to West Reservoir to make up the deficit. Minimum upgraded reservoir size is about 1.5 MG with total system storage at 1.7MG. Estimated construction cost $1.3M Minimum booster to supply West Reservoir from East Reservoir is 90 HP. The pumping plant would require (2) pumps, standby electrical supply, building, controls, etc. Estimated construction cost $0.5M. Does not include O&M costs.	Total water production – 2,650 GPM: 1,100 GPM both West Wells, and 600 GPM from remaining SAS wells.	Groundwater sources alone cannot meet peak hour flow. System must rely on groundwater sources and storage. Existing storage (0.4MG) is not sufficient. With one source down, the system requires either a larger reservoir or an additional SAS source. West reservoir needs to be increased to 0.6MG. Total system storage 1.0MG. Estimated construction cost $0.4M. Construction cost for 3rd SAS source is about $0.5M. Does not include O&M costs.

EXHIBIT "A"
164

CHALLIS WATER SYSTEM FACILITY PLAN – FEBRUARY 2012
Supplement Detailing System Recommended Project Response to Meet IDAPA 58.01.08.501.17 – Groundwater Redundancy

REVIEW #3 – OPTIONS

1. Non-Concurrent Failure – The ability to handle a water source loss in either the Garden Creek Aquifer System (GCAS) or the Salmon Aquifer System (SAS). Since one cannot predict which source may fail, the overall water system needs to perform under either condition.

OPTIONS	DESCRIPTION	COMPONENTS	OPERATION AND MAINTENANCE	ESTIMATED COSTS
1	Retain GCSSF	Existing System. New diversion to allow restoration of Garden Creek and participation of conservation service in drilling a new Garden Creek Well.	1. Routine and periodic testing 2. Routine and periodic filter cleaning 3. Routine and periodic maintenance of disinfection system	No additional cost.
2	Non-Concurrent Failure without GCSSF	Expansion of West Reservoir to 1.5MG	1. Adjust operation to maintain tank turn over (freshness) 2. Routine and periodic maintenance of level controls and other equipment 3. Site security	Estimated $1.3M construction cost
3	Non-Concurrent Failure without GCSSF	Booster duplex 90HP booster station at East Reservoir and increase West Reservoir storage to 0.6MG. Protects against a failure of either a West Well or an East Well.	1. Demand and electrical costs for pumps and HVAC equipment 2. Pump, valve, and control maintenance 3. Routine and periodic maintenance of level controls and other equipment 4. Site security	Estimated $0.4M tank construction + $0.5M booster station construction. Total ~$1.0M.
4	Non-Concurrent Failure without GCSSF	Booster duplex 90HP booster station at East Reservoir and 3rd well in SAS. Protects against a failure of either a West Well or a East Well	1. Demand and electrical costs for pumps and HVAC equipment 2. Pump, valve, and control maintenance 3. Routine and periodic maintenance of level controls and other equipment 5. Site security	Estimated $0.5M booster station construction + $0.5M 3rd East Well. Total ~$1.0M.

EXHIBIT "A"
165

Pipe 723 [RUN10]

EXISTING FILL VALVE AT
EAST RESERVOIR.
OPERATION WITH LOSS OF 1
EAST WELL.

EXHIBIT "A"

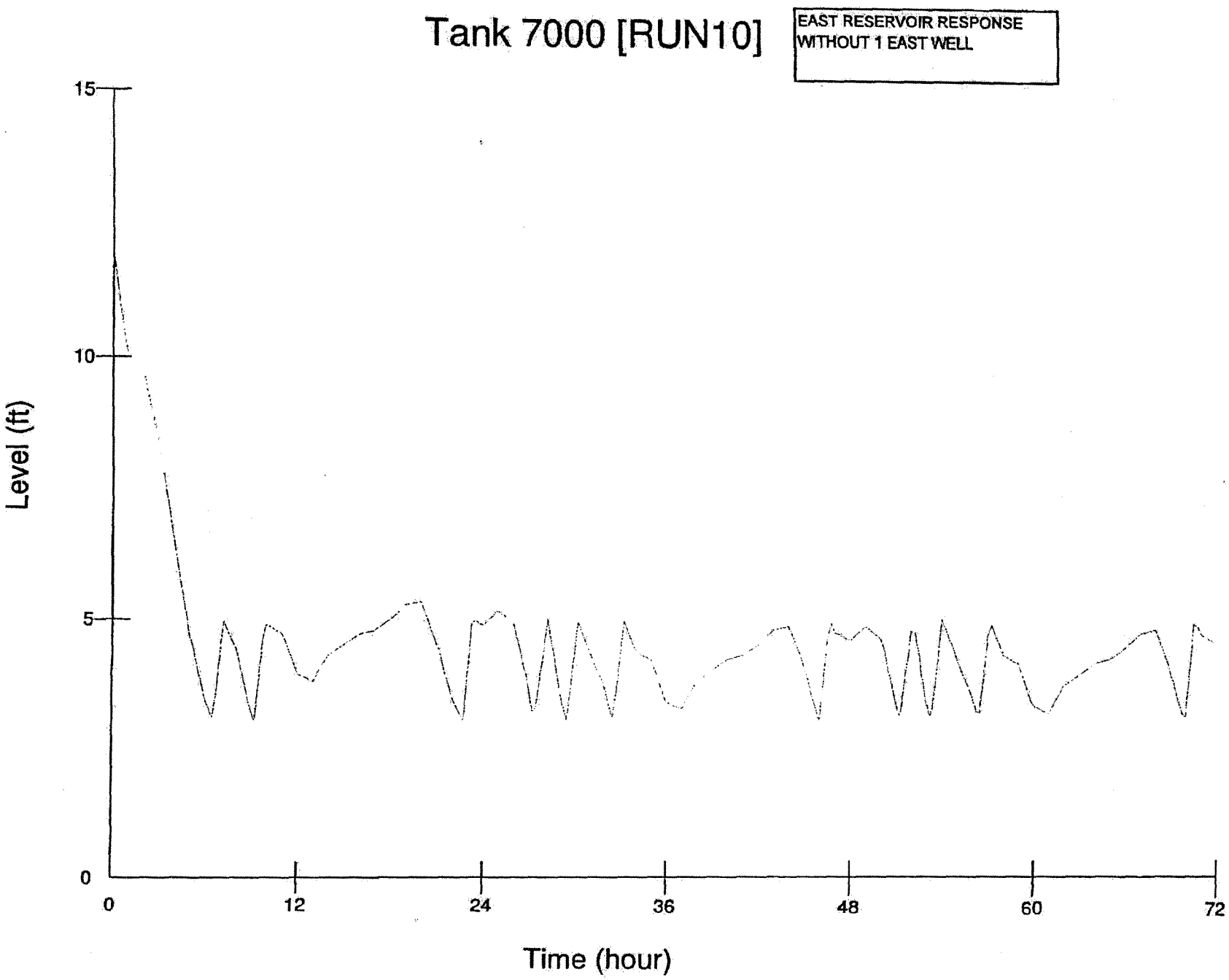

Tank 7000 [RUN10]
EAST RESERVOIR RESPONSE
WITHOUT 1 EAST WELL
15
10
5
0
Level (ft)
0
12
24
36
48
60
72
Time (hour)

EXHIBIT "A"

Pump 5003 [RUN10]

EAST WELL COMPLEX WITH 1 SOURCE NOT OPERATION. NOTE - TOTAL PERFORMANCE WITH BOTH SOURCES IS 1,200 GPM

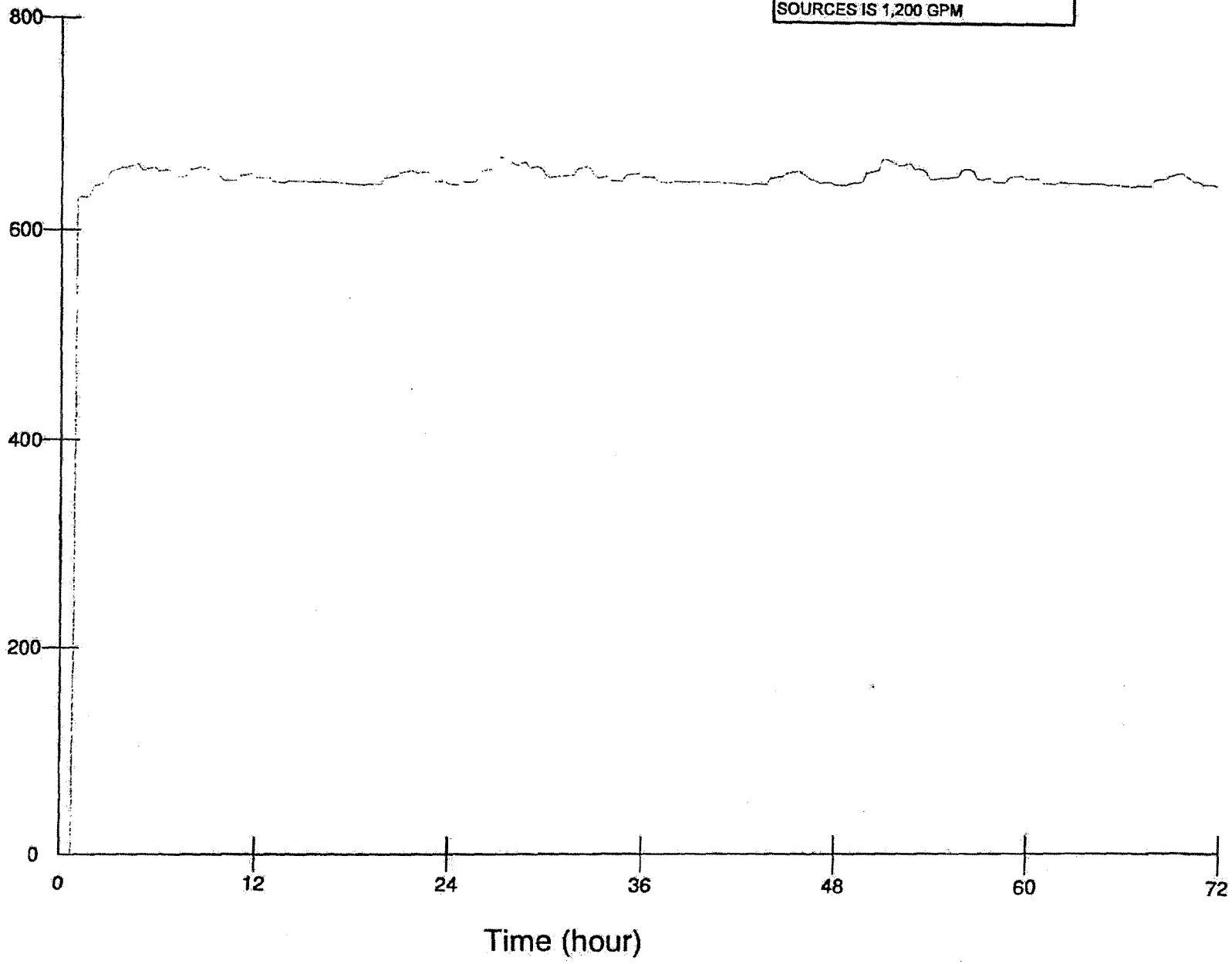


EXHIBIT "A"

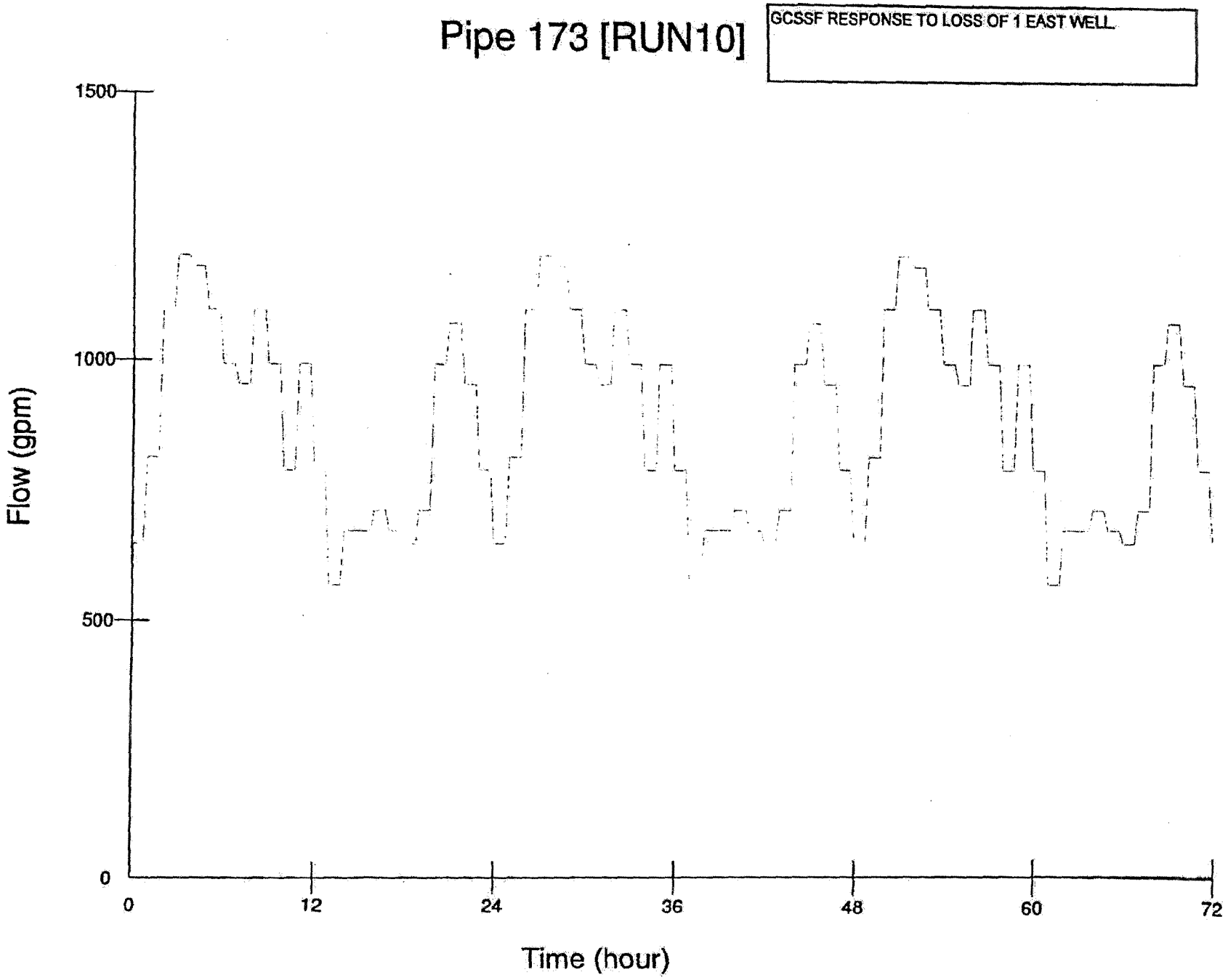
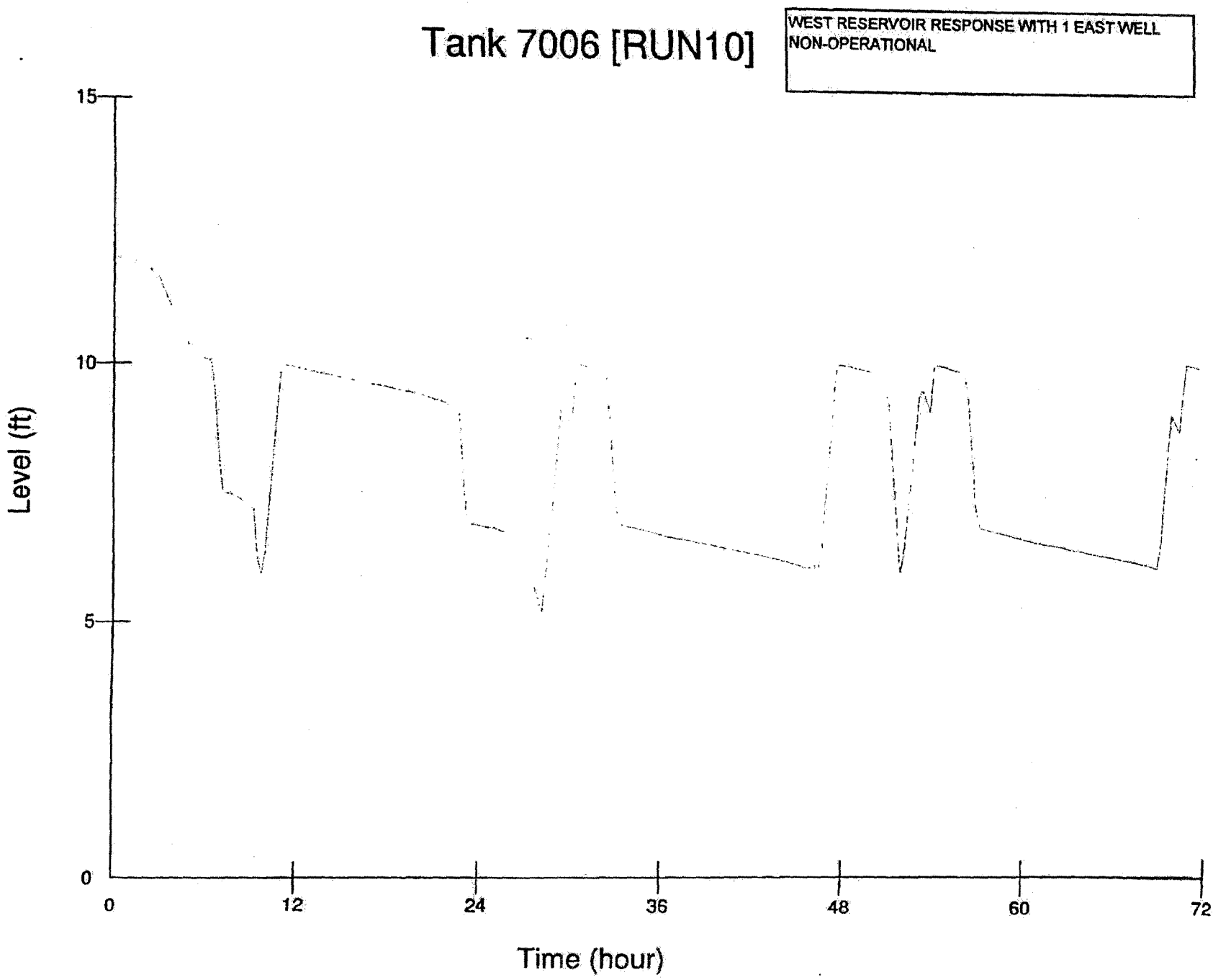

Pipe 173 [RUN10]
GCSSF RESPONSE TO LOSS OF 1 EAST WELL
1500
1000
500
0
Flow (gpm)
0
12
24
36
48
60
72
Time (hour)

EXHIBIT "A"

170



Pump 5001 [RUN10]

WEST WELL COMPLEX RESPONSE WITH 1 EAST WELL NON-OPERATIONAL. NOTE - CAPACITY OF COMPLEX IS 1,100 GPM

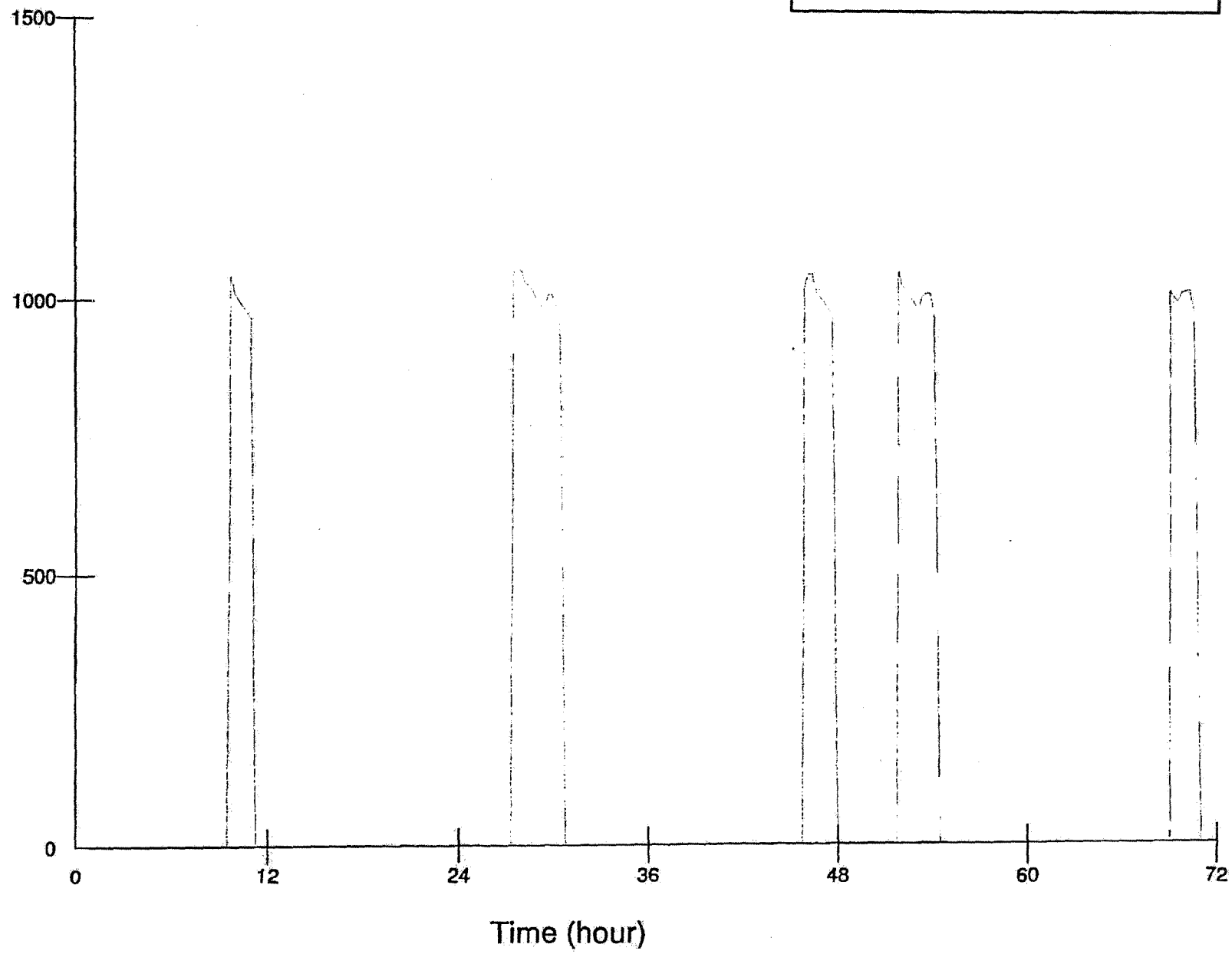
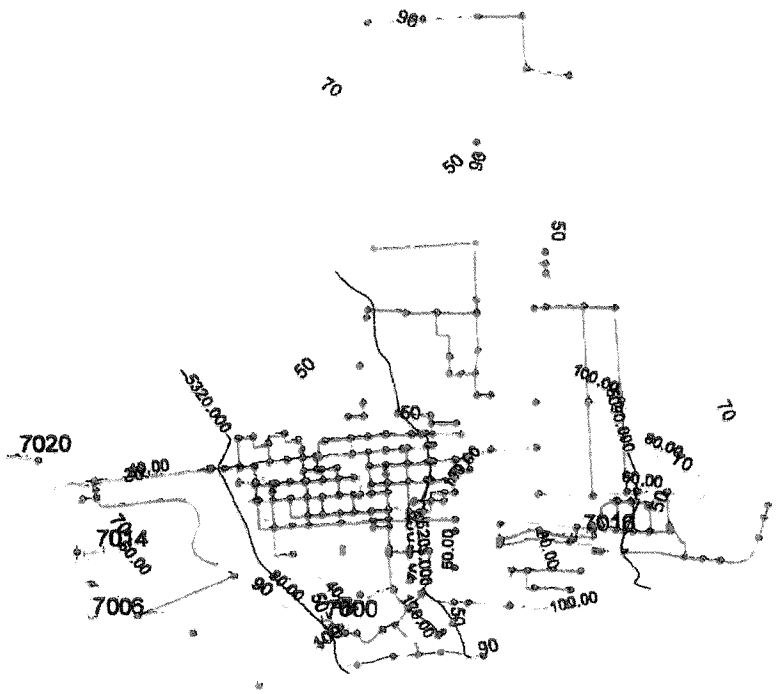


EXHIBIT "A"

EXHIBIT "A"

172

RP1 SUPPLEMENTAL 6FEB12 - SYSTEM WITH GCSSF AS EMERGENCY - PERFORMANCE WITHOUT (1) WEST WELL



JUNCTION (VALUE)
- Less than 40
- Greater than 40

TANK (MOTYPE)
- Active Tank
- Domain Tank
- Active Reservoir
- Domain Reservoir

PIPE (VALUE)
- Less than 4
- 4-5
- 5-7
- 7-9
- 9-11
- 11-13
- 13
- Greater than 13

PUMP (MOTYPE)
- Active
- Domain

VALVE (MOTYPE)
- Active
- Domain

18 (Demand7) (VALUE)
- 20
- 24
- 28
- 32
- 36
- 40

12 (Elevation) (VALUE)
- 5090
- 5205
- 5320

14 (Min. Pressure at 72:00 hrs) (VALL
- 30
- 50
- 70
- 90
- 100

Prepared By: RIEDESEL ENGINERING, INC.

Date: Wednesday, February 08, 2012

Valve 9009 [RUN10]

OPERATION OF EXISTING PRV THAT SUPPLIES OLD TOWN FROM WEST WELL COMPLEX WITHOUT 1 WEST WELL OPERATIONAL. VALVE IS NOT OPERATING, AND FLOW IS PROVIDED BY GCSSF.

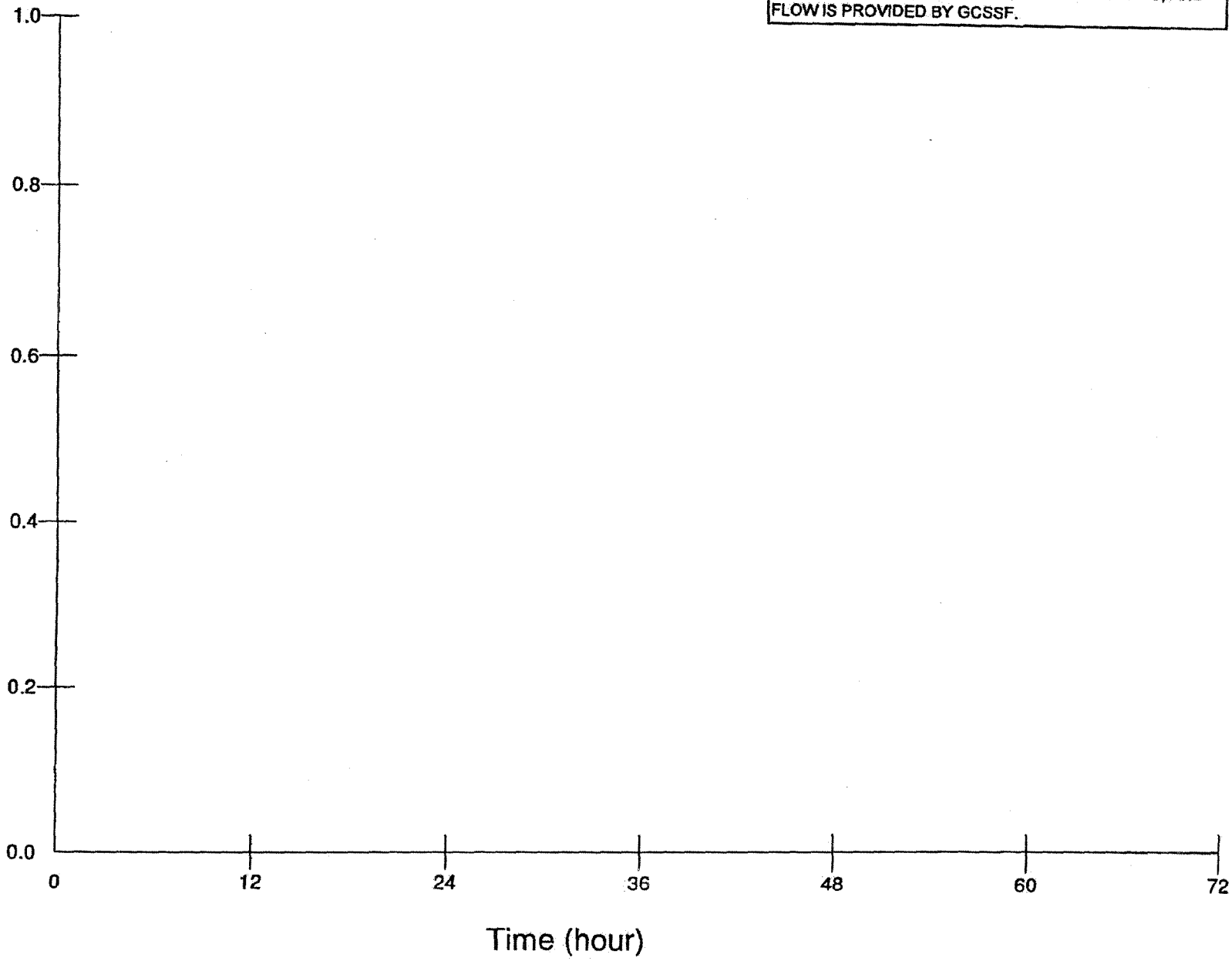


EXHIBIT "A"

Tank 7000 [RUN10]

OPERATION OF EAST RESERVOIR WITHOUT 1 WEST WELL OPERATIONAL. NOTE MAXIMUM WATER LEVEL IS 12 FEET.

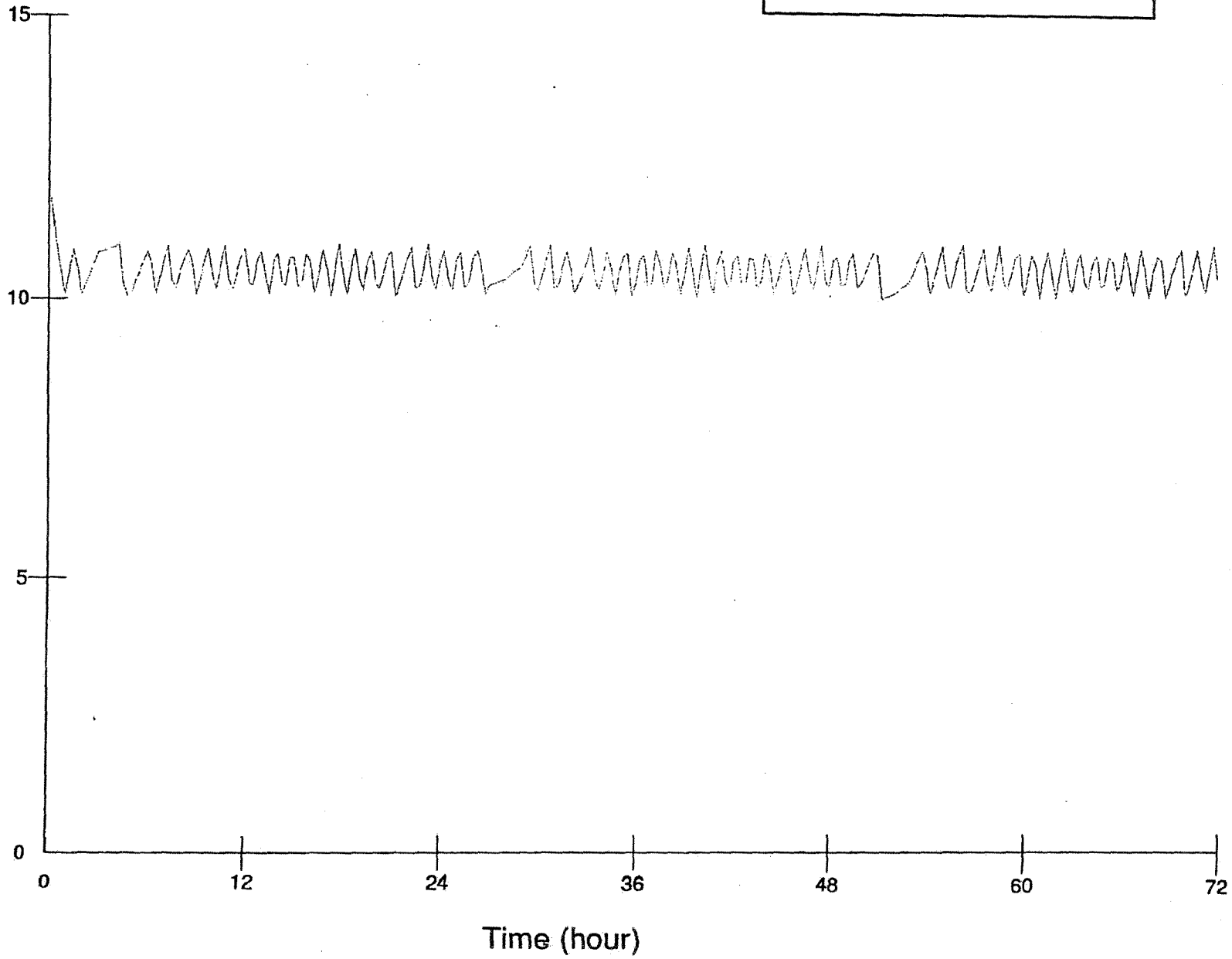


EXHIBIT "A"

Pump 5003 [RUN10]

OPERATION OF EAST WELLS WITHOUT 1 WEST WELL.
NOTE - EAST WELL COMPLEX PRODUCES 1,200 GPM.

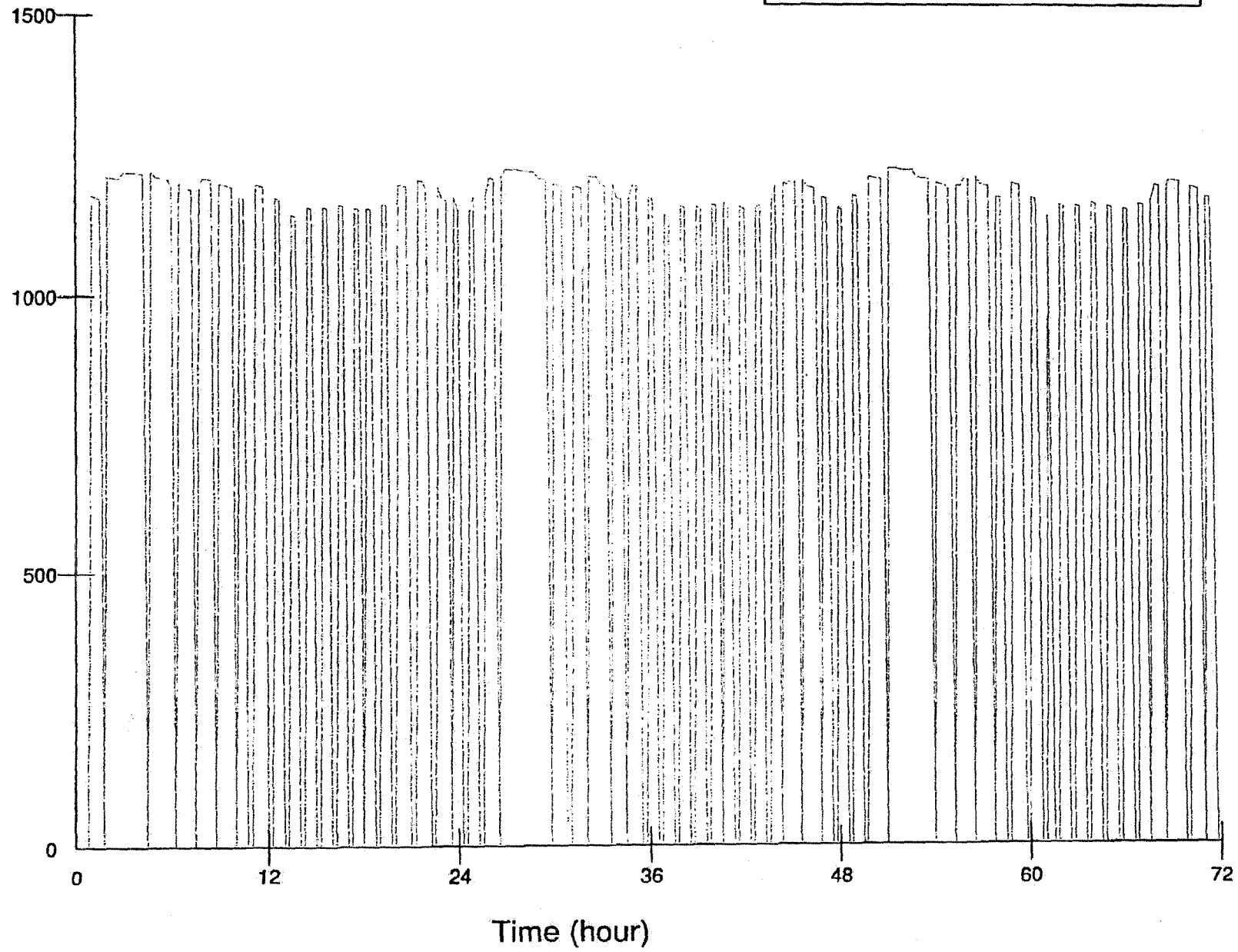
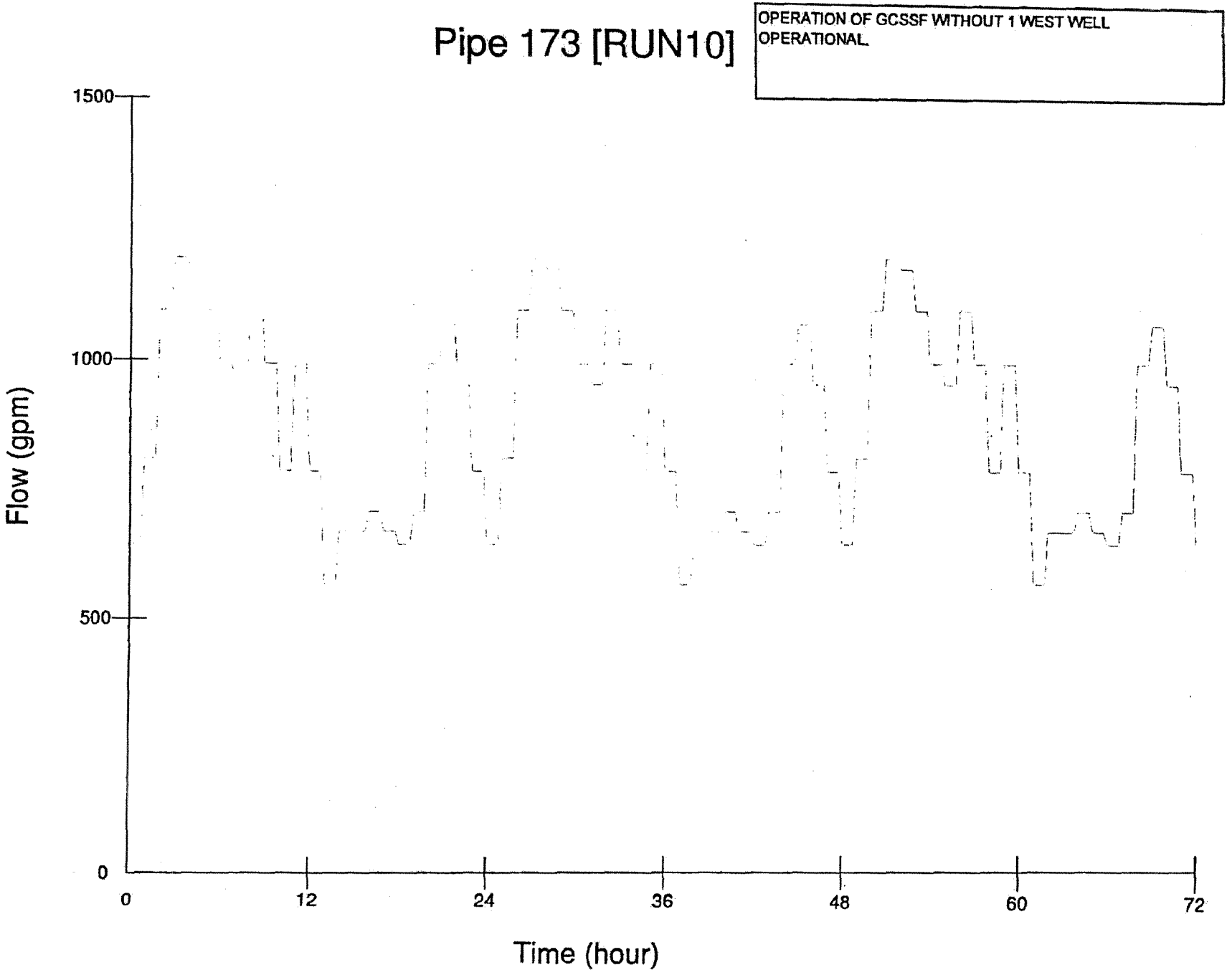


EXHIBIT "A"

EXHIBIT "A"


Pipe 173 [RUN10]
OPERATION OF GCSSF WITHOUT 1 WEST WELL OPERATIONAL
1500
1000
500
0
Flow (gpm)
0
12
24
36
48
60
72
Time (hour)

Tank 7006 [RUN10]

OPERATION OF WEST RESERVOIR WITHOUT 1 WEST WELL OPERATIONAL. NOTE - MAXIMUM WATER LEVEL IS 12 FEET.

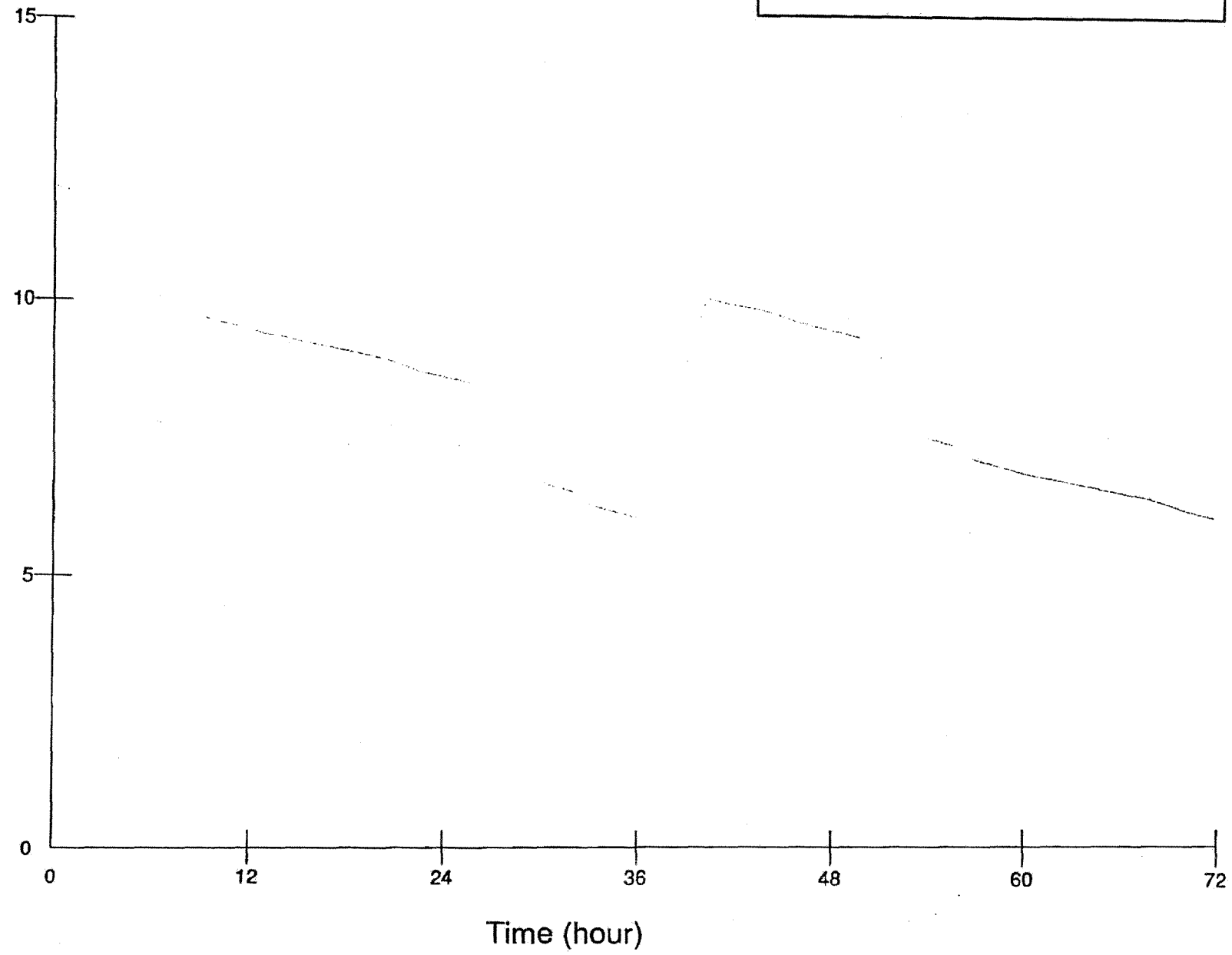


EXHIBIT "A"

Pump 5001 [RUN10]

OPERATION OF WEST WELL COMPLEX WITHOUT 1 WEST WELL OPERATIONAL. NOTE - TOTAL COMPLEX PRODUCTION IS 1,100 GPM

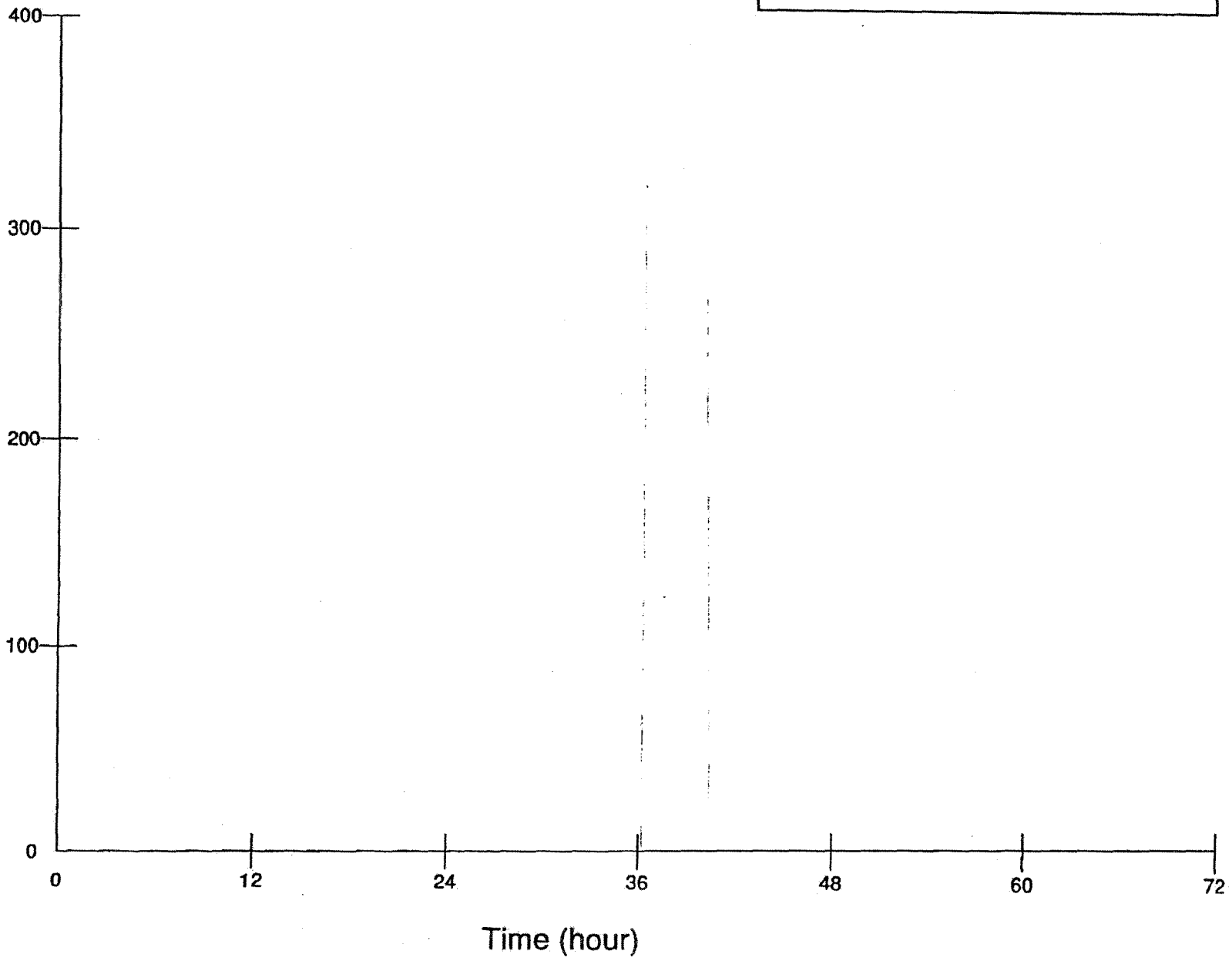
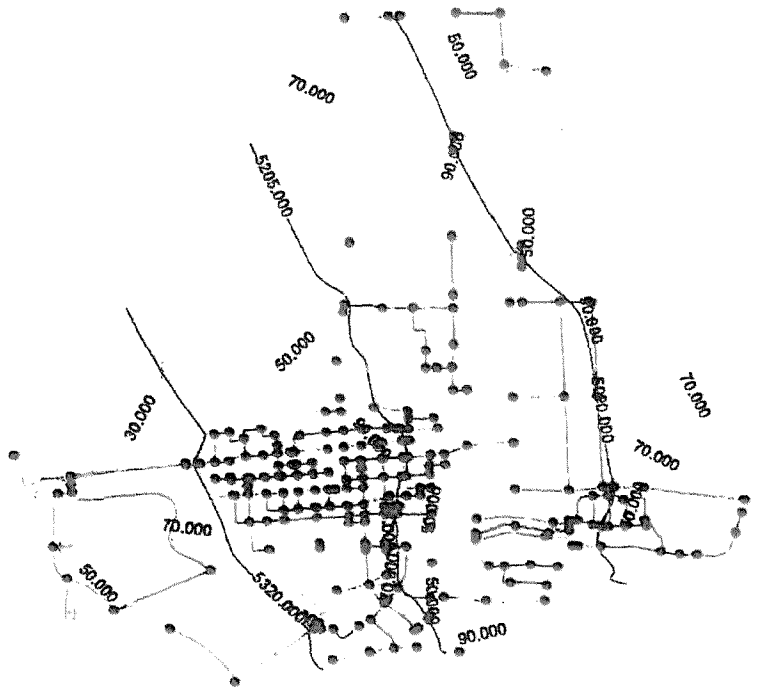


EXHIBIT "A"

EXHIBIT "A"

179

RP1 SUPPLEMENTAL 6FEB12 - 0.6MG WR - RESPONSE @4800 HRS WITHOUT 1 EAST WELL



JUNCTION (VALUE)
- Less than 40
- Greater than 40

TANK (MOTYPE)
- Active Tank
- Domain Tank
- Active Reservoir
- Domain Reservoir

PIPE (VALUE)
- Less than 4
- 4~5
- 5~7
- 7~9
- 9~11
- 11~13
- 13
- Greater than 13

PUMP (MOTYPE)
- Active
- Domain

VALVE (MOTYPE)
- Active
- Domain

12 (Elevation) (VALUE)
- 5090
- 5205
- 5320

16 (Demand7) (VALUE)
- 20
- 24
- 28
- 32
- 36
- 40

14 (Min. Pressure at 48:00 hrs) (VALL
- 30
- 50
- 70
- 90
- 100

Prepared By: RIEDESEL ENGINEERING, INC.

Date: Monday, February 06, 2012

Tank 7006 [RUN10]

RESPONSE OF WEST RESERVOIR, UPGRADED TO 06.MG, WITHOUT GCSSF AND WITHOUT 1 EAST WELL OPERATIONAL

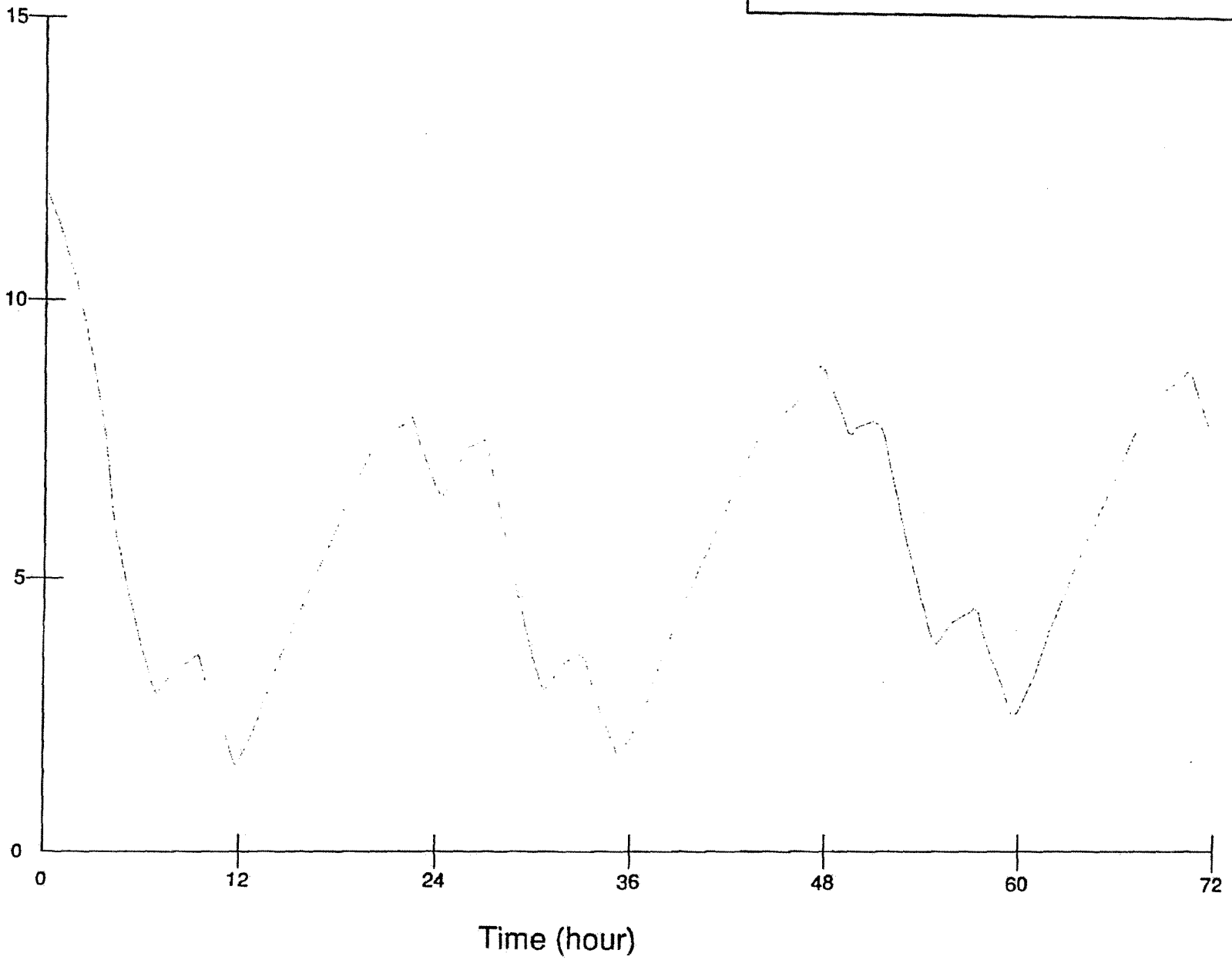


EXHIBIT "A"

EXHIBIT "A"

181

Pipe 723 [RUN10]

EXISTING FILL VALVE AT EAST RESERVOIR. OPERATION WITH WEST RESERVOIR @0.6MG, WITHOUT GCSSF, WITHOUT 1 EAST WELL.

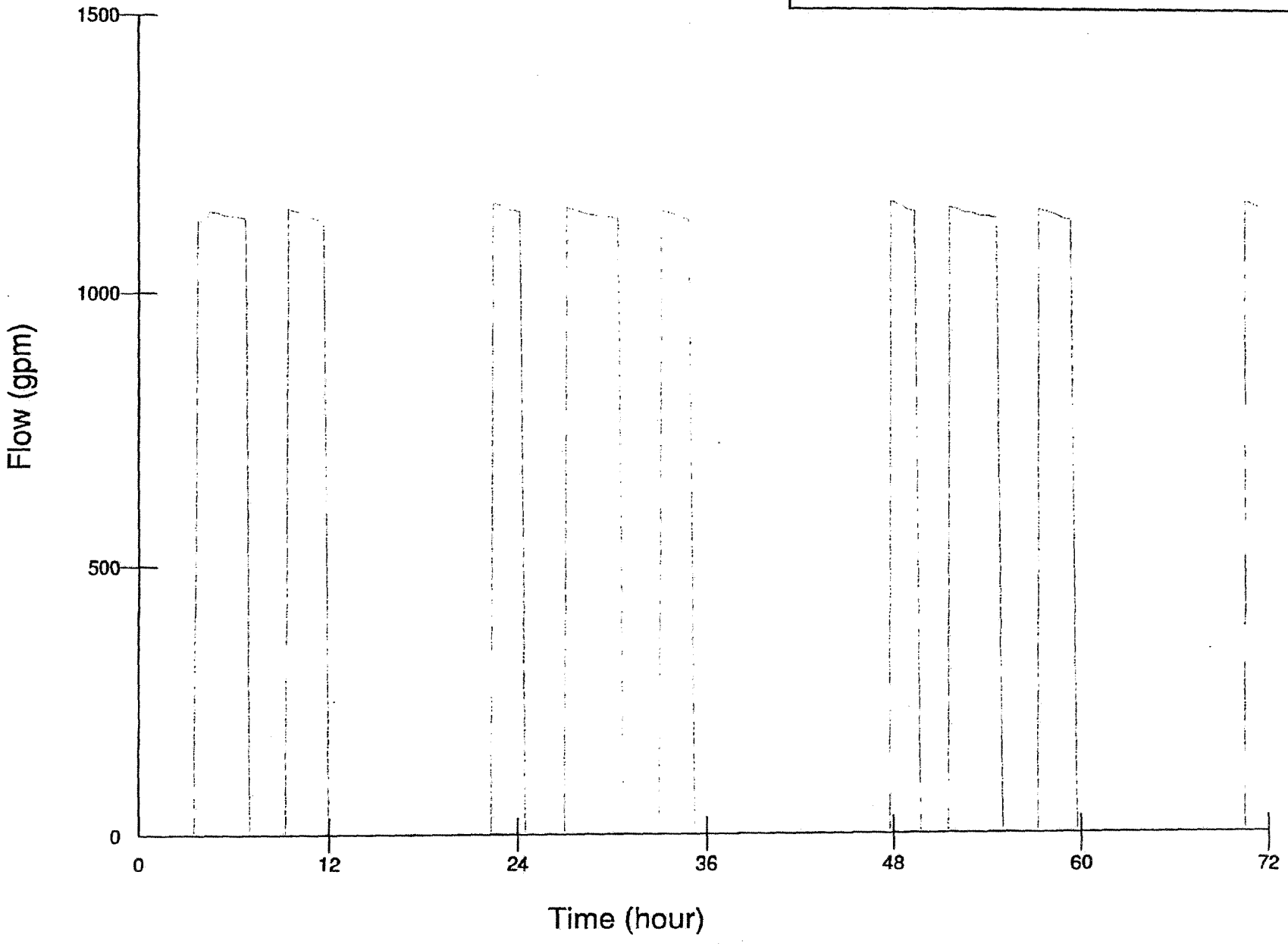
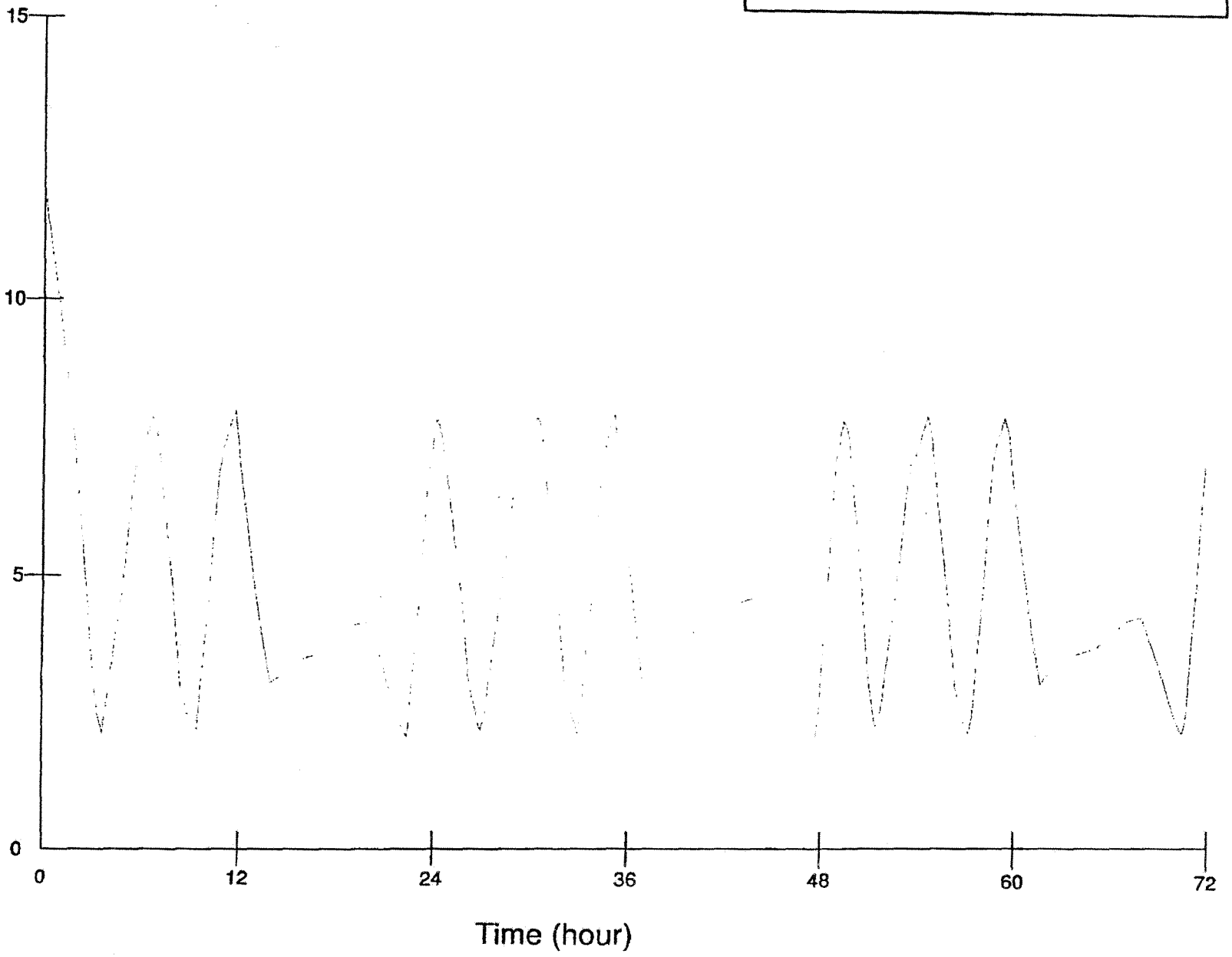


EXHIBIT "A"

Tank 7000 [RUN10]

EAST RESERVOIR OPERATION WITH WEST RESERVOIR @0.6MG, WITHOUT GCSSF, WITHOUT 1 EAST WELL



Pump 5003 [RUN10]

RESPONSE OF EAST WELL COMPLEX WITH WEST RESERVOIR @0.6MG, WITHOUT GCSSF, WITHOUT 1 EAST WELL. NOTE EAST WELL COMPLEX CAN PRODUCE 1,200 GPM.

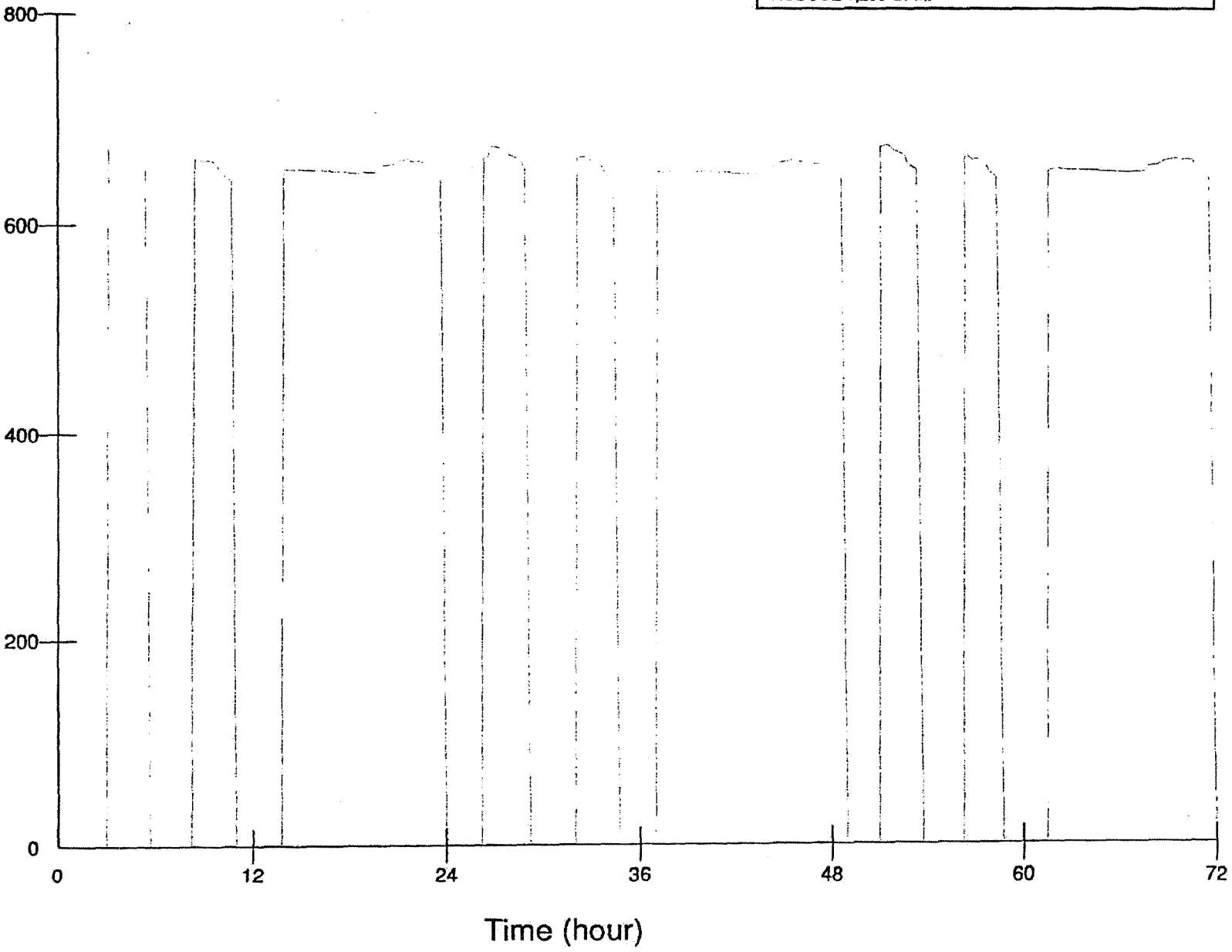


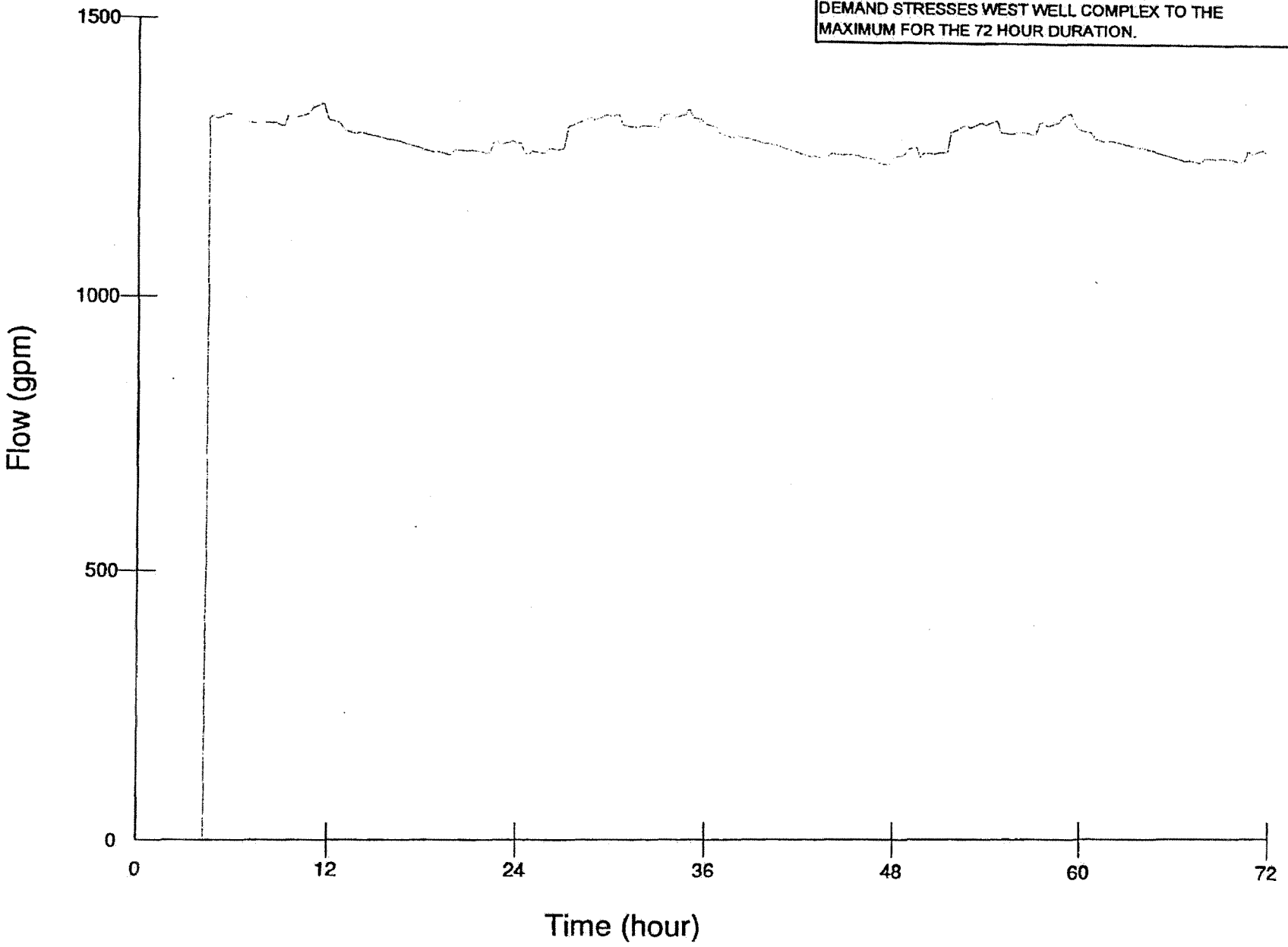
EXHIBIT "A"

EXHIBIT "A"

184

Pump 5001 [RUN10]

WEST WELL COMPLEX RESPONSE WITH WEST RESERVOIR @0.6MG, WITHOUT GCSSF, WITHOUT 1 EAST WELL. NOTE WEST WELL COMPLEX PRODUCTION IS 1,100 GPM. THIS DEMAND STRESSES WEST WELL COMPLEX TO THE MAXIMUM FOR THE 72 HOUR DURATION.



RP1 SUPPLEMENTAL 6FEB12 - ALL RES .2MG - BOOSTER @ ER @4800HRS - WITHOUT 1 WEST WELL-

JUNCTION (VALUE)
- Less than 40
- Greater than 40

TANK (MOTYPE)
- Active Tank
- Domain Tank
- Active Reservoir
- Domain Reservoir

PIPE (VALUE)
- Less than 4
- 4~5
- 5~7
- 7~9
- 9~11
- 11~13
- 13
- Greater than 13

PUMP (MOTYPE)
- Active
- Domain

VALVE (VALUE)
- less than 0.00
- greater than 0.00

18 (Demand7) (VALUE)
- 20
- 24
- 28
- 32
- 36
- 40

12 (Elevation) (VALUE)
- 5090
- 5205
- 5320

14 (Min. Pressure at 48:00 hrs) (VALL
- 30
- 50
- 70
- 90
- 100

Prepared By: RIEDESEL ENGINEERING, INC.

Date: Monday, February 06, 2012

EXHIBIT "A"

Pump 5007 [RUN10]

BOOSTER PUMP REQUIRED AT EAST RESERVOIR TO MAKE UP DEFICIT IN WEST WELL PRODUCTION TO WEST RESERVOIR. WITHOUT GCSSF, WITHOUT 1 WEST WELL. ALL RESERVOIRS @ 0.2 MG (EXISTING VOLUME).

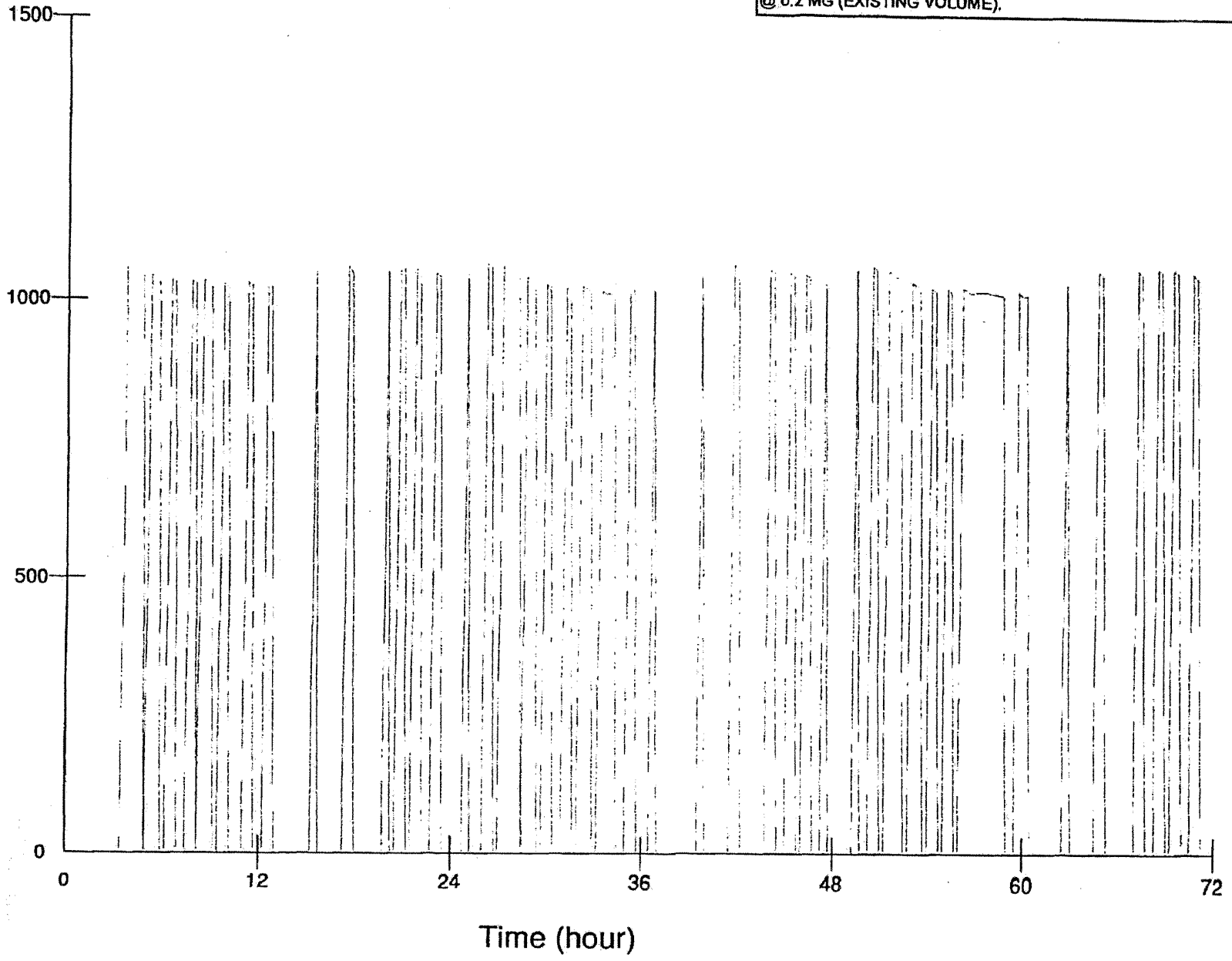


EXHIBIT "A"

EXHIBIT "A"

Tank 7000 [RUN10]

EAST RESERVOIR (0.2MG) RESPONSE WITH BOOSTER PUMP DRAFTING, WITHOUT GCSSF, WITHOUT 1 WEST WELL

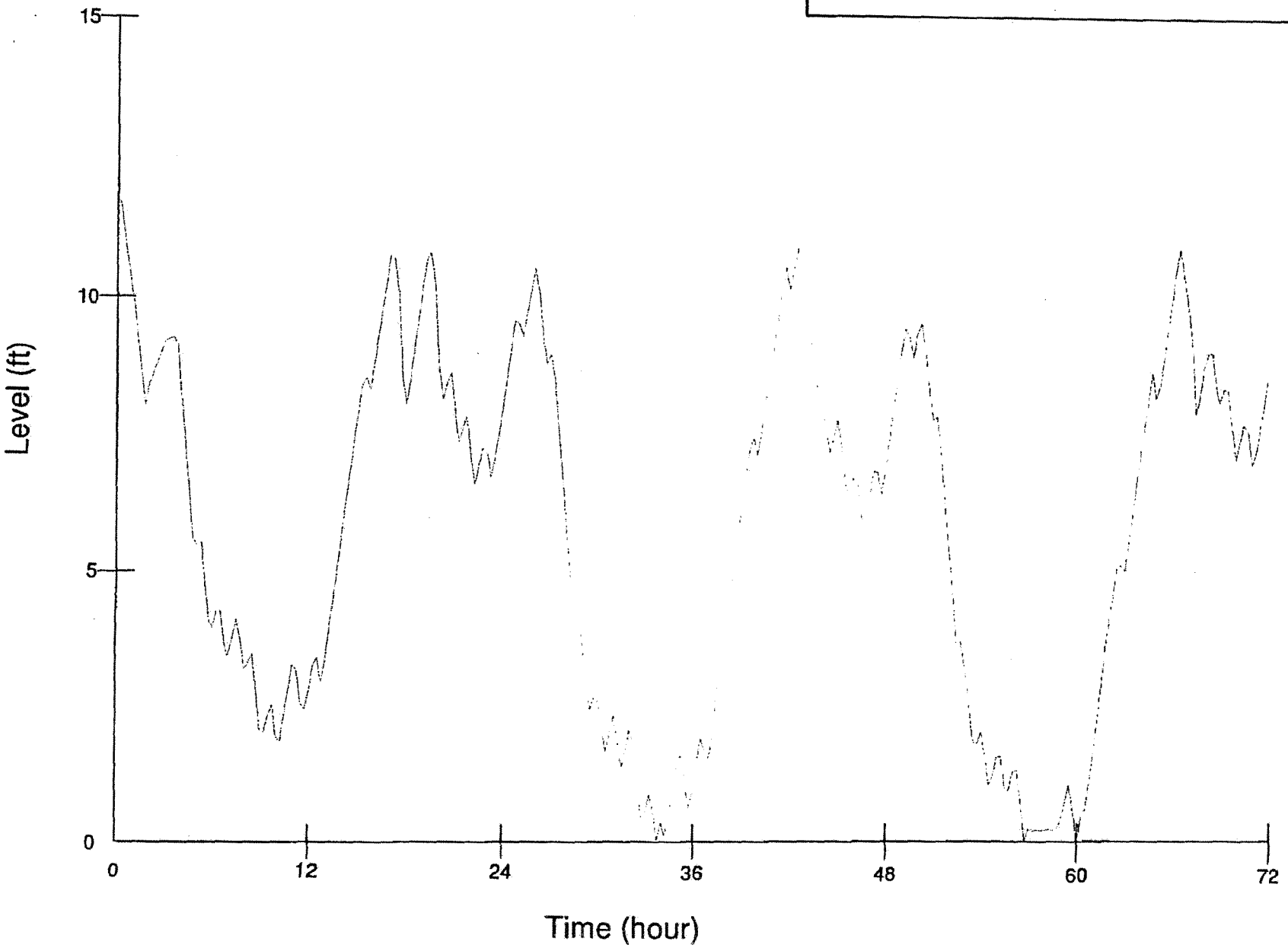
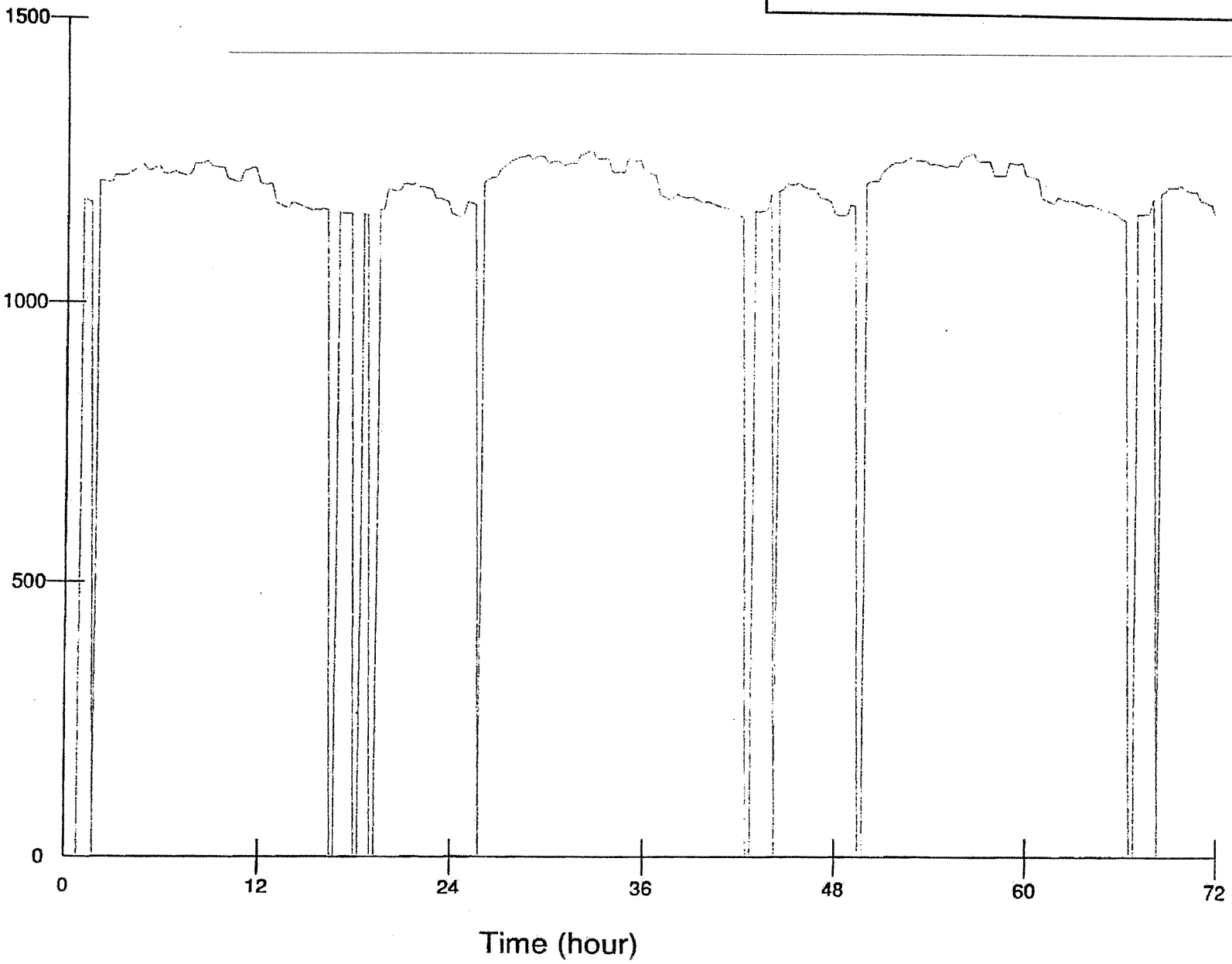


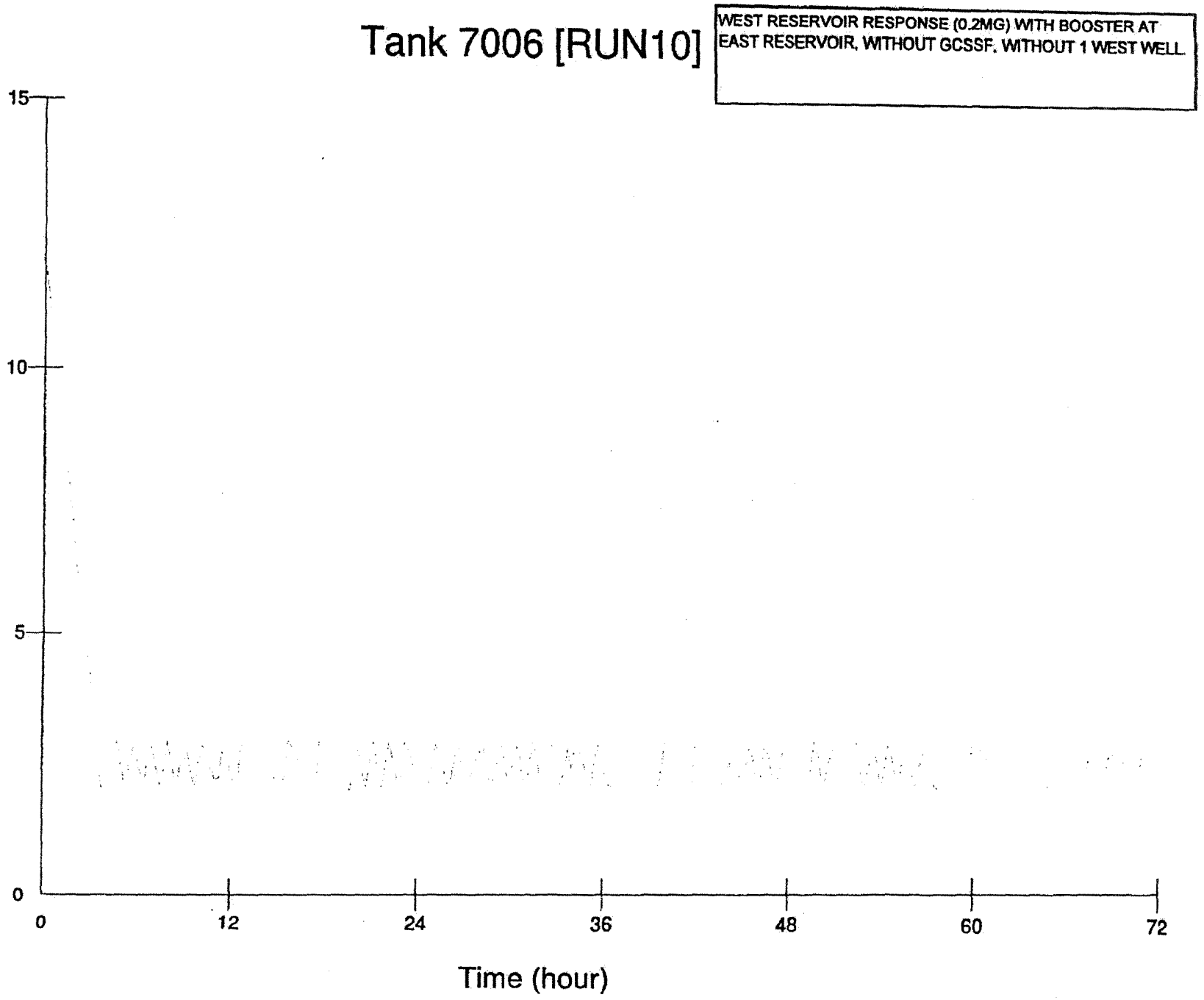
EXHIBIT "A"

188

Pump 5003 [RUN10]

EAST WELL COMPLEX RESPONSE WITH ALL RESERVOIRS @0.2MG, WITH BOOSTER PUMP AT EAST RESERVOIR, WITHOUT GCSSF, WITHOUT 1 WEST WELL.




Tank 7006 [RUN10]
WEST RESERVOIR RESPONSE (0.2MG) WITH BOOSTER AT EAST RESERVOIR, WITHOUT GCSSF, WITHOUT 1 WEST WELL
15
10
5
0
Level (ft)
0
12
24
36
48
60
72
Time (hour)

Pump 5001 [RUN10]

RESPONSE OF WEST WELL COMPLEX WITH 0.2MG RESERVOIRS, BOOSTER PUMP AT EAST RESERVOIR, WITHOUT GCSSF, WITHOUT 1 WEST WELL. NOTE - WEST WELL COMPLEX PRODUCTION IS 1,100 GPM.

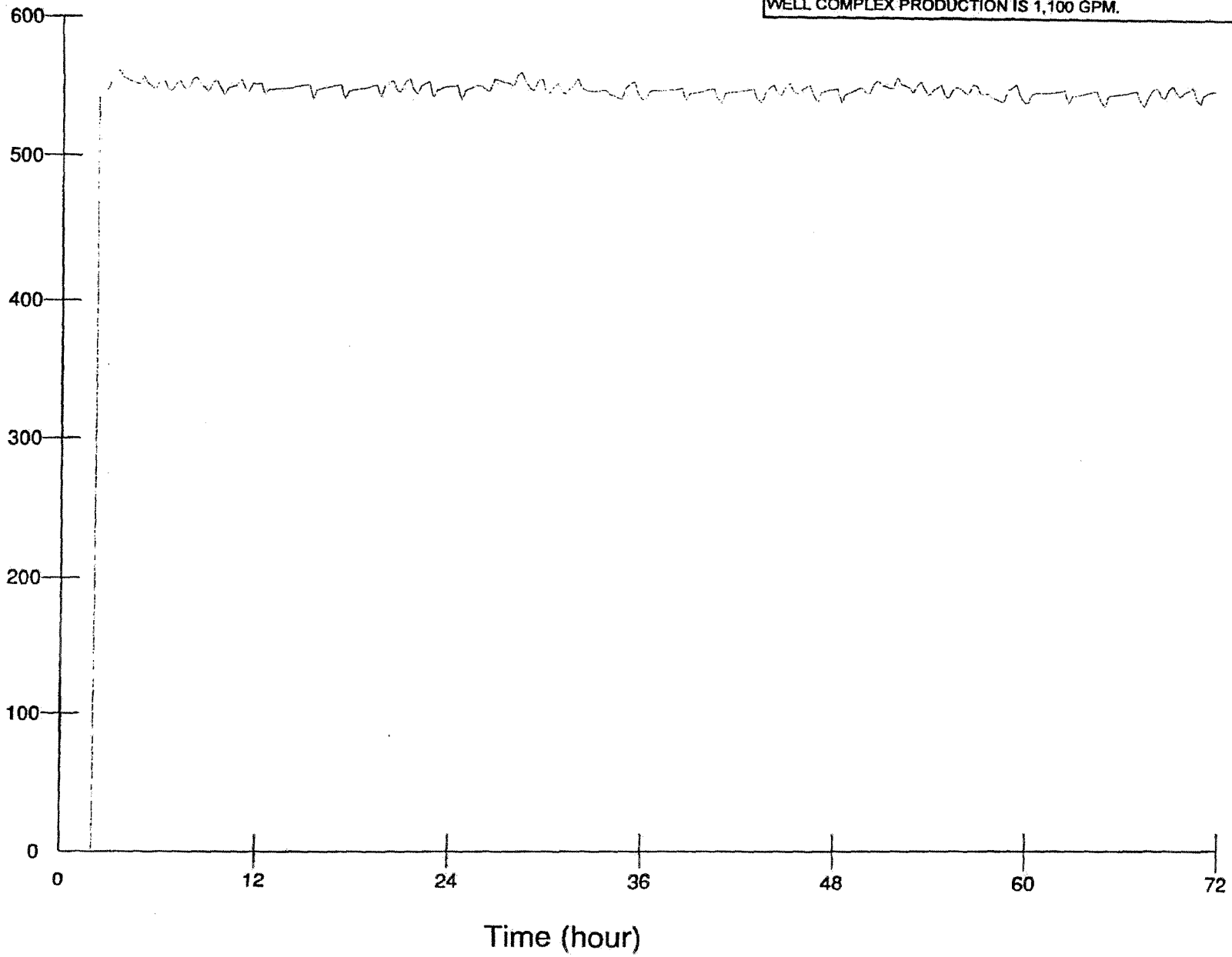


EXHIBIT "A"

1 FACILITY PLAN SUMMARY

The 2011 City of Challis Water System Facility Plan (the Plan) reviews the source water, storage, distribution, metering, and telemetry components of the existing water system. City staff has expressed concerns about the current system which could create water quantity and quality problems within a 20-year planning horizon (year 2030). These concerns include:

- The City's water supply comes from the unprotected Garden Creek Watershed and from two existing ground water wells. The Garden Creek surface water source is susceptible to contamination from the watershed.
- The City may not be able to provide adequate fire flows due to the use of existing old and dead end water mains, and small diameter un-looped lines.
- There are old, improperly spaced hydrants connected to 4" water mains (6" mains provide the minimum supply for fire suppression).
- The City does not have sufficient right to groundwater to expand that source as a replacement to Garden Creek to meet either its current or design year water demand.
- Depending on the water year, the surface water source cannot meet the summertime peak demand without rationing.
- The City does not have a plan to anticipate water demands and provide water services for future growth.
- Any extension of service to supply additional demands or future growth cannot be considered without an approved facility plan[1].
- The residential services and meters installed with the 1980s capital project are aged and need to be replaced.
- Aged pipes not replaced in the 1980s project that are in need of replacement.

As of the report date, the City does not have any water system compliance issues with the Idaho Department of Environmental Quality (IDEQ).

We tested the system components for their ability to meet minimum fire fighting requirements, minimum and maximum statutory working pressures, and the system's ability to meet the estimated water demand of the 20-year planning timeframe. We identified the deficiencies through hydraulic modeling of the distribution system, conversations with City Staff, presentations to the City Council, consultations with State and Federal Agencies, and review of published reports. We summarize our work on the existing water system as follows:

[1] Idaho Administrative Code - IDAPA 58.01.08.502.01

EXHIBIT "A"

	FACILITY	NEEDED	DISCUSSION
1	Source Water - Water Rights	Y	The City currently has groundwater and surface water rights. These rights total 2.79 million gallon per day (MGD). Projected year 2030 demand is 2.57 MGD. Note – Change to 100% groundwater source will require new groundwater right.
2	Source Water - Increased Source Water Production	Y	The City does not have enough groundwater capacity from its 2 operating sources to meet year 2030 demands. One of the goals of this plan to for the City to develop enough groundwater right to cease dependence on the Garden Creek Slow Sand Filter.
3	Storage - Increased Water Storage	N	The City has a total of 0.4 million gallons (MG) of storage. Modeling of source water production with peak hour flow and fire flow indicate the City has adequate storage.
4	Distribution System – Transmission Improvements	Y	The extent of distribution system improvements depends of the specific project chosen by the City. In general, improvements are targeted to eliminate pipeline dead ends, ageing 4-inch and other pipes, conveying water to new developments within the City limits, and conveying water to newly annexed areas.
5	Distribution System – Fire Fighting	Y	The City's existing 4-inch lines will not convey the year 2030 demand. The City will need additional hydrants to improve hydrant spacing, and new hydrants along transmission line expansions.
6	Distribution System – Pressure Zones	Y	The City needs to improve its pressure zones to meet IDAPA. The City will need (4) formal pressure zones when it switches to all groundwater supply.
7	Distribution System – System Expansion	Y	The City desires to extend water service and fire flow capability to the airport and annex the Butts subdivision. Service line extension to the airport will enhance commercial development along the US 93 strip, from the City of Challis to the airport.
8	Metering	Y	The City was metered in its 1980s project. The meters are aging, probably are not within AWWA accuracy ranges, and some are not operational. Manual read meters represent a significant labor commitment that can be recovered by AMR equipment. New meters with increased accuracy, ability to read year round could realize increased revenues and/or reduction in consumption.
9	Telemetry	Y	The current system uses some basic supervisory control but it not robust. A fully developed telemetry/SCADA system will allow monitoring of key elements with enhanced alarm and notification features. Telemetry/ SCADA can allow remote operator access to assess threats and respond to problems and alarms without physically visiting the site.

The City Council established (11) criteria as requirements for water system improvements and we evaluated (17) preliminary alternatives covering improvements to various aspects of the distribution system, source water development, and metering and telemetry. We revised these alternatives into 18 discrete projects with nine possible combinations of the discrete projects. Based on input from the City Council and feedback from the public participation meeting, Riedesel again revised and condensed the nine project combinations into three specific alternatives, all combination projects addressing source water, distribution, metering, and telemetry. The projects are summarized as follows: all new ground water being developed in the Garden Creek Aquifer System at the west end of Challis; all new ground water being developed in the Salmon Aquifer System on the east side of Challis; a mixture of both east and west locations. The Council selected the

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last one of these three as its preferred project which we term Recommended Project #1 (RP1). Estimated construction cost for RP1 is $8,078,877 with and Equivalent Uniform Annual Cost (EUAC) of <$ 442,958>. Of the (3) final alternatives, RP1 has the least EUAC and is therefore the most economically favorable project for the City.

These are the elements of Recommended Project #1 (RP1):

- Source Water. RP1 allows the City to curtail use of the Garden Creek surface water source and source water treatment. 2 new wells - one in the Garden Creek Aquifer system that recovers the lost output of West Well #1 and one in the Salmon Aquifer System – will replace the curtailed Garden Creek water source. The City will abandon the slow sand filter but retain the surface water right. RP1 solves the susceptibility issue of the unprotected Garden Creek watershed by moving all of the City's drinking water sources to groundwater.
- Distribution System. RP1 includes all the modeled pipeline changes and additions needed to meet the year 2030 design population and with total reliance on groundwater. 4 pressure zones will be formally established with new pressure reducing stations and isolation valves. The system will have new, properly spaced hydrants on new pipelines and add hydrants where needed to improve hydrant spacing on the existing pipelines. RP1 solves the pressure zone issues with the existing distribution system, solves the fire hydrant spacing issue, and allows the City to meet the projected drinking water demands of the year 2030 population. The City will be able to meet the requirements of the design fire flow and duration.
- Distribution System Alternatives. RP1 includes new transmission pipeline to provide water and fire fighting service to the Challis Airport. The transmission lines also allow for development in the east and west corridors parallel to US 93, and for the annexation of the Butts Subdivision into the City. RP1 meets the City goals of serving the Airport and providing for future growth.
- Metering. RP1 replaces all the meters in the City with new automated meter read (AMR) equipment. RP1 allows the City to read every meter every month, reduce the staffing requirements to bill for water, increase the accuracy of that billing, take the first steps to recovering the estimated 4% lost water identified by Idaho Rural Water, and provide the data needed to do a water audit.
- Telemetry. RP1 connects the City's key facilities into an integrated network that provides enhanced supervisory control and data acquisition (SCADA). Key facilities include the new and existing groundwater wells, and East and West Reservoirs. Telemetry will provide better security for the drinking water system, and City staff will be able to access the SCADA system remotely to evaluate and respond to alarm conditions. RP1 improves the operation and security of the drinking water system.

Recommended Project #1(RP1) is a plan for the development of the City of Challis from now to the 2030 design year. RP1 addresses health and safety issues, operation and maintenance improvements, and expansion of the water system to serve the airport and growth of the community. RP1 needs strategic implementation for prudent implementation. "Prudent implementation" has these elements in order of priority:

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1. Address health and safety concerns
2. Focus on items that will reduce the operation and maintenance (O&M) costs of the system
3. Expand the water system to serve the airport and other areas of interest to the City as the need and demand for service occur

The table below shows the components of RP1 and rates them for the (3) priorities. All the components except for metering impact all 3 priorities. The category designations:– SW – Source Water; DS – Distribution System; T – Telemetry; M – Metering match the designations of the project charts in Appendix D.

CATEGORY	*DESCRIPTION/ RP1 SOLUTION*	*HEALTH & SAFETY*	*MINIMIZE O&M*	*SYSTEM EXPANSION*
SW HEALTH & SAFETY Garden Creek Surface Water Source	Vulnerability & Variability of the Garden Creek Water Shed. Replace surface water supply with new groundwater source and recover the capacity of West Well 1.	✓		
SW O&M	Recovers O&M costs to operate and maintain the slow sand filter.		✓	
SW EXPANSION	Meet future demands with new well in Salmon Aquifer System.			✓
DS HEALTH & SAFETY Fire Fighting	Dead end lines, hydrants on 4-inch lines, sub-standard hydrant spacing. Add pipe loops to tie–in dead ends; replace 4-inch lines; add new hydrants to add capability to existing system. Add interties to incorporate groundwater sources to Old Town system (surface water source replaced with groundwater).	✓		
DS O&M	Replacing old 4-inch pipes reduces leaks.		✓	
DS EXPANSION	New pipes and pipe loops top meet system expansion to the airport and future growth			✓
DS HEALTH & SAFETY Pressure Zones	Over-pressurized areas of Old Town and Cyprus System. Create (4) new pressure zones incorporating the change to groundwater for the entire system.	✓		
DS EXPANSION	Pressure Zone 4 includes the existing system and will cover the full expansion of the system.			✓
T HEALTH & SAFETY System	Existing system has minimal supervisory control and data acquisition (SCADA) capability and no intrusion alarms for key water system elements. Add new telemetry.	✓		

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CATEGORY	DESCRIPTION/ RP1 SOLUTION	HEALTH & SAFETY	MINIMIZE O&M	SYSTEM EXPANSION
Telemetry				
T O&M	New telemetry allows remote operator access to the key elements of the system instead of requiring a site visit. Key elements include well houses and pump stations, storage reservoirs, and pressure reducing stations.		✓	
T EXPANSION	Telemetry allows for addition of new key elements to the system, such as a new well in the Salmon Aquifer system.			✓
M O&M	Re-meter the City with new "automated read" (AMR) water meters. City can read every meter every month throughout the year and have the data for a complete water audit. All the meters can be read in less than (1) day.		✓	

We suggest the following ranking of the first priority items:

1. Replace the surface water source with a new groundwater source in the Garden Creek aquifer system.
2. Construction distribution system improvements to tie the Old Town system into the new groundwater system, eliminate 4-inch pipes and the fire hydrants that tie to them, install new and properly spaced fire hydrants, and tie-in dead end lines. Add pressure reducing stations and isolation valves to create (4) pressure zones which eliminates service areas that are over-pressurized.
3. Install a telemetry system to improve supervisory control and data acquisition to protect the water system.

Appendix D has a chart that shows the EUAC analysis for the first priority items.

The first priority items automatically fulfill the operation and maintenance (O&M) criteria of the second priority when they are implemented. Metering is the only stand alone second priority item. Even though metering is not a health and safety priority, our analysis indicates the construction cost may be significantly (if not completely) offset by the labor saving to read the meters and process the water bills. The City may also realize some lost revenues due to inaccuracies with the old existing meters. We recommend replacing the meters as soon as possible.

2 INTRODUCTION

2.1 Purpose and Need for Project

The City of Challis is a municipal corporation located in Custer County, Idaho. The most recent water system facility plan and resulting improvement project performed for the City dates from 1981 and is approximately 30 years old[2]. City staff has expressed concerns about the current system which could create water quantity and quality problems within a 20-year planning horizon (year 2030). These concerns include:

- The City's water supply comes from the unprotected Garden Creek Watershed and from two existing ground water wells. The Garden Creek surface water source is susceptible to contamination from the watershed.
- The City may not be able to provide adequate fire flows due to the use of existing old and dead end water mains, and small diameter un-looped lines.
- There are old, improperly spaced hydrants connected to 4" water mains (6" mains provide the minimum supply for fire suppression).
- The City does not have sufficient right to groundwater to expand that source as a replacement to Garden Creek to meet either its current or design year water demand.
- Depending on the water year, the surface water source cannot meet the summertime peak demand without rationing,
- The City does not have a plan to anticipate water demands and provide water services for future growth.
- Any extension of service to supply additional demands or future growth cannot be considered without an approved facility plan[3].
- The residential services and meters installed with the 1980s capital project are aged and need to be replaced.
- Aged pipes not replaced in the 1980s project that are in need of replacement.

There are 5 main areas of focus to this facility plan:

1. Drinking water sources
2. Potable storage
3. Distribution system
4. Metering
5. Telemetry

It is the purpose of this facility plan to review and analyze staff concerns within these five components and then to test the component's ability to meet the regulatory, consumption,

[2] "Challis, Idaho Water System Improvements – Master Plan and Preliminary Engineering Report" – CH2M Hill, April 1981

[3] Idaho Administrative Code - IDAPA 58.01.08.502.01

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and operational demands of the 2030 design year. The plan will then propose community-based solutions to projected deficiencies with capital projects.

2.2 Organization of Report

The structure of the report follows the format of The Idaho Department of Environmental Quality (IDEQ) Form 5-A, December 2010 edition and includes a Table of Contents and appendices. The order of the report is as follows: Facility Plan Summary, Introduction, Existing Conditions, Future Conditions, Development and Initial Screening of Alternatives, Final Screening of Principal Alternatives and Facility Plan Adoption, Selected Alternative Description and Implementation Agreements, Engineer's Recommendations, and Appendices.

Physically, the report has two parts – the main report document and the Appendices. The parts are in 2 books. When studying the report, the reader has the option of viewing a referenced item side-by-side with the report section that references it.

2.3 Acceptance by Owner of Project Responsibility

The City of Challis' project responsibility is divided into two parts – responsibility for the funding of the facility plan which identifies potential capital projects, and responsibility for the funding and administration of an actual capital construction project. The facility plan is currently funded by the City of Challis. The City tried to secure a planning grant from USDA-Rural Development but the population median income exceed the maximum grant approval criteria of Rural Development. The City has recently applied for a planning grant through IDEQ. The City has funds dedicated to the facility plan and has selected its consultant through a proper Qualification Based Selection process meeting the requirements of Idaho Statute 67-2320.

Should the City decide to pursue a capital project to repair or improve its water system infrastructure, Challis will be seeking grants and loans to help finance the project. At the present, Challis' options for project funding include: IDEQ SRF loan and USDA-Rural Development grant and loan. A preliminary Income Survey performed to see if the City could qualify for Idaho Department of Commerce Community Development Block Grant (CDBG) indicates the City will not qualify for CDBG funds. The City will be using a certified grant administrator to apply for SRF/USDA-RD funds and aid with selection of the bond counsel and bond election.

Challis has successful project experience, organization, and facilities to carry out a new construction project. Application for project funding will further demonstrate the financial capability to secure the needed grants and loans. The following table gives an overview of project history:

Project Dates Start/End	Funding Agency	Project Description	Capital Cost	Consultant
12/2005	FAA	#569 Challis General Engineering	$350,000	Riedesel Engineering, Inc.
8/05 to 4/08		#712 Challis Airport – Land Acquisition	$29,455	Riedesel Engineering, Inc.
6/05 to 12/07		#805 Challis Water Funding	$67,5000	Riedesel Engineering, Inc.
1/09 to 10/09	FAA	#1051 Challis Airport – AIP	$679,000	Riedesel Engineering, Inc.
11/09 to 12/09	Fed/Local Agencies	#1546 Challis Bike Path	$1,333,000	Riedesel Engineering, Inc
3/10 to 7/10	FAA	#1569 Challis Airport	$83,6500	Riedesel Engineering, Inc

3 EXISTING CONDITIONS

3.1 Project Planning Area

The Planning Area Map is located in Appendix A, Figure 1. The area within the border encompasses about 2,048 acres or 3.2 square miles. About 60% percent of the planning area is within the existing City limits. Any capital improvement project identified by this report and accepted by the City will occur within this study boundary. The boundary is also the footprint of the environmental document that is a separate part of this facility plan. Progressive Engineering Group, Inc. (PEGI), is a sub-consultant to Riedesel Engineering and provides the Environmental Information Document included in Appendix H.

3.2 Existing Environmental Conditions

Riedesel Engineering and Progressive Engineering Group established a list containing 35 target individuals and agencies that might want to comment on the facility plan boundaries. The list is in Appendix E. The information from these contacts is primarily used in the environmental document prepared by Progressive Engineering. Not all persons or agencies contacted by mail responded. The responses we received, both mail and emails are also located in Appendix E. The following maps that are referenced in this section are located in Appendix D – Maps & Charts:

- Study Area Map
- USGS Topographic Map
- Wild & Scenic River Designations
- U.S. Fish & Wildlife Service National Wetlands Inventory
- DEQ/IDWR Sole Source Aquifer Designation location map
- Custer County Land Ownership
- Public Lands Interpretive Association map of parks and campgrounds
- Idaho Air Quality Planning Areas
- Mine Locations
- FEMA Flood Plain Panel
- City of Challis Zoning Map

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3.2.1 Physiography, Topography, Geology, and Soils

The City of Challis is located within north central Custer County, in central Idaho. The City is situated on the alluvial fan created by Garden Creek, within Round Valley, with the mountainous Sawtooth Recreational District to the south, the Challis National Forest to the West and the Salmon National Forest to the North. The northerly flowing Salmon River bounds the area on the east. Elevation ranges from about 5,100' to 5,400' above mean sea level. Central Challis is located at Latitude 44(degrees) 30' 17.76" N and Longitude 114(degrees) 13' 55.44"W. The topography within Challis is generally level to gently sloping toward the east, although steep slopes bound the valley to the north, west and south. The gently to moderately sloping Salmon River and its associated floodplain lies to the east.

The Challis basin may have formed at least 50 million years ago (MYA), by a combination of faulting and erosion before and during Eocene age (51 to 40 MYA) volcanic eruptions. As lava, ash-flows and ash erupted and settled, faulting (earth movement), landslides and stream erosion produced the topography and unconsolidated sediments overlying the rock formations. One prehistoric slide temporarily blocked Garden Creek, forming a small lake which deposited the alluvial clay rich soils of lower Garden Creek. The Challis Basin is still considered subject to earthquakes and earth vibrations and is included within the Central Idaho Seismic Zone.
The prehistoric earthquake history is not well known except for parts of the Lost River fault, which ruptured in 1983. Therefore it is virtually impossible to predict with any accuracy where a rupture or fault scarp might occur. Seismic design for water pipelines is not required to meet current AWWA standards. However, critical function pipelines and / or critical function connections could be subject to more rigorous design criteria as far as available information and budget allow. Critical function pipelines or connections are defined by consideration of: the facilities they serve; importance to the community for fire fighting, health, and post-earthquake emergency response and recovery; potential for secondary disasters (erosion, inundation, life safety) resulting from pipe damage or failure; difficulty in making repairs; effects on community socio-economics; and a pipe's ability to disrupt emergency response or evacuation if damaged. The soils within the project area, listed in the table below are too steep, rocky and / or dry to present an expected liquefaction risk.

Table of Soils within the Challis Basin and Area of Impact

Map Symbol	Map Unit Name	Farmland Classification
10	Bayhorse-Dawtonia association, 15 to 40 % slopes	Not prime farmland
31	31 Calcids-Rubble land-Rock outcrop complex, 50 to 80 percent slopes	Not prime farmland
48	Dawtonia very gravelly loam, 4 to 8 percent slopes	Not prime farmland
49	Dawtonia-Dawtonia, cold complex, 5 to 25 percent slopes	Not prime farmland

Map Symbol	Map Unit Name	Farmland Classification
51	Dawtonia-Frailton complex, 20 to 50 percent slopes	Not prime farmland
53	Dawtonia-Rock outcrop complex, 20 to 50 percent slopes	Not prime farmland
55	Dawtonia-Dacont association, 20 to 50 percent slopes	Not prime farmland
146	Nurkey-Dawtonia association, 20 to 55 percent slopes	Not prime farmland
232	Whiteknob-Zer complex, 2 to 6 percent slopes	Not prime farmland
241	Yearian very stony loam, 1 to 4 percent slopes	Not prime farmland
256	Zer gravelly loam, warm, 2 to 15 percent slopes	Not prime farmland

Source: Natural Resources Conservation Service
Soil Survey Area: Challis, Idaho
Survey Area Data: Version 4, February 14, 2011

None of the soils listed above that fall within the proposed project area are listed as Prime, Unique or Farmland of Statewide Importance.

3.2.2 Surface and Groundwater Hydrology

The City of Challis relies on surface water derived from the Garden Creek watershed. Surface water from Garden Creek supplies the slow sand filter on the west side of town. The Garden Creek Watershed also supplies the groundwater source used by the City's West Well #2. The City's East Well is supplied by the Salmon Aquifer system. The document that best describes the geology and hydrogeology of these sources is "Hydrogeologic Analysis of the Water Supply for Challis, Custer County, Idaho", Otto, Wylie & Martin, Idaho Geologic Survey, 2005. A copy of the document is in Appendix B.

3.2.3 Fauna, Flora & Natural Communities

The following table lists Special Status Species likely to occur near the City of Challis. The information does not designate these species as occurring within the study area of the facility plan.

Special Status Species Known or Likely to Occur near Challis

Species	Type	Vegetation Type / Habitat	Soil Characteristics
Lemhi Milkvetch (Astragalus aquilonius)	2	Most abundant on gentle slopes near Challis, but also on steep erosive slopes and in washes; generally south facing, dry	Challis volcanic weathering; limestone gravelly slopes and shallow sandy loams

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Species	Type	Vegetation Type / Habitat	Soil Characteristics
Welsh's buckwheat (Eriogonum capistratum var. welshii)	2	Alluvial fans of Big Lost River Range	Calcareous gravels
Alkali primrose (Primula alcalina)	2	Spring-fed calcareous headwaters system	Highly alkaline clay
Challis Milkvetch (Astragalus amblytropis)	3	Steep erosive slopes, little vegetated, south facing, dry	Challis volcanic weatherings including rhyolitic and andesitic weatherings
Meadow Milkvetch (Astragalus diversifolius)	3	Alkaline wet meadows	Soils often alkaline with obvious whitish deposits
Blue gramma (Bouteloua gracilis)	3	Unknown	Unknown
Chatterbox orchid (Epipactis gigantean)	3	Springside, thermal springs	Limestone weatherings
Marsh felwort (Lomatogonium rotatum)	3	Spring-fed calcareous headwaters system	Highly alkaline clay
Challis crazyweed (Oxytropis besseyi var. salmonensis)	3	Steep (30%) to more gentle slopes, generally south facing, or in washes. Usually dry, sparsely vegetated, open communities	Sandy to gravelly erosive substrates derived from Challis volcanics
Wavy leaf thelypody (Thelypodium repandum)	3	Steep erosive slopes, little vegetated, south facing dry	Challis volcanic weatherings, including rhyolitic and adesitic weatherings
Pale sedge (Carex livida)	4	Unknown	Unknown
White eatonella (Eatonelela nivia)	4	Mid-elevation desert	Sand to gravelly thin soil, often on basalt
Hoary willow (Salix candida)	4	Spring-fed calcerous headwater wetland systems	High alkaline clay
Rush aster (Aster juncuformis, Symphyotrichum boreale)	4	Unknown	Unknown

Rare and Endemic Species

Common Name	Scientific Name	Distribution
D = Disjunct | P = Peripheral | L = Limited | CI = Central Idaho | CE = Challis Endemic * Species known only from the Challis area		
Salmon River rabbitbrush	*Chrysothamnus parryi salmonesis*	CE
Salmon River Cryptantha*	*Cryptantha salmonesis*	CE

Wildlife living in the area includes elk, pronghorn, mule deer, sage grouse as well as many rodents, birds of prey and songbirds. The Herd Management Area (HMA) also provides critical winter range habitat for big game species, as well as a full complement of large predators with mountain lions, bears, and wolves.

3.2.4 Housing, Industrial and Commercial Development

The City of Challis is zoned and a copy of the zoning map is in Appendix D. The City completed a rate study with assistance from Idaho Rural Water Association (IRWA). The rate study identified and differentiated the water meters into residential and commercial equipment. The rate study and list of meters is in Appendix C.

3.2.5 Cultural Resources

The City of Challis lies at the boundary of three distinct cultural areas: the Plains, the Great Basin and the Columbia Plateau. The area contains 495 known, recorded cultural resource sites which represent a variety of types and chronological time periods. Together these sites document an almost continuous human occupation of the area from at least 11,000 years ago to the present. Historic sites in this area include historic mining districts, stage and freight road remnants, homesteads, cabins and dumps. The City of Challis has two National Historic Districts, the Old Challis Historic District and the Challis Brewery Historic District. Historic places in Challis are listed in the Table below.

National Register of Historic Places listings in Challis County, Idaho

Landmark name	Date listed	Location	City
Bayhorse	March 15, 1976	South of Challis off U.S. Route 93 44°23'52"N 114°18'42"W44.3977 8°N 114.31167°W	Challis
Board-and-Batten Commercial Building	December 3, 1980	Main Ave. 44°30'19"N 114°14'9"W44.50528° N 114.23583°W	Challis
Building at 247 Pleasant Avenue	December 3, 1980	247 Pleasant Ave. 44°30'13"N 114°14'10"W44.5036 1°N 114.23611°W	Challis

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Landmark name	Date listed	Location	City
Buster Meat Market	December 3, 1980	Main Ave. 44°30'19"N 114°14'10"W44.5052 8°N 114.23611°W	Challis
Bux's Place	December 3, 1980	321 Main Ave. 44°30'17"N 114°14'6"W44.50472° N 114.235°W	Challis
Challis Archeological Spring District	February 12, 1981	Address Restricted	Challis
Challis Bison Jump Site	September 5, 1975	Address Restricted	Challis
Challis Brewery Historic District	February 5, 1980	Challis Creek Rd. 44°30'28"N 114°13'38"W44.5077 8°N 114.22722°W	Challis
Challis Cold Storage	December 3, 1980	Main Ave. 44°30'19"N 114°14'7"W44.50528° N 114.23528°W	Challis
Challis High School	December 3, 1980	Main Ave. 44°30'17"N 114°13'52"W44.5047 2°N 114.23111°W	Challis
Bill Chivers House	December 3, 1980	3rd St. 44°30'21"N 114°14'7"W44.50583° N 114.23528°W	Challis
Thomas Chivers Cellar	December 3, 1980	Challis Creek Rd. 44°30'27"N 114°13'34"W44.5075° N 114.22611°W	Challis
Thomas Chivers House	December 3, 1980	Challis Creek Rd. 44°30'27"N 114°13'52"W44.5075° N 114.23111°W	Challis
Custer County Jail	December 3, 1980	Main Ave. 44°30'18"N 114°13'49"W44.505° N 114.23028°W	Challis
False-Front Commercial Building	December 3, 1980	Main Ave. 44°30'17"N 114°14'9"W44.50472° N 114.23583°W	Challis
Emmett Hosford House	December 3, 1980	3rd St. 44°30'22"N 114°14'7"W44.50611° N	Challis

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Landmark name	Date listed	Location	City
I.O.O.F. Hall	December 3, 1980	Main Ave. 44°30′17″N 114°13′59″W44.50472°N 114.23306°W	Challis
McKendrick House	December 3, 1980	4th St. 44°30′12″N 114°14′3″W44.50333°N 114.23417°W	Challis
Old Challis Historic District	December 3, 1980	Bounded by Valley and Pleasant Aves., 2nd and 3rd Sts. 44°30′13″N 114°14′10″W44.50361°N 114.23611°W	Challis
Bill Peck House	December 3, 1980	16 Main Ave. 44°30′18″N 114°14′17″W44.505°N 114.23806°W	Challis
Penwell House	December 3, 1980	North Ave. 44°30′23″N 114°13′50″W44.50639°N 114.23056°W	Challis
Donaldson Rowles House	December 3, 1980	North Ave. 44°30′22″N 114°13′23″W44.50611°N 114.22306°W	Challis
Henry Smith House	December 3, 1980	5th St. 44°30′13″N 114°13′59″W44.50361°N 114.23306°W	Challis
Stone and Log Building	December 3, 1980	Pleasant Ave. 44°30′16″N 114°14′6″W44.50444°N 114.235°W	Challis
Stone Building	December 3, 1980	3rd St. 44°30′20″N 114°14′7″W44.50556°N 114.23528°W	Challis
Twin Peaks Sports	December 3, 1980	Main Ave. 44°30′20″N 114°13′59″W44.50556°N 114.23306°W	Challis
Clyde Wilkinson House	December 3, 1980	9th St. 44°30′25″N 114°13′46″W44.50694°N 114.22944°W	Challis

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Construction of capital improvements identified by this facility plan will occur in the streets and other rights-of-way and will not impact cultural or historic resources.

3.2.6 Utility Use

The City of Challis provides drinking water and sanitary sewer to its residents. Other utilities that serve the community are:

- Solid Waste – Blue Mountain Refuse
- Propane - Salmon River Propane
- Telephone – Custer Telephone

Recommended Project #1 (RP1) derived from this facility plan will increase the City's electrical consumption. RP1 includes (2) new groundwater wells and pumping plants to add capacity the (2) existing groundwater sources. The City's electrical consumption for groundwater pumping will double when the wells are online and meeting the planning year demand.

3.2.7 Flood Plains & Wetlands

The 100-year floodplains for both the Salmon River and Garden Creek are shown in Appendix D Maps & Charts. The National Flood Insurance Program (FNIP) has established the 100-year flood as the basis for determining minimal land use measures for construction of new facilities or substantial improvements to existing development in flood hazard areas. Executive Order 11900 and EPA Flood Insurance Requirements (PRM-71) further define requirements for flood proofing of water and wastewater facilities in accordance with the NFIP. These requirements have been addressed as part of the proposed project.

Historical Frequency Flash Floods

Place	Date	Event	Magnitude / Reported Damage
Challis	9/18/1940	Flash Flood	Washed out section of Highway 93
Challis	7/26/1941	Flash Flood	Washed out irrigation ditches, outbuildings
Challis	8/20/1941	Flash Flood	Highways & irrigation ditches washed out
Challis	7/17/2007	3:45 PM	Over 1" of rain in one hour

Historical Frequency River or Stream Flooding

Place	Date	Event	Details
Challis	1/6/1938	Flood	Salmon River floods / Water covers highway 27 below Challis
Challis	1/31/1940	Flood	Ice jam caused flooding / Water washed out Highway 27
Challis/ Mackay	3/31/1943	Flood	Rapid snow melt caused flooding / State Hwy 27 closed, other roads washed out including main street in Challis
Challis	1/15/1974	Flood	Salmon River floods / 2 bridges and 8 basements flooded

A map of the National Wetlands Inventory, for the Challis area with locations where the proposed project may intersect wetlands can be found in Appendix D. No wetlands have been designated within the project area. No wetlands will be affected by any capital improvement project identified by this facility plan.

3.2.8 Wild/Scenic Rivers

The Salmon River located past the east border of the study area is a designated "Wild/Scenic River" and the only such designated waterway near the study area.

- Designated Reach: July 23, 1980. The segment of the main stem from the mouth of the North Fork of the Salmon River downstream to Long Tom Bar.
- Classification/Mileage: Wild — 79.0 miles; Recreational — 46.0 miles; Total — 125.0 miles.

3.2.9 Public Health and Water Quality Considerations

The City has both treated surface water and groundwater sources for drinking water. As of the latest sanitary survey, there are no compliance issues with the water system. The water system meets current standards for protection of the health and safety of the public. The City does have increasing concerns about its surface water supply since the Garden Creek watershed that provides the water is unprotected. Idaho Rural Water Association (IRWA) completed a Drinking Water Protection Plan for the City in 2003 that details vulnerability concerns with this source. A copy of the protection plan is located in Appendix B. The facility plan addresses how the City can overcome the vulnerability issue with Garden Creek by installing (2) more groundwater sources.

3.2.10 Important Farmlands

The following table lists soil groups within the study area. None of the soils listed in the table are listed as Prime, Unique or Farmland of Statewide Importance.

Table of Soils within the Challis Basin and Area of Impact

Map Symbol	Map Unit Name	Farmland Classification
10	Bayhorse-Dawtonia association, 15 to 40 % slopes	Not prime farmland
31	31 Calcids-Rubble land-Rock outcrop complex, 50 to 80 percent slopes	Not prime farmland
48	Dawtonia very gravelly loam, 4 to 8 percent slopes	Not prime farmland
49	Dawtonia-Dawtonia, cold complex, 5 to 25 percent slopes	Not prime farmland
51	Dawtonia-Frailton complex, 20 to 50 percent slopes	Not prime farmland
53	Dawtonia-Rock outcrop complex, 20 to 50 percent slopes	Not prime farmland
55	Dawtonia-Dacont association, 20 to 50 percent slopes	Not prime farmland
146	Nurkey-Dawtonia association, 20 to 55 percent slopes	Not prime farmland
232	Whiteknob-Zer complex, 2 to 6 percent slopes	Not prime farmland
241	Yearian very stony loam, 1 to 4 percent slopes	Not prime farmland
256	Zer gravelly loam, warm, 2 to 15 percent slopes	Not prime farmland

Source: Natural Resources Conservation Service
Soil Survey Area: Challis, Idaho
Survey Area Data: Version 4, February 14, 2011

3.2.11 Proximity to Sole Source Aquifer

There are no sole source aquifers located in the planning area of this facility plan.

3.2.12 Land Use and Development

Of the 3,152,384 land acres in Custer County, the Federal government owns 93%. The USFS owns 2,123,710 acres and the BLM owns 813,965. The State of Idaho owns 1.7% of the County's acres including 52,626 Endowment land acres, 1,253 Fish and Game acres and 22 Park and Recreation acres. Cities and the County own less than 1% of the land. Private land is 5% of the total at 158,503 acres.

The Custer County All Hazards Mitigation Plan (AHMP) contains maps that show the distribution of land ownership in Custer County. Most of the Forest Service land is located in the south and west areas of the County. A copy of the AHMP is located in Appendix B. The Bureau of Land Management has most of its land in the Pahsimeroi, Little Lost River,

the Salmon, and Big Lost River Valleys. State of Idaho Lands is scattered throughout BLM land. Private land is concentrated around the major roads and near or within cities.

DESCRIPTION OF LAND OWNERSHIP	ACRES OF LAND OWNED
U.S. Forest Service	2,123,710
Bureau of Land Management	813,965
State Endowment	52,626
Idaho Fish & Game	1,253
Custer County	2,300
Municipal	5
Total Private	158,503
Total Federal Land	2,937,675
Total State Land	53,879
Total Land	3,152,384

3.2.13 Formally Classified Lands

The Salmon/Challis National Forest and the Frank Church River of No Return Wilderness lie to the west, northwest of Challis. The Salmon River flows northerly to the east of Challis. Classified lands include the Sawtooth National Recreation Area, Redfish Lake, the Yankee Fork Gold Dredge, the historic ghost town of Custer lie to the south southwest of Challis. None of these lie within one mile of the project planning area, although the Bureau of Land Management Buffalo Jump Interpretive Center is 1.75 miles to the south, southeast of Challis.

There are no national or state parks, or campgrounds within the planning area. There are no national, state, or private animal refuges within the planning area. The Challis Municipal Golf Course is within the service area and does provide camping / recreational vehicle camping, but no recommended improvements identified by this plan impact the Challis Municipal Golf Course.

3.2.14 Climate – Precipitation, Temperature and Prevailing Winds

The average rainfall for the Challis area is 7.38 inches in a year. Average snowfall is 17.1 inches. The average high temperature is 58 (degrees Fahrenheit) and the average low temperature is 30. The month of July is typically the warmest and the driest month, averaging 85 degrees Fahrenheit. January is typically the coldest month and June is generally the wettest month.

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TABLE
Average High Temp

Dec., Jan., Feb.	Mar, Apr, May.	June, July, Aug.	Sept, Oct, Nov.
33.3F	57.7F	81.5F	59.6F

TABLE
Average Low Temp

Dec, Jan, Feb.	Mar, Apr, May.	June, July, Aug.	Sept, Oct, Nov.
11.6F	31.4F	47.7F	30.7F

3.2.15 Air Quality & Noise

Custer County is not located in an Idaho air quality "Nonattainment Area" planning area. Construction of capital improvements as a result of this facility plan may impact air quality and create noise. Both noise and air impacts can be mitigated through application of the Idaho Standards for Public Works Construction (ISPWC) which typically specifies dust control measures and timing of construction.

3.2.16 Energy Production and Consumption

Electrical service is provided to the community by an REA utility, Snake River Electric Cooperative. The facility plan does not include any elements for electrical production.

3.2.17 Socioeconomic Profile of the Community

The population of Challis has fallen from a high of 1,073 in 1990 to 956 in 2006, an 11% decline. The population is 94.9% white, 3.9% Hispanic, 0.7% American Indian and 0.6% report two or more races. The population is 50.5% female and the median age is 41.8 years.

The most common industries in Challis are mining, quarrying, educational services, construction, accommodation and food services, agriculture, forestry, fishing and hunting, public administration, food and beverage stores. The major employers in Custer County are the Challis & Mackay Joint School District #181 & #182, Custer County, Idaho & U.S. Government (BLM, F&G, Ag), Lamb's Foodtown, The Village Inn, Thompson Creek Mining Company and Village Square

- Retail trade (33%)
- Accommodation and food services (15%)
- Public administration (9%)
- Mining, quarrying, and oil and gas extraction (8%)
- Professional, scientific, and technical services (8%)
- Finance and insurance (6%)
- Agriculture, forestry, fishing and hunting (5%)

TABLE
Service Area Employers

ITEM NO.	NAME	PRODUCT OR SERVICE	EMPLOYEES
1	Tri Pro Lumber Company	Wood Products	75
2	Challis Motel	Motel	8
3	Brant Cedar	Wood Products	6
4	JR Industries	Machine Shop	4
5	Custer Concrete	Concrete Mix	3

3.2.17.1 Assessed Property Valuations

Market values for the Tax Code Areas within the City of Challis Water District were provided by Custer County. Valuations for residents within the taxing district are listed as follows:

TAX YEAR	ASSESSED VALUATION
2000	$12,802,264
2001	$12,812,654
2002	$12,132,218
2003	$12,521,859
2004	$12,666,740
2005	$13,849,974
2006	$17,157,,118
2007	$21,235,390
2008	$20,709,337

3.2.17.2 Outstanding Bonded Indebtedness

The City of Challis has no outstanding indebtedness.

3.2.17.3 Surplus and Reserve Funds

The City of Challis records indicate the following surplus and reserve funds:

DESCRIPTION	AMOUNT IN FUND
Checking Account	$921.59
Money Market Account	$28,029.48
Savings Account	$640.47

City records indicate the following surplus and reserve funds:

DESCRIPTION	AMOUNT IN FUND
General Fund	$4,000.00

3.2.18 Maps, Site Plans, Graphics, Etc.

Please see the facility plan appendices for this information.

3.3 Existing Sources, Distribution System & Treatment

The map of the existing water system with labels for the elements described below is shown in Figure 2 in the Appendix A. Table 1 Appendix A lists the pipe diameters, lengths and hydrants in the existing system. The data source for Table 1 is the City's map, "Water Main System of Challis, Idaho". A full sized copy of this map is in Appendix D.

3.3.1 Water Sources

The City has surface and groundwater sources for drinking water. The surface water source comes from a slow sand filter treatment plant. Garden Creek supplies the treatment plant. Elevation of the treatment plant is about 5435 feet. The City uses this source from about March to December. It supplies the Old Town portion of the distribution system. The City has the water right to divert 1.58 CFS from Garden Creek and the diversion rate is regulated at the control structure on Garden Creek. Peak flow from this source is about 950 GPM. The peak flow from the treatment plant can exceed the diversion rate because diverted water creates a reservoir above the surface of the filter media. The reservoir plus the stored treated water in the clear well allows the treatment plant to meet City demands exceeding the diversion rate at Garden Creek.

The City has (4) groundwater wells of which only 2 are currently in service. The (2) wells in service are West Well #2 (WW2) and East Well (EW). Neither well supply is currently disinfected. Challis has 2.73 CFS in water right for its west and east wells. WW2 is located on the west end of town in the Garden Creek drainage at a surface elevation of about 5420 feet. WW2 derives its water from fractured basalts that this report terms "Garden Creek Aquifer System". More information about the hydrogeology of Challis' water supply can be found in "Hydrogeologic Analysis of the Water Supply for Challis, Custer County, Idaho", Bruce Otto, et. al., Idaho Geologic Survey, 2005, located in Appendix D.

WW2 ties to the West Reservoir which controls its operation. WW2 primarily supplies the upper Cyprus pressure zone during March through December when the Garden Creek source is operational. When Garden Creek is not operational, West Well 2 supplies the Old Town Distribution system though a pressure reducing valve (PRV) at Garden Creek Road. A gate valve isolates the PRV and the connection to Old Town until staff wants to

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divert flow to Old Town. WW2 is also connected to East Reservoir. The City uses the East Reservoir connection to supplement and blend WW2 water with the harder (calcium carbonate hardness) water developed form EW. Water quality data for West and East wells is located in Appendix B. Flow rate from WW2 is about 400-500 GPM. A copy of the well log for WW2 is located in Appendix B.

East Well is an alluvial well completed in what this report terms "Salmon Aquifer System". EW is located about 1 mile east of US Highway 93 in the Middle Cyprus distribution system and ties to the East Reservoir which controls its operation. Surface elevation for this source is about 5,100 feet. East Well is highly productive and supplies about 600 GPM to the system. East Well primarily serves the Middle and Lower Cyprus distribution system. Flow rate from East Well is about 600 GPM and its well log is located in Appendix B.

3.3.2 Pumping Facilities and Appurtenances

The Garden Creek surface water treatment system supplies the Old Town distribution system by gravity. The disinfection equipment uses a booster pump to create velocity for the chlorine gas injection. Flow from the treatment system is metered and has a recording chart. More details about this system are on file with IDEQ-IFRO and the latest Sanitary Survey concerning the treatment plant can be found in Appendix G.

West Well 1 (not currently operational), West Well 2, and East Well all have lineshaft turbine pumps to deliver water from the well to the distribution system, as follows[4]:

- East Well – 75 HP, 3 PH, 1770 RPM driver with FLOWAY 10-inch 9-stage pump. Metered.
- West Well 1 (not operational) – 50 HP, 3 PH, 1170 RPM driver with FLOWAY 10-inch 16-stage pump. Not metered.
- West Well 2 – 125 HP, 3 PH, 1770 RPM driver with Aurora Vertiline 10-inch, 16 stage pump. Metered with chart recorder.

None of the wells have standby power generation. All wells are metered but only West Well 2 has a recording chart. More details about the City wells and equipment is on file with IDEQ-IFRO and the latest Sanitary Survey concerning them can be found in Appendix G.

3.3.3 Storage and Distribution System

This section describes the City's existing storage facilities and provides an analysis of the storage capability to meet peak hour demand with the City's current source water production.

[4] Data supplied by Corey Rice, City of Challis Water/Wastewater Superintendant

3.3.3.1 Water Storage and Its Distribution System.

The City has two storage and distribution systems – Old Town and Cyprus. The Old Town system is the original distribution system and uses the impoundments and Clearwell at the slow sand filter treatment plant for storage. The impoundments total several million gallons in storage, and the Clearwell has about 30,000 gallons in storage. The Old Town system and the Cyprus system can be interconnected through isolation valves at Seventh, Tenth, Eleventh Streets, and at the pressure reducing station at Garden Creek Road.

The Cyprus distribution system is newer, completed in the 1980's as part of expansion project by Cyprus Mines, Ltd. Cyprus mines paid for the engineering and installation of the Cyprus distribution system which includes (2) 200,000 gallon concrete reservoirs. Both reservoirs are about 12 feet in depth. The City has named the storages West Reservoir and East Reservoir.

West Reservoir is located west of the City on a small hill top. Reservoir elevation is about 5,550 feet and supplies the upper pressure zone. West Reservoir is a back up supply to the East reservoir through a float valve located at that storage. West Reservoir supplies the Upper Cyprus and a small portion of the Mid-Cyprus pressure zones. East Reservoir is south of town and about 0.75 miles east of West Reservoir. Structure elevation is about 5,320 feet, and East Reservoir supplies the Mid Cyprus and Lower Cyprus pressure zones. See Figure 2 Appendix A for the location of these facilities

There are 2 normal operating modes for the distribution system: nominally March to December and January through February. During the March/December period, the City uses the Garden Creek surface water system, and it supplies the demands for Old Town distribution system. West Well 2, East Well, and the 2 reservoirs supply the Cyprus system. This period is the maximum consumption demand of City. The January/February period is the low demand time of the City. The City does not operate the Garden Creek source during this period. Drinking water is mainly provided by West Well 2. The City cycles East Well on occasion during low demand.

3.3.3.2 Analysis of Storage Response – Garden Creek Surface Water System

There are two factors that govern the response of the Garden Creek Surface Water System to consumptive demands from Old Town – maximum water right diversion rate to the slow sand filters and the design output of the slow sand filters. The diversion water right is 1.58 CFS[5], or an average of about 709 GPM. This right is yearlong, 24 hours per day, and has some restrictions. See documents on the City's water rights in Appendix B.

The maximum output rate of the filters is governed by the hydraulic surface loading of the filters. Typically slow sand filters are loaded between 0.015 to 0.15 gallons per minute per square foot of filter area[6]. The City is not able to produce record information about the construction of the slow sand filter beds. CH2MHill in its April 1981 Master Pan and

[5] IDAHO DEPARTMENT OF WATER RESOURCES Water Right Report 72-47. See Appendix B
[6] "Slow Sand Filtration", Tech Brief Fourteen, National Drinking Water Clearinghouse Fact Sheet, June 2000

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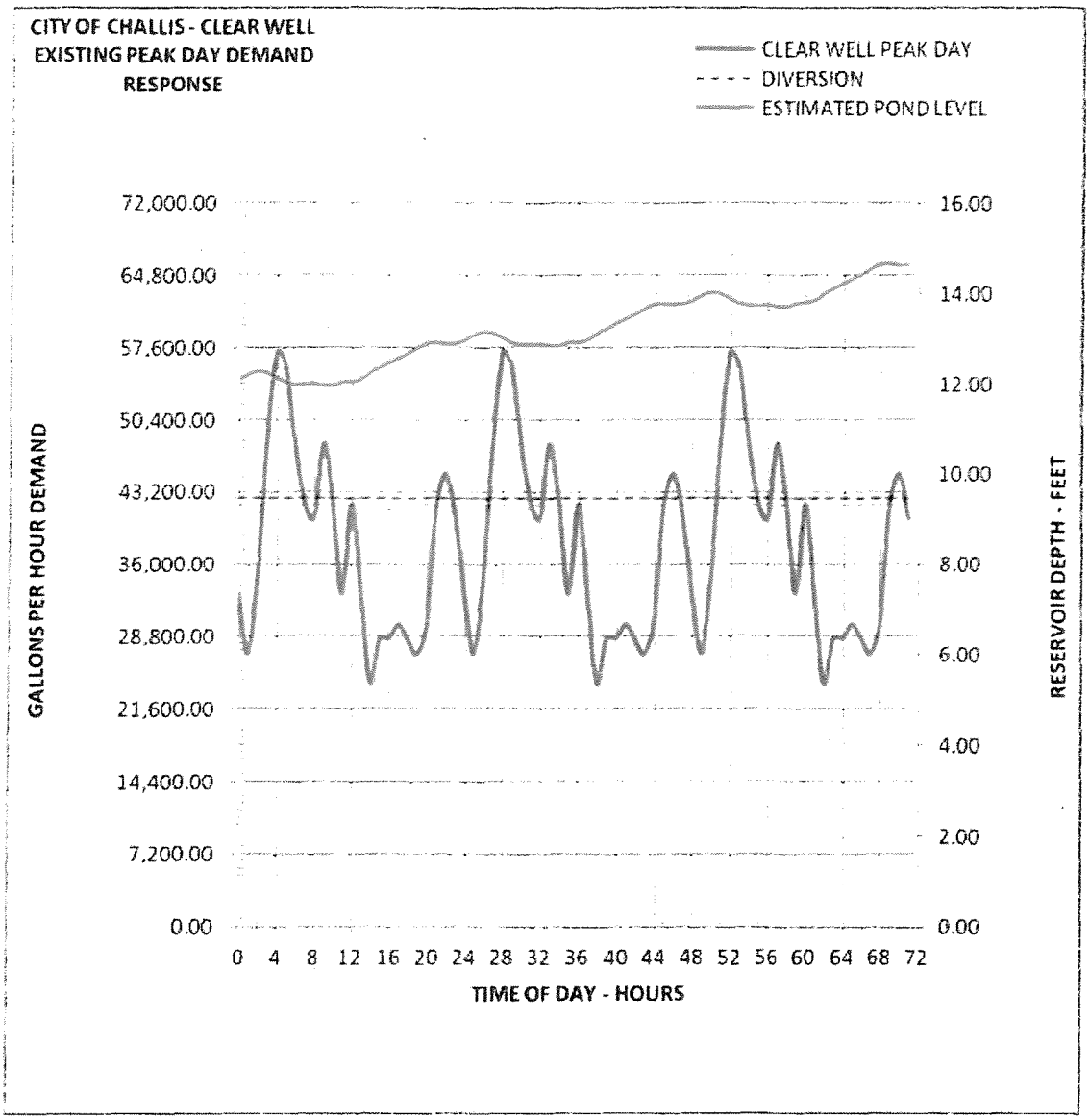
Preliminary Engineering Report states the maximum production of the filters is 1.56 MGD or an average flow of about 1,083 GPM. The peak hour/peak day demand of the Old Town System is about 950 GPM (57,000 GPH) (See Section C.1 Water Sources). The Garden Creek system has sufficient capacity to meet peak hour demand without any lowering of the water surface elevation over the filters. The graph below assumes the water depth is 12 feet:



3.3.3.3 Analysis of Storage Response – East & West Reservoirs.

The West Reservoir directly supplies the upper and a small portion of the mid Cyprus pressure zone around Summit Circle and Blue Mountain Road. West Reservoir also connects to the East Reservoir as a backup supply. Flow to the East Reservoir from West Reservoir is governed by a float valve. The proportioning of usage between West 2 and East Well to meet the total Cyprus system demand is an operational procedure managed by City staff. The East Reservoir directly supplies the lower Cyprus pressure zone and the remainder of the Mid Cyprus zone.

Table 2 in Appendix A shows how the water system connections and system Equivalent Dwelling Units(EDUs) are distributed in the Upper, Mid, and Lower Cyprus zones as well as the Old Town system. 1 EDU = 1 residential water connection based on a 5/8 x 3/4 inch meter service. Other meter sizes have different EDU values. See Appendix C for City Water Rates and Meter Sizes. A summary of Table 2 values follows below:

- Total system from Challis Rate Study - 789 Connections, 984 EDUs
- Hydraulic Model Lower Cyprus East Reservoir (LCER) – 136 residential connections, 7 commercial EDUs, total 143 EDUs
- Hydraulic Model Mid Cyprus East Reservoir (MCER) – 163 residential connections, 40 commercial EDUs, total 203 EDUs
- Hydraulic Model Old Town System (OTS) – 329 residential connections, 162 commercial EDUs, total 491 EDUs.
- Hydraulic Model Upper Cyprus West Reservoir (UCWR) – 126 residential connections, 28 commercial EDUs, total 157 EDUs.

We analyzed the performance of the City's East and West reservoirs to see if the aggregate 0.4 MG storage would be sufficient to meet the existing peak day/peak hour demand. Tables 3, 4 & 5 and their respective graphs in Appendix A show the results. The City has sufficient storage with its existing well sources to meet the peak day/peak hour demand.

3.3.3.4 Treatment facilities

The City's only water treatment facility is the Garden Creek slow sand filter and disinfection system. None of the well supplies are currently disinfected.

3.3.3.5 Current Peak Hour Water Demands – Summer & Winter – The Diurnal Curve – How It Was Generated and What It Means.

Riedesel typically uses a diurnal curve to model present and future demands and hydraulic response of the distribution system to those demands. When we have data available we generate specific curves for the system showing peak hour- peak day consumption, and low hour -low day consumption. The diurnal curve is an essential tool

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in digital hydraulic modeling of the system. The curve it tells us the critical hour to use for simulating a fire flow demand on the system.

As mentioned above only 2 of Challis' 3 currently operating sources have recording charts – Garden Creek slow sand filter (GCSSF) and West Well 2. The following summarizes the creation of the peak flow and low flow diurnal curves for Challis:

- GCSSF connects directly to the Old Town distribution system. Its flow chart represents the time delineated demand of Old Town during peak day. We searched City records for a chart showing peak demand and chose the chart for July 22, 2006.
- WW2 connects to West Reservoir and is either "On or Off". The recording chart does not directly depict a time delineated consumption pattern for this source. The chart shows the reservoir demand for water based on the level controls in the tank. We searched City records for a chart showing a peak day usage and chose the chart for July 26, 2006.
- The City manually collects flow data for East Well by observing the instantaneous flow when the operator periodically records the meter readings to calculate pumpage. The City's observations are more or less monthly. We searched City observations for a record showing peak demand and chose the record for July 26, 2006.

The year 2006 had the highest water demand in the 2005-2009 record of the City. Demand record for 2005-2009 is shown in Figure 4 Appendix A.

We created a composite diurnal curve for the City using the peak day data from all 3 sources. We assumed GCSSF chart to be representative of the entire system, Old Town and Cyprus for low flow and peak flow. We used to flow data from WW2 and East Well to scale up the GCSSF data, that is, we summed the peak day flows and then used the hourly variability of the GCSSF chart to determine the peak hour flow for a specific hour for the composite diurnal curve. For example:

- The peak day flow for the Garden Creek Slow Sand Filter is 907,500 gallons
- The flow from the chart at hour 04:00 is 950 GPM
- The GCSSF peak hour scaler for 04:00 is 950/907,500 or 0.00105 (rounded) GPM/GPD
- The product of total composite flow multiplied by the scaler is the composite peak hour flow for 04:00 – 0.00105 (rounded) GPM/GPD X 1,862,150 GPD = 1,949.36 GPM

We assumed the GCSSF chart to be representative of the system during the wintertime low flows when the filter is not operational. We used the records from WW2 and East Well to scale down the GCSSF data in the same manner described above. Copies of the data are located in Appendix B. The following tables summarize the City's peak hour-peak and low flow diurnal curve for the year 2010. The graph of the composite curve, showing peak day and low day is shown in Figure 3, Appendix A.

CITY OF CHALLIS - PEAK DAY SUMMARY

SOURCE	PEAK HOUR	PEAK HOUR GPM	GPD FROM SOURCE	% OF COMPOSITE	COMPOSITE GPD
GCSSF	4:00 AM	950	907,500	48.7%	1,862,150
WW2	N/A – SUPPLIES WEST RESERVOIR. "ON OR OFF".	*410 *PEAK FLOW FROM CHART	448,950	24.1%	1,862,150
EAST WELL	N/A – SUPPLIES EAST RESERVOIR. "ON OR OFF".	*507 *OBSERVED AT TIME OF DATA GATHERING	505,700	27.2%	1,862,150
TOTALS			1,862,150	100%	

CITY OF CHALLIS - LOW DAY SUMMARY

SOURCE	PEAK HOUR	PEAK HOUR GPM	GPD FROM SOURCE	% OF COMPOSITE	COMPOSITE GPD
GCSSF	N/A	N/A	0	0	279,100
WW2	N/A – SUPPLIES WEST RESERVOIR. "ON OR OFF".		215,100	77%	279,100
EAST WELL	N/A – SUPPLIES EAST RESERVOIR. "ON OR OFF".		64,000	23%	279,100
TOTALS			279,100	100%	

Some observations:

a.) Composite Curve. The peak day/peak hour diurnal curve is a composite based on both operational experience from City staff and peak flow data we collected. Other combinations of flow data from the 3 sources collected on different dates could produce other conclusions about peak and peak hour flows.

b.) Irrigation and Potable Consumption. The peak day flow composite represents source water input into the water system. It includes potable consumption, irrigation, potential leaks, etc., for both residential and commercial connections.

c.) Composite vs. Actual Diurnal Curve. There are several ways this composite curve differs from what a typical municipal curve looks like. First, the curve is more quad-urnal than diurnal, in that is it has 4 distinct peak hour flows instead of 2. Second, the peak hour, 04:00 is about 3-4 hours earlier than typical[7]. The same skew applies to the 4th peak occurring at about 22:00 hours. Third, neither the peak hour flow nor the low flow ever reaches or approaches 0 GPM flow during the 24-hour period. One would expect such a drop in demand in a metered distribution system with minimum leakage and minimal unaccounted water[8]. The lowest value for the low flow day is about 123 GPM at 14:00 hours.

[7] Residential End Uses of Water, Figure ES.4, page xxxi & Figure 5.21, page 125. William B. DeOreo et.al, AWWA Research Foundation and American Water Works Association, 1999.
[8] Ibid.

The lowest value for the peak day is about 821 GPM at 14:00 hours. The lowest value from the GCSSF curve from which these flow values are based is 400 GPM at 14:00 hours. Typically, the difference between the ideal approaching zero demand and the low flow shown on a diurnal curve is caused by a combination of leaks, other lost water, irrigation, and data accuracy. The City of Challis sits atop a highly permeable alluvial fan which affects the ability of the City to detect a leak because it does not surface, and creates a high irrigation demand to maintain landscaping. Challis has vigorously pursued system leaks, and the historical decline in water use in the period from 2005 to 2009 reflects this effort. See Figure 4 Appendix A. Both the City and Idaho Rural Water consider lost water and leaks to be no more than about 4% of the total daily flow[9]. We estimate the low flow from the GCSSF chart to be representative of actual summertime peak day irrigation demand. Based on the data available, the curve is our representation of time delineated flows in the system at peak day demand.

The main purpose of creating a time delineated flow for the City is to determine the timing of the peak hour and the flow probably occurring at that time. We time the occurrence of a fire flow demand in the digital hydraulic model at that peak hour to simulate the worst-case stress on the system when responding to a fire. Determining how Challis meets the regulatory requirements of fighting a fire is one of the goals of this facility plan. The composite curve provides the critical hour and the system flow at that time.

We estimated Challis 2010 population at 906 persons, and the composite peak hour demand totals about 2,055 gallons/capita/per day (GPCD). There are about 984 existing EDUs. Demand per EDU is 1,892 gallons per day. The peak hour demand includes potable consumption, commercial use, and irrigation. Figure 4 shows a plot of yearly water use from 2005 to 2009 for each of the 3 sources based on City records[10]. Figure 5 plots total water use with population and average GPCD consumption for the same period. Average percapita consumption for this period is 644 gallons per day, with a high use in 2005 of 713 GPCD and a low use in 2009 of 581 GPCD. Typical water system peaking factors that estimate peak hour flow from average flow range from about 2 to 4. Using "10 States"[11] formula to estimate a peaking factor yields an average factor of 3.84 based on the population for the period of 2005-2009. The product of the 2005 average percapita demand multiplied by the peaking factor yields a peak flow of 2,738 GPCD. Using the factor and the low flow from year 2009, the peak flow is 2,231 GPCD.

3.3.3.6 Cross Connection Control

The City of Challis has a cross connection ordinance. A copy is included in Appendix B.

3.3.3.7 Most Recent Sanitary Survey

[9] Conversation with Bill Hayes, Idaho Rural Water Circuit Rider and author of the 2011 Water Rate Study for Challis, and Corey Rice, City of Challis Water/Wastewater Superintendant

[10] Note – 2009 is a projection.

[11] "Recommended Standards for Wastewater Facilities" – 2004 Edition, page 10-6, Figure 1. Note – the chart source is not specific to wastewater estimation.

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The most recent Sanitary Survey of the City, performed by IDEQ-IFRO is dated August 5, 2009. The survey did not identify any significant deficiencies or any deficiencies in general. Comments include:

- ***Groundwater Source*** *- "The pump distribution line for West Well #1 & #2 and East Well #1 do not provide the necessary valves and appurtenances to allow the well to be pumped to waste at the design capacity of the well via an approved air gap at a location prior to the first service connection, as required by IDAPA 58.01.08.511.02."*
- ***Groundwater Source*** *– "The pump distribution line for West Well #1 does not provide an instantaneous and totalizing flow meter equipped with nonvolatile memory pursuant to IDAPA 58.01.08.511.04. The Department has deemed a flow meter to be unnecessary for West Well #1 at this time. The requirement of a flow meter will be reevaluated every time an ESS is conducted.* ***(No Action Required)".***
- ***Distribution*** *– "There are fire hydrants provided that are connected to water mains smaller than six (6) inches in diameter, which is not in accordance with IDAPA 58.01.08.542.06."*
- ***Pumping*** *– "There is no auxiliary power on-site for West Well #1 & #2 and East Well #1 as required by IDAPA 58.01.08.501.07. According to the operator, the power outages experienced by the system are of minimal frequency and duration that auxiliary power will not be required. The need for auxiliary power on-site will be reevaluated every time an ESS is conducted.* ***(No action required at this time)".***

The alternatives presented later in this report address fire hydrants and standby generation plants at the proposed new wells. The Sanitary Survey is included in Appendix G.

3.4 Drinking Water Quality

The City of Challis is in compliance with all drinking water quality rules. Copies of test reports can be found in Appendix B. There are some quality concerns in developing additional ground water supplies in the Salmon Aquifer System (SAS). The groundwater from these wells is harder than groundwater from the Garden Creek Aquifer System (GCAS). Recent test reports for hardness and related analytes are also in Appendix B. The following table summarizes the most recent tests:

WELL	SOURCE	HARDNESS MG/L	TDS MG/L	pH
WEST WELL 1	GCAS	70.7	213	7.61
WEST WELL 2	GCAS	65.9	213	7.77
EAST WELL	SAS	108	246	7.58
CHALLIS AIRPORT	SAS	112	226	7.35
BUTTS SUBDIVISION	SAS	92.7	220	7.23

The City of Challis blends groundwater from East Well with West Well 2 water in the East Reservoir to mitigate the hardness for its customers.

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3.5 Hydraulic Analysis of Existing Conditions

Riedesel created a hydraulic model of the City's distribution system, water sources, and storage tanks using Innovyze® (formerly MWH Soft®) H2OMAP Water 9.6 (H2OMAP), Update #4. Hydraulic data used in the existing system model are located in Appendix F. The model is un-calibrated and is suitable for facility planning. If and when the City proceeds to a design phase, the model should be calibrated to confirm the design. The model simulates the performance the drinking water system at peak day demand and demonstrates the pressure effects under peak day demand for fire flow. The model is based on the following data:

- Water Main System of Challis, Idaho - Mountain River Engineering, September, 1995. The map shows the location of pipes in the system and their respective diameters and age; location of pressure reducing valves; location of fire hydrants; key isolation valves; and operational notes. Riedesel created a *.TIFF of this map, overlaid upon a Google Earth Pro ©2010 image, and scaled it to match the Google Earth image. The scaled image provided the pipe lengths used for model. We made a *.DXF of the map pipe network and imported this *.DXF into the H2OMAP program giving the model the correct spatial representation of the system. Please see Table 1 Appendix A for a summary of the existing pipelines in the distribution system.
- Composite Diurnal Curve. The composite diurnal curve created for this facility is discussed in detail in a previous section. The curve informs the hydraulic model about the time delineated demands in the system, that is the total peak hour demand for the peak day and how that total is distributed by hour for the peak day. Please see Figure 3 Appendix A for the composite existing system diurnal curve.
- Nodes and Node Demand Loading. Model nodes are pipeline junctions, hydrant locations, or other specific points of interest in a pipeline run. The model uses these nodes to represent how the total peak day demand is distributed over the City. In the case of fire flow simulations, we loaded the existing fire hydrant locations with the design fire requirements. City staff provided guidance where a cluster of water services might be represented by a demand node in the model. We loaded these demand nodes with their pro rata share of the total peak day flow based on the number of connections represented by the node. The existing system model has 195 demand nodes, 86 of which represent fire hydrants.
- Node Elevations. We used Google Earth Pro ©2010 (GEP) to determine node elevations for the model. The GEP image dates from June, 2009.
- Hazen Williams Friction Factor. We used a Hazen's factor (C) of 120 for all existing pipes in the system, and C of 130 for all new pipes.

3.5.1 Existing System Peak Hour Simulations

The model includes the operation of the Garden Creek Slow Sand Filter, West Well 2, East Well, the two 0.2MG storage reservoirs, and 2 existing pressure reducing valve stations. A copy of the modeling output of the existing system model is shown in Table 4 Appendix A. The modeling simulations predict the following:

- The existing distribution system can meet the existing peak hour demand and stay within the guidelines of IDAPA 58.01.552.01.b.ii, even with extensive quantities of old 4-inch mains. For the most part the distribution system is effectively looped.
- There are some areas where the static and dynamic pressures exceed the requirements of IDAPA 58.01.552.01.b.iii.
- East and West Reservoirs have sufficient volume coupled with the performance of East and West Well 2 to meet equalization requirements for peak day/peak hour demand.

A complete set of data for the model's existing system peak day demand can be found in Appendix F.

3.5.2 Existing System Fire Flow Demand at Peak Hour Simulations

The official empowered to determine the design fire criteria for the City is Launna Gunderson, Chief, North Custer Rural Fire District. Chief Gunderson selected the minimum required fire flow and duration - 1,500 GPM for 2-hour duration[12]. The design fire requires either equalization storage of 180,000 gallons or source(s) that can provide peak day flow and 1,500 GPM. Challis' (3) water sources do not have peak hour and fire flow capacity. The City's 2 reservoirs impound 400,000 gallons and have sufficient fire storage. Fire storage is 180,000 gallons.

Chief Gunderson expressed concerns about Challis' existing distribution system that limits the District's ability to fight a fire. Those concerns are:

1. There are many pipelines that were not replaced in the most recent water project (circa 1980). These are primarily the 4-inch lines in the Old Town distribution system.
2. There are fire hydrants connected to 4-inch lines.
3. Some of the hydrants (Pacific States) are not operational and some will not close again if opened.
4. Hydrant spacing is greater than current standards. Current standards[13] are summarized as follows:

[12] 2009 International Fire Code, Copyright © 2009 by International Code Council, Inc., Appendix A, Table B105.1
[13] 2009 International Fire Code, Copyright © 2009 by International Code Council, Inc., Appendix B, Table C105.1

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- Minimum number of hydrants - 1
- Average spacing between hydrants – 500 feet
- Maximum distance from any point on street or road frontage to a hydrant – 250 feet

The existing system composite diurnal curve shows the peak hour of the peak day to be 04:00 hours. The H2OMAP performs a comprehensive fire flow analysis at the determined peak day-peak hour using the data from the existing system model and the assigned fire demand nodes. A copy of the output report is in Appendix F. A copy of the existing system operating at peak day-peak hour demand with fire flow demand is shown in Figure 6 Appendix A. The modeling simulations predict the following:

- The existing distribution system cannot meet the existing peak hour demand with the design fire criteria and stay within the guidelines of IDAPA 58.01.552.01.b. i. Figure 6 Appendix A shows that intensely looped old 4-inch mains can meet the design fire requirements. It is the peripheral nodes that fail the demand.
- With the exception of 2 dead end nodes, the maximum compliant fire flow the existing system can provide is 500 GPM. Please see Figure 7 Appendix A.

A complete set of data for the model's existing system peak day demand with fire flow can be found in Appendix F.

3.6 Violations and Compliance Issues

The City is not operating under any violation or compliance issues. A copy of the latest sanitary survey is included in Appendix G.

3.7 User Charges and Operations Budget

Challis has changed its schedule for water and sewer rates. The new schedule takes place in October, 2011. A copy of new fiscal year budget, rates, and rate ordinance are in Appendix C.

3.8 Pressure Zone and Problems

The Idaho Administrative Procedures Act (IDAPA) establishes rules for public drinking water systems in IDAPA 58.01.08. Section 552.01.b addresses minimum and maximum distribution system pressures. In general, these pressures are:

- Minimum of 20 PSI during peak hour demand including fire flow demand (58.01.08.552.01.b.i)
- Minimum of 40 PSI during peak hour demand excluding fire flow (58.01.08.552.01.b.v)
- Ordinary maximum static pressure of 80 PSI (58.01.08.552.01.b.vi)
- Controlling pressures above 100 PSI with pressure reducing devices (58.01.08.552.01.b.vi)

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Low system pressure can cause back-siphonage of materials into the drinking water system that are harmful to the health and safety of the public. High system pressures increases overall water consumption, increases leaks and the amount of water loss from leaks in the system, increases wear on valves and fittings, and increases the stress of pressure transients on pipelines and appurtenances.

The distribution system of the City of Challis has 4 pressure areas – Old Town, Upper Cyprus, Middle Cyprus and Lower Cyprus. Figure 8 Appendix A shows the existing pressure areas, pressure contours during peak day peak hour flow, and the location of specific junctions that are discussed below.

The clear well at the Garden Creek Slow Sand Filter sets the maximum hydraulic grade line for the Old Town System at about 5,425 feet elevation. The lowest model node (J580 - Safe Haven) in this system is about 5,142 feet elevation. Static head at this node is about 283 feet, or about 123 PSI. The City does not have any pressure reducing valves in the Old Town distribution system and it is effectively one pressure zone. Hydraulic modeling indicates the Old Town System meets the 40 PSI minimum pressure during peak hour demand. The Old Town distribution system does not meet the IDAPA rules for maximum unregulated system static pressure.

The hydraulic gradeline for the Upper Cyprus System (UCS) is set by the West Reservoir. Elevation at the West Reservoir is about 5,550 feet. Isolation valves separate UCS from the middle and lower systems and from the Old Town System. UCS is (1) pressure zone. The elevation of the lowest node in the UCS is about 5,193 feet (J314 – BLM). Static head at this node is about 357 feet, or about 155 PSI. Hydraulic modeling indicates the UCS meets the 40 PSI minimum pressure during peak hour demand. UCS distribution system does not meet the IDAPA rules for maximum unregulated system static pressure.

The hydraulic gradeline for the Middle Cyprus System (MCS) is set by the East Reservoir. Elevation at the East Reservoir is about 5,320 feet. Isolation and pressure reducing valves separate MCS from the upper and lower systems. Isolation valves also separate the MCS from the Old Town System. MCS is (1) pressure zone. The elevation of the lowest node in the MCS is about 5,100 feet (J182 – Valley RV). Static head at this node is about 220 feet, or about 95 PSI. Hydraulic modeling indicates the MCS meets the 40 PSI minimum pressure during peak hour demand. MCS distribution system meets the IDAPA rules for maximum unregulated system static pressure.

The hydraulic gradeline for the Lower Cyprus System (LCS) is set by pressure reducing valves on Apex Lane and in the vicinity of Bayhorse and Ramshorn. We estimate the elevation of these valves to be about 5,100 feet. The downstream setting of these valves is about 50 PSI. The hydraulic gradeline at these settings is about 5,216 feet. LCS is (1) pressure zone. The elevation of the lowest node in the LCS is about 5,026 feet (J150 FH39). Estimated static head at this node is about 190 feet, or about 82 PSI. Hydraulic modeling indicates the LCS meets the 40 PSI minimum pressure during peak hour demand. LCS meets the IDAPA rules for maximum unregulated system static pressure.

The alternatives developed in this facility plan address the over-pressure issue with the Old Town and Upper Cyprus distribution systems.

3.9 Defects and Deficiencies

The most recent Sanitary Survey of the City, performed by IDEQ-IFRO is dated August 5, 2009. The survey did not identify any significant deficiencies or any deficiencies in general. See Section 3.3.3.6.

Based on our hydraulic modeling of the existing system we add over-pressuring in the Upper and Old Town distribution systems as a defect. In our modeling of Future Conditions we create 4 pressure zones for the entire distribution system.

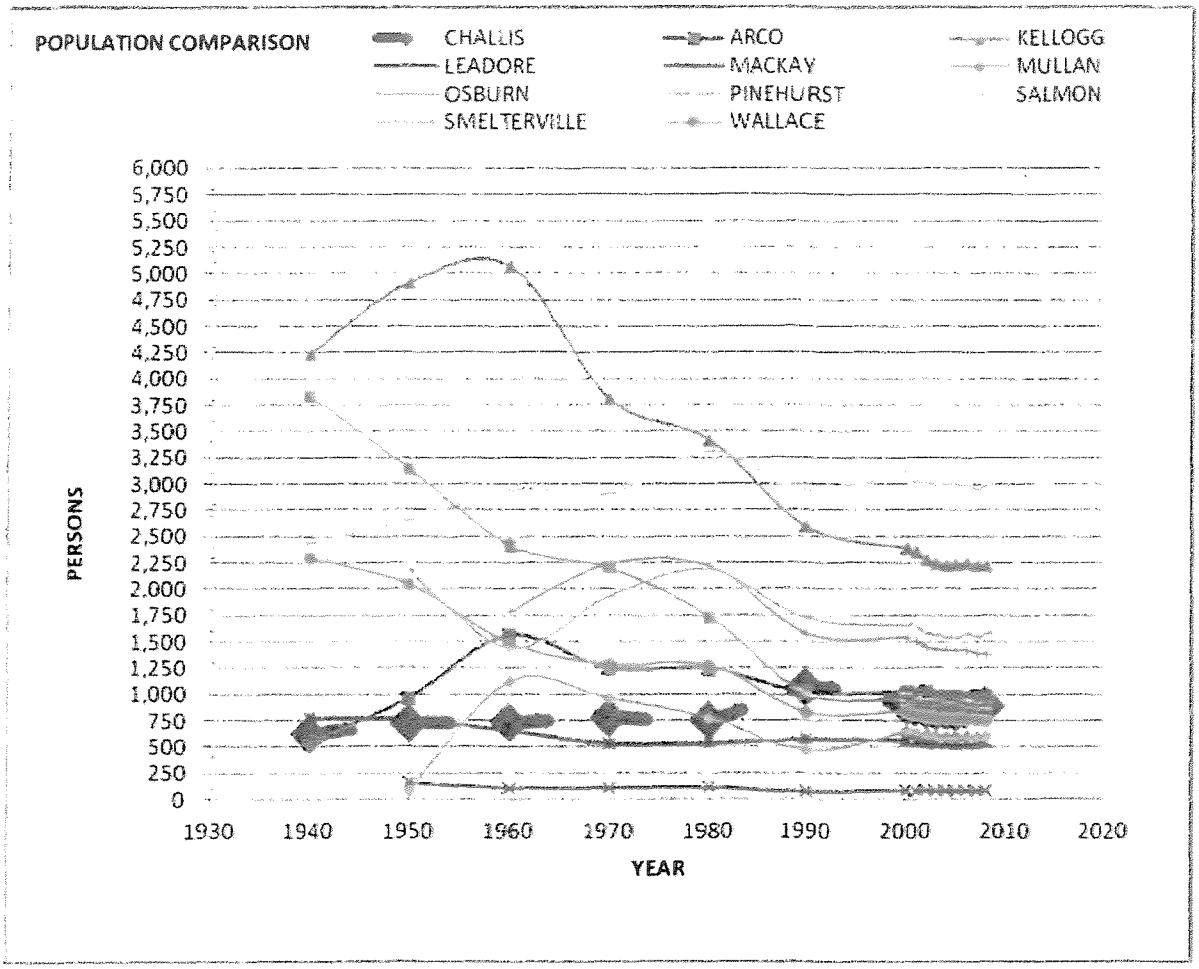
3.10 Other - None

4 FUTURE CONDITIONS

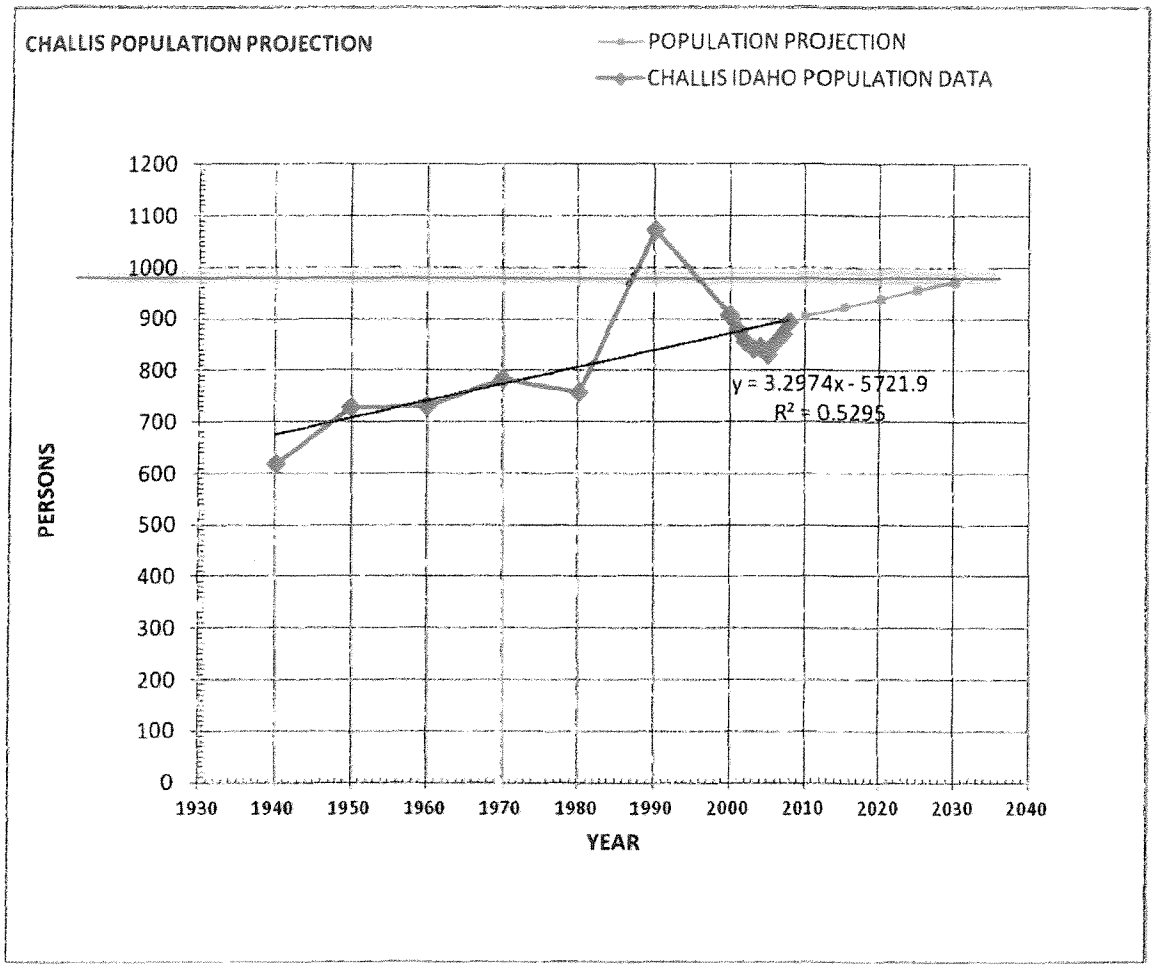
4.1 Future Growth and 20-year planning horizon

We used 2 methods to estimate a 20-year population for the City of Challis (Year 2030) – a statistical curve fitting procedure using population data from the Idaho Department of Commerce (IDC) and historical data coupled with an estimate of the City's service requirements within its City limits.

Statistical Curve Fitting. The economy and population of Challis is based on resource extraction and like many other Cities in Idaho and especially Northern Idaho, Challis' population follows a "boom/bust" cycle. The figure below compares the populations of Challis with 10 other communities. Most of these communities experienced population gains in the decade starting from 1970 to 1980. Challis' peak population occurred about 1990.



The graph below shows the same data but for Challis only. The population rises from 1980 and peaks at 1990 and then declines to year 2000. The latest data from IDC is for the year 2008 and the points beyond that year are extrapolations based on a linear curve fit to IDC data. The 2008 population is 896 persons. The year 2000 population is 907 persons. Projected 2010 population is 906 persons.



The population projection for year 2030 is 972 persons. Our initial hydraulic modeling for future conditions was based on 972 persons for the year 2030. Table 5 Appendix A shows population data.

Historical – Service Obligation. The statistical projection has shortcomings. First it doesn't accommodate well the nature of a resource based economy and the potential municipal service obligations it creates. The 1990 population peak demonstrates this. Second, it doesn't account for the City's service obligation to serve platted existing residential and commercial lots within the current City limits. When these lots develop (or re-develop) the City must provide water service. At the present time, this service obligation is an implicit demand on Challis' source water supplies and distribution system.

We consulted with City staff to better understand this implicit obligation, and determined the best representation would be a design population of 1,250 persons. 1,250 persons was the peak population for the City when the Cyprus Mines project was in full development. The Cyprus Mines project constructed the road, water and sewer system

infrastructure for the City to meet the demand. In conjunction with City staff and Council, we accepted 1,250 persons to be 2030 year design horizon and subsequently hydraulically remodeled the City for this projection. All of the initial and final alternatives discussed in this report are based on a design population of 1,250 persons.

4.2 Forecast of Demand

In Section II.C.5 we discussed the creation of the composite diurnal curve and the existing peak hour and flow day demand. We use the same composite diurnal curve to project 2030 year demands with a population of 1,250 persons. We scaled the 2030 year demand using a peak day percapita consumption of 2,056 gallons. Since the City has been metered since the 1980s, we do not expect any reduction in the percapita demand based solely on the presence of meters. The City may experience some percapita reduction if it chooses re-meter the system with "automated read" (AMR) type equipment. AMR equipment will allow the City to read (instead of estimating flows) meters every month through the year. Better accounting of water use and increased water rates could create reductions in consumption. The City is instituting a new rate schedule. The rate schedule will escalate if the City decides to pursue a capital project.

There are some assumptions in doing this projection:

1. The peak hour demands shown by the existing composite diurnal curve will be representative of the design year 2030. For instance - discussions with staff and Bill Hayes[14] indicate the 04:00 and 22:00 hour peaks are representative of the shift changes at the mine. The patterns could change with expansion/contraction of this industry, or with the development of new industries in the City.
2. The proportion of residential/commercial/irrigation components of the City's potable consumption remains consistent with current usage. Expansion of the commercial sector in respect to residential demand changes overall per lot demand, and the estimated percapita demand.
3. The population projection is predicative of the design year. Population projections were discussed in the previous section.
4. There are no significant water conservation programs to diminish peak hour demand.

Figure 3 Appendix A shows the composite diurnal curve showing existing year and year 2030 peak hour demands.

In Section II.C.5 we estimated existing peak hour flow at about 1,950 gallons per minute (GPM) and peak day at 1.86 million gallons (MG). For the design year 2030, projected peak hour flow is about 2,700 GPM and peak day is about 2.57 MG.

[14] Conversation with Bill Hayes, Idaho Rural Water Circuit Rider and author of the 2011 Water Rate Study for Challis, and Corey Rice, City of Challis Water/Wastewater Superintendant

4.3 Needed Drinking Water Facilities for 20-year horizon

This section identifies general improvements needed for the City to meet a design population of 1,250 persons by the year 2030. At the outset, we categorized the areas in which these improvements were to occur. The categories are: Distribution System, Source Water; Storage, Metering, and Telemetry.

	FACILITY	NEEDED	DISCUSSION
1	Source Water - Water Rights	*Y*	The City currently has groundwater and surface water rights. These rights total 2.79 million gallon per day (MGD). Projected year 2030 demand is 2.57 MGD. Note – Change to 100% groundwater source will require new groundwater right.
2	Source Water - Increased Source Water Production	*Y*	The City does not have enough groundwater capacity from its 2 operating sources to meet year 2030 demands. One of the goals of this plan to for the City to develop enough groundwater right to cease dependence on the Garden Creek Slow Sand Filter.
3	Storage - Increased Water Storage	*N*	The City has a total of 0.4 million gallons (MG) of storage. Modeling of source water production with peak hour flow and fire flow indicate the City has adequate storage.
4	Distribution System – Transmission Improvements	*Y*	The extent of distribution system improvements depends of the specific project chosen by the City. In general, improvements are targeted to eliminate pipeline dead ends, ageing 4-inch and other pipes, conveying water to new developments within the City limits, and conveying water to newly annexed areas.
5	Distribution System – Fire Fighting	*Y*	The City's existing 4-inch lines will not convey the year 2030 demand. The City will need additional hydrants to improve hydrant spacing, and new hydrants along transmission line expansions.
6	Distribution System – Pressure Zones	*Y*	The City needs to improve its pressure zones to meet IDAPA. The City will need (4) formal pressure zones when it switches to all groundwater supply.
7	Distribution System – System Expansion	*Y*	The City desires to extend water service and fire flow capability to the airport and annex the Butts subdivision. Service line extension to the airport will enhance commercial development along the US 93 strip, from the City of Challis to the airport.
8	Metering	*Y*	The City was metered in its 1980s project. The meters are aging, probably are not within AWWA accuracy ranges, and some are not operational. Manual read meters represent a significant labor commitment that can be recovered by AMR equipment. New meters with increased accuracy, ability to read year round could realize increased revenues and/or reduction in consumption.
9	Telemetry	*Y*	The currently uses some basic supervisory control but it not robust. A fully developed telemetry/SCADA system will allow monitoring of key elements with enhanced alarm and notification features. Telemetry/ SCADA can allow remote operator access to assess threats and respond to problems and alarms without physically visiting the site.

The improvements vary according to the planning alternative the City chooses to pursue. Specific improvements, their respective design lives, project costs, and Equivalent Uniform Annual Cost (EUAC) determinations are presented in detail in Section VI – Selected Alternative Description and Implementation Arrangements.

EXHIBIT "A"

4.4 Future Conditions without Proposed Improvements

The City Council determined that the design population for the facility plan would be 1,250 persons for the design year 2030. The Council also created 11 criteria or goals it would use to evaluate a potential capital improvement project. This section evaluates those criteria if the City does not proceed to implement improvements. Note: the City does not need to proceed with a capital project because of a compliance issue with the State of Idaho. The 11 criteria and their evaluation are as follows:

1. Provide for City Fire Protection
   - The City cannot meet the design fire flow and pressure requirements without making improvements to the existing distribution system.
   - The City cannot expand its distribution system and have it meet the design fire flow and pressure requirements without making improvements to the existing distribution system and designing the expansion to meet fire flow requirements.
   - Inability to provide the minimum design fire requirements could limit the economic attractiveness of the community for either business start-ups or business relocation
   - Inability to provide the minimum design fire requirements increases fire insurance rates.
   - Criteria #1 is not attainable without a capital improvement project and the City could be liable for its inability to meet the minimum design fire requirements
2. Provide for Airport Fire Protection
   - The existing well and pump system at the airport cannot meet the design fire requirements.
   - Inability to provide the minimum design fire requirements could limit the economic attractiveness of the community for either business start-ups or business relocation
   - Inability to provide the minimum design fire requirements increases fire insurance rates.
   - Criteria #2 is not attainable without a capital improvement project.
3. Meet Development and Growth Needs
   - To meet future development and growth needs the City must expand its distribution system and increase its volume of drinking water. Future development includes both "in-fill" projects within the City limits, and expansion to future areas of annexation.
   - In a sense, City service expansion is a regionalization strategy that would incorporate and improve substandard water and sewer systems with corresponding improvements to the Round Valley environment.
   - Criteria #3 is not attainable without a capital improvement project.
4. Recovers Labor from the Slow Sand Filter

- Continuing dependence on the Garden Creek surface water source and treatment will create increased labor and staff expense because of inflationary factors and increased treatment level mandates.
- Criteria #4 is not attainable without a capital improvement project.

5. Maintain or Improve Source Water Quality & Safety
   - The surface water supply for the slow sand filter comes from an unprotected watershed. The City does not have the financial means to litigate violators in the watershed in order to protect its influent water quality. Recent testing has revealed increased levels of E.coli bacteria in Garden Creek upstream of the treatment plant. We assume there is also an increase in nitrates in the water source as well. Continued use of this surface water supply without improved treatment providing multiple barriers to contaminants jeopardizes health and safety of the Old Town users of the source.
   - Development of groundwater sources is an attractive alternative to enhanced surface water treatment.
   - The safety of the Garden Creek system cannot be improved nor can new groundwater sources be developed without a capital project.
   - Criteria #5 is not attainable without a capital improvement project.
6. Controls or Minimizes Future Costs
   - System improvements re-establish the life cycle of aged infrastructure. It replaces and minimizes, at least initially, repairs. Repairs escalate over time as equipment degrades. Capital improvements are required to have new operation and maintenance manuals that detail ways to keep equipment functioning properly. New equipment and proper maintenance controls and minimizes future costs.
   - Time value of money calculations generally favors "doing it now" versus "doing it later" strategies.
   - Incorporating technology, such as AMR meters and telemetry, adds complexity but minimizes operational costs.
   - Criteria #6 is not attainable without a capital improvement project.
7. Is the Water Source or Treatment Reliable for Quality
   - Concerns about continuing reliance on the surface water source for the City has been discussed above and is relevant here as well.
   - Criteria #7 cannot be addressed without a capital improvement project.
8. Is the Water Source Reliable for Amount
   - The City has sufficient water right to meet the drinking water demands of the design year if the City does not undertake an improvement project.
   - The yearly production of the groundwater and surface water sources themselves can vary and have done so historically.
   - The City needs to recapture the lost production of West Well 1 to meet the design year demand.
   - Criteria #7 cannot be addressed without a capital improvement project.
9. Provides Minimum Pipe Sizes for Fire Protection
   - The City has old 4-inch pipes and hydrants tied to them. Criteria #9 cannot be met without a capital improvement project

10. Maintains or Improves the Reliability of the System Components
    - System improvements re-establish the life cycle of aged infrastructure. It replaces and minimizes, at least initially, repairs. Repairs escalate over time as equipment degrades. Capital improvements are required to have new operation and maintenance manuals that detail ways to keep equipment functioning properly. New equipment and proper maintenance controls and minimizes future costs.
    - Time value of money calculations generally favors "doing it now" versus "doing it later" strategies.
    - Incorporating technology, such as AMR meters and telemetry, adds complexity but minimizes operational costs.
    - Criteria #10 is not attainable without a capital improvement project.
11. Provides for Redundancy and Emergency Isolation of the System
    - The City's water supply uses surface water and wells tapping 2 different aquifer systems. The City's sources are redundant.
    - The supply to the Old Town pressure zone can be back fed by the Cyprus system. The Old Town pressure zone supply is redundant.
    - The Upper Cyprus pressure zone is not redundant. There is insufficient head to supply West Reservoir from the Garden Creek Slow Sand Filter. The East Well pump does not have sufficient head to supply West Reservoir, even if the distribution system had the necessary valving to make the connection.
    - The Middle and Lower Cyprus pressure zones can be supplied from the Old Town and Upper Cyprus zones. The Middle and Lower zones have redundant sources.
    - All of the zones can be isolated with existing valving, but isolating the Middle Cyprus zone requires modification to East Well controls to allow East Well to continue supply the Lower Cyprus zone.
    - Criteria #11 is not fully attainable without a capital improvement project.

4.5 Land Use Plans for Existing & Future Drinking Water Facilities

The City's existing water facilities include: Old Town and Cyprus distribution systems, Garden Creek Slow Sand Filter and Clearwell; West Well 1&2, West Reservoir, East Reservoir, and East Well. The City owns the land for the GCSSF, West and East Reservoirs, both West Wells, and the site for East Well. The distribution systems are located in the public roadways or within dedicated easements and/or rights-of-way.

Where possible, future source water facilities such as new wells will be sited on existing City property. Expansion of the distribution system into unincorporated areas will require new easements when public roadways and rights-of-way are not available for pipelines. We anticipate that the City will have to cross US 93 in at least 2 locations for new transmission lines. Idaho Transportation Department (ITD) will probably require directional boring under the highway for utility extensions

4.6 Hydraulic Analysis of Future Conditions

In Section IV.B we forecasted the demand for the design year based on a population of 1,250 persons and Figure 3 Appendix A shows a diurnal curve estimating the peak day/peak hour consumption. Hydraulic modeling uses this diurnal curve along with the placement of demands within the distribution system to predict the response of the system to the peak day/peak hour demand and the peak day/peak hour demand with a design fire demand. The future hydraulic model is based on the level of service the City wishes to provide and the area it wishes to serve. We worked with the City through a variety of different levels of service and service areas until Council selected an alternative. The selection process and the selected alternatives are discussed in the following sections. The future hydraulic model for the selected alternative is located in Appendix F.

5 DEVELOPMENT AND INITIAL SCREENING OF ALTERNATIVES

5.1 Description of Compliance Issues, Problems & Deficiencies

5.1.1 DEFINITIONS

This section will use the following definitions:

Compliance Issue – A possible or current decree or order to the water system by agency or agencies with jurisdiction to correct an identified condition affecting the health and safety of the public.

Problem – A condition of the water system that does not immediately affect the health and safety of the public. An example of a problem could be a missing hydrant port cover or a line valve that is difficult to operate. A problem may or may not be an item identified by a sanitary survey.

Deficiency – A deficiency is a problem that detracts from the optimal operation or management of the water system but does not concern the health and safety of the public.

IDAPA 58.01.08.003.113 Significant Deficiency. As identified during a sanitary survey, any defect in a system's design, operation, maintenance, or administration, as well as any failure or malfunction of any system component, that the Department or its agent determines to cause, or have potential to cause, risk to health or safety, or that could affect the reliable delivery of safe drinking water.

5.1.2 GENERAL

The last water facility planning study for the City of Challis, Idaho was completed in 1981. Since then the City has been able to meet minimum water quality standards without compliance issues. The latest sanitary survey of the system was performed in 2009 and

the text of the document is located in Appendix G. The survey found no significant deficiencies and no deficiencies.

5.2 Description of Problems/Deficiencies

The City and the facility plan have identified the following needs to respond to future problems and the issues identified in the sanitary survey. These needs are the driving force for capital projects identified in later sections:

	FACILITY	NEEDED	DISCUSSION
1	Source Water - Water Rights	*Y*	The City currently has groundwater and surface water rights. These rights total 2.79 million gallon per day (MGD). Projected year 2030 demand is 2.57 MGD. Note – Change to 100% groundwater source will require new groundwater right.
2	Source Water - Increased Source Water Production	*Y*	The City does not have enough groundwater capacity from its 2 operating sources to meet year 2030 demands. One of the goals of this plan to for the City to develop enough groundwater right to cease dependence on the Garden Creek Slow Sand Filter.
3	Storage - Increased Water Storage	*N*	The City has a total of 0.4 million gallons (MG) of storage. Modeling of source water production with peak hour flow and fire flow indicate the City has adequate storage.
4	Distribution System – Transmission Improvements	*Y*	The extent of distribution system improvements depends of the specific project chosen by the City. In general, improvements are targeted to eliminate pipeline dead ends, ageing 4-inch and other pipes, conveying water to new developments within the City limits, and conveying water to newly annexed areas.
5	Distribution System – Fire Fighting	*Y*	The City's existing 4-inch lines will not convey the year 2030 demand. The City will need additional hydrants to improve hydrant spacing, and new hydrants along transmission line expansions.
6	Distribution System – Pressure Zones	*Y*	The City needs to improve its pressure zones to meet IDAPA. The City will need (4) formal pressure zones when it switches to all groundwater supply.
7	Distribution System – System Expansion	*Y*	The City desires to extend water service and fore flow capability to the airport and annex the Butts subdivision. Service line extension to the airport will enhance commercial development along the US 93 strip, from the City of Challis to the airport.
8	Metering	*Y*	The City was metered in its 1980s project. The meters are aging, probably are not within AWWA accuracy ranges, and some are not operational. Manual read meters represent a significant labor commitment that can be recovered by AMR equipment. New meters with increased accuracy, ability to read year round could realize increased revenues and/or reduction in consumption.
9	Telemetry	*Y*	The currently uses some basic supervisory control but it not robust. A fully developed telemetry/SCADA system will allow monitoring of key elements with enhanced alarm and notification features. Telemetry/SCADA can allow remote operator access to assess threats and respond to problems and alarms without physically visiting the site.

EXHIBIT "A"

5.3 Development of Alternatives – Source, Distribution, Storage, Metering, Telemetry

This section covers the first preliminary set of project alternatives for the City. Refinements of the preliminary set are the bases of the final alternatives and the project selected by the City. The alternatives cover five main areas of City concerns – the water distribution system, the drinking water sources, the system water storage, system wide metering, and control telemetry. The alternatives were generated to respond to these general criteria:

- Does the alternative address the problems?
- Does the alternative address the deficiencies?
- Does the alternative address significant deficiencies?
- Does the alternative address compliance issues?
- Does the alternative address the needs?

The City's water system currently has no significant deficiencies and no compliance issues. Problems, including sanitary survey issues, have been identified in Future Conditions, Section D. The (9) system needs have been identified in the previous section.

Appendix D contains charts identifying each alternative and shows: standard alternatives to the upgrade or construction; no-action benefits and dis-benefits; environmental concerns from Form 5-4 Section B.2; and the whether there are impacts to the environmental concerns. In total the charts display 17 preliminary alternatives – nine for Source Water, five for the Distribution System, and three for Metering and Telemetry.

DEQ's Outline and Checklist for Engineering Report/Facility Plan Form 5-A requires a discussion of "optimum operation of existing facilities".

5.3.1 Optimum Operation – Sources

Water Right. Challis has enough aggregate water right to meet the projected demand for the year 2030. The City will utilize 92% of that aggregate right to meet the peak day/peak hour flow for the year 2030. See "How Much Water do We Need" chart in Appendix D. One of the main goals of the facility plan is to test the ability of the City to replace the Garden Creek Surface Water System with new groundwater source(s). The City will need to develop new groundwater right to ensure that it has optimal source water available for the design year 2030. See the summary report from Barker, Rosholt & Simpson, LLP in Appendix E.

Groundwater Sources. There are competing priorities for the optimum location of new groundwater sources. There are two sources available – The Garden Creek Aquifer System (GCAS) (West Wells 1&2 utilize this aquifer) and the Salmon Aquifer System

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(SAS) (East Well utilizes this source). The alluvial Salmon Aquifer system east of town is the more extensive and prolific. New well(s) will require less drilling depth, and new well will have higher specific capacity (GPM per foot of draw down). The SAS also has poorer water quality due to mineral hardness and will require extensive distribution pipeline changes if SAS is used as the sole groundwater source.

GCAS is an optimal location for new groundwater sources because it is higher in elevation than SAS, will not require signification distribution pipeline changes to incorporate into the system, and has much lower mineral hardness than SAS. GCAS is a less extensive source that Idaho Water Resources Research Institute (IWRRI) indicates is fully exploited[15]. Other than the recovery of the capacity of West Well #1, we feel it inadvisable to attempt to develop the full replacement capacity of surface water supply in the GCAS. The optimal solution which we derived by hydraulic modeling, is a single new well in the GCAS and a single new well in the SAS.

Pumping. Both groundwater sources, East Well and West Well pump to the City's storage tanks. Pump operation is based on water level in the tanks. The pumps are either "on or off" as a result. The future groundwater sources will operate in the same manner. Optimal operation includes proper design of new pumps to ensure wire-to-water efficiency and management of the level controls in the storage tanks to minimize short-cycling of the pumps. Large 3-phase pump motors should have no more than 4 starts per hour. The City currently operates the level controls to minimize short-cycling.

5.3.2 Optimum Operation – Storage

Hydraulic modeling of the existing and future water systems indicate the City has sufficient storage to meet peak day/peak hour demand with a fire demand at peak day/peak hour. Optimal operation of the City's storage includes adjustment of winter-time water levels to ensure turnover for water quality. Turnover will be especially important if the City is required to start disinfection of the groundwater sources.

5.3.3 Optimum Operation – Distribution System

Issues for optimal operation of the distribution system include: elimination of dead end lines and pipeline networking, elimination of small diameter pipes to improve hydraulic efficiency for fire flows, adequate number and spacing of fire hydrants, and establishing pressure zones throughout the system. The final selected alternative rectifies all these issues.

5.3.4 Optimum Operation – Metering

The City of Challis is currently metered, but the meters date from the 1980s. Issues for optimal operation system wide metering include: change out of non-operating or inaccurate meters, and reading the meters during the winter months rather than

[15] "Hydrogeologic Analysis of the Water Supply for Challis, Custer County, Idaho", Otto, Wylie & Martin, Idaho Geologic Survey, 2005, page 13, paragraph Recharge for West Wells.

estimating consumption. Replacement of all the meters with new equipment using automated read features will rectify these issues. Further, new equipment will identify and reduce City-side service leaks, recover lost water revenues, and encourage conservation.

5.3.5 Optimum Operation – Telemetry

The City of Challis currently has minimal telemetry/supervisory control and data acquisition (SCADA) capability, and relies on visual inspections and site visits to monitor operation of its pumps and water storage elements. A more robust SCADA system will reduce staff time, improve overall monitoring of key elements, enhance reporting and response of alarm conditions, and improve the security of the system. The final selected alternative rectifies the telemetry issue.

DEQ's Outline and Checklist for Engineering Report/Facility Plan Form 5-A requires a discussion of "regionalization".

5.3.6 Regionalization

The City of Challis is the only municipality within a twenty-mile radius of the City. The nearest municipal water system is operated by the City of Salmon, ID. The City of Salmon is about 60 miles, by road, from Challis. There are no regionalization opportunities within an economic proximity to the City of Challis. Challis is considering annexation of the Butts subdivision. Butts subdivision has a separate water and sewage system. Annexation of the subdivision will eliminate a poor to failing water and wastewater system, bring those systems into compliance, and ensure proper operation of the facilities. The annexation if pursued is a regionalization effort.

5.4 Environmental Impacts

See charts in Appendix D.

5.5 Service to Isolated Areas

Future service line extensions discussed in the preliminary alternatives will serve future annexation areas. Service includes metering, pressure zones, and design fire fighting capabilities.

5.6 Development of New Sources

New groundwater sources will have to be developed to replace the City's dependence on its Garden Creek surface water source.

5.7 New Treatment Facilities

No new treatment facilities are required for the 1,250 population for the 2030 design year.

5.8 Storage Requirements

No new water storage is required for the 1,250 population for the 2030 design year.

5.9 Pumping Requirements

New groundwater sources will require new pumping plants with standby generation capability.

5.10 Pressure Maintenance

The water system needs (4) defined pressure zones throughout the system. See Figure 12 Appendix A.

5.11 Separate Irrigation Facilities

We have reviewed the option of supplying separate irrigation facilities. A separate irrigation system will not remedy the problems/defects identified by this plan. It is not an economic alternative for the City. See the project list in Appendix D.

5.12 Staged Distribution

Future expansion of the distribution system can be phased or staged.

5.13 System Classification and Licensure

The water system for the City of Challis is a public water system, PWS# 7190013. Current operator levels needed are Class 1 Treatment and Distribution System. Using DEQ's classification worksheets, the future system will still require only Class 1 Treatment and Distribution. See Figure 14, Appendix A.

5.14 Other

None.

6 FINAL SCREENING OF PRINCIPAL ALTERNATIVES AND FACILITY PLAN ADOPTION

6.1 Evaluation of Costs

This facility plan presents an evaluation of costs both on the preliminary and final alternatives. The final alternative cost evaluations use and equivalent uniform annual cost (EUAC) method which is a derivative of Present Work Analysis. EUAC presents an annualized cost based on capital cost of improvements and its financing, the replacement frequency or life of the improvements, the impact of the improvements on operation and maintenance, and current electrical costs based on the rate structure of the local utility.

Like a Present Worth Analysis, the project with the lowest EUAC is the economically preferred project.

The EUAC analysis uses the loan term, 40 years, to differentiate between a long-lived asset and a short lived asset. An asset with a replacement life of less than 40 years is a short lived asset. The EUAC uses a 6% interest rate even though rates from DEQ and Rural Development are significantly less. 6% allows some latitude for inflation over the life of the projection. Copies of the EUAC worksheets for each of the principal alternatives are in Appendix D.

6.2 Evaluation of Environmental Impacts – NEPA, IDAPA 58.01.20

The environmental report by Progressive Engineering Group, Inc. follows the guidelines of IDAPA 58.01.2 and Idaho Department of Commerce Community Development Block Grant. The environmental report is located in Appendix H.

6.3 Consideration of Impacts to Water Supply Systems

The facility plan follows the recommendations of the IWRRI report, "Hydrogeologic Analysis of the Water Supply for Challis, Custer County, Idaho", 2005. Based on this document we recommend the City not attempt to replace the total right from the Garden Creek surface water source in the Garden Creek Aquifer System.

6.4 Consideration of EPA Reliability Criteria

We base the reliability of the proposed groundwater sources on the IWRRI cited above.

6.5 Comparison of Alternatives

The principal alternatives will have no environmental effects other than dust and noise during construction. Construction will require an Storm Water Pollution and Prevention Plans to mitigate run-off from construction.

6.6 Public Input Evaluation per 40CFR Part 25 and State of Idaho 40 CFR part 25 Describes Criteria for Public Participation.

We followed the guidelines in this manner:

- 40CFS part 25.4.c – Public Notification. The City of Challis provided public notification of each City Council Meeting in which elements of the facility plan were presented according to Idaho Statute. Council Meeting presentations occurred on these dates: 4/12/11, 5/10/11, 6/7/11, and 8/9/11. Notification of the formal public participation hearing, held on 7/21/11, was published in "The Challis Messenger".
- 40CFS part 25.5 – Public Hearings. A public hearing was held on 7/21/11. A copy of the notice and list of attendees are included in Appendix E. The hearing included post boards and presentations by Don Acheson, P.E. of

Riedesel Engineering, Inc, and Michelle Bly, P.C.E.D. of Progressive Engineering Group, Inc. Attendees were encouraged to ask questions and each were given (4) colored dots to use for expressing their alternative preference. The dots were: green – my favorite; blue – my second choice; yellow – my third choice; and red – no thank you. At the end of the presentation, attendees were request to express their alternative preference by placing a colored dot on the poster board explaining that alternative.

- 40CFS part 25.8 – Responsiveness Summary. The summary is in Appendix E.

6.7 Description of Cost Effectiveness per 40 CFR 35.2030(B.)(3.)

This section applies to wastewater treatment works and not a water system facility plan. The facility plan does address elements of the this section, namely: the high per capita water consumption and conservation measures that can be incentivized by water rates and re-metering with new AMR type equipment; the EUAC analysis; environmental impacts; water supply implications; a concise and appropriate facility planning level project description of the selected alternative.

7 SELECTED ALTERNATIVE DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS

In all, Riedesel Engineering initially presented the City of Challis with 17 preliminary alternatives covering improvements to various aspects of the distribution system, source water development, and metering and telemetry. The alternatives were in response to the City's concerns about the vulnerability of the surface water source for drinking water, the desire to develop new groundwater sources to supplant the surface water supply, the ability to provide fire flow protection, and meet the future drinking water needs of the community. Please see the charts in Appendix D. Riedesel later revised these alternatives into 18 discrete projects with nine possible combinations of the discrete projects. The revision was based on the City's 11 criteria for future improvements to the system. We used the revision as the basis for discussion during the Public Hearing on July 21, 2011. Based on input from the City Council and feedback from the public participation meeting, Riedesel revised and condensed the nine project combinations into three specific alternatives, all combination projects addressing source water, distribution, metering, and telemetry. The three projects differ in the location of new groundwater sources and the extent of pipeline and other changes needed to tie the new sources into the water system. The projects are summarized as follows: all new ground water being developed in the Garden Creek Aquifer System at the west end of Challis; all new ground water being developed in the Salmon Aquifer System on the east side of Challis; a mixture of both east and west locations.

Riedesel presented the three projects at the regular City Council meeting on August 9, 2011 with a specific recommendation to select the option with new groundwater sources east and west of town, Recommended Project #1. The rationale for this recommendation:

1. The hydrogeologic study[16] indicated the Garden Creek Aquifer may be fully allocated. The City should not try to get the full replacement of the surface water source from this aquifer. Replacing the failed West Well #1 from this source will supply about half of the surface water supply and be within the capability of the aquifer.
2. While the Salmon aquifer system is abundant and wells using this alluvial source are highly productive, the water has high mineral hardness. The City typically blends East Well with the less-hard West Well 2 water to mitigate consumer complaints about hardness. Further, developing all the replacement water from the Salmon system would require an 8,000 foot, 12-inch transmission pipeline to connect the source to the West Reservoir. The 12-inch connection is the least onerous distribution system modification needed to make this option workable.
3. Project #1, a new well in both the Garden Creek and Salmon aquifer systems, provides the best water quality, minimizes pipeline changes, and has the least equivalent uniform annual cost.

At the meeting the council voted to proceed with Recommended Project #1. Recommended Project #1 is the overall water system masterplan for the City of Challis as it grows to its projected 2030 design year population. In Section 8 we provide recommendations for a strategic approach to implementing Recommended Project #1.

7.1 Justification and Description of Selective Alternative – Recommended Project #1

7.1.1 Description of Selected Project

These are the elements of Recommended Project #1 (RP1):

- Source Water. RP1 allows the City to curtail use of the Garden Creek surface water source and source water treatment. 2 new wells - one in the Garden Creek Aquifer system that recovers the lost output of West Well #1 and one in the Salmon Aquifer System – will replace the curtailed Garden Creek water source. The City will abandon the slow sand filter but retain the surface water right. RP1 solves the susceptibility issue of the unprotected Garden Creek watershed by moving all of the City's drinking water sources to groundwater.
- Distribution System. RP1 includes all the modeled pipeline changes and additions needed to meet the year 2030 design population and with the total reliance on groundwater. 4 pressure zones will be formally established with new pressure reducing stations and isolation valves. The system will have new, properly spaced hydrants on new pipelines and add hydrants where needed to improve hydrant spacing on the existing pipelines. RP1 solves the pressure zone issues with the existing distribution system, solves the fire hydrant spacing issue, and allows the City to meet the projected drinking water demands of the year 2030 population. The City will be able to meet the requirements of the design fire flow and duration.

[16] See note #14.

- Distribution System Alternatives. RP1 includes new transmission pipeline to provide water and fire fighting service to the Challis Airport. The transmission lines also allow for development and new water services in the east and west corridors parallel to US 93, and for the annexation of the Butts Subdivision into the City. RP1 meets the City goals of serving the Airport and providing for future growth.
- Metering. RP1 replaces all the meters in the City with new automated meter read (AMR) equipment. RP1 allows the City to read every meter every month, reduce the staffing requirements to bill for water, increase the accuracy of that billing, take the first steps to recovering the estimated 4% lost water identified by Idaho Rural Water, and provide the data needed to do a water audit.
- Telemetry. RP1 connects the City's key facilities into an integrated network that provides enhanced supervisory control and data acquisition (SCADA). Key facilities include the new and existing groundwater wells, and East and West Reservoirs. Telemetry will provide better security for the drinking water system, and City staff will be able to access the SCADA system remotely to evaluate and respond to alarm conditions. RP1 improves the operation and security of the drinking water system.

A map of the RP1 system is included in Appendix A, Figure 12.

7.1.2 Justification of Selected Project

Recommended Project #1 is justified on these merits:

1. There are only three alternatives that comprehensively meet the City's 11 criteria. RP1 is one of the three alternatives.
2. Of the three alternatives, RP1 has the least Equivalent Uniform Annual Cost and is therefore the best economic choice for the City.
3. RP1 addresses and corrects the system deficiencies.
4. RP1 does not require the construction of new water storage facilities.
5. RP1 minimizes the land needed for developing new well sources by using existing City property.
6. RP1 removes the environmental uncertainty of reliance on surface water used as a drinking water source that is derived from an unprotected watershed.
7. The public health and safety aspects of curtailing surface water as a potable source more than compensates for the additional electrical energy needed for the new well pumps.
8. RP1 is affordable by the community.

7.2 Preliminary design of selected alternative

DEQ Checklist Form 5A requires the discussion of seven items in this section: Major Features, Unit Processes and Sizes; A Schematic Diagram for Treatment; Distribution Length and Sizes; Proposed Design Criteria; Design and Construction Completion Schedule; Maps. Recommended Project #1 does not have any treatment elements, so Unit Processes and Treatment Schematics will not be addressed. See Appendix B for an

estimated Construction and Completion Schedule. The presentation that follows discusses the remaining five elements as the elements pertain to Source Water, Distribution, Metering, and Telemetry.

7.2.1 Source Water

- Major Features
  - New alluvial aquifer well in the vicinity of East Well tapping the Salmon Aquifer System, finished 12-inch diameter with stainless steel screen and approximately 350 feet in depth. Estimated minimum water production – 600 GPM.
  - New hard rock well in the vicinity of the slow sand filter in the Garden Creek System, finished 12-inch open hole and approximately 600 feet in depth. Recovers the lost production of West Well #1, about 600 GPM.
  - Both wells will use new vertical lineshaft turbine pumps in pump houses, dedicated well lots, and meet IDAPA 58.01.08.511 & 512.
  - Standby generation equipment for the 2 new well sources.
  - Dedicated metering, instantaneous pumping level assessment, and system connection telemetry
- Distribution Length and Sizes. Depends on final chosen location for drilling. New system connections will probably be new 6-inch piping with appurtenances.
- Proposed Design Criteria
  - IDAPA 58.01.510, 511, 512, 541
  - IDAPA 37.03.09 Well Construction Standards
  - Salmon Aquifer System Alluvial Well – pumps to East Reservoir, 600 GPM @ 450 feet TDH @ 75% efficiency – 90 BHP.
  - Garden Creek Aquifer System – pumps to West Reservoir, 600 GPM @ 688 feet TDH @ 75 % efficiency – 139 BHP.
  - Consider variable frequency drive instead of pump control valves

7.2.2 Distribution System

- Major Features
  - Looped transmission pipelines to the Challis Airport, east and west of US93.
  - Network "backbone" to connect Butts Subdivision when that project is annexed.
  - Elimination of pipeline dead ends
  - (2) US93 bores for Airport loop and supply to eastside transmission extension
  - Replacement of all old 4-inch Old Town system pipes
  - Addition of fire hydrants in the Old Town system to improve spacing.
  - New fire hydrants with new transmission lines.
  - Ability to convey design year demand flows with fire flow to all areas of the City.
  - New pressure zones that extend throughout the system

- Distribution Length and Sizes

  The table shows the lengths and sizes of new, upgraded, and unchanged pipes in the distribution system. All existing 4-inch pipes in the system are replaced.

DIAMETER	TOTAL LENGTH (FEET)	NEW (FEET)	UPGRADE (FEET)	EXISTING NO CHANGE (FEET)
6-INCH	69,126	12,397	15,914	40,815
8-INCH	48,313	26,748	5,756	15,809
10-INCH	17,727	0	836	16,891
12-INCH	12,964	510	0	12,454
TOTALS	148,130	39,655	22,506	85,969

- Proposed Design Criteria
    - IDAPA 58.01.08.501, 542, &548
    - Idaho Standards for Public Works Construction, most recent edition
    - ASTM/AWWA Standards such as C651, C654
    - Conforming construction standards from the City of Challis
    - System network design to provide fire flow for the design year 2030, during peak day/peak hour demand, with no location in the system dropping below 20 PSI.
    - Minimum design year peak day/peak hour pressure – 40 PSI
    - Maximum design year peak day/peak hour pressure – 90 PSI

7.2.3 Metering

- Major Features
    - Replace all residential meters with new 5/8 x 3/4 inch, automated read meters. Reuse existing meter setters & meter boxes.
    - Replace all commercial meters larger than 5/8 x 3/4 inch with automated read meters.
    - Equip the City with a vehicle mounted receiver and laptop computer to read the meters in "drive-by" mode.
    - Equip the City with software to process metering downs to work with either the City's existing billing, or provide new software billing.
- Distribution Length and Sizes – N/A
- Proposed Design Criteria
    - Idaho Standards for Public Works Construction, most recent edition
    - AWWA/ASTM C700-713
    - Manufacturer's recommendations

7.2.4 Telemetry

- Major Features
    - Provides enhanced supervisory control and data acquisition (SCADA) for key system elements like wells, East & West reservoir, and key metering points in the City.
    - Provides better security for the drinking water system
    - City staff will be able to access the SCADA system remotely to evaluate and respond to alarm conditions
- Distribution Length and Sizes – N/A
- Proposed Design Criteria

- Proprietary and public domain design criteria
- AWWA/ASTM G200 & G430

7.3 Justification – Most Cost Effective of Meeting Applicable Public Health Requirements.

Documentation provided in this report demonstrates that Recommended Project #1 is the most cost effective and environmentally sound alternative for the City. We base this conclusion on the following:

- The City's water system is not out of compliance with applicable codes and statutes.
- Recommended Project #1 rectifies all the deficiencies identified by this facility plan.
- Construction of Recommended Project #1will take place within the study area of the attached environmental document. The environmental document demonstrates that there will be no significant impact when constructing the improvements.
- We performed an equivalent uniform annual cost (EUAC) analysis that shows Recommended Project #1 is the least costly and most economically feasible for the City.

7.4 Total estimated project cost

The total estimated project cost to implement all the changes identified in Recommended Project #1 is $8,078,877.

7.5 Certification of Financial Capability

The City will fulfill the certification requirement as part of the funding process for the capital project it chooses to implement. We have identified Recommended Project #1(RP#1) as the plan for the City to meet the water system demands for the design year 2030. It is not prudent for the City to proceed with this total project. Please see Section 8 – Engineer's Recommendations for a listing of priorities we feel the City should follow as it implements elements of RP#1.

7.6 Availability of Most Suitable Land for the Selected Project

RP#1 utilizes existing City property along with existing rights-of-way in existing roadways.

7.7 Environmental Information Document

See Appendix H.

7.8 Other Implementation Elements

1. Intermunicipal Agreements. None required for RP#1.

2. Financial Arrangements. The City will seek funding for RP#1 from multiple sources including IDEQ's SRF program, USDA-Rural Development grant & loan. The City will bond for improvements.
3. Operation and Maintenance Requirements. RP#1 will require training for the operation of the automated meter reading system and billing procedures. We have estimated these costs in the EUAC analyses. City staff will also need training to operate, manage, and perform basic repairs and troubleshooting for the telemetry system. We have estimated these costs in the EUAC analyses.
4. Project Schedule. The City of Challis is not under a compliance order from DEQ and there is no compliance schedule that must be adhered to. We have provided an estimated project schedule in Appendix B.

7.9 Operator Certification.

The City's current operator certification is adequate for RP#1. See Figure 14, Appendix A.

8 ENGINEER'S RECOMMENDATIONS

8.1 IMPROVEMENT PRIORITIES – A STRATEGIC APPROACH

Recommended Project #1(RP1) is a plan for the development of the City of Challis from now to the 2030 design year. RP1 addresses heath and safety issues, operation and maintenance improvements, and expansion of the water system to serve the airport and growth of the community. RP1 needs strategic implementation for prudent implementation. "Prudent implementation" has these elements in order of priority:

1. Address health and safety concerns
2. Focus on items that will reduce the operation and maintenance (O&M) costs of the system
3. Expand the water system to serve the airport and other areas of interest to the City as the need and demand for service occur

The table below shows the components of RP1 and rates them for the (3) priorities. All the components except for metering impact all 3 priorities. The category designations:– SW – Source Water; DS – Distribution System; T – Telemetry; M – Metering match the designations of the project charts in Appendix D.

CATEGORY	DESCRIPTION/ RP1 SOLUTION	HEALTH & SAFETY	MINIMIZE O&M	SYSTEM EXPANSION
SW HEALTH & SAFETY Garden Creek Surface Water Source	Vulnerability & Variability of the Garden Creek Water Shed. Replace surface water supply with new groundwater source and recover the capacity of West Well 1.	✓		
SW O&M	Recovers O&M costs to operate and maintain the slow sand filter.		✓	
SW EXPANSION	Meet future demands with new well in Salmon Aquifer System.			✓
DS HEALTH & SAFETY Fire Fighting	Dead end lines, hydrants on 4-inch lines, sub-standard hydrant spacing. Add pipe loops to tie-in dead ends; replace 4-inch lines; add new hydrants to add capability to existing system. Add interties to incorporate groundwater sources to Old Town system (surface water source replaced with groundwater).	✓		
DS O&M	Replacing old 4-inch pipes reduces leaks.		✓	
DS EXPANSION	New pipes and pipe loops top meet system expansion to the airport and future growth			✓
DS HEALTH & SAFETY Pressure Zones	Over-pressurized areas of Old Town and Cyprus System. Create (4) new pressure zones incorporating the change to groundwater for the entire system.	✓		
DS O&M	New pressure zones keep maximum pressure to IDAPA standards. Lower pressures reduce system leaks and water loss.		✓	
DS EXPANSION	Pressure Zone 4 includes both the existing system and will cover the full expansion of the system.			✓
T HEALTH & SAFETY System Telemetry	Existing system has minimal supervisory control and data acquisition (SCADA) capability and no intrusion alarms for key water system elements. Add new telemetry.	✓		
T O&M	New telemetry allows remote operator access to the key elements of the system instead of requiring a site visit. Key elements include well houses and pump stations, storage reservoirs, and pressure reducing stations.		✓	
T EXPANSION	Telemetry allows for addition on new key elements to the system, such as a new well in the Salmon Aquifer system.			✓
M O&M	Re-meter the City with new "automated read" (AMR) water meters. City can read every meter every month throughout the year and have the data for a complete water audit. All the meters can be read in less than (1) day.		✓	

EXHIBIT "A"

We suggest the following ranking of the first priority items:

1. Replace the surface water source with a new groundwater source in the Garden Creek aquifer system.
2. Construction distribution system improvements to tie the Old Town system into the new groundwater system, eliminate 4-inch pipes and the fire hydrants that tie to them, install new and properly spaced fire hydrants, and tie-in dead end lines. Add pressure reducing stations and isolation valves to create (4) pressure zones which eliminates service areas that are over-pressurized.
3. Install a telemetry system to improve supervisory control and data acquisition to protect the water system.

The first priority items automatically fulfill the operation and maintenance (O&M) criteria of the second priority when they are implemented. Metering is the only stand alone second priority item. Even though metering is not a health and safety priority, our analysis indicates the construction cost may be significantly (if not completely) offset by the labor saving to read the meters and process the water bills. The City may also realize some lost revenues due to inaccuracies with the old existing meters. We recommend replacing the meters as soon as possible.

9 APPENDICES

A. Figures & Tables

B. Relevant Engineering Information – Reference Documents – Water Quality Test Results

C. User Charge Ordinance and Latest Maintenance Budget

D. Maps & Charts

E. Mailing List – Correspondence – Public Participation Information – Water Rights

F. Hydraulic Analyses of Existing & Proposed Water System Improvements

G. DEQ Sanitary Survey

H. Environmental Information Document

EXHIBIT "A"