

80994

Ident. No.

82-12259
RECEIVEDSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCES**AMENDED APPLICATION FOR PERMIT**

To appropriate the public waters of the State of Idaho

JUN 02 2016

IDWR / NORTH

1. Name of applicant(s) City of Stites Phone (208) 926-7121
 Name connector (check one): ☐ and ☐ or ☐ and/or
 Mailing address P.O. Box 300 City Stites
 State Idaho Zip 83552 Email stitesct@gmail.com
2. Source of water supply Groundwater which is a tributary of N/A
3. Location of point(s) of diversion:

TWP	RGE	SEC	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
32N	4E	28		SW	NW	NW	Idaho	groundwater	Primary Well
32N	4E	29		SE	NE	NE	Idaho	groundwater	Deep Well
32N	4E	20		SE	SE	SE	Idaho	groundwater	Artesian Well

4. Water will be used for the following purposes:
 Amount 0.25 for municipal purposes from Jan. 1 to Dec. 31 (both dates inclusive)
 (cfs or acre-feet per year)
 Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)
 Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)
 Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
 (cfs or acre-feet per year)
5. Total quantity to be appropriated is (a) 0.25 cubic feet per second (cfs) and/or (b) N/A acre feet per year (af).
6. Proposed diverting works:
- a. Describe type and size of devices used to divert water from the source. Three wells will be used to divert the groundwater: the existing Artesian Well (early 1900's), the existing Deep Well (1977), and the new Primary Well (2016).
- b. Height of storage dam N/A feet; active reservoir capacity N/A acre-feet; total reservoir capacity N/A acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11. For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☐ No
- c. Proposed well diameter is 8 inches; proposed depth of well is max. of 750 feet.
- d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☒ No
- e. If well is already drilled, when? N/A; drilling firm _____; well was drilled for (well owner) _____; Drilling Permit No. _____.
7. Description of proposed uses (if irrigation only, go to item 8):
- a. Hydropower; show total feet of head and proposed capacity in kW. _____
- b. Stockwatering; list number and kind of livestock. _____
- c. Municipal; complete and attach the Municipal Water Right Application Checklist.
- d. Domestic; show number of households _____
- e. Other; describe fully. _____

8. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below.
See instructions for standard symbols.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
32N	04E	20															M	M	
32N	04E	28						M	M										
32N	04E	29	M	M		M													

Total number of acres to be irrigated: N/A

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping?

Right # 82-7053: Municipal use with diversion rate of 0.18 cfs

10. a. Who owns the property at the point of diversion? Troy Biesecker
- b. Who owns the land to be irrigated or place of use? The place of use is the Stites' city limits (multiple owners)
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing:
The City currently has an easement for the well site and is in the process of securing a long-term easement.

11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary.

Water supply to the City of Stites is currently provided by two wells: a "deep well" and an "artesian well". The deep well recently tested positive for total coliform and E-coli. It was taken off-line and they attempted to provide water from the artesian well, but it was unable to keep up with demand. The deep well was brought back online and a boil order was issued. Repeat contamination of the deep well is likely due to its lack of site control & setbacks. The proposed well has been approved by DEQ and will provide the City with a reliable primary source of drinking water.

12. Time required for completion of works and application of water to proposed beneficial use is 1 year years (minimum 1 year).
13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Signature of Applicant

Gerald J. Cathey
Signature of Applicant

Print Name (and title, if applicable)

Gerald J. Cathey - Mayor
Print Name (and title, if applicable)

Received by db on original application Date 4/15/2016 Time _____ Preliminary check by _____
Fee \$ 250.00 Received by db Receipt No. N031836 Date 4/15/16

RECEIVED

APR 15 2016

IDWR / NORTH

Ident. No. _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

1. Name of applicant(s) City of Stites Phone (208) 926-7121
 Name connector (check one): ☐ and ☐ or ☐ and/or
 Mailing address P.O. Box 300 City Stites
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2. Source of water supply Groundwater which is a tributary of N/A
3. Location of point(s) of diversion:

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- Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
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 (cfs or acre-feet per year)
5. Total quantity to be appropriated is (a) 0.25 cubic feet per second (cfs) and/or (b) N/A acre feet per year (af).
6. Proposed diverting works:
- a. Describe type and size of devices used to divert water from the source. A municipal well with 8-inch permanent casing will be constructed. A 110 gpm in-well pump will be used to divert water to the City of Stites water distribution system.
- b. Height of storage dam N/A feet; active reservoir capacity N/A acre-feet; total reservoir capacity N/A acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11. For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☐ No
- c. Proposed well diameter is 8 inches; proposed depth of well is max. of 750 feet.
- d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☒ No
- e. If well is already drilled, when? N/A; drilling firm _____; well was drilled for (well owner) _____; Drilling Permit No. _____.
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			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
32N	04E	20															M	M	
32N	04E	28						M	M										
32N	04E	29	M	M		M													

Total number of acres to be irrigated: N/A

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping?

Right # 82-7053: Municipal use with diversion rate of 0.18 cfs

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- b. Who owns the land to be irrigated or place of use? The place of use is the Stites' city limits (multiple owners)
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12. Time required for completion of works and application of water to proposed beneficial use is 1 year years (minimum 1 year).

13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Gerald S. Cathey
Signature of Applicant
Gerald S. Cathey, Mayor
Print Name (and title, if applicable)

Signature of Applicant

Print Name (and title, if applicable)

For Department Use:

Received by rb Date 4/15/16 Time _____ Preliminary check by _____
Fee \$ 250.00 Received by rb Receipt No. ND31836 Date 4/15/16

**STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES**

**AMENDED MUNICIPAL WATER RIGHT APPLICATION CHECKLIST
FOR AN APPLICATION TO APPROPRIATE WATER FOR MUNICIPAL PURPOSES**

An application to appropriate water for municipal purposes must be prepared in accordance with the requirements listed below to be acceptable for processing by the Department. There are two types of permits for municipal water use. The first type of municipal permit provides water for reasonably anticipated future needs (RAFN) over a defined planning horizon.¹ The second type of municipal permit, called non-RAFN, provides water solely for use to meet needs that will arise in the near-term (five years).² A non-RAFN permit may have an annual volume limitation associated with it. Each type of municipal water use has a distinct set of review requirements.

Applicant Name: City of Stites

1. Type of Municipal Provider. Applicant must qualify as a Municipal Provider to obtain a municipal water right. See Idaho Code § 42-202B (5). Check one:

- ☒ Type 1 – Municipality
☐ Type 2 – Franchise or political subdivision supplying water to a municipality
☐ Type 3 – Corporation or association regulated as a “public water supply” system by IDEQ
-
- ☒ Attach documentation of qualification as a Municipal Provider. See Idaho Code § 42-202(2).

2. List existing Water Rights (permits, licenses, decrees, and beneficial use claims) available to the applicant for municipal needs. These rights may or may not have a purpose of use expressly defined as “municipal”. Include a separate attachment as needed.

Right Number	Nature of Use	Diversion Rate (cfs)	Annual Vol. (acre-feet)	Service Area
<u>82-7053</u>	<u>Municipal</u>	<u>0.18</u>	<u>N/A</u>	<u>Within the City Limits of Stites</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

3. List the total diversion rate from Item 2. Be sure to account for any combined diversion rate limits in the approval conditions of each right listed. 0.18 CFS (total from 2)
4. List the total volume from Item 2. Be sure to account for any combined volume limits in the approval conditions of each right listed N/A AF (total from 2)

¹ For a thorough discussion of RAFN water rights, see IDWR’s *Recommendations for the Processing of Reasonably Anticipated Future Needs (RAFN) Municipal Water Rights at the Time of Application, Licensing, and Transfer*.

² For a thorough discussion of non-RAFN water rights, see IDWR’s Application Processing Memorandum No. 18.

5. Planning Horizon. See Idaho Code § 42-202B (7). Check one:

- ☐ RAFN. Specify planning horizon: ____ years. Go to Item 6.
☒ Non-RAFN (≤5 years). Go to Item 7.

6. If application is for RAFN:

- ☐ Attach justification for planning horizon. See Idaho Code § 42-202(2) and § 42-202B(7).
☐ Attach description of service area. See Idaho Code § 42-202(2) and § 42-202B(9).
☐ Attach population projection within the service area over the planning horizon. See Idaho Code § 42-202(2) and § 42-202B(8).
☐ Attach evaluation for demand within the service area over the planning horizon. See Idaho Code § 42-202(2) and § 42-202B(8).

Does demand exceed the totals listed in Items 3 and 4?

- Y N
☐ ☐ Rate?
☐ ☐ Volume?

If the answer is "No" to both rate and volume and a new point of diversion is needed, file a transfer application pursuant to Idaho Code § 42-222(1).

7. If application is for non-RAFN:

When submitting proof of beneficial use, non-RAFN permit holders will be required to show that water was diverted for an additional increment of beneficial use over existing water rights during the authorized development period, which may be up to five years from the date of approval. Do existing demand and short term needs exceed the combined authorizations from the existing water rights listed in Items 3 and 4?

- Y N
☒ ☐ Rate?
☐ ☐ Volume?

~~Existing water right does not have authorized volume~~

If the answer is "No" to both rate and volume and a new point of diversion is needed, file a transfer application pursuant to Idaho Code § 42-222(1).

CITY OF STITES IDWR APPLICATION FOR PERMIT MAP OF PROPOSED PROJECT

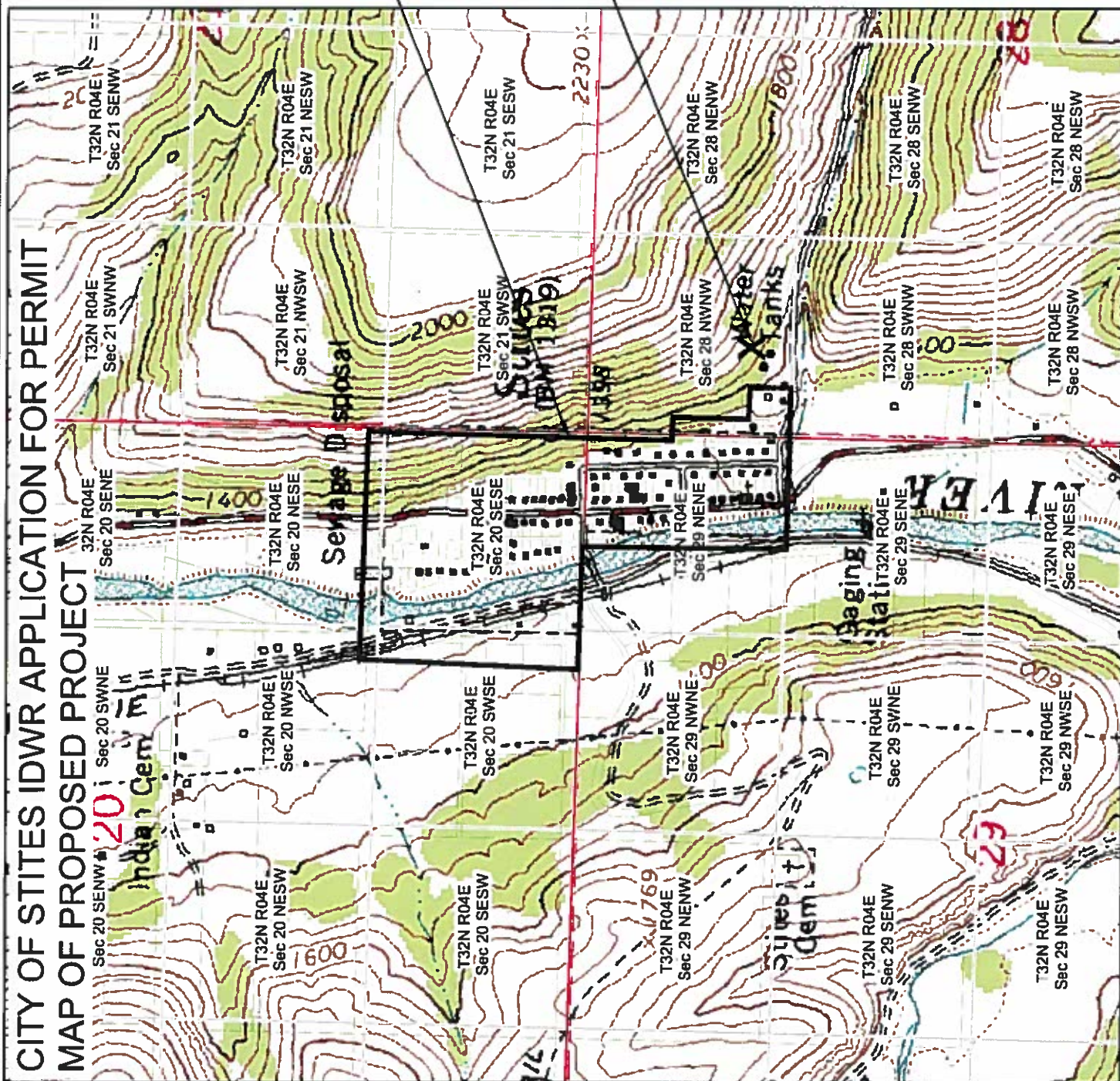
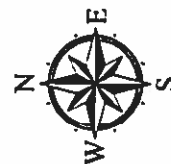
Legend

- ESPA
- GCDB Township/Range
- GCDB Section
- GCDB Quarter-Quarter
- Counties

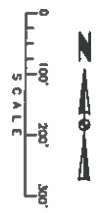
PROPOSED PLACE OF USE
(STITES' CITY LIMITS)

PROPOSED POINT OF DIVERSION
(0.25 CFS GROUNDWATER WELL)

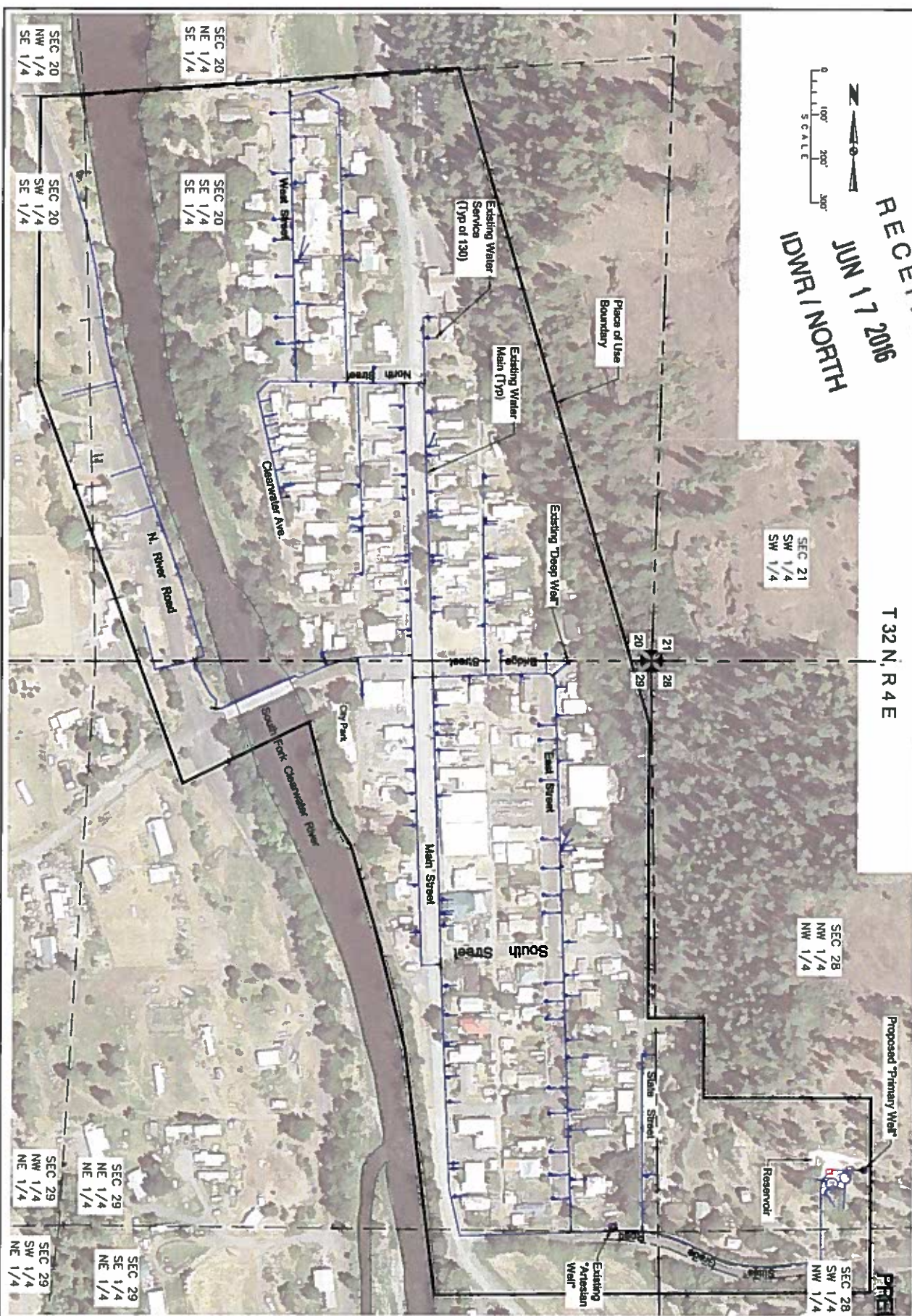
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JUN 17 2016
IDWR / NORTH

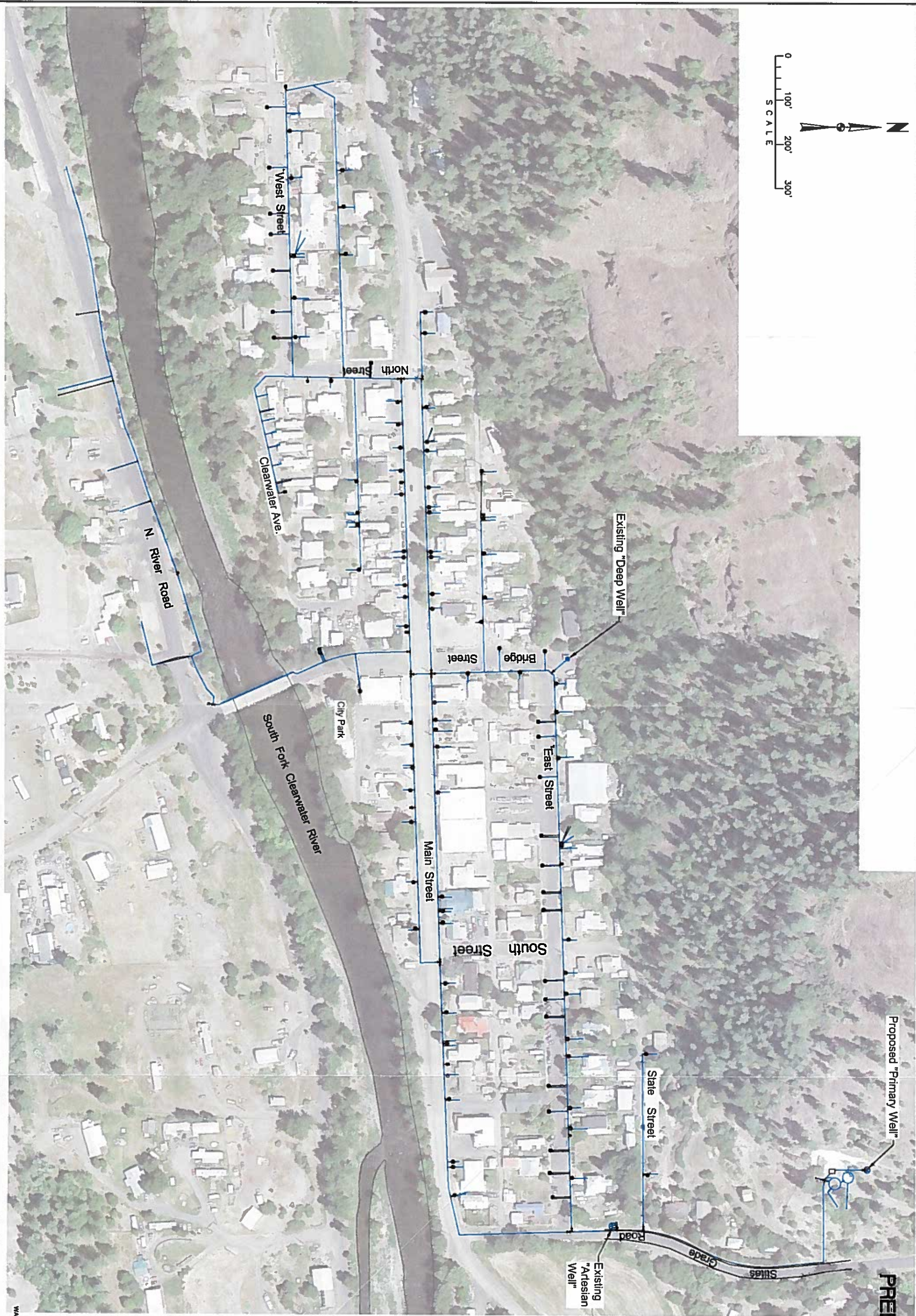
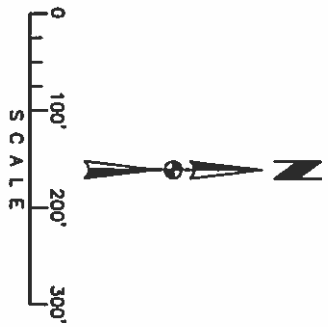


T 32 N, R 4 E



PRELIMINARY

WATER SYSTEM FACILITY PLAN CITY OF STITES, IDAHO		TD&H Engineering	DATE: 06/17/16 BY: [Signature] CHECKED: [Signature] APPROVED: [Signature]		REV	DATE	REVISION
WATER RIGHT APPLICATION EXHIBIT			1				



PRELIMINARY

WATER SYSTEM FACILITY PLAN
CITY OF STITES, IDAHO

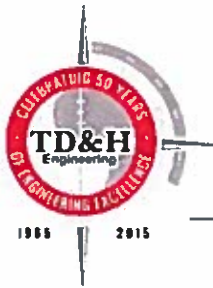
WATER SYSTEM MAP



GREAT FALLS-BOZEMAN-KALISPELL-SHELBY
SPokane
LEWISTON
WATFORD CITY

DRAWN BY: HRC
DESIGNED BY: HRC
QUALITY CHECK: HRC
DATE: 05/18/16
JOB NO. L-14485
FIELDBOOK

REV	DATE	REVISION



RECEIVED 12/30/2015
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APR 15 2016
IDWR/NORTH

MEMORANDUM

To: Nicolas Hiebert, P.E.
Idaho DEQ

From: David L. Witthaus, P.E.

Subject: City of Stites, Idaho
Engineering Report:
Water System ECWAG Improvements

TDH Job No.: L14-061



1 OVERVIEW

In 2015 the City of Stites in conjunction with TD&H Engineering began design of water system improvements which include a new groundwater well to replace the existing "Deep Well" as the primary public water supply source and a new well house with connection to the existing distribution and storage system. The intent of this memorandum is to summarize the engineering parameters and calculations used during the design process of the water system improvements and to clarify any questions that may arise during the review process of the Contract Documents and Construction Drawings.

2 PURPOSE AND NEED

The purpose of this project is to provide safe, reliable domestic water supply to the City of Stites. Recently the primary supply well was contaminated, resulting in a boil order. This project will replace this well as the primary source with a new domestic water supply well.

Water supply to the City of Stites consists of two wells located within the City. The highest production well is called the "Deep Well". The second well is considered an artesian well, but requires pumping to provide adequate pressure. During the summer months production of the second well reduces substantially and is unable to keep up with demand.

On May 8, 2014 the Deep Well tested positive for total coliform and subsequent testing has resulted in ongoing positive test results for total coliform and escheriachia coli (E. Coli).

In response to the positive test results, the City took the Deep Well off line and attempted to provide service to the community by pumping the artesian well. The artesian well was unable to service demand and, therefore, the Deep Well was put back in service. A boil order was then issued by the City.

The boil order was in effect for several months in order to provide a safe potable water supply. Since this was not a sustainable solution to the City's problem several long-term solutions were evaluated. It was determined that a new groundwater well would be constructed. This report summarizes the design elements of the water system improvements proposed.



3 POPULATION AND WATER DEMAND ANALYSIS

3.1 POPULATION FORECAST

The most recent (2015) population growth projections for Idaho County published by the Idaho Department of Commerce anticipate a future growth rate of less than 1 percent. Future populations were estimated by using a conservative population growth rate of 1.0 percent. The current and anticipated populations relevant to the design calculations of this project are shown in Table A. The growth rate was also applied to estimate the future number of Equivalent Dwelling Units (EDUs).

Table A: City of Stites Population Projections

Year	Population	Equivalent Dwelling Units (EDUs)	People/Residence
2013	206	101	2.04
2014	206	101	2.04
2015 (current)	206	101	2.04
2035 (20-year)	259	127	2.04

The City currently has 104 residential service connections, 12 commercial service connections, and several non-revenue (unmetered) municipal connections. Due to the type of commercial properties, they are each considered one EDU. 15 of the residential services are currently vacant and did not contribute to the number of EDUs listed in Table A. The unmetered non-revenue connections include city owned properties.

3.2 WATER USAGE AND DEMANDS

Initially, water usage and demand was calculated based on meter readings provided by the City of Stites for the years 2013 and 2014. Usage for the year 2015 was estimated by taking an average of the previous two years' total annual flow. These values were also used to estimate the water demand for the projected population of 2035 (20-year). The current and forecasted water usage demands are summarized in Table B.



Table B: Water Usage, Current and Projected

Year	Average Day Demand, ADD (gpd)	Average Day Demand with 15% Leakage (gpd)	Maximum Day Demand with 3.0 Peaking Factor (gpd/EDU)	Peak Hourly Demand, PHD ¹ (gpm)
2013	11,968	13,763	409	96.6
2014	15,789	18,157	539	121.7
2015 ²	13,878	15,960	474	109.2
(20 YR) 2035 ³	17,449	20,066	474	126.3

Please Note: The calculations spreadsheet for water demands can be found in Appendix A. This spreadsheet also includes the Recorded Monthly Flows and Total Annual Flows provided by the City of Stites for 2013 and 2014.

Since the flows provided by the City do not include usage from non-revenue connections or the 15 services associated with vacant properties, the Maximum Day Demand specified by IDAPA 58.01.08.552.01.a was used to provide conservative design flows. These values for the minimum design requirements outlined within IDAPA 58.01.08.552.01.a are shown in Table C. The Idaho Drinking Water Rules specify a minimum Maximum Day Demand capacity of 800 gallons per residence per day for public drinking water systems.

Table C: Design Demand, Current and Projected

Year	Maximum Day Demand, MDD (gpd/EDU)	Average Day Demand, ADD (gpd)	Average Day Demand with 15% Leakage (gpd)	Peak Hourly Demand, PHD (gpm)
2015	800	26,933	30,973	171.9
(20 YR) 2035	800	33,867	38,947	200.8

To anticipate future growth within the City of Stites, the 20-year projected population was used for the design and sizing of the proposed well and well house. An analysis of the systems' capacity compared to current and future water usage can be found in Section 5 of this memorandum.

¹ PHD formula from Washington State Department of Health Water System Design Manual

² ADD for 2015 based on Total Average Annual Flow for 2013 and 2014

³ 20 year design demands based on corresponding projected population

4 WELL DESIGN REQUIREMENTS

The design of the proposed well was performed in accordance with IDAPA 37.03.09 – Well Construction Standards Rules, IDAPA 58.01.08 – Idaho Rules for Public Drinking Water Systems, and the hydrogeologic report prepared by Dale Ralston titled *Ground-water Development Potential for the City of Stites, Idaho*.

This section summarizes the various components considered and calculations required for the proposed well design including: the required source capacity, location and depth of the well, casing and borehole size, screen type and size, and well pump type and size. Design parameters, screen sizing calculations and well pump sizing calculations can be found in Appendix B.

4.1 MINIMUM SOURCE CAPACITY

The minimum source capacity (groundwater well yield) required was calculated using the water demands for the year 2035 (summarized in Section 3, Table C). The Maximum Day Demand in gallons per minute was multiplied by a well production factor of 1.5. The current and future required well source capacities are shown in Table D.

Table D: Minimum Yield for the Proposed Well

Year	Maximum Day Demand (gpd/EDU)	Maximum Day Demand (gpm)	Minimum Source Capacity, MDD x 1.5 (gpm)
2015	800	56.1	84
(20 YR) 2035	800	70.6	106

The source capacity calculated for the current year closely coincides with the well pumping rate that the City's existing well produces, which is 80 gpm. The proposed well and well pump will be sized for the future source capacity of 110 gpm (rounded up from 106 gpm). Calculations for the well pump sizing are summarized in Section 4.5 of this memorandum.

4.2 WELL LOCATION AND DEPTH

The proposed well is located at the existing storage reservoir site approximately 30 feet east of the reservoirs. The site, which was evaluated as part of the hydrogeologic report prepared by Dale Ralston, P.G., meets all of the requirements set forth by DEQ for groundwater sources. Furthermore, the City of Stites received Well Site Approval from DEQ in a letter dated November 25, 2015. Dale Ralston's report and the Well Site Approval letter can be found in Appendix C and Appendix D, respectively.

Based upon the recommendations from the hydrogeologic report, the proposed well was designed based on a maximum depth of 750 feet. This depth is an estimate based upon well logs in the surrounding area. The actual depth installed will vary with conditions encountered during drilling.



4.3 BOREHOLE AND CASING SIZE

In accordance with Idaho Well Construction Standards and the Drinking Water Rules, as well as recommendations from Dale Ralston's hydrologic report the proposed well overbore, borehole and casing dimensions are shown in Table E of this report and Detail 1 of Sheet 3 of the Construction Drawings.

Table E: Proposed Well Construction Dimensions

	Size (inches)	Depth Interval Below Ground Surface (feet to feet)	Standard Referenced
Overbore	14	0 to 58	IDAPA 37.03.09.025.06
Borehole	12	0 to ± 750	IDAPA 58.01.08.510.03.b
Temporary Casing	12	0 to 58	IDAPA 58.01.08.510.03.b
Permanent Casing	8	+2 to ± 750	IDAPA 58.01.08..511.06.9

The annular space between the temporary and permanent casing shall be sealed with cement grout in accordance with IDAPA 37.03.09.025.03.b.i and IDAPA 58.01.08.510.03.b. Depending on conditions encountered, additional grout depth may be required if a formation seal is needed. The permanent casing shall be 8 inch (nominal) steel casing with a wall thickness of 0.322 inches in accordance with IDAPA 50.01.08.900. This will allow proper installation of a 6 inch diameter well pump.

4.4 WELL SCREEN TYPE AND SIZE

The proposed well screen is a 304 stainless steel 0.010 wide (10-mil) slot, continuous wound screen 20 feet in length with a tail pipe a minimum of 10 feet long. This was sized based upon the expected formations outlined within Dale Ralston's hydrogeologic report, the desired well source yield of 110 gpm, requirements set forth by the Idaho Drinking Water Rules, and standard TD&H well design practices.

The formations expected to be encountered during drilling are comprised of fractured basalt which is a consolidated formation. Flow contact aquifers are anticipated at depths of approximately 200 feet and 750 feet in to Basalt. In accordance with IDAPA 58.01.08.510.03.f, well screen openings will be based on sieve analysis performed in the field during drilling. The aperture entrance velocity shall not exceed 0.3 fps.

The screen was sized based on a desired source yield of 110 gpm, an entrance velocity of 0.1 fps and a slot size of 0.010 inches with a corresponding open area of 34.3 square inches per foot.



Minimum Required Screen Length

$$Q_s = 110 \text{ gpm}$$

$$V_E = 0.1 \text{ fps}$$

$$A_{OP} = 34.3 \text{ in}^2/\text{ft}$$

$$A_{min} = Q_s / V_E$$

Where Q_s = Source Capacity

V_E = Aperture Entrance Velocity

A_{OP} = Open Area of Screen

A_{min} = Minimum Required Slot Area

$$A_{min} = (110 \text{ gal/min}) \left(\frac{1 \text{ ft}^3}{7.48 \text{ gal}} \right) (1 \text{ min}/60 \text{ sec}) (1 \text{ sec}/0.1 \text{ ft}) = 2.45 \text{ ft}^2$$

$$A_{min} = (2.45 \text{ ft}^2) \left(\frac{144 \text{ in}^2}{1 \text{ ft}^2} \right) = 352.9 \text{ in}^2$$

$$L_{min} = A_{min} / A_{OP} = 352.9 \text{ in}^2 / 34.3 \text{ in}^2/\text{ft} = 10.29 \text{ ft}$$

The minimum required screen length was then rounded up to the nearest factor of 10 to provide ample open area to accommodate for potential plugging of screen openings in the future. This resulted in a well screen length of 20 feet.

4.5 WELL PUMP SIZING AND SELECTION

In order to size the well pump prior to drilling, some assumptions were required. Calculations were based on the maximum possible design depth, the maximum possible pumping level, minor losses based on the proposed piping, and the desired groundwater well yield.

Appendix B has the well pump sizing calculations spreadsheet and the manufacturer's specifications for the selected well pump. The calculated well pump design parameters were 110 gpm at 745 feet of total dynamic head (TDH). The proposed well pump has a 3-Phase, 30 horsepower, 60 hertz, 460 volt, 3,470 RPM motor and is manufactured by Grundfos, Model 150S300-17.

Pertinent equations from the well pump sizing calculations spreadsheet are shown below. All intermediate calculated values can be found in the spreadsheet.

Reynolds Number

$$Re = \frac{QD}{\nu A}$$

Where Re = Reynolds Number

Q = Design Flowrate

D = Pipe Diameter

ν = Kinematic Viscosity of Working Fluid

A = Cross – sectional Area of Pipe

Friction Factor

$$f = 0.25 \left[\log_{10} \left(\frac{\epsilon}{3.7D} + \frac{5.74}{Re^{0.9}} \right) \right]^{-2}$$

Where f = Friction Factor

ϵ = Roughness Height

Velocity

$$V = \frac{Q}{A}$$

Where V = velocity

Q = Design Flowrate

A = Cross – sectional Area of Pipe

Headloss Through a Pipe

$$h_f = f \left(\frac{L}{D} \right) \left(\frac{V^2}{2g} \right)$$

Where f = Friction Factor

L = Pipe Length

D = Pipe Diameter

V = Velocity

g = Gravitational Constant



Pump Head or Total Dynamic Head (TDH)

Given Bernoulli's Equation

$$\frac{P_1}{\gamma} + \frac{V_1^2}{2g} + Z_1 + h_p = \frac{P_2}{\gamma} + \frac{V_2^2}{2g} + Z_2 + h_f$$

Where $P_1 = P_2 = \text{Pressure (constant assumed)}$

$V_1 = V_2 = \text{Velocity (constant)}$

$Z_1 = \text{Pumping Elevation}$

$Z_2 = \text{Reservoir Elevation (at capacity)}$

$h_p = \text{Pump Head}$

$h_f = \text{Headloss}$

Simplifying the above equation implies

$$h_p = Z_2 - Z_1 + h_f$$

Substituting the values calculated in the well pump sizing spreadsheet (see Appendix B) the minimum required Total Dynamic Head is as follows.

$$h_p = 1451 - 734.5 + 28.57 = 745.07 \text{ feet}$$

This results in proposed well pump requirements of 110 gpm at 745 feet of TDH.

5 STORAGE VOLUME ANALYSIS

The City of Stites water system storage capacity is currently comprised of two reservoirs with a combined capacity of 84,000 gallons (42,000 gallons each). This analysis evaluates the long-term storage needs based upon the 20 year population projection compared to the current system capacity. Current and Forecasted Demand is summarized in Section 3, Tables B and C of this memorandum.

The source capacity is based on the proposed well capacity determined above, which is 110 gpm. This value was determined by multiplying the Maximum Day Demand by a well production factor of 1.5. The Maximum Day Demand used within these calculations is based on IDAPA 58.01.08.552.01.a which specifies a minimum Maximum Day Demand capacity of 800 gallons per residence per day for public drinking water systems.

Required storage is a sum of the following components. Note that all storage requirements are based on demand forecasts for the year 2035 in accordance with the calculations described above. A single 30 foot diameter reservoir was used for the purposes of these calculations. The Washington State Department of Health Water System Design Manual (WS DOH Water System Design Manual) was used as a reference for all storage volume calculations:



Operational Storage (OS)

Sensor Accuracy Check:

The proposed pump control system includes a pressure switch for Pump On and Pump Off. The accuracy for the proposed sensor is 0.5% of full scale BSFL ± 1 digit. The appropriate full scale range, based on the manufacturer specifications, is 30 psi or 69.3 feet. Therefore, the accuracy is:

$$\text{Accuracy} = (0.5/100)(69.3 \text{ ft}) = 0.3465 \text{ ft} = 4 \text{ inches.}$$

For practical purposes in setting the pressure switch, an operational range of one foot is proposed.

Pump Cycling Check:

The pump rate feeding the water storage reservoir is 110 gpm. Based on a 30' inside diameter:

$$\text{Tank Volume} = (1 \text{ ft})(\pi)(30 \text{ ft}/2)^2(7.48 \text{ gal}/\text{ft}^3) = 5,287 \text{ gallons}$$

Per WS DOH recommendations, the OS volume should be "about 2.5 times the capacity of the largest pump":

OS Required = $2.5 \times 110 = 275 \text{ gallons}$, which is less than the proposed capacity of 5,287 gallons for an operational range of one foot.

Equalizing Storage (ES)

$$Q_s = 110 \text{ gpm}$$

$${}^4\text{PHD} = (MDD/1440) [(C)(N) + F] + 18$$

$$\text{Where } C = 2.0$$

$$F = 75$$

$$N = 127 \text{ EDUs}$$

$$\text{PHD} = (800/1440)[(2.0)(127) + 75] + 18 = 200.8 \text{ gpm}$$

$${}^5\text{ES} = (\text{PHD} - Q_s)(150 \text{ min.}) = (200.8 - 110)(150) = 13,617$$

Therefore, the required Equalizing Storage is 13,617 gallons.

⁴ Peak Hourly Demand (PHD) Formula is Equation 5-1 of the WS DOH Water System Design Manual. Constants C and F of this Formula are based on Table 5-1 of the same manual.

⁵ Equalizing Storage (ES) Formula is equation 9-1 of the WS DOH Water System Design Manual.



Fire Suppression Storage (FSS)

In accordance with the Idaho State Fire Code, required fire suppression for the City of Stites water system is 1,000 gallons per minute for 60 minutes.

$$FSS = 1,000 \text{ gpm} \times 60 \text{ minutes} = 60,000 \text{ gallons}$$

Therefore, the required Fire Suppression Storage is 60,000 gallons.

Standby Storage (SB)

For a single source,

$${}^6SB = (2 \text{ days}) (ADD) (N)$$

Where $ADD = 307 \text{ gpd/ERU}$ (accounts for 15% system leakage)

$$N = 127 \text{ ERU}$$

$$SB = (2 \text{ days}) (307) (127) = 77,893 \text{ gallons}$$

Therefore, the required Standby Storage is 77,893 gallons.

Dead Storage (DS)

The reservoir will be constructed with the bottom of the tank above an elevation required to provide a minimum of 30 psi to the entire system. Therefore, minimum pressure requirements do not dictate dead storage requirements.

The drain pipe to distribution of the existing reservoirs is estimated to be located 6 inches above the bottom of the tank making the bottom 6 inches of tank volume unusable (dead storage). The total volume of this dead storage is:

$$DS = (0.5 \text{ ft})(\pi)(30 \text{ ft}/2)^2(7.48 \text{ gal/ft}^3) = 2,644 \text{ gallons}$$

Therefore, the required Dead Storage is 2,644 gallons.

⁶ Standby Storage (SB) Formula is Equation 9-2 of the WS DOH Water System Design Manual.



Total Storage

Total storage is the sum of the storage components calculated above. The same process was repeated using the current water usage demands and is outlined in Table F alongside the 2035 projected storage requirements.

Table F: Required Storage Capacities, Current and Future

2015		2035	
EDUs	101	EDUs	127
OS =	5,287 gallons	OS =	5,287 gallons
ES =	13,158 gallons	ES =	13,617 gallons
FSS =	60,000 gallons	FSS =	60,000 gallons
SB =	61,947 gallons	SB =	77,893 gallons
DS =	2,644 gallons	DS =	2,644 gallons
Total Storage =	143,036 gallons	Total Storage =	159,441 gallons

As stated previously, the two existing storage reservoirs have a combined capacity of 84,000 gallons. In accordance with the Drinking Water Rules the estimated storage capacity required for current and future demands are 143,036 gallons and 159,441 gallons, respectively. Therefore, the existing system storage is inadequate to meet current or future demand.

6 SUMMARY

The proposed water system improvements project is the first step to getting the City of Stites in compliance with IDAPA 58.01.08. This project will address the health hazards associated with the contamination issues of the existing well as well as the low water pressures at services within the distribution system. A Facility Plan will be prepared in conjunction with this project to identify long term solutions to address the issues described in the Well Site Approval letter from DEQ (Appendix D).



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1118 F Street • Lewiston, Idaho 83501 • (208) 799-4370
www.deq.idaho.gov

C.L. "Butch" Otter, Governor
John H. Tippetts, Director

RECEIVED
JUL - 5 2016
IDWR/NORTHERN

July 1, 2016

Adam Frederick
Idaho Department of Water Resources
7600 N Mineral Dr., Ste. 100
Coeur d'Alene, ID 83815

Subject: Water Rights Application for Permit # 82-12259

Dear Mr. Frederick:

DEQ has received a request for comment on the approval of a water right application to draw ground water from an existing artesian well, existing deep well, and a new primary well located within the service area of the City of Stites municipal water supply system in Idaho County. This application will draw 0.25 cfs for municipal water service from January 1 to December 31.

DEQ approved the project for construction earlier this year and supports the effort. Assuming all federal, state and local permits have been obtained, regulations met, and reviews completed, we can offer the following comment.

It is the policy of the State of Idaho Ground Water Management Plan that existing and projected beneficial uses of ground water and interconnected surface water be maintained and protected and degradation that would impair beneficial uses of ground water and interconnected surface water not be allowed.

Thank you for requesting our review and comment of your activity. If you have any questions regarding Idaho Water Quality Standards, please call us at (208) 799-4370.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cindy Barrett".

Cindy Barrett
Surface Water Quality Manager

c: Gerald J. Cathey, Mayor, City of Stites
Ray Hennekey, IDFG
John Cardwell, DEQ
TRIM

Ball, Dianne

From: Ball, Dianne
Sent: Tuesday, June 28, 2016 10:46 AM
To: Legal Notices-ID CO Free Press (IFPlegals@idahocountyfreepress.com)
Cc: Frederick, Adam; Maxey, Shaun; Case, Morgan
Subject: Application for Permit No. 82-12259, 85-15773, 85-15775
Attachments: LegalNotice 06-28-16 IC e-mail 82-12259, 85-15773, 15775-.doc

Good morning,

Please publish the attached legal notice on the dates indicated, July 6 and 13, 2016, (once a week for two consecutive weekly issues). If you cannot publish the notice on the proposed dates, please contact us immediately.

Please note the area(s) under **USE** containing dates and water amounts that are offset and lined up. Our legal should appear in this format. One item in the HACKNEY application in this **USE** area is offset a little different –referencing cubic feet per second (cfs) amount of water. That line for *USE: Stockwater from Storage*, should remain offset a little different from the other.

Actually, this legal notice should be very close to press ready – for 2-column, 8pt font. It might possibly be able to be a straight “copy and paste”, to help hold the **USE** section formatting. I don’t know what font specifically, you use.

Please also send a **proof/preview** copy for my review before this actually goes to press.

If you have any questions, please contact me as early as possible.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office before 7/25/2016. Your cooperation is greatly appreciated.

Thanks for all your help in getting our legals published as submitted.

PS: If you hear from Nona, please tell her ‘Hi’ for me.

Dianne Ball

Administrative Assistant
Idaho Department of Water Resources
7600 N Mineral Dr., Ste. 100
Coeur d'Alene, ID 83815
208-762-2800 Fax 208-762-2819

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

82-12259

CITY OF STITES

PO BOX 300

STITES, ID 83552

Point of Diversion SWNWNW S28 T32N R04E IDAHO County

Point of Diversion SENENE S29 T32N R04E IDAHO County

Point of Diversion SESESE S20 T32N R04E IDAHO County

Source GROUND WATER

Use: MUNICIPAL 01/01 to 12/31 0.25 CFS

Total Diversion: 0.25 CFS

Date Filed: 4/15/2016

Place of Use: MUNICIPAL

Municipal use is within the service area of the applicant.

85-15773

TED G WEEKS

TIFFANY L WEEKS

140 PINE RD

KAMIAH, ID 83536

Point of Diversion L23(NWNWSW) S12 T33N R03E IDAHO CO

Source SPRING tributary SINKS

Use: DOMESTIC 01/01 to 12/31 0.04 CFS

Use: IRRIGATION 03/15 to 11/15 0.09 CFS

Use: STOCKWATER 01/01 to 12/31 0.02 CFS

Total Diversion: 0.15 CFS

Date Filed: 5/9/2016

Place of Use: DOMESTIC T33N R03E S12 L10(SWNW)

L23(NWSW)

Place of Use: :STOCKWATER and IRRIGATION

T33N R03E S12 L10(SWNW) L23(NWSW)

Total Acres: 3

Domestic use is for 1 home.

Stockwater use is for 5 head of mixed stock.

85-15775

STEPHEN W HACKNEY

309 FARRENS CREEK LN

GRANGEVILLE, ID 83530

Point of Diversion SWSESE S11 T29N R03E IDAHO County

Source SPRING Tributary SINKS

Point of Diversion NESESE S11 T29N R03E IDAHO County

Source SPRING Tributary SINKS

Use: FIRE PROTECTION Storage 01/01 to 12/31 19.3 AF

Use: RECREATION Storage 01/01 to 12/31 19.3 AF

Use: STOCKWATER Storage 01/01 to 12/31 19.9 AF

Use: STOCKWATER from Storage 01/01 to 12/31 0.02 CFS

Total Diversion: 0.02 CFS 19.9 AF

Date Filed: 5/31/2016

Place of Use: STOCKWATER from Storage T29N R03E S11

SESE

Place of Use: STOCKWATER Storage T29N R03E S11 SESE

Place of Use: RECREATION Storage T29N R03E S11 SESE

Place of Use: FIRE PROTECTION Storage T29N R03E S11

SESE

Stockwater use is for 22 head of cattle and horses

Recreation use is for swimming..

Permits will be subject to all prior water rights. For additional information concerning the property location, contact Northern Region office at (208) 762-2800; or for a full description of the right(s), please see:

<http://www.idwr.idaho.gov/apps/ExtSearch/WRApplcationResults/>

Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, Northern Region, 7600 Mineral Drive, Suite 100, Coeur D' Alene ID 83815 together with a protest fee of \$25.00 for each application on or before 7/25/2016. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 7/6/2016 and 7/13/2016



State of Idaho

DEPARTMENT OF WATER RESOURCES

Northern Region, 7600 Mineral Drive. Suite 100, Coeur d'Alene, Idaho 83815

Phone: (208) 762-2800 FAX: (208) 762-2819 www.idwr.idaho.gov

June 28, 2016

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

CITY OF STITES
PO BOX 300
STITES, ID 83552

Application For Permit No. 82-12259

Dear Applicant(s):

The Department of Water Resources has received your water right application. Please refer to the number referenced above in all future correspondence regarding this application.

A legal notice of the application has been prepared and is scheduled for publication in the IDAHO COUNTY FREE PRESS on 7/6/2016 and 7/13/2016. Protests to this application may be submitted for a period ending ten (10) days after the second publication.

If the application is protested, you will be sent a copy of each protest. All protests must be resolved before the application can be considered for approval. If the protest(s) cannot be resolved voluntarily, the Department will conduct a conference and/or hearing on the matter.

If the application is not protested, the Department will process your application and notify you of any action taken on the application. If your application is approved, the Department will send you a copy of the permit.

Please contact this office if you have any questions regarding the application.

Sincerely,

A handwritten signature in cursive script that reads "Adam Frederick".

Adam Frederick
Senior Water Resource Agent

Enc. Receipt No. N031836

Ball, Dianne

From: Ball, Dianne
Sent: Monday, June 27, 2016 5:15 PM
To: Cynthia.Barrett@deq.idaho.gov
Cc: Frederick, Adam; Case, Morgan
Subject: RE: Application for Permit No. 82-12259 City of Stites
Attachments: App-municiple-ckl iisr & maps.pdf

Dear Cindy

The Department of Water Resources is seeking written comment and/or recommendations from your agency regarding the above referenced water right application. A copy of the application is attached for your reference.

This is being prepared for publication in the Idaho County Free Press on July 6 and 13, 2016 with July 25, 2016 as final date for protests to be received in our office.

Your prompt response to this request is appreciated. If your agency desires to formally protest the approval of this application, you may do so after the notice is published by filing a written protest along with a \$25.00 filing fee within 10 days after final publication.

Please contact Adam Frederick in this office if you have any questions regarding this application.

Sincerely,

Dianne Ball

Administrative Assistant
Idaho Department of Water Resources
7600 N Mineral Dr., Ste. 100
Coeur d'Alene, ID 83815
208-762-2800 Fax 208-762-2819

Case, Morgan

From: Heather Calkins [Heather.Calkins@tdhengineering.com]
Sent: Friday, June 17, 2016 12:34 PM
To: Case, Morgan
Subject: Re: Additional Information - City of Stites Application for Permit
Attachments: City of Stites - Water System Map.pdf

Morgan,
Attached is the map with the requested information. Let me know if you need anything else.
Thank you!

Heather Calkins, P.E. | Civil Engineer

TD&H Engineering

210 Main Street | Lewiston, ID 83501
t:208.746.0938
www.tdhengineering.com

>>> "Case, Morgan" <Morgan.Case@idwr.idaho.gov> 6/14/2016 8:16 AM >>>
Heather,

We reviewed the amended permit and need one additional piece of information. Can you please submit a map showing all of the wells and municipal place of use with the Township, Range, Section, and QQ lines? You can submit that by email to me and we will get the process started.

Thank you,

Morgan

Morgan Case
Northern Regional Manager
Idaho Department of Water Resources
7600 N Mineral Dr. Suite 100
Coeur d'Alene, ID 83835
208.762.2800

CONVERSATION MEMO

____ Office Visit ☒ Telephone ____ Meeting ____ Other

TO WR File
FROM Morgan Case
DATE 5/17/2015
RE RAFN vs. non-RAFN right

I spoke with Heather Callins from TDH (208.746.0938) about the City of Stites application for a Municipal RAFN right. According to her, the city is already diverting 0.45 cfs to serve existing system. The city has approximately 130 service connections, although not all are in use. I advised TDH to work with the City to file an amended application which will include all wells as PODs for a non-RAFN municipal right. TDH will also work with the City of Stites to file an application for transfer of their existing Water Right No. B2-7053. The application for RAFN will be held until we receive the amendments.

JUN 02 2016

DEPARTMENT OF
WATER RESOURCES

May 17, 2016

Morgan Case
Idaho Department of Water Resources
PO Box 83720
Boise, ID 83720-0098

Re: City of Stites – Water Right Permit Application Amendment

Morgan:

Thank you for taking the time to discuss the options for securing a water right permit for the City of Stites' new well. As discussed, we have assisted the City in preparing an amended permit application and municipal checklist. The amendment provides the following changes:

- 1) Section 3 of the Application for Permit has been revised to add all wells within the City of Stites as points of diversion for the new water right. This includes the existing "Artesian Well" (constructed in early 1900's), the "Deep Well" (constructed in 1977), and the new "Primary Well" that will be constructed this summer.
- 2) A vicinity map has been attached which shows the location of the two existing wells, the proposed well, and the water distribution system components.
- 3) Section 5 of the Municipal Water Right Application Checklist has been amended to indicate that the water right permit is for a non-RAFN planning horizon (≤ 5 years).
- 4) Section 7 of the Municipal Water Right Application Checklist has been amended to indicate that for a non-RAFN application, the existing demand and short term needs do exceed the combined authorizations from the existing water right. Justification for the water usage calculation is provided below

Justification for usage calculations

TD&H is in the process of preparing a Water Facility Plan for the City of Stites. As part of the system evaluation, the number and location of existing water service connections was identified. Currently, the water system has 130 existing water services. Although several of these services are to vacant lots or unoccupied residences/businesses, this number represents the existing built-out conditions. It is very likely that within the next 5-years, many of these services will become active.

Per IDAPA 58.01.08.552.01.a, the capacity of a public drinking water system shall be at least eight hundred (800) gallons per day per residence.

Based on 130 connections with a demand of 800gpd/residence, the calculated Maximum Day Demand (MDD) is 104,000 gallons. Peak Hour Demand (PHD) was then calculated using the Washington Department of Health Water System Design Manual, Equation 5-1:

$$PHD = (MDD/1440) \times (C \times N + F) + 18$$

With:

MDD = 800 gpm

C = 2.0

N = number of connections = 130

F = 75

This results in a PHD of 204 gpm which is equal to 0.45 cfs. The City currently has a water right permit that authorizes 0.18 cfs. The amended water right application seeks to secure a new water right permit for 0.25 cfs. This would bring the City's total water right authorized use to 0.43 cfs. The increased water right will allow the City to accommodate existing water demands and short term needs.

The City has also been notified that their existing water right (0.18 cfs) only includes the Deep Well as a point of diversion. A recommendation has been given to them to file an *Application for Transfer of Water Right – Point(s) of Diversion* in order to include the Artesian Well and the new Primary Well as points of diversion under the existing water right. TD&H will assist them with this application.

Thank you for your assistance with the water application amendment. Please call or email if you have any questions or if additional information is needed.

Sincerely,

TD&H Engineering



Heather Calkins, P.E.
Project Engineer

C: Gerald Cathey, Mayor

CONVERSATION MEMO

____ Office Visit X Telephone ____ Meeting ____ Other

TO WR File
FROM Morgan Case
DATE 4/28/2016
RE RAFN application

I spoke with David Withhaus, PE of TDH (208.746.0938) about the City of Stites RAFN application. He was under the impression that a transfer of the existing right (82-7053) would require abandonment of the original (well) POD. I clarified that the city could add a POD through a transfer and maintain the original POD as an emergency back-up. The City would still like to pursue the RAFN application for future needs, but are now aware that the process for approving a RAFN will not meet their project deadlines. I told David that staff will be reviewing the application.

Public Water System Classification List

PWS #	Name	Distribution SSC	Treatment SSC	Population	Source Type	County
ID1280155	SOUTH RIVER WATER ASSN	VSWS		150	GW	KOOTENAI
ID3140254	SOUTHSHORE WATER	VSWS		30	GW	CANYON
ID1090130	SOUTHSIDE ELEMENTARY SCHOOL	VSWS		200	GW	BONNER
ID1090131	SOUTHSIDE WATER AND SEWER DIST	DWD1		541	GW	BONNER
ID3140115	SOUTHWEST IDAHO TREATMENT CENTER	VSWS		142	GW	CANYON
ID6030050	SPACE ACRES WATER USERS ASSN	VSWS		34	GW	BANNOCK
ID1280175	SPIRIT BEND WATER ASSN	VSWS		123	GW	KOOTENAI
ID1280177	SPIRIT LAKE CITY OF	DWD2		1980	GW	KOOTENAI
ID1280176	SPIRIT LAKE EAST WATER COMPANY	DWD1		655	GW	KOOTENAI
ID4200048	SPLENDID ACRES WATER ASSN	VSWS		90	GW	ELMORE
ID5420054	SPORTSMANS RIVER RESORT	VSWS		50	GW	TWIN FALLS
ID5160041	SPRING CREEK TERRACES	VSWS		70	GW	CASSIA
ID5160056	SPRINGDALE ACRES	VSWS		35	GW	CASSIA
ID6060080	SPRINGFIELD CITY OF	VSWS		35	GW	BINGHAM
ID3140161	SSI FOOD SERVICE	VSWS		216	GW	CANYON
ID7220067	ST ANTHONY	DWD2		3542	GW	FREMONT
ID6040024	ST CHARLES CITY OF	VSWS		130	GW	BEAR LAKE
ID7100070	ST LEON IND PARK	VSWS		75	GW	BONNEVILLE
ID1050024	ST MARIES CITY OF	DWD2	DWT1	3152	SW	BENEWAH
ID2290036	STADIUM DRIVE MOBILE HOME PARK	VSWS		129	GW	LATAH
ID4010139	STANLEY POND INC	VSWS		72	GW	ADA
ID7190053	STANLEY SCHOOL	VSWS		45	GW	CUSTER
ID3140001	STAR ROAD WAREHOUSE LLC	VSWS		100	GW	CANYON
ID4010220	STAR SEWER AND WATER DIST WATER SYSTEM	DWD2		6600	GW	ADA
ID7100100	STARTING LINE	VSWS		60	GW	BONNEVILLE
ID1280182	STATE LINE VILLAGE	VSWS		500	GWP	KOOTENAI
ID3140175	STECHER MUTUAL WATER COMPANY	VSWS		56	GW	CANYON
ID3140116	STECHER WATER USERS ASSN	VSWS		70	GW	CANYON
ID1280242	STEPPING STONES ESTATES	VSWS		85	GW	KOOTENAI
ID2250060	STITES CITY OF	VSWS		253	GW	IDAHO
ID6360009	STONE ELEMENTARY SCHOOL DIST 351	VSWS		35	GW	ONEIDA
ID1090009	STONERIDGE	VSWS		322	GW	BONNER
ID6210017	STRAWBERRY MINK CREEK WATER ASSN	VSWS		75	GW	FRANKLIN
ID4010016	SUEZ	DWD4	DWT4	214237	SW	ADA
ID7330026	SUGAR CITY CITY OF	DWD2		1514	GW	MADISON
ID4200049	SUMMERWIND WATER USERS	VSWS		192	GW	ELMORE
ID2250140	SUMMIT ACADEMY	VSWS		75	GW	IDAHO
ID1280184	SUN AIRE ESTATES	VSWS		70	GW	KOOTENAI
ID7330027	SUN GLO OF IDAHO NORTH	VSWS		92	GW	MADISON
ID5070051	SUN VALLEY WATER AND SEWER DIST	DWD2		3427	GW	BLAINE
ID6390007	SUNBEAM WATER	VSWS		60	GW	POWER

USE OF ANY LIST AS A MAILING LIST OR TELEPHONE LIST IS PROHIBITED BY IDAHO CODE §9-348 AND PUNISHABLE BY A CIVIL PENALTY UP TO \$1,000