

DROUGHT RELIEF GRANT APPLICATION

Ecology Use Only

Application Number				
D2015	03	-E	R	O
Date				
Reed 7/20/2015				

The information provided in this application will be used to determine general eligibility for funding from the Drought Relief Program, and the priority or ranking of the proposal amongst other competing proposals.

Separate application must be made for any needed emergency drought authorization. Before final approval of grant funding, the applicant must submit copies of all required permits and other authorizations needed for the proposal to Ecology for our review.

1. Applicant Name(Public Body): Stevens Public Utility District			
Address: P O Box 592	City: Loon Lake	State: WA	Zip: 99148
(a) Authority (State Law): RCW 54, 08 ^{RW}			
(b) Date Organized: 1936			

2. Contact Person: Richard C.R. Price, P.E.		Title: General Manager/Engineer	
Address: P O Box 592	City: Loon Lake	State: WA	Zip: 99148
Email: dprice@stevenspubd.org		Phone #: 509-233-2534	

3. PROJECT(S) DESCRIPTION	<p>Provide a description of the proposed project(s) and a detailed scope of work. Attach additional sheet(s) if necessary. Attach a map (U.S.G.S. Quad or comparable) showing the geographic location of the proposed project(s).</p> <p>Riverside Well Replacement Project: Drill and place into service a new well to replace the failing main production well.</p> <p>Scope of Work: This project includes the following:</p> <ol style="list-style-type: none"> 1. Drill and test pump a new 8" well, 2. Install well pump and controls for new well, 3. Install piping from new well to existing pumphouse, and modify piping and valves inside existing pumphouse.
----------------------------------	---

4. DESCRIPTION OF NEED

Describe what would occur without the benefit of the proposed project(s), including: the nature of the actual hardship, both short-term and long-term impacts, the expected loss of normal water supply by percentage, and the estimated potential financial losses. Explain why these circumstances constitute a water supply emergency resulting from natural-caused drought conditions, rather than a pre-existing condition during a normal water year.

The S05 main production well from the Riverside Water System has a steadily decreasing water level since last fall, which has forced us to valve down the well output from 188 gpm to 40 gpm currently. We expect this well output to continue decreasing.

This S05 well has historically produced 60% of the total source capacity of the 3 existing wells. The outputs have historically been as follows:

Well Tag No.	Well Source No.	Historical Output	Current Output	% of Total Historical Output
ABR225	S02	97 gpm	95 gpm	31%
AHC143	S04	26 gpm	0 gpm	9%
ACA993	S05	188 gpm	40 gpm	60%
Totals		311 gpm	135 gpm	100%

Since October 2014, the static and pumping water levels have steadily decreased in the S05 well.

In February, 2015, the S05 well pump was lowered 9', which is as low as possible without placing the pump inside the well screen. This did not increase the quantity of water available. Production Well S04 is located only 50' from the main S05 production well and we are now also having low water level problems with this well. On July 15, 2015 this S04 well low-levleled and the automatic level sensor shut off the pump and it is now turned off. So, we have now lost the 26 gpm output from this well. Because both of these adjacent wells are experiencing low water levels, it is clear the problem is decreasing groundwater levels and not problems with just the well construction.

On July 23rd (tomorrow) we will lower the 20 hp pump in the S05 well approximately 5' in a last-ditch effort to continue getting at least some output from this well.

The Riverside Water System has 107 service connections, including a trailer park, several businesses, and a church.

- Attached are the following documents:
- 1) Well Logs for the 3 wells.
 - 2) Well location map.
 - 3) Approved Water System Service Area Map.

Revised 7/22/15 by Richard Price

5. EXPECTED OUTCOME(S)

Describe how the projects would reduce or avoid harm or hardships and any measures planned to assure the capability and reliability of the proposed project(s) to provide an emergency water supply to the applicant.

The proposed new well will be drilled near the existing S02 production well, which is approximately one mile south of wells S04 and S05 and on a bench that is approximately 60' lower in elevation. To date there have been no decreasing water levels in this well. The P.U.D. owns 10 acres at this location, so there is more than sufficient space to drill the proposed well.

A hydrology study done in 1988 by Car and Associates concluded the location where the S02 Well was drilled may be an old river channel.

6. WATER SHORTAGE RESPONSE ACTIONS ALREADY TAKEN

Describe the measures taken by the applicant to plan for or mitigate the effects of drought (e.g., conservation, irrigation efficiency measures, leakage, elimination of non-essential uses).

In February 2015, the S05 well pump was lowered to maximize the well output. This has not solved the problem because the water level continues decreasing.

An additional water source is needed because the S05 well produces 60% of the total source capacity and no amount of water conservation can meet this need.

7. WATER RIGHTS

- (a) Describe whether you have or will be submitting an application for an emergency drought authorization and or have other pending water right applications

None anticipated.

- (b) List the applicant's legal water rights to divert or withdraw water for use on land within the applicant's legal boundaries, and attach copies.

There are sufficient existing water rights. The proposed new well is already shown on the following Riverside Water System water rights as future well S07 (Well #4) on Parcel No. 39353.9105:

- 1) G3-21375C
- 2) G3-26151C
- 3) G3-24001C
- 4) G3-28260P
- 5) G3-26598P

8. INTERGOVERNMENTAL COORDINATION

Provide a summary of how the applicant has and/or will consult with affected agencies and/or Indian Tribes prior to and during implementation of the proposed project(s). Include a list of the affected agencies and Indian Tribes and a summary of impacts/approvals if known. (Attach an additional sheet if necessary.)

Plans and specifications will be submitted to DOH for approval. The project is SEPA exempt.

The Spokane, Kalispell, and Colville Tribes will be contracted regarding the project to determine and coordinate any archaeological concerns.

9. PROJECT(S) SCHEDULE/DURATION

(a) When do you expect to have all the required permitting, approvals, and funding?

September 1, 2015

(b) Approximately how long will the proposed project(s) take to complete?

3 months

(c) Expected project(s) schedule, including start date, completion date, and significant intermediary steps:

September 1, 2015 - start well drilling

September 14, 2015 - start test pumping well

September 28, 2015 - start well pump and piping installation

October 22, 2015 - finish construction work

10. PROJECT COMPONENTS

Check appropriate box or boxes and complete estimated cost for proposed activities under this grant.

- (a) Engineering design and report \$ 5,000
- (b) Project(s) plans and specifications \$ 5,000
- (c) Purchase of land, rights-of-way, easements \$ 0
- (d) Construction \$ 70,000
- (e) Construction engineering \$ 3,000
- (f) Education and outreach \$ 3,000 (and environmental)
- (g) Other Legal, Administration, inspection \$ 8,000

11. FUND SOURCES	Estimated total project cost		Estimated eligible project cost	
(a) Total estimated project(s) cost	100 %	\$ 94,000	100 %	\$ 94,000
(b) Total estimated eligible project(s) cost	%	\$ 94,000	%	\$ 94,000
(c) Ecology grant share	%	\$ 47,000	%	\$ 47,000
(d) Match fund source(s): (specify)	%	\$	%	\$
(e) System Revenue	%	\$ 47,000	%	\$ 47,000
(f)	%	\$	%	\$
(g)	%	\$	%	\$

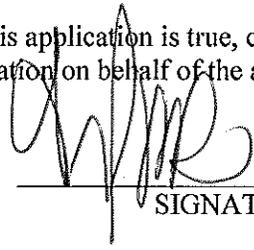
Applicant may be exempt under WAC 173-167-040(3) from the fund match requirement

Revised on 7/27/2015 by Richard Price

12. CERTIFICATION

I certify to the best of my knowledge that the information in this application is true, complete, and correct and that I am legally authorized to sign and submit this information on behalf of the applicant.

Richard C.R. Price
PRINT NAME


SIGNATURE

General Manager/Engineer
TITLE

July 16, 2015
DATE

13. Send original, including attached sheets, maps, copies of water rights, and other supporting documents, to:

**Department of Ecology
Water Resources Program
PO Box 47600
Olympia, WA 98504-7600
ATTN: Rebecca Inman**

SOA Red Well

File Original and First Copy with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Howard Gatlin Address 8003 MARKET - SPOKANE

(2) LOCATION OF WELL: County SPOKANE - NN 1/4 - 1/4 Sec. 25 - T. 21N. R. 43W.M
Bearing and distance from section or subdivision corner 35 7/1125

(3) PROPOSED USE: Domestic Industrial Municipal
Irrigation Test Well Other

(4) TYPE OF WORK: Owner's number of well (if more than one) REPLACED
New well Method: Dug Bored
Deepened Cable Driven
Reconditioned Rotary Jetted

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 127 ft. Depth of completed well 125 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8" Diam. from 1 1/2 ft. to 92 ft.
Threaded 8" Diam. from 55 ft. to 125 ft.
Welded " Diam. from " ft. to " ft.

Perforations: Yes No
Type of perforator used: Torch
SIZE of perforations 1/8" by 6" in.
15 perforations from 80 ft. to 90 ft.
perforations from " ft. to " ft.
perforations from " ft. to " ft.

Screens: Yes No
Manufacturer's Name: _____ Model No. _____
Type: _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes No Size of gravel: _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes No To what depth? 20 ft.
Material used in seal: Bestrite
Did any strata contain unusable water? Yes No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation _____ ft.
Static level 60 ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes No If yes, by whom? H2O well service
Yield: 135 gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 11/24/84
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes No

(10) WELL LOG: Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
<u>SAND & GRAVEL</u>	<u>0</u>	<u>92</u>
<u>SAND, GRAVEL, CLAY & QUARTZ</u>	<u>92</u>	<u>127</u>
<u>GRAVEL</u>	<u>127</u>	<u> </u>
<u>Completed Hole</u>	<u>125</u>	<u> </u>

RECEIVED
SEP 28 2006
P.O.D. NO. 1
OF STEVENS COUNTY

Work started 11-27-84 Completed 11-27-84

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME UNITED DRILLING INC
(Person, firm, or corporation) (Type or print)

Address P.O. Box 2499 Coeur d'Alene, ID 83814

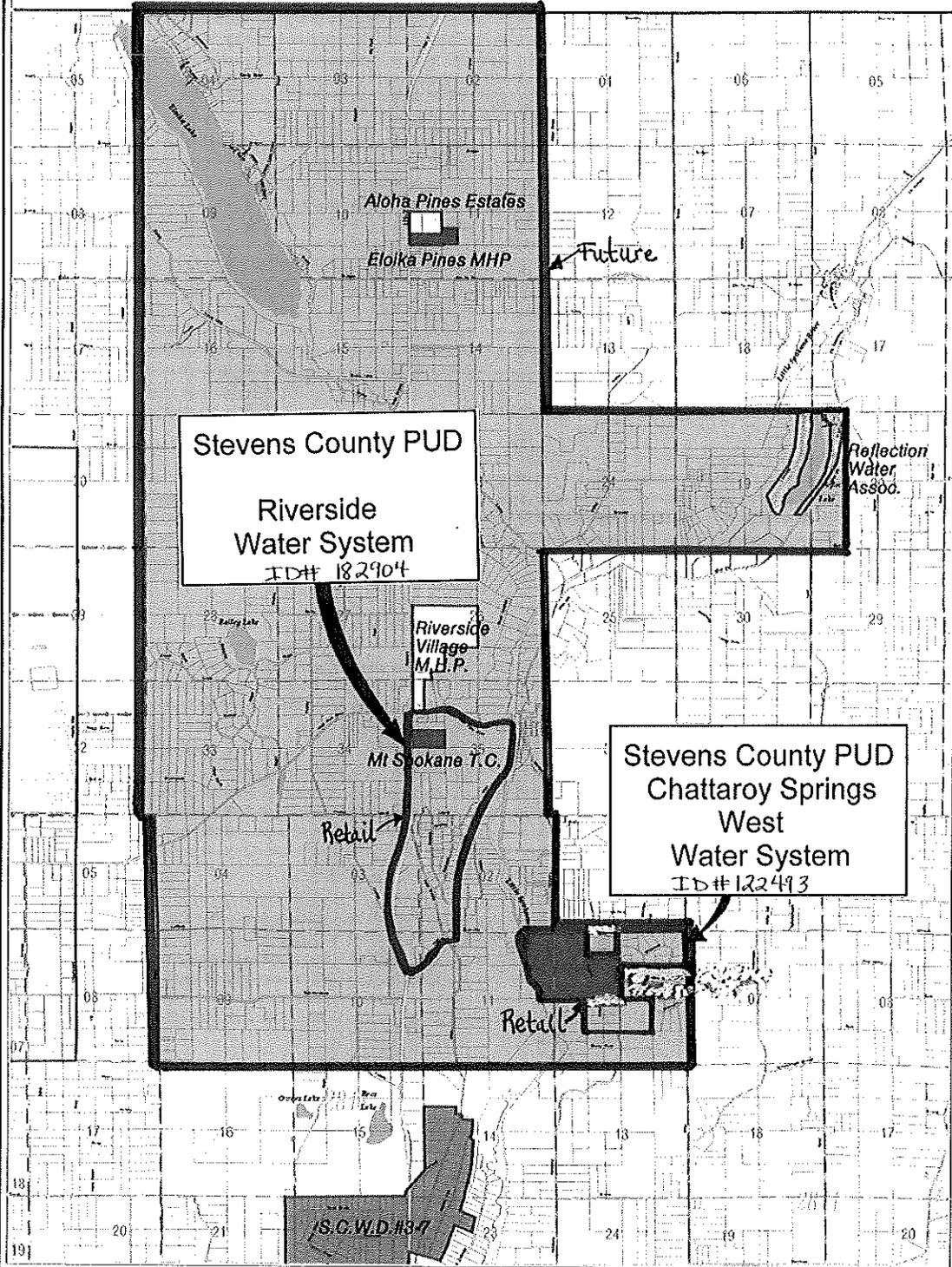
(Signed) Tom R. Volby
(Well Driller)

License No. 1370 Date 11/28 84

11/24/84

(USE ADDITIONAL SHEETS IF NECESSARY)

-  = PUD Retail Service Area
-  = PUD Future Service Area



LEGEND
 - WATER SERVICE AREAS
 - MAJOR PIPE LINES
 - FUTURE SERVICE AREAS
 - RIVERSIDE WATER SYSTEM
 - CHATTAROY SPRINGS WEST WATER SYSTEM

Coordinated Water System Plan - Spokane County
 Service Area Map - 75

Produced by
 Spokane County Utility Div.
 Rev. Date: Nov. 18, 2008
 Print Date: February 23, 2009