Memorandum

To: Papio-Missouri River Natural Resources District Programs Projects and Operations Subcommittee

From: Paul W. Woodward, PE, Groundwater Management Engineer

Date: August 7, 2020

Re: Review and Recommendation on City of Tekamah Nebraska Environmental Trust Grant Application for Enhanced Well Seals and Decommissioning

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The City of Tekamah applied for and received a Nebraska Environmental Trust (NET) grant in Sept. 2018 to fully decommission 4 abandoned wells and install a primary aquifer seal in their fire station municipal well shown on Figure 1. The NRD participate in providing matching funds in the amount of $10,000 and the total project cost was approximately $62,000.

This project was a success. Groundwater nitrate levels in the shallow geologic layers, between 41 and 72 feet below grade, surrounding the fire station were tested at 15 ppm. After Groundwater Solutions Group LLC fully abandoned the four previously capped steel wells, as shown in Figure 2, nitrate levels tested from the municipal well were reduced to 7.1 ppm during a 6 hour pump test. Next, the pump was pulled out of the municipal well and work was performed to penetrate the well casing and pump cement grout into the sand filter pack that surrounds the casing between 42 and 72 feet below grade. During a final 6-hour pump test performed after the well was cleaned and the pump reinstalled, nitrate levels fell at or below 3 ppm.

Given the promising results from this past project and the relatively low cost compared to having to install new wells, the City of Tekamah is interested in pursuing another NET grant to fully decommission 3 other old abandoned wells and place a primary aquifer seal in all 4 of their remaining municipal wells. The total estimated cost for this effort would be $203,460 according to a proposal from Groundwater Solutions Group. The City of Tekamah has agreed to pay for any required engineering necessary for permit to modify each municipal well, estimated at approximately $20,000. They have asked the District to provide a cost-share for the project of up to $30,000. As such, a draft letter of support from the District is enclosed for your consideration.

The total cost for the grant will be spent over a two-year period ending by October 2022 as follows:

Year	NET	Tekamah	NRD	TOTAL
1	$ 95,615	$ 10,000	$ 22,320	$ 127,935
2	$ 77,865	$ 10,000	$ 7,680	$ 95,545
TOTAL	**$ 173,480**	**$ 20,000**	**$ 30,000**	**$ 223,480**

Staff recommends that the subcommittee recommend to the Board of Directors that the General Manager be authorized to submit a letter of support for the City of Tekamah's Nebraska Environmental Trust grant application and provide matching funds up to $30,000 for an Enhanced Well Seals and Decommissioning project, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.

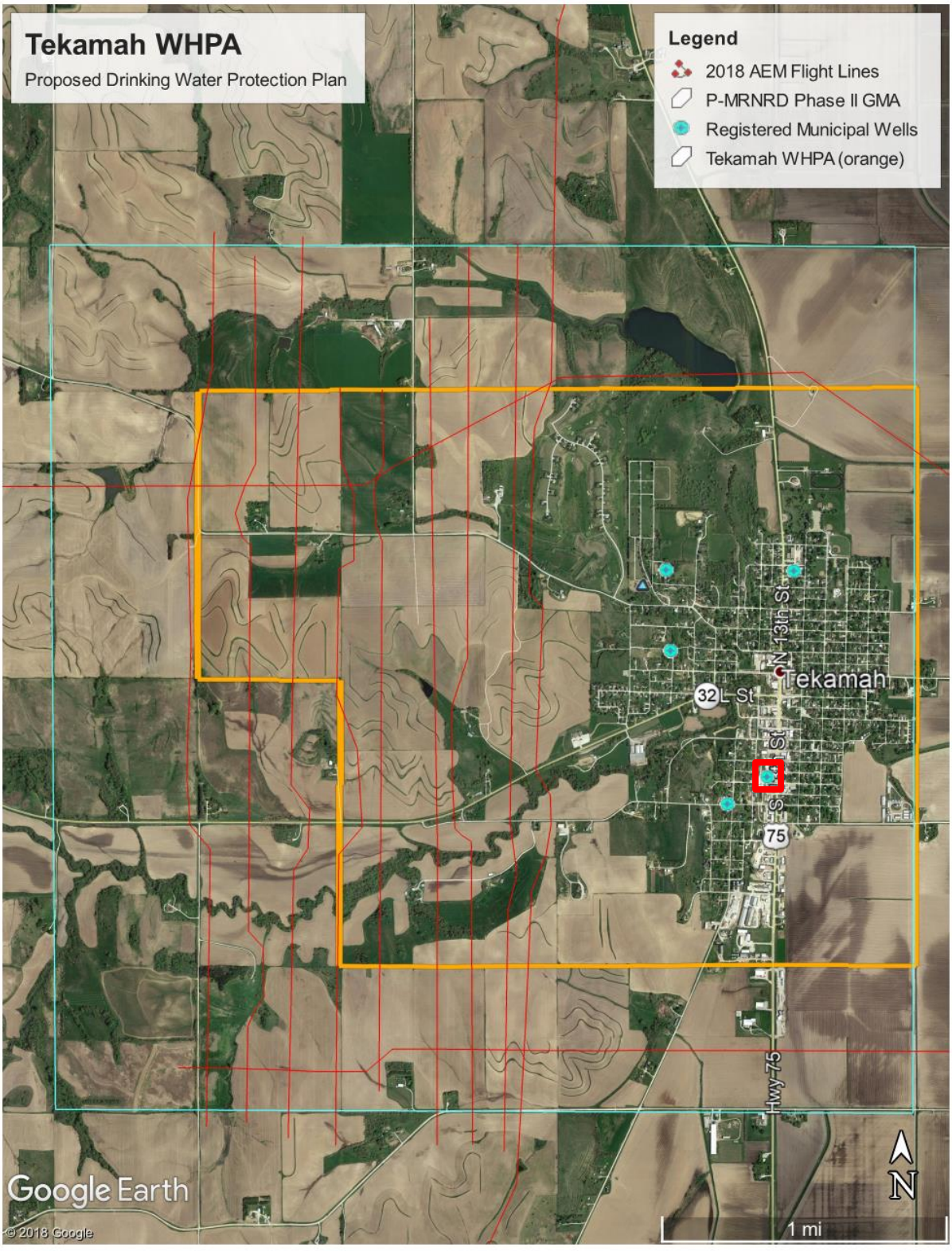


Figure 1 – Map of Tekamah WHPA and Phase II Groundwater Management Area.

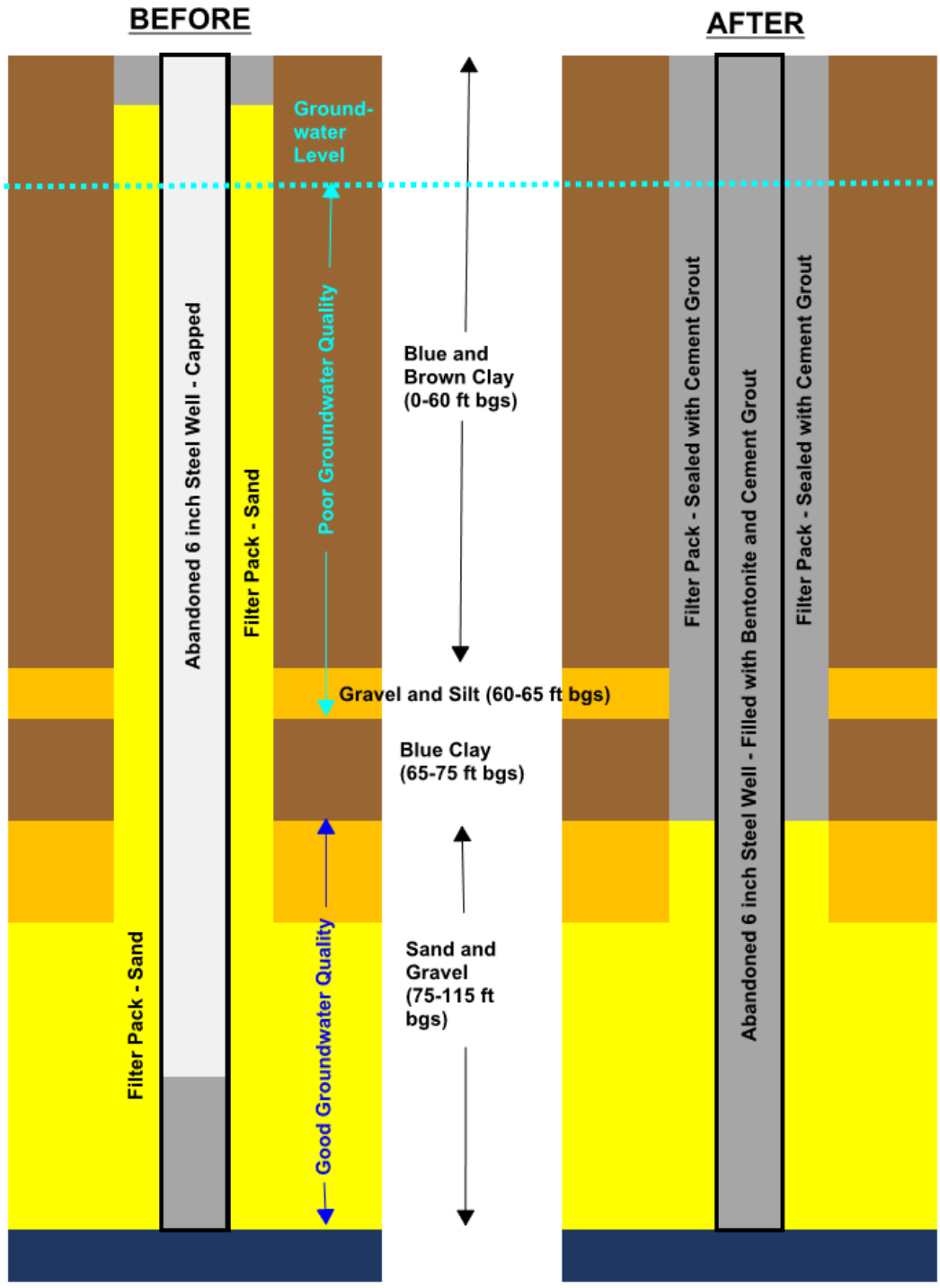


Figure 2. Before and after depiction of enhanced well decomissioning in 6-inch steel wells

August 7, 2020

Ms. Karolyn McElroy

City of Tekamah, Clerk
1315 K Street
Tekamah, Nebraska 68061

Re: Enhanced Well Seals and Decommissioning Nebraska Environmental Trust Grant Application

Dear Ms. McElroy:

This letter is to confirm the Papio-Missouri River NRD's (P-MRNRD) participation and financial support for the Enhanced Well Seals and Decommissioning project in Tekamah. The District will be able to provide $30,000 in funding over two years. A financial summary for the District is enclosed.

The Tekamah Wellhead Protection Area is currently designated as a Phase II Groundwater Quality Management Area in the NRD's recently adopted Groundwater Management Plan. The District supports this project as part of our efforts to address nitrate contamination in this Phase II area per our Groundwater Management Plan.

We look forward to a successful grant application and project. Please contact me with any questions.

Sincerely,

John Winkler
General Manager

Enclosure

CC: Paul Woodward, P-MRNRD

GROUNDWATER SOLUTIONS GROUP LLC PROPOSAL FOR SERVICES

For Groundwater Protection-Well Augmentation City of Tekamah Public Water Supply Wells G-028227, G-028228, G-028229, and G-051029. Enhanced Decommissioning 3 unregistered abandoned wells on City property

July 27, 2020

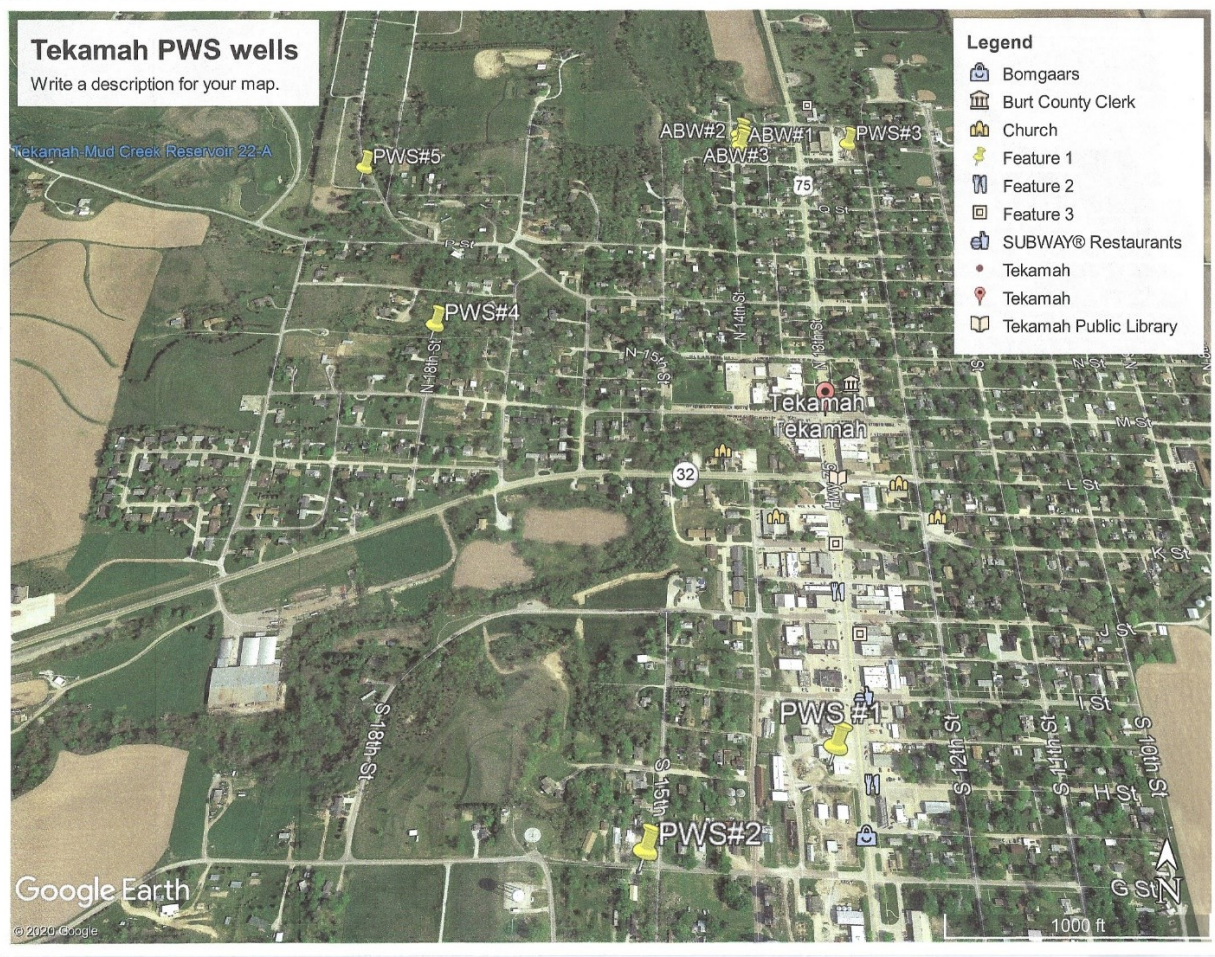
OVERVIEW

Groundwater Solutions Group LLC is submitting this proposal to the City of Tekamah to assist them in their desire to improve water quality from their PWS water wells. Groundwater Solutions Group LLC is a network of groundwater professionals experienced and committed to improving groundwater qualities by applying enhanced grouting techniques to existing high capacity water wells. .

The Objective

The City of Tekamah currently has 5 active Public Water Supply Wells (PWS). All these wells have a history of being impacted by nitrate contamination. A review of the recorded well logs for these 5 PWS wells indicate they share a common trait. Each well location has an upper zone of water separated by a substantial clay layer from a lower production zone of ground water. The nitrates in the upper zone tend to be higher than the maximum contaminate level of 10.5 parts per million (PPM) for nitrates. It has been documented that contaminates such as nitrates can migratre from an upper zone in the aquifer to a lower aquifer if the borehole of a well is drilled through the separating clay layer and is not adequately grouted.

In April of 2019 the City of Tekamah signed a contract with Groundwater Solutions Group to decommission four (4) PWS wells and to augment the gravel packed borehole of PWS well G-028226 with the desired result to lower and maintain nitrate results below 10 parts per million (PPM). The project concluded in May of 2020. Groundwater Solutions Group was able to successfully locate and properly decommission four abandoned PWS wells by perforating the six (6) inch steel casing and pressure grouting the entire well and existing boreholes with a neat cement grout sealing all four wells. It was in the process of diagnosing the on-site conditions present at G-028226, that a third zone of water was documented. Each zone had unique water qualities that distinguished them from each other. This discovery lead to an additional perforation and grout interval within, the 10-inch steel casing found in PWS well G-028226. The casing was perforated in three (3) different intervals isolating those dissimilar water qualities. The lowest interval had the best water quality with no iron, low manganese, and low nitrates. The middle interval had water quality with high iron, high manganese, but low nitrates. The upper most interval had the highest concentration of nitrates at 15 PPM. A six-hour pump test was conducted upon completion of the work and one month after that. As a result, nitrates were reduced from 9.4 PPM before work commenced to 2.4 PPM at the final pump test one month after completion. The final 13parameter water tests indicated that the lowest interval was still low in iron, manganese, total dissolved solids, hardness and stable pH. This indicates that the three zones of water have been successfully separated.



The Opportunity

Due to the success of this project the City of Tekamah is exploring funding to re-grout their remaining four (4) PWS water wells and decommission three (3) more abandoned 6-inch steel wells within the confines of the city.

The regrouting of the remaining four (4) PWS wells are of vital interest to the City of Tekamah to try and improve the water quality from their existing system.

- Registered Public Water Supply Well G-028227 was completed in 1956 and has been identified as being a well that was constructed without adequate environmental seals within the borehole. This well is located at SE/SW ¼, Section 19, Township 21, Range 11 East, of Burt County. The well log states total depth of 152 below ground surface (BGS), the source of water for this well is the Dakota Sandstone. The geological log found on the water well registration indicates a substantial clay layer from 77 to 92 feet BGS. This will need to be verified by an electronic logging (e-log) inspection. Past water sample results indicate nitrate levels fluctuate between 4.1 PPM to 6.35 PPM.
- Registered Public Water Supply Well G-028228 was completed in 1949 and has been identified as being a well that was constructed without adequate environmental seals within the borehole. This well is located at NW/NE ¼, Section 19, Township 21, Range 11 East, of Burt County. The well log states total depth of 96 below ground surface (BGS), the source of water for this well is a local sand and gravel similar to G-028226. The geological log found on the water well registration indicates a substantial clay layer from 45 to 54 feet BGS. This will need

to be verified by an electronic logging (e-log) inspection. Past water sample results indicate nitrate levels fluctuate between 6 PPM to 9.6. PPM.

- Registered Public Water Supply Well G-028229 was completed in 1959 and has been identified as being a well that was constructed without adequate environmental seals within the borehole. This well is located at SW/NW ¼, Section 19, Township 21, Range 11 East, of Burt County. The well log states total depth of 171.8 below ground surface (BGS), the source of water for this well is the Dakota Sandstone. The geological log found on the water well registration indicates a substantial clay layer from 100 to 116 feet BGS. This will need to be verified by an electronic logging (e-log) inspection. Past water sample results indicate nitrate levels fluctuate between 5.2 PPM to 10.5 PPM.
- Registered Public Water Supply Well G-051029 was completed in 1975 and has been identified as being a well that was constructed without adequate environmental seals within the borehole. This well is located at NW/NW ¼, Section 19, Township 21, Range 11 East, of Burt County. The well log states total depth of 180 below ground surface (BGS) , the source of water for this well is the Dakota Sandstone. The geological log found on the water well registration indicates a substantial clay layer from 85 to 133 feet BGS. This has been validated during the construction of three (3) monitoring wells in 1999. Past water sample results indicate nitrate levels fluctuate between 1.7 PPM to 17.4 PPM.
- There are three (3) abandoned 6-inch steel wells near G-028228. Since these wells are no longer in use and have no record of construction it is assumed these wells are a point source for contamination. To protect the integrity of the groundwater in the City these wells will be decommissioned using the same enhanced decommissioning methods as were used at PWS G-028226 well site. Current State of Nebraska Title 178 NAC 12-012 regulations for decommissioning fails to address the preferential pathway of contamination entering the groundwater reservoir by transport through the gravel pack annulus between the borehole wall and the well screen and casing. Instead the regulations focus on filling the inside of the screen and casing to prevent point source contamination through and open pipe. Enhanced decommissioning address both filing the inside of the well and grouting the outside of the well to achieve an environmentally sound aquifer seal.
- According to construction records the above identified active public water supply wells have a full-length gravel packed borehole and needs to be augmented to achieve separation of waters from the upper sand and gravel zone from the lower production zone. This will be accomplished by perforating the steel casing adjacent to an existing clay layer, and re-grouted with bentonite slurry. To restore the natural filtration of the ground water reservoir all of these wells (3 abandoned wells and 4 active PWS wells) must be grouted and tested.

The Solution

Identify the source of high nitrates at each well site by drilling an accurate test hole and e-logging each hole. The e-log will help identify the exact location of protective clay layers and will provide an indication of water quality within the borehole. Monitoring wells will be established both deep in the aquifer and shallow in subsurface to map the concentrations of nitrates. The only site this will not be done is G-051029 as there are already three (3) monitoring wells established by the Papio-Missouri River NRD in 1999 that have documented the nitrates in the shallow sandstone at total depth of 71 feet BGS in the borehole

Because of the existence of nitrates in two of the five well locations it can be assumed shallow perched water is present underneath the City of Tekamah. The fact that this perched water table contains high nitrate ground water its important that any borehole penetrating this zone of perched water will be sealed to prevent nitrate and dissimilar water qualities from migrating downward through the gravel packed annulus of the borehole. We propose a two-year project to achieve such protection. As a result we intend to perform the following;

- Identify which PWS boreholes that penetrate the established clay barrier between upper and lower water bearing zone within the aquifer.

- Evaluate which wells are most viable and good candidates for borehole augmentation. Should a well be discovered to having deteriorated beyond useful repair, it will be identified as being a candidate for enhanced decommissioning and replacement.

  Re-establish a segregation between zones of dissimilar water qualities in the City's PWS water supply wells with a grout seal adjacent to those separating clay layers and;

- Decommission the existing three abandoned wells near G-028228 by enhanced water well decommissioning methods.

Our Proposal-Year #1

Phase *#1 Test hole-e-logs- monitoring wells- water sampling*

To determine the proper placement of the well seals needed to ensure these wells are properly decommissioned we propose the following:

- Drill a test hole to verify potential aquitards needed to bind with the grout materials at each site except the well site G-051029 near the cemetery. The test hole properties will be recorded by a geophysical log known as e-logging and drill cutting samples preserved for analysis.
- The deep test hole will be developed into a segregated monitoring well for future validation of the well seal. Additional shallower monitoring wells will be completed to document nitrate levels in zones throughout the borehole at each site for G-028227, G-028228, and G-028229.
- A representative water sample (nitrates and 13 parameter) will be obtained from the project well and segregated monitoring wells to establish baseline water quality at each site

Phase *#2 Enhanced Decommissioning 6-inch abandoned wells*

- The three (3) 6-inch abandoned wells will be inspected with a down-hole video camera. This inspection will verify the integrity of the casing, depth to static water, depth to the top of the screened openings, total depth of the well.
- The abandoned 6-inch wells will be cleaned in the areas of grouting and perforation of the casing.
- Perforations will be made at the interval(s) prescribed by the test hole and e-log results. The integrity of the perforations will be documented by a downhole video inspection
- The screen area will be filled with gravel to within 5 feet of the lower grout interval.
- The lower grout interval will be sealed with a bentonite clay or neat cement mixed to manufacturer's specification to achieve a 23% active solids content for a length determined by the test hole and e-log results. The grout will be placed until pressure on the grouter indicate a pressurized seal has been achieved. Any remaining well casing will be filled to within 10 feet of the surface with bentonite grout mixed at 23% active solids or neat cement. The grout will remain undisturbed for 24 hours.
- The well casing will be filled with bentonite chips to within 5 feet of the surface and the remaining steel casing will be removed and seal will then be installed according to Title 178 NAC12-012 regulations.
- The well decommissioning notice filed with the DNR will be modified to indicate the enhanced decommissioning used on this well.

Phase *#3 Year #1 Borehole Augmentation of G-051029 (Cemetery Well Site)*

- Pull pumping equipment from G-051029 (Cemetery well)
- Evaluate the well condition with downhole video inspection
- Clean the well in areas of perforation
- Perforations of the well casing to include cuts made at 120 feet below grade adjacent to the grey shale layer between 85-133 feet BGS and any other interval discovered during the process to need grouting up to two additional intervals.
- Inspect perforation and document spacing of perforations with downhole video camera
- Grout the perforated zone with bentonite or neat cement slurry until backpressure on the grouter indicates a sufficient seal has been placed. Grout will be allowed to set undisturbed for 24 hours
- Grout interval will be inspected with down hole camera
- Well will be cleaned and debris removed from the well
- Well will be disinfected with 200 PPM Chlorine solution
- Pump will be reinstalled, and pump tested for capacity
- 6-hour pump test will be conducted to compare against original baseline data.

PHASE #3 -YEAR #2 WELL BOREHOLE AUGMENTAION G-028227, G-28228, G-028229

Each PWS well will be worked on one at a time so the City will have only one well out of service. Another project will not commence until the PWS well that is being re-grouted has been tested and placed back in service.

- 13 parameter water quality samples taken from PWS well and related monitoring wells.
- Pump will be removed and evaluated for wear
- Downhole video of well casing and screened intervals will be performed to determine integrity of well condition
- Well casing and screen will be cleaned by brushing and airlifting to remove debris
- Well will be perforated in designated areas to establish separation of the upper and lower zones of the aquifer and establish a surface seal within the borehole. Based on experiences at well site G-028226, up to three (3) perforations and grout intervals may be needed to achieve separation of waters of dissimilar water qualities within the borehole. Downhole video inspection will be made to confirm perforation location and condition
- The lower grout interval will be sealed with a bentonite clay mixed to manufacturer's specification to achieve a 23% active solids content for a length determined by the test hole and e-log results. The grout will be allowed to remain undisturbed for 6 hours. The upper perforation will be grouted with a neat cement grout consisting of 94 pounds of Portland cement to 5.5 gallons of water. The grout interval will sit undisturbed for 24 hours.
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- Downhole video inspection will be performed to validate perforations being sealed
- Well will be airlifted and cleaned of debris and disinfected with 200 PPM disinfectant
- Pump will be re-installed, and test pumped 6 hours for volume capacity
- 13 parameter water samples will be taken from PWS well and subsequent monitoring wells to establish a baseline.

Project Report

The final report will consist of analysis of the installed grout seal integrity and sealing materials installed in this and the pilot project at G-028226. The report will document water quality changes in the PWS wells and identify other water quality parameters changes over the course of the project.
The final report will not include an estimate of well longevity of any of the wells involved within the project. It is understood that these well were constructed from 1949 to 1976 and are aged from normal wear. By augmenting the grout seal these older wells at this time, enhanced decommissioning of the well casing will not be needed to safely replace the well when it comes time to replace the well.

Execution Strategy

Our execution strategy incorporates proven methodologies, extremely qualified personnel, and a highly responsive approach to well decommissioning and grout seal augmentation. Following is a description of our methodology, including how the project will be developed, a proposed timeline of events, and reasons for why we suggest developing the project as described.

Timeline for Execution

Key project timelines are outlined below. Days are best-guess estimates for completing enhanced decommissioning for 4 wells and Augment PWS well G-028228

Description- Site evaluation and assessment- Year #1	**Phases**	**Duration**
Meet with the City of Tekamah	Prestart	
Drill test hole and e-logging and monitoring well construction	1	20 days
Baseline water samples	1	5 days
Enhanced Decommissioning- abandoned 6-inch wells- Year #1		
Cleaning of well(s) and complete well peroration(s)	2	12 days
Filling the screened opening area	2	1 day
Lower Seal installed	2	5 days
Well casing filled with grout of within 10 feet of grade	2	3 days
Upper seal installed- neat cement	2	5 days
Remaining casing filled top sealed, top 3 feet excavated and removed	2	4 days
Well Augmentation -PWS G-051029 Cemetery well site- Year #1		
Baseline water samples	1	1day
Pull pumping equipment and inspect pump	3	2 days
Downhole video inspection of PWS well G-028229	3	1 day
Clean and brush well casing in perforation intervals	3	2 days
Perforate Casing in lower interval and upper interval	3	3 days
Pressure grout lower seal	3	1 day
Pressure Grout upper seal	3	1 day
Air lift and remove debris- test pump- downhole video inspection	3	2 days
Disinfect well, install pump, test pump, obtain water samples	3	3days
G-051029 report of findings filing modification paperwork with DNR	3	5 days

Well Augmentation -PWS G-028227, G-028228, G-028229- Year #2	Phase for each site	Per Site
Baseline water samples	1	1 days
Pull pumping equipment and inspect pump	3	2 days
Downhole video inspection of PWS well G-028229	3	1 day
Clean and brush well casing in perforation intervals	3	2 days
Perforate Casing in lower interval and upper interval	3	3 days
Pressure grout lower seal	3	1 day
Pressure Grout upper seal	3	1 day
Air lift and remove debris- test pump- downhole video inspection	3	2 days
Disinfect well, install pump, test pump, obtain water samples	3	3days
Final report, filing modification paperwork with DNR		

EXPECTED RESULTS

By removing the un-grouted areas of the borehole around the abandoned 6- inch wells and the PWS well G-028227,G-028228 and G-028229 we expect to reduce and eliminate the preferential pathway for contamination to transport to the ground water reservoir. As a result, the nitrate concentrations in water samples of PWS wells should stabilize and reduce. We expect this proposed solution to be of value to the City of Tekamah to assist them in their desire to improve water quality from their PWS water wells. and benefit the City by providing the following results:

- Reduction of nitrate concentrations in water samples from the PWS well
- Provide protection of the lower production zone of the aquifer
- Elimination of a potential point sources contamination
- Enhanced protection of the City's groundwater supply
- Development of best management plans for addressing future contamination concerns

PRICING

The prices listed in the following table are an estimate for the services discussed. This summary is not a warranty of final price. Estimates are subject to change if project specifications are changed or unforeseen site conditions cause unexpected expense, or costs for outsourced services change before a contract is executed. **Prices do not include costs for Engineering services to obtain a permit from the Department of Heath and Human Services – Engineering Section for Title 179 – Public Drinking Water**

The following table details the costs for enhanced decommissioning of the 3 capped city wells and augmenting the grout seals of PWS well G-051029, G-028227, G-028228, G-028229.	Year	
Phase #1		
Phase #1- abandoned well site, test hole, e-log	1	$4,750.00
Phase #1 G-051029-baseline water samples	1	$3,375.00
Phase #1 G-028227-test hole, monitoring wells baseline water samples	1	$13,875.00
Phase #1 G-028228-test hole, monitoring wells baseline water samples	1	$13,875.00
Phase #1 G-028229-test hole, monitoring wells baseline water samples	1	$13,875.00
Preliminary Report Phase 1, includes registering monitoring well with NDNR	1	$7,680.00
Phase #2		
Phase #2- enhanced decommission well #1- 6-inch abandoned wells	1	$8,100.00
Phase #2- enhanced decommission well #2- 6-inch abandoned wells	1	$8,100.00
Phase #2- enhanced decommission well #3- 6-inch abandoned wells	1	$8,100.00
Report including Notice of Decommissioning filed with NDNR	1	$2,550.00
Preliminary Report Phase 2, includes filing notice of decommissioning report with NDNR	1	$7,680.00
Phase #3		
G-051029- Augmentation of grout seal	1	$25,955.00
G-028227- Augmentation of grout seal	2	$25,955.00
G-028228- Augmentation of grout seal	2	$25,955.00
G-028229- Augmentation of grout seal	2	$25,955.00
Preliminary Report- Phase 3, includes well modification report filed with NDNR	2	$7,680.00
Total of Year #1 and #2		$203,460.00

Disclaimer

It is understood that well grout augmentation does not guarantee increased longevity of a well. Well casing materials age at a certain rate and will eventually need to be replaced. Steel well casing has an expected longevity of 60 to 90 years depending on water conditions at the site. PVC well casing by contrast has an undefined longevity as it is inert to corrosion but more susceptible to abrasion.

These City wells were constructed in 1949 (71 years), 1956 (64 years), 1957 (63 years), 1967 (53 years) , and 1976 (44 years) are constructed out of steel well casing meaning three of these wells are in the early stages of the expected longevity span for steel wells. It is reasonable to expect however that due to the favorable water quality generally found in the groundwater underneath the City of Tekamah, these steel cased wells have many useful years of service in the years to come. Based on the viability and integrity of the steel well casing used in G-028226 that was augmented earlier this year, it reasonable to expect that the steel well casing of a younger aged wells found in G-028227, G-028228, G-028229, and G-051029 should be at least as viable as was discovered at G-028226.

Groundwater Solutions Group will utilize every tool to evaluate the integrity of the steel well casing. Should a well be determined to be unstable and not a candidate for grout seal augmentation, the well will be grouted as an enhanced decommissioning candidate.

QUALIFICATIONS

Groundwater Solutions Group is proven to be an industry leader for high quality products and services in the following ways;

- Groundwater Solutions Group offers cohesive access to the following professionals;
- Tom Christopherson is recognized by the National Ground Water Association as an expert in the field of groundwater and groundwater protection. He has been acknowledged by the NGWA as a member and a leader of a research project in the area of groundwater protection earning a national award for the work done by the State of Nebraska in 2017. His background as a water well contractor for 20 years before serving the State of Nebraska in his role as a field inspection water supply specialist, and then later as manager of the water well standards program and project manager of the Nebraska Grout Task Force and subsequent research projects, insures Groundwater Solutions Group has key personnel needed to lead a project and achieve its goals.
- GeoSpec Drilling has the latest diagnostic equipment available for the analysis of the borehole and cutting samples needed to identify aquitards critical to the success of the well grout augmentation process. Owner Bo Bonn has given several classes and seminars of the purpose and function of groundwater diagnostics and analysis; GeoSpec is a leader and has been highly successful in noninvasive perforations of well casing and pressure grouting the borehole annulus of high capacity water wells.
- Bruce Manchon is a professional geologist in the State of Nebraska. He is a nationally recognized expert in the areas of geophysics, groundwater contamination remediation, groundwater resource development and is a lecturer for the National Ground Water Association.
- AWS Well Co is licensed by the State of Nebraska as a Water Well Drilling/Pump Installation Contractor and has experienced personnel in the area of planning, engineering, and construction of wells and installation of irrigation and domestic water well systems. Bryce Anderson is a licensed Professional Engineer (PE) with the State of Nebraska. Located in Saunders and Valley county of Nebraska AWS has personnel with over 75 years of combined experience of providing the citizens of the Lower Platte North, Lower Platte South, Papio/Missouri River, Lower Elkhorn, Lower Loup, Central Platte, and Little Blue NRDs with solutions to their ground water use needs.
- Dave Hansen is a nationally recognized expert in well construction, water quality analysis, water chemistry and treatment. Dave has an extensive career in the groundwater industry beginning work with a private water well contractor in Minnesota, then moving on to Johnson Screen Works INC. where he contributed to the Ground Water and Wells second edition, then owning Design Water Technologies Inc.. He developed such products as unicid™ for well cleaning, steroline™ for well disinfection and Chloropal™ for well decontamination. He has served the National Ground Water Association in developing best management practices and served as the McEllhieny lecturer for 2007.

CONCLUSION

We look forward to working with the City of Tekamah to assist them in their desire to improve water quality from their PWS water wells. to preserve groundwater quality for groundwater users throughout their district. We are confident that we can meet the challenges ahead and stand ready to partner with you in delivering an effective groundwater protection solution plan.

If you have questions you can contact me at cwcwaterpro55@gmail.com or by phone at (402) 881-5249Thank you for your consideration,

Tom Christopherson
Groundwater Solutions Group