




LOWER PLATTE SOUTH natural resources district

3125 Portia Street | P.O. Box 83581 • Lincoln, Nebraska 68501-3581
P: 402.476.2729 • F: 402.476.6454 | www.lpsnrd.org

Memorandum

Date: February 12, 2021
To: Each Director
From: Paul D. Zillig, General Manager 
RE: Water Resources Subcommittee Meeting Minutes.

The Water Resources Subcommittee met via video/teleconference at 5:30 p.m. on Thursday, February 11, 2021. Subcommittee members participating included Larry Ruth, Chelsea Johnson, Vern Barrett, Ken Vogel, John Youkum, and Gary Hellerich. Other Directors participating included Deborah Eagan. And others participating include Dan Levy of Monolith, Mike Sotak of FYRA, Corey Wasserburger, Steve Seglin, Craig Matulka, David Potter, Tracy Zayac, Steve Herdzina, Nathan Kuhlman, Dick Ehrman, Dan Schulz, and myself.

Chair Ruth opened the meeting and welcomed those in attendance. The first item on the agenda was to consider an engineering services agreement for repairs to the Wilson Dam, near Avoca (see map). Matulka reported that there is shoreline erosion along the dam that has reached the point that it needs to be repaired and stabilized. Matulka contacted FYRA to look at the problem and staff negotiated a scope and fee with FYRA for the necessary engineering services to design, permit, bid and provide construction observation services for the repairs (see attached agreement). Sotak answered questions concerning the work. It was moved by Hellerich, seconded by Youkum, and unanimously approved by the Subcommittee to **recommend the Board of Directors approve the Professional Services Agreement with FYRA Engineering for the design, permitting, bidding, and construction observation of repairs to the Wilson Dam, at a cost not to exceed \$23,713.**

The next item on the agenda was to review a draft memo to the Board reviewing groundwater management in the NRD, milestones, implementing our Groundwater Management Plan, and the progress on the review of the Monolith Nebraska LLC preliminary well permit. The Subcommittee discussed the memo and Dan Levy provided information in response to questions concerning the Monolith plans. A copy of the final memo is attached.

I reported that we expect to receive the draft report from LRE Water this week and LRE Water will present this at the February Board Meeting and answer questions. Depending on comments and possible updates to the permit application by Monolith, our initial plan to consider the application in March. If additional time isn't needed we anticipate in early March we hold a couple of Subcommittee Meetings, a public meeting on the Monolith well permit, and Board action on the permit at the March Board Meeting. If additional time is needed the schedule would be deferred to April. All meetings will be virtual/zoom meetings.

The Subcommittee then reviewed and discussed the natural resource benefits of many of the Subcommittee programs and conservation practices. A copy of the table is attached.

There being no additional business the meeting adjourned at 6:30 pm.

PDZ/pz

Encl. 4

cc: Steve Seglin & Corey Wasserburger

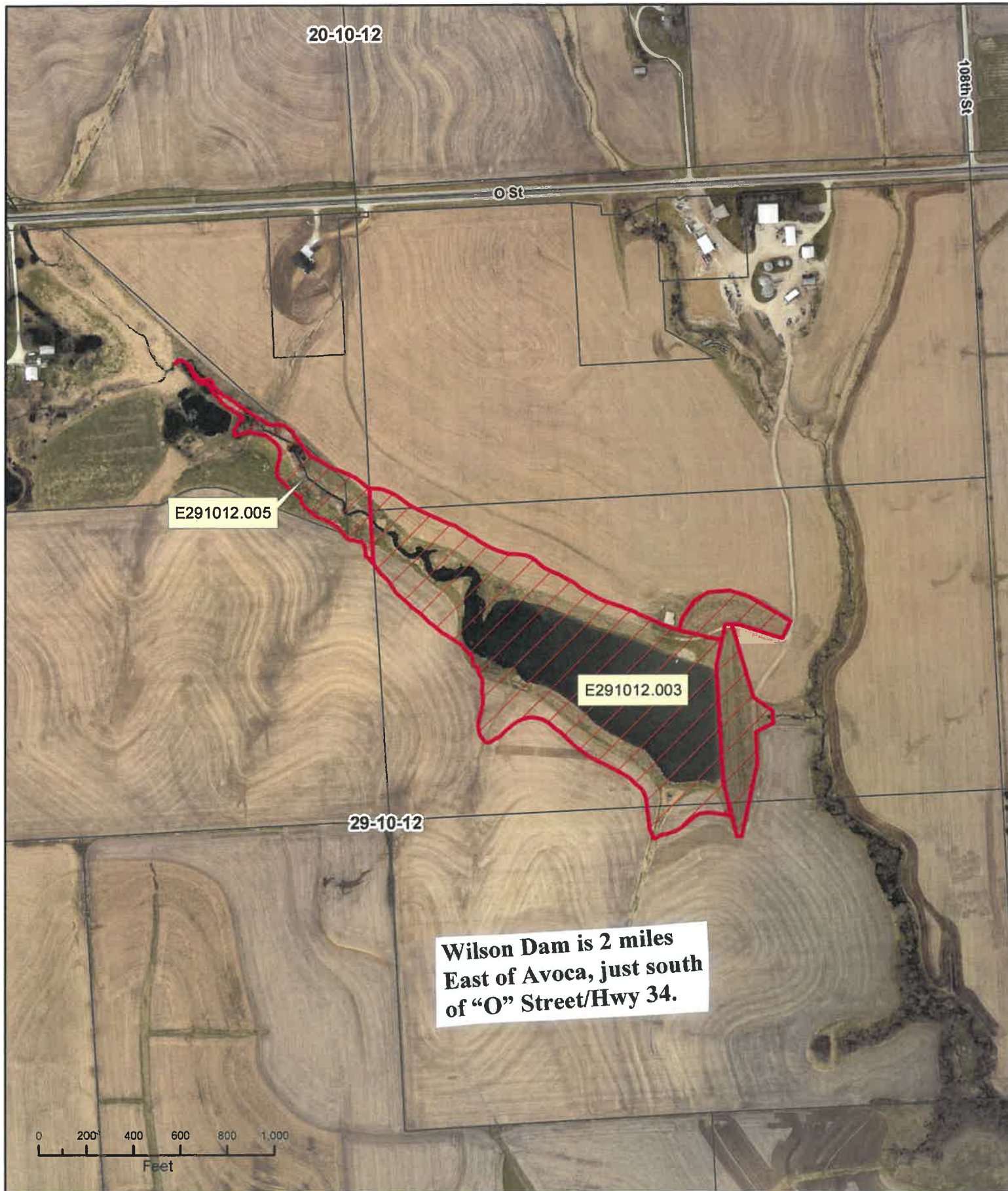
*** NOTICE ***



This diagram is not filed with the easements at the Register of Deeds. The NRD has generated this diagram to show the locations based on the legal descriptions provided in the easements.



Wilson Dam Easements (Sec29, T10N-R12E)





PROFESSIONAL SERVICES AGREEMENT

PROJECT: Wilson Dam Wave Berm Repair FYRA Engineering, LLC JOB #: 002-20-04
CLIENT: Lower Platte South NRD
ADDRESS: 3125 Portia Street, Lincoln, NE 68521
CONTACT: Jared Nelson, P.E. TEL: 402.476.2729 FAX: 402.476.6454
CONSULTANT: FYRA Engineering, LLC
ADDRESS: 12702 Westport Pkwy, Suite 300, Omaha, NE 68138
CONTACT: Michael K. Sotak, P.E. TEL: 402.502.7131 FAX: 402.932.6940
PROJECT DESCRIPTION: Design, permitting, bid solicitation and Construction Observation services for wave berm repair at Wilson Dam near Elmwood, NE.

[X] SCOPE OF SERVICES (See Attachment) [X] SCHEDULE (See Attachment)

COMPENSATION:

The total compensation under this Agreement shall not exceed the dollar amount indicated herein or the amount authorized by Amendment(s) and/or Notice(s) to Proceed (NTP), whichever is the lesser.

- [] LUMP SUM. Compensation for these services shall be a Lump Sum of \$
[X] TIME AND MATERIALS. Compensation for these services will not exceed \$23,713 without written authorization and will be based on the following option (per the attached Budget or List of Hourly Rates), and Reimbursable Expenses based on actual costs incurred and approved by FYRA Engineering, LLC and as authorized in writing by Client.
[] Subconsultant's Direct Job Wages times a factor of [X] Budget/List of Subconsultant's Hourly Rates.
[] COST PLUS FIXED FEE. Compensation for these services shall be Subconsultant Cost plus a fixed professional fee, including Reimbursable Expenses. The estimated compensation for services is \$ plus a fixed fee of \$ for a total of \$

COMPENSATION DETAIL (See Following Pages) SCHEDULE OF PAYMENTS (See Following Pages)

SERVICES AUTHORIZED BY: [X] Execution of Agreement or [] Amendment(s) and/or NTP

EXECUTION: Execution of this document by duly authorized representatives of FYRA Engineering, LLC and CLIENT, including FYRA Engineering LLC's Standard Conditions (reverse side) and any attachments, Additional Provisions as indicated, and addenda, represents the entire Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended or modified by written instrument, but such instrument is valid only upon signature by both parties.

CONSULTANT: FYRA Engineering, LLC CLIENT: Lower Platte South NRD
BY: Michael K. Sotak, P.E. BY: Paul Zillig
SIGNATURE: [Signature] SIGNATURE:
TITLE: Owner/Principal TITLE: General Manager
DATE: 9 February 2021 DATE:



FYRA ENGINEERING, LLC STANDARD CONDITIONS

SERVICES. FYRA Engineering will perform services for the Project as set forth in attachment and in accordance with these Terms & Conditions. FYRA Engineering has developed the Project scope of service, schedule, and compensation based on available information and various assumptions. The Client acknowledges that adjustments to the schedule and compensation may be necessary based on the actual circumstances encountered by FYRA Engineering in performing their services.

AUTHORIZED REPRESENTATIVES. The officer assigned to the Project by FYRA Engineering is the only authorized representative to make decisions or commitments on behalf of FYRA Engineering. The Client shall designate a representative with similar authority.

PROJECT REQUIREMENTS. The Client shall confirm the objectives, requirements, constraints, and criteria for the Project at its inception. If the Client has established design standards, they shall be furnished to FYRA Engineering at Project inception. FYRA Engineering will review the Client design standards and may recommend alternate standards considering the standard of care provision.

SITE ACCESS. The Client shall obtain all necessary approvals for FYRA Engineering to access the Project site(s).

PERIOD OF SERVICE. FYRA Engineering shall perform the services for the Project in a timely manner consistent with sound professional practice. FYRA Engineering will strive to perform its services according to the Project schedule set forth in attachment. The services of each task shall be considered complete when deliverables for the task have been presented to the Client. FYRA Engineering shall be entitled to an extension of time and compensation adjustment for any delay beyond FYRA Engineering control.

COMPENSATION. In consideration of the services performed by FYRA Engineering, the Client shall pay FYRA Engineering in the manner set forth in attachment. The parties acknowledge that terms of compensation are based on an orderly and continuous progress of the Project. Compensation shall be equitably adjusted for delays or extensions of time beyond the control of FYRA Engineering.

PAYMENT TERMS. FYRA Engineering shall submit monthly invoices for services performed and Client shall pay the full invoice amount within thirty (30) days of the invoice date. Invoices will be considered correct if not questioned in writing within ten (10) days of the invoice date. FYRA Engineering shall be entitled to a 2% per month administrative charge in the event of payment delay. Client payment to FYRA Engineering is not contingent on arrangement of project financing. Invoice payment delayed beyond sixty (60) days shall give FYRA Engineering the right to stop work until payments are current. Non-payment beyond seventy (70) days shall be just cause for termination by FYRA Engineering.

ADDITIONAL SERVICES. The Client and FYRA Engineering acknowledge that additional services may be necessary for the Project to address issues that may not be known at Project initiation or that may be required to address circumstances that were not foreseen. In that event, FYRA Engineering shall notify the Client of the need for additional services and the Client shall pay for such additional services in an amount and manner as the parties may subsequently agree.

INDEPENDENT CONSULTANT. FYRA Engineering shall serve as an independent consultant for services provided under this agreement. FYRA Engineering shall retain control over the means and methods used in performing their services and may retain subconsultants to perform certain services as determined by FYRA Engineering.

STANDARD OF CARE. Services provided by FYRA Engineering will be performed with the care and skill ordinarily exercised by members of the same profession practicing under similar circumstances. FYRA Engineering will not be liable for the cost of any omission that adds value to the Project.

COMPLIANCE WITH LAWS. FYRA Engineering shall perform its services consistent with sound professional practice and endeavor to incorporate laws, regulations, codes, and standards applicable at the time the work is performed. In the event that standards of practice change during the Project, FYRA Engineering shall be entitled to additional compensation where additional services are needed to conform to the standard of practice.



PERMITS AND APPROVALS. FYRA Engineering will assist the Client in preparing applications and supporting documents for the Client to secure permits and approvals from agencies having jurisdiction over the Project. The Client agrees to pay all application and review fees.

OWNERSHIP OF DOCUMENTS. Documents prepared by FYRA Engineering for the Project are instruments of service and shall remain the property of FYRA Engineering. Record documents of service shall be based on the printed copy. FYRA Engineering will furnish documents electronically; however, the Client releases FYRA Engineering from any liability that may result from documents used in this form. FYRA Engineering shall not be held liable for reuse of documents for any purpose other than those intended under the Project.

INSURANCE. FYRA Engineering will maintain the following insurance and coverage limits during the period of service. The Client will be named as an additional insured on the Commercial General Liability and Automobile Liability policies.

<u>Workers' Compensation</u>	As required by applicable state statute.
<u>Commercial General Liability</u>	\$1,000,000 per occurrence (bodily injury including death & property damage) \$2,000,000 aggregate.
<u>Automobile Liability</u>	\$1,000,000 combined single limit for bodily injury and property damage.
<u>Professional Liability</u>	\$1,000,000 each claim and in the aggregate.
<u>Umbrella/Excess Liability</u>	\$2,000,000 each occurrence

The Client shall make arrangements for Builder's Risk, Protective Liability, Pollution Prevention, and other specific insurance coverage warranted for the Project in amounts appropriate to the Project value and risks. FYRA Engineering shall be a named insured on those policies where FYRA Engineering may be at risk. The Client shall obtain the counsel of others in setting insurance limits for construction contracts.

WAIVER OF SUBROGATION. FYRA Engineering, LLC affirmatively agrees to obtain waiver of subrogation against the client and name the client as an additional insured on the Commercial General Liability and Automobile policies.

INDEMNIFICATION AND HOLD HARMLESS. FYRA Engineering, LLC shall indemnify and hold harmless the Client and its employees and agents from any and all liability, settlements, loss, defense costs, and expenses in connection with any action, suit, or claim resulting from the negligent acts, errors, or omissions in services provided pursuant to this Agreement by FYRA Engineering, LLC its employees, or Subconsultants and/or subcontractors. Client shall indemnify and hold harmless FYRA Engineering, LLC and its employees and agents from any and all liability, settlements, loss, defense costs, and expenses in connection with any action, suit, or claim resulting from the negligent acts, errors, or omissions in services provided pursuant to this Agreement by the Client, its employees, or subconsultants and/or subcontractors. However, if any such liability, settlements, loss, defense costs or expenses result from the concurrent negligence of FYRA Engineering, LLC, and the Client this indemnification applies only to the extent of the negligence of FYRA Engineering, LLC.



LIMITATION OF LIABILITY. To the fullest extent permitted by law, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, Subconsultant and all other negligent entities and individuals.

LEGAL EXPENSE. In the event that either party takes legal action against the other that is not prosecuted, is dismissed, or if the decision is rendered for the other party, the party taking legal action agrees to pay the other their attorney fees, court costs, and defense expenses that are allowable under Nebraska state law, within thirty (30) days of the court action.

CONSEQUENTIAL DAMAGES. Neither the Client nor FYRA Engineering shall be liable to the other for any consequential damages regardless of the nature or fault.

ENVIRONMENTAL MATTERS. The Client to its knowledge has disclosed all potential hazardous materials that may be encountered on the Project. In the event unknown hazardous materials are encountered, FYRA Engineering shall be entitled to additional compensation for appropriate actions to protect the health and safety of its personnel, and for additional services required to comply with applicable laws. The Client shall indemnify FYRA Engineering from any claim related to hazardous materials encountered on the Project except for those events caused by negligent acts of FYRA Engineering.

COST OPINIONS. If included in the scope of service, FYRA Engineering shall prepare cost opinions for the Project based on historical information that represents the judgment of a qualified professional. The Client and FYRA Engineering acknowledge that actual costs may vary from the cost opinions prepared and that FYRA Engineering offers no guarantee related to the Project cost.

INDEPENDENT COUNSEL. The Client agrees to obtain independent legal and financial counsel for the Project considering FYRA Engineering does not furnish these services.

CONTRACTOR SELECTION. FYRA Engineering may make recommendations concerning award of construction contracts and products. The Client acknowledges that the final selection of construction contractors and products is their sole responsibility.

SHOP DRAWING REVIEW. If included in the scope of service, FYRA Engineering shall review shop drawing submittals from the contractor solely for their conformance with the design intent of and performance criteria specified for the Project. FYRA Engineering shall not be liable for the performance of or consequential damages of any equipment furnished by the contractor under the Project.

CONSTRUCTION REVIEW. If included in the scope of service, FYRA Engineering shall observe the progress and content of the work to determine if the work is proceeding in general accordance with the Contract Documents. This construction review is intended to observe, document, and report information concerning the construction process. Observation of work at the Project site shall not make FYRA Engineering responsible for the work performed by another party; the means, methods, techniques, sequences, or procedures selected by another party; nor the safety precautions or programs of another party.

REJECTION OF WORK. FYRA Engineering may recommend that the Client reject work by construction contractors that does not conform to the requirements of the Project.

SAFETY. FYRA Engineering shall be responsible solely for the safety precautions or programs of its employees and no other party.

INFORMATION FROM OTHER PARTIES. The Client and FYRA Engineering acknowledge that FYRA Engineering will rely on information furnished by other parties in performing its services under the Project. FYRA Engineering shall not be liable for any damages that may be incurred by the Client in the use of third-party information.



CONSTRUCTION RECORD DRAWINGS. If included in the scope of service, FYRA Engineering will deliver drawings to the Client incorporating information furnished by construction contractors. In that construction record drawings are based on information provided by others, FYRA Engineering cannot and does not warrant their accuracy.

FORCE MAJEURE. Neither party will hold the other responsible for damages or delay caused by Acts of God, acts of war, strikes, accidents, or other events beyond the other's control.

DISPUTE RESOLUTION. The Client and FYRA Engineering agree that they shall diligently pursue resolution of all disagreements within forty-five (45) days of either party's written notice using a mutually acceptable form of mediated dispute resolution prior to exercising their rights under law. FYRA Engineering shall continue to perform services for the Project and the Client shall pay for such services during the dispute resolution process unless the Client issues a written notice to suspend work.

SUSPENSION OF WORK. The Client may suspend services performed by FYRA Engineering with cause upon fourteen (14) days written notice. FYRA Engineering shall submit an invoice for services performed up to the effective date of the work suspension and the Client shall pay FYRA Engineering all outstanding invoices within fourteen (14) days. If the work suspension exceeds thirty (30) days from the effective work suspension date, FYRA Engineering shall be entitled to renegotiate the Project schedule and the compensation terms for the Project.

TERMINATION. The Client or FYRA Engineering may terminate services on the Project upon seven (7) days written notice in the event of substantial failure by the other party to fulfill its obligations of the terms hereunder. FYRA Engineering shall submit an invoice for services performed up to the effective date of termination and the Client shall pay FYRA Engineering all outstanding invoices within fourteen (14) days. The Client may withhold an amount for services that may be in dispute provided that the Client furnishes a written notice of the basis for their dispute and that the amount withheld represents a reasonable value.

GOVERNING LAW. The terms of agreement shall be governed by the laws of the state where the services are performed provided that nothing contained herein shall be interpreted in such a manner as to render it unenforceable under the laws of the state in which the Project resides.

ASSIGNMENT. Neither party shall assign its rights, interests, or obligations under the Project without the express written consent of the other party.

WAIVER OF RIGHTS. The failure of either party to enforce any provision of these terms and conditions shall not constitute a waiver of such provision nor diminish the right of either party to the remedies of such provision.

WARRANTY. FYRA Engineering warrants that it will deliver products under the Project within the standard of care. FYRA Engineering provides no other expressed or implied warranty.

SEVERABILITY. Any provision of these terms later held to violate any law shall be deemed void and all remaining provisions shall continue in force. In such event, the Client and FYRA Engineering will work in good faith to replace an invalid provision with one that is valid with as close to the original meaning as possible.

SURVIVAL. All provisions of these terms that allocate responsibility or liability between the Client and FYRA Engineering shall survive the completion or termination of services for the project.

NON-DISCRIMINATION. Consultant or their subcontractors shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Agreement, with respect to their hire, tenure, terms, conditions, or privileges of employment, because of their race, color, religion, sex, sexual orientation, gender identity, disability, or national origin."

FYRA Engineering					
Title:	Proj Mgr	Proj Engr	Engr Intern	Clerical	Expenses
Name(s):	Sotak	Kaufman	Varies	Stratton	
Rate:	\$225	\$160	\$115	\$80	

TASKS

Project Management

1 Monthly Invoice/Schedule Update (3)	1.5				\$0	
2 Design Coordination Conf Call (1)	1				\$338	
3 Coordinate w/ NDNR	0.5				\$225	
					\$113	675

Prepare Design Documents

Site Inspection/Survey	4		6	\$350	\$1,940	
Calculate Lake Fetch	0.5		3		\$458	
Prepare Construction Documents	2		24		\$3,210	
Review Final Design w/ NRD/NDNR	2				\$450	
Prepare Project Specifications	6			4	\$1,670	
Develop Engineer's Opinion of Costs	0.5		2		\$343	8,070

Project Permitting

Prepare Nationwide Permit Application		8	16		\$3,120	
Prepare NDNR Permit Application	2				\$450	
Correspondence with NDNR	2				\$450	4,020

Bid Phase Services

Prepare/Send Project Invitations to Bid	0.5			1	\$193	
Correspondence with Bidders	2				\$450	
Prepare for and Attend Bid Letting	3				\$675	
Prepare Bid Tab / Mail Results to Bidders	0.5			2	\$273	
Prepare Engineer's Recommendation of Award	1				\$225	1,815

Construction Phase Services

Prepare for and Attend Pre-Construction Conference	4		4	\$100	\$1,460	
Construction Observation (Site visits over 2 weeks)	8		42	\$700	\$7,330	
Preparation of As-Built Drawings	0.5		2		\$343	9,133

Totals:	41.5	8	99	7	Total Contract:	\$23,713
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Schedule:

90% Design Plans to be submitted to LPSNRD for review four weeks after approval to begin.
 Project to bid in July, 2021 (funded FY22)
 Construction phase services to be conducted in fall of 2021.



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Memorandum

Date: February 12, 2021
To: Each Director
From: Paul Zillig, General Manager
Subject: Groundwater Management and the Monolith Nebraska, LLC Well Permit



In the next month the Lower Platte South NRD Board of Directors will be considering the well permit application from Monolith Nebraska, LLC (Monolith) for their facility in southwest Lancaster County, just northeast of Hallam, Nebraska. The permit will be for industrial use, and more specifically for cooling. In this memo I will provide some background information on groundwater management in the Lower Platte South NRD, our groundwater regulations, Monolith's well permit application and where they're at compiling the information required for the application.

Groundwater management is one of the responsibilities assigned to the NRDs upon their formation in 1972. In 1975 the Nebraska Legislature passed the Ground Water Management and Protection Act, authorizing additional specific authorities regarding groundwater management. Included in those authorities was the right to establish Groundwater Management Areas and adopt rules and regulations, including the requirement that applicants of wells that pump 50 gallons/minute or more must obtain a well permit.

In the 1980's and 1990's the Lower Platte South NRD prepared and approved Groundwater Management Plans (GWMP) for both quality and quantity and these plans were approved by the State. The NRD identified 5 groundwater reservoirs where there is typically enough groundwater available to sustain higher capacity wells, as compared to the Remaining Area of the NRD (see attached map) with more limited groundwater resources. In the GWMP the NRD established triggers for water level declines that would require moving to a higher level of management (from Phase 1 to Phase 2 or 3). One of the Groundwater Reservoirs located in southern Lancaster County is the Crete-Princeton-Adams Groundwater Reservoir, which includes the Monolith/Hallam area. In this Groundwater Reservoir, moving to Phase 2 would require at least an 8% decline in 30% of the monitoring wells for a 2 year period (an 8% decline would be approximately 12 feet).

In 1996 the Lower Platte South NRD designated the entire NRD a Groundwater Management Area and approved Groundwater Rules and Regulations for the NRD. Included in these Rules and Regulations were the requirements for Well Permits (Section C, Rule 2, Class 2 Permit) and the

Granting, Denying or Cancelling a Water Well Permit (Section C, Rule 3), the specific sections that apply to the Monolith well application is attached.

This past spring a consultant contacted NRD staff asking about well permitting requirements for a potential large groundwater user in southern Lancaster County. In June the consultant contacted us about Monolith's interest in obtaining a well permit for their facility near Hallam. From the feasibility study, the estimated amount of groundwater needed was several billion gallons/year (this was later reduced in final design to 320-400 million gallons/year). Monolith then submitted a preliminary well construction permit application for one well that would pump 800 gallons/minute and in excess of 250 acre-feet annually (Class 2 Permit). In late June, Monolith began drilling test holes at their facility, in accordance with the groundwater rules.

On July 1st, NRD staff met with the Hallam Village Board and reported on the Monolith well permit status, that current groundwater use in the area included 11 million gallons/year by the Village of Hallam, 500 million gallons/year by NPPD, 10-15 million gallons/year for each center pivot system, and that part of the permitting process would be to determine the effect of the Monolith well on groundwater levels in the area. On July 10th the NRD approved the Preliminary Well Construction Permit for one well that enabled Monolith to conduct an aquifer test and start work on the hydrogeologic analysis report to determine the effect on groundwater levels over time.

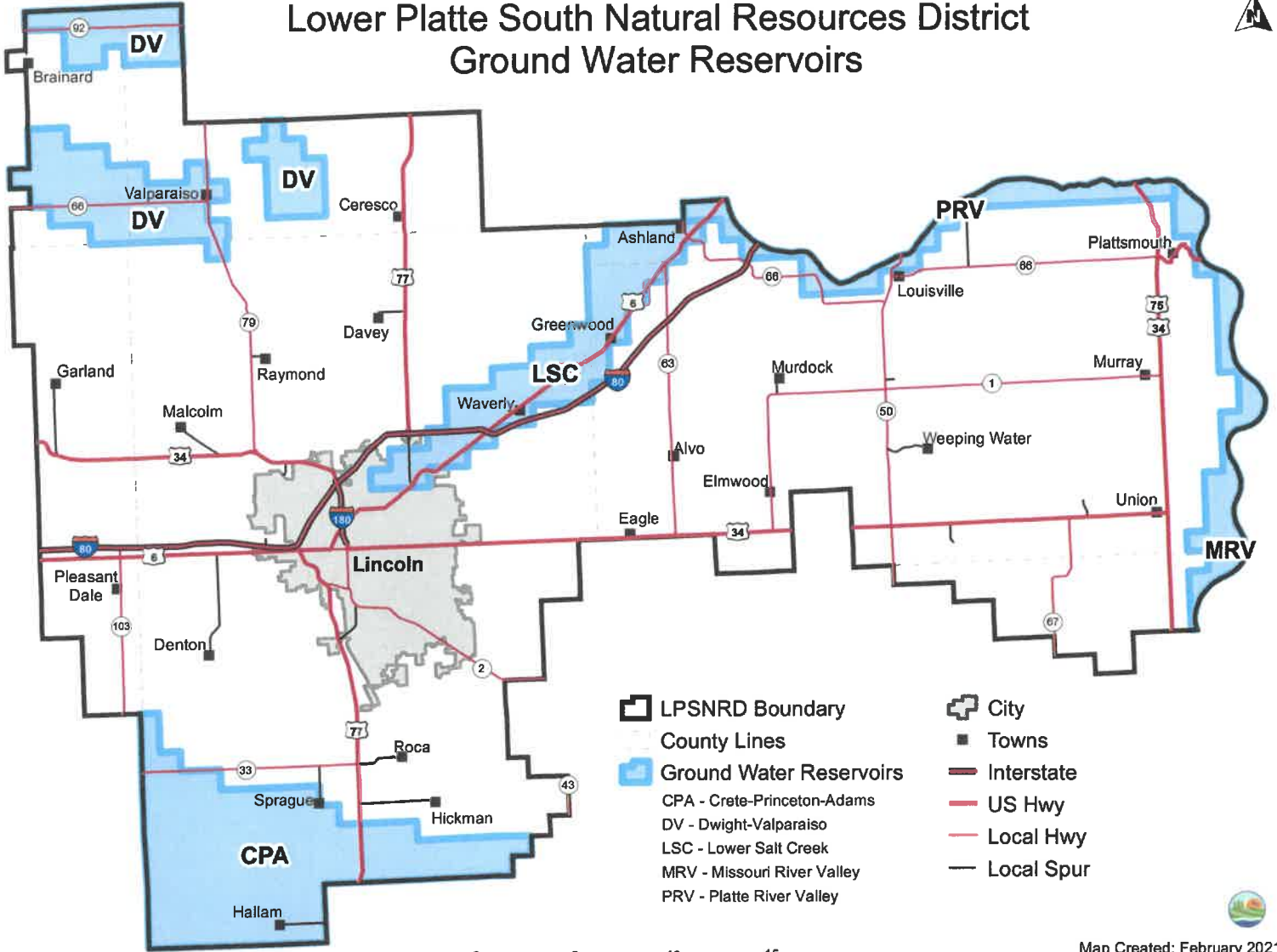
In September the NRD hired LRE Water to review both the aquifer test and the hydrogeologic analysis report. Monolith submitted the aquifer test in late September and a draft hydrogeologic analysis report was submitted in December 2020. Both reports have been under review by the NRD's consultant, LRE Water.

At the February NRD Board Meeting, LRE Water will present their findings and recommendations from the review of the Monolith reports and well permit application. The NRD's Water Resources Subcommittee will then meet to discuss, the NRD will hold a public "zoom" meeting to obtain public input, and the Water Resources Subcommittee will make a recommendation on the permit for Board consideration at the March Board Meeting.

PDZ/pz

Enc. 5

Lower Platte South Natural Resources District Ground Water Reservoirs



Sources: LPSNRD; NDNR

0 5 10 15 Miles

Map Created: February 2021
By: Lower Platte South NRD, sdr

Section C – Water Well Permits

Rule 2 Classes of Well Permits and Required Hydrogeologic and Water Quality Information

- (a) Any person who proposes to construct a well requiring a permit shall be required to provide certain hydrogeologic and water quality information before a water well permit may be approved. The District shall provide guidelines for required reports which shall be submitted to the District with each permit application.

- (c) Class 2 Permit:
 - (i) Applies to any proposed well to be located in a Ground Water Reservoir designed and constructed to pump 1000 gallons per minute or more, or pump 250 acre-feet or more water per year;
 - (A) The requirements for a Class 2 permit shall be as follows and shall be included with the application:
 - (1) A copy of the well log to determine geologic formation;
 - (2) An accurate static water level measurement to estimate saturated thickness of the aquifer;
 - (3) An aquifer test including all necessary drawdown and pumping data as required by the District. The aquifer test must be designed and supervised by a licensed professional geologist or engineer with experience in such analysis;
 - (4) Water quality samples to be collected at the end of a 24-hour pump test. Any well must be pumped at 100% of its designed rate. The samples shall be submitted to a qualified laboratory for analysis of sodium, chloride and total dissolved solids; and
 - (5) A hydrogeologic analysis report considering the impact of the proposed withdrawal on current ground water users and a minimum twenty (20) year impact on the aquifer for potential future users shall be submitted by the Applicant. The report must be prepared by a licensed professional geologist or engineer with experience in such analysis.

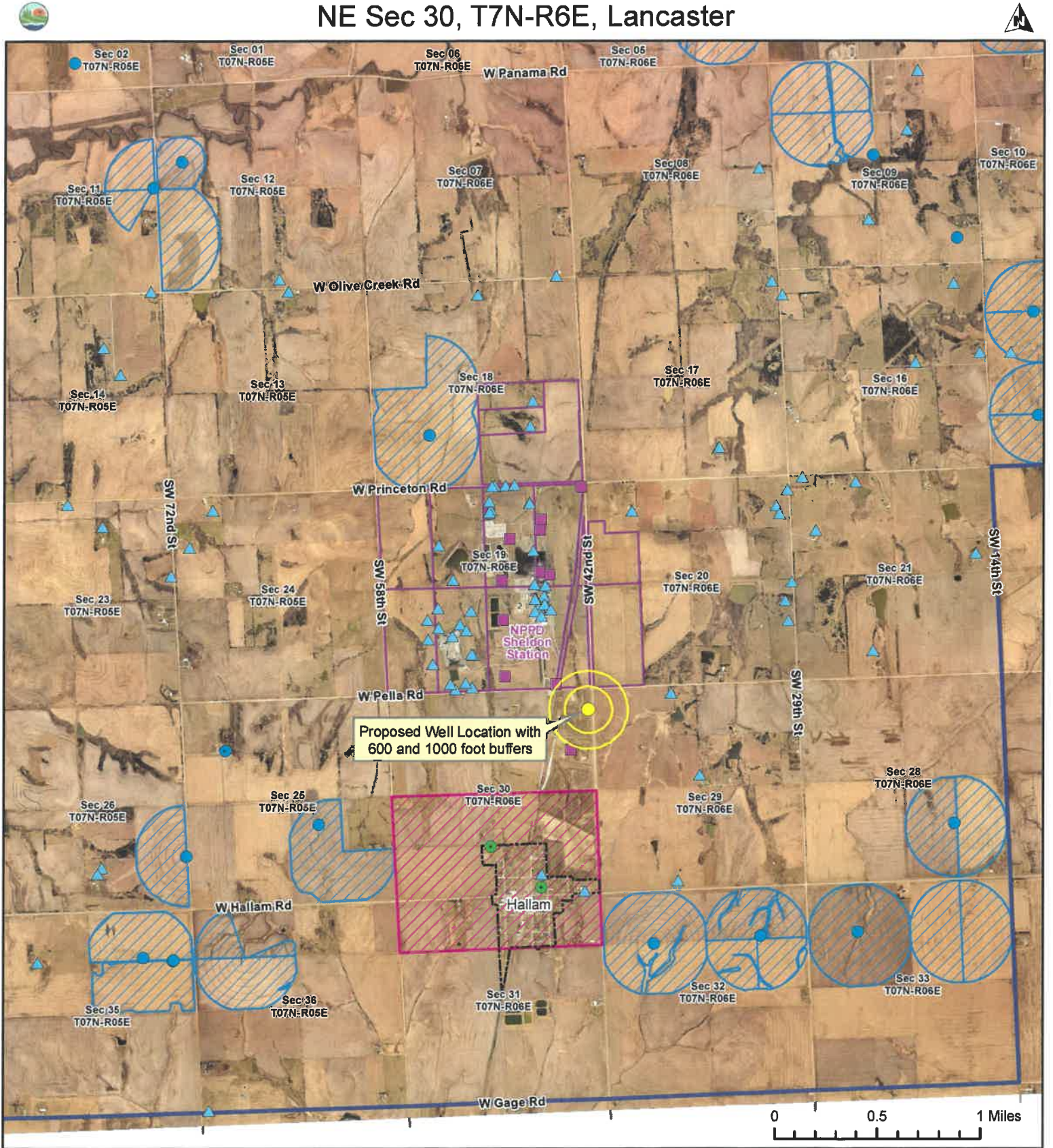
LPSNRD 1/15/2020

Section C – Water Well Permits |

Rule 3 Granting, Denying or Cancelling a Water Well Permit in a Ground Water Reservoir

- (a) An application for a permit or late permit for any water well in a Ground Water Reservoir shall be granted unless the District finds any of the following conditions:
 - (i) The location or operation of the proposed water well or other work would conflict with any regulations or controls adopted by the District or of other applicable laws of the State of Nebraska;
 - (ii) The proposed use would not be a beneficial use of water for domestic, agricultural, manufacturing, or industrial purposes;
 - (iii) The applicant refuses to cooperate with the District in ground water monitoring activities;
 - (iv) An applicant refuses to equip the well with a water well flow meter;
 - (v) In the case of a late permit only, that the applicant did not act in good faith by failing to obtain a timely permit;
 - (vi) For a Class 1 Permit:
 - (A) The total dissolved solids from a water quality sample taken at the end of a 24-hour pump test are 2500 parts per million or more, and an applicant does not choose to apply for a salt water well permit.
 - (B) An applicant shall have the option to apply for a salt water well permit prior to denial of the permit.
 - (vii) For a Class 2 Permit:
 - (A) The hydrogeologic analysis indicates potential short or long-term detrimental effects to the aquifer and/or if the drawdown as determined by an aquifer test would adversely affect a nearby well with a higher preference of use; and/or
 - (B) The total dissolved solids from a water quality sample taken at the end of a 24-hour pump test are 2500 parts per million or more, and the applicant does not choose to apply for a salt water well permit.
 - (C) An applicant shall have the option to apply for a salt water well permit prior to denial of the permit.
 - (viii) For a Salt Water Well Permit:
 - (A) The water quality samples indicate the potential for salt water intrusion.

Well Permit Review - Monolith NE Sec 30, T7N-R6E, Lancaster



Map By:
LPSNRD, sdr
6/26/2020

	Proposed Well Location		Certified Irr Acres	Reg Wells
	Well Spacing Buffers		CWSPA	
	LPSNRD Boundary		NPPD Parcels	
	Town Boundary			



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July 10, 2020

Monolith Nebraska LLC
134 S. 13th Street, Suite 700
Lincoln, NE 68508

Dear Matt:

The Lower Platte South NRD has approved your Preliminary Well Construction Permit for your Water Well Permit application (enclosed is a copy). The Preliminary Well Construction Permit (LPSP-200412) is located in the NE 1/4 of the NE 1/4 of Section 30, Township 7 North, Range 6 East, Lancaster County. The current location and GPS coordinates highlighted on the permit form meet current well spacing requirements. If this location is moved, you must contact the District before beginning drilling to make certain the new location meets well spacing requirements. This is a Class II permit for a well in a Ground Water Reservoir for industrial use. This gives you one year from the date of preliminary approval to complete and submit the information required for the class of permit you are applying for.

Class II Permit Requirements:

- A copy of the well log to determine the geologic formation(s) present.
- An accurate static water level.
- An aquifer test with at least one observation well, and all necessary drawdown and pumping data as required by the District. The aquifer test must be designed and supervised by a licensed professional geologist or engineer with experience in water resources evaluation. The aquifer test must be conducted according to the plan document submitted by EA Engineering, Science, and Technology via email on June 16, 2020.
- Water quality analysis of samples from a qualified laboratory. Samples are to be taken after 24 hour pump test at 100% of the designed pumping rate. Results to be attached include Sodium (Na), Chloride (Cl), and Total Dissolved Solids (TDS).
- A hydrogeologic analysis report considering the impact of the proposed withdrawal on the current groundwater users and the minimum twenty (20) year impact on the aquifer for potential users shall be prepared and submitted. The report must be prepared by a licensed professional geologist or engineer with experience in water resources evaluation.

Additional Information/Comments/Questions:

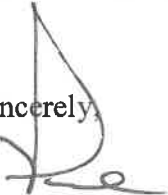
- We understand that there is the likelihood that additional wells will be needed to supply Monolith's needs, and that the water from these additional wells will be commingled.

Under current Nebraska law and LPSNRD regulations, such commingled wells will be considered as a single source and the total output of those wells will be treated as a single, aggregate amount. Given the large scale of this development, please be aware that, depending upon the results of the aquifer test and modeling as well as the number and capacity of any additional well(s) to be installed, additional analysis, including but not limited to additional aquifer testing, longer-term modeling, and additional data collection, may be required by the District.

- What is Monolith's ultimate, long-term plan for managing their total water use requirements as well as ensuring that nearby groundwater users (e.g. the Village of Hallam, domestic/other private well owners, irrigators, Nebraska Public Power District, etc.) are not adversely impacted by Monolith's groundwater withdrawals? LPSNRD understands that such planning will depend on the results of aquifer testing, groundwater modeling, and other factors, but initiating planning for the long term now will help avoid possible conflicts in the future.
- All groundwater users and NRDs are concerned about the effect additional large scale groundwater pumping may have on groundwater quality. LPSNRD has information indicating that groundwater in the vicinity of the Monolith facility may be elevated in certain constituents such as total dissolved solids (TDS). The source of TDS is generally thought to be deeper bedrock aquifers, and given the amount of groundwater Monolith may eventually be withdrawing, saltwater intrusion is a possible concern. The potential degradation of groundwater quality needs to be evaluated to insure the wellfields can be managed and operated properly without inducing the intrusion of groundwater of poorer quality.
- What is Monolith's plan for reaching out to and informing the public and other water users (e.g. the Nebraska Public Power District) in the general area? LPSNRD understands that Monolith has had contact with the Village of Hallam through the zoning/planning process, but it's clear very little information has been provided previously by Monolith to the NRD, community, or the area about your estimated groundwater needs to operate your facility.

Once you have gathered all the information necessary, please send it to the Lower Platter South NRD office along with the permit application form (enclosed). After all items have been received, your application will be considered for Final Approval. Please remember that all newly permitted wells must be equipped with a water meter. Cost share is available on the water meter. Also, the District requires that all irrigated acres be certified by the District prior to irrigating. Please contact myself or Maclane Scott at (402) 476-2729 if you have any questions.

Sincerely,



Paul D. Zillig
General Manager




Lower Platte South
Natural Resources District



PRELIMINARY WELL CONSTRUCTION PERMIT LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT

1. Fill out #'s 1-10 on the attached Water Well Permit Application.
2. Sign below and submit to the District.

I, Matthew Rhodes (print name) acknowledge that I have received and read the guidance document, aquifer test procedures, and the water well permit classes flow chart. I also acknowledge this Preliminary Well Construction Permit is for constructing a well to gather the required information to complete a Water Well Permit application. I also acknowledge that approval of this Preliminary Well Construction Permit by the District does not assure me that I will receive a Water Well Permit, and I understand there is one year to complete the Water Well Permit application.


Signature

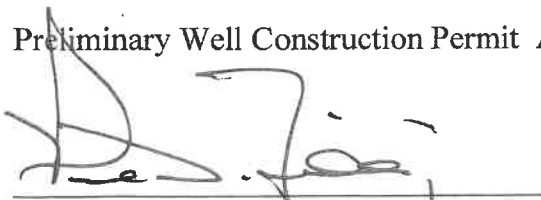
6/12/2020
Date

NRD – Preliminary Well Construction Permit site inspection by:


Inspector

6-25-20
Date

Preliminary Well Construction Permit Approval


Paul D. Zillig, General Manager

LPSP-200412
Preliminary Permit Number

July 10, 2020
Date

APPLICATION FOR A PERMIT TO CONSTRUCT A WATER WELL IN THE LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT

GROUNDWATER RESERVOIR PERMIT FORM

1. **PERMIT CLASS (indicate one)**
 Class I (50 gpm < X < 1000gpm and < 250 acre-feet/ year)
 Class II (≥ 1000gpm and/ or ≥ 250 acre-feet/year)
- Is this well intended to pump salt water for a beneficial use? () Yes No
 If Yes, then application will be considered for a Salt Water Well Permit

DNR & NRD USE ONLY
Permit No. <u>LPSP-200412</u>
Reg. No. _____

2. **IS THIS PERMIT FOR A SERIES OF WELLS?** () Yes No
 If Yes, how many wells? _____

3. **NAME AND ADDRESS OF APPLICANT:**

Monolith Nebraska, LLC

134 S 13th St Ste. 700

Lincoln, NE 68508

Phone (319) 541 _____ 1554 _____

4. **NAME AND ADDRESS OF WELL DRILLER:**

Cahoy Pump Service, Inc.

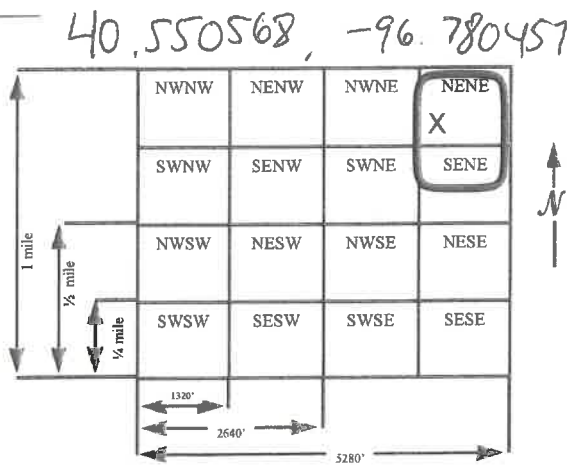
24568 150th Street

Sumner, IA 50674

Phone (563) 578 _____ 1130 _____

5. **PURPOSE OF WELL (indicate one)** () Public Water Supply () Irrigation () Domestic () Livestock
 () Dewatering (over 90 days) () Geothermal () Monitoring () Aquaculture Industrial
 () Recovery () Other _____

6. **IDENTIFY THE LOCATION OF THE PROPOSED WELL:**
Lancaster County,
 Townsh: 7 North, Ra11 East, Section 30



The box at the right represents one square mile, (section). Indicate with an "X", the proposed location of the well. Outline the proposed water use area, if water is to be used outside the above written legal description, give legal description of water use area, Township _____ North, Range _____ East, Section _____

The well will be located _____ feet from the North/South section line, and will be _____ feet from the East/West section line.

If possible mark (with a flag) the well site in the field

7. **COMMINGLED, COMBINED, CLUSTERED, OR JOINED WELLS:**
 Will the proposed well be connected to another well(s) or be used to supplement an existing water use from another well? () Yes No
 If yes, list registration numbers of other well(s) _____

8. **IRRIGATION WELLS:**
 How many acres will be irrigated? 0
 Type of irrigation system: () Center Pivot () Gravity () Other (specify) _____
 Will Fertilizer, Chemicals or Animal Waste be applied through the system? () Yes () No

9. **REPLACEMENT AND ABANDONMENT WELL INFORMATION:**
 Is this a replacement well? () Yes No Registration number of well to be replaced: _____
 Well to be replaced was last operated _____, 20____ Replacement well is _____ feet from the original well.
 Will new well water the same tract of land or provide water for the same use as the decommissioned well? () Yes () No

10. **SPECIFICATIONS OF INTENDED WELL AND PUMP:**
 Approximate date when construction will begin: June 22, 202020
 Estimated total well depth 310 feet. Estimated water well capacity: 800 gallons per minute
 Pump column diameter: 6-8 inches. Well casing diameter: 12 inches.

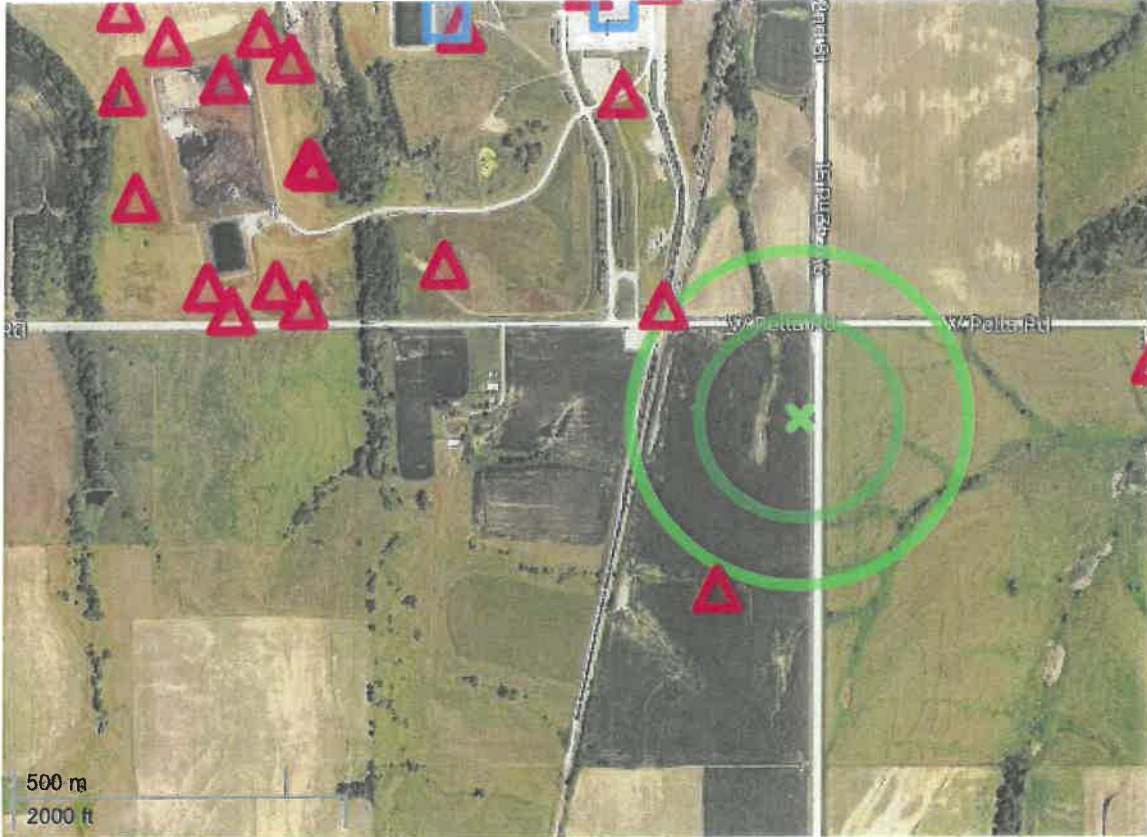
DO NOT BEGIN CONSTRUCTION UNTIL AN APPROVED PRELIMINARY WELL CONSTRUCTION PERMIT FORM IS RETURNED TO THE LANDOWNER

See Other Side



LOWER PLATTE SOUTH
natural resources district

District Preliminary



Selected / Unselected Well from
600 and 1000 feet




Selected / Unselected Permit
from 600 and 1000 feet

WELL INFORMATION

PERMIT INFORMATION

11. I certify that I am familiar with the information contained in this application, and its restrictions, rules and regulations and that to the best of my knowledge and belief such information is true, complete and accurate. The necessary supporting material, under the district's Groundwater Rules and Regulations (Section B), is attached for the well permit class to which I am applying. A copy of the Groundwater Rules and Regulations is available upon request.

This form must be completed in full and be accompanied by a non-refundable \$50.00 filing fee (payable to the Lower Platte South Natural Resources District). Forward this application and filing fee to Lower Platte South Natural Resources District, P.O. Box #83581, 3125 Portia Street, Lincoln, Nebraska 68501-3581. Please take the time to fill out the information correctly. An incomplete or defective application will be returned by the District, with 60 days being allowed for resubmission. All permits shall be issued by the District with or without conditions attached, or denied no later than 30 days after receipt of a complete and properly prepared application pursuant to §46-736.

Date: 6/12/2020 Signature of Applicant: 
Date Approved: _____ Date Denied: _____ Reason for Denial Attached _____ NRD Representative: _____

PERMIT RESTRICTIONS & TERMS

- Water well permits are required prior to completing construction and use of the water, if construction and use of the water well is commenced prior to obtaining a permit, a late permit must be obtained from the District along with a \$250.00 application fee.***
- Any person who, on or after August 13, 1996, commences or causes construction of such a water well for which the required permit has not been obtained, or who knowingly furnishes false information regarding such permit, shall be guilty of a Class IV misdemeanor pursuant to §46-602.02 and §46-613.02.
- Prior to construction of a water well, a water well contractor shall take those steps necessary to satisfy himself or herself that the person for whom the well is to be constructed has obtained a permit pursuant to §46-602.
- No irrigation or industrial water well or water well of any other public water supplier shall be drilled within 1,000 feet of any registered water well of any public water supplier; No water well of any such public water supplier shall be drilled within 1,000 feet of any registered irrigation or industrial water well; No irrigation water well shall be drilled within 1,000 feet of a registered industrial or within 600 feet of a registered irrigation water well; No industrial water well shall be drilled within 1,000 feet of a registered irrigation or industrial water well pursuant to §46-609 and §46-651. These spacing requirements shall not apply to water wells owned by the same person. Any person may apply to the Nebraska Department of Natural Resources for a special permit to drill a water well without regard to the spacing requirements pursuant to §46-653.
- This permit does not register the water well with the Nebraska Department of Natural Resources. All water wells are required to be registered by the water well contractor constructing the well with the Nebraska Department of Natural Resources within 60 days after the water well is completed pursuant to §46-602.
- A replacement water well is one which replaces an abandoned water well that has been operated within the last three years, and is constructed to water the same tract of land as the abandoned water well which is being replaced. As of August 13, 1996 replacement wells **DO** need a permit from the Lower Platte South Natural Resources District. If a water well is being replaced it must be properly abandoned according to state guidelines. A copy of these guidelines are available from the Lower Platte South Natural Resources District.
- If the water well is not constructed and equipped within a one year period from the date of approval, a new water well permit is required.
- Water wells may not be drilled within 50 feet of a stream bank without first getting a surface water right for that stream from the Nebraska Department of Natural Resources pursuant to §46-637.
- Permits are not required for test holes, temporary dewatering wells with an intended use of less than 90 days, or a single water well designed and constructed to pump (yield) 50 gallons per minute or less pursuant to §46-656.29.
- The issuance by the District of this permit or registration of a water well by the Director of the Nebraska Department of Natural Resources pursuant to §46-602 shall not vest in any person the right to violate any rule, regulation, or control in effect on the date of issuance of the permit or the registration of the water well or to violate any rule, regulation, or control properly adopted after such date.
- All wells permitted after March 31, 2008 must be equipped with a NRD approved flow meter (See Section C, Rule 1 of the District's Ground Water Rules & Regulations)
- All applicants for a water well permit shall, as a condition of the permit, agree to cooperate with the district, at its request, in ground water monitoring activities to include water level measurement and water quality sampling (See Section B, Rule 7 of the District's Ground Water Rules & Regulations)

COMMENTS / RESTRICTIONS / TERMS _____

LOWER PLATTE SOUTH NRD PO BOX #83581 3125 PORTIA STREET
LINCOLN, NE 68501-3581 PHONE (402) 476-2729 www.lpsnrd.org

NATURAL RESOURCE BENEFITS OF PRACTICES & PROGRAMS

Lower Platte South NRD

(H= High M= Medium L= Low)

November 1 2020

RF&W	Urban	WRS	Land	Program & Practices	Ground Water Quality	Surface Water Quality	Water Conservation	Erosion Control	Changes in Climate/Carbon	Wildlife Habitat	Soil Health
X				Community Forestry	L	L	L	L	H	H	M
X				Conservation Forestry (Tree Seedlings)	L	M	M	H	H	H	M
			X	Cover Crop Program	M	H	M	H	M	M	H
			X	Farm Pond Cost share	M	H	H	H	M	H	L
		X		Fertilizer Flow Meter	H	M	L	L	M	L	M
			X	Filter/Buffer Strip Program	M	H	M	H	H	H	M
		X		Flood Control Structure Cost Share Program	M	H	H	M	M	H	L
		X		Irrigation Management Assistance Program	H	M	H	L	L	L	M
	X			Rain Scapes Program-Lincoln	M	H	M	M	M	M	L
	X			Rain Ready Landscapes Program	M	H	M	M	M	M	L
		X		Road Structure Program	M	H	H	M	M	H	L
		X		Spring Nitrogen Application Program (SNAP)	H	M	L	L	M	L	M
		X		Soil Sampling Cost-Share Program	H	H	L	L	L	L	M
		X		Well Decommissioning	H	L	L	L	L	L	L
				Ag BMP Cost-Share							
			X	• Terraces	M	H	M	H	L	L	M
			X	• Grassed Waterways	M	H	M	H	M	M	M
			X	• Pasture & Hay land Mgt.	L	M	M	M	H	M	H
			X	• Pasture & Hay land Planting	L	H	M	H	H	H	H

The Lower Platte South NRD provides assistance to landowners for a variety of practices and programs that benefit our natural resources. The Purpose of this table is to provide a general understanding of the level of natural resources benefits that we can expect from each conservation practice or program. Benefits such as improved groundwater and/or surface water quality, water conservation, erosion control, changes in climate/carbon, wildlife habitat and soil health, are listed in each of the columns. The conservation practices or programs (not a complete list) are listed in the far left column. For each program there is an estimated level of benefit, either H-High; M-Medium; or L-Low. The “changes in climate/carbon” benefit is associated with plants ability to store carbon in the plant or roots/soil and also utilizing lakes/wetlands as a carbon sink.