



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

AGENDA ITEM
#4

Memorandum

Date: March 21, 2021
To: Each Director
From: Paul Zillig, General Manager
Subject: Monolith Well Permit – Additional Information & Potential Conditions

At the March 24th Special Board Meeting the NRD Board will be considering if any additional information is required for the Monolith Well Permit near Hallam (LPSP-200412). The District Groundwater Rules & Regulations require that the application must also include any additional information as the District deems necessary or desirable. The Board will also discuss potential “conditions” that could be placed upon the permit, if approved. We will also continue to address questions of the Board, landowners, and the public as we continue with the process of considering this well permit.

I have included with this memo a copy of my February 12th memo to the Board concerning “Groundwater Management and the Monolith Nebraska, LLC Well Permit”. This memo includes background information on groundwater management, the LPSNRD Groundwater Management Plan, the LPSNRD Groundwater Rules & Regulations, an aerial photo of the Hallam/Monolith area showing permitted wells, and a copy of the Monolith Preliminary Well Permit and Well Permit Application.

The NRD’s consultant, LRE Water, reviewed the Draft Monolith Hydrogeologic Analysis and has recommended that the following additional information be provided in the application. Director’s that submitted requests similar to LRE Water’s are listed in () below that recommendation. LRE Water’s recommendations are:

- LRE Water #1.** Complete a more detailed sensitivity analyses on the following:
- Scale of hydraulic conductivity in model layers 1 and 3 (low-permeability layers); and
 - Horizontal / vertical hydraulic conductivity ratio (kh/kv) in all layers.

(See LarryR #1)

LRE Water #2. Provide an addendum with directions for exact replication of future drawdown simulations presented by Model results. This will be useful for documenting and comparing the current model results.

LRE Water #3. (not included, pertains to future applications).

LRE Water #4. Better characterize the gradient (i.e., flow direction) between the bedrock units and the CPA aquifer in the area if bedrock well water level measurements exist. If the gradient is currently downward from the CPA into the bedrock units, and is expected to remain downward during future pumping, it is reasonable to assume that there may not be significant impacts to CPA aquifer water quality. However, if the gradient is upward, or is expected to change directions from downward to upward, additional monitoring of water quality is recommended.

(See LarryR #2, and LarryR #6 & BruceJ #2)

LRE Water #5. LRE recommends that a groundwater monitoring plan be developed and implemented before the Monolith Well begins operating. The plan should be designed to address future potential changes in groundwater quality and quantity at the Site and surrounding area. The plan is recommended based on changes to groundwater quality (indicated by elevated total dissolved solids) that have 1) occasionally been observed in the general area of the Site that may have been a result of pumping and leakage from the underlying bedrock (personal communications with LPSNRD staff), 2) the increase in the specific conductance in the Monolith Well during the 72-hour aquifer pumping test, and 3) because the Model does not include bedrock, and therefore cannot predict leakage from the underlying bedrock where the poor water quality may be originating.

(See LarryR #3)

LRE Water #6. Identify and document details (i.e., owner, location, depth, pump setting, static water levels) on all private and public supply wells within 1 ½ miles of the Site, and provide a well interference contingency plan in the event that any issues should occur to these wells as a result of the Monolith Well pumping.

(See LarryR #4)

Directors were asked to identify any additional information that they recommend the Board consider including. Directors Larry Ruth and Bruce Johnson submitted items to consider and those items are listed later in this memo. Five of Ruth's six items tied closely with LRE Water's recommendation and are mentioned with the appropriate LRE Water recommendation. Bruce Johnson's "BruceJ #2" ties in with LRE Water's recommendation "LRE Water #4" and is

mentioned with that recommendation. Both Ruth's "LarryR #5" and Johnson's "BruceJ #1" are the same and is listed below. NRD Legal Counsel is reviewing this item.

LarryR #5 and BruceJ #1. The Monolith Hydrologic Analysis Report notes in various places the use of historical climate data over the past years as part of determining estimates of groundwater recharge and groundwater withdrawals. Examples would be development of the LPMT Model and the creation of a 50-year future scenario using the LPMT (a regional model first mentioned at ES-1), the Monolith groundwater model (a subregional model first mentioned at ES-2), and perhaps various other models mentioned on page 11. Future climate may be relevant to potential short or long-term effect to the CPA aquifer by Monolith drawdown under the permit. Additionally, future climate may be relevant to the drawdown effect on a nearby well with a higher preference of use.

Accordingly, it is necessary and desirable that Monolith provide additional information on (1) the use of future climate in the Monolith Hydrogeologic Analysis, and (2) the general effect of future climate on the CPA aquifer and on the drawdown effect on a nearby well with a higher preference of use over the 50-year period of its future scenario.

The NRD can also include "conditions" as part of the well permit. Conditions will need to be finalized when the NRD takes final action on the permit. Potential conditions include:

1. Limit pumping, probably to the amount requested in the permit.
2. Require Monolith to develop a monitoring plan for groundwater levels on site and out to 1.5 miles from the well.
3. Require Monolith to investigate any water level decline complaints from well owners within 1.5 miles of the well.
4. Should Monolith sell the facility/well, Monolith shall require the new owner to assume these conditions.

PDZ/pz

Enc. 1

pc: Steve Seglin & Corey Wasserburger

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ADDITIONAL INFORMATION REQUESTED BY DIRECTORS

Larry Ruth – Requests for additional information (LarryR #1 – LarryR #6)

LarryR #1. The LRE/Water Review states the following Recommendation 1:

Complete a more detailed sensitivity analyses (sic) on the following:

- a. Scale of hydraulic conductivity in model layers 1 and 3 (low permeability layers); and
- b. Horizontal / vertical hydraulic conductivity ratio (kh/kv) in all layers.

Accordingly, it is necessary and desirable that the Monolith Application submit a more detailed sensitivity analysis as recommended in LRE/Water Review Recommendation 1.

LarryR #2. LRE/Water states the following Conclusion 7:

It is our opinion that the physical structure of the CPA aquifer within the model extent is reasonably adequate for model simulations to achieve the desired objectives if the assumption of little to no interaction with bedrock aquifers can be strengthened. If the recommended gradient analysis shows the likelihood of a gradient reversal from downward to upward, further analysis or monitoring is recommended.

LRE/Water Recommendation 4. states:

Better characterize the gradient (i.e. flow direction) between the bedrock units and the CPA aquifer in the area if bedrock well water level measurements exist.

Accordingly, it is necessary and desirable that the Monolith Application include (1) further gradient analysis of interaction of the CPA aquifer in the area with bedrock aquifers to support its assumption of little or no interaction with bedrock aquifers, (2) the likelihood of gradient reversal to upward flow direction if the further analysis shows downward gradient or little to no interaction. If bedrock well water level measurements do not exist, then identify the basis for any assumption that the gradient is downward or that there is little to no interaction of the CPA aquifer in the area with bedrock aquifers.

LarryR #3. LRE/Water states the following Recommendation 5:

LRE recommends that a groundwater monitoring plan be developed and implemented before the Monolith Well begins operating.

Accordingly, it is necessary and desirable that the Monolith Application include details of any groundwater monitoring plan Monolith intends to develop and implement to address future potential changes in groundwater quality and quantity at the Site and surrounding area. Further, that

such details are responsive to changes in groundwater quality (as observed in points 1) – 3) of the recommendation.

LarryR #4. LRE/Water states the following Recommendation 6:

Identify and document details (i.e., owner, location, depth, pump setting, static water levels) on all private and public supply wells within 1 ½ miles of the Site, and provide a well interference contingency plan in the event that any issues should occur to these wells as a result of the Monolith Well pumping.

Accordingly, it is necessary and desirable that the Monolith Application include details of wells and a well interference plan as provided in Recommendation 6.

LarryR #5. The Monolith Hydrologic Analysis Report notes in various places the use of historical climate data over the past years as part of determining estimates of groundwater recharge and groundwater withdrawals. Ruth. Examples would be development of the LPMT Model and the creation of a 50-year future scenario using the LPMT (a regional model first mentioned at ES-1), the Monolith groundwater model (a subregional model first mentioned at ES-2), and perhaps various other models mentioned on page 11. Future climate may be relevant to potential short or long-term effect to the CPA aquifer by Monolith drawdown under the permit. Additionally, future climate may be relevant to the drawdown effect on a nearby well with a higher preference of use.

Accordingly, it is necessary and desirable that Monolith provide additional information on (1) the use of future climate in the Monolith Hydrogeologic Analysis, and (2) the general effect of future climate on the CPA aquifer and on the drawdown effect on a nearby well with a higher preference of use over the 50-year period of its future scenario.

LarryR #6. The Monolith Hydrologic Analysis Report states that “it is generally understood that significant aquifer drawdowns resulting from a newly proposed water use could be detrimental to the aquifer as this could impact...the total dissolved solids (TDS) within the Groundwater Reservoir due to upwelling of underlying water with higher TDS.” (p. 53). The Monolith Report also states: “While declines of up to 8.5 feet can be anticipated in the immediate vicinity of the Monolith well, impacts of this extent will be localized and are generally less than 1-2 feet over most of the aquifer.” (p. 57)

Accordingly, it is necessary and desirable that Monolith provide additional information on the potential for upwelling in the immediate vicinity (as that term is used on p. 57) of the Monolith well over the 50-year period of its future scenario.

Bruce Johnson – requests for additional information (BruceJ #1 – BruceJ #2).

BruceJ #1. The Monolith Hydrologic Analysis Report notes in various places the use of historical climate data over the past years as part of determining estimates of groundwater recharge and groundwater withdrawals. Examples would be development of the LPMT Model and the creation of a 50-year future scenario using the LPMT (a regional model first mentioned at ES-1), the Monolith groundwater model (a subregional model first mentioned at ES-2), and perhaps various other models mentioned on page 11. Future climate may be relevant to potential short or long-term effect to the CPA aquifer by Monolith drawdown under the permit. Additionally, future climate may be relevant to the drawdown effect on a nearby well with a higher preference of use.

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BruceJ #2. The Monolith Hydrologic Analysis Report states that “it is generally understood that significant aquifer drawdowns resulting from a newly proposed water use could be detrimental to the aquifer as this could impact...the total dissolved solids (TDS) within the Groundwater Reservoir due to upwelling of underlying water with higher TDS.” (p. 53) The Monolith Report also states: “While declines of up to 8.5 feet can be anticipated in the immediate vicinity of the Monolith well, impacts of this extent will be localized and are generally less than 1-2 feet over most of the aquifer.” (p. 57)

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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.

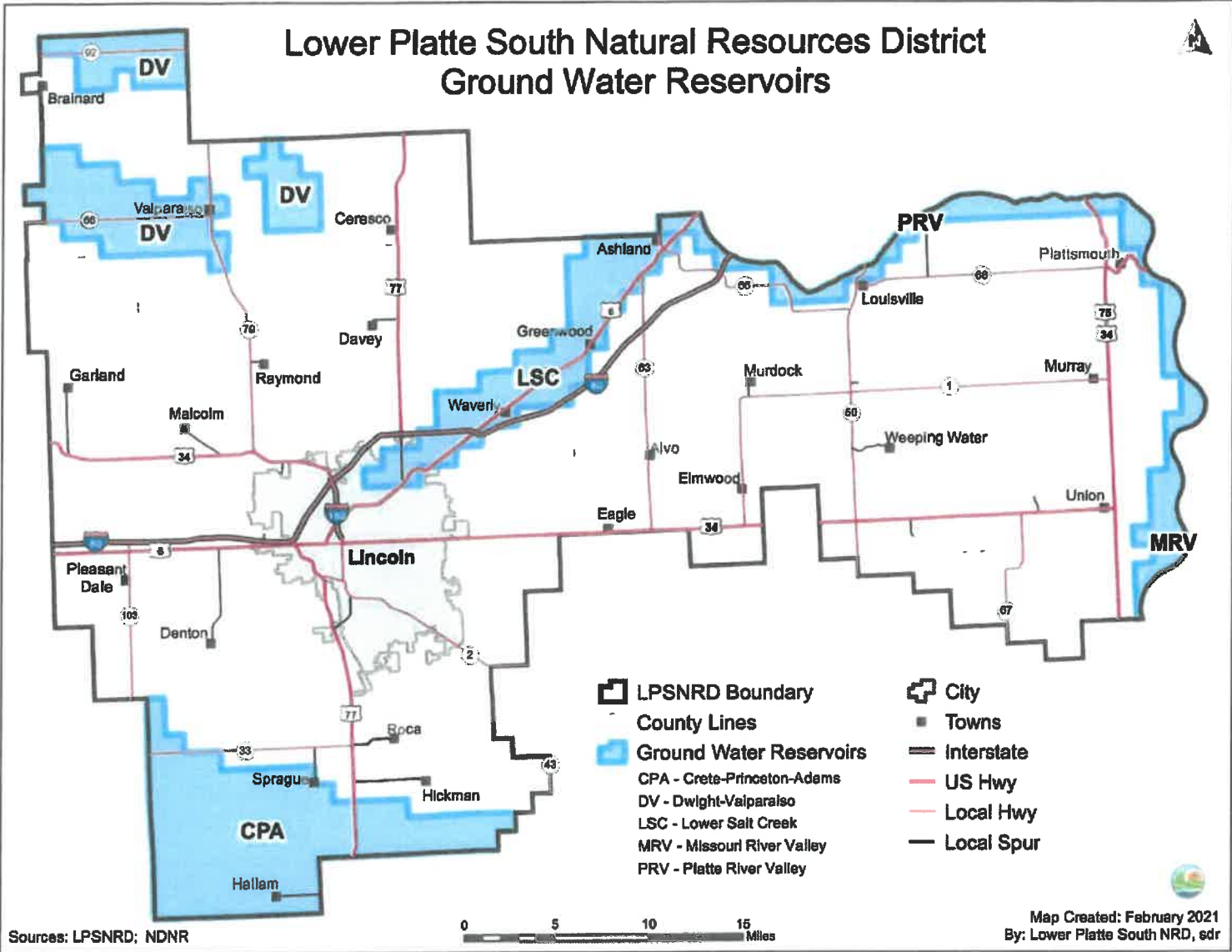
In September the NRD hired LRE Water to review both the aquifer test and the hydrogeologic analysis report. Monolith submitted the aquifer test in late September and a draft hydrogeologic analysis report was submitted in December 2020. Both reports have been under review by the NRD's consultant, LRE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

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.

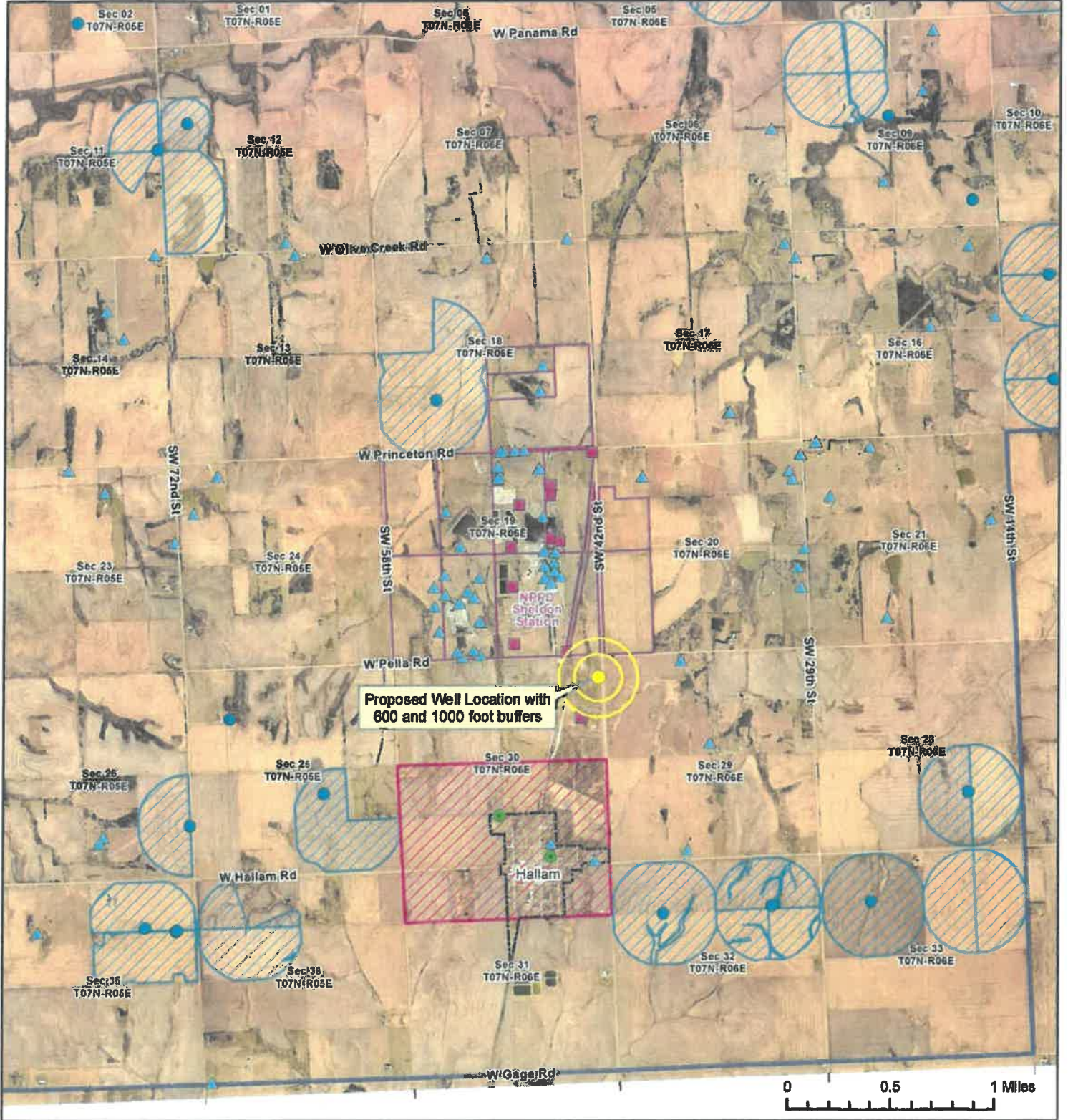
LPSNRD 1/15/2020

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			
				Other Wells



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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.

Matthew Rhodes
Signature

6/12/2020
Date

NRD – Preliminary Well Construction Permit site inspection by:

Mark Scott
Inspector

6-25-20
Date

Preliminary Well Construction Permit Approval

Paul D. Zillig
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)

DNR & NRD USE ONLY

Permit No. LPSP-200412

Reg. No. _____

- 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

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 _____

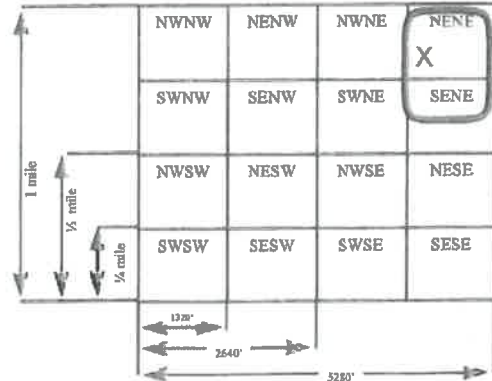
40,550568, -96.780457

6. **IDENTIFY THE LOCATION OF THE PROPOSED WELL:**

Lancaster County,
 Townsh: 7 North, Ra. 6 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: 8-8 inches. Well casing diameter: 12 inches.

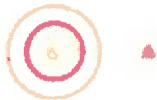
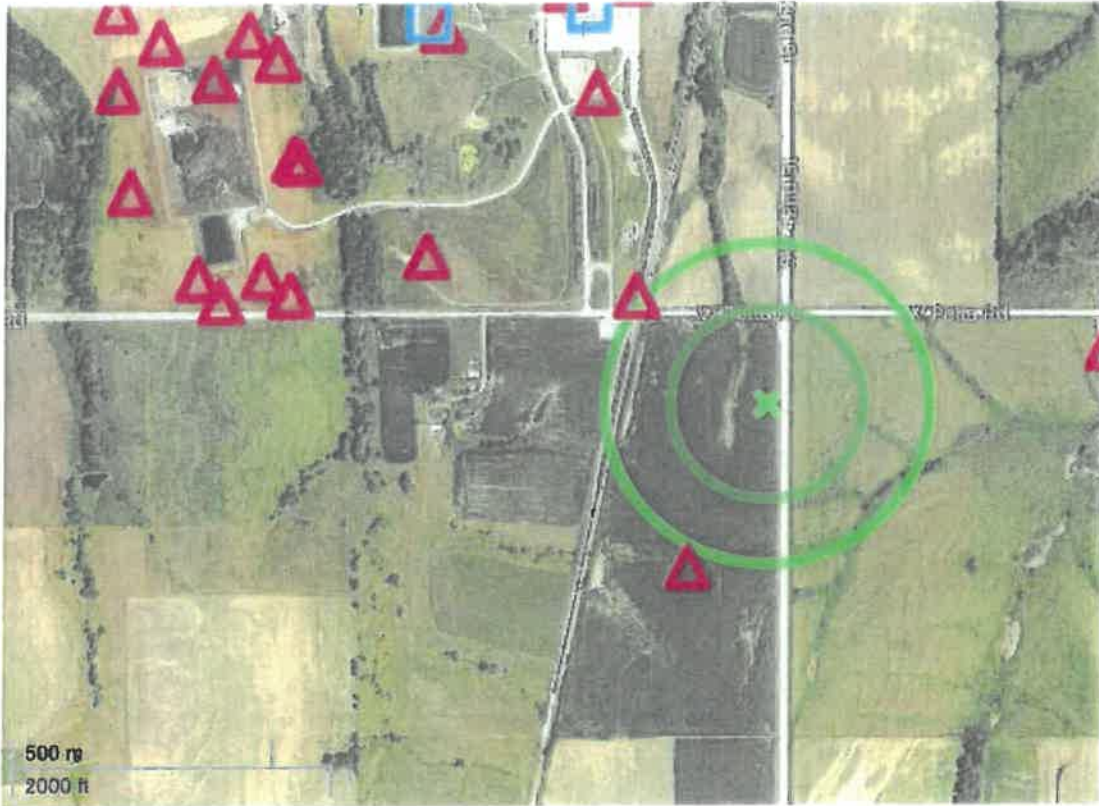
DO NOT BEGIN CONSTRUCTION UNTIL AN APPROVED PRELIMINARY WELL CONSTRUCTION PERMIT FORM IS RETURNED TO THE LANDOWNER

See Other Side



LOWER PLATTE SOUTH
natural resources district

District Preliminary



Selected / Unselected Well from
600 and 1000 feet

WELL INFORMATION



Selected / Unselected Permit
from 600 and 1000 feet

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

1. *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.*
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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)
12. 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 _____

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