




## 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 #4a

### Memorandum

**Date:** June 24, 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 Tuesday, June 22, 2021. Subcommittee members participating included Larry Ruth, Chelsea Johnson, John Yoakum, Vern Barrett, Ken Vogel, and Gary Hellerich. Other Directors participating included Susan Seacrest, and Deborah Eagan. And others participating included Amy Ostermeyer, Rob Hanson, Dan Levy, Don Blankenau, Brian Dunnigan, and Jim Schneider (all associated with Monolith), and Steve Seglin, Corey Wasserburger, David Potter, Tracy Zayac, Nathan Kuhlman, Mike Murren, Maclane Scott, Dick Ehrman, Dan Schulz, Steve Herdzina, and myself.

Chair Ruth opened the meeting and welcomed those in attendance. Ruth reviewed the agenda and that the purpose of the meeting is to prepare a recommendation to the Board on the Monolith well permit applications (see attached map). Ruth mentioned the staff recommendation and desired to get the motion on the floor and then the Subcommittee can discuss it and consider any amendments to the motion.

It was moved by Ruth and seconded by Vogel to **recommend the Board of Directors approve Monolith Well Permit Applications for Olive Creek 2 (OC2) Well #1, #2, and #3 near Hallam, NE including the proposed well permit conditions.**

I then reviewed the attached Monolith Well Permit timeline that took us thru the June 17<sup>th</sup> Public Input session. The Subcommittee had copies of all public input listed below and attached:

1. Letter from Senator Tom Brandt.
2. Bruce Trautwein attended the Open House in Hallam and asked we provide you a copy of the attached article.
3. Kenneth Yates attended the Open House in Hallam and provided the attached email.
4. Rob Hansen, Monolith CEO provided supportive comments at the Public Input Session (recording is posted on the LPSNRD website).
5. Bob Kerrey, Monolith Board Chair provided supportive comments at the Public Input Session (on LPSNRD website).

6. Elana Wallace, Monolith employee from Cortland provided supportive comments at the Public Input Session (on LPSNRD website).
7. Jeff Shafer, NPPD employee from York provided supportive comments at the Public Input Session and referred to the attached NPPD letter from April 19th.
8. Dan Curran, Nebraska Dept of Economic Development provided supportive comments at the Public Input Session (on LPSNRD website).
9. Larry Hudkins, Lancaster County Farm Bureau provided supportive comments at the Public Input Session (on LPSNRD website).
10. Darin Schwaninger, the attached email letter was submitted June 20<sup>th</sup>.

Ruth then reviewed Section C, Rule 3 of the NRD's Groundwater Rules & Regulations regarding action on well permits, a copy of that section of the R&R is attached. Ruth reviewed the rule that a permit will be granted unless the District finds a specific condition, with focus on "the hydrogeologic analysis indicates potential short or long-term detrimental effects to the aquifer and/or if the drawdowns as determined by an aquifer test would adversely affect a nearby well with a higher preference of use".

Ruth then called on Ehrman and Schulz to review the proposed well permit "Conditions". The conditions included the water quality and level readings required for OC2 Wells #2 & #3 agreed to in the variance process and the requirements for the groundwater monitoring plan. Subcommittee discussion ensued concerning contingency plans, addressing well problems, well protection agreements and that Monolith's offer will remain open to enter into an agreement anytime, meters, and the frequency of monitoring.

It was moved by Ruth, seconded by Barrett, and unanimously approved by the Subcommittee to amend the well permit conditions included in the motion to add #6 – "OC2 Plant Wells #1, #2, and #3 are required by LPSNRD regulations to each have a water flowmeter installed. An additional condition is that the total volume of water pumped from each well be reported by Monolith to LPSNRD on a quarterly basis at the end of each quarter"; this statement would be in place of the "Note" at the end of the list of conditions. (see attached "amended" listing of Conditions).

The Subcommittee then further discussed water quality monitoring required in the monitoring plan. The discussion centered around if what is being proposed will provide enough monitoring of water quality or if quarterly monitoring of water quality is also a necessary condition? After much discussion on the monitoring plan specifics, the Subcommittee deferred from proposing additional requirements.

A staff memo from Tracy Zayac on the Omission of a Pumping Limitation is attached. The memo gave several reasons that placing a pumping limitation as a condition of the permit was not recommended.

The Subcommittee then discussed future groundwater management options, should reality deviate from the anticipated modeling results. Staff discussed the groundwater management

options, including establishing a special management area if local groundwater declines become concerning.

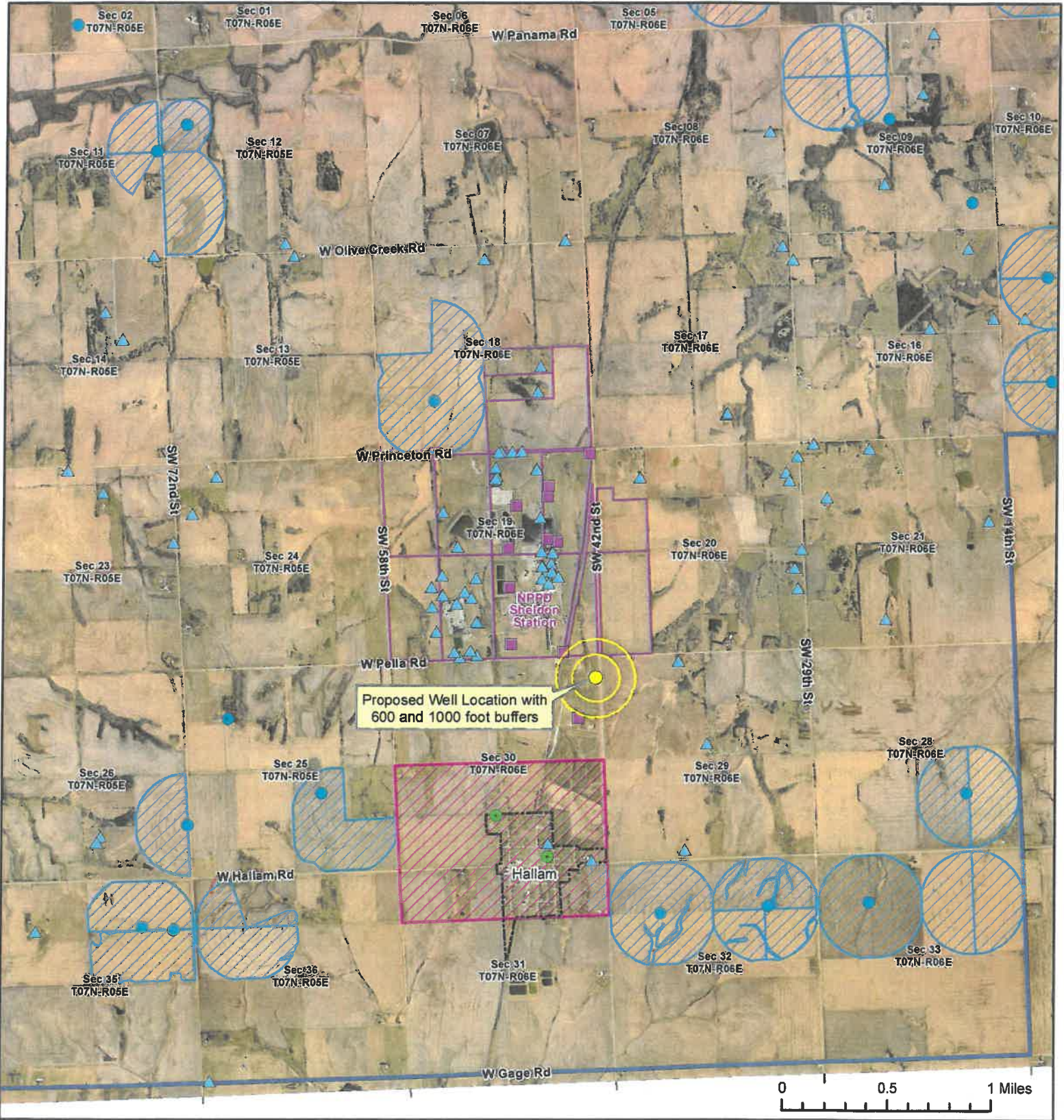
The Subcommittee then voted unanimously to **recommend the Board of Directors approve Monolith Well Permit Applications for Olive Creek 2 (OC2) Well #1, #2, and #3 near Hallam, NE including the proposed well permit conditions.**

There being no additional business the meeting adjourned at 7:10 pm.

PDZ/pz

cc: Steve Seglin & Corey Wasserburger

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



Map By:  
LPSNRD, sdr  
6/26/2020

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

## **Monolith Well Permits Timeline**

<b>June 12, 2020</b>	<b>Monolith submits first well application (OC2 #1)</b>
<b>July 10, 2020</b>	<b>NRD/GM approves Preliminary Well permit for OC2 #1</b>
<b>Sept. 16, 2020</b>	<b>NRD hires LRE Water to provide Hydrogeologic consulting services.</b>
<b>Dec. 2020</b>	<b>Monolith submits “Draft” Monolith Hydrogeologic Analysis Report.</b>
<b>Feb. 2021</b>	<b>LRE Water submits Review of the Monolith GW Flow Model.</b>
<b>March 24, 2021</b>	<b>NRD Special Board Meeting – NRD requests additional information on the current well permit application. OC2 #1.</b>
<b>March 2021</b>	<b>“Formal” Monolith interest in applying for 3 wells for OC2.</b>
<b>April 7, 2021</b>	<b>NRD/Monolith meeting to discuss best process to consider applications for three wells (all at the same time).</b>
<b>April 12, 2021</b>	<b>Monolith submits second well permit application. OC2 #2.</b>
<b>April 12, 2021</b>	<b>Monolith submits third well permit application. OC2 #3.</b>
<b>April 12, 2021</b>	<b>Monolith submits Variance Request for OC2 #2.</b>
<b>April 12, 2021</b>	<b>Monolith submits Variance Request for OC2 #3.</b>
<b>April 21, 2021</b>	<b>NRD approves Variance Request to not require a separate aquifer test and hydrogeologic analysis for OC2 Wells #2 &amp; #3.</b>
<b>April 21, 2021</b>	<b>NRD denies Variance request to not require accurate static water level measurements and water quality samples for OC2 Wells #2 &amp; #3.</b>
<b>May 19, 2021</b>	<b>NRD determines no additional information is needed for the applications for OC2 Wells #1, #2, &amp; #3, and Monolith will submit applications on June 4<sup>th</sup>.</b>
<b>June 4, 2021</b>	<b>Monolith submits final applications for OC2 Wells #1, #2, and #3.</b>
<b>June 15, 2021</b>	<b>NRD holds Open House on the Permit applications in Hallam.</b>
<b>June 17, 2021</b>	<b>NRD holds Public Input Session, both virtually and “in-person” in the NRD Office.</b>

# Nebraska State Legislature

SENATOR TOM BRANDT

District 32  
State Capitol  
PO Box 94604  
Lincoln, Nebraska 68509-4604  
(402) 471-2711  
tbrandt@leg.ne.gov



## COMMITTEES

Vice Chairperson - Agriculture  
General Affairs  
Judiciary  
Building Maintenance

April 20, 2021

Lower Platte South Natural Resources District Board of Directors  
c/o Paul Zillig  
3125 Portia Street  
Lincoln, NE 68521

### RE: Monolith Well Permit Application

Dear Lower Platte South Natural Resources District Board of Directors,

Please accept this letter supporting Monolith's application for a well permit for its Olive Creek expansion project.

The Olive Creek 2 (OC2) facility will lead the nation – and in some cases, the world – in cleanly made carbon black, green hydrogen and low-carbon ammonia production. As a world-class, first-of-its-kind facility, OC2 will be a model that shows essential everyday materials can be created profitably while also meeting stringent marketplace and decarbonization demands.

I've discussed the results of the hydrogeological analysis conducted by Olsson with Monolith. I considered their results as both a state senator and an ag producer in the area. I'm satisfied the modeling supports the conclusion of minimal groundwater impact. I also believe Monolith's ongoing well monitoring efforts and offer of well protection agreements with area landowners, the Village of Hallam and NPPD are further evidence of their desire to be good stewards of the environment and good neighbors to those around them.

Over the last year, I've had the chance to meet with Monolith leadership on several occasions and tour their existing facility. I'm gratified by their unwavering commitment to safety, environmental transformation and transparency. That includes acknowledging those times when their facility is not meeting expectations and taking appropriate corrective actions.

Finally, there's no denying the significant, positive economic impact of OC2. A recent analysis by Dr. Eric Thompson at UNL's Bureau of Business Research indicates that the annual economic impact of OC2 is \$338.9 million, including the creation of 264 jobs at the OC2 site and another 584 indirect jobs to support it.

I strongly encourage you to approve Monolith's well permit application for the OC2. Please don't hesitate to contact my office if you have any questions or concerns about my support.

Sincerely,

A handwritten signature in black ink that reads "Tom Brandt".

Senator Tom Brandt

Bruce L. Trautwein  
brucon@galaxycable.net

402 560 7304

an-in-effect-indefinitely-for-more-than-1-800-rural-lancaster-  
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EDITOR'S PICK ALERT

## Sprinkler ban in effect indefinitely for more than 1,800 rural Lancaster County residents

Andrew Wegley  
Jun 11, 2021

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**T**he water supplier for some rural Lancaster County residents has indefinitely banned sprinkler usage for every lawn in Rural Water District No. 1, citing a "water supply emergency" in a June 9 letter to customers.

Under the ban, the district "may immediately turn off" water service for customers who are found to be using sprinkler systems, according to the letter written by Jordon Bang, the manager for the district that serves area communities, including Bennet, Panama and Roca.

Bang cited an inadequate water supply in towers required to maintain water pressure in the system, which serves more than 1,800 customers in the southeast corner of Lancaster County and the eastern edge of Cass County.

The district's board of directors approved the indefinite ban at a meeting Wednesday, where it passed an additional drastic step: Bang said the district will not allow newly constructed homes to access the district's water, even as it develops new well sites to mitigate the strain placed on its current supply ports.

"It's not gonna catch up to the demand, at all," Bang said. "I hope what the customers are seeing now opens their eyes, and they realize just how important following the restriction is."

Bang said the district noticed Monday that the water supply was dwindling. By Wednesday, water district employees were going door-to-door in the district's largest subdivisions to notify residents.

"We did it because, to be honest with you, if we didn't go door-to-door and tell people they had to shut them (sprinklers) off, our supply — we would have been at zero," Bang said.

The ban will remain in effect until the water supply is restored to non-emergency levels, Bang said, but the exact timeline will depend on how fast the district's wells recover. He said Friday's rainfall — 1.99 inches in Lincoln — should help.

The sprinkler ban comes more than a month after the district implemented its annual odd-even water-regulation system, assigning specific days for different residents to water their lawns in an effort to manage seasonal supply issues.

The regulatory period is supposed to run April 1 through Oct. 31, but Bang said it seems as if customers had largely disregarded the effort, which began in 2018.

On Monday, when the water shortage first became apparent, Bang said he dispatched 60 notices to customers who violated the odd-even schedule. The violations largely stem from a small group of homeowners.

Of the district's 1,820 customers, Bang said 1,400 households — more than 76% — never use more than 5,000 gallons of water a month. But some customers use up to 200,000 gallons a month, and that's "what's killing us," Bang said.

**📄 Human remains found at Pawnee Lake identified, sheriff says**

**📄 Seed companies to shoulder cost, burden of cleaning up troubled AltEn ethanol plant**

**📄 Nebraska Gov. Ricketts stirs up opposition to Biden's 30-by-30 conservation plan**



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**From:** Kenneth Yates <kennethyates57@gmail.com>

**Sent:** Wednesday, June 16, 2021 11:12 AM

**To:** Tracy Zayac <tzayac@lpsnrd.org>

**Subject:** Re: geologic cross section diagrams for Hallam area-LPSNRD open house follow-up

Thank you, I will review these and get back to you oh, I would like to add again, there should be no permit issued until monolith supplies in writing a agreement detailing what they will do if the aquifer suffers, and Wells begin to drop around here. Are they going to quit pumping? What hammer do we have over their head other words, other than law. And what consequences will they pay if and when these eventualities may occur. I heard nothing about monolith ceasing to pump water. Also, this water is being used to manufacture anhydrous ammonia. I see nothing in writing in any of the literature last night that discussed this gross change from their original plans. They are in my opinion and everyone else is around here, exploiting Nebraska's natural resources.



**Nebraska Public Power District**  
"Always there when you need us"

April 19, 2021

Mr. Paul Zillig, Manager  
Lower Platte South NRD  
PO Box 83581  
3125 Portia Street  
Lincoln NE 68521

Dear Mr. Zillig:

**RE: Monolith Industrial Well Application**

Nebraska Public Power District (NPPD) supports Monolith in their efforts to receive approval for an industrial well permit from the Lower Platte South NRD.

Monolith has kept NPPD informed throughout their groundwater impact modeling efforts and it is NPPD's opinion that Monolith's proposed industrial wells will not negatively impact NPPD's industrial wells used at Sheldon Station.

If you have any comments or questions, please contact me at my office (402) 563-5355 or on my cell phone (402) 910-7337.

Sincerely,

Joe L. Citta, Jr.  
Director of Corporate Environmental  
and Water Resources

cc: Deborah Eagan, LPSNRD Board of Directors Chair  
Chris Cerveny, NPPD - Sheldon Station

Name Darin Schwaninger  
Email [darinsch@hotmail.com](mailto:darinsch@hotmail.com)  
Phone 402-580-7581  
Message  
Dear LPSNRD Board,

I'd like to express my concerns about the Monolith well permit. I think it should be denied unless they have some sort of backup plan, in writing, in case the water level of the aquifer is lowered by their pumping. A backup plan could include offsite wells or some other way of cooling their processes. Monolith is a multi-national corporation that cares about the bottom line and I do not believe they would abide by pumping restrictions if they adversely affect the aquifer. I think once Monolith has the permit, that LPSNRD will be powerless to stop them from pumping. Monolith is very well connected politically. I own 7 wells within 2 miles of Monolith and Monolith has offered to lower the pumping level if the water level drops. That is not an acceptable solution should that happen. I should not be punished because of an industrial user of water. Water is our most valuable natural resource. Please protect the residential and ag users in this area of the district. Thanks

Sincerely,  
Darin Schwaninger  
28805 SW 42nd St  
Hallam NE 68368

The results of this submission may be viewed at:

<https://www.lpsnrd.org/node/8/submission/680>

## Section C – Water Well Permits

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

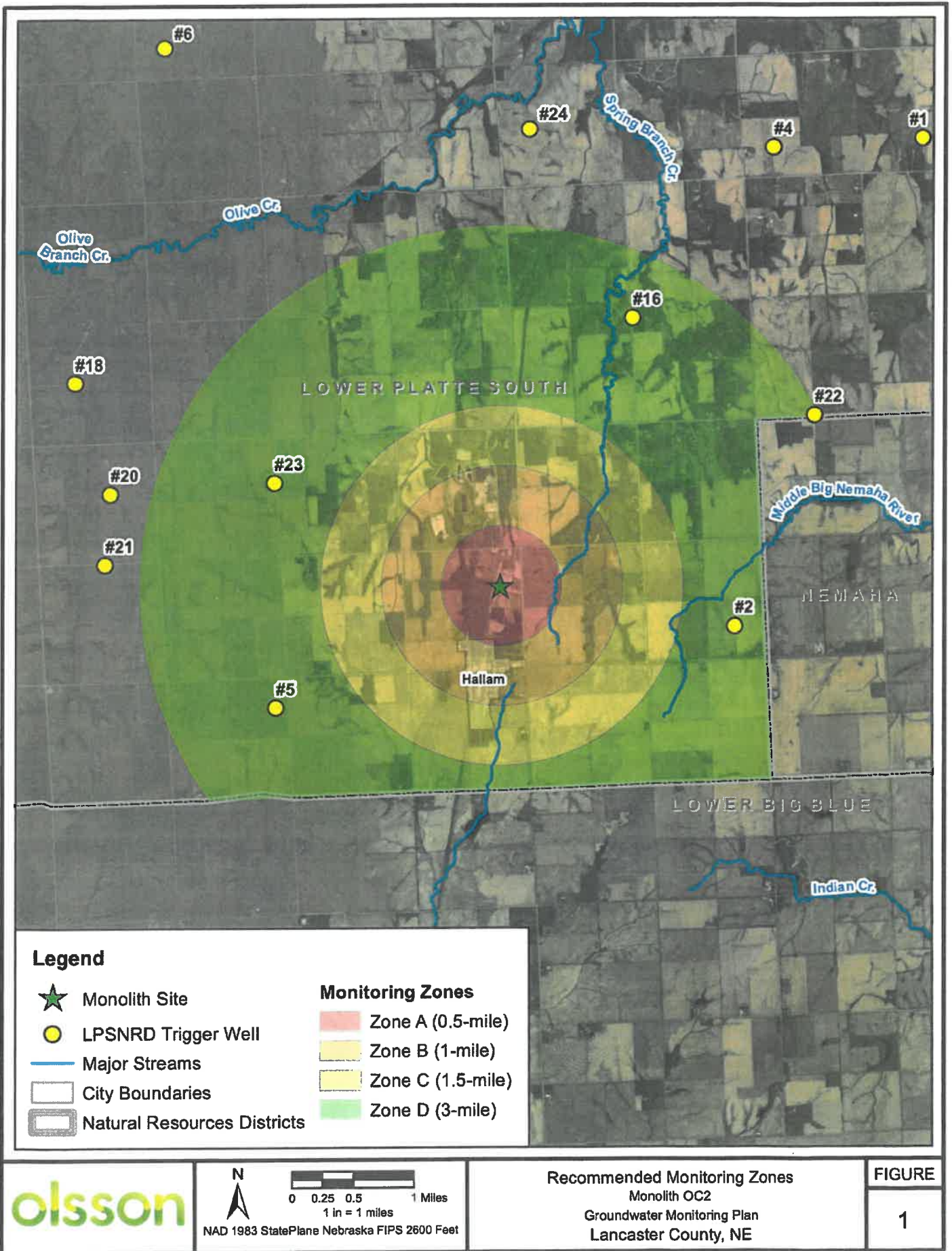
- (a) An application for a permit or late permit for any water well in a Ground Water Reservoir shall be granted unless the District finds any of the following conditions:
- (i) The location or operation of the proposed water well or other work would conflict with any regulations or controls adopted 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.

### CONDITIONS FOR MONOLITH WELL PERMIT APPROVAL

In addition to all other existing requirements for approval of a groundwater well permit in the Lower Platte South Natural Resources District, the following conditions will apply, both to Monolith and any subsequent owners/operators of the groundwater wells known as Olive Creek 2 (OC2) Wells #1, #2, and #3:

1. Within one (1) year of the date of approval of the preliminary well permits for OC2 Well #2 and OC2 Well #3, Monolith will provide the following to LPSNRD:
  - a. Static water level measurements.
  - b. Water quality sample analysis for sodium, chloride, and total dissolved solids (TDS) after pumping each well for a minimum of 24 hours at full capacity.
2. Once all wells (OC2 Wells #1, #2, and #3) are drilled and equipped, Monolith will work with LPSNRD to implement Monolith's Groundwater Monitoring Plan, as outlined in the Hydrogeologic Analysis Report, Appendix A, submitted to LPSNRD as part of the Monolith well permit applications. Implementation will include, but may not be limited to, the following:
  - a. Gaining land access for a minimum of three (3) groundwater monitoring well locations as located within Zones A, B, and C (Appendix A, Figure 1).
  - b. Installing groundwater monitoring wells at these three locations as follows:
    - i. Depth and screened interval of each well will be determined by LPSNRD upon consultation with Monolith.
    - ii. The Zone A monitoring location will consist of a nest of wells with a minimum of two (2) wells, one well to be completed in the lower aquifer near the interface between the aquifer unit and underlying bedrock, and one well to be completed in the upper aquifer unit. Well installations in Zones B and C may consist of single wells.
    - iii. All wells will be equipped with downhole monitoring equipment (e.g., pressure transducers) capable of measuring and recording groundwater levels at a minimum of four (4) times per day.
    - iv. All wells will be completed in a manner which will allow groundwater quality samples to be obtained from each well.
    - v. Monolith will obtain groundwater quality samples from each monitoring well at a minimum of once each calendar quarter (i.e., four (4) times per calendar year). These samples will be analyzed by a qualified laboratory for, at a minimum, sodium, chloride, and total dissolved solids (TDS).
    - vi. All groundwater monitoring wells will be completed and fully equipped prior to the OC2 Plant beginning operation.

3. Prior to the OC2 Plant beginning operation, Monolith will submit to LPSNRD at least one (1) set of groundwater level measurements and groundwater quality analyses for each groundwater monitoring well installation.
4. After the OC2 Plant begins operation, Monolith will submit all groundwater level and groundwater quality data from the monitoring well installations to LPSNRD at least once per calendar quarter for a minimum of two (2) calendar years from the date of the first submittal after the OC2 Plant begins operation. Upon completion of this two-year period, LPSNRD will determine the frequency of future data collection and submittal upon consultation with Monolith.
5. This permit approval is based on the information contained and representations made in Monolith's well permit application. If LPSNRD finds that Monolith (1) has misrepresented any information in its permit application or (2) is otherwise operating in a manner inconsistent with the representations that Monolith made during the application process, then LPSNRD may place additional requirements on Monolith.
6. OC2 Plant Wells #1, #2, and #3 are required by LPSNRD regulations to each have a water flowmeter installed. An additional condition is that the total volume of water pumped from each well be reported by Monolith to LPSNRD on a quarterly basis at the end of each quarter.





# LOWER PLATTE SOUTH

## natural resources district

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### Memorandum

**Date:** June 17, 2021

**To:** Water Resources Subcommittee

**From:** Tracy Zayac, Stormwater/Watershed Specialist

**RE:** Omission of pumping limitation from Monolith well permit conditions

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Staff have carefully considered additional conditions that should be placed on the Monolith well permit. Staff recommends that the conditions placed on the Monolith well permit not include a limit on maximum pumping, for the following reasons (discussed further below):

- Outside of the Dwight-Valparaiso Brainard Special Management Area (DVB SMA), we do not restrict pumping for any other groundwater user in the District, without specific information to show that such a restriction is necessary.
- We are not aware of any NRD, including LPSNRD, that has placed pumping restrictions as a well permit condition.
- We already have the tools to address aquifer declines, including annual groundwater use reports and an evolving network of groundwater monitoring wells, should such declines occur in the future. Monitoring will help ensure that we have the data to support any future restrictions we may put in place on any groundwater uses.
- We will receive annual water use reports from other wells in the area, as well as the results from the monitoring network. Should problems arise in the future, the District could consider establishing a SMA, in accordance with District Groundwater Rules and Regulations Section R.
- We would have difficulty enforcing a penalty, should overpumping occur. Although setting a pumping limit seems easy to do, we have no rules to penalize a violator other than through a cease and desist order.

Currently, the District has placed allocations only on irrigation wells in the DVB SMA. We place no pumping limitations on any other users in the District, except in specific cases where available data (e.g., from an aquifer test) indicate that groundwater supply in that location is limited. Moreover, we have no SMA designated in any part of the Crete-Princeton-Adams (CPA) Groundwater Reservoir. The best science the District has available to it today does not indicate that placing pumping restrictions on any particular user in the CPA is necessary to protect human health, safety, and welfare, and/or protect neighboring groundwater uses. If the District were to include a pumping limitation, the District would be placing a restriction on Monolith that exists nowhere else in the District, outside of irrigation uses in our SMA and specific water-limited locations.



If, in the future, Monolith were to greatly exceed the estimated maximum pumping amount that they supplied in their well permit application, the District will see that reflected in the annual water meter reports that Monolith must submit under our rules and regulations. In addition, the data from Monolith's and the District's dedicated groundwater monitoring wells, as well as annual reports we receive from irrigation and other wells, will enable the District to track the effects that pumping is having on groundwater levels in the aquifer. If Monolith exceeds their anticipated pumping and/or groundwater levels decline more than predicted, the District would be well within its authority to require that Monolith gather additional information, submit a new modeling analysis to show effects on the aquifer from pumping at higher levels, or take other additional actions to evaluate the situation. If the District has evidence that any user is in violation of our rules and regulations, then we can issue a notice of violation and, if necessary, a cease and desist order.

If, based on data from annual water use reports and monitoring wells, the District begins to see aquifer declines in the CPA, the District has the authority to designate a SMA and impose additional requirements or restrictions to address those declines and/or to follow the Phase delineation process outlined in the District's Groundwater Management Plan. Declines could result from a combination of influences on the aquifer, which may include Monolith's pumping but also changing precipitation and recharge patterns and other water uses in the CPA. The steps that the District may take at that time would be designed to address aquifer issues systemically, rather than focus on a single user.