

**From:** [efilingmail@tylerhost.net](mailto:efilingmail@tylerhost.net)  
**To:** [Hamre, John G.](#)  
**Subject:** Filing Accepted for Case: 08-2018-CV-02937; Environmental Law and Policy Center, et al. vs. North Dakota Public Service Commission, et al.; Envelope Number: 3293199  
**Date:** Friday, February 01, 2019 9:17:57 AM

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## Filing Accepted

Envelope Number: 3293199

Case Number: 08-2018-CV-02937

Case Style: Environmental Law and  
Policy Center, et al. vs. North Dakota  
Public Service Commission, et al.



The filing below was reviewed and has been accepted by the clerk's office. You may access the file stamped copy of the document filed by clicking on the below link.

Filing Details	
<b>Court</b>	Burleigh County - South Central District
<b>Case Number</b>	08-2018-CV-02937
<b>Case Style</b>	Environmental Law and Policy Center, et al. vs. North Dakota Public Service Commission, et al.
<b>Date/Time Submitted</b>	1/31/2019 6:34 PM CST
<b>Date/Time Accepted</b>	2/1/2019 9:17 AM CST
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<b>Filing Description</b>	CR Exhibit 25 Record Addition 5 Letter part 2 of 2
<b>Activity Requested</b>	EFileAndServe
<b>Filed By</b>	John Hamre
<b>Filing Attorney</b>	Illona Jeffcoat-Sacco

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<b>Lead Document</b>	CR Exhibit 25 Record Addition 5 Letter part 2 of 2.pdf
<b>Lead Document Page Count</b>	7
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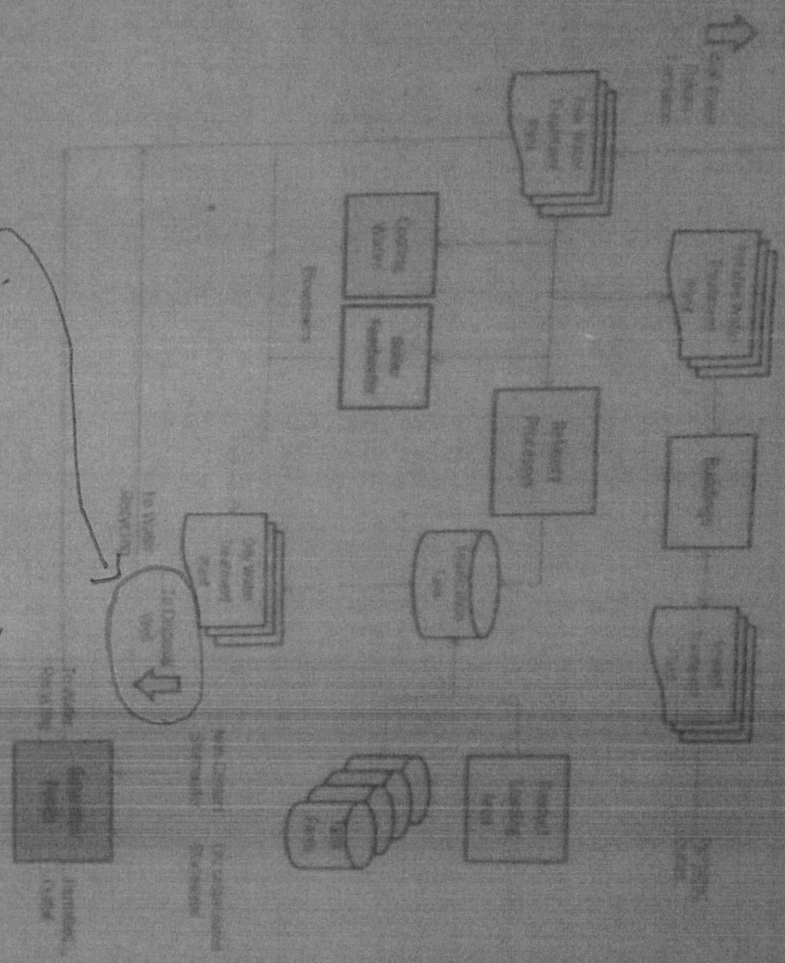
For technical assistance, contact your service provider or  
North Dakota Court's Information Technology Department 701-328-4218  
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disposal well - well thing: drill their own well

truck waste water }  
paper waste water }

they will have to have storage tanks (M)

# Refinery Water Flow Chart



it says "to disposal well"



# North Dakota Aquifer Profile

Age Units	Rock Units	Hydrogeologic Systems	Aquifers	Description	Approximate Depths (ft)
Quaternary	Red Creek fm Fox Hills fm Prairie fm Jordan River fm Lignite	TK4 Aquifer	Upper Aquifer	Primarily domestic or livestock use	0-620
	Madison fm Cannon fm Cannon fm Belle Fourche fm Henry fm Newark fm Sud Creek fm Hyer-Kara fm		Red Creek Aquifer Fox Hills Aquifer	Primarily agricultural use	620-820
	Colorado Group Dakota Group		Confing Layer	Greater than 2,000' of shale	820-4,220
Jurassic	Sand fm Ransom fm	TK3 Aquifer	Dakota Aquifer	Target water source aquifer	4,220-9,200
	Triassic				

Our water well is ①  
 780 ft deep  
 Lindbois (in Fryberg)  
 well is 1140 ft deep.  
 Fryberg school well  
 is 1700 ft deep

~~TK3~~



Building a Better World  
for All of Us

September 22, 2016

RE: Meridian Energy  
Appropriation of Water Clarification Letter  
to Nearby Property Owners  
SEH No. MERID 135471 14.00

Dear Property Owner:

Please note that Meridian Energy Group, Inc has submitted an application to the North Dakota State Water Commission for pursuing an appropriation for water. Please find enclosed the Notice of Application for Appropriation of Water provided to Meridian Energy by the North Dakota State Water Commission and sent to the necessary property owners per the requirements of the State of North Dakota.

The actual application referred to in the letter is for an appropriation of water from the Dakota Formation. The Dakota Formation is located at an approximate depth of 3,500 to 5,000 feet and the ground water within this formation is known to be "brackish" or in other words "salty". This letter is to notify you that the application was submitted and to offer an opportunity to provide comment or to request an informational hearing.

*note for hearing in Medora not Bismarck*

The refinery will not access any of the existing ground water sources from which potable water is currently drawn by neighboring residences, farms, ranches, or municipalities. Meridian Energy will treat the water received from the Dakota Formation by removing the salts to provide the refinery process water.

Please feel free to contact me if you have any questions or comments at 715-559-3012 or 715-720-6254.

Sincerely,

Daniel N. Hedrington, Principal  
Client Service Manager/Sr. Project Manager

ch

Enclosure

c: Meridian Energy  
Scott Lange, PE – SEH

y:\kol\merid\135471\1-gen\14-cor\water appropriation permit mailings\9-22-16 letter to nearby property owners\letter to nearby property owners 9.22.16.docx



Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 10 North Bridge Street, Chippewa Falls, WI 54729-2550  
SEH is 100% employee-owned | [sehinc.com](http://sehinc.com) | 715.720.6200 | 800.472.5881 | 888.908.8166 fax

ND SWC

This is from no Dakota state water commission  
Water Appropriation Requirements -  
2010 Summary  
Prepared by W.M. Schuh

incorporated into the permitting application process in late 2009. The requirement adds additional time delays in the permitting process.

- In May 2010, the U.S. Army Corps of Engineers announced that a three-to seven-year storage availability study would be required before any additional water access permits could be approved from Lake Sakakawea. If the study indicates storage is available, the Corps plans to levy "surplus water" storage fees for all industrial water users withdrawing water from Lake Sakakawea. As of July, 2010, the Corps indicates that the permitting process for four water permit applications currently before the Corps (which includes an 18,000 acre-foot application from the International Western Company) will be processed simultaneously with the storage availability study and a study to determine "surplus water" storage fees. No timeline for permit completion has been provided by the Corps.
- Currently, the North Dakota State Water Commission has approved 55 water permit applications to divert water from Lake Sakakawea for irrigation purposes. Some of these permits holders would like to temporarily forego irrigation and divert water for industrial (water depot) use for oil well fracing. The Water Appropriation Division of the State Water Commission has developed an internal policy to accommodate this change in purpose of use with the authorization of a temporary water permit. As of July 2010, this request is under study by the Corps with regard to their permitting process.

**Petroleum Refining:** The U.S. Department of Energy has estimated that unit water use for oil refining is about 1.5 gal/gal. There is currently only one oil refinery operating in North Dakota, the Mandan Tesoro Refinery, which processes about 60,000 barrels of crude oil per day (bpd). There are currently proposals for three new refineries: Northwest Refining at Williston (for 100,000 bpd), Dakota Oil Processing at Trenton (for 20,000 bpd), and the Three Affiliated Tribes Refinery at Makoti (for 15,000 bpd). There is also a proposal for expanding the Tesoro Refinery to produce low-sulfur diesel fuel from coal.

now  
74,000

- The Tesoro Refinery uses about 1.5 million gallons of water per day from the Missouri River. About a million gallons are consumed, mainly through evaporation. The rest is returned to the stream.
- The approximate use distribution is: boiler water (10-15%), desalting crude oil (30-40%), and cooling water (approx. 35%).
- Since Tesoro replaced British Petroleum as the owner and operator of the refinery in 2003, the median water withdrawal (through 2008) has been 2,100 acre-feet per year, and median water consumption has been 1,275 acre-feet per year.

(6) 4

Consumptive water use has ranged narrowly from 0.46 to 0.53 gal/gal liquid product, with a median of 0.48 gal/gal. Total water withdrawal has ranged narrowly from 0.78 to 0.85 gal/gal liquid product with a median of 0.8 gal/gal. Estimated unit water use is low by national standards.

- If an additional 137,000 barrels were to be refined, at a range of 1 to 2 gallons of water per gallon of refined product, additional water use of 6,900 to 13,800 acre-feet would be required – for a total of 8,200 to 15,100 acre-feet per year.

**Coal-Fed Syngas and Liquid Fuels Synthesis:** The extraction of synthesis gas (syngas) from coal or methane can be used to produce several different energy fuels, from hydrogen to natural gas and diesel fuel. Syngas production, or planned production in North Dakota, uses lignite exclusively as a carbon and hydrogen feedstock. The Dakota Gasification plant at Beulah uses lignite to produce methane. A proposed synfuels plant at South Heart plans to produce hydrogen gas to directly fuel thermoelectric power generation. A joint venture between Tesoro and an area utility has been proposed to use coal from the Falkirk mine with steam from the Tesoro refinery at a facility managed with the Tesoro refinery, to produce aircraft fuel or diesel fuel using the Fischer-Tropsch process. American Lignite Energy is also planning another coal-to-liquid facility for future construction.

The U.S. Department of Energy (USDOE 2006) has estimated unit water use at 4.6 to 6.9 gal/gal of liquid Fischer-Tropsch product, depending on the coal used. Other authors have presented a range of 1.5 gal/gal for a zero-discharge, air-cooled plant, to 5 to 7 gal/gal for a plant with water cooling and less recycled use of waste heat. Unit water use for production of hydrogen gas from methane has been estimated at about 4.5 gal/kg hydrogen produced.

- Eight-year unit water by Dakota Gasification was estimated at 0.049 gallons per standard cubic foot of methane gas. Efficiencies in water use are enhanced by the production of additional products, including anhydrous ammonia, ammonium sulfate, and various organic compounds.
- The proposed South Heart Energy Facility currently plans to produce syngas (hydrogen gas) from coal. The syngas will be used to power an integrated gas combined cycle power plant to produce electricity. The combined turbines will produce about 285 MW, of which about 118 MW is parasitic, leaving about 167 MW net power produced for sale. A CO<sub>2</sub> byproduct will be used for enhanced oil recovery in the Williston Basin. An average of 650 gallons per minute of raw water will be supplied by the Southwest Pipeline Project (SWPP), via an interconnect just upstream of the Dickinson Water Treatment Plant. Power plant cooling will be a combined air and water-cooled system so that water supplementation for cooling will be needed mainly in the summer. South Heart

This was sent to people who live in that 1 mile radius. (live in that have land)

NOTICE OF APPLICATION  
FOR APPROPRIATION OF WATER

Application No. 6858

TAKE NOTICE that Meridian Energy Group - Costa Mesa, CA has made application to the State Engineer of North Dakota for a permit to divert and appropriate water from: Ground Water.

The application is for a permit to divert and appropriate water from a point or points on the land described as follows:

The SW1/4 of Section 01, in Township 139 N., Range 100 W.

The application requests an average approximate rate of 400 gallons per minute of water during the operating season for each year said permit may remain in force, with an annual appropriation of 645.2 acre-feet, for the purpose of:

Industrial use.

Notice of Application will be published in the:

Billings County Pioneer - Medora, ND

The published Notice of Application will give a date by which written comments regarding this proposed water permit application must be filed with the State Engineer, State Office Building, 900 East Boulevard, Bismarck, North Dakota 58505-0850. Written comments must include the name and address of individual filing said comments. Any person providing written comments may also request an informational hearing. The State Engineer will consider all written comments and prepare a recommended decision, which will be provided to the applicant and persons submitting written comments. Those persons may provide additional information, request an adjudicative proceeding, or both.

Dated this 18th day of August, 20 16.

*[Signature]* V.P.  
Applicant  
Meridian Energy Group, Inc.

*[Handwritten mark]*

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**Refinery update**

Fri, Oct 07, 2016 12:11 PM

Called the Water Commission to see if there have been any updates to the application process. Here is the information I've gathered:

Application # 6858 / no permit has been issued yet

Public notice was published in the Billings Co. Pioneer on Thurs. 10/06/2016. Another notice will be published on 10/13/2016

The person I have been in contact with is Kimberly Fischer (hydrologist / water appropriations) 701-328-2796

- \* She said that Meridian is the 4th applicaiton on her list to review
- \* She does not foresee any hydrological problems with using the Dakota Aquifer

Process from now:

- \* Public comment can be submitted to the state engineer until Nov. 7th\*\*
- \* The state engineer will reach a recommended decision and that decision will be sent out to all of those that submitted a comment.
- \* An additional 30 day comment period will begin after that.

File public comment to: Garland Erbele, P.E., State Engineer

State Engineer, State Office Building, 900 East Boulevard, Bismarck, North Dakota 58505-0850

[slocken@nd.gov](mailto:slocken@nd.gov)

Action Items:

- \*Submit public comment: Ask the questions that you want answers to. Voice your concerns.
- \*LTE: Let people know what part of the process the permit is at and for them to get involved.

Let me know if there is something else I could assist with at this time!  
Hope you all are doing well and that I will get to see you at the annual meeting coming up. Take care.

--  
Cecilia Montesdeoca  
Field Organizer | Dakota Resource Council  
1200 Missouri Ave, Ste 201  
Bismarck, ND 58504

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