

September 23, 2019

Zoning Board
415 West 1st Ave. Suite 204
Miller, SD 57362

Greetings Hand County Commissioners

We are writing in response to the United State Department of the Interior Fish and Wildlife Service comments submitted by Ms. Williams. First and foremost, we are all agricultural and environmental enthusiasts. We live and raise our families on our land and with our land. Our past generations instilled this passion of environmental stewardship and we will continue pass that down to our future generations. Our livelihoods depend on this, which is no different than our fellow farmers and ranchers in Hand County.

Upon review of the comments submitted, there is an apparent misunderstanding of key aspects of this proposed project. We understand how some of the information relating to the project can be confusing or misunderstood, and we would like to take this opportunity to clarify those points. Ms. Williams indicates we are applying for the South Dakota General CAFO Permit which allows for a discharge during 25 year/24-hour event. This is incorrect. Although that type of permit exists, Ratio, LLC is applying for a different South Dakota DENR State CAFO Permit, which does NOT allow for any discharge. It is what is referred to as a "zero discharge facility." Our manure holding structures are completely covered and will not capture rainfall during these types of events.

Additionally, Ratio, LLC is restricted by the DENR from applying nutrients on frozen and snow-covered ground. Figure 2 in Ms. Williams' comments refers to the frozen and snow covered ground application map, which is a map required by the DENR to be submitted for permitting and illustrates application areas should an emergency arise requiring nutrients to be spread when the ground is frozen. It is important to note that any such emergency application on frozen or snow-covered ground requires prior approval from the DENR. Any such application is to be used in emergency situations only and the application setbacks for such emergency application are increased from the 100' normal requirement to 300' in order to prevent potential runoff in such conditions. Submission of this map is required by the DENR for every similar permit application and is by no means a reflection on the likelihood of such an event.

Missing from the discussion are the nutrient application maps illustrating the normal application practices that are to be implemented at all times, with the exception of the unlikely event of an emergency as discussed above. Ratio, LLC's nutrient application is to be performed primarily in the fall and the nutrients are to be injected into the soil, significantly reducing the runoff risk, but also to benefit the agronomics of nutrient uptake by the plant. During spring and fall application periods our setback from all conveyances and waterbodies is 100' as well as 250' from private wells. Below is a current view of the application fields for Ratio, LLC.

Water Quality Risk Assessment Map
 Aughenbaugh Site
 5,6,8-110N-67W & 31,32-111N-67W



Legend

- Aughenbaugh Borders
- Excluded Areas
- Manure Application Field
- R** Runoff High Risk
- L** Leaching High Risk



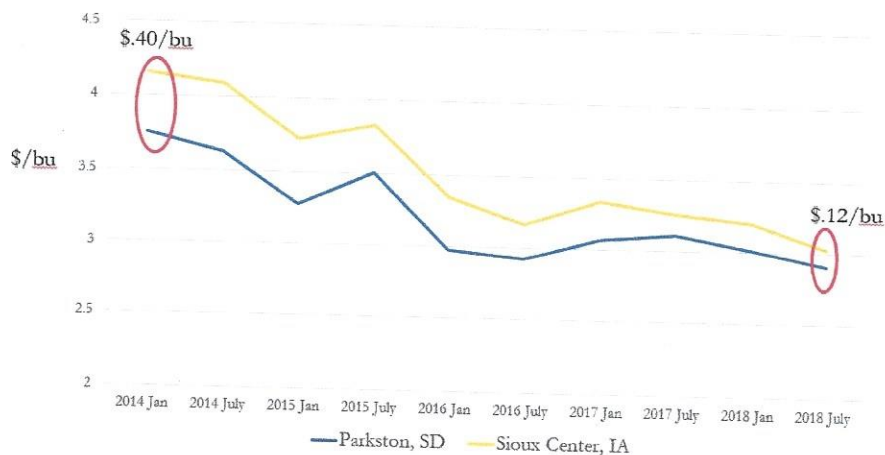
CENTROL.
CROP CONSULTING

A study performed by US Fish and Wildlife Service (Schwarz *et al.* 2004) is also referenced Ms. Williams' comments. Of note is the fact that these wetlands were created by using livestock wastewater. Ratio, LLC is a very different farm in terms of housing, design, manure storage, and application. The Hastings Farm being referenced was formerly a series of ammunition storage bunkers which are now refurbished into a livestock production system using lagoons as manure storage. By contrast, Ratio, LLC is an engineered facility utilizing a covered, deep pit manure storage system with precision nutrient application, all of which is monitored and regulated by DENR. Below is a snip from the referenced article:

of swine urine and manure slurry are generated daily (based on calculations for swine between 36-55 kg of body weight; Fraser 1991), for a total of 1.8 million liters of wastewater per day. In an effort to utilize this wastewater, a partnership between Hastings Pork and the RWBJV resulted in the creation of seven wetlands (known as the Hayden Thompson wetlands and referred to herein as the created wetlands) totaling 17 acres on Hastings Pork property. These wetlands receive swine wastewater effluent from lagoons by a canal system, with a distance of delivery ranging from less than a mile to 5 miles. The created wetlands were designed to provide waterfowl habitat and were not intended to treat swine-waste effluent; therefore, the Service and Hastings Pork formed a partnership to evaluate whether migratory birds attracted to the created wetlands may be exposed to contaminants and disease pathogens. The Service is also concerned that

In closing, Ratio, LLC proposed farm meets and exceeds all State and Local ordinances and setbacks. We are committed to animal care and environmental stewardship. In terms of the direct economic benefits with the jobs created, health care, and retirement packages, we will be offering some of the most competitive jobs in the community. Furthermore, there are indirect benefits such as opportunities generated from feed milling, grain basis improvement benefiting all corn and soybean growers, as well as the various service providers involved in the operations of the proposed farm. Below is a snip from SDSU's Dr. Thaler, which he presented at the Livestock Development Summit in Brookings, SD.

IMPACT OF LIVESTOCK ON CORN PRICES (\$/BU)



We thank you for your consideration of this project.

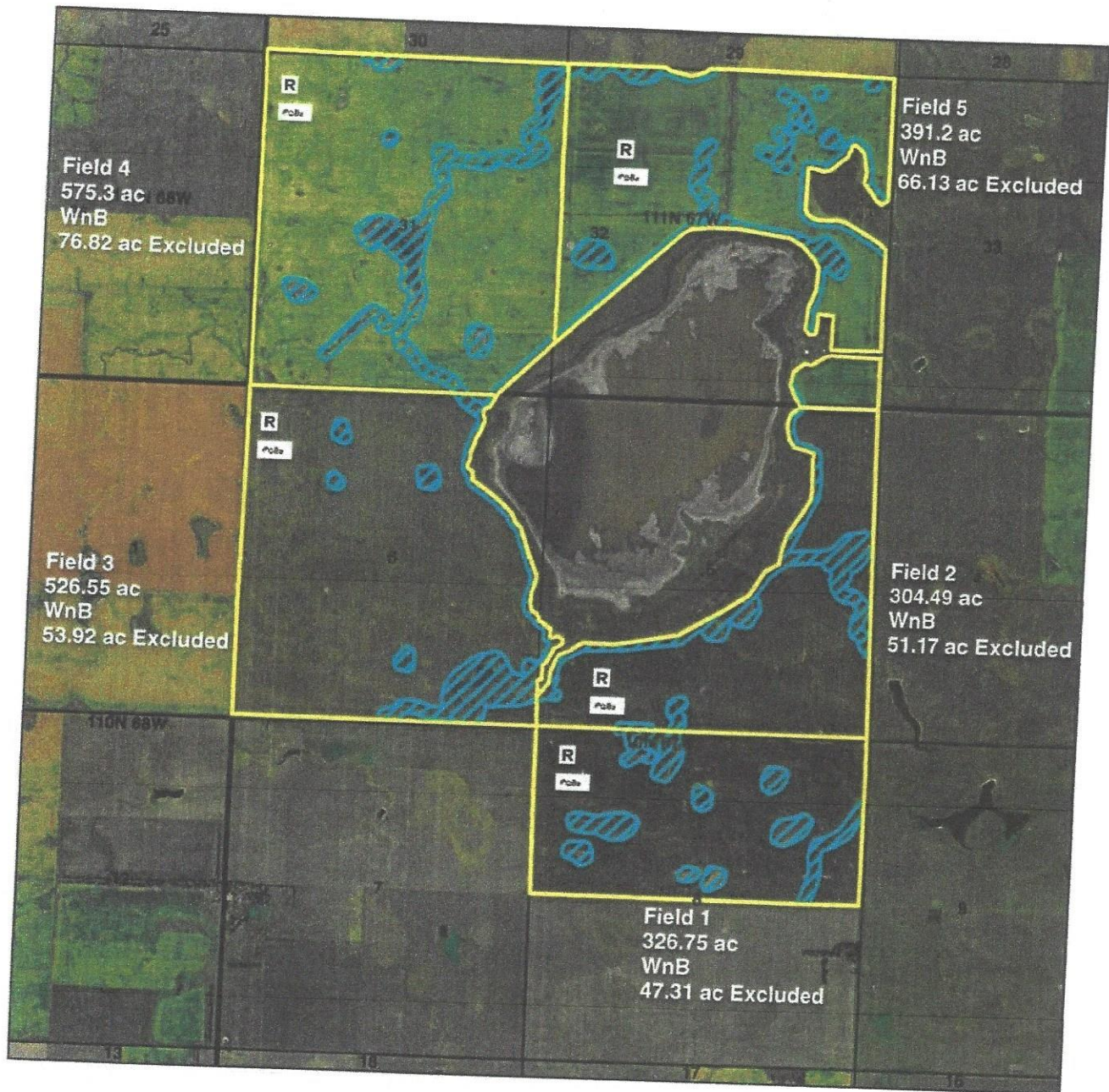
Best Regards,

A handwritten signature in black ink, appearing to read 'Nick Fitzgerald', with a long horizontal flourish extending to the right.

Nick Fitzgerald

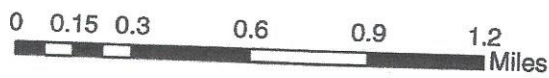
Pipestone System
1300 S. Hwy 75
Pipestone, MN 56164

Water Quality Risk Assessment Map Aughenbaugh Site 5,6,8-110N-67W & 31,32-111N-67W



Legend

-  Aughenbaugh Borders
-  Excluded Acres
-  Manure Application Field
- R** Runoff High Risk
- L** Leaching High Risk



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