

August 23, 2012
Town of Saratoga –Proposed Golden Sands Dairy
WDNR EIS Public Input Session
Meeting Summary

Two listening sessions were held at the Town of Saratoga Town Hall on August 23, 2012.

Sign-In sheets indicate 170 people attended the first session (3-5pm) and 131 people attended the second session, for a total of 301 individuals. It should be noted not all in attendance signed in. The Nekoosa Fire Inspector present at the entrance estimated 5% may have entered without signing in, bringing total participants to approximately 325.

After listening to a 15 minute overview of the meeting purpose and EIS process specifics by Regional Director, Dan Baumann, and Environmental Analysis Program Supervisor, Russ Anderson, the citizens dispersed among 8 separate program tables staffed by 18 WDNR specialists.

Participants were invited to discuss their concerns and issues for the following program areas: Forestry, WPDES permits, Nutrient Management, Water Resources, Facility Plan Design Review, Wildlife Management, EIS Coordination, Air Quality, Drinking Water, High Capacity Wells, Groundwater Quality, and Fisheries.

Some individuals presented the department with studies, reports and books regarding various aspects of the proposed dairy, some very specific to an individual topic and others general in nature to overall CAFO operations.

The public provided input in various forms including: Comment forms, studies, petitions, data sets and a reference book. Nearly one hundred (98) separate documents were received, with comment forms often containing numerous program issues.

Preliminary breakdown of comments received at the August 23 listening sessions:

Drinking and Ground Water (25): 20 comment forms, 3 prepared statements, 1 Petition and Well Survey Summary Report, 1 Groundwater Report

Water Resources (14): 12 comment forms, 2 prepared statements

Wildlife (9): 9 comment forms

WPDES, NMP, and Facility Design (8): 5 comment forms, 1 fact sheet form and 2 request reports

Fisheries (5): 4 comment forms, 1 information sheet, additional on multiple topic comment forms

Endangered Resources (4): 3 comment forms, 1 prepared letter

Soils (4): 2 comment forms, 2 Reports

Forestry (1): 1 comment form, Forestry Specialist listening summary sheet (16 issues raised), additional in multiple topic comment forms

Prepared, typed comments on a range of topics (4)

Multiple Topic Comment Forms (24): Issues include air, forestry, alternative scenarios, public land, recreational uses, animal care (hormones), weather extremes, population density/compatibility, tourism, land use, property values, odor, hunting, road damage, liability issues, genetic seeds, health concerns, economic impacts, property values, noise and quality of life.

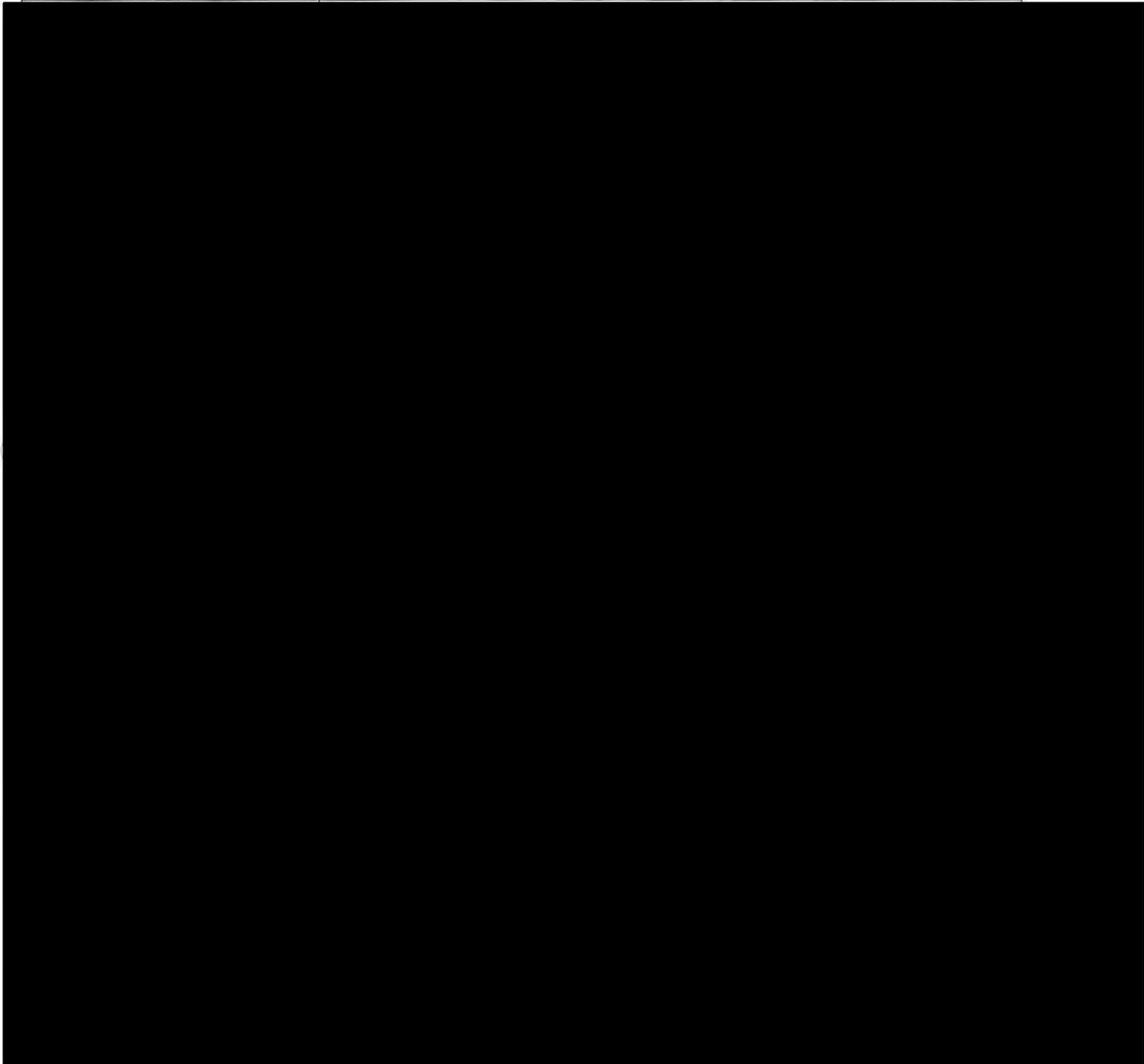
All comments, including those received prior to and after the August 23 meeting, will be addressed by program staff and responses compiled accordingly. The WDNR is accepting public comments until September 21, 2012 to be considered for inclusion in the Environmental Impact Statement. Once the comment period closes, the EIS Scoping Topic Outline will be updated to include public input topics. The updated outline will be provided to the applicant for completion of the EIR document and placed on the Department's GSD webpage.

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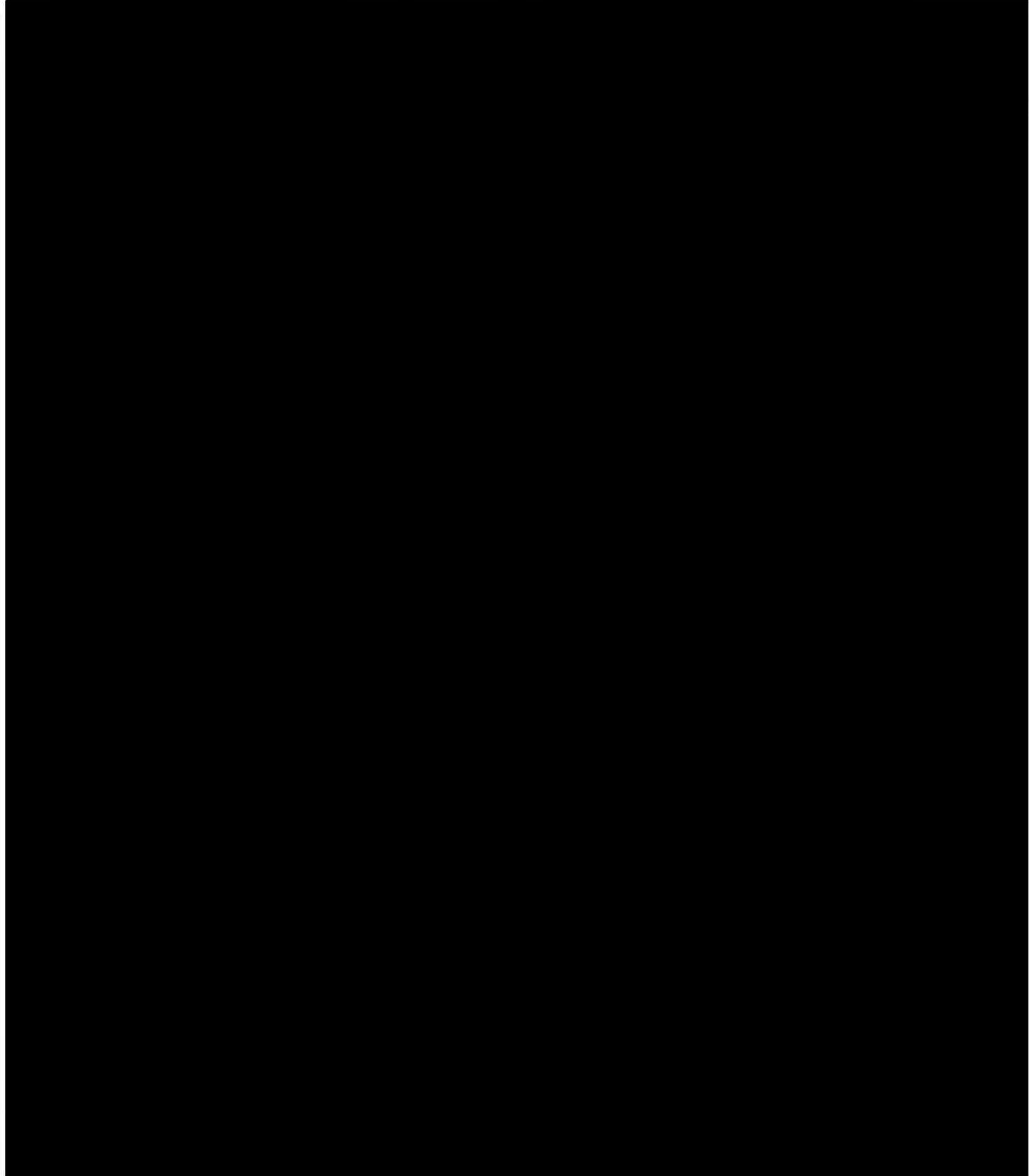


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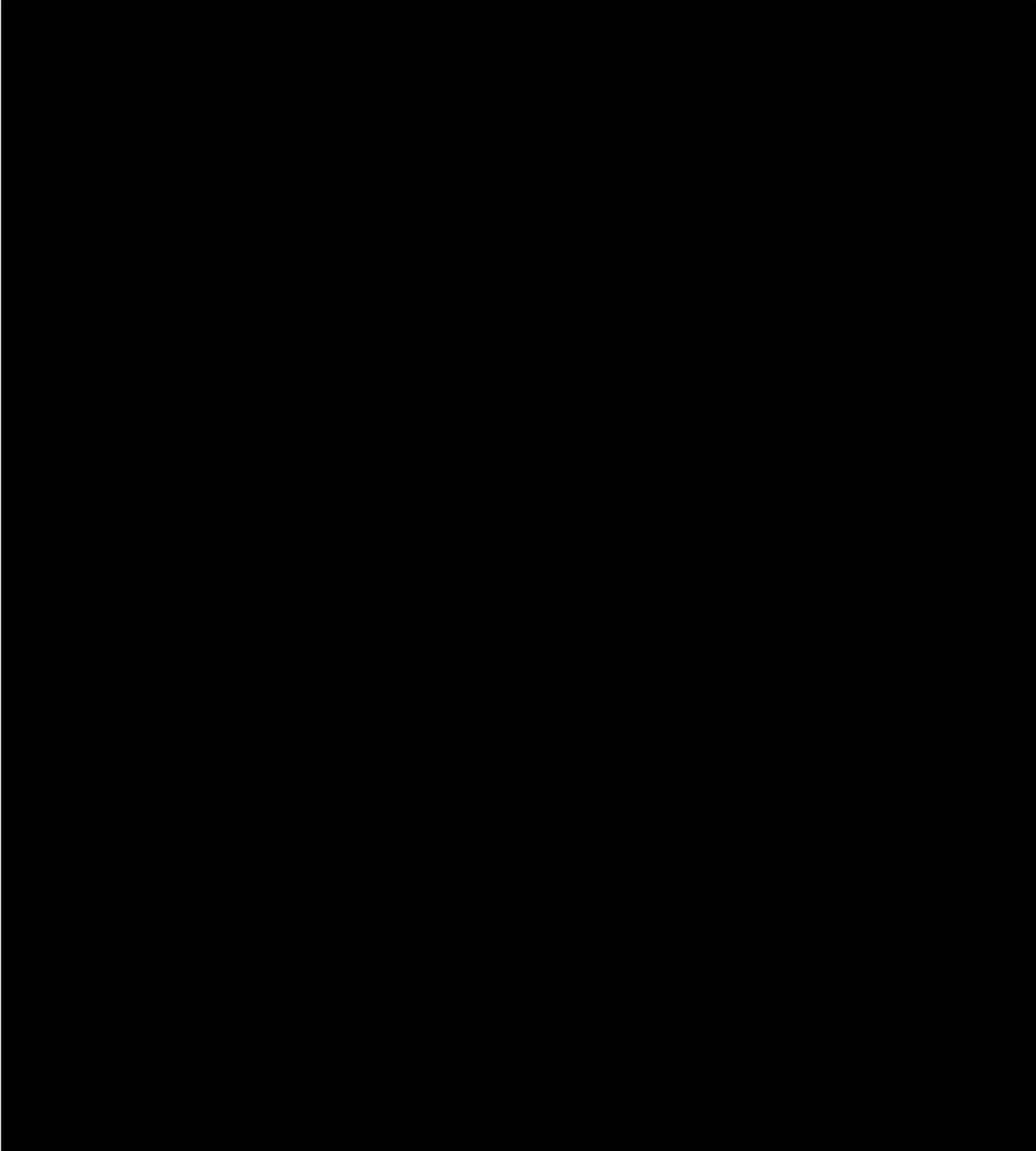


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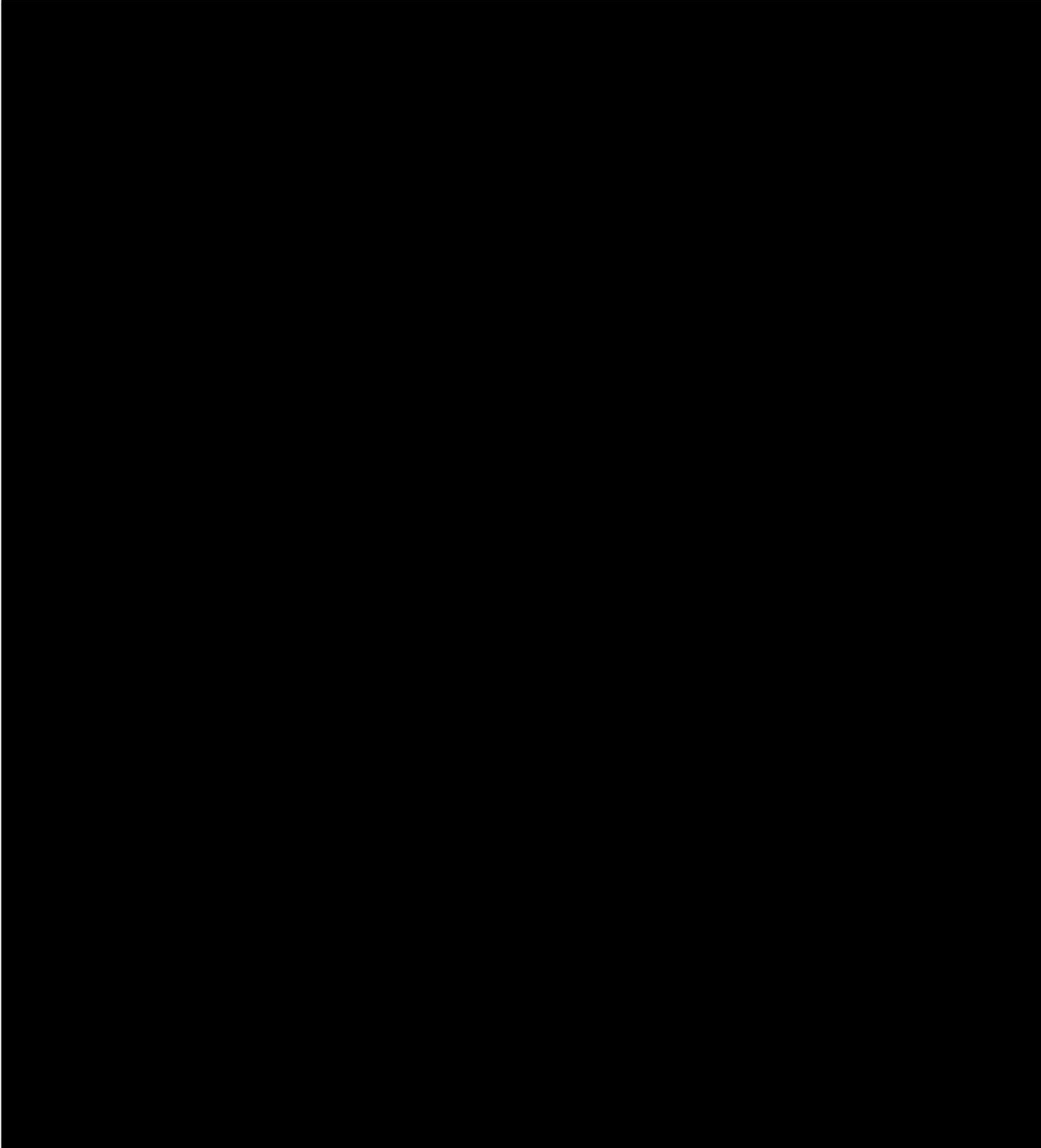


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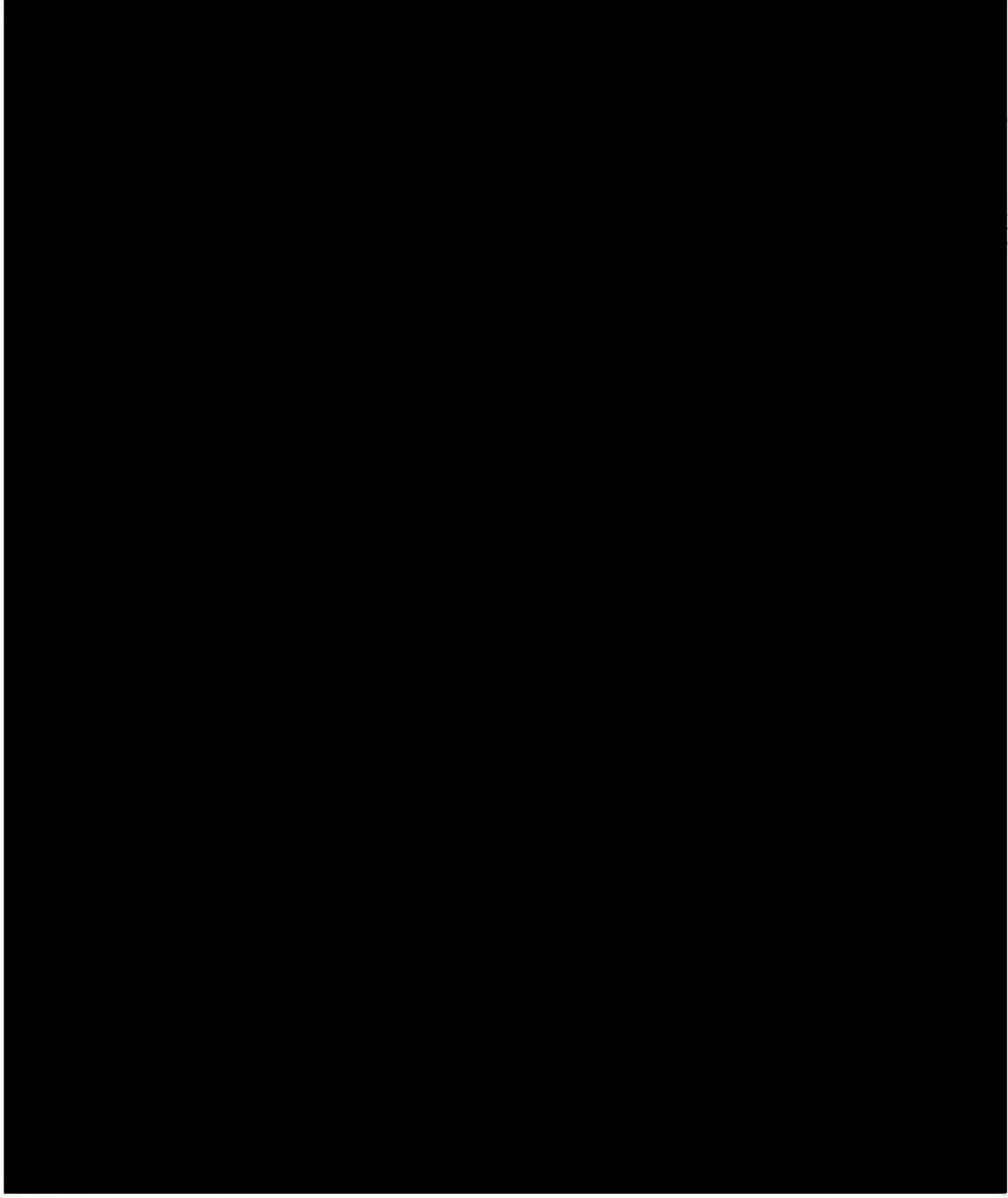




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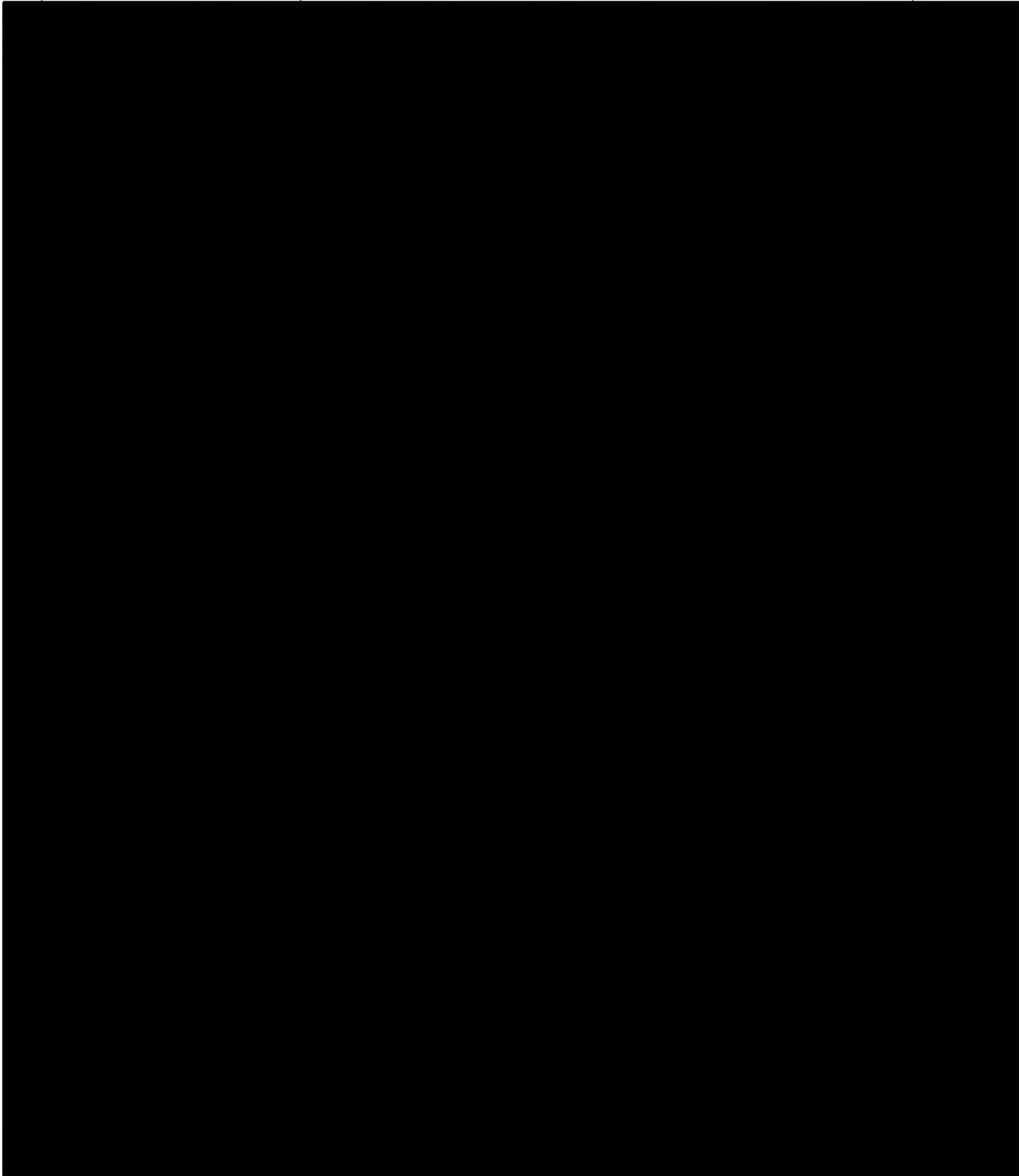
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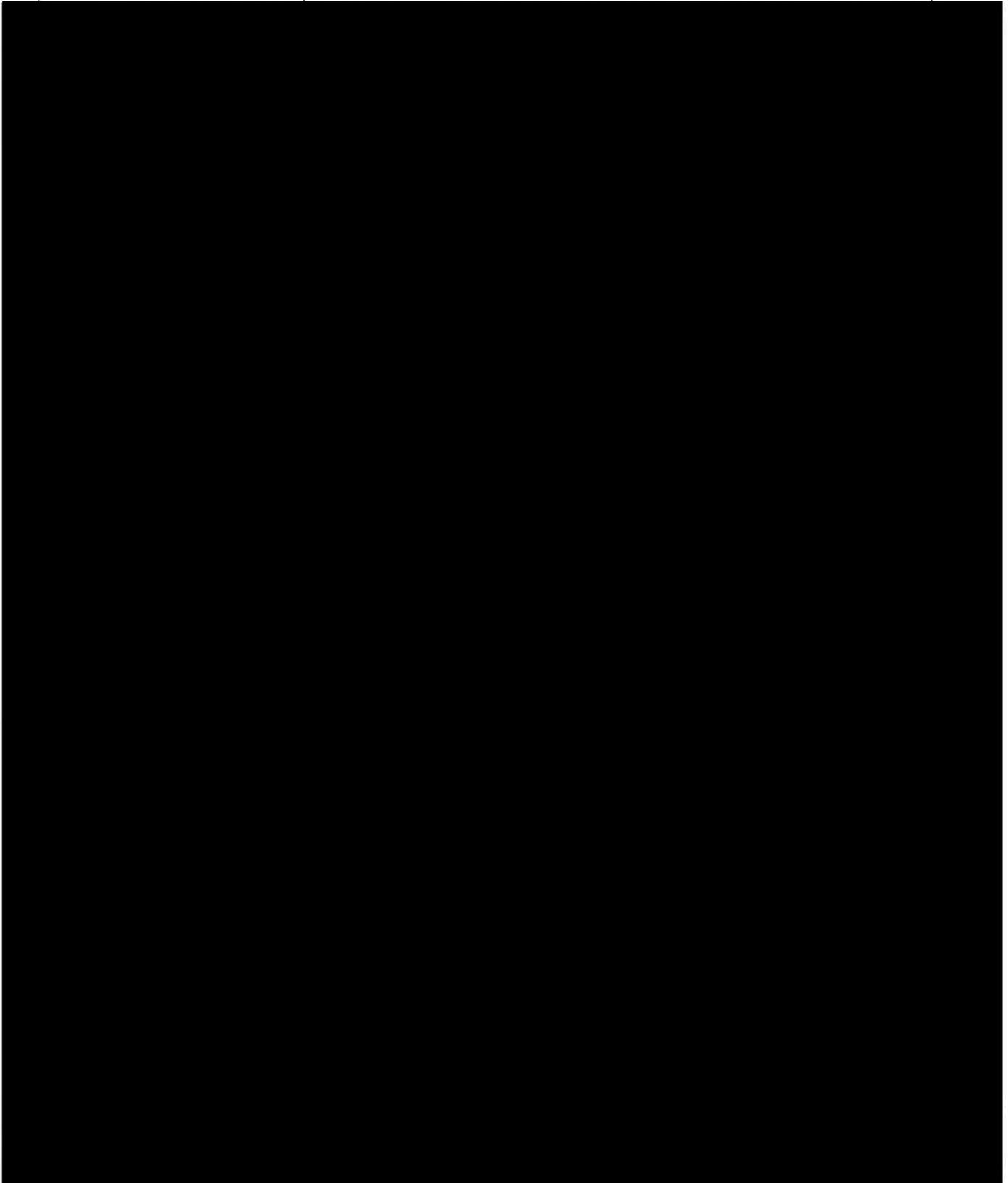
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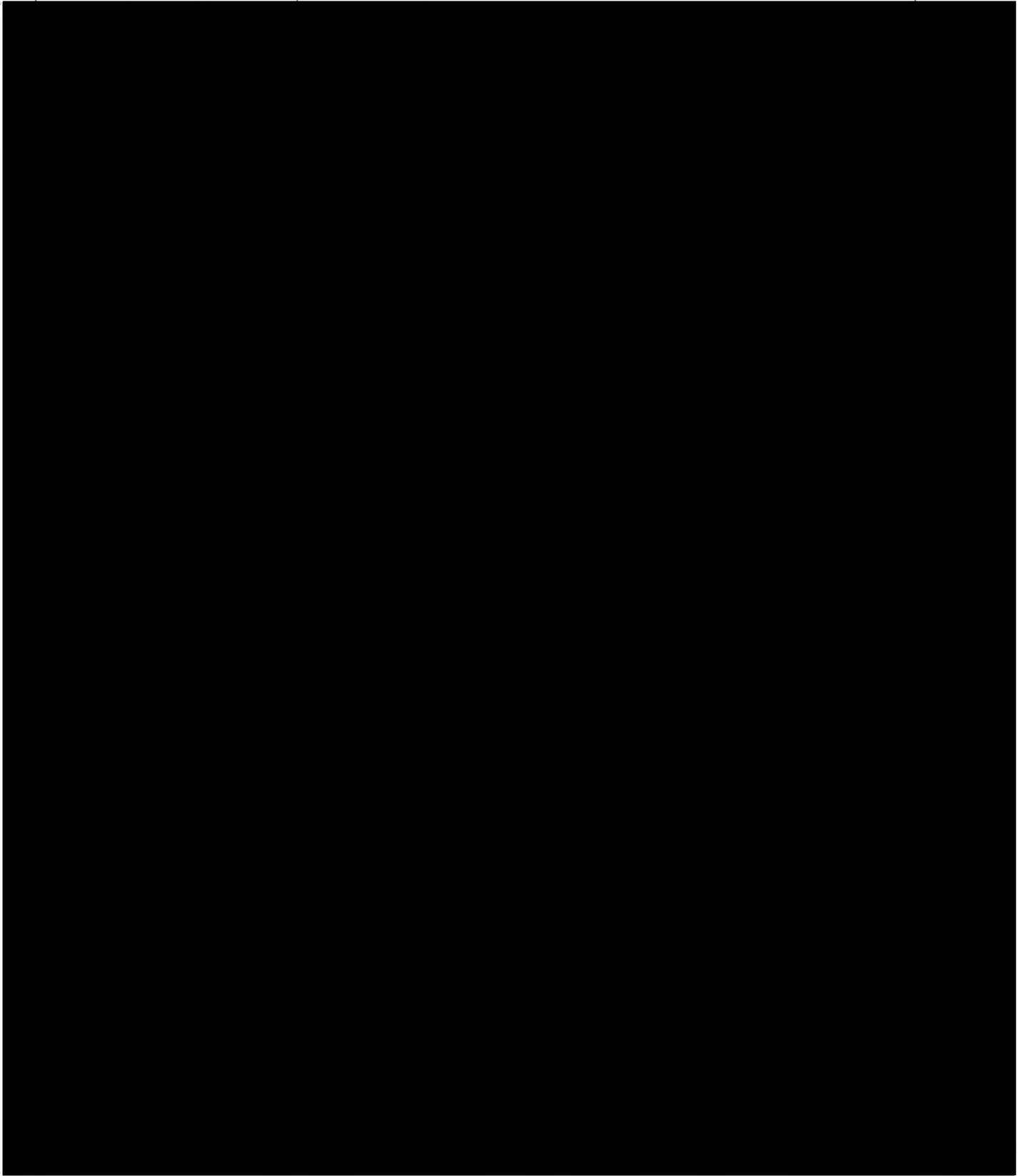
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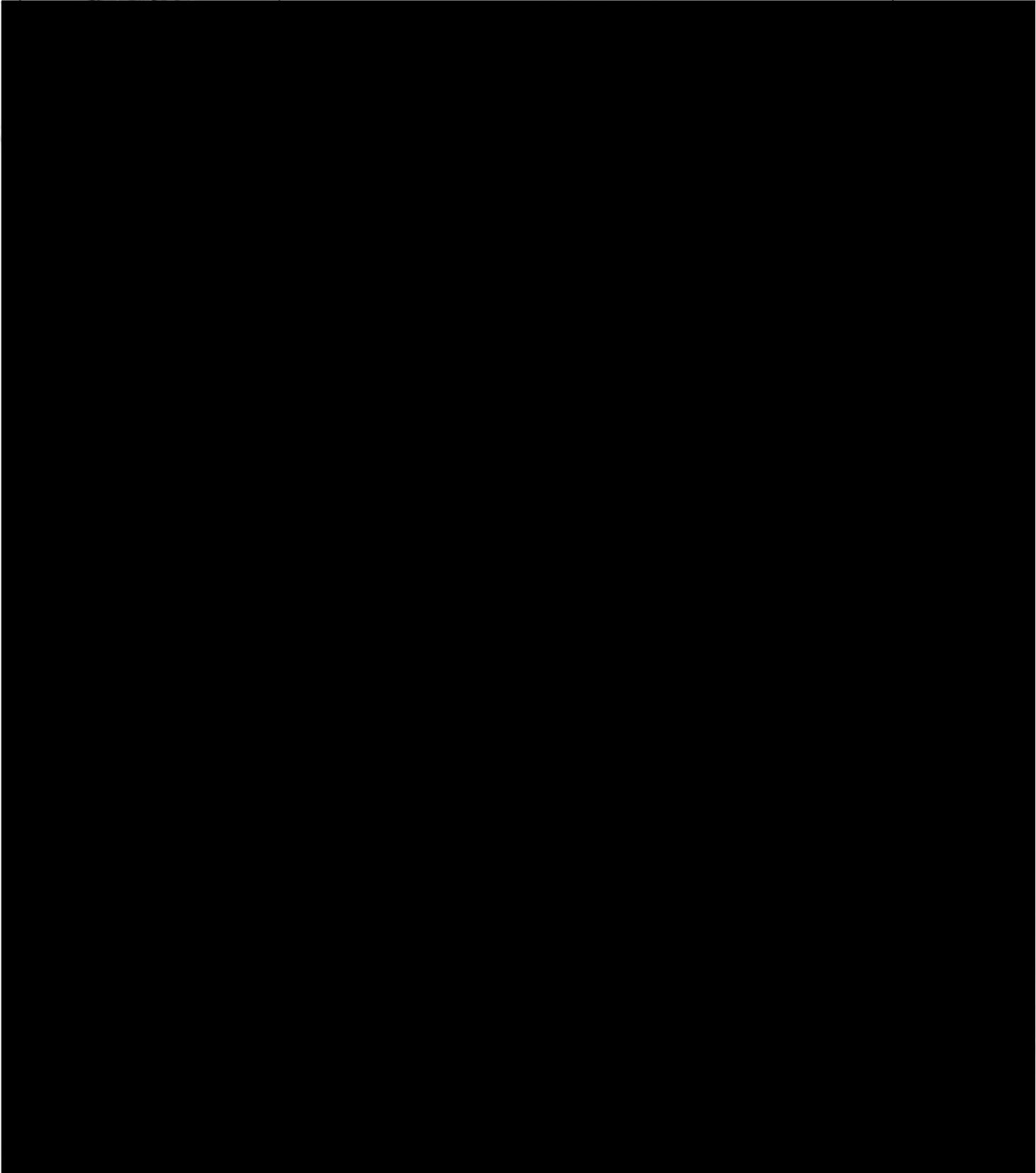


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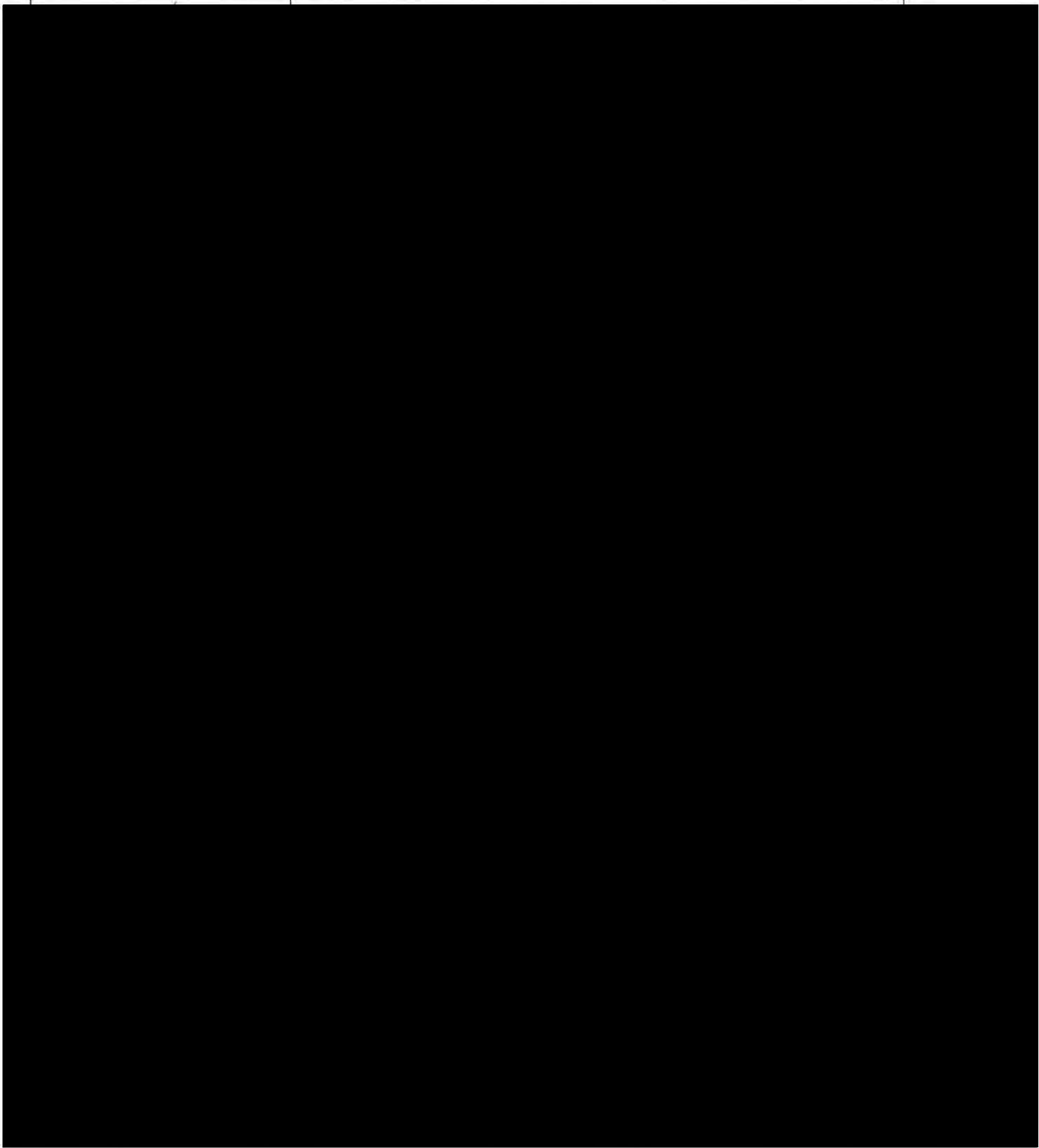
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FW Water Quality Fact Sheet 10-4-06

From: [REDACTED]
Sent: Sunday, August 26, 2012 5:53 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: Water Quality Fact Sheet 10.4.06.doc

----- Original Message -----

From: [REDACTED]
To: [REDACTED]
Sent: Friday, August 10, 2012 4:49 PM
Subject: Water Quality Fact Sheet 10.4.06.doc

[REDACTED]

CAFOs and Water Quality

A Compilation of Facts from: [Concentrating on Clean Water: The Challenge of Concentrated Animal Feeding Operations](#) by Carol J. Hodne, Ph.D.

Full report: http://www.iowapolicyproject.org/2005_reports_press_releases/050406-cafo-fullx.pdf

- As Cooperband and Good (2002, p. 5075) observed, “Intensively managed livestock production systems have exacerbated conditions where manure use in crop production is more akin to waste disposal than beneficial fertilization.” (Hodne, 2005, p. 6)
- ...the processes used in siting CAFOs inadequately consider water quality issues at regional and watershed levels (Jackson, Keeney, & Gilbert, 2000). (Hodne, 2005, p. 7)
- Contract producers compared to independent producers, have narrower options for manure management and other practices that affect water quality (e.g., Morrison, 1998). (Hodne, 2005, p. 4)

Manure Application / Runoff

- Manure runoff to surface waters is increased by manure application to: flood plains; steep land slopes; and soil that is frozen, snow covered, saturated, or of low porosity (Mulla, et al., 1999). (Hodne, 2005, p. 13)
- Manure application near waterways, natural drainage paths and surface waters increases runoff (Crane, et al., 1983; U.S. E.P.A., 1998). (Hodne, 2005, p. 13)
- The Centers for Disease Control and Prevention (CDCP, 1998) studied lagoon, surface water and ground water samples from farm sites in Iowa counties with high densities of swine CAFOs. ...The results generally suggested the possibility that pollutants and pathogens can move through the soil and away from the point of higher pollution (i.e., lagoons) and by overland flow from the area of manure application. (Hodne, 2005, p. 18)
- Water contamination may increase with poorly planned CAFO siting that ignores issues such as regional and watershed water quality, sandy soils, shallow groundwater and flood plains (Jackson, et al., 2000). (Hodne, 2005, p. 14)

Manure Lagoon Seepage

- Earthen manure storage lagoons (that are soil lined or clay lined) allow seepage of wastewater, creating a source of potential groundwater contamination (Ham & DeSutter, 2000). (Hodne, 2005, p. 11)
- With or without liners, lagoons are at risk for seepage due to freezing and thawing, burrowing animals, roots, and cracking from drying walls following pumpout (Jackson, 1998). (Hodne, 2005, p. 12)

Water Pollutants Emitted by Factory Farms

- The main components of CAFO manure that may cause water pollution are nutrients, (i.e. nitrogen, phosphorous, and potassium), ammonia, pathogens, (e.g., bacteria), feed additives (e.g. antibiotics, hormones), salts and trace elements, organic matter, and solids (U.S. EPA, 1998). (Hodne, 2005, p. 7)

Antibiotics

- Antibiotics are used in CAFO animals to treat disease, prevent the spread of disease, promote growth and enhance feed efficiency (Cole, Hill, Humenik, & Sobsey, 1999; McEwan & Fedorka-Cray, 2002). ...Depending on the source, 40 percent (Nawaz, et al., 2002) to 70 percent (Mellon, et al., 2000) of antibiotics used in the United States are fed to livestock to promote growth, treat disease and minimize the risks of confinement (e.g., stress from crowding). (Hodne, 2005, p. 8.)
- Of antibiotics given to CAFO livestock, 25-75 percent pass unchanged into manure waste and may contaminate soil and water through transmission through surface water and ground water (Chee-Sanford, Aminov, Krapac, Garrigues, & Mackie, 2001). (Hodne, 2005, p. 18)

- The use of antibiotics, including subtherapeutic use as growth promoters, in CAFOs has been associated with the selection and spread of antibiotic resistance among populations of bacteria in animals. Resistant organisms may spread through infected carrier animals, feed, wildlife, or clothing. (Addis, et al., 1999; Cole, et al., 1999; McEwan & Fedorka-Cray, 2002). (*Hodne, 2005, p. 19*)
- Methods of transmission of antibiotic resistance to humans include direct contact, animal manure and contaminated food (Gorbach, 2001; McEwan & Fedorka-Cray, 2002). (*Hodne, 2005, p. 19*)

Hormones

- Synthetic estrogen and testosterone, which are used in livestock feed to stimulate growth, increase feed efficiency and increase productivity, end up in animal manure (Mulla, et al., 1999). (*Hodne, 2005, p. 8.*)
- Estrogen and Testosterone are typically transferred to surface waters by runoff and leaching, respectively (Shore, Correll, & Chakraborty, 1995). (*Hodne, 2005, p. 19*)

Nutrients

- The application of manure at a nitrogen-based agronomic rate leads to significant overapplication of P [Phosphorus], relative to crop needs (Cooperband & Good, 2002; Sims, 1995). (*Hodne, 2005, p. 13*)
- High nutrient concentrations have been found in Iowa surface water in river basins with denser concentrations of CAFOs. (*Hodne, 2005, p. 14*)

Pathogens

- Pathogens are microorganisms (e.g., bacteria, viruses, parasites) that can cause disease. Animal waste may carry infectious organisms including those that cause food-borne illness in humans, such as *Campylobacter*, *Escherichia coli* (*E.coli*) and *Salmonella*. Animal manure can carry protozoa, including *Cryptosporidium parvum* and *Giardia* species. (Addis, et al., 1999; Mulla, et al., 1999; U.S. EPA, 2001). (*Hodne, 2005, p. 8.*)
- The settling of fecal coliform to sediments represents a latent human health threat. This is because natural or human disturbances may cause the contaminated sediments to become resuspended (i.e., released into the water again), thereby, becoming a source of contaminated water for humans (Burkholder, et al., 1997). (*Hodne, 2005, p. 10*)

Salts and Trace Elements

- Undigested feed that passes through animals contains sodium and potassium. Trace elements in manure include those that are often added to feed as growth stimulants and biocides – arsenic, copper, selenium and zinc. (*Hodne, 2005, p. 8*)
- Salts and trace elements from discharges from feedlots and land-applied manure, especially when applied excessively and repeatedly, can accumulate, as they persist in the environment, and can ultimately harm soil quality and plant growth. (*Hodne, 2005, p. 20*)
- Increased salts and trace elements may cause environmental imbalances in fresh waters and on agricultural lands, harming birds and reducing yields. (*Hodne, 2005, p. 20*)
- The Iowa CDCP (1998) study found trace metals and common ions in water affected by large-scale swine CAFOs, especially in earthen manure lagoons, but also in drainage ditches and wells, tile line inlets and outlets, and an adjacent river. (*Hodne, 2005, p. 20*)
- Excessive amounts of copper and zinc have been found in creek sediment and wetlands, in association with cattle CAFO and swine CAFOs, respectively (U.S.EPA, 2001). (*Hodne, 2005, p. 20*)

All information included in this factsheet was obtained from:

Hodne, Carol J. [Concentrating on Clean Water: The Challenge of Concentrated Animal Feeding Operations](http://www.iowapolicyproject.org/2005_reports_press_releases/050406-cafo-fullx.pdf). The Iowa Policy Project. 2005. Full report: http://www.iowapolicyproject.org/2005_reports_press_releases/050406-cafo-fullx.pdf

Public Comment - Greenway

-----Original Message-----

From: NRSCFIGU08_MPC4501_fitchburg@wi.gov
[mailto:NRSCFIGU08_MPC4501_fitchburg@wi.gov]
Sent: Tuesday, August 28, 2012 10:14 AM
To: Anderson, Russell A - DNR
Subject: Message from "nrscfigu08"

This E-mail was sent from "nrscfigu08" (Aficio MPC4501).

Scan Date: 08.28.2012 10:14:02 (-0500)
Queries to: NRSCFIGU08_MPC4501_fitchburg@wi.gov

My name is [REDACTED] I live at [REDACTED]. I lived in Saratoga all my life and have owned my property since 1984. I have invested approximately \$350,000 in improving my property and have 4 shallow wells on 14 acres. The proposed Wysocki CAFO Dairy Farm is about ½ mile south of my house. My wife and I are very active, healthy outdoor people. If the Wysocki farm project is approved they will steal our clean air and water and poison our soil. This will destroy our neighborhood. Our property values will go down and our way of life will be stolen from us. The Saratoga town board and the majority of the 5000 residents do not want this project to move forward. The DNR say they will study the impact on the environment but if Wysocki meets all the minimum standards for applying for 49 high capacity wells, they will be approved. The DNR doesn't seem to care about the resident's at all only compliance from Wysocki. Anyone with any common sense knows that the only way you can grow crops in the sand is to apply tons of fertilizer, pesticide, herbicide and lots of water.

This area has two major creeks and several lakes that will be negatively affected by this farm plan. This whole area is mainly residential and recreational property, NOT FARM LAND! The Wysocki family does not care about the residents of Saratoga, they only care about making more money for themselves. The negative impact on this area by approving the Wysocki dairy farm is far more than positive. If the DNR approves the permits the residents of the town of Saratoga will be hurt in many ways. Wysocki farms should not be allowed to come into our town and do whatever they want to.

The Saratoga comprehensive long-term plan does not include large corporate farms or this huge 3500 cow dairy. The town is not zoned and this is what Wysocki is counting on. Wysocki will make millions and the people surrounding their farm will be forced to drill new and deeper wells, purify their water and put up with the smell and pollution. I feel the state laws and DNR rules are not strict enough and favor the large corporations. Our township should be able to control what goes on here, not Madison politicians. As our elected local representative you should be informed and help the town of Saratoga stop this insane idea. Please read this and act quickly. Take a stand one way or the other and make a public statement.

Thank you

[REDACTED]

[REDACTED]

[REDACTED]

FACTS FROM THE WYSOCKI GOLDEN SANDS DAIRY PROPOSAL

- Approximately 6,000 acres will be clear cut for farming.
- Approximately 4,300 cows plus calves will be in feed lots in urban/rural areas.
- An estimated 26 million gallons of liquid manure and wastewater will be stored along with approximately 298,000 cu. ft of manure solids.
- An estimated 30 million gallon liquid storage basin will be used for manure prior to being spread onto fields.
- Proposal to DNR is for 46 high capacity wells, but the well count may be different. The map will be on display at the PAC center meeting.
- Two trout streams are currently running through the property (please see map).
- Most groundwater is only 14-24 feet below the surface.

OTHER INFORMATION YOU SHOULD CONSIDER:

- Nitrogen may run off through sandy soil with no bedrock into groundwater and residential wells.
- Nitrate levels could possibly increase to 20, 30, or 40 milligrams per liter (parts per million). In nature, water usually contains less than 1 milligram of nitrate per liter. Federal and state laws set the maximum allowable level at 10 milligrams per liter (10 parts per million). The Wisconsin Division of Public Health recommends that people of all ages avoid long term consumption of water that has levels greater than 10 milligrams per liter (parts per million).
- The average family of four uses approximately 160 gallons of water PER DAY.
- 46 wells can pump upward of 2,760,000 gallons PER HOUR..
- The manure may be stored for a period of time in the manure basin until the facility reaches 90% of its animal capacity. Separated liquid will then be applied through irrigation and solid wastes will be spread over crop land.

THE TOWN OF SARATOGA BOARD MEETING WILL BE HELD AT THE PERFORMING ARTS CENTER (PAC) ON THURSDAY, JULY 19TH, 2012 AT 6:00 P.M. PLEASE PLAN TO ATTEND.

Pathogens

Both manure and animal carcasses contain pathogens (disease-causing organisms) which can impact human health, other livestock, aquatic life, and wildlife when introduced into the environment. Several pathogenic organisms found in manure can infect humans.

Table 1. Some Diseases and Parasites Transmittable to Humans from Animal Manure		
Disease	Responsible Organism	Symptoms
Bacteria		
Anthrax	<i>Bacillus anthracis</i>	Skin sores, fever, chills, lethargy, headache, nausea, vomiting, shortness of breath, cough, nose/throat congestion, pneumonia, joint stiffness, joint pain
Brucellosis	<i>Brucella abortus</i> , <i>Brucella melitensis</i> , <i>Brucella suis</i>	Weakness, lethargy, fever, chills, sweating, headache
Colibacillosis	<i>Escherichia coli</i> (some serotypes)	Diarrhea, abdominal gas
Coliform mastitis-metritis	<i>Escherichia coli</i> (some serotypes)	Diarrhea, abdominal gas
Erysipelas	<i>Erysipelothrix rhusiopathiae</i>	Skin inflammation, rash, facial swelling, fever, chills, sweating, joint stiffness, muscle aches, headache, nausea, vomiting
Leptospirosis	<i>Leptospira Pomona</i>	Abdominal pain, muscle pain, vomiting, fever
Listeriosis	<i>Listeria monocytogenes</i>	Fever, fatigue, nausea, vomiting, diarrhea
Salmonellosis	Salmonella species	Abdominal pain, diarrhea, nausea, chills, fever, headache
Tetanus	<i>Clostridium tetani</i>	Violent muscle spasms, "lockjaw" spasms of jaw muscles, difficulty breathing
Tuberculosis	<i>Mycobacterium tuberculosis</i> , <i>Mycobacterium avium</i>	Cough, fatigue, fever, pain in chest, back, and/or kidneys
Rickettsia		
Q fever	<i>Coxiella burneti</i>	Fever, headache, muscle pains, joint pain, dry cough, chest pain, abdominal pain, jaundice
Viruses		
Foot and Mouth	Virus	Rash, sore throat, fever
Hog Cholera	Virus	
New Castle	Virus	
Psittacosis	Virus	Pneumonia
Fungi		
Coccidioidycosis	<i>Coccidioides immitis</i>	Cough, chest pain, fever, chills, sweating, headache, muscle stiffness, joint stiffness, rash wheezing
Histoplasmosis	<i>Histoplasma capsulatum</i>	Fever, chills, muscle ache, muscle stiffness, cough, rash, joint pain, joint stiffness

Ringworm	Various <i>microsporium</i> and <i>trichophyton</i>	Itching, rash
Protozoa		
Balantidiasis	<i>Balatidium coli</i>	
Coccidiosis	<i>Eimeria</i> species	Diarrhea, abdominal gas
Cryptosporidiosis	<i>Cryptosporidium</i> species	Watery diarrhea, dehydration, weakness, abdominal cramping
Giardiasis	<i>Giardia lamblia</i>	Diarrhea, abdominal pain, abdominal gas, nausea, vomiting, headache, fever
Toxoplasmosis	<i>Toxoplasma</i> species	Headache, lethargy, seizures, reduced cognitive function
Parasites/Metazoa		
Ascariasis	<i>Ascaris lumbricoides</i>	Worms in stool or vomit, fever, cough, abdominal pain, bloody sputum, wheezing, skin rash, shortness of breath
Sarcocystiasis	<i>Sarcosystis</i> species	Fever, diarrhea, abdominal pain

References: USDA, 1992 (for diseases and responsible organisms). Symptom descriptions were obtained from various medical and public health service Internet Web sites. Pathogens in animal manure are a potential source of disease in humans and other animals. This list represents a sampling of diseases that may be transmittable to humans.

The treatment of public water supplies reduces the risk of infection via drinking water. However, protecting source water is the best way to ensure safe drinking water. *Cryptosporidium parvum*, a protozoan that can produce gastrointestinal illness, is a concern, since it is resistant to conventional treatment. Healthy people typically recover relatively quickly from such illnesses. However, they can be fatal in people with weakened immune systems such as the elderly and small children.

Runoff from fields where manure has been applied can be a source of pathogen contamination, particularly if a rainfall event occurs soon after application. The natural filtering and adsorption action of soils typically strands microorganisms in land-applied manure near the soil surface (Crane et al., 1980). This protects underlying groundwater, but increases the likelihood of runoff losses to surface waters. Depending on soil type and operating conditions, however, subsurface flows can be a mechanism for pathogen transport.

Direct Quotes from the American Public Health Association, *Precautionary Moratorium on New Concentrated Animal Feed Operations*

Increased numbers of CAFOs in an area often are associated with declines in local economic and social indicators (e.g., business purchases, infrastructure, property values, population, social cohesion), which undermine the socioeconomic and social foundations of community health.

CAFO generated manure has constituents and byproducts of health concern including heavy metals, antibiotics, pathogen bacteria, nitrogen and phosphorus, as well as dust, mold, bacterial endotoxins, and volatile gases.

Manure pathogens capable of causing severe gastrointestinal disease, complications, and sometimes death in humans include *Campylobacter* and *Salmonella* species as well as *Listeria monocytogenes*, *Helicobacter pylori*, and *E coli*, and the protozoa *Cryptosporidium parvum*.

Run off from manure-applied fields can carry human pathogens into surface waters, which often serve as drinking water sources.

The emerging scientific consensus is that antibiotics given to food animals contribute to antibiotic resistance transmitted to humans. Antibiotics, as well as arsenic and other metal compounds are routinely added to the feeds of concentrated animals absent of any diagnosed illness to promote growth and compensate for the stress of raising animals under confinement.

CAFO manure wastes also include organic dust, molds, bacterial endotoxins and manure-generated gases of up to 400 separate volatile compounds, such as ammonia and hydrogen sulfide, many of which are known airway irritants, allergens, or respiratory hazards.

Scientists convened first by the Centers for Disease Control and Prevention (CDC), and more recently by the University of Iowa and Iowa State University, agree CAFO air emissions may constitute a hazard to public health, in addition to workers' health. The latter report recommends that "precautions should be taken to minimize both specific chemical exposures (hydrogen sulfide and ammonia) and mixed exposures (including odor) arising from CAFOs".

Therefore, the American Public Health Association hereby:

Resolves that APHA urge federal, state, and local governments and public health agencies to impose a moratorium on new Concentrated Animal Feed Operations until additional scientific data on the attendant risks to public health have been collected and uncertainties resolved.

Area Creeks

The Ten Mile Creek's flow is electronically monitored at the Hwy 13 South station by the United States Geological Survey (USGS). During the time period of July 13-17, 2012, the average flow of water was 35.2 cu. ft. per second (15,797 gallons per minute). The average high capacity well can pump upwards of 1,000 gallons per minute, or 2.2 cu. ft. per second. At this rate, the current creek flow is comparable to the water flow of 16 high capacity operating wells. No flow information is available for other creeks in the proposed project area.

The Little Plover River is very similar to the Ten Mile Creek as the cool, groundwater fed stream is ideal for cold water fish such as trout. The river has suffered as increasing amounts of water have been withdrawn, and beginning in 2005, sections of the river have gone dry. **What effects will we see on our area trout streams and creeks?**

PRIVATE/PUBLIC WATER TESTING LABS SERVING WOOD COUNTY

Wisconsin Rapids Water and Light

221 16th St. So., Wisconsin Rapids, WI. 54494
(715) 423-6300

*Must use water bottles received from Water and Light

State Lab of Hygiene

P.O. Box 7996, Madison, WI. 53707-7996 (US MAIL)
2601 Agriculture Drive, Madison, WI. 53718 (UPS)
(608) 224-6202 or 1-800-442-4618

Environmental Task Force Lab

UW Stevens Point, CNR Room 200
Stevens Point, WI. 54481
(715) 346-3209

Ag-Source Laboratory

1001 Frontage Road, Stratford, WI. 54484
(715) 687-4165

Marathon County Health Lab

Marathon County Health Department
1200 Lakeview Drive, Room 200, Wausau, WI. 54403
(715) 261-1908

http://waterdata.usgs.gov/wi/nwis/uv?site_no=05401050.

MORE QUESTIONS THAN ANSWERS?

Q: Won't pine trees use more water than irrigation over the course of a year?

A: NO. Because managed forests are thinned, there is very little canopy to catch falling rainwater. The furrows created serve as pathways for rainwater to re-charge the groundwater.

Q: Do pine plantations really help to prevent soil erosion?

A: YES. Seedlings, staggered tree rows, and vegetation use little water and prevent soil erosion from wind. **It can take 500 years to achieve just one inch of top soil!**

Q: Will there be an effect on our air quality?

A: YES. Consider the dust pollution and pesticide drift from aerial spraying. Coarse particles that include field dust have a lifetime of minutes to hours and can travel up to 10 kilometers (over 6 mi). Fine particles composed of sulfate, nitrate, carbon, ammonia, and organic compounds have a lifetime of days to weeks and can travel significantly further. These can lead to bronchitis, asthma, shortness of breath, dizziness, and cardiac disorders. The majority of ammonia emissions in the US come from livestock manure, causing irritation to the eyes, skin, and respiratory tract. **Consider the increase in healthcare costs!**

Q: Do trees help to clean our water?

A: YES. Trees filter out pollutants and leave water cleaner. Tree roots also stabilize the soil, preventing contaminated particles from entering the water supply. Planting trees is also an effective way of preventing excessive, foul smelling, algae growth in water that may be caused by fertilizer runoff. The algae can actually absorb all the oxygen in a watercourse, killing the life within it.

Q: There is uncertainty in the toxicology of nitrates, so are they really bad?

A: YES. **No level of nitrates is acceptable** and boiling your water increases levels. Nitrates over 10 parts per million are not to be consumed over long term periods by anyone according to the Wisconsin Division of Public Health, and levels could possibly increase to 20, 30 or 40 parts per million in wells located near farm fields, barnyards, feedlots, and waste water treatment systems.

Q: Aren't there nitrates in foods such as hot dogs and lunch meats?

A: YES. However, we can make a choice to not eat these foods every day. It is recommended that we drink 2 quarts of water (8 glasses) per day, so nitrate levels in the body could increase substantially.

Q: Don't pesticides need to be tested and approved to make sure they are safe?

A: YES and NO. It is not only the pesticide itself, but the chemical changes that occur as it breaks down that are of concern. Bovine Growth Hormone and antibiotics to prevent Hoof and Mouth and other diseases common to CAFOs also enter the wastewater, killing naturally occurring, beneficial bacteria, exposing humans to pathogens that are resistant to medical antibiotics. Homeowners may flush Rx and OTC medication down the toilet, but it isn't Atrazine! Household septic system discharges are few and well spread out. **Who will be testing our groundwater for safety?**

Q: Are we questioning all agricultural operations?

A: NO. We need the products to feed our hungry population. We are only commenting on large agriculture, Concentrated Animal Feeding Operations (CAFOs)...not smaller farms. The impact of 1 animal unit=18 humans, so the proposed 5,300 cows would be comparable to a town with a population of 95,400 people, not to mention the 26,000 gallons of liquid manure and wastewater applied through irrigation and the 298,000 cu. ft. of manure solids. **Consider the impact!**

WISCONSIN LEGISLATORS

<u>NAME</u>	<u>ADDRESS</u>	<u>PHONE</u>	<u>Email/website</u>
Sen. Julie Lassa	Room 7 S. State Capitol PO Box 7882 Madison, WI. 53708-7882	800-925-7491 608-266-3123 715-342-3806	sen.lassa@legis.wi.gov
Rep. Scott Krug	Room 316 N. State Capitol PO Box 8952 Madison, WI. 53708	888-529-0072 608-266-0215	rep.krug@legis.wi.gov
Rep. Louis John Molepske	Room 22 W. State Capitol PO Box 8953 Madison, WI. 53708	888-534-007 1 608-267-9649	rep.molepske@legis.wi.gov
Rep. Amy Sue Vruwink	Room 112 N. State Capitol PO Box 8953 Madison, WI. 53708	888-534-0070 608-266-8366 715-652-2909	rep.vruwink@legis.wi.gov
Sen. Herbert Kohl	330 Hart Senate Office Bldg. Washington, DC 20510-4903	202-224-5338 608-264-5338	http://www.kohl.senate.gov
Sen. Ron Johnson	386 Russell Senate Office Bldg. Washington, DC 20510	202-224-5323 920-230-7250	http://www.ronjohnson.senate.gov
Rep. Paul Ryan	1223 Longworth House Office Bldg. Washington, DC 20515	202-225-3031	http://paulryan.house.gov
Rep. Tom Petri	2462 Rayburn House Office Bldg. Washington, DC 20515-4906	800-242-4883 202-225-2476	http://petri.house.gov
Rep. Sean Duffy	1208 Longworth House Office Bldg. Washington, DC 20515	202-225-3365	http://duffy.house.gov



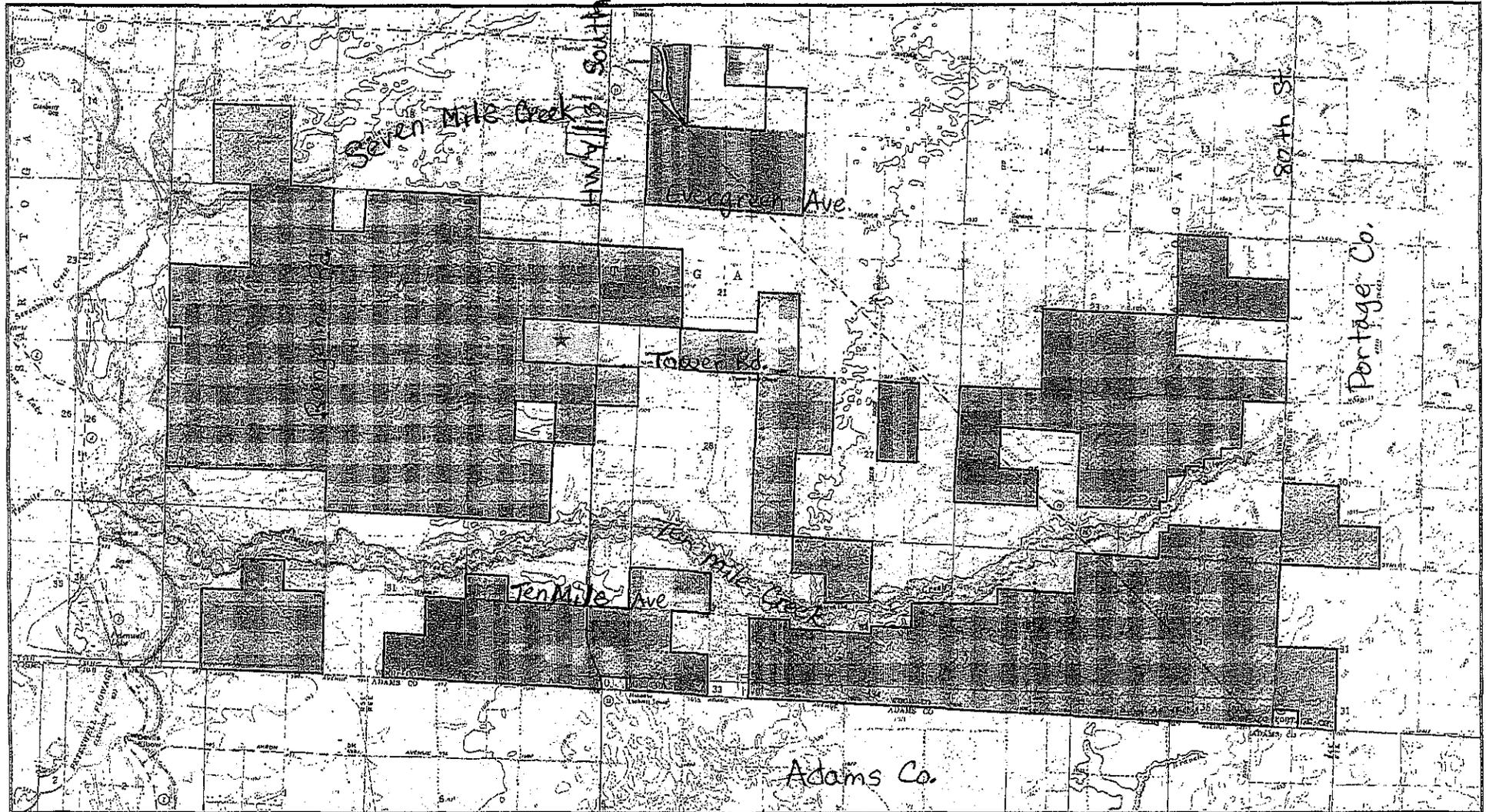
Concerned Citizens,

We applaud your presence here this evening as you become more informed about the proposed Golden Sands Dairy CAFO (Concentrated Animal Feeding Operation) that is to be located within the Township of Saratoga. As you listen to the information presented, please consider the following:

- Permits have been submitted to the DNR for 49 wells (47 for high capacity irrigation and 2 for dairy operations).
- The estimated water use of all Town of Saratoga residents combined is approximately 9,200 gallons **per hour** (160 gallons/day per average family of four).
- 47 high capacity wells could pump upward of **2,820,000 gallons per hour. That is 307 times more than the amount used by the entire township and could possibly equal the water use of over 1,688,000 people every hour!**
- **26 million gallons** of liquid manure/wastewater and 298,000 cu. ft. of manure solids may be stored and applied to crop land.
- Surrounding area groundwater is estimated to only be at 14-24 ft. below the ground's surface.
- Nitrogen may run off through sandy soil with no bedrock into groundwater and residential wells.
- Nitrate levels could possibly increase to 20, 30, or 40 milligrams per liter (parts per million). In nature, water usually contains less than 1 milligram per liter. Federal and state laws set the **maximum allowable level** at 10 milligrams per liter. The Wisconsin Division of Public Health recommends that people of all ages avoid long term consumption of water that has levels greater than 10 milligrams per liter.
- Trees serve as natural cleansers of water, filtering out pollutants and stabilizing the soil.
- Historically, property near CAFOs have seen tax increases along with decreased land value.
- Road use will be impacted with maintenance ranging from \$150,000/mile for repairs to \$500,000/mile for reconstruction.

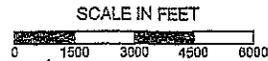
Ask yourself. What will your family gain from this project? What effect could this have on future generations and the environment? How will this affect the future economic and recreational values of our community? How will this improve the quality of your life?

CONSIDER THE IMPACT!



SOURCE: USGS 7.5 minute topographic quadrangle, Wisconsin Rapids South, Wisconsin, 1984.

- ★ DAIRY PRODUCTION SITE
- ▨ PROJECT PARCELS



RJN Environmental Services, LLC
Surface Water Studies
Groundwater Studies
Site Investigations
4631 COUNTY ROAD A, OREGON, WISCONSIN 53575 (608) 670-3001

GOLDEN SANDS DAIRY, LLC ELLIS INDUSTRIES SARATOGA, LLC DAIRY PROJECT			FIGURE 1
DRAWN BY	PROJ. No.	DATE	FILE
RN	12-203	6 JUN 12	BASE MAP

MYTH

CAFO operators work to be good Neighbors in the community.

CAFOs lower taxes.

CAFOs generate jobs.

When you transfer forest land Management land to agriculture, The community receives huge sum Of money.

CAFOs have good environmental Management plans that benefit The community.

A well managed CAFO will not Affect the water supply.

FACT

Spraying manure on crop fields cannot be Safely absorbed by surrounding lands, Watersheds, and the atmosphere and is Detrimental to health.

Electricity produced by a CAFO is used To power the CAFO. Homes are not Equipped to receive it.

Property values go down when CAFOs Move in. The State mandates that Farmland be taxed at a much lower rate Than residential. Municipal maintenance Costs have to be ade up somewhere, so TAXES GO UP.

CAFO jobs are typically dangerous, low Paying (\$8./hr) jobs, traditionally held by Migrant workers accustomed to the 12 Hour days/60 hour week schedule.

It is a one-time payment. A virtual band aide, Towns don't get all the The County & State get a large Portion. The following year, Towns are Left with high municipal maintenance costs and no resources to fund repairs to Roads, extra first responders for Increased health problems of residents, Additional police due to abandoned Homes & property & additional crime.

Most CAFO environment plans give lip service to the environment, but the plans Are self-regulating, and virtually useless.

High Capacity Wells utilized by CAFOs Pump an inordinate amount of water out Of the aquifer. Each individual well may Have the capacity to pump 1 million Gallons of water per day. Multiply that By the number of wells used by a CAFO, And the total usage could be staggering.

From: [REDACTED]
Sent: Monday, August 27, 2012 7:17 PM
To: Baumann, Dan G - DNR
Subject: EIR outline

Dan, how is it that we have a time line already but they (Wysocki's) don't even have the EIR done yet? They have an outline and that's it. How can we submit a rebuttal or fight anything if we don't know what they are doing? Shouldn't we all have the same amount of time? They should have the 21st as their deadline also, correct?

Also Mrs. Sauer was at the meeting the other night and in the parking lot you told her that if her well went bad you, the DNR, would put her in a new well. She said a couple people were there with her, one being her neighbor. Does this apply to everyone in Saratoga, and shouldn't Wysocki be the one to do this? Is it in the plan to give us a municipal well system for the township paid for by the DNR or Wysocki? This is something that should be in their plan but they don't have it done yet.

Thank you for listening,

[REDACTED]

FW Letter I rec'd from Town of Rome at EIR mtg

-----Original Message-----

From: Lanier@EauClaire.DNR [mailto:Lanier@EauClaire.DNR]

Sent: Friday, August 24, 2012 9:19 AM

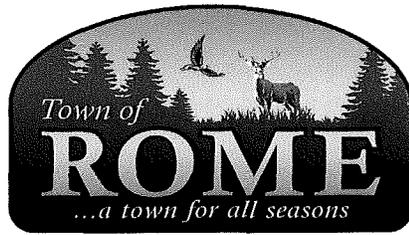
To: Baumann, Dan G - DNR

Subject:

This E-mail was sent from "NRWCECCL05" (MP C3300/LD533C).

Scan Date: 08.24.2012 09:19:21 (-0500)

Queries to: Lanier@EauClaire.DNR



**1156 Alpine Drive
Nekoosa, Wisconsin 54457
715-325-8013**

August 23, 2012

Dan Baumann
Regional Supervisor
Department of Natural Resources

Re: High Capacity Wells in Northern Adams County and
14-Mile Water-shed

Dear Mr. Baumann:

We as the government of the Town of Rome; a Town of approximately 3000-residents are concerned with the cumulative effects of the proliferation of high capacity wells on our lakes water supply.

The Town of Rome including Lake Camelot, Lake Sherwood and Lake Arrowhead were built in the early 70's under permits from the Department of Natural Resources. The Town has lost \$164 million dollars in equalized value in the last 3-years and will lose an estimated \$120 million in assessment value just this year. Some of this loss may be attributable to water quality and quantity in our lakes.

In 1980 more than 60-percent of the water to these lakes came from the 14-Mile Creek water-shed as surface runoff. Lake Sherwood showed a total volume exchange of 15 times volume in 1 year. Approximately 30-percent of agricultural land in our water-shed was irrigated with high capacity wells.

Today the 14 Mile Creek exists for only a few hundred yards above Lake Camelot. Surface water flow to the lakes is non-existent. Cranberry Marsh reservoirs store water during and after spring runoff; only the 5-CFS minimum discharge and exceptional periods of precipitation contribute to any surface water flowing to the lakes. The Spring Branch Creek has ceased to exist.

Today more than 80-percent of the ag-lands in our water-shed are irrigated. Attempts to quantify the number of HC wells have shown there are more than 80 of these wells in the Town of Leola, at least 52 in Colburn and hundreds more further east at the headlands of the 14-Mile Creek water-shed. These wells irrigate fields and most recently fill cranberry marsh reservoirs left dry by lack of surface water in-flow. Once drilled, regardless of reason, they are always there and pumping water.

The above comments contain facts obtained from State of Wisconsin documents and the 14-Mile Creek Water Shed Study completed in 1980 by the University of Wisconsin.

Dan Baumann
Page Two
August 23, 2012

They raise concerns to the Town of Rome:

We are concerned the property values within the Town of Rome have declined more than local and state average. We are concerned that the water quality and quantity issues have contributed to the decline in values and will continue to impact property values.

We are concerned that the DNR does not have up-to-date information as to the number and location of high capacity wells in the Central Sands Region, yet continue to issue permits.

We are concerned that the DNR issues high capacity well permits each on its own merit without regard to proximity to existing wells, without regard to proximity of surface waters as required by State statutes and without regard to concentration and density of wells in a defined area.

We are concerned that the DNR issues high capacity well permits without regard to historical data and trends; data which may show an impact on local Class I, II, and III trout streams and lakes.

We are concerned that the DNR permitting process is without effective input and control of that permit process. Recent court cases may support this concern.

The State of Wisconsin relies on the Department of Natural Resources for administration, allocation and protection of our natural resources.

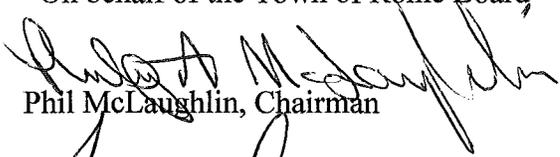
We are concerned the high capacity well permit process is flawed. High capacity wells once installed operate for many years. Historical data and trends should be required. Real time information on existing wells needs to be available to everyone. The permitting process needs to be much more transparent on every occasion. Affected properties need to be notified. Distances from all surface water should be documented and maximum density patterns established. The permitting process requires immediate review and change.

We are concerned for ourselves and the surrounding communities. We would invite you to attend one of our board meetings to specifically address and reply to these concerns.

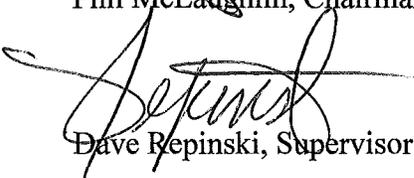
Respectfully submitted,



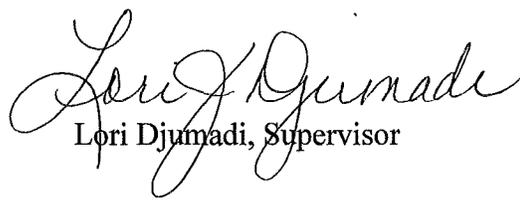
Rick Bakovka
Town of Rome Supervisor
On behalf of the Town of Rome Board



Phil McLaughlin, Chairman



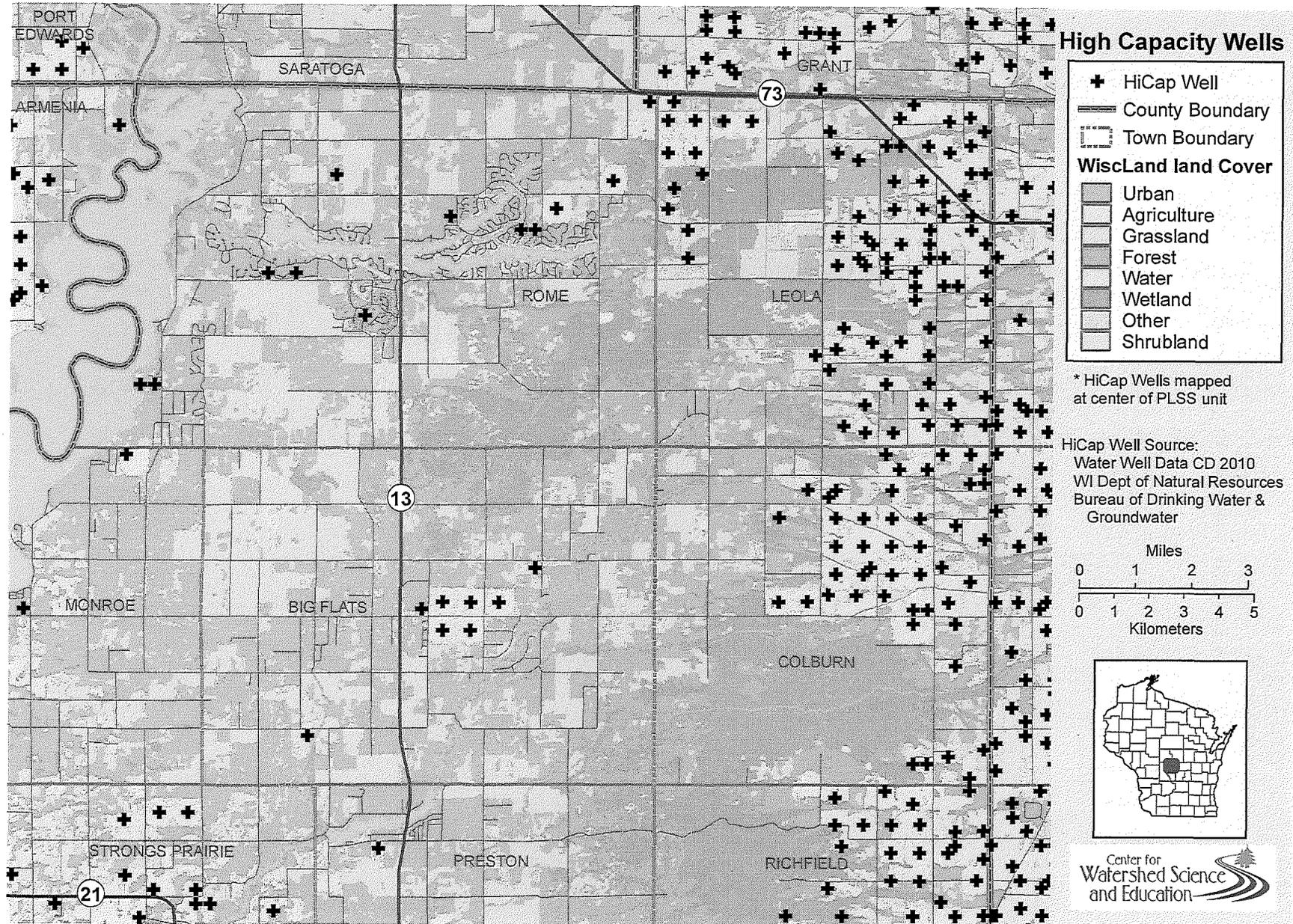
Dave Repinski, Supervisor



Lori Djumadi, Supervisor



Jerry Wiessinger, Supervisor



FW Design Report for Manure Storage System Control System

From: [REDACTED]

Sent: Thursday, August 23, 2012 9:31 PM

To: Anderson, Russell A - DNR; Baumann, Dan G - DNR

Subject: Fw: Design Report for Manure Storage System Control System

Subject: Fwd: Design Report for Manure Storage System Control System

This is from the project plan application given to the Saratoga Town Board. Page 5 states separated liquid will be applied by irrigation.

evidently there is discrepancies in the DNR proposal and the proposal to the town board. How many more are there? Please forward this to Terry Kafka also Thanks
[REDACTED]

1.0 INTRODUCTION

1.1. KEY INFORMATION

- I. **Site Owner:**
Jim Wysocki
Owner
PO Box 330
Bancroft, WI 54921

- II. **Site Location:**
Wood County, Wisconsin
Town of Saratoga (T 21N, R 6E)
SW1/4 of SE1/4, and SE1/4 of SW1/4 Section 20, and eastern 200 foot strip of
SW1/4 of SW1/4
See Maps in Appendix A

- III. **Site Contact:**
Jim Wysocki
Office: 715-335-8060
Fax: 715-335-8061
Email: jimw@rpespud.com

- IV. **Engineer:**
Resource Engineering Associates, Inc. (REA)
3510 Parmenter Street
Middleton, Wisconsin 53562-1536

Telephone 608-831-5522 X 13
Cell 608-220-3800
Fax 608-831-6564

I, Robert J. Rafahl, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct.

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Appendix A Site Data

- Site Map
- Soil Borings and Map
- Soils map and soils data
- Watertable Elevation Map
- Well logs

Appendix B Separated Sand and Manure Solids Pad

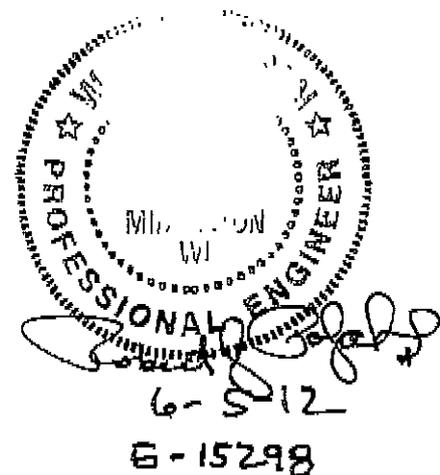
- Manure and Waste Water & Basin sizing calculations

Appendix E NRCS standards

- NRCS 313, Manure Storage
- NRCS 634, Waste Transfer
- NRCS 629 Waste Treatment

Appendix D

- Preconstruction Meeting Form
- Construction Observation (Inspection) Plan
- Qualifications of Construction Observer
- Routine Inspection Checklist
- Operations & Maintenance Plan



1.2. SCOPE OF SERVICES

Mr. Jim Wysocki of Golden Sands , LLC requested Resource Engineering Associates, Inc. (REA) to prepare a Design Layout and Design Report for a manure storage system and feed storage runoff control systems to meet Wisconsin Department of Natural Resources (WDNR) NR 243 (WPDES permit) requirements for manure storage and handling. The Scope of Services for the project included tasks as follows:

- Prepare an existing conditions map of the proposed facility area identifying topography, and readily apparent site features;
- Prepare soil logs and collect soil samples from borings in the proposed manure basin, solids/sand stacking area, future digester area, and feed storage pad area to identify soil classification, soil moisture / saturation, percent fines (P200);
- Prepare engineering drawings and design specifications for the manure and runoff handling system facilities including the manure storages and feed storage runoff control system;
- Prepare a site grading plan and erosion control plan;
- Prepare documentation to submit for a WDNR WPDES permit for manure storage and feed storage runoff handling.

This design report includes a management assessment, site assessment, summary of design factors, and an operation and maintenance plan. NRCS Conservation Practices referenced includes NRCS 313, 629, and 634, See Appendix C.

1.3. BACKGROUND

The proposed facility is a new operation that will integrate dairy into the current irrigated potato and vegetable production cropland. This proposal is environmentally-sized to allow for advanced manure handling and nutrient recycling systems. The facility is modeled after the Central Sands Dairy in Juneau County.

Dairy crop production will enhance the sustainable farming methods of the current potato production systems. The practices will reduce wind erosion by utilizing limited tillage practices on the field corn silage crops and having multiple years in alfalfa production in each rotation.

Reduced nutrient leaching will be attained by harvesting forages and using the recycled organic nutrients from the cow manure in the following crop years, greatly reducing the amount of commercial fertilizer applied each year. The combination of forage crops and the application of recycled nutrients will increase the soil's organic matter. Runoff, while not a significant issue on these sandy soils, will be virtually non-existent due to the amount of surface residue and soil conditioning during forage production years.

Pesticide use will be decreased due to longer rotations between potato crops and improved soil health, which allows integrated pest management systems to lower the insect and disease pressures. In addition, forage crops generally utilize less pesticides than vegetable canning crops.

Upon installation of the digester in Phase II, irrigated agricultural land in this area will be transitioned to a more sustainable form of cropping and electrical generators in Phase II will produce electricity to power 1,400 homes as a "green power" source

1.4. PROPOSED DEVELOPMENT

In general the new facility will include the following:

- Two free-stall barns—98' x 1,553' each
- Dry cow barn—113' x 420'
- Special needs barn—98' x 428'
- Milking parlor and holding area—92' x 370'
- 575' x 390' concrete pad for silage
- 260' x 100' concrete pad and commodity building
- 90' x 176' manure processing building (phase II)
- 200' x 200' calf hutch area
- 30,000,000 gallon concrete liquid manure storage basin (290' x 315' bottom)
- Two concrete manure solids storage pads - sand 82' x 176' and manure solids 172' x 200'
- Digester (Phase II)
- Five concrete tanks for soaker water collection
- Concrete tank for solids pad runoff collection
- 500' x 445' hay storage area (not concrete)
- Scale station
- Two wells

1.5. MANAGEMENT ASSESSMENT

The purpose of the Management Assessment as identified in NRCS Practice Standard 313 is to determine options for manure and waste water handling and disposal. The assessment is performed to explore options and to determine the purpose of storage components, available resources, manure disposal schemes, and waste characterization. Issues included are as follows:

Waste Characterization: The proposed dairy will have 3,400 milk cows, 600 dry cows, 300 heifers and 1000 calves. Bedding is planned to be sand. The manure from the animals, except the calves, will enter a sand separator prior to entering a digester (once Phase II is implemented). The bedded calf manure will be land spread when the pens are cleaned or stored on the manure solids pad. Digested manure solids will be separated with mechanical separators and the liquid portion of the manure will be stored in the proposed basin. Separated manure solids will be stacked on site prior to land application. The processed liquid manure in the basin will be irrigated to cropland to be developed adjacent to the dairy. Manure application will be based on crop nutrient needs. The nutrient management plan is being completed by Freese Crop Consulting.

Wastewater includes parlor/milkhouse wash water (7.65 g/c/d), silage leachate water (0.25 g/c/d) and sand separation water (0.5 g/c/d) for a total of 8.4 g/c/d (Note: cows are based on milking cows). Wastewater as outlined above is calculated as 28,560 g/d. The parlor water will be recycled to flush the parlor holding area, then will be pumped to the processing building before entering the digester. Soakers will be used during months when the liquid can be irrigated to cropland, about 33,000 gallons per day (Average over 180 days).

Manure and waste water calculations and manure basin sizing is presented in the spreadsheet presented in Appendix B.

Table 1. Summary of volume of waste to be stored.

Animals	Number	Manure (ft ³ /cow)	Bedding (ft ³ /cow)	Storage Days	Vol./Day (gal.)	Total Vol. (gal.)	Total Vol. (ft ³)
1400 lb Milk Cows	3,400	2.5	0.0	180	64,089	11,535,955	1,542,240
1400 lb Dry Cows	600	1.9	0.0	180	8,527	1,534,896	205,200
Heifers	300	1.1	0.0	180	2,468	444,312	59,400
wastewater plus sand rinse water	--	--	--	180	27,710	4,987,800	666,818
Subtotal					102,794	18,502,963	2,473,658
solids & sand pad runoff				180		371,352	49,646
leachate from feed storage				180		149,600	20,000
feed storage runoff gallons				180		1,788,393	239,090
workpads outside barns				180		176,430	23,587
Total Manure & Runoff to Storage						20,812,308	
soaker water to storage					33,000	5,940,000	
sand	4300		0.45	90			174,150
manure solids				90			298,809

Land Base: The farm has approximately 6,112 acres of cropland owned, rented or in a land spreading agreement available to apply nutrients.

Planned Storage Period: The planned storage period is 180 days for liquid manure. Calculations indicate 192 days will be provided.

Waste Handling & Transfer: Waste from the planned barns will be vacuumed by tankers and hauled to the processing building. Five concrete transfer tanks are designed to hold soaker water that is collected before it is pumped to the sand separator. Wastewater from the parlor will be pumped to the sand separator. Separated sand will be piled on a pad for reuse or land application.

basin. Manure will be field applied in accordance with a nutrient management plan prepared by others.

Facility Waste Removal Methods: Liquid manure accumulated in the storage basin will be irrigated as a liquid. The owner will evaluate alternative custom pumps for emptying. Separated solids manure will be land applied per the nutrient management plan.

Storage Liner: The liner for the storage basins will consist of a concrete liner in accordance with NRCS 313 - Table 5 Concrete Liner Criteria for Impoundments. "Water Tight" Concrete with waterstops.

Access and Safety: Manure will generally be removed by pumping over the walls or embankments of manure storages. Access to the main manure storage basin will be from a concrete ramp, but access is expected to be infrequent due to use of the sand separator, digester and solids separator. The basin is to be fenced to limit access by cattle and for safety for workers and visitors. Other storages will have safety railings installed as per owner's direction.

Labor & Equipment Needs: The farm will employ laborers and purchase vacuum tank scrapers to collect manure and agitation and pumping equipment to empty storage basins.

Odor, Aesthetics & Animal Health: The site is located over ¼ mile from the nearest property owner or house. State Highway 13 forms the east boundary of the Dairy, a 200 foot setback from the east end of the barns is included in the design.

As cows to stock the barn are initially brought in, the manure will be stored in the manure basin. Once the facilities are at 90% capacity, the facility plans to operate a sand removal and digester system to process the manure. The solids will be removed and land spread during the growing season. The separated liquid will be applied by irrigation.

Expansion Considerations: Expansion is not being considered at this time.

1.6. SITE ASSESSMENT

The purpose of the site assessment is to determine physical characteristics that may influence placement, construction, maintenance, and environmental integrity of the proposed storages.

Location: The building locations, land elevations (topography), public road access, soil test boring locations, nearby property lines, are identified on Sheet C-100 of the plan set. Adjacent properties in the section will be under common ownership by partners.

Water Table Information: Well Constructor Reports were obtained from the Wisconsin Geological and Natural History Survey (WG&NHS) for Wood County. The closest well reports are from Section 20 & 29 T21N R6E which are north and south of the proposed dairy. The well logs list the depth from surface to normal water level ranging from 12-33 feet (12 feet seems to be in a perched water table condition, as the depth dropped substantially during pumping.)

Water table data is consistent with a Water Table Elevation Map for Irrigable Lands Inventory (1981) also by the WG&NHS. The map shows the water table in the site area at elevations between 980 and 990, with a gradient to the west, southwest. The general surface elevation from the site survey is 1004 msl; this suggests groundwater is 14 - 24 feet below the surface. The well construction reports and WG&NHS map is presented in Appendix A.

Soil borings collected on site identified water table depths ranging from 21.5 feet to 23.5 feet as presented in Appendix A.

Test Boring Logs and Soil Test Results: Soil test boring locations are as identified on the Site Layout Map. Logs of the test borings are presented in Appendix A. The data is summarized as follows:

- Soil observations on site generally indicated the following:
 - 0-0.5 feet, topsoil- Sand, dark brown, composed of roots, grass & tree residue;
 - 0.5 -24 feet, poorly graded sand, some small gravel intermixed periodically.
- Bedrock was not encountered in the test borings.
- Watertable was encountered at an elevation ranging from 21.5 to 23.5 feet below grade.

Sinkholes and other karst features: Sinkholes or karst features are not believed to be on the site. The area is not known to have karst features.

Borrow Areas: Borrow for buildings and basins will come from the construction of stormwater basins and roads on site.

Potential Discharge Impacts: Over filling such that over topping would occur would spill into proposed adjacent farm fields and depressions constructed on site.

Floodplain Considerations

Flood plain areas are not believed to be in or adjacent to the construction area. This is supported by the Wisconsin DNR Water Viewer Map.

2.0 FEED STORAGE LEACHATE AND RUNOFF CONTROL

A silage feed storage pad is planned to be built east of the proposed liquid manure storage basin. The facility plans to store silage in three to five piles on the pad. Silage may produce leachate with nitrogen, phosphorus, BOD, and ammonia. Silage will be covered with plastic, which will divert precipitation reducing the amount of potential leachate. A leachate and runoff collection system is designed to collect runoff from the feed pad for up to the 25 year storm and transfer the runoff to storage. Silage pad runoff and leachate volumes are included in the waste storage design spread sheet.

We believe the system design factors meet the objective of no discharge of pollutants, but management and experience will dictate specific operational needs.

2.1 LEACHATE COLLECTION SYSTEM

The leachate collection system includes a sloping silage pad to the southwest corner, collection trenches on the south and west side of the pad, a collection tank with sump, pump with manual and automatic controls. Leachate and runoff will flow to the collection trenches and flow to the collection tank where runoff will be pumped to storage.

2.1.1 SITE CONDITIONS

Soil Borings

Borings 15, 16, 17, 21, 22 & 23 were logged to a depth of 12 to 15 feet in the area of the feed storage pad. Soil characteristics were similar to the rest of the site, as discussed in the site characteristics. Because of the sandy nature of the soils, the feed storage pad is planned to be of a "water tight" concrete design. See Appendix A for boring logs.

2.1.2 LEACHATE VOLUME

The silage is intended to be stored at low moisture content, typically in the range of 30-35 percent solids. The leachate volume was calculated for the largest harvest anticipated (corn silage) as per owner. The calculation is as follows:

Calculation:

- Weight of stored feed = 32,000 to 40,000 tons per year
- Leachate volume = 40,000 tons * 0.5 ft³/ton * 7.48 gal/ ft³ = 149,600 gallons

Leachate volume is included in the waste storage design spread sheet as wastewater.

2.1.3 HYDROLOGY

The feed storage pad area and collection trenches are approximately 240,000 ft² in size. Runoff from the feed storage pad is included as runoff in the manure storage calculation.

2.1.4 COLLECTION STRUCTURES

2.1.4.1 COLLECTION TRENCHES

The concrete collection trenches are designed to be "watertight" and to collect the first flush of 0.1 inches plus convey the 25yr 24hr storm to manure storage.

2.1.4.2 COLLECTION TANK

The collection tank is designed to be a poured in place watertight tank with sump. The tank and pump system will collect the first flush from the feed storage pad using a small pump, and additional runoff (up to the 25 year design storm) using a larger pump. The pump system is proposed because gravity discharge to a vegetative treatment area would be difficult without significant fill.

During a runoff event, the tank should be pumped within 24 hours to remove potentially odorous liquids and solids. The pumps and pump controls should be observed for potential maintenance needs, such that the system is functional for the next storm event.

During freezing conditions the pump will need to be weather proofed .

2.2 GRADING AROUND THE FEED STORAGE

Grading around the feed storage is designed for working access and to divert runoff away from the feed storage.

3.0 SOAKER WATER COLLECTION

During the summer months the dairy plans to utilize soakers to keep the cows cool. Soaker water that does not evaporate or is not absorbed by solids in the alleys will flow toward the ends of the barns where liquids will drain into a reception trench located in an outside work pad. The work pad and trench will collect excess soaker water as well as manure that may be tracked out of the barn. The trench will flow to a concrete basin where it will be pumped to the digester. There will be five of these basins; one at each end of the freestall barns and one at the end of the special needs barn (no soakers are planned for the dry cow barn).

These basins will be "watertight" concrete. The basin inside dimension will be 10' by 12' by 8' with a 2.5' deep sump. The Maximum Operating Level (MOL) will be 1.4' from the top to address precipitation, the 25yr24hr storm event, and 1' of freeboard. Waste is planned to be pumped from the tanks to a collection line that runs from the tanks to the processing building. Each tank will have a check valve between the tank and the collection line to protect against backflow.

The dairy plans to operate the soakers when the temperature is above 70 degrees. If the soakers are on May through September the historical average for those months have 125 days where the temperature is above 70 degrees. If the soakers run half the time these days they will generate 47,412 gal/day.

Soaker water calculation

Soaker line length for freestall barns =1515ft

Soaker spacing=8 ft

Cycle= 2 min on, 6 min off

Nozzle flow rate = 0.6gal/min

4 rows of misters

$1515' / 8ft * 4rows = 756$ misters

$2min / 8min * 12hr/day = 3hrs/day$

$0.6g/min * 60min/hr * 3hrs/day * 756misters = 81,648gal/day$

Soaker line length for special needs barn =490ft

Soaker spacing=8 ft

Cycle= 2 min on 6 min off

Nozzle flow rate = 0.6gal/min

$490' / 8ft * 2 = 122$ misters

$2min / 8min * 12hr/day = 3hrs/day$

$0.6g/min * 60min/hr * 3hrs/day * 122misters = 13,176 gal/day$

The WI NRCS wastewater spreadsheet indicates that half of the water used for misters goes to storage. The balance would evaporate.

$$\begin{aligned}
 &81,648 \text{ gal/day} \\
 &+ 13176 \text{ gal/day} \\
 &94824 \text{ gal/day} / 2 = 47,412 \text{ gal/day}
 \end{aligned}$$

$$47,412 \text{ gal/day} * 125 \text{ days} = 5,926,500 \text{ gallons}$$

Rainfall from the working pads outside the barns will also be collected. Five pads totaling about 23,200 ft², the rainfall runoff from these pads for 180 days of storage is about 176,430 gallons. The work pads are included in the runoff area.

Soaker water is included in the manure storage calculation spread sheet as part of the waste water number.

4.0 SEPARATED SAND AND MANURE SOLIDS PAD

4.1 SEPARATED SAND PAD

Once the digester is constructed, before manure is pumped to the digester, the sand will be removed by McClanahan separators, Hydrocyclones, and gravity settling. The reclaimed sand will be stored on a 176' by 82' watertight concrete pad until it is able to be reused or field applied. The dairy estimates sand use will be about 50 lbs/cow/day (110lb/ft³) or 0.45 ft³/cow/day.

Table 3. Summary of volume of sand to be stored.

Animals	Number	Bedding (ft ³ /cow)	Storage Days	Vol./Day (ft ³)	Total Vol. (ft ³)
1400 lb Milk Cows	3,400	0.45	90	1,530	137,700
1400 lb Dry Cows	600	0.45	90	270	24,300
1000 lb Heifers	300	0.45	90	135	12,150
Total				1,935	174,150

Stacking with 1:1 sideslopes and a compaction factor of 1.2 the volume on the sand pad will equate to a 28 foot high pile. Runoff from the pad will flow into an adjacent basin to be pumped to the processing building to assist in sand separation.

If the separated sand pad becomes full and sand cannot be reused or field applied sand will be stacked on the silage pad and runoff will be collected.

4.2 SEPARATED SOLIDS PAD

Digested manure will enter a solid separator to separate the solids from the liquid portion to more economically handle the land application of the manure. The solids will be stacked on a 200' by 172' watertight concrete pad. Stacking with 1:1 sideslopes and a pile height of 30 feet the pad storage volume would be 298,800 ft³. Digested manure solids are estimate to be generated at a rate of 132,865 lbs/day (66.5 tons/day). If the manure solids density is 45 lbs/ft³ the volume produce is about 2,953ft³/day. The storage pad will allow for about 90 days storage. Separated solids will be land applied in accordance with the farms nutrient management plan.

Runoff from the pad will flow into an adjacent tank basin to be pumped to the digester or storage.

4.3 SOLIDS PAD RUNOFF BASIN

Rainfall from the solids pads will be collected. The pads total area is about 48,832 ft², the rainfall runoff from these pads for 180 days of storage based on the Waste Facility Design spreadsheet is about 371,500 gallons. Some rain that falls on this pad will be absorbed by the separated solids and not runoff, but if minimal solids are stored the 371,000 gallons would need to be stored. Runoff calculations are included in the manure storage spreadsheet.

The solids pad basin will be a "watertight" concrete basin with a 6:1 concrete ramp for access (occasional access is anticipated). The basin inside dimension will be 98' by 36' by 8'. The Maximum Operating Level (MOL) will be 1.7 feet from the top to address precipitation, the 25yr24hr storm event, and 1' of freeboard. This provides about 18,400ft³ of storage for the 25yr24hr storm assuming no water is absorbed by solids. The 100yr/24hr storm will fill the basin and back up into the solids pad.

Runoff collected in the solids water runoff basin will to be pumped to the processing building. Accumulated solids can be removed with equipment via the ramp.

5.0 LIQUID MANURE STORAGE

The proposed liquid manure storage basin is located in the southeast corner of the site. The basin location, dimensions and elevations are shown on Sheet 4 and 12 of the plan set. The storage basin top elevation will be 1015. Natural ground in the area of the storage basin is at an elevation of approximately 1000 to 1004. The bottom of the basin will be about 15 to 19 feet below the natural ground at an elevation of 985.

5.1 SITE CONDITIONS

The soil characteristics are consistent across the site as discussed in Section 1.6. Twelve soil borings (SB 1-12) were logged in the liquid manure storage basin footprint. Saturation was observed in the soil cores at depths ranging from 22 to 23.5 feet below grade.

The data indicates separation to ground water is greater than 2 feet a required in NRCS 313. Ground water separation is proposed to be confirmed during basin excavation (See Plans).

5.2 CAPACITY

The basin capacity is planned to be 30 million gallons plus a one foot freeboard and emergency capacity for a 25 year 24 hour storm (about 2 feet total).

5.3 DESIGN

The liquid manure storage basin was designed by REA in accordance with WI NRCS Conservation Practice Standard: *Waste Storage Facility (313)*. The basin is planned to have sloped-side walls and a concrete liner with waterstops. The basin floor dimensions are 290' x 315'. The inner side wall slopes are 2.5:1 to accommodate concrete placement and the outer slopes were set at 3:1 to accommodate mowing. The berm top width is 20' to accommodate vehicle traffic.

The maximum operating level (MOL) is elevation =912.3 feet giving a one foot freeboard and storage for a 25 yr, 24 hr rainfall event above the maximum operation level. The design fill height of the berm on the basin side is approximately 15 feet. The top of berm elevation is increased 5 percent or 0.7 feet for settlement in accordance with NRCS 313.

Manure will enter the basin from the processing building through a pipe above the top of the basin. The pipe will be covered with a minimum of 2 feet of soil and will be surfaced with a concrete pad. The piping should be insulated to protect pipe from freezing in the winter.

6.0 TIME SCHEDULE

The objective is to begin construction in April 2013 and complete construction to start populating the barns by November 2013. The silage pad construction will need to be completed first to allow for the storage of feed for the cows that will arrive in the fall.

Phase II will begin once arrangements have been made for financing, regulatory approvals, and construction plans have been prepared and approved. The digester is expected to be operable before the facility is 90 % of design capacity.

Appendix D includes a pre-construction meeting form, Construction Observation (Inspection) Plan, Qualifications of Construction Observer, Routine Inspection Checklist, and Operations and Management Plan. These forms and Plans should be used during and after construction. The Plans and Checklists should be updated on an annual basis.

From: [REDACTED]
Sent: Friday, August 24, 2012 3:25 PM
To: Anderson, Russell A - DNR
Subject: comments regarding proposed cattle/dairy farm in Saratoga
Importance: High

As taxpayers and home owners in the area of Lake Arrowhead, we are firmly against the proposed dairy/cattle farm being constructed in Saratoga. We retired in this area because of its beauty and all it offers, but strongly feel that anything such as what is being proposed, severely threatens our lakes and water supplies through our wells. In our travels over the winters, we have seen areas in California where these type of farms are located and the stench as well as inhumane conditions for animals is also in question. The biggest concern for those living here are our water supplies.

I don't understand how something like this can come in and think they can do what they want based on what is a business decision with little regard from all the residents and taxpayers who were here long before they presumed to locate their farm here. If done in good faith, they would have polled the area resident ahead of time to get their input. As it is, they proceeded and then residents found out.

The future in this area as well as that of our children who would inherit, is challenged by this proposal and does not go along with the recreational, and serenity of the area as is. It would do much to distract from property values as well as dangers to our water supply and lakes.

Please put us down as firmly opposed to this proposal and if having a vote regarding it, we would definitely vote NO!!!!

Sincerely,

[REDACTED]

From: [REDACTED]
Sent: Friday, August 24, 2012 8:49 PM
To: Anderson, Russell A - DNR
Subject: Saratoga CAFO

Good Evening Mr Anderson

I am writing with a specific concern about the Wysocki CAFO being considered in the town of Saratoga. I did attend the August 23rd meeting at the Saratoga town hall and did fill out one of your forms with a concern to be included in the EIS. I am writing to express the concern I submitted because I am not sure I expressed myself fully in the submission. It was my understanding that in your review and issuing process that permits will be evaluated individually for each separate well being proposed. I am sure many people have expressed their concerns on the individual wells near their properties. I hope and encourage the DNR to also take a cumulative examination of the overall effect of the 46 wells combined. I spoke with your water quantity representative and he made it clear that the impact of individual wells can be projected as far as what distance the aquifer flows into the well location to replenish water used in irrigation. I would hope and encourage the DNR to also formulate a combined evaluation of the effect of the 46 wells combined. I would suggest that if it is possible to plot the coordinates of all proposed wells it would be possible to locate one individual location that could be considered the "center" of all locations and that calculations could be formulated to then evaluate the distances that will be affected and required to draw water from in order to replenish the proposed 33 to 66 million gallons of water proposed to be used on a daily basis. Over the approximately 180 day proposed "irrigation season" the quantity of water being consumed by the irrigation operation could accumulate to 5.9 billion gallons of water being consumed at the proposed "average daily use" or up to 11.8 billion gallons of water being consumed at the "maximum daily usage" proposed in the permit application. The total area required to draw water in to the area to replenish that quantity of usage would certainly seem to be larger than the area required for individual well calculations. Since many of the proposed wells are located in close proximity to each other it would appear that multiple wells could be calculated to be utilizing the same sources for replenishment and therefore since a gallon of water located at a midpoint between two wells may be included in both wells individual calculation as being drawn in to replenish water used for irrigation in reality that gallon cannot be used twice and will have to extend the range of area that will be required as the source of replenishment. I believe that fact will dramatically increase the area that can and will have their supply of drinking water affected especially over the long range of years of the operation of this CAFO. Central Wisconsin and specifically the areas to the immediate east and southeast of this proposed project have an extremely high concentration of "high capacity wells" and the supply of drinking water for the residents who already are here prior to this facility and for those new residents that will be required for the ultimate long range survival of this area and its economy must be given a higher priority than the commercial use of a limited resource that is

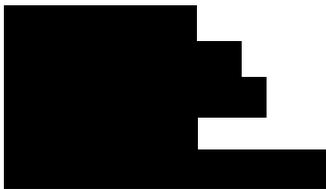
vital to the future of both Saratoga and also other communities in southern Wood and northern Adams county. I feel it is imperative that the DNR place a higher value on the needs of existing residents when it comes to the use of a limited and critically vital resource like water as opposed to providing that resource to a new demand of a commercial entity.

The protection of and the determination of who has a right to the use of all of our "natural resources" has been entrusted to your department by the PEOPLE of the State of Wisconsin. The people who have entrusted that responsibility to you should be provided the first priority if a choice must be made about the use of a critical resource. Without overwhelming and indisputable evidence that there is a surplus of any specific resource above and beyond the needs of current and the future residents, the massive use of our water by a commercial enterprise should not be permitted.

There are certainly other concerns being expressed by residents in regards to nitrate pollution and air quality but my specific request urges the Department to place significant weight on an overall and cumulative view of the effect of all of the wells being requested rather than on each specific individual well permit being requested.

Thank you for your time and the interest the DNR has shown in requesting input on this issue. It is very apparent that the town of Saratoga and the residents of Saratoga and the town of Rome and it's residents have very significant concerns about the protection of the water resources that are critical for the preservation and survival of the very nature of the area that has attracted us to reside here.

Again the people of this group of communities should take priority in a decision about the use of the natural resources over the introduction of a new demand on the use of a limited and critical resource.



From: [REDACTED]
Sent: Friday, August 24, 2012 9:37 PM
To: Anderson, Russell A - DNR
Subject: dairy farm

I feel that the Wisocki farm should be required to investigate how the new deep wells will affect the three lakes of Arrowhead, Camelot, and Sherwood. This needs to be done especailly during drought conditions like we are currently experiencing. Our Lake Camelot is currently down 20-24 inches. My concern is whether we will be living on a dry lake bed.

Sincerely,

[REDACTED]

From: [REDACTED]
Sent: Sunday, August 26, 2012 5:46 PM
To: Anderson, Russell A - DNR
Subject: GSD CAFO question

Russ,

Here are some more questions I have to be considered in the Environmental Impact Statement for the Golden Sands Dairy in Saratoga.

- The high capacity well permit submitted by Wysocki asks if the wells are within 1200 feet of a landfill. What about the now-defunct landfill off of Hollywood Rd. in Saratoga?
- Golden Sands has proposed two freestall barns to house 4,000 milking/dry cows, 300 heifers (800-1200 lbs.) and 1,000 calves (under 400 lbs.) that will produce approximately 48 million gallons of liquid manure/process wastewater and 24,000 tons of solid manure on an annual basis. Is the 24,000 tons of solid manure included in the 48 million gallons or is that in addition to the 48 million gallons of liquid manure?
- According to the Design Report (Manure Storage & Site Development Project) prepared June 5, 2012 by Resource Engineering Associates for Jim Wysocki, on Page 2, 1.3 Background, it states that "The proposed facility is a new operation that will integrate dairy into the current irrigated potato and vegetable production cropland...". The existing land that the CAFO will be built on is forest, not irrigated potato or vegetable cropland (see the Design Report, Appendix A – Quad Map). Most of the 6000+ acres that the cropland will be built on is also forest, not existing cropland. How can any information about the land where the CAFO is to be installed in this design report be considered valid if the existing land use is reported incorrectly?
- According to the Design Report (Manure Storage & Site Development Project) prepared June 5, 2012 by Resource Engineering Associates for Jim Wysocki, on Page 2, 1.3 Background, it states that "Runoff, while not a significant issue on these sandy soils, will be virtually non-existent due to the amount of surface residue and soil conditioning during forage production years." My understanding is that runoff is not a significant issue on sandy soil because it leaches into the ground at a faster rate than other kinds of soils. If this is true, then how much of the chemical residue from pesticides over 6000 acres will leach into the ground quickly through the sandy soil and reach our groundwater?
- According to the Design Report (Manure Storage & Site Development Project) prepared June 5, 2012 by Resource Engineering Associates for Jim Wysocki, on Page 2, 1.3 Background, it states that "Upon installation of the digester in Phase II, irrigated agricultural land in this area will be transitioned to a more sustainable form of cropping...". So it is saying that initially forage crops that require less pesticides will be planted, and then when the digester is built they will switch to crops that will require more pesticides? Again, how much of the chemical residue from pesticides over 6000 acres will leach into the ground quickly through the sandy soil and reach our groundwater?

- According to the Design Report (Manure Storage & Site Development Project) prepared June 5, 2012 by Resource Engineering Associates for Jim Wysocki, on Page 5, 1.5 Management Assessment – Odor, Aesthetics & Animal Health, it states that the site is located over a ¼ mile from the nearest property owner or house. Odor does not stop at ¼ mile. How many houses are within a 1-mile radius of the site? Would they not be impacted from the odor and their quality of life adversely affected (enjoying being outside in their yards, hanging laundry, etc.)? How far can airborne particulate travel from the site? How many residents live in that area?
- According to the Design Report (Manure Storage & Site Development Project) prepared June 5, 2012 by Resource Engineering Associates for Jim Wysocki, on Page 11, Time Schedule, the digester will not be built until Phase II. Will there be any manure in lagoons before then, and if so, how will the odor from the manure be mitigated?
- According to the Design Report (Manure Storage & Site Development Project) prepared June 5, 2012 by Resource Engineering Associates for Jim Wysocki, on Page 89, Waste Storage Facility Code 313 by the Natural Resources Conservation Service Conservation Practice Standard, Section VI. Considerations #L, states “Avoid locating facilities in areas where negative impacts to water resources may occur, particularly near streams or in floodplains.” This CAFO will be within a mile of the Ten Mile Creek.



From: [REDACTED]
Sent: Thursday, August 23, 2012 04:54 PM
To: Provost, Scott M - DNR; [REDACTED]
Subject: Fwd: Golden Sands Water Usage Calculations

Scott,

Please include this message in the public comments section regarding the CAFO in Saratoga, WI. If you wish to pursue these calculations further please contact me.

[REDACTED]

----- Original Message -----

Subject: Golden Sands Water Usage Calculations
Date: Thu, 23 Aug 2012 11:49:45 -0500
From: [REDACTED]
Reply-To: [REDACTED]
Organization: [REDACTED]
To: [REDACTED]

Hello all,

I have attached an Excel spreadsheet detailing my calculations regarding the proposed Golden Sands water usage/year vs. the rainfall contribution/year associated with their 8,000 acres. The premise of my argument is that one may be entitled to the water that falls on one's land, but if you exceed that amount, you are unfairly taking water from your neighbors. According to my calculations, the proposed Golden Sands

Dairy would exceed the amount contributed by a large margin.

By virtue of the assumed rainfall/year of 31 inches and an evaporative loss of 10 inches, Golden Sands would only be supplying 49.7% of the water they would be using. Looking at it another way, we in the watershed would be contributing 4,610,880,000 gallons of water/year to Golden Sands. Is this fair? I don't think so.

Like any calculation of this nature, the situation is more complex than my first cut at it. I have made a number of assumptions, and am more than willing to make corrections if more exact data is forthcoming.

Your neighbor,

[REDACTED]

23-Aug-12

WATER USE CALCULATIONS

- 49 Number of Wells Applied for
- 1000 gallons/minute capacity/well
- 31 Average precipitation/year in this area, inches
- 8000 Acres
- 6400 Acres Cropland
- 10 Assumed water loss due to evaporation in inches This is possibly a conservative estimate

1.0538E+12 net cubic inches of water/year falling on the 8000 acres
 4.56E+09 net gallons/year falling on the 8000 acres

1.05E+09 gallons/year for the two wells devoted to the dairy running continuously
 8.12E+09 gallons/year assuming irrigation for 4 months/year for the 47 irrigation wells

49.73% Percentage of water the Golden Sands Dairy would be receiving on its 8000 acres due to precipitation vs estimated usage of water

Another way of looking at it:

##### number of gallons per year that we, the neighbors of the proposed Golden Sands Dairy would be contributing to the Golden Sands Dai	
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From: [REDACTED]
Sent: Thursday, August 23, 2012 6:24 PM
To: Baumann, Dan G - DNR
Subject: Fwd: Fwd: Fwd: Re: Fwd: RURAL WISCONSIN and SARATOGA FARM

Hi Dan,

Was glad to meet you today. The details of Pints & Politics next month are that it will be held on Tuesday, September 25 at 6:30 PM at The Four Star Family Restaurant, at 2911 8th Street So. in Wisconsin Rapids. Hope you will be able to come.

Now following is some correspondence about the proposed Wysocki Farm. My original letter follows a note to Jeff Williamson, editor of The Voice of Wisconsin Rapids which published my letter August 9th and a correspondence between [REDACTED] and me. [REDACTED] in Marshfield and brother of [REDACTED] and who owns 400+ cows out near Pittsville. That note to [REDACTED] pretty well explains that we checked the territory and his comment back. Finally my letter which was also printed in the Wisconsin Rapids Daily Tribune on Sat., August 16. The Tribune had an interesting editorial, "Dairy debate turns negative," last Sat. Aug. 18th p.6A and Jeff Williams wrote about it Aug. 16th p.9. His entitled "Saratoga has forgotten its place in our economy." Finally a silly "Listen up City Slickers" was not submitted to the papers.

I hope all of this will be considered when the DNR makes its decisions, including the two editorials that I noted. Thank you for your time.

[REDACTED]

----- Original Message -----

Subject: Fwd: Re: Fwd: RURAL WISCONSIN and SARATOGA FARM
Date: Fri, 17 Aug 2012 15:56:09 -0500
From: [REDACTED]
To: Jeff Williams <jeff@voiceofwisconsinrapids.com>

Thank you for your editorial today. My LTE that you printed last week was finally in the Tribune yesterday. A few reader comments followed. One from Milwaukee that the farm was going to ruin his dreams by taking away recreational land from him. I asked "who owns the land?" How much had he paid for his lot and that he probably bragged to his Milwaukee neighbors about the low cost of his pristine estate.

Others said there was no sign of "mob" at the PAC meeting. I reread my letter. Never once did I say mob. I did witness a man being dragged out by the police and more than one Wysocki speaker being yelled off the stage, especially the hydrologist before he had a chance to complete his speech which I really wanted to hear. One said it was the Wysocki backers that made trouble.

Of course some said I don't have any right to speak because I don't live in the township, (one from Kaukauna.) I live south of Griffith and can visualize how quickly a forest fire could spread across Bloody Creek. Without the farm there we could all lose most everything.

About putting the dairy out of sight of the highway; their plans show the facilities all west of Hwy. 13. I'll bet if the Wysockis were dealt with in some fair manner they would be willing to oblige. The Juneau C. dairy looks nice on the west side of the road with trees surrounding it. They couldn't take it way off of 13 or the township would have problem with their "over used roads." I'd love to see a going business instead of miles of trashy trees. I understand that Plum Creek has done some tree cutting after Saratoga chased the last attempt to get a business there. I think it is called cutting off your nose to save your face.

About tourism here: We tried to eat at the Hide-a-Way only to discover that it has been closed for some time. If they couldn't make a go there, one of the most beautiful spots on the river, how can we expect that a nice looking farm will stop tourists from coming here?

Thanks again,
[REDACTED]

----- Original Message -----

Subject:Re: Fwd: RURAL WISCONSIN and SARATOGA FARM

Date:Sun, 5 Aug 2012 17:53:47 -0500

From: [REDACTED]

Thanks [REDACTED].Not surprising -- about it not having changed.

Everything I've heard and know indicates the Wysocki's will do a first rate job.

Take Care!

[REDACTED]

[REDACTED]

On Sun, Aug 5, 2012 at 5:43 PM, [REDACTED] wrote:

Follow-up: Just to make sure that the Wysockis weren't destroying something beautiful we took a drive through much of the area of the proposed farm after our meeting today. My description of it was not a lie and I'm appalled that nothing has changed in the 50

plus years since [REDACTED] and I met and drove back and forth from Easton to Arpin. Even the sand fire lanes, jack pines are still there! There are only 6 to 10 homes along 10 Mile Creek Avenue west of 13, (Mrs. [REDACTED] lives there) 0 to none to the east of 13 along the Adams Co border with Wood Co. which is a soft sand road after a mile or so of gravel from Hwy 13 toward Kellner Rd. The Wysockis should be cheered on for wanting to make something out of it. The cow barn will be at least 3 miles from 10 Mile Creek residents. The Juno Co. farm fields are bordered by healthy looking tree lines.

----- Original Message -----

Subject:Fwd: RURAL WISCONSIN and SARATOGA FARM

Date:Sun, 05 Aug 2012 00:08:16 -0500

From: [REDACTED]

To:undisclosed-recipients::;

COMMENTS ABOUT THE "SARATOGA MEGA FARM"

I have a few comments to make to the people who are fighting the Wysocki Dairy farm in Saratoga Township. The person leading the fight against the farm is a " self proclaimed city girl moved from Wisconsin Rapids to their 14 acres in 1995." Eight of my relatives have owned and operated dairy farms in Wood Co. They were big farms at the time. The last one was sold last year by the great-grandson of the first. Why sell? See #5 below. The price that a farmer gets for his cow's milk has hardly changed over the years, but the price of machinery, etc. has gone out of sight. Only mega farms have a chance to survive anymore. "Ten years ago there were 1000 cows in the Seneca Corners neighborhood. Today there are 25." I asked an attendee at the first Saratoga hearing where he would get his groceries. He said at the grocery store. I asked, "And how would they get there? Fall from the sky?"

"Saratoga has always been about suburban, rural residential and rural preservation" (Quotes from the Wisconsin Rapids Voice.) Wrong! Northern Adams Co. and South Wood Co. were either farmed or it was a mess of jack pines, scrub oak, sand burrs and fleas, biting flies and a creek or two with fire towers and sand fire roads. It was not an oasis. The "Lakes Area" was no different until the creeks were dammed and people bought properties around them. Most people were not locals. Rather they were from Milwaukee or the Chicago area. The best time for the realtors to sell was in the spring before the weeds took over.

Our sand does not retain water. That fact and the above is why there are few farms left. We took a ride to see the Wysocki farm in Juno Co. It was depressing to see the crops almost dead from the drought throughout the drive through Juneau Co. from the south. All of a sudden we came upon an oasis, The Wysocki farm. We drove at least halfway into the driveway, didn't smell cow manure.

From what the presentation by the experts that Wysockis brought to the hearing I learned:

1. trees use twice as much water as farm crops. 2. Twenty percent of the milk sold in the Dairyland State of Wisconsin is now imported.

The editor of the Voice had an editorial this week bemoaning the fact that business in this area is dwindling. Brostrom has closed. Take a ride around the whole county and count the farms that are no longer productive or functioning. We'd better hope that the Feds will be able to continue our Social Security payments and that New Page survives. A going business built by central Wisconsin natives, as the Wysockis are, would seem to be the best thing that can happen here. How many people actually live within a mile of the proposed farm? To think your surroundings would never change when buying land in the country seems very naive.

Please consider this in a light of what this area needs economically to become viable and remain stable. There was a comment in last weeks paper that no-one that was for The Farm spoke up at the Wysocki presentation at the Performing Arts Center. I didn't because the opponents had spread so much false information that they had the crowd revved up to a dangerous frenzy and I was frightened into silence. As things stand now the opposition to the Wysocki farm believes that they speak for the entire community -- that there is nothing but opposition within Saratoga Township. The opposition group is holding its next meeting at Saratoga Town Hall, Aug. 8, at 6:00 PM. The meeting is advertised as community-wide with everyone welcome. One would suppose from that, that supporters of the Wysocki dairy farm were as welcome as the opposition. Their stated agenda however contains only one item: How to stop Wysocki Farms from building their proposed dairy.

If any of you would be willing to help to oppose the opposition or at least give it a fair hearing join me Wed. night. I'm open to discussion [REDACTED].

[REDACTED]

From: [REDACTED]
Sent: Monday, August 27, 2012 11:45 AM
To: Anderson, Russell A - DNR
Subject: Town of Saratoga proposed CAFO and crop land

To Mr. Russell Anderson,

I live on the Ten Mile Creek in the town of Saratoga on Oak Street. When i built this place back in 1994, and had my water tested, I was told that we had some of the best water in the state of Wisconsin. I understand that near heavily farmed crop land, nitrogen levels in the surrounding ground water may rise to 20-40 milligrams per liter. The Wisconsin Department of Public Health recommends that humans avoid long term consumption of water that has levels greater than 10 milligrams per liter. I hope we don't let this happen.

I am also concerned that the 49 high capacity wells running parallel to the Ten Mile Creek, proposed by Golden Sands Dairy, will affect the level and temperature of one of Wisconsin's class "A" trout streams. This summer I noticed the water in the creek was extremely low. The temperature was above 70 degrees, which causes much stress to trout. I am convinced that the lack of rainfall in July caused this phenomenon. This reduced flow which is primarily spring fed caused the temperatures to rise above levels that can sustain trout effectively. I know that since 2005, the Little Plover River has had increasing amounts of water taken from it's watershed area. As a result of this diminished supply of water, sections of the river have gone dry. Are we going to take that chance with the Ten Mile Creek?

[REDACTED]

From: [REDACTED]
Sent: Thursday, June 21, 2012 12:40 PM
To: [REDACTED]
Cc: Kafka, Terence - DNR; Lynch, Lawrence J - DNR
Subject: Wysocki Farms - DAIRY in SARTOGA

Mr. [REDACTED], Kafka and Lynch,

Several of us property owners are concerned with the proposed large scale dairy farm to be located in Saratoga by WYSOCKI Farms.

The other day we received the attached letter from WYSOCKI explaining their intent. Our Saratoga board was blindsided by this? Several residents showed up at meeting on Wednesday the 13th and were turned away due to the fact the dairy issue was not on the agenda.

On Wednesday the 20th we were fortunate to have Mr. George Kraft – Hydro Geologist Professor of Water Resources, Director of the Center for Watershed Science and Education, and Director of the Central Wisconsin Groundwater Center came to speak with us and shed his expertise on this matter. He was very informative regarding the water issues this Dairy and massive agriculture venture (6000 acres total) would have on this area. I have included a copy of

the map showing the land Wysocki wishes to purchase from Plum Creek. Ten Mile and Seven Mile Creeks are located on the proposed property - our concerns are the impact of our wells and the creeks. What Wysocki is proposing would be detrimental to both. (Fourteen Mile Creek would also be effective by this venture). Our other concern of course is our property values and the tax structure changes that will be made with this significant agricultural growth?

The next meetings are set for 6:00pm @ the Town Hall located @ 1120 State Highway 73 S Wisconsin Rapids, WI
July 3rd - George Kraft will return
July 19th - Wysocki

If you are able to attend it would be greatly appreciated.

[Redacted signature block]

Attachments – Richfield Dairy
Diagram showing effects of pumping



P. Terence Kafka
Ag Runoff Specialist
Wausau DNR
5301 Rib Mountain Road
Wausau WI 54401

Dear Mr. Kafka:

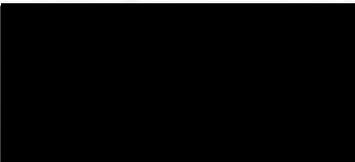
This letter is regard to the Wysocki Golden Sands Dairy Project that is planned for the township of Saratoga. We built our house here 22 years ago for the fresh air, the forest land and clean water. The Ten Mile Creek runs thru our land. If this project is approve it will surround us on three side. The Ten Mile Creek flow was impacted sometime ago by the upland Cranberry Marshes. It not as clean as it use to be, because of the water that gets dumped back in the creek from the marshes. The high capacity wells will have a huge impact on the flow.

Spreading of manure, fertelizers and pestisides on the sandy soil here will affect the ground water. We are very concerned about our well water quality and quantity over time. We have very good water at this time. I'm going thru chemotherapy at this time and clean water is very important to my health. What about our next generation? Don't they deserve to have clean water and air also?

We and the township are very much against this project and yet we seem to have no say in how our land and air are used. We hope the Wisconsin DNR are very diligent about their testing. Our township will suffer greatly if this project goes thru. Our property values will go down, our taxes will go up, and no one will want to live in our township. The air quality and water quality will be terrible.

We enjoy our clean air, the forest land, wildlife, clean water and fishing in the Ten Mile Creek trout stream.

Sincerely,



66
July 15th, 2012

Terence Kafka:
Wisconsin Dept. of Natural Resources
5301 Rib Mountain Drive
Wausau, WI 54401

This past July 4th, as so many Americans celebrated their freedom and independence, I quietly sat on my porch and questioned where I, my wife, and my neighbors fit into this normally festive holiday. My sparklers were left in the drawer.

On June 6th, Wysocki Farms presented the Saratoga Town Board and our residents with a proposal to obtain Town and DNR permits to construct a 6,000 acre dairy and agricultural operation. This would include a 3,500 cow CAFO (Concentrated Animal Feeding Operation) and the annual harvest of over 90,000 tons of assorted produce. The fact that this massive industrial-sized farm would be placed in a township of over 5,000 people and will require the drilling of 49 high capacity wells to sustain it has left our community bewildered.

Personally, I must admit that upon hearing that a dairy CAFO could land in the town of Saratoga, I was actually intrigued. It was only after my ignorant and open-minded endeavor to research the potential ramifications (good and bad) of such a proposal that I quickly realized that a dairy CAFO near any municipality may not necessarily be a good thing. It is my sincere hope that the July 19th Wysocki Farms presentation to the town board will be attended by a full house of open-minded, CAFO educated residents. Wysocki deserves to be heard just as we do. I suspect that this event will go a long way in determining how neighborly the involved parties can be.

To this point, the Town Board and the residents of Saratoga owe an enormous sum of gratitude to Protect Wood County & Its Neighbors. This group was the first to begin the mind-numbing task of researching the potential positives and negatives of placing an operation of this magnitude in such close proximity to Saratoga Township as well as the City of Wisconsin Rapids. They do not stand alone. They have assembled a growing team of concerned and competent individuals with a mission. That mission: Unite and inform all parties involved of the possible negative eco-system effects due to the impact of Concentrated Animal Feeding Operations (CAFOs).

Thus far, and to our dismay, our own research along with input from George Kraft, a UWSP Hydrology professor, has left us deeply concerned for the future quality and level of our towns' natural water supply as well as three area streams. The potential for ground water and run-off contamination involving pesticides, nitrates, and antibiotics is unnerving to say the least. Add in the possible issues of air quality, road repairs, decreased property values, and increased homeowner taxes, and you have the potential recipe for a negative impact in our township.

To add to our concern, while Wysocki Farms has yet to assure us that this is a good thing, the Town of Saratoga may not have the authority to deny these permits even if they decide that the Wysocki CAFO is not a fit for this community. Do the taxpaying voters of Saratoga need to fear that pathogens could be transferred into their water supply by the dispersing of tons of liquid manure? Does the most obese country in the world really need to allow the addition and expansion of dairy CAFOs in order to bulge the production of even more cheese, ice cream, and butter?

Mr. Kafka, as an ethical, concerned custodian of Wisconsin's natural resources, environment, and quality of life, I implore you and your department to perform a diligent, thorough study on the Wysocki proposal. A hasty or expedited decision on this matter has the potential to negatively impact a township of over 5,000 people along with its resources. To allow this project to move forward without

⁶⁷
the full scrutiny of the DNR must go against all your personal beliefs and intellectual wisdom. Our fate could be in your hands. Please handle it as if it were your own.

You must believe as we do that our natural resources were meant to be shared by all. Please help us realize that the "Golden Rule" does not have to mean that those with the gold make all the rules. Perhaps next year I will be able to light my sparklers again.

Sincerely,

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

P.S. I strongly urge you to read two very enlightening articles relating to the realities of CAFO farming. They are:

Wisconsin's Cost-Share Program for Farm Pollution; The Milking of the Public

Confronting CAFOs through Local Control by John Ikerd



Saratoga Town Hall Public Listening Session
Issues Identification Comment Form

For the Proposed

Golden Sands Dairy

August 23, 2012 Meeting

Public information gathering for the Environmental Impact Statement (EIS). Please clearly state the issue(s) you feel should be addressed by WI Department of Natural Resources in the EIS:

- 1) Effects on property values
- 2) Long term impact (5-10+ yrs) on water quality & quantity
- 3) Long term impact on Ten Mile Creek & other creeks in the area of high capacity wells (5-10+ years)

Enclosed pictures of Ten Mile Creek - 2 from 1999 when cranberry marshes & high cap. wells for crops up stream started. This was a drought year. If high cap. wells (#49) were in place there would be no water.

When we built our home here in 1989 - waders were necessary to navigate for Trout fishing.

Completion of this form and inclusion of personal information is voluntary. We will use your contact information to seek clarification of your comments, if necessary. All comments subject to Wisconsin's Open Records Law.

Name: _____

Contact Information: _____





From: [REDACTED]
Sent: Sunday, August 26, 2012 11:06 PM
To: Baumann, Dan G - DNR
Subject: CAFO

Hi Dan,

I live in Saratoga and wanted to share a video with you. Here is a facebook page with the locally produced video and other CAFO videos:

<http://www.facebook.com/SaratogaConcerned>

or

here is the youtube link to "The Other Side of CAFO"
(Saratoga residents share concerns about the proposed CAFO.)

<http://www.youtube.com/watch?v=PQtWvUDjanU&feature=plcp>

My wife and I are both teachers in Nekoosa. I have taught for 30 years. The last two years have been by far the toughest ever. The one thing we have been able to do is to come home and try to forget about all the politics as we live out of town. We have four children and a dog. We often take him for walks in the woods behind our house. We eat outside over a campfire a few times a week in the summer and try once a week all year long. Now we find out about the proposed CAFO. Air, water, smell and bulldozing all the trees that so many use??? Can't imagine.

Please watch.

Thanks,

[REDACTED]

From: [REDACTED]
Sent: Tuesday, August 28, 2012 9:32 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: Info

Dan this sounds like a way to stop the CAFO INCLUDING NO ACTION!!! [REDACTED]

--

The Science and Environmental Health Network is working to implement the precautionary principle as a basis for environmental and public health policy.

The principle and the main components of its implementation are stated this way in the 1998 Wingspread Statement on the Precautionary Principle:

"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action." - Wingspread Statement on the Precautionary Principle, Jan. 1998

The precautionary principle, virtually unknown here six years ago, is now a U.S. phenomenon. In December 2001 the New York Times Magazine listed the principle as one of the most influential ideas of the year, describing the intellectual, ethical, and policy framework SEHN had developed around the principle.

In June 2003, the Board of Supervisors of the City and County of San Francisco became the first government body in the United States to make the precautionary principle the basis for all its environmental policy.

From: [REDACTED]
Sent: Wednesday, August 29, 2012 7:35 AM
To: Anderson, Russell A - DNR
Subject: Saratoga CAFO/Golden Sands Dairy

Dear Mr. Anderson,
Attached is a communication regarding the Saratoga CAFO/Golden Sands Dairy.
Please accept this communication of concern from me, a resident in Saratoga WI.
Thank you

[REDACTED]

August 28, 2012

To: Russell Anderson

Dear Sir:

This letter is in regards to the proposed Saratoga WI CAFO (Golden Sands Dairy).

I have seen state highway projects stopped or postponed (or at least extreme measures taken) because of Blanding's Turtles or Garner Blue Butterflies.

The endangered and threatened animals law, if violated intentionally, can lead to a person being fined \$2,000 – \$5,000 and/or imprisonment for nine months and yet 6,000 acres can be deforested, animal habitat destroyed, air quality and water quality destroyed and topsoil wind erosion allowed for a concentrated animal farm operation.

Where is the protection for citizens of Wisconsin when these types of things are allowed to happen?

Respectfully,

A large black rectangular redaction box covering the signature area.

From: [REDACTED]
Sent: Tuesday, August 28, 2012 9:32 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: Info

Dan this sounds like a way to stop the CAFO INCLUDING NO ACTION!!! [REDACTED]

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In June 2003, the Board of Supervisors of the City and County of San Francisco became the first government body in the United States to make the precautionary principle the basis for all its environmental policy.

From: [REDACTED]
Sent: Wednesday, August 29, 2012 10:43 AM
To: Anderson, Russell A - DNR
Subject: Golden Sands Wysocki CAFO

We live in Grand Rapids and are concerned about the effect of the high capacity wells on the water table in this area. Since the Wysocki's have requested so many high capacity wells, the drawdown effect on the water table in a large area is almost certain to be felt much further away than just the township of Saratoga. We have a well that furnishes water to our home and would like assurance that those wells will not eventually affect our well, even though it might not show up in the near future. How long a period might it take and what recourse would we have if, in fact, it did result in the lowering of the water table where our well is located?

We hope you will consider the long term effects for not only us, but this whole area, which includes Wisconsin Rapids, Grand Rapids, Saratoga and northern Adams County.

Thanks for your consideration of our request.

[REDACTED]

From: [REDACTED]
Sent: Wednesday, August 29, 2012 8:29 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: news article

Dan And Russell According to DNR rules the amount of Water usage must show significant impacts in order to deny the wells!!! People are figuring out the math. Our math shows the amount of water used per year is 5 times what NEPCO LAKE holds. How much more can we demonstrate the significant water impacts to our area. What is required of our community ALL OUR WELLS to go dry before the DNR first can say the impacts WERE significant. Seems very clear to our community as well as Wis. Rapids and Rome that there will be significant oimpacts. [REDACTED]

----- Original Message -----

From: [REDACTED]
To: [REDACTED]
Sent: Wednesday, August 29, 2012 8:13 PM
Subject: news article

My view: Dairy water use calculated

8:32 PM, Aug 28, 2012 | [3 Comments](#)

Armed with a calculator and the Internet, I found alarming statistics on proposed water usage for a new “Saratoga dairy farm” facility. What I found should make every citizen of southern Wood County and northern Adams County take notice.

To sustain the agricultural portion of land used, 49 high-capacity wells would be needed, pumping 1,000 gallons of water per minute each (according to speakers at informational meetings) or 2,940,000 per hour or 70,560,000 gallons per day. This is 2,116,800,000 in 30 days, or 8,467,200,000 in a 120-day growing season.

If the shape of an acre were 100 feet by 436 feet, that acre would contain 325,853 U.S. gallons of water, so the farm would consume 332,585 acre feet of water in 120 days. This is a volume of water one foot deep by 100 feet wide by 14,207,060 feet long or 100 feet multiplied by 2,691 miles.

To put this into perspective, a four-lane superhighway is approximately 48 feet wide. A four-lane highway the distance from [Error! Hyperlink reference not valid.](#) City to Los Angeles is 2,776 miles. In other words, the amount of water used would be one foot deep and the size of a superhighway running from New York City to Los Angeles — and back.

Where is the Department of Natural Resource’s [Error! Hyperlink reference not valid.](#) impact study for this project? Those guys run around protecting snail darters, spotted owls, Karner blue butterflies — guys so anal they will fine you for possession of an eagle feather.

For the average — yes average — citizen, it is illegal to disturb wetlands in any way, shape or form; yet the DNR is willing to allow a farm project of such monumental magnitude. They are willing to allow the potential irreparable damage of depleting water supplies in streams and recreational lakes, and let’s not forget the slow depletion of underground aquifers.

Aside from a potential lack of drinking water and the environmental fish and aquatic damage, what about the damage to the local economy? Who wants to live by lakes with little, if any, water, reeking of dying fish and decaying vegetation?

Since the DNR obviously prefers to remain passive about the issues they were created to protect, perhaps someone needs to contact a national office of the [Error! Hyperlink reference not valid.](#) Remember, once the damage is done, there is no turning back.

lives in Wisconsin Rapids.

From: [REDACTED]
Sent: Sunday, September 02, 2012 8:33 PM
To: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: more property devaluation info

Subject: more property devaluation info

These links can go under property devaluationa and CAFOS - Financial Hardships for 5,000 plus people and surrounding . [REDACTED]

Aiken, David J. "Property Valuation May Be Reduced by Proximity to Livestock Operation." Cornhusker Economics 1 May 2002.

Available Online: <http://agecon.unl.edu/pub/cornhusker/05-01-02.pdf>

Summary: Bruce Livingston successfully challenged the Nebraska Tax Equalization and Review Commission, claiming that his 1999-built \$329,000 home near his hog complex was unfairly valued by the tax board for \$540,000 in 2000. Livingston's appraiser valued the home at \$325,000.

Commentary:

Marbery, Steve. "Landmark Tax Case." *Listsers*. 21 April 2002.

Available Online: <http://lists.iatp.org/listarchive/archive.cfm?id=48493>

Cantrell, Patty. "Michigan Tax Tribunal Recognizes Hog Factory Stench: State Court Recognizes Factory Farm Abuse." Michigan Land Use Institute Online 7 Dec 1999.

Available Online: <http://mlui.org/farms/fullarticle.asp?fileid=4527>

Summary: Five rural residents of Mecosta County, Michigan were awarded a reduction in the taxable value of their homes by 35% on November 18, 1999, due to odors from an AFO that moved to the area in 1997. Convincing evidence included a statement from an appraiser about the property's unlikely sales: "Across the road from subject is a large pig farm operation, and the smell is terrible."

Clement, D. "Knee deep in feedlot feuds." Fedgazette Online July 2001.

Available Online: <http://www.minneapolisfed.org/pubs/fedgaz/01-07/feedlots.cfm>

Summary: This short article examines the impact of large scale animal feeding operations on surrounding residents in various states throughout the Midwest. Clement notes Waseca County, MN, where the county assessor created a "smell location chart" that determines the financial impact on a home's value considering proximity to the feedlot, size of the operation, and the presence of a manure lagoon.

Dilly, Barbara. "Tax Policy and Swine Production in Iowa, United States." Journal of Ecological Anthropology Vol. 10 (2006):45-60.

Available Online: <http://jfaniowa.org/reports/DillyCAFOsLocalTaxPolicy.pdf>

Abstract: This paper examines county level decision-making regarding swine confinement permits in Iowa. The case study follows a 2003 Iowa State Legislature ruling that gives county supervisors the option to adopt a detailed Department of Natural Resources Master Matrix

plan for swine manure management. In this research, I sought to understanding environmental policy conflicts associated with industrialized hog production. This study examines four counties in North Central Iowa located in the region of rapidly expanding, corporate-formed, swine confinement operations. Ethnographic field research was conducted from May 2003 to October 2006. Comparison of qualitative and quantitative data for each of these four counties reveals different stakeholder and agroecology dynamics at the level of county decision-making processes. I explain these differences in terms of a family farm-corporate agribusiness continuum which reflects diverse local agricultural attitudes and practices related to environmental values, economic rationalities and social investments. In some rural areas where family farm agricultural attitudes and practices related to livestock production persist along side of corporate agribusiness, there exist some county assessors, engineers, and auditors who seek to protect family farm social and cultural interests because of their stabilizing effect on the local environmental and economy. This study explains why local county-level decision-makers have become proactive in supporting family farms and local businesses by challenging state policies biased in favor of corporate agribusiness.

Hamed, M., T. G. Johnson, and K. K. Miller. "The Impact of Animal Feeding Operations on Rural Land Values." Community Policy Analysis Center May 1999.

Available Online: <http://www.cpac.missouri.edu/library/reports/landvalue-saline/landvalues.pdf>

Summary: In this Saline County, MO study of 99 properties near a CAFO, it was found that increased proximity to the CAFO negatively impacted the value of the property. From the study: "Based on the averages of collected data, loss of land values within 3 miles of a CAFO would be approximately \$2.68 million... Average loss of land value within this 3-mile area would be approximately \$112 per acre."

Herriges, J. A., S. Secchi, and B. Babcock. "Living with Hogs in Iowa: The Impact of Livestock Facilities on Rural Residential Property Values." Center for Agricultural and Rural Development August 2003.

Available Online: http://www.econ.iastate.edu/research/webpapers/paper_10683.pdf

Abstract: We estimated a hedonic model to explain variations in residential sales price with standard house attributes, such as number of bedrooms and square feet of living space, as well as the effects of distance and density of livestock feeding operations. We find that livestock operations have an overall statistically significant effect on property values. Predicted negative effects are largest for properties that are downwind and close to livestock operations. In addition, feeding operations that are moderate in size have more impact than do large-scale operations, most likely reflecting age, type, and management practices of the moderate-sized operations.

Key Points: Distance from a livestock operation, direction (due to wind) and the size and kind of the operation in question all impact a home's value. Babcock's report found that smaller

units had a more negative impact than larger operations, perhaps because larger operations are newer and better operated.

Summary Article:

Babcock, Bruce. "Living with Hogs in Rural Iowa." Center for Agricultural and Rural Development August 2003.

Available Online:

<http://www.extension.iastate.edu/AGDM/articles/babcock/BabAug03.htm>

Commentary:

Neil, Ruth. "Study Shows Effect of Hog Confinements on Rural Home Values." Iowa State Daily 3 Sept 2003.

Available Online: <http://media.www.iowastatedaily.com/media/storage/paper818/news/2003/09/03/News/Study.Shows.Effects.Of.Hog.Confinements.On.Rural.Home.Values-1096288.shtml>

"Judge awards Iowa couple \$100,000 in hog lot lawsuit." Associated Press. Amarilla Globe-News 12 Jan 2002.

Available Online: http://www.pmac.net/AM/hoglot_lawsuit.html

Summary: A hog operation of 4,000 head was ordered to pay \$100,000 in damages to a couple who claimed that the farm "was a nuisance that attracted bugs and harmed their emotional and physical health."

Kilpatrick, John A. "Concentrated Animal Feeding Operations and Proximate Property Values." The Appraisal Journal 39:3 (2001): 301-306.

Available Online: http://www.pmac.net/AM/property_values.html

Summary: John Kilpatrick argues in this 2001 article that any properties located near a concentrated animal feeding operation (CAFO) will bear a negative impact, which increases as distance between the property and CAFO decreases. Kilpatrick's argument is supported by seven case studies that illustrate some of the negative impacts (health, property value) felt by property owners near CAFOs. Kilpatrick advises appraisers to consider the seven following issues when valuing property near a CAFO: 1) type of property, 2) distance between the property and CAFO, 3) physical manifestations (ex. air quality, insects), 4) scientific tests (ex. on air or water quality), 5) impacts on property use (livability, rental use, etc.), 6) marketability evidence (time on market of comparable properties), and 7) impact on highest and best use.

Milla, K., M.H. Thomas, and W. Ansine. "Evaluating the Effects of Proximity to Hog Farms on Residential Property Values: A GIS-Based Hedonic Price Model Approach." URISA Journal 17:1 (2005): 27-32.

Available Online: <http://www.urisa.org%7c~www.urisa.org/prev/Journal/Vol17No1/Milla.pdf>

Summary: In this North Carolina study, the authors examine the relationship between the distance from animal feeding operations (particularly hog farms) and residential property sales. The study finds that there is a significant negative impact on the values of homes located near hog farms, and that the higher the concentration of animals, the greater the negative impact.

Palmquist, R. B., F. M. Roka, and T. Vukina. "Hog Operations, Environmental Effects, and Residential Property Values" *Land Economics* 73:1 (1997): 114-124.

Available Online (purchase only):

[http://links.jstor.org/sici?sici=0023-7639\(199702\)73%3A1%3C114%3AHOOEAR%3E2.0.CO%3B2-A#abstract](http://links.jstor.org/sici?sici=0023-7639(199702)73%3A1%3C114%3AHOOEAR%3E2.0.CO%3B2-A#abstract)

Abstract: A hedonic study of rural residential house sales in southeastern North Carolina was conducted to determine the effect of large-scale hog operations on surrounding property values. An index of hog manure production at different distances from the houses was developed. It was found that proximity caused a statistically significant reduction in house prices of up to 9 percent depending on the number of hogs and their distance from the house. The effect on the price of a house from opening a new operation depended on the number of hogs already in the area.

Key Points (from "Report on Animal Feeding Operations and Rural Colorado Communities"): "In North Carolina results indicated that home values decreased \$0.43 for every additional hog in a five mile radius of the house. The study found a decrease of 4.75% (about \$3,000 in the value of residential property within 0.5 miles of a 2,400 head finishing operation where the mean home price was \$60,816. As homes were located farther from an operation, the decrease in total home value decreased to less than \$100 at 2 miles away."

Park, D., A. F. Seidl, and S. P. Davies. "The Effect of Livestock Industry Location on Rural Residential Property Values." *Colorado State Economic Development Report, Colorado State University* Sept 2004.

Available Online:

<http://dare.agsci.colostate.edu/csugecon/extension/docs/impactanalysis/edr04-12.pdf>

Abstract: A hedonic study of rural residential house sales in southeastern North Carolina was conducted to determine the effect of large-scale hog operations on surrounding property values. An index of hog manure production at different distances from the house was developed. It was found that proximity caused a statistically significant reduction in house prices of up to 9 percent depending on the number of hogs and their distance from the house. The effect on the price of a house, from opening a new operation depended on the number of hogs already in the area.

Ready, R. and C. Abdalla. "GIS Analysis of Land Use on the Rural-Urban Fringe: The Impact of Land Use and Potential Local Disamenities on Residential Property Values and on the Location of Residential Development in Berks County, Pennsylvania." AERS Staff Paper No. 364. June 2003.

Available Online:

Long Report: <http://landuse.aers.psu.edu/study/BerksLandUseLong.pdf>

Short Report: <http://landuse.aers.psu.edu/study/BerksLandUseShort.pdf>

Summary: A CAFO was found to negatively impact a home's value by 4.1% at 800 meters, and the devaluation extended to around 1600 meters away from the facility. Medium-sized operations were found to have the most negative impact on house prices, and the impact did not vary by species. The average impact of a CAFO on 119 homes within 1600 meters of the facility was \$1,803, with a total of \$215,000 on all 119 homes, 1.7% of the assessed value of the homes.

Commentary:

Hopey, Don. "Hog Heaven? Study Finds Large Hog Farms Lower Property Values." [Post-Gazette.com](http://www.post-gazette.com) 7 July 2003.

Available Online:

<http://www.post-gazette.com/healthscience/20030607hogsenviron1p1.asp>

Seidl, A. and J. Davies, eds. "Report on Animal Feeding Operations and Rural Colorado Communities." Agricultural and Resource Policy Report, Colorado State University Feb 1999.

Available Online:

<http://dare.agsci.colostate.edu/csusagecon/extension/docs/impactanalysis/feeding.pdf>

Key Points: (pgs. 10-11) "An Iowa study found that agricultural land values increased due to an increased demand for "spreadable acreage." However, total assessed value, including residential, decreased in proximity to a hog operation. In Illinois and Iowa county assessors have, somewhat arbitrarily, discounted the assessed value of homes within 0.5 miles of a hog operation by 40%, within 1 mile by 30%, 1.5 miles by 20%, and 2 miles by 10%, much greater discounting than the N.C. study would warrant (Padgitt & Johnson, 1998)."

Thomas, M., P. Goldsmith, J. Kim, W. Ansine, and N. Bruton. "A Comparison of Three Recent Hedonic Models of Hog Farm Discommodity in Costal North Carolina: Evidence of Diseconomies of Scale and Brown Zones." College of Agriculture, University of Kentucky May 2003.

Available Online: http://www.ca.uky.edu/sera-ieg/pubs/thomas_full_draft.pdf

Abstract: Three Hedonic Price Models (HPM), using Geographic Information Systems (GIS) data, were developed and used to quantify the impact of swine externality on residential property values in Craven and Onslow counties, North Carolina. The models demonstrate

that, on average, swine externality causes a statistically significant reduction in residential property values. For the average valued house located one mile from a swine farm, the marginal affect of an additional animal results in a one time cost to home owners ranging from \$0.48 to \$2.04. Evidence from one model suggests diseconomies of scale may exist for the discommodity of hog externality. In other words, smaller operations (5,200 or less hogs) have a smaller cumulative impact on residential property owners than larger farms (13,000 hogs). All three models provide evidence that environmental setbacks of less than two miles will likely offer little protection to residential property owners.

Summary Articles

Weida, William J. “The CAFO: Implications for Rural Economies in the US.” Department of Economics, Colorado College and the Global Resource Action Center for the Environment 24 February 2004.

Available Online: http://www.sustainabletable.org/issues/docs/YaleEconOnly_NDI.pdf

--. “The Evidence for Property Devaluation Due to the Proximity to CAFOs.” Department of Economics, Colorado College and the Global Resource Action Center for the Environment January 2002.

Available Online: http://www.factoryfarm.org/docs/Weida_Prop_Devaluation.pdf

--. “Nutrient Management Issues.” Department of Economics, Colorado College and the Global Resource Action Center for the Environment 4 April 2001.

Available Online: <http://www.factoryfarm.org/docs/nutrientmgmtissues.pdf>

Fact Sheets with Summaries of Literature

“False Promises! Costly Reality! What hog confinements really cost Iowa’s counties!” Care4Iowa.com.

Available Online:

http://www.factoryfarm.org/docs/Iowa_Assn_of_Counties_HOG_PIECE11.pdf

Ulmer, A. and R. Massey. “Animal Feeding Operations and Residential Land Value.” Agricultural Economics Extension, University of Missouri 2006.

Available Online:

<http://muextension.missouri.edu/explorepdf/miscpubs/mp0748.pdf>

From: [REDACTED]
Sent: Friday, August 31, 2012 9:42 PM
To: [REDACTED]
Cc: Anderson, Russell A - DNR; Baumann, Dan G - DNR
Subject: Fw: central sands dairy

Here are soil sample tests from central sands dairy in Armenia. I believe this shows Phosphorus and nitrate levels POST DIGESTER!!! Rick you had stated phosphorus of 6 was a concern. Let me know if I am not looking at the results correctly THANKS [REDACTED]

----- Original Message -----

From: [Rohland, Robert F - DNR](#)
To: [REDACTED]
Cc: [Baumann, Dan G - DNR](#) ; [Baczynski, Robert J - DNR](#)
Sent: Thursday, July 26, 2012 8:57 AM
Subject: RE: central sands dairy

Hi,

I have the records for Central Sands and cover that area (but not Wood County-Golden Sands) so Dan Bauman forwarded your request for information to me.

Central Sands has approximately 8000 acres covered by their Nutrient Management Plan, so there are literally hundreds of pages of soil test results. You do have access to these records under the open records law, but we would need to make arrangements as to what you specifically would like and how to get the information to you. These records are almost all paper, so arrangements would need to be made for copying and so forth.

Soil tests are required every 4 years and usually some are taken each year. You would need records from at least two consecutive tests to determine if the nutrient levels are going down. I mention that in order to indicate that with the large number of tests taken on a large number of fields and on different years it becomes a little complicated - that's why it would be helpful to understand in detail what you are asking for.

Also, I do not know what water sample results you are referring to, Central Sands WPDES permit does not require water samples..

I have attached the one report I do have in electronic form (pdf), the latest Annual Report (2011, submitted 1/2012). This does contain soil and manure sample results that were completed in 2011, it may provide most of the information you asked for, but no water sample results.

Thanks,

Bob Rohland
Black River Falls DNR Service Center
715-284-1429

From: Baumann, Dan G - DNR
Sent: Wednesday, July 25, 2012 9:27 AM

To: Rohland, Robert F - DNR; Baczynski, Robert J - DNR
Subject: FW: central sands dairy

An info request for soil test data at Central Sands Dairy. Please respond to Nancy at [REDACTED]

From: [REDACTED]
Sent: Tuesday, July 24, 2012 7:28 PM
To: Baumann, Dan G - DNR
Subject: central sands dairy

have any yearly soil test been done at central sands dairy it is documented that yearly soil test data is available to us. Where also water test data the Nauda reports were supposed to be available to us a few weeks ago. where do we find those. all we are seeing is a 1981 suggestion in the project plans on hydrology. thanks [REDACTED]

FRASE CROP CONSULTING, LLC.

JEFFREY E. FRASE
E-10305 CTH. HH
OSSEO, WI 54758

HOME (715)597-3693
Cell # (715)577-4945
E-mail jeffreyfrase@centurytel.net

1-31-2012

Bob Rohland
Ag. Runoff Management Specialist

Black River Falls Service Center
910 Highway 54 East
Black River Falls, WI 54615

Subject: WPDES Annual Spreading Report of Central Sands Dairy, LLC

In compliance with the WPDES Permit of Central Sands Dairy, LLC, Nekoosa, WI., Permit No. WI-0063533-02-0, I am submitting the following Annual Reports required in Section 3.2.13 of the Permit.

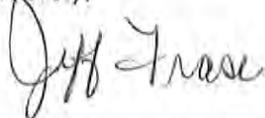
Manure applications for Permit period 2011

Manure sample analysis results

Quarterly facilities inspection reports for 2011

Monitoring & Inspection Program Reports for 2011

Sincerely;



Jeff Frase
Fraser Crop Consulting, LLC.

**DNR CAFO ANNUAL SPREADING REPORT
For 2011
Reported for Central Sands Dairy LLC**

Snap-Plus version 1.132.8

Printed 1/28/2012
Plan Completion/Update Date: Missing

Prepared for
Central Sands Dairy LLC

Instructions:

Before running this report update SNAP-Plus from what was planned to happen during this cropping year, to what actually happened for all parameters (e.g., crop, tillage, nutrients applied).

Add rows as needed and fill in the three columns that SNAP-Plus cannot.

Attach other necessary reports and lab results to document compliance with:

- Tolerable Soil Loss (Field Data and 590 Assessment)
- Soil testing (Soil Test Report)
- Manure testing (CAFO Nutrient Sources)

Test methods and other information for sampling manure and soil required under Ch. NR 243.19, Wis. Admin. Code shall be retained for 5 years.

Record-keeping requirements may vary according to permit. See your permit for specific record-keeping requirements that apply to your operation. If your permit requires reporting on soil conditions*, see Ch. NR 243.03, Wis. Admin. Code for soil condition definitions (saturated, frozen, snow-covered). If snow-covered, indicate inches of snow present.

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure/Process Wastewater Application					Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)
											Manure Applied Nutrients (lbs/acre)	UW Crop Nutrient Recs (lbs/acre)	N	P2O5	Excess N Amount (Lbs/Acre)	
CASINO N	4	Snapbean to Snapbean	Potatoes, late harvest, to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	10	Incorporated			-1	0	-1	-1	0
							0/ - 0- 60	500	Incorporated	67	44					
							9/ - 28- 4	10	Incorporated	0	0					
							5/ - 18- 10	5	Incorporated	10	32					
							32/ - 0- 0	40	Incorporated	3	10					
CASINO S	3	Alfalfa	Alfalfa (1st cut) to Corn silage			Post Digestor Solids	5/ 7- 4- 2	10	Unincorporated			-1	0	-1	-1	0
							0/ - 0- 60	350	Unincorporated	50	44					
							5/ - 18- 10	3	Incorporated	0	0					
							46/ - 0- 0	125	Unincorporated	2	6					
NO1	2	Sweet corn to Late Summer Direct Seeded Legume Forage	Alfalfa			Post Digestor						-1	0	-1	-1	0

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure/Process Wastewater Application		Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)			Excess N Amount (Lbs/Acre)	Comr
							Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)		N	P2O5	N	P2O5	N	P2O5			
							Manure/Process Wastewater Source	Spread Method		N	P2O5	N	P2O5	N	P2O5			
N02	2	Sweet corn to Late Summer Direct Seeded Legume Forage	Alfalfa			Solids	5/ 7- 4- 2	10	Unincorporated	50	44							
							0/ - 0- 60	200	Unincorporated	0	0							
						Post Digestor Solids	5/ 7- 4- 2	10	Incorporated	67	44							
							0/ - 0- 60	200	Incorporated	0	0							
N03	1	Corn silage to small grain cover crop	Snapbean to Snapbean															
						Post Digestor Solids	5/ 7- 4- 2	10	Incorporated	67	44							
							0/ - 0- 60	350	Incorporated	0	0							
							32/ - 0- 0	10	Incorporated	35	0							
N04	1	Corn silage to small grain cover crop	Snapbean to Snapbean															
						Post Digestor Solids	5/ 7- 4- 2	10	Incorporated	67	44							
							0/ - 0- 60	350	Incorporated	0	0							
							32/ - 0- 0	10	Incorporated	35	0							
N05	1	Potatoes, late harvest, to small grain cover crop	Alfalfa															
						Post Digestor Solids	5/ 7- 4- 2	7	Incorporated	47	31							
							0/ - 0- 60	200	Incorporated	0	0							
N06	1	Corn grain	Snap Beans late plant to small grain cover crop															
						Post Digestor Solids	5/ 7- 4- 2	7	Incorporated	47	31							
N07	1	Corn grain	Snapbean to Snapbean															

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Application					Manure Applied Nutrients (lbs/acre)			UW Crop Nutrient Recs (lbs/acre)			Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)			Excess N Amount (Lbs/Acre)	Comr	
						Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	N	P2O5	N	P2O5	N	P2O5	N	P2O5				
																			N			P2O5
						Liquid																
N20	4	Corn silage to small grain cover crop	Snap Beans early plant, 30 inch row																			
						Post Digester Liquid	3/ 4- 1- 9	4000	Incorporated		17	5										
						Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated		22	6										
							5/ - 18- 10	3	Incorporated		2	6										
N21	3	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop																			
						Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated		43	11										
							5/ - 18- 10	3	Incorporated		2	6										
							32/ - 0- 0	25	Incorporated		89	0										
N22	3	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop																			
						Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated		43	11										
							5/ - 18- 10	3	Incorporated		2	6										
							32/ - 0- 0	25	Incorporated		89	0										
N23	3	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop																			
						Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated		43	11										
						Post Digester Liquid	3/ 4- 1- 9	6000	Incorporated		26	7										
							5/ - 18- 10	3	Incorporated		2	6										

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure/Process Wastewater Application					Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)									
											Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Excess N Amount (Lbs/Acre)										
											N	P2O5	N	P2O5			Comp								
N24	3	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digestor Liquid	32/ - 0- 0	40	Incorporated		142	0													
N25	3	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digestor Liquid	3/ 4- 1- 9	10000	Incorporated		43	11													
N26	3	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digestor Liquid	5/ - 18- 10	5	Subsurface		3	10													
N27	3	Corn silage to small grain cover crop	Peas to Snapbean to small grain cover			Post Digestor Liquid	32/ - 0- 0	25	Incorporated		89	0													

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure/Process Wastewater Application				Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Compl							
							Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	N	P2O5	N	P2O5	N	P2O5									
N28	4	Corn silage to small grain cover crop	Peas to small grain cover				32/- 0-0	10	Unincorporated		35	0													
							5/- 18-10	3	Incorporated		2	6													
N29	3	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop																						
N30	4	Alfalfa	Alfalfa (1st cut) to Corn silage																						
N31	3	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop																						

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure/Process Wastewater Application			Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)	Excess N Amount (Lbs/Acre)	Comm	
											Manure Applied Nutrients (lbs/acre)	UW Crop Nutrient Recs (lbs/acre)	N P2O5				
N32	3	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated								
										43	11						
							32/ - 0- 0	30	Incorporated			106	0				
							5/ - 18- 10	3	Incorporated			2	6				
N33	3	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated								
										43	11						
							5/ - 18- 10	3	Incorporated			2	6				
							32/ - 0- 0	30	Incorporated			106	0				
N34	3	Potatoes, early harvest, to small grain cover crop	Alfalfa			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated								
										22	6						
										22	6						
							0/ - 0- 22	50	Incorporated			0	0				
N35	3	Peas to Snapbean to small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digester Liquid	32/ - 0- 0	30	Incorporated								
										106	0						
							0/ - 0- 60	500	Unincorporated			0	0				
							5/ - 18- 10	5	Incorporated			3	10				
			32/ - 0- 0	35	Incorporated						124	0					

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure Applied Nutrients (lbs/acre)		UW Crop Nutrient Recs (lbs/acre)		Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)		Excess N Amount (Lbs/Acre)	Comr
											N	P2O5	N	P2O5	N	P2O5		
N36	3	Peas to Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop				0/ - 0- 60	500	Incorporated		0	0	-1	0	-1	-1	0	
							32/ - 0- 0	30	Incorporated		106	0						
							5/ - 18- 10	5	Incorporated		3	10						
							32/ - 0- 0	35	Incorporated		124	0						
N37	4	Alfalfa (1st cut) to Corn silage	Potatoes, late harvest, to small grain cover crop				0/ - 0- 60	500	Incorporated		0	0	-1	0	-1	-1	0	
							32/ - 0- 0	30	Incorporated		106	0						
							5/ - 18- 10	5	Subsurface		3	10						
							32/ - 0- 0	35	Incorporated		124	0						
N38	4	Potatoes, late harvest, to small grain cover crop	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop				3/ 4- 1- 9	10000	Incorporated		43	11	-1	0	-1	-1	0	
							5/ - 18- 10	3	Incorporated		2	6						
							32/ - 0- 0	30	Incorporated		106	0						
N39	4	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop	Potatoes, late harvest, to small grain cover crop				0/ - 0- 60	400	Incorporated		0	0	-1	0	-1	-1	0	
							5/ - 18- 10	3	Subsurface		2	6						
							32/ - 0- 0	30	Incorporated		106	0						
							32/ - 0- 0	35	Incorporated		124	0						

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Application					Manure Applied Nutrients (lbs/acre)			UW Crop Nutrient Recs (lbs/acre)			Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)	
						Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	N	P2O5	N	P2O5	N	P2O5	Excess N Amount (Lbs/Acre)	Comm
N40	4	Alfalfa	Alfalfa			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated				-1	0	-1	-1	0	
						Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated	22	6							
						Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated	22	6							
N41	4	Corn silage to small grain cover crop	Peas to small grain cover			Post Digester Liquid	3/ 4- 1- 9	5000	Incorporated				-1	0	-1	-1	0	
						Post Digester Liquid	3/ 4- 1- 9	6000	Incorporated	22	6							
						Post Digester Liquid	3/ 4- 1- 9	6000	Incorporated	26	7							
						Post Digester Liquid	32/ - 0- 0	10	Incorporated	35	0							
N42	4	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digester Liquid	3/ 4- 1- 9	10000	Incorporated				-1	0	-1	-1	0	
						Post Digester Liquid	3/ 4- 1- 9	6000	Incorporated	43	11							
						Post Digester Liquid	5/ - 18- 10	3	Incorporated	26	7							
						Post Digester Liquid	5/ - 18- 10	3	Incorporated	2	6							
						Post Digester Liquid	32/ - 0- 0	40	Incorporated	142	0							
N43	4	Snap Beans early plant to small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digester Liquid	0/ - 0- 60	500	Incorporated				-1	0	-1	-1	0	
						Post Digester Liquid	5/ - 18- 10	3	Incorporated	0	0							
						Post Digester Liquid	5/ - 18- 10	3	Incorporated	2	6							
						Post Digester Liquid	32/ - 0- 0	65	Incorporated	230	0							
N44	4	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digester Liquid	0/ - 0- 60	500	Incorporated				-1	0	-1	-1	0	
						Post Digester Liquid	5/ - 18- 10	3	Incorporated	0	0							
						Post Digester Liquid	5/ - 18- 10	3	Incorporated	2	6							
						Post Digester Liquid	32/ - 0- 0	65	Incorporated	230	0							

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure/Process Wastewater Application					Excess N Amount (Lbs/Acre)	Comm	
											Manure Applied Nutrients (lbs/acre)	UW Crop Nutrient Recs (lbs/acre)	Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)					
											N	P2O5	N	P2O5	N	P2O5		
N45	1	Corn silage to small grain cover crop	Snap Beans late plant to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	5	Incorporated		34	22	-1	0	-1	-1	0	
N46	1	Sweet Corn middle plant (May 20 - June 10) with small grain cover crop	Potatoes, late harvest, to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	10	Incorporated		67	44	-1	0	-1	-1	0	
											0/ - 0- 60	500	Incorporated	0	0			
											5/ - 18- 10	3	Incorporated	2	6			
											32/ - 0- 0	45	Incorporated	160	0			
N47	1	Potatoes, late harvest, to small grain cover crop	Corn silage to small grain cover crop			Post Digestor Solids	5/ 7- 4- 2	10	Unincorporated		50	44	-1	0	-1	-1	0	
											0/ - 0- 60	425	Unincorporated	0	0			
											32/ - 0- 0	17	Incorporated	60	0			
											32/ - 0- 0	25	Incorporated	89	0			
N48	1	Sweet corn to Late Summer Direct Seeded Legume Forage	Peas to Snapbean to small grain cover										-1	0	-1	-1	0	
											0/ - 0- 60	200	Incorporated	0	0			
							32/ - 0- 0	10	Incorporated		35	0						
N49	1	Peas to Late-Direct Seeded Legume Forage	Alfalfa										-1	0	-1	-1	0	
											0/ - 0- 60	250	Incorporated	0	0			

Field ID	Slope (%)	Previous Crop	Current Crop	Date of Applic.	Acres Applied	Manure/Process Wastewater Source	Manure Analysis Lbs avail/Ton or 1000 gal. (Ns/Ni-P-K)	Manure Appl. Rate (Tons-Gals/Acre)	Spread Method	Soil Condition (sat, non-sat, frozen, snow)	Manure/Process Wastewater Application					Excess N Amount (Lbs/Acre)	Comm		
											Manure Applied Nutrients (lbs/acre)	UW Crop Nutrient Rees (lbs/acre)	Total Nutrients Applied + Credits from legumes, manure credits, fertilizer (lbs/acre)						
											N	P2O5	N	P2O5	N	P2O5			
N50	4	Peas to Late-Direct Seeded Legume Forage	Alfalfa				0/ - 0- 60	250	Incorporated		0	0		-1	0	-1	-1	0	
N51	3	Alfalfa	Alfalfa (1st cut) to Corn silage				3/ 4- 1- 9	10000	Unincorporated		32	11		-1	0	-1	-1	0	
							3/ 4- 1- 9	5000	Unincorporated		16	6							
							32/ - 0- 0	20	Incorporated		71	0							
N52	3	Peas to Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop				0/ - 0- 60	500	Incorporated		0	0		-1	0	-1	-1	0	
							5/ - 18- 10	5	Incorporated		3	10							
							32/ - 0- 0	65	Incorporated		230	0							
N53	4	Peas to Snapbean to small grain cover	Potatoes, late harvest, to small grain cover crop				0/ - 0- 60	500	Incorporated		0	0		-1	0	-1	-1	0	
							5/ - 18- 10	5	Incorporated		3	10							
							32/ - 0- 0	65	Incorporated		230	0							
N54	3	Corn silage to small grain cover crop	Snap Beans late plant to small grain cover crop				3/ 4- 1- 9	6500	Incorporated		28	7		-1	0	-1	-1	0	
							5/ - 18- 10	3	Incorporated		2	6							
N55	4	Snap Beans early plant to small grain	Sweet Corn middle plant (May 20 - June 10) with small											-1	0	-1	-1	0	