



Sustain Rural Wisconsin Network

Moratorium Fact Sheet

CAFO Facts

- Between 2005 and 2016, the number of CAFOs nearly doubled -- from 146 to 295.
- As of May 2017, 99 (34%) of the 295 CAFOs in Wisconsin had expired WPDES permits¹
- Livestock operations have spilled at least 4.8 million gallons of manure since 2009, according to Wisconsin Department of Natural Resources data, with more than 3 million of those gallons spilled in 2013 and 2014.²
- Animal Livestock 2014/2015 in Wisconsin:
 - 3.5 million cattle and calves
 - 300,000 hogs
 - 5.11 million layers and 1.45 billion eggs
 - 53.4 million broiler chickens³

Water Quality

- Monitoring wells at the Babcock Genetics hog CAFO in La Crosse County had elevated levels of nitrates in its monitoring wells since 2005 but the DNR did not issue a notice of violation nor notice of noncompliance for the high nitrate levels.⁴
- The DNR is currently using outdated and inaccurate rainfall data in its requirements for CAFO discharge limits from the production area, manure volume and storage calculations, and the amount of land needed for manure application.⁵
- The DNR does not track operator requests or approvals for emergency manure spreading permissions (which are typically granted in the winter or in unfavorable conditions for manure spreading).
- The Natural Resources Defense Council's May 2017 report places Wisconsin as the 11th worst state with nearly 1,400 Safe Drinking Water Violations in 2015.⁶
- 2012 studies show that 47 water systems in WI have nitrate levels exceeding the MCL of 10 ppm compared to just 14 systems in 1999, a 30% increase in three years.

¹<https://docs.google.com/spreadsheets/d/1nreuP5vNNeisyd8SqRFUGjBVUJwaaYrTguCY-4PPSU8/edit#gid=0>

²<http://www.greenbaypressgazette.com/story/news/investigations/2015/02/06/manure-spills-water-supply/22983669/>

³https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Annual_Statistical_Bulletin/2016AgStats_web.pdf

⁴http://lacrossetribune.com/news/local/nitrate-nightmare-la-crosse-county-advisory-brings-flood-of-well/article_c68af82a-8ff4-5a92-aac1-ff45c771886e.html

⁵http://midwestadvocates.org/assets/resources/Safe%20Drinking%20Water%20Act%20Petition/2016-7-29_FINAL_NR_151_MEA_cmts_to_NRB.pdf

⁶ <https://www.nrdc.org/media/2017/170502>



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- In Kewaunee County, there are 16 CAFOs, roughly 98,000 cows and 34% of tested wells have unsafe levels of nitrates or bacteria.⁷
- The DNR is providing temporary emergency drinking water when tests show that a water supply is contaminated and is likely due to groundwater contaminated by manure, a person on the property contracts a water-borne illness or there is a sudden change in color or odor of well water.⁸

Water Quantity

- There are 13,000 high-capacity wells in Wisconsin with a maximum daily pumping rate of **at least** 100,000 gallons per well.⁹
- In 2015, high capacity wells pumped 223 billion gallons of water in Wisconsin.¹⁰
- Studies link aquifer depletion to the proliferation of high capacity wells over the last five decades¹¹
- Since October 2016, the DNR has approved requests for a billion gallons per month in **new** groundwater withdrawals from locations where the state's own experts warned that higher pumping levels could be expected to harm vulnerable lakes, streams and drinking water supplies.¹²
- The average rainfall in the Central Sands Region is approximately 31 inches per year. The high end of the recharge rate (the amount of water returning to the water table) is 12 inches per year. When these 12 inches of recharge water are not shared equitably, or in a sustainable manner by all users, lakes, streams and wells in the area will continue to suffer losses.¹³

Human Health and Welfare

- According to the U.S. Food and Drug Administration, nearly 80 percent of antibiotics in the United States are sold for use in livestock feeds. The manure produced by these livestock and applied to crop fields contains antibiotic-resistant bacteria, resistance genes, and 25- 75 percent of the antibiotics consumed by the animals.¹⁴

⁷<http://archive.jsonline.com/news/statepolitics/one-third-of-wells-in-kewaunee-county-unsafe-for-drinking-water-b99636500z1-363176361.html>

⁸<http://www.jsonline.com/story/news/local/wisconsin/2017/05/09/low-key-rollout-dnr-begins-giving-water-to-rose-tainted-wells/101478098/>

⁹<http://wuwm.com/post/senate-committee-advances-legislation-ease-high-capacity-well-regulations-wisconsin#stream/0>

¹⁰http://host.madison.com/wsj/news/local/govt-and-politics/growers-face-off-against-conservationists-fishin-g-enthusiasts-over-effort-to/article_c811aa05-3d47-59da-93be-cbd42089dd9e.html

¹¹ Kraft, G. and David Mechenich. March 15, 2010. Groundwater Pumping Effect on Groundwater Levels, Lake Levels, and Stream flows in the Wisconsin Central Sands.

¹²http://host.madison.com/wsj/news/local/govt-and-politics/state-oks-pumping-of-billion-gallons-from-vulnerable-aquifers/article_a8b020ca-2b04-528a-bdc8-8f8c1a0a1e6f.html

¹³ Kraft, G. and David Mechenich. March 15, 2010. Groundwater Pumping Effect on Groundwater Levels, Lake Levels, and Stream flows in the Wisconsin Central Sands

¹⁴ <http://www.jhsph.edu/news/news-releases/2013/casey-schwartz-mrsa.html>



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- Pathogenic viruses, bacteria, and protozoa live in manure, often for months if not composted or otherwise treated. These are just a few of the potential human pathogens found in manure: Escherichia coli and other coliform bacteria, Leptospira pomona, Listeria monocytogenes, Salmonella, Giardia lamblia, Campylobacter jejuni, and Cryptosporidium. Sources of infection from pathogens include fecal-oral transmission, inhalation, drinking water, or incidental water consumption during recreational water activities.¹⁵
- Ingesting high levels of nitrate has been associated with increased risk for thyroid conditions, birth defects, reproductive problems, diabetes, cancers, and a potentially fatal condition among infants, blue baby syndrome.¹⁶
- According to John Hopkins Bloomberg School of Public Health, proximity to swine manure application to crop fields and livestock operations each was associated with MRSA and skin and soft-tissue infection.¹⁷
- Ammonia emissions from hog farms react with other gases in the air to form fine particle pollution, a public health threat linked to decreased lung function, cardiovascular ailments and most seriously, premature death¹⁸
- The American Journal of Public Health further confirms that hazardous air emissions are associated with physiological and psychological effects which include high blood pressure, depression, anxiety, and sleep disturbances.
- There is consistent evidence suggesting that factory farms increase asthma in neighboring communities, as indicated by children having higher rates of asthma¹⁹

Phosphorus and Nitrates

- Agricultural runoff from CAFOs is the main cause of the dead zone in Lake Michigan's Green Bay.²⁰
- According to state estimates, nitrate is at unsafe levels in an estimated 94,000 Wisconsin households. One in five wells in heavily agricultural areas is now too polluted with nitrate for safe drinking, according to data from the state Department of Agriculture, Trade and Consumer Protection.²¹

¹⁵ https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf

<http://articles.extension.org/pages/8967/pathogens-and-potential-risks-related-to-livestock-or-poultry-manure>

<http://lshs.tamu.edu/docs/lshs/end-notes/uc%20davis%20pathogens%20in%20manure-2636453403/uc%20davis%20pathogens%20in%20manure.pdf>

¹⁶ <http://www.hecweb.org/wp-content/uploads/2014/10/Hopkins-scientists-on-CAFOs-health.pdf>

¹⁷

<http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1738717?resultClick=3#ArticleInformation>

¹⁸ http://environmentalintegrity.org/pdf/publications/CAFOAirEmissions_white_paper.pdf

¹⁹ Sigurdarson & Kline, 2006; Mirabelli et al., 2006

²⁰ <http://archive.jsonline.com/news/wisconsin/dead-zones-haunt-green-bay-as-manure-fuels-algae-blooms-die-offs-b99344902z1-274684741.html>

²¹ <http://wisconsinwatch.org/2015/11/nitrate-in-water-widespread-current-rules-no-match-for-it/>



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- UW Madison Dept. of Agriculture statistics show that the average level of available phosphorus reached optimum levels of 29-35 ppm in the mid 1970's. Those average levels rose an average of 2-4 ppm every four years through the 1990's, topping out at 52 ppm in 1999.
- A new study from UW Madison, published March 13, 2017, quantifies the negative effects of “legacy phosphorus” (accumulated overabundance of phosphorus in soil) in the Yahara Basin which can only be checked by reduction of phosphorus application to farmland. Currently, the amount of manure produced by livestock in the Upper Yahara Watershed study area indicates an excess of up to **nearly double** the manure phosphorus in comparison to crop uptake.²²

Economic Impact

- 1996 Iowa study found that proximity to a CAFO decreased neighboring property values in the following order: 40% within ½ mile; 30% within 1 mile; 20% within 1.5 miles, and; 10% within 2 miles.²³
- Todd Knutson's, a property owner in Green County, property assessment was lowered from \$220,700 to \$161,800, or about 27 percent, due to its proximity to a 2,499 hog CAFO.²⁴
- Counties with more factory farms trend toward lower income growth, fewer business, and less commercial activity.²⁵
- According to a 2006 DNR survey, Wisconsin communities have spent more than 24 million dollars to bring nitrate levels down to acceptable levels in municipal wells. That cost has been spread out among 22 municipalities with a combined population of 150,000 or more.²⁶

²² <http://news.wisc.edu/study-quantifies-role-of-legacy-phosphorus-in-reduced-water-quality/>

²³ William J. Weida, The CAFO: Implications for Rural Economies in the U.S. 1 (Colo. College & GRACE Factory Farm Project 2004) (citing Padgett & Johnson)

²⁴ <http://www.thecountrytoday.com/front-page/2016/11/14/Tax-assessment-lowered-due-to-proximity-to-hog-farm-nbsp.html>

²⁵ <http://www.und.nodak.edu/org/ndrural/Lobao%20&%20Stofferahn.pdf>

²⁶ <http://dnr.wi.gov/wnmag/html/supps/2006/apr06/threats.htm>