

**KEWAUNEE COUNTY
PUBLIC HEALTH AND GROUNDWATER PROTECTION
ORDINANCE**

ORDINANCE # _____

Section 1: Introduction.

(1) Title. This ordinance shall be referred to as the Public Health and Groundwater Protection Ordinance.

(2) Authority. This ordinance is adopted under authority granted by ss. 59.02, 59.03, 59.70 and 92.11, Wis. Stats.

(3) Purpose and Intent. The purpose of this ordinance is to promote the health and general welfare of the public by protecting, and preventing the contamination of, groundwater quality in Kewaunee County by regulating local land use and management based upon vulnerable geographic considerations such as areas of shallow soil depth to carbonate bedrock, otherwise referred to as shallow Karst landscapes.

It is not the intent of this ordinance to supersede or replace the Wisconsin agricultural nonpoint pollution control performance standards and/or prohibitions found in NR 151, Wis. Adm. Code. The intent of this ordinance is to protect the public’s health and welfare by preventing the contamination of the County’s groundwater through local regulation of land use and management practices as they pertain to the land application of wastes on shallow Karst landscapes.

(4) Declaration of Policy and Findings.

The Kewaunee County Board of Supervisors recognizes the importance of adopting a precautionary approach to protecting groundwater quality, and that proper land use and management contribute to the protection of groundwater quality; public health and welfare; and the property tax base of the County. The goal of this ordinance is to promote the protection of public health, safety and general welfare of the citizens of Kewaunee County through proper land use and management on geographically vulnerable areas, such as landscapes containing areas with less than 5 feet (60 inches) of soil depth to carbonate bedrock.

As of May 2014, testing of 556 different private rural wells in Kewaunee County, coordinated by the Land and Water Conservation Department and the University of Wisconsin-Stevens Point Environmental Analysis Lab, has shown that 29.7% of the wells sampled throughout the County, were not safe for human consumption due to presence of coliform bacteria and/or nitrates above the human health standard of 10 parts per million. Furthermore, in the specific townships where the largest areas of shallow soil depth to carbonate bedrock occur in the County, the following percentages have been found as far as the amount of wells sampled that were not safe for human consumption due to presence of coliform bacteria and/or nitrates above the

1 human health standard of 10 parts per million: Red River (42.4%), Lincoln (41.7%) and
2 Luxemburg (30.6%).

3
4 Currently, NR 214, Wis. Adm. Code, regulates land application of liquid industrial wastewater,
5 byproducts and sludge; NR 204, Wis. Adm. Code, regulates land application of municipal
6 biosolids; NR 113, Wis. Adm. Code, regulates land application of septic tank and holding tank
7 waste; and NR 151 and NR 243, Wis. Adm. Code, through USDA NRCS Nutrient Management
8 Standard 590, regulate land application of animal waste. According to the November 2013
9 Wisconsin Nutrient Management Update, 79% (second within the state) of Kewaunee County's
10 cropland was included in certified nutrient management plans on file with the Land and Water
11 Conservation Department. Clearly, the County's high local percentages of wells testing positive
12 for bacteria, and having nitrate levels above the health standard for safe human consumption,
13 supports the conclusion that current regulations covering land application of wastes, in general,
14 are inadequate for protecting human health in the County's shallow soil depth to carbonate
15 bedrock landscapes.

16
17 The Kewaunee County Board of Supervisors makes the following findings of fact based
18 on the best available science and monitoring:

- 19
20 (a) Based upon current records on file with the County, at a minimum, 554,990,508
21 gallons of liquid manure, not including additional other wastes, including septage,
22 biosolids and industrial wastewater are applied to rural lands each year in the
23 County.
24
25 (b) Land applications of the above mentioned wastes significantly impact
26 groundwater quality by:
27
28 (i) Increasing the level of nitrate, particularly in geographically vulnerable
29 areas. Refer to attached references:
30
31 (ii) Increasing the risk of pathogens and other contaminants, particularly in
32 geographically vulnerable areas. Refer to attached references:
33
34 (c) Testing of private drinking water wells indicate increased nitrate levels in
35 Kewaunee County as follows. Refer to attached references:
36
37 (d) Private drinking water wells have been compromised by other contaminants
38 including hormones and pathogens. Refer to attached references:
39
40 (e) Nitrates and other contaminants present environmental and public health risks.
41 Scientific research shows that elevated concentrations of nitrate in groundwater,
42 the most prevalent contaminant in Kewaunee County's groundwater, presents
43 the risk of excessive consumption of nitrate in drinking water that has been
44 associated with the risk of methemoglobinemia, or "blue baby syndrome", in
45 humans. Refer to attached references:
46
47 (f) Based on available data and past implementation experience in Kewaunee
48 County, current generally accepted nonpoint source pollution abatement best

1 management practices do not adequately protect the County’s groundwater
2 resources from contamination with excessive nutrients, microbial pathogens, and
3 pharmaceuticals present in waste applied to the land. For example, according to
4 2013 data submitted to DATCP, nearly 80 percent of the county’s cropland is
5 covered by nutrient management plans. In addition, current performance
6 standards in NR 151 do not effectively address applications of non-farm wastes
7 on cropland. See NR 151.07(2), Wis. Adm. Code, which excludes the application
8 of industrial waste and byproducts, municipal sludge regulated, and septage from
9 nutrient management performance standard.

10
11 (g) In addition to the findings in (f) above, research validates the limited benefits of
12 currently accepted conservation practices in protecting public health and drinking
13 water. Refer to attached references:

14
15 (h) More specifically, the performance standards, prohibitions, conservation
16 practices and technical standards developed under s. 281.16(3), Wis. Stats., are
17 unable to adequately address relevant public health concerns due to multiple
18 factors including the failure to adequately address vulnerable landscapes. Refer
19 to attached references:

20
21 (i) The following geographically vulnerable landscape features create unacceptably
22 high levels of risk for groundwater contamination from waste applications:

23
24 (i) Landscapes containing areas with less than 5 feet (60 inches) of soil depth to
25 carbonate bedrock pose an extreme vulnerability to contamination. (Erb, K. and R.
26 Stieglitz; *Final Report of the Northeast Wisconsin Karst Task Force, February 9, 2007*)

27
28 (ii) There is a high probability of groundwater contamination when waste is
29 applied to frozen, snow-covered or saturated ground in landscapes containing
30 areas with less than 5 feet (60 inches) of soil depth to carbonate bedrock. (Erb, K.
31 and R. Stieglitz; *Final Report of the Northeast Wisconsin Karst Task Force, February 9, 2007*)

32
33 (iii) There is a high probability of groundwater contamination when waste is
34 applied to drainage features that contribute runoff water to landscapes containing
35 areas with less than 5 feet (60 inches) of soil depth to carbonate bedrock. (Erb, K.
36 and R. Stieglitz; *Final Report of the Northeast Wisconsin Karst Task Force, February 9, 2007*)

37
38 (j) Adequate land use and management controls offer the potential to more
39 effectively manage the environmental and public health risks associated with the
40 application of wastes on landscapes containing areas with less than 5 feet (60
41 inches) of soil depth to carbonate bedrock.

42
43 (5) Applicability. This ordinance applies to all townships within Kewaunee County that
44 adopt this ordinance by local referendum.

1 (6) Construction. This ordinance is to be interpreted liberally to affect the purposes of
2 the ordinance. This ordinance does not abrogate, annul, impair, interfere with, limit, or
3 repeal any existing ordinance or any other power granted by the Wisconsin Statutes.
4

5 (7) Severability. The provisions of this ordinance are severable. If any provision or its
6 application to any person or circumstance is determined to be invalid, that invalidity will
7 not affect any other provision or application that can be given effect without the invalid
8 provision or application.
9

10 **Section 2: Definitions.**

11 In this ordinance:

12
13
14 “Direct conduits to groundwater”, as per NR 151.002(11m), Wis. Adm. Code, means
15 wells, sinkholes, swallets, fractured bedrock at the surface, mine shafts, nonmetallic
16 mines, tile inlets discharging to groundwater, quarries, or depressional groundwater
17 recharge areas over shallow fractured bedrock.
18

19 “Frozen ground”, as per NR 243.03(24), Wis. Adm. Code means soil that is frozen
20 anywhere between the first ½ inch and 8 inches of soil as measured from the ground
21 surface.
22

23 “Industrial wastewater” means wastewater from food, dairy, and other industrial
24 facilities.
25

26 “Landscapes likely having areas less than 5 feet (60 inches) in soil depth to carbonate
27 bedrock” means those areas depicted on the “Depth to Bedrock Map - Figure D”,
28 developed by the United States Geology Survey and Wisconsin Department of Natural
29 Resources, and previously approved by the Land and Water Conservation Committee,
30 County Board, and the Wisconsin Department of Agriculture, Trade and Consumer
31 Protection as part of the County’s current Land & Water Resource Management Plan –
32 January 2010 through December 2019, hereby incorporated by reference. See “Depth
33 to Bedrock Map – Figure D” attached to this ordinance.
34

35 “LWCC” means the Kewaunee County Land and Water Conservation Committee.
36

37 “LWCD” means the Kewaunee County Land and Water Conservation Department.
38

39 “NRCS” means Natural Resources Conservation Service.
40

41 “Person” means an individual, corporation, partnership, cooperative association, limited
42 liability company, trust, or other legal organization or entity.
43

44 “Saturated soils”, as per NR 243.03(57), Wis. Adm. Code, means soils where all pore
45 spaces are occupied by water and where any additional inputs of water or liquid wastes
46 cannot infiltrate into the soil.

1
2 “Septage”, as per NR 113.03(55), Wis. Adm. Code, means the wastewater or contents
3 of septic or holding tanks, dosing chambers, grease interceptors, seepage beds,
4 seepage pits, seepage trenches, privies or portable restrooms.

5
6 “Sewage sludge”, “sludge” or “biosolids”, as per NR 204.03(55), Wis. Adm. Code,
7 means the solid, semi-solid or liquid residue generated during the treatment of domestic
8 sewage in a treatment works. Sewage sludge includes scum or solids removed during
9 primary, secondary or advanced wastewater treatment processes and material derived
10 from sewage sludge. Sewage sludge does not include ash generated during the firing
11 of a sewage sludge incinerator or grit and screenings generated during preliminary
12 treatment of domestic sewage in a treatment works. *(Note: All three terms defined here are*
13 *interchangeable, and recognized by the LWCD, as they are all in common use.)*

14
15 “Sinkhole” means a point where surface water runoff disappears underground due to
16 the fractured nature of the underlying bedrock.

17
18 “Snow-covered ground”, as per NR 243.03(60), Wis. Adm. Code, means areas of a field
19 covered with any amount of snow.

20
21 “Swallet” means a place where water disappears underground in a limestone region.

22
23 “USDA” means United States Department of Agriculture.

24
25 “Waste” means septage, sewage sludge, sludge, biosolids, industrial wastewater,
26 animal wastes, or any combination of these materials.

27
28 **Section 3: Regulation of Local Soil and Water Resource Management Practices**
29 **Pursuant to s. 92.11, Wis. Stats.**

30
31 (1) Application of this ordinance in any town is subject to approval by a majority of all
32 votes cast in the town in a referendum conducted in accordance with sec. 92.11(4), Wis.
33 Stats., using the following question:

34
35 “Shall the town approve the application of Kewaunee County Ordinance # _____
36 to the town in order to prevent groundwater pollution, protect human health, prevent the
37 spread of disease, and promote the general welfare of the citizens of Kewaunee County
38 by regulating local land use and management practices in the town, specifically through
39 controlling the application of wastes on shallow carbonate bedrock areas as well as
40 direct conduits to groundwater?”

41
42 (2) Land Use and Management Restrictions

43
44 (a) Wastes shall not be mechanically applied to land, or allowed to directly drain to,
45 landscapes likely having areas less than 20 feet in soil depth to carbonate bedrock
46 during the time period of January 1st through April 15th, unless an exemption is issued,
47 in writing, by the Land and Water Conservation Committee. On or about March 10th, the

1 Land and Water Conservation Committee will meet, and may take action to amend the
2 April 15th date mentioned above.

3
4 (b) Wastes shall not be mechanically applied to landscapes likely having areas less
5 than 20 feet in soil depth to carbonate bedrock when the soil is frozen, snow-covered or
6 saturated; when snow is actively melting such that water is flowing off the field; or
7 precipitation capable of producing runoff is forecast within twenty-four (24) hours of
8 application.

9
10 (c) Wastes shall not be mechanically applied to direct conduits to groundwater, or
11 allowed to directly drain to direct conduits to groundwater.

12
13 (d) Temporarily stockpiling or stacking of wastes on landscapes likely having areas less
14 than 20 feet in soil depth to carbonate bedrock shall not occur during the time period of
15 January 1st through April 15th, unless an exemption is issued, in writing, by the Land and
16 Water Conservation Committee. Exempted stockpiling or stacking locations shall
17 comply with the criteria for animal waste found in Table 10 of the USDA Natural
18 Resources Conservation Service Technical Standard 313, hereby incorporated by
19 reference. See "USDA NRCS Standard 313, Table 10" attached to this ordinance.

20
21 **Section 4: Land and Water Conservation Committee Powers.**

22
23 (1) The Land and Water Conservation Committee is authorized to hear and decide
24 appeals where it is alleged there is an error in any decision, determination, or order
25 issued by the County Conservationist, except that this authority does not include the
26 authority to hear appeals from a citation or any decision, determination, or order that
27 may be appealed to the circuit court or that is otherwise subject to judicial review.
28 Appeals under this ordinance will be conducted in accordance with Wis. Stat. Ch. 68.

29
30 (2) The Land and Water Conservation Committee, upon written request by a landowner,
31 may grant exemption to land use and management restrictions in Section 3 upon the
32 submission of a spreading or stacking plan to adequately minimize the public health
33 risks.

34
35 (3) Specific sites may be reviewed by the Land and Water Conservation Committee,
36 upon written request by a landowner, and if contrary depth to bedrock mapping
37 evidence is provided using technology currently found acceptable by the Wisconsin
38 Geological and Natural History Survey, the Committee may, after consulting with the
39 Land and Water Conservation Department, amend the mapping designation.

40
41 (4) The Land and Water Conservation Committee may consult with the county public
42 health department and other appropriate resources to obtain accurate public health data
43 and expertise necessary to the administration of the ordinance.

44
45 **Section 5: Administration.**

1 (1) Department Responsibilities. This Ordinance shall be administered by the Land
2 and Water Conservation Department and the County Conservationist shall:

3
4 (a) Keep an accurate record of all inspections, and other official actions.

5
6 (b) Investigate complaints relating to compliance with this ordinance.

7
8 (c) Perform any other duties specified in this ordinance.

9
10 (2) Inspection Authority. The Land and Water Conservation Department is authorized
11 pursuant to Wis. Stat. sec. 92.07(14) to enter upon any lands affected by this ordinance
12 to inspect the land to determine compliance with this ordinance. If permission to enter
13 lands is not given by the landowner, entry may be gained pursuant to Wis. Stat. sec.
14 66.0119. Refusal to grant permission to enter lands affected by this ordinance for
15 purposes of inspection shall be considered a violation of this ordinance.

16
17 (3) Citation Authority. The County Conservationist, or his/her designee, may issue a
18 citation for any violation of this ordinance.

19
20 (4) Referral Authority. The County Conservationist may refer a violation of this
21 ordinance to the County's Corporation Counsel for legal action.

22
23 (5) Other Enforcement Means. Nothing in this section may be construed to prevent the
24 County from using any other lawful means to enforce this ordinance, and does not limit
25 or prevent the County Conservationist from taking other emergency or interim action,
26 including an abatement order, to prevent or mitigate imminent harm to public health and
27 safety or other actions otherwise authorized by law.

28
29 **Section 6: Violations.**

30
31 (1) It is unlawful for a person to violate any provision of this ordinance.

32
33 (2) It is unlawful for any person to knowingly provide false information, make a false
34 statement, or fail to provide or misrepresent any material fact to a county agent, board,
35 commission, committee, department, employee, officer, or official acting in an official
36 capacity under this ordinance.

37
38 (3) It is unlawful for a person to disobey; fail, neglect, or refuse to comply with; or
39 otherwise resist an order issued pursuant to this ordinance.

40
41 (4) A separate offense is deemed committed on each day that a violation occurs or
42 continues.

43
44 (5) The failure of any agent, board, commission, committee, department, employee,
45 officer, or official to perform any official duty imposed by this code will not subject the

1 agent, board, commission, committee, department, employee, officer, or official to the
2 penalty imposed for a violation of this code unless a penalty is specifically provided.

3
4 **Section 7: Penalties.**

5
6 (1) This ordinance may be enforced through civil forfeiture or through issuance of an
7 injunction by the circuit court in an action initiated by the County or Land and Water
8 Conservation Committee. The court may award reasonable attorney fees to any plaintiff
9 in a successful action for enforcement through injunction.

10
11 (2) A person will, upon conviction for a violation of this ordinance, forfeit not less than
12 \$250 nor more than \$500 for each offense, together with the costs of prosecution for
13 each violation, and may be ordered to take such action as is necessary to abate the
14 offense within a specified time.

15
16 (3) The minimum and maximum forfeitures specified in this section are doubled each
17 time that a person is convicted for the same violation of this ordinance within a 24
18 month period.

19
20 (4) A person who has the ability to pay a forfeiture entered pursuant to this ordinance,
21 but who fails or refuses to do so may be confined in the county jail until the forfeiture
22 and costs are paid, but the period of confinement may not exceed 30 days. In
23 determining whether a person has the ability to pay, all items of income and all assets
24 may be considered regardless of whether the income and assets are subject to
25 garnishment, lien, or attachment by creditors.

26
27 (5) In the event an offense is not abated as ordered, Kewaunee County may take such
28 action as is necessary to abate the offense and the cost of such abatement will become
29 a lien upon the person's property and may be collected in the same manner as other
30 taxes.