

IOWA DEPARTMENT OF NATURAL RESOURCES

Petition by the Iowa Environmental Council and the Environmental Law and Policy Center for the adoption of rules relating to animal feeding operations.	PETITION FOR RULE MAKING
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The Iowa Environmental Council and the Environmental Law and Policy Center present this petition for rule making pursuant to 567 IAC 5.1 and the Uniform Rules on Agency Procedure. The petition requests the revision of rules relating to the siting of animal feeding operations. The revisions requested in this petition are based on the need to protect water quality, specifically as it relates to floodplains. The petition requests that the Iowa Department of Natural Resources (“DNR”) promulgate a new rule governing animal feeding operations.

1. Relevant Law

The Iowa Legislature charged the Environmental Protection Commission (EPC) with adopting regulations regarding the construction of animal feeding operations (AFOs) and concentrated animal feeding operations (CAFOs) in floodplains. Iowa Code section 459.301(5) states:

- a. The department shall designate by rule each one hundred year floodplain in this state according to the location of the one hundred year floodplain. A person shall not be prohibited from constructing a confinement feeding operation structure on a one hundred year floodplain unless the one hundred year floodplain is designated by rule in accordance with this subsection.

The statute goes on to provide interim procedures “[u]ntil the effective date of rules adopted by the department to designate the location of each one hundred year floodplain in this state.” IOWA CODE § 459.301(5)(b). The Iowa DNR has operated under these “interim” procedures for two decades: the legislature passed the requirement to adopt the floodplain in rule in 2002.

The legislature predicated regulation of AFOs on the adoption of the floodplain map. At section 459.310(2), the law provides that: “Except as provided in subsection 4, a confinement feeding operation structure shall not be constructed on land that is part of a one hundred year floodplain as designated by rules adopted by the department pursuant to section 459.301.”

Similarly for open feedlots, siting depends on a defined floodplain or floodway: “A settled open feedlot effluent basin or an unformed animal truck wash effluent structure constructed on a floodplain or within a floodway of a river or stream shall comply with rules adopted by the commission.” IOWA CODE § 459A.302(5).

Iowa Code at section 459.301(42) defines the one hundred year floodplain to mean:

the land adjacent to a major water source, if there is at least a one percent chance that the land will be inundated in any one year, according to calculations adopted by rules adopted pursuant to section 459.103. In making the calculations, the department shall consider available maps or data compiled by the federal emergency management agency.

A “major water source” means a surface water that can float a boat with a person in it for six months in a ten year period.¹ Thus, while not every surface water is subject to the floodplain restrictions, most flowing waters would be included.

Section 459.103(1) provides broad authority to adopt rules to regulate animal feeding operations:

The commission shall establish by rule adopted pursuant to chapter 17A, requirements relating to the construction, including expansion, or operation of animal feeding operations, including related animal feeding operation structures. The requirements shall include but are not limited to minimum manure control, the issuance of permits, and departmental investigations, inspections, and testing.

More generally, the EPC has broad statutory authority to “Develop comprehensive plans and programs for the prevention, control and abatement of water pollution.”² No other department or commission has this duty – only the EPC has authority to adopt rules for water quality protection.

The EPC has not fulfilled its statutory obligation to adopt the floodplain map required by law. Nor has it used its general rule making authority to adopt a map.

2. Summary of Argument in Support of the Proposed Rules

Iowa Code imposes a general prohibition against building concentrated animal feeding operations in the 100-year floodplain. The EPC has had a statutory directive since 2002 to adopt a floodplain map by rule, which would make the prohibition effective. It has not done so. The EPC should adopt a map now to fulfill its legal duty. Adopting a map now is appropriate because a map is available and flooding concerns will worsen with climate change.

A brief in support of the proposed rules is attached (see Attachment A).

3. Summary of Data in Support of the Proposed Rules

The Iowa Flood Center began developing floodplain maps based on Light Detection and Ranging (LiDAR) data in 2010. These maps are submitted to the Federal Emergency Management Agency

¹ IOWA CODE § 459.102(39).

² IOWA CODE § 455B.173; *see also* IOWA CODE § 455B.173(12) (providing the EPC authority to “Adopt, modify, or repeal rules relating to the construction or operation of animal feeding operations, as provided in sections relating to animal feeding operations provided in chapter 459, subchapter III”).

(FEMA) on a county-by-county basis for use as FEMA floodplain maps. The Iowa DNR has relied on the floodplain maps to determine areas not in the 100-year floodplain for purposes of the prohibition in state law, but they have not been adopted in rule as required by Iowa Code.

Iowa has been subjected to a series of devastating floods in the past three decades. Climate change is expected to exacerbate flooding in Iowa due to the changes in the intensity of storms and changing weather patterns. The state has regularly suffered from severe floods that have caused substantial damage and affected large areas.

4. Text of the Proposed Rule

Amend 65.1 as follows:

“One hundred year floodplain” means the land adjacent to a major water source, if there is at least a 1 percent chance that the land will be inundated in any one year, according to ~~calculations adopted by rules~~ the map in Appendix E, adopted pursuant to Iowa Code section 459.103. ~~In making the calculations, the department shall consider available maps or data compiled by the Federal Emergency Management Agency.”~~

The new “Appendix E” would be the current floodplain map developed by DNR under the Statewide Floodplain Mapping Program.

5. Description of Affected Class of Persons

Feedlot developers would be affected because they would no longer need to follow the interim process provided under Iowa Code section 459.301(5)(b). All Iowans will be affected by the proposed rules because the rule change could improve water quality statewide. In addition, non-Iowans who are interested in or rely on Iowa’s water resources will benefit from the cleaner water.

6. Request for a Meeting

Petitioners respectfully request a meeting with DNR regarding this petition as provided at 567 IAC 5.1 and the Uniform Rules on Agency Procedure.

7. Agency Consideration

The Uniform Rules on Agency Procedure provide that the agency must respond “within 60 days after the filing of the petition or within any longer period agreed to by the petitioner.” Petitioners agree to a period of consideration for the petition of up to six months from the date of filing (with an additional extension of up to three months upon consent by petitioners). This extension will 1) ensure that DNR can adequately solicit public input and provide affected parties with a sufficient opportunity for input, 2) ensure that the state has enough time to conduct a fiscal/job impact analysis, and 3) provide adequate time for permit derivation discussions.³

³ See Environmental Protection Commission, Denial of Petition for Rulemaking by Iowa Environmental Council and Environmental Law and Policy Center at 4-5 (October 14, 2013) (describing the need for public input before issuing notice of intent to adopt rules).

IEC and ELPC recognize that the DNR has committed to undertake a rule making process related to feedlots in the future. DNR stated at the EPC meeting on February 15, 2022, that the process will involve stakeholder input on a range of topics. That process has not started, does not have a defined timeline, and has no completion deadline. The EPC should direct the agency to get feedback on the flood plain map early in the upcoming process in order to allow the EPC to adopt the floodplain map within six months and before the stakeholder process on other rule changes may be complete. If the stakeholder process has not started by July 1, 2022, EPC should consider this rulemaking petition separately in order to comply with its statutory duty and to ensure Iowa's waters are protected

8. Inquiries

Communication regarding this petition should be directed to Michael R. Schmidt of the Iowa Environmental Council, Mailing Address: 505 5th Avenue, Suite 850, Des Moines, Iowa 50309. Email: schmidt@iaenvironment.org. Phone: 515-244-1194, extension 212.

9. Enclosures

Enclosure A: Brief in support of proposed rule making

Signed:

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**BRIEF IN SUPPORT OF PETITION FOR RULEMAKING TO REVISE RULES
RELATING TO ANIMAL FEEDING OPERATIONS**

I. BACKGROUND

Iowa is known for its agricultural production, including livestock and the crops they eat. Livestock in Iowa has become highly concentrated in animal feeding operations, with more than 12,000 active facilities identified by Iowa DNR. The manure produced by animals in concentrated animal feeding operations (CAFOs) is far greater than the human waste in the state. It has contributed to the state’s poor water quality and can only be remedied by amending the state’s regulatory oversight.

Flooding can cause problems that seriously threaten water quality and public health: loss of the animal feeding operation itself, loss of animals, and pollution of surface waters from manure stored at the animal feeding operation. When a manure storage structure floods as several did in 2019, it can pollute a large quantity of water with pathogens, nitrogen, and phosphorus.⁴ To protect against those harms, Iowa law expressly prohibits construction of new confinements in the floodplain while allowing new structures – such as manure storage structures – for existing confinements.⁵ Open feedlots may be constructed in a floodplain, but must comply with siting rules adopted by the EPC.⁶ Under those rules, the DNR “may” require a permit.⁷

The above prohibitions and limitations depend on identification of the 100-year floodplain. For the last 20 years, however, DNR has failed to adopt a map identifying the floodplain. Instead, DNR has operated under interim procedures, issuing permits on a case-by-case basis until the EPC adopts the floodplain map.

A. Flooding Has Serious Costs and Will Worsen With Climate Change.

Iowa has been subjected to a series of devastating floods in the past three decades. Experts expect climate change to exacerbate flooding in Iowa, and the extent of floodplains may change due to the changes in the intensity of storms and changing weather patterns.⁸ Iowa should be preparing for these types of repeated disasters. Adopting a floodplain map to facilitate compliance is an important step to implement state policy.

⁴ Erin Jordan, “Overflowing manure tanks reported in western Iowa, Eastern Iowa on alert,” *The Gazette* (Mar. 25, 2019), available at <https://www.thegazette.com/crime-courts/overflowing-manure-tanks-reported-in-western-iowa-eastern-iowa-on-alert/>.

⁵ Iowa Code § 459.310(2).

⁶ Iowa Code § 459A.302(5);

⁷ 567 IAC 65.109(6).

⁸ *See, e.g.*, “Research Links Climate Change to Flooding in Iowa,” University of Iowa IIHR (Mar. 19, 2021); Wing, O.E.J., Lehman, W., Bates, P.D. et al. Inequitable patterns of US flood risk in the Anthropocene. *Nat. Clim. Chang.* 12, 156–162 (2022). <https://doi.org/10.1038/s41558-021-01265-6>.

In the time that CAFO construction has proliferated across Iowa, the state has suffered from severe floods that have caused substantial damage and affected large areas. In 1993, flooding in central and eastern Iowa forced the Des Moines Water Works to suspend operations for weeks. The flood cost an estimated \$15 billion in damages.⁹ In 2008, the Cedar River flooded multiple communities, most notably an area of more than 10 square miles in Cedar Rapids.¹⁰ In 2011, the Missouri River crested nearly 10 feet above flood stage in southwest Iowa.¹¹

And in 2019, historic flooding resulted in a Presidential Disaster Declaration for 80 of Iowa's 99 counties.¹² Long-term flooding affected portions of eastern Iowa in 2019 and affected substantial low-lying areas near the Mississippi River.¹³ Hog facilities in southwest Iowa flooded, killing the livestock.¹⁴ Manure tanks overflowed, allowing manure from feedlots to enter surface waters.¹⁵ In other cases, floods cut off access to feedlots even if the feedlot itself was above the floodwaters.¹⁶ Because it was the second-wettest year on record,¹⁷ the heavy rains and flooding ultimately affected nearly 20 million acres of farmland across the country.¹⁸ The damage totaled over \$18 billion; it significantly affected barge traffic to transfer agricultural products.¹⁹

Agriculture near sections of the Mississippi River in Iowa is possible due to levees that protect from 100-year storms. FEMA does not consider these areas to be floodplains, and the Iowa DNR has relied on those maps to determine that the areas are not in the 100-year floodplain for purposes of the prohibition in state law. But in the past, these levees have not always held: in 2008, more

⁹ Merrit Kennedy, "The Mississippi River Has Been Flooding For 41 Days Now," NPR, May 3, 2019, available at <https://www.npr.org/2019/05/03/720043317/the-mississippi-river-has-been-flooding-for-41-days-now>.

¹⁰ "Flood of 2008 Facts and Statistics," City of Cedar Rapids, available at https://www.cedar-rapids.org/discover_cedar_rapids/flood_of_2008/2008_flood_facts.php (last visited Dec. 20, 2021).

¹¹ "National Weather Service Advanced Hydrologic Prediction Services," National Weather Service, available at https://water.weather.gov/ahps2/hydrograph.php?wfo=oax&gage=omhnl&prob_type=stage&source=hydrograph.

¹² "Action Plan for Disaster Recovery Spring 2019 Flooding (DR-4421)," Iowa Economic Development Authority (Apr. 30, 2020), at 8, available at <https://www.iowaeda.com/UserDocs/2019cdbg-dr-draft-action-plan.pdf>.

¹³ Merrit Kennedy, "The Mississippi River Has Been Flooding For 41 Days Now," NPR, May 3, 2019, available at <https://www.npr.org/2019/05/03/720043317/the-mississippi-river-has-been-flooding-for-41-days-now>.

¹⁴ David Pitt and Margery Beck, "Floodwaters threaten millions in crop and livestock losses," Associated Press (Mar. 20, 2019), available at <https://apnews.com/article/north-america-iowa-us-news-ap-top-news-ia-state-wire-6d66f63a5f76410596387befc20ccdee>.

¹⁵ Erin Jordan, "Overflowing manure tanks reported in western Iowa, Eastern Iowa on alert," The Gazette, Mar. 25, 2019, available at <https://www.thegazette.com/crime-courts/overflowing-manure-tanks-reported-in-western-iowa-eastern-iowa-on-alert/>.

¹⁶ *Id.*

¹⁷ NOAA, "2019 was the 2nd wettest year on record for the U.S.," Jan. 8, 2020, available at <https://www.noaa.gov/news/2019-was-2nd-wettest-year-on-record-for-us>.

¹⁸ Amal Ahmed, "Last year's historic floods ruined 20 million acres of farmland," Popular Science, Jan. 20, 2020, available at <https://www.popsoci.com/story/environment/2019-record-floods-midwest/>.

¹⁹ NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2021). <https://www.ncdc.noaa.gov/billions/>, DOI: [10.25921/stkw-7w73](https://doi.org/10.25921/stkw-7w73); Margery A. Beck, "Flooding disrupts farm shipments on the Mississippi River," Des Moines Register, May 18, 2019, available at <https://www.desmoinesregister.com/story/news/2019/05/18/iowa-ia-business-agriculture-corn-soy-grain-shipments-flooding-farm-mississippi-river-barges/3723574002/>.

than a dozen levees failed to hold back floodwater.²⁰ More recently, four Iowa levees along the Missouri River breached in 2019, along with eight levees in two other states.²¹ The U.S. Army Corps of Engineers has identified several levees in Iowa as having a high or moderate risk of failure, but even “low-risk” Iowa levees breached in 2019.²²

Climate change is expected to exacerbate the intensity and frequency of storms in Iowa, including rainfalls. The “Midwest water hose” is expected to increase the precipitation in the Midwest and already contributed to the severity of flooding in 2019.²³ The Environmental Protection Agency says that average annual precipitation in most of the Midwest increased by 5 to 10 percent in the last half century.²⁴

Reliance on purely historical data or outdated modeling puts resources at risk: communities may suffer greater losses, water will be polluted with agricultural chemicals, and the agricultural investments will be lost. Adopting a floodplain map and subjecting it to regular review provides guidance to the public and can protect against more debilitating losses.

A. DNR’s “Interim” Procedures

Under the interim procedures in effect for the last 20 years, DNR has evaluated feedlot applications (both open lots and confinements) on a case-by-case analysis to determine whether each is in the 100-year floodplain. Between 2013 and an IEC data request in 2021, DNR issued seven floodplain permits and 729 declaratory orders (determining that a proposed feedlot was not in the floodplain). IEC reviewed dozens of DNR’s floodplain decision documents to assess the process DNR has used to make its determinations. IEC found DNR has used a range of approaches to determine whether feedlots are in the 100-year floodplain.

Many developers submitted an application for a declaratory order because the feedlot would be located in alluvial soils.²⁵ These soils are associated with deposition from moving water and require an application to DNR.²⁶ In cases where floodplain maps were not available, DNR made

²⁰ Nick Carey, “Mississippi river overflows levees,” Reuters, June 18, 2008, available at <https://www.reuters.com/article/uk-usa-flooding/mississippi-river-overflows-levees-idUKN1845062720080619>.

²¹ Kim Norvell and Austin Cannon, “‘The whole thing is trashed’: Damaged levees along Missouri River could cost billions to fix,” Des Moines Register, Mar. 19, 2019, available at <https://www.desmoinesregister.com/story/news/2019/03/19/iowa-flooding-2019-weather-rain-levees-breached-mills-fremont-county-hamburg-kim-reynolds-mike-pence/3214462002/>.

²² “High Risk Levees along the Upper Mississippi River,” Environmental Law and Policy Center (May 2020), available at <https://elpc.org/wp-content/uploads/2020/05/ELPC-High-Risk-Levees-Along-the-Mississippi-River.Nov..20.19.pdf>.

²³ Donnell Eller, “Climate change-driven ‘Midwest water hose’ caused massive 2019 flooding in Iowa, elsewhere, UI researchers find,” Des Moines Register, Mar. 2, 2021, available at <https://www.desmoinesregister.com/story/money/agriculture/2021/03/02/ui-study-climate-change-midwest-water-hose-dumping-rain-university-iowa/6884486002/>.

²⁴ “What Climate Change Means for Iowa,” U.S. EPA (Aug. 2016), available at <https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-ia.pdf>.

²⁵ See, e.g., Declaratory Order nos. 2016-84-DO01, 2017-84-DO07, 2020-29-DO01.

²⁶ 567 IAC 65.9(1)(o).

conclusory statements with limited analysis or rationale. DNR often concluded that the nearest water was not a “major water source” and therefore the site was not within the definition of the floodplain.²⁷ In at least one such case, DNR concluded a facility was *not* in a floodplain despite finding that “the area would be inundated by the ‘100-year’ flood.”²⁸ In rarer cases, DNR relied on DNR engineering analysis in direct response to a petition for a declaratory order.²⁹

Under any of these circumstances above, a map adopted by rule would avoid the burden of unnecessary applications, as well as DNR resources to process and analyze all requests on a case-by-case basis.

B. Floodplain Mapping in Iowa

DNR recognized the need to develop updated floodplain maps in response to severe flooding in 2008.³⁰ The agency began a project with the Iowa Flood Center to update floodplain maps statewide in 2010.³¹ These maps rely on Light Detection and Ranging (LiDAR) to precisely identify elevation of the landscape, allowing more accurate floodplain mapping. The Iowa Flood Center maps have been completed statewide.³²

DNR has used these floodplain maps to pursue approval from the Federal Emergency Management Agency (FEMA) for use as Flood Insurance Rate Maps.³³ To date, approximately 86 county maps have final approval and 13 counties are pending approval.³⁴ The county maps with pending approval have not been subject to FEMA’s appeal and compliance periods required for use as Flood Insurance Rate Maps, which can lead to small modifications.³⁵ Although the EPC is directed to “consider” FEMA maps,³⁶ nothing in the Iowa Code or rule requires FEMA approval. In practice, FEMA is adopting the Iowa-developed maps instead of the reverse.

Where they have been available, DNR has relied on Iowa Flood Center floodplain maps in its case-by-case analysis; this approach is straightforward and shows the benefit of having a map of the floodplain. DNR has used the maps regardless of FEMA approval status.³⁷ But because no map has been adopted in rule, DNR still processes every individual application and conducts floodplain analysis for each submission. This case-by-case approach means that DNR is often using the maps to make decisions with unnecessary administrative process. Applicants and the public do not know what DNR relies on when making its decisions.

²⁷ See, e.g., Declaratory Order nos. 2016-84-DO01, 2016-84-DO08.

²⁸ Cover letter to Corrected Declaratory Order no. 2011-58-DO01 (replacing original declaratory order finding the facility was in a floodplain).

²⁹ See, e.g., Declaratory Order no. 2008-58-DO04.

³⁰ “Flood Plain Mapping,” Iowa DNR, last visited Mar. 29, 2022, available at <https://www.iowadnr.gov/Environmental-Protection/Land-Quality/Flood-Plain-Management/Flood-Plain-Mapping>.

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*; Scott Ralston, personal communication, June 28, 2021.

³⁵ Scott Ralston, personal communication, June 28, 2021.

³⁶ IOWA CODE § 459.301(42)

³⁷ See, e.g., Declaratory Order No. 2018-60-DO02.

II. EPC IS REQUIRED BY LAW TO ADOPT A FLOODPLAIN MAP.

Iowa law restricts the siting of animal feeding operations in floodplains.³⁸ The EPC must adopt the floodplain map developed under the Statewide Floodplain Mapping Program to fulfill its statutory duty. DNR has applied the procedures inconsistently due to lack of an official floodplain map or clear procedures for evaluation. These issues would be resolved by adoption of the floodplain map.

B. The Statute Requires Adoption and Application of a Floodplain Map.

Iowa Code section 459.301(5) provides that:

- a. The department *shall* designate by rule each one hundred year floodplain in this state according to the location of the one hundred year floodplain. A person shall not be prohibited from constructing a confinement feeding operation structure on a one hundred year floodplain unless the one hundred year floodplain is designated by rule in accordance with this subsection. (Emphasis added)

The statute does not condition the adoption of the floodplain map upon approval by any federal agency or other external reviewer. The DNR is simply directed to adopt a 100-year floodplain map. DNR has discretion in deciding how to define the floodplain, as explained in the definition of the 100-year floodplain in statute:³⁹

“One hundred year floodplain” means the land adjacent to a major water source, if there is at least a one percent chance that the land will be inundated in any one year, according to calculations adopted by rules adopted pursuant to section 459.103. In making the calculations, the department shall consider available maps or data compiled by the federal emergency management agency.

DNR is not bound by the decisions of FEMA or any other federal agency, and in fact the state is providing maps to FEMA for approval. The EPC could adopt the Iowa Flood Center maps immediately.⁴⁰ Until the EPC adopts such a map, the statute is not given its full effect and the EPC is not complying with Iowa law.

The statute also requires EPC to adopt rules to regulate open feedlots in floodplains via section 459A.302(5):

A settled open feedlot effluent basin or an unformed animal truck wash effluent structure constructed on a floodplain or within a floodway of a river or stream shall comply with rules adopted by the commission.

Thus, the statute gives broad discretion to the EPC in adopting appropriate regulations for open feedlots, but the statute relies on the adoption and application of a floodplain map.

³⁸ IOWA CODE § 459.301(5).

³⁹ IOWA CODE § 459.102(41).

⁴⁰ The EPC can update the map via rulemaking if there are changes due to the FEMA review, and in fact agencies must regularly review rules for updates. IOWA CODE § 17A.7(2).

IEC and ELPC’s petition proposes to the EPC adopt an appendix to the rule that contains the floodplain map. The new “Appendix E” would be the current floodplain map developed by DNR under the Statewide Floodplain Mapping Program. The map includes the National Flood Hazard Layer geospatial database, which is maintained and provided by FEMA to support the National Flood Insurance Program. It would also include the maps that have not yet obtained final approval from FEMA, but which DNR relies on to issue floodplain development permits in areas without an approved FEMA map.⁴¹ DNR should make the map available on its website and available to download for use in geographic information system software.

The proposed change would delete the language “calculations adopted by rules” in the definition of the 100-year floodplain. This change is appropriate because the statute requires adopting a map, not calculations. Calculations to determine the floodplain would be less accessible to the public and would need to be tailored based on the local geographic features. Furthermore, DNR has not adopted calculations in the two decades since the statute’s passage.

The legislature provided an unambiguous directive to the EPC in law to adopt a floodplain map. Although the statute provided for an interim approach, that does not excuse the EPC from complying with the law. The interim procedures lack the same level of clarity, impose a greater administrative burden, and do not fulfill the intent of the statute. The EPC must adopt a floodplain map.

III. CONCLUSION

The EPC must act to fulfill its legislative duty. Failure to protect Iowa’s resources will increase costs for Iowans and degrades the state’s water quality. Adopting a floodplain map into rule would fulfill a legislative directive and protect Iowans from AFOs that pose higher risks to water quality.

The Iowa Environmental Council and Environmental Law & Policy Center request the EPC adopt the rules proposed in the petition to protect water quality across the state of Iowa.

⁴¹ See, e.g., Declaratory Order No. 2018-60-DO02 (relying on Iowa Floodplain Center map developed through hydrologic modeling).