



Animal Feeding Operation Updates

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Cold weather concrete pours – A word of advice from an expert

Can your concrete stand up to the weather? The Iowa Department of Natural Resources' senior AFO engineer Paul Petitti is a professional when it comes to concrete inspections.

“Concrete contains water and must not be allowed to freeze in the first seven days,” he says. “If properly cured, the concrete will reach about 70 percent of its design strength in the first week. And, about 90 percent of its design strength in 28 days.”

Follow Petitti's tips for cold weather concrete to be successful.

Plan ahead, look at long-term forecasts and suspend concrete pouring for the season once cold weather hits.

When construction can't be halted, follow these practices once temperature drops below freezing:

- Use insulating blankets to keep ground from freezing before you pour a floor slab and to cover the floor slab after pouring. Leave blankets on for seven days.
- Use insulating blankets to keep freshly poured walls from freezing. Leave blankets and forms on for three days. If temperatures remain below freezing, replace blankets and leave in place for four more days.
- If cold weather arrives after properly pouring slabs and walls and the pit's been backfilled, put a few feet of water into the deep pit to prevent frost heave.

Be aware:

- Hot water in the concrete mix can help, but it is not a substitute for blankets.
- An accelerator admixture in the concrete (calcium chloride) may also help, but, again, it is not a substitute for blankets.
- Plastic drain tile becomes very brittle in cold weather, so it is subject to breaking during construction activities such as backfilling.

Petitti reminds contractors they must call and notify the regional DNR [field office](#) before pouring slabs.

DNR rules refer to the American Concrete Institute's Standard 306 "Recommended practices for Cold Weather Concreting." Refer to the [306 Standard](#) for a thorough understanding of cold weather concreting.

Counties: Prepare for signup to evaluate animal confinement sites

The Iowa Department of Natural Resources reminds the Iowa State Association of Counties in early December that counties interested in evaluating construction permits for proposed animal feeding facilities must adopt a construction evaluation resolution.

On average, 88 counties pass a resolution each year, allowing them to review construction permit applications required for larger, totally roofed animal feeding operations (confinements).

County boards of supervisors may approve the resolutions at any time, but must submit resolutions between Jan. 1 and 31, 2023.

Producers in counties that file the resolutions must meet additional standards in their construction permits than sites in other counties. They must earn points on a master matrix by choosing a site and using practices that reduce effects on the environment and the community.

The Master Matrix development, submittal and approval process allows applicants and county supervisors to discuss options for site selection, facility type and management. The county submits a recommendation to the DNR on the permit application after reviewing the master matrix items the applicant selected.

Counties that participate in the master matrix process may accompany DNR on site visits to proposed locations. The county board of supervisors may also appeal the DNR's preliminary approval of a permit to the Environmental Protection Commission.

Send resolutions to Kelli Book at DNR, 502 E. Ninth St., Des Moines, IA 50319-0034 or email Kelli.Book@dnr.iowa.gov. Sign-ups in January apply to permit applications DNR receives from February 2023 through January 2024.

For historical information on counties that adopted resolutions, check for Master Matrix information on the DNR's animal feeding operations [construction permit](#) webpage.

More information is available from the Iowa State Association of Counties at www.iowacounties.org.

Winter land application limits start soon

Dry conditions and warm weather provided an early harvest and manure application season. But here are a few reminders, if winter application is still necessary.

Confinements with liquid manure—restrictions start Dec. 21

Runoff into our streams is more likely to occur during winter manure application. State law limits liquid manure application for confinement operations (roofed facilities) with more than 500 animal units. Restrictions on applying manure to snow-covered ground begin Dec. 21 and continue until April 1. Liquid manure cannot be applied to fields covered with 1 inch or more of snow or 0.5 inches of ice, except in an emergency.

Starting Feb. 1, applying liquid manure on frozen ground is also restricted until April 1. Call the local [DNR field office](#) prior to any emergency application..

Other limits may apply if you took credit for injection or incorporation as part of a construction permit application using the Master Matrix.

Winter land application of liquid manure from confinements is allowed when producers can inject or incorporate manure on the same date, and when the ground is not frozen or snow-covered.

Rules for all producers

While limits on winter land application do not apply to open feedlots, dry manure and small confinement producers, all producers must prevent water quality violations. Often they can help protect water quality by using common sense, and choosing application areas far from a stream on flat land with little snow cover.

All surface land application must [follow setbacks](#) from buildings and environmentally sensitive areas. Look for more information on [winter application rules](#) on DNR's animal feeding operations web page.