

Notice of Availability of a Supplement to Environmental Assessment Worksheet (EAW)

Daley Farms of Lewiston, LLP – 2018 Dairy Expansion

Doc Type: Public Notice

Public comment information

EAW public comment period begins: January 22, 2020

EAW public comment period ends: 4:30 p.m. on ~~February 20, 2020~~ EXTENDED to 4:30 p.m. on March 6, 2020

Notice published in the EQB Monitor: January 21, 2020

Permit public comment period begins: January 21, 2020

Permit public comment period ends: ~~February 20, 2020~~ EXTENDED to March 6, 2020

Facility specific information

Facility name and location:

Daley Farms of Lewiston, LLP
18774 Highway 14
Lewiston, MN 55952
Utica Township
Winona County

Facility contact:

Ben Daley
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MPCA contact information

MPCA EAW contact person:

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Minnesota Pollution Control Agency
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Admin staff phone: 651-757-2100

General information

The Minnesota Pollution Control Agency (MPCA) placed an Environmental Assessment Worksheet (EAW) for the Daley Farms of Lewiston, LLP – 2018 Dairy Expansion (2018 EAW) for public notice and comment in the October 1, 2018 *Environmental Quality Board (EQB) Monitor*. The MPCA is distributing this supplement to the 2018 EAW for a 45-day review and comment period. Comments on the Supplement to the 2018 EAW should address the new information being provided about greenhouse gas emissions, such as the accuracy and completeness of information, potential GHG emission impacts that are reasonably expected to occur that warrant further investigation, and the need for an EIS based on GHG emissions. Comments previously submitted on the 2018 EAW will remain part of the official record.

The MPCA is distributing this supplement to the 2018 EAW for a 45-day review and comment period pursuant to the EQB rules. The MPCA uses the EAW and any comments received to evaluate the potential for significant environmental effects from the project and decide on the need for an Environmental Impact Statement (EIS).

An electronic version of the supplement to the 2018 EAW is available on the MPCA Environmental Review webpage at <https://www.pca.state.mn.us/eaw>. If you would like a copy of the supplement to the 2018 EAW, the 2018 EAW, or permit or have any questions, contact the appropriate persons.

Description of proposed project

Daley Farms of Lewiston, LLP (Daley) currently owns and operates three dairy sites (LLP, LLP1, and LLP7) in Utica Township, Winona County. Daley intends to expand its existing dairy at the LLP site, close the LLP1 site, and install open-lot runoff controls at the LLP7 site. The expansion at the LLP site will include a total confinement barn with 3,000 dairy cows, a rotary milking parlor, a manure storage basin, a feed storage pad, and stormwater runoff controls.

Public Informational Meeting

The MPCA will host a public informational meeting on February 4, 2020, with an open house from 6:30 to 7:00 pm, presentations from 7:00 to 7:30 pm, and questions from 7:30 to 8:30 pm, regarding the supplement to the 2018 EAW and the permit. The meeting will be at the Lewiston Community Center, 75 Rice Street, Lewiston, MN 55952.

To submit written comments on the supplement to the 2018 EAW and Permit

Written comments on the supplement to the 2018 EAW must be received by the MPCA EAW contact person within the comment period listed above.

For information on how to comment on the permit, contact the MPCA permit contact person listed above.

NOTE: All comment letters are public documents and will be part of the official public record for this project.

Need for an EIS

The MPCA Commissioner will make a final decision on the need for an EIS after the end of the comment period.

Alternative EAW Form for Animal Feedlots

Supplement to ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to preparers: This form is authorized for use only for the preparation of Environmental Assessment Worksheets (EAWs) for animal feedlots. Project proposers should consult the guidance *Guidelines for Alternative EAW Form for Animal Feedlots* (also available at the Minnesota Environmental Quality Board (EQB) website <https://www.eqb.state.mn.us/content/environmental-review-guidance-practitioners-and-proposers> or by calling 651-296-6300) regarding how to supply information needed by the Responsible Government Unit to complete the worksheet form.

Note to reviewers: The Environmental Assessment Worksheet (EAW) provides information about a project that may have the potential for significant environmental effects. This Supplement to the EAW was prepared by the Minnesota Pollution Control Agency (MPCA), acting as the Responsible Governmental Unit (RGU), to determine whether an Environmental Impact Statement (EIS) should be prepared with respect to potential greenhouse gas emissions from the proposed project. The project proposer supplied reasonably accessible data for, but did not complete the final worksheet. Comments on the Supplement to the EAW must be submitted to the MPCA during the 30-day comment period which begins with notice of the availability of the EAW in the *Minnesota Environmental Quality Board (EQB) Monitor*. Comments on the Supplement to the EAW should address the new information being provided about greenhouse gas emissions, such as the accuracy and completeness of information, potential GHG emission impacts that are reasonably expected to occur that warrant further investigation, and the need for an EIS based on GHG emissions. All comments received on the original EAW during the comment period that ran from October 1, 2018 to November 15, 2018, will remain part of the official record and **do not need to be resubmitted**. A copy of the Supplement to the EAW may be obtained from the MPCA by calling 651-757-2100. An electronic version of the completed EAW is available at the MPCA website www.pca.state.mn.us/eaw.

1. Basic Project Information.

A. Feedlot Name: Daley Farms of Lewiston, LLP – 2018 Dairy Expansion

Feedlot

B. Proposer: Daley Farms of Lewiston, LLP C. RGU: Minnesota Pollution Control Agency

Technical

Contact Person Ben Daley

Contact

Person Kim Grosenheider

and

Title Owner/Partner

and

Title Planner Principal

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D. Reason for EAW Preparation: (check one)
 EIS Scoping Mandatory EAW Citizen Petition RGU Discretion Proposer Volunteered

This is a supplement to the original 2018 EAW. This supplement provides new information on greenhouse gas emissions.

E. **Project Location:** County Winona City/Twp Utica
NE 1/4 Section 16 Township 106N Range 9W
 Watershed (name and 4-digit code): Mississippi River – Winona (07040003) and Root River (07040008)

F. **Attachments:**

Attachments A-V available in the 2018 EAW (available at <https://www.pca.state.mn.us/sites/default/files/p-ear2-143i.pdf>)
 Attachment W – Greenhouse Gas Calculations

G. **Project summary of 50 words or less to be published in the EQB Monitor.**

Daley Farms of Lewiston, LLP (Daley) currently owns and operates three dairy sites (LLP, LLP1, and LLP7) in Utica Township, Winona County. Daley intends to expand its existing dairy at the LLP site, close the LLP1 site, and install open-lot runoff controls at the LLP7 site (Project). The expansion at the LLP site will include a total confinement barn with 3,000 dairy cows, a rotary milking parlor, a manure storage basin, a feed storage pad, and stormwater runoff controls.

MPCA placed its original 2018 EAW for the Project on public notice and comment in the October 1, 2018 *EQB Monitor*. MPCA is distributing this supplement to the 2018 EAW for a 30-day review and comment period. Comments on the supplement to the 2018 EAW should address the new information being provided about greenhouse gas emissions, such as the accuracy and completeness of information, potential GHG emission impacts that are reasonably expected to occur that warrant further investigation, and the need for an EIS based on GHG emissions. Comments previously submitted on the 2018 EAW will remain part of the official record.

H. **Please check all boxes that apply and fill in requested data.**

| Animal Type | Number Proposed | Type of Confinement |
|--|-----------------|---|
| <input type="checkbox"/> Finishing hogs | | |
| <input type="checkbox"/> Sows | | |
| <input type="checkbox"/> Nursery pigs | | |
| <input checked="" type="checkbox"/> Dairy cows | 3,000 | cross-vented, total confinement, freestall barn |
| <input type="checkbox"/> Beef cattle | | |
| <input type="checkbox"/> Turkeys | | |
| <input type="checkbox"/> Layer hens | | |
| <input type="checkbox"/> Chickens | | |
| <input type="checkbox"/> Pullets | | |
| <input type="checkbox"/> Other (Please identify species) | | |

I. **Project magnitude data.**

Total acreage of farm: 2,381 acres (owned by Daley)
 Number of animal units proposed in this project: 4,200 AU
 Total animal unit capacity at this location after project construction: 5,968 AU
 Acreage required for manure application: 4,083 acres

| Facility | Facility - Existing number of Animals | | Proposed Project Animal increase/decrease | | Totals after construction | |
|--|---------------------------------------|---------------|---|----------------------------------|---------------------------|---------------|
| | Number | AUs | Number | AUs | Number | AUs |
| LLP Dairy Cows/Heifer (Expansion) | 1,426 cows | 1996.4 | +2,475 cows +525 heifers | +3,465 and +367.5 = 3832.5 | 3,901 cows 525 heifers | 5828.9 |
| LLP1 Dairy Cows (Eliminate) | 100 cows | 140 | -100 cows | -140 | 0 | 0 |
| LLP7 Dairy Cows and calves (Add runoff controls) | 82 cows 120 calves | 138.8 | 0 | 0 | 82 cows 120 calves | 138.8 |
| TOTAL AUs | | 2275.2 | | 3692.5 | | 5967.7 |

J. Describe construction methods and timing.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

K. Past and future stages.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

2. Land uses and noteworthy resources in proximity to the site.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

3. Geologic and soil conditions.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

4. Water Use, Tiling and Drainage, and Physical Alterations.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

5. Manure management.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

6. Air/odor emissions.

A. Identify the major sources of air or odor emissions from this feedlot.

The Project will release air and odors emissions typically associated with a dairy farm. Major sources of air and odors emissions will include:

- Animals
- Barn and barn ventilation
- Animal carcasses
- Manure basin
- Land application of manure
- Sand bedding recovery and storage

- Feed storage
- Feedpad runoff basin
- Vehicle and equipment dust

Air emissions from the Project include hydrogen sulfide, ammonia, methane and nitrous oxide. Methane and nitrous oxide are greenhouse gasses (GHG).

B. Describe any proposed feedlot design features or air or odor emission mitigation measures to be implemented to avoid or minimize potential adverse impacts and discuss their anticipated effectiveness.

The Project has operational and design features to avoid and minimize adverse air and odor emissions.

Project design and operational measures to reduce air and odor emissions include:

- Daley will maintain clean, dry floors, eliminate manure buildup, and clean up any spilled feed.
- Daley will store animal mortalities in an enclosed and shaded structure, and contract a rendering service to pick up the animal mortalities within 48 hours.
- Daley will maintain general Project site cleanliness to help minimize air and odor emissions.
- Daley will maintain organic crusts on the manure basins to reduce odors.

Manure land application measures to reduce air and odor emissions include:

- Daley will only agitate the stored manure immediately before the manure is removed for land application.
- Daley will inject manure into the soil during manure land application.
- Daley will evaluate weather conditions, primarily wind speed/direction and humidity, before manure application to minimize impacts to neighbors and the public.
- Daley will consult with the MPCA or County Feedlot Officer to identify changes to reduce odors in the event complaints are received.
- Daley will observe all required setbacks or specific practices from nearby residences and special features.
- Daley may delay applying manure in the fall until soil temperature is below 50 degrees F.
- Daley may add a nitrogen inhibitor to manure when land applied, limiting nitrous oxide (N₂O) production in soils.
- Daley may plant a fall cover crop on fields receiving manure; this acts to build soil organic carbon in soils, removing carbon dioxide (CO₂) from the atmosphere.

C. Provide a summary of the results of an air emissions modeling study designed to compare predicted emissions at the property boundaries with state standards, health risk values, or odor threshold concentrations. The modeling must incorporate an appropriate background concentration for hydrogen sulfide to account for potential cumulative air quality impacts.

The discussion below focuses on GHG emissions. Discussion on air/odor emissions issues other than GHG emissions was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

Greenhouse Gases

The MPCA estimates the Project would directly release GHG emissions and indirectly affect GHG emissions from related activities. In general, the primary GHG emissions from dairy operations are methane (CH₄) and nitrous oxide (N₂O). Direct GHG emissions are released from manure storage and

animal flatulence. Indirectly, GHG emissions are released as a result of the land application of manure, although GHG emissions will be reduced through other Project-related activities.

CO₂ is the most abundant GHG on earth and has had the largest effect on our climate. Other GHGs – including those associated with typical feedlot operations - are emitted in smaller amounts but can trap heat more effectively than CO₂. Some GHGs stay in our atmosphere for a very long time while other GHGs stay in our atmosphere for a relatively shorter time. “Global warming potential” is a relative measure of a GHG’s ability to trap heat and how long it stays in the atmosphere. To compare all the GHGs in common terms to CO₂, the MPCA multiplies each pollutant’s emissions by its global warming potential to produce the pollutant’s CO₂-equivalent (CO₂-e) emissions.

In the context of a feedlot (such as the Project), the actual amount of GHG emissions that may be produced will depend on numerous variables, including without limitation the feed ration provided to the livestock, particular manure storage and application practices, designs of buildings and manure storage facilities, local climate and geography, and many other operational and site-specific factors.

The United States Environmental Protection Agency has developed emission factors from a large population of feedlots for use in estimating total feedlot GHG emissions, and the MPCA has previously used these emission factors in estimating GHG emissions from all feedlots in Minnesota in preparing statewide inventories of emissions. The MPCA has calculated the potential emissions for the Project using these population-based emission factors. These projections reflect an estimated inventory of GHGs the Project may contribute.

The table below provides estimates of potential emissions for the Project in CO₂-e tons. Attachment W contains details of these calculations.

| Emission Type and Source | Existing Facility (tons CO ₂ -e/yr) | Project Increase (tons CO ₂ -e/yr) | Total – after Project Construction (tons CO ₂ -e/yr) |
|--|---|--|--|
| N ₂ O - manure storage | 600 | 1,000 | 1,700 |
| CH ₄ - manure storage | 4,500 | 7,200 | 11,700 |
| CH ₄ - flatulence | 6,700 | 11,700 | 18,400 |
| N ₂ O - manure land application | 300 | 400 | 700 |
| ESTIMATED TOTAL: | 12,100 | 20,300 | 32,500* |

*Note: table values were rounded to the nearest hundred tons. Because of differences in rounding, the total – after Project construction does not match the rounded sum of the existing facility plus project increase.

The potential GHG emissions in the table above are only estimates and do not consider all GHG emissions that the Project could create or induce. For example, GHG emissions are not calculated for electricity generation that is required to operate lighting, heating, milk pumping equipment, etc. Also not included are GHG emissions from fuel combustion required to deliver feed, animals, and milk, and to operate farm equipment used in growing feed, processing feed, and applying manure.

Some agricultural practices can offset estimated greenhouse gas emissions. The land application of manure replaces nutrients that farmers would otherwise provide to their fields via application of chemical fertilizers, thereby avoiding GHG emissions associated with chemical fertilizer production. As part of its permit for the Project, Daley will implement manure application practices—including without limitation the use of cover crops—that may further mitigate GHG emissions and sequester greater carbon in the soil. The Project’s additional cattle would demand an average of 850 acres of alfalfa. The conversion of land currently managed as row crop agriculture to alfalfa would result in an estimated 1,000 tons CO₂-e avoided annually. Additional CO₂-e could be avoided by Daley’s and likely neighbor’s

increased use of cover crops since the Project would demand additional corn silage or corn earlage for animal feed, which is harvested sooner and provides greater opportunity for cover crop plantings versus corn harvested for grain only.

The MPCA had to apply its technical expertise and experience with GHG emissions inventories to determine which Project-related activities to quantify because Environmental Quality Board guidance is not currently available, and the information MPCA would need to conduct a full GHG life-cycle analysis is not readily available. The MPCA chose to quantify the sources listed in the above table because these are the sources MPCA uses to estimate GHG emissions for the entire agricultural sector on a statewide basis, and the U.S. Environmental Protection Agency provides emission factors for these sources. Therefore, quantifying these sources for the Project enhances comparison between this Project's GHG emissions and other GHG emissions in Minnesota.

D. Describe any plans to notify neighbors of operational events (such as manure storage agitation and pumpout) that may result in higher-than-usual levels of air or odor emissions.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

E. Noise and dust. Describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

7. Dead Animal Disposal.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

8. Surface Water Runoff.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

9. Traffic and Public Infrastructure Impacts.

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

10. Permits and approvals required. Mark required permits and give status of application:

Discussion under this section was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

11. Other potential environmental impacts, including cumulative impacts. If the project may cause any adverse environmental impacts not addressed by items 1 to 10, identify and discuss them here, along with any proposed mitigation. This includes any cumulative impacts caused by the project in combination with other existing, proposed, and reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Examples of cumulative impacts to consider include air quality, stormwater volume or quality, and surface water quality. (Cumulative impacts may be discussed here or under the appropriate item(s) elsewhere on this form.)

The discussion below focuses on GHG emissions. Discussion for item 11 on issues other than GHG emissions was provided in the 2018 EAW. Previous comments on the 2018 EAW will remain part of the official record.

Annual GHG emissions fluctuate, but fortunately, the State has been on a general downward trend since 2005. While there are no state or federal caps on GHG emissions, the Next Generation Energy Act, Minn. Stat. § 215H.02, sets Minnesota GHG emission reduction goals of 15% from 2005 levels by 2015, 30% from 2005 levels by 2025, and 80% by 2050. The most recently available data (2016) shows the state's total annual GHG emissions at 12% below the 2005 baseline.

The MPCA estimates that, in 2016, activities in Minnesota released 154.2 million tons of CO₂-e. Of the total 154.2 million, about 35 million tons CO₂-e came from Minnesota's agriculture sector. Animal agriculture accounted for about 10.5 million tons CO₂-e, and crop agriculture accounted for nearly 27 million tons CO₂-e. Together, Minnesota's agriculture and forestry sector have decreased about 12% compared to the 2005 baseline, but emissions were highly variable between 2005 and 2016.

Global climate change results from the total accumulation of GHGs in the Earth's atmosphere, as well as other man-made and natural factors. The GHG composition in the Earth's atmosphere is changing and causing the planet's climate to change. The Project's incremental contribution to global GHGs cannot be translated into effects on climate change globally or regionally.

In general, regional impacts from climate change may include the following effects: increased mean annual air temperature (summer and winter warming); increased surface water temperatures; later onset of winter and earlier onset of spring; precipitation may fall in fewer, but more intense, storms; species adapted to cold climates may shift out of the Great Lakes basin into Canada; and aspen and birch forests may be replaced by hardwood forests of oak and hickory. Moderate climate change may increase agricultural yields and food production, with some regional and annual variability.

As indicated in item 6.C., the Project will directly release GHG emissions and indirectly cause GHG emissions from related activities, with total projected emissions from the facility after the Project is completed estimated at 32,500 tons of CO₂-e per year. However, at least some of these emissions may be mitigated or offset by practices that can remove carbon from the atmosphere and sequester it in the soil, including an estimated 1,000 tons of CO₂-e per year from the conversion of row crops to alfalfa. There are no Minnesota or National Ambient Air Quality Standards for GHGs. The assessment of GHG emissions and climate change is extremely complex. Currently it is not possible to model the physical impacts of global or regional climate change, such as storm frequency/intensity or temperature increases, caused by incremental GHG emissions, such as those from the Project. In other words, while agriculture contributes to climate change generally, existing scientific tools do not allow MPCA to quantify the specific effects of a particular feedlot or project on global or regional climate change impacts. There is currently an absence of regulatory guidance for analyzing GHG emission impacts. If, in the future, climate models improve in their predictive capacity or more regulatory guidance is provided, MPCA will incorporate those tools into its environmental review process at that time.

12. Summary of issues. List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

No additional issues.

RGU CERTIFICATION.

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as "phased actions," pursuant to Minn. R. 4410.0200, subp. 60, 4410.1000, subp. 4, and 4410.4300, subp. 1.
- Copies of this EAW are being sent to the entire EQB distribution list.

Name and Title of Signer:



**Dan R. Card, P.E., Supervisor, Environmental Review Unit
St. Paul Office
Resource Management and Assistance Division**

Date:

1/14/20

The format for the alternative Environmental Assessment Worksheet form has been approved by the Chair of the Environmental Quality Board pursuant to Minn. R. 4410.1300 for use for animal feedlot projects. For additional information contact: Environmental Quality Board, 520 Lafayette Road, St. Paul, Minnesota, 55155-4194, 651-296-6300, or at their website <https://www.eqb.state.mn.us/>

