



Minnesota Pollution Control Agency

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October 22, 2012

TO: INTERESTED PARTIES

RE: Gourley Brothers Hog Feedlot

On October 22, 2012, the Minnesota Pollution Control Agency Citizens' Board voted to approve the Findings of Fact, Conclusions of Law, and Order for a Negative Declaration on the need for an Environmental Impact Statement for the proposed Gourley Brothers Hog Feedlot, Todd County. The Findings of Fact, Conclusions of Law, and Order document concludes that the project does not have the potential for significant environmental effects. This decision for a Negative Declaration completes the state environmental review process under the revised Minnesota Environmental Quality Board Rules, Minn. R. ch. 4410. Final governmental actions on the granting of permits and approvals for the project may now be made.

These documents can be reviewed at the following locations: the MPCA offices in St. Paul, Brainerd, and Willmar; the Minneapolis Public Library at 300 Nicollet Mall, Minneapolis; and the Kitchigami Regional Library at 212 Park Avenue, Pine River. The document can be viewed on our MPCA website at <http://www.pca.state.mn.us/news/eaw/index.html>. Requests for copies of these documents may be made by contacting the St. Paul office at 651-757-2101.

We appreciate the time and effort of those who submitted comments on the Environmental Assessment Worksheet. Comments and responses to them have been incorporated into the Findings of Fact, Conclusions of Law, and Order and have been considered by MPCA staff during the permit process for the proposed project.

Sincerely,

A handwritten signature in black ink, appearing to read "John Linc Stine".

John Linc Stine
Commissioner

JLS:mbo

**STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY**

**IN THE MATTER OF THE DECISION
ON THE NEED FOR AN ENVIRONMENTAL
IMPACT STATEMENT FOR THE PROPOSED
GOURLEY BROTHERS HOG FEEDLOT
LESLIE TOWNSHIP, TODD COUNTY, MINNESOTA**

**FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER**

FINDINGS OF FACT

The above-entitled matter came before the Minnesota Pollution Control Agency (MPCA) Citizens' Board (Board) at a regular meeting held in St. Paul, Minnesota on October 22, 2012. Based on MPCA staff review, the EAW, comments and information received during the comment period, and other information in the record of the MPCA, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order.

Project Description

1. The Gourley Brothers (Project Proposer) are proposing to build a total confinement swine barn in Leslie Township, Todd County. The Gourley Brothers Hog Feedlot (Project) will house 2,930 sows, 300 nursery pigs, and 750 replacement gilts, for a maximum physical capacity of 1,412 animal units. The proposed total confinement barn will be 230 feet wide by 424 feet long. The proposed barn will have a 12-foot deep, below-barn concrete liquid manure storage area for holding manure generated by the swine. All of the manure generated at the Project will be transferred to area landowners/operators and will be applied during the fall after the crops have been harvested from the designated land application sites.
2. The proposed barn will be power ventilated.
3. The proposed barns will have 12-foot deep concrete pits beneath the barn. The storage capacity for the barn will be about 8,750,000 gallons, which exceeds minimum storage capacity requirement of 9 months.
4. Transferred ownership of manure takes place when the manure produced by 300 or more animal units is applied to fields not owned or leased by the owner of the animal feedlot or manure storage area. Any person receiving the manure shall comply with Minn. R. 7020.2225 subpart 1, item C. All manure and process wastewater applications to land must meet the requirements of this part except where specifically exempted. The 2011-2016 State of Minnesota General Livestock Production Permit (Feedlot Permit) Part II, item C, of the Feedlot Permit details requirements for the Project Proposer when ownership of manure is transferred.
5. The permit application for coverage of the proposed Project under the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Feedlot Permit was submitted to the MPCA on May 3, 2012.

6. The proposed Project is a new feedlot site and, therefore, no previous environmental review has been completed on this Project.

Procedural History

7. Pursuant to Minn. R. 4410.4300, subp. 29, MPCA staff prepared an Environmental Assessment Worksheet (EAW), dated July 19, 2012, on the proposed Project. Pursuant to Minn. R. 4410.1500, the MPCA notified the public of the availability of the EAW for public comment. A notice of availability of the EAW was published in the *EQB Monitor* on July 23, 2012.
8. The MPCA provided a news release to media in Todd, Otter Tail, Morrison, Stearns, and Douglas Counties, as well as other interested parties, on July 24, 2012. The notice of the availability of the EAW was published in the *EQB Monitor* on July 23, 2012, and the EAW was made available for review on the MPCA website at <http://www.pca.state.mn.us/news/eaw/index.html>.
9. MPCA Staff visited the Project site on August 14, 2012.
10. The public comment period for the EAW began on July 23, 2012, and ended on August 22, 2012. During the 30-day comment period, the MPCA received 1 comment letter from the Minnesota Department of Natural Resources (DNR) and 11 letters from citizens. A list of the comment letters received and copies of the letters are included as Appendix A to these Findings.
11. The MPCA prepared written responses to the comment letters received during the comment period. The responses to the comments are included as Appendix B to these findings, and are hereby incorporated into these findings by reference.

Criteria for Determining the Potential for Significant Environmental Effects

12. Under Minn. R. 4410.1700, the MPCA must order an Environmental Impact Statement (EIS) for projects that have the potential for significant environmental effects. In deciding whether a project has the potential for significant environmental effects, the MPCA must compare the impacts that may be reasonably expected to occur from the project with the criteria set forth in Minn. R. 4410.1700, subp. 7. The criteria are as follows:
 - a. Type, extent, and reversibility of environmental effects;
 - b. Cumulative potential effects. The responsible governmental unit (RGU) shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project;

- c. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and
- d. The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

**The MPCA Findings with Respect to Each of These Criteria
Are Set Forth Below**

Type, Extent, and Reversibility of Environmental Effects

- 13. The first criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is the “type, extent, and reversibility of environmental effects” (Minn. R. 4410.1700, subp. 7. A). The MPCA findings with respect to this criterion are set forth below.
- 14. The types of impacts that may reasonably be expected to occur from the Project include the following:
 - a. Air quality impacts related to hydrogen sulfide emissions;
 - b. Air quality impacts related to ammonia emissions;
 - c. Air quality impacts related to odors;
 - d. Impacts on water quality; and
 - e. Impacts related to water appropriation.
- 15. Other issues raised by commenters that may be expected to occur from the Project include the following:
 - a. Impacts related to public health;
 - b. Impacts related to safety; and
 - c. Impacts related to compliance and enforcement.
- 16. With respect to the extent of impacts that are reasonably expected to occur from the proposed Project, the MPCA makes the findings set forth below.
- 17. Air quality modeling was performed to estimate air concentrations of hydrogen sulfide and ammonia, and odor intensity that will be created by the proposed feedlot. The air quality model provides an estimate of ambient air concentrations and odor intensities at the property lines for the feedlot and at the feedlot’s 35 nearest neighbors located in the three-mile by three-mile grid around the proposed feedlot site. The model considered air emissions from eight neighboring feedlots.

**Gourley Brothers Hog Feedlot
Hourly Average Hydrogen Sulfide and Ammonia Concentrations and
Odor Intensity in Ambient Air**

Proposed Site Property Boundary	Hydrogen Sulfide (ppb) ^a	Maximum Hourly Ammonia ($\mu\text{g}/\text{m}^3$) ^b	Maximum Hourly Odor Intensity (OU, d/t) ^c	Frequency "Faint" Odor Threshold is Exceeded ^c
North	29.32	800	78	0.02%
South	25.53	410	75	< 0.01%
East	26.39	488	89	0.01%
West	27.71	1,145	77	< 0.01%

^a. The air quality standard for hydrogen sulfide is 30 ppb (parts per billion) as a half-hour average not to exceed more than two times in any five-day period. The results in the tables include a background concentration of 17 ppb.

^b. The acute iHRV (inhalation health risk value) for ammonia is 3,200 $\mu\text{g}/\text{m}^3$ (micrograms per cubic meter). The results in the table include a background concentration of 148 $\mu\text{g}/\text{m}^3$.

^c. Odor impact assessment based on odor units (OUs). Odor intensities and their perceived strength: very faint (25 – 72), faint (72 – 212), moderate (212 – 624) strong (624 – 1,834), and very strong (>2,140)¹.

Air Quality Impacts Related to Hydrogen Sulfide Emissions

18. The Project Proposer submitted a report on air modeling that used *CALPUFF*, an advanced non-steady-state meteorological and air quality modeling system. *CALPUFF* has been adopted by the U.S. Environmental Protection Agency in its Guideline on Air Quality Models as the preferred model for assessing long-range transport of pollutants and their impacts on near-field applications involving complex meteorological conditions. The modeling system consists of three main components: *CALMET* (a diagnostic three-dimensional meteorological model), *CALPUFF* (an air quality dispersion model), and *CALPOST* (a post-processing package). The *CALPUFF* air quality model was selected to estimate the property-line and nearest-neighbor odorous gas concentrations because of its ability to account for calm wind conditions.
19. The air modeling results indicated that the proposed Project will not cause the Minnesota ambient air quality standard for hydrogen sulfide to be exceeded. The *CALPUFF*-predicted third highest Project-specific contribution to the ambient hydrogen sulfide concentration was 12.32 ppb. When a background hydrogen sulfide concentration of 17 ppb was added to the *CALPUFF* prediction, the maximum property-line hourly concentration was 29.32 ppb, which indicates that the half-hour standard of 30 ppb will not be violated. Thus, exceedances of the hydrogen sulfide standard are not expected to occur, and the proposed Project is expected to be in compliance with the applicable air quality standards for hydrogen sulfide.

¹ Jacobson L. D. *et al.* 2000. Development of an odor rating system to estimate setback distances from animal feedlots: odor for feedlots setback estimation tool (OFFSET). Final Report. Prepared by the Department of Biosystems and Agricultural Engineering, University of Minnesota, St. Paul, MN. 26 pp.

20. The air modeling results also indicated that the proposed Project will not cause the subchronic hydrogen sulfide iHRV to be exceeded at neighboring residences. The maximum estimated facility-specific, 13-week, time-averaged hydrogen sulfide concentration for the feedlot's nearest neighbors was $0.4 \mu\text{g}/\text{m}^3$. When a background concentration of $1 \mu\text{g}/\text{m}^3$ is added to the *CALPUFF* estimate, the 13-week neighbor hydrogen sulfide maximum concentration was $1.4 \mu\text{g}/\text{m}^3$, which is below the subchronic hydrogen sulfide iHRV of $10 \mu\text{g}/\text{m}^3$.

Air Quality Impacts Related to Ammonia Emissions

21. The modeling results for ammonia indicate that the proposed Project will not exceed the acute ammonia iHRV. The model predicted a maximum hourly property-line concentration of $997 \mu\text{g}/\text{m}^3$. When the background concentration of $148 \mu\text{g}/\text{m}^3$ was added to the prediction, the maximum property line ammonia concentration was $1,145 \mu\text{g}/\text{m}^3$, which is below the acute ammonia iHRV of $3,200 \mu\text{g}/\text{m}^3$.
22. The modeling results also indicate that the proposed Project would not result in air concentrations of ammonia exceeding the chronic ammonia iHRV at the neighboring residences. The estimated maximum one-year time-averaged ammonia concentration among the Project's neighbors was $27.86 \mu\text{g}/\text{m}^3$. When a background ammonia concentration of $5.72 \mu\text{g}/\text{m}^3$ was added to the *CALPUFF* estimate, the maximum annual ammonia concentration at any neighboring residence was $33.58 \mu\text{g}/\text{m}^3$, which is below the chronic ammonia iHRV of $80 \mu\text{g}/\text{m}^3$. Thus, the chronic ammonia iHRV is not expected to be exceeded.

Air Quality Impacts Related to Odor

23. Ambient air quality standards are not established for the regulation of odor in Minnesota; however, the *CALPUFF* model was used to estimate the ground level odor intensities at the feedlot's property lines and at neighboring residences. As indicated in the table in finding number 17, the maximum hourly odor intensity predicted at the expanded feedlot's effective property lines was 89 OUs. This would be above the "faint" odor threshold of 72 OUs, but below the "moderate" odor threshold of 212 OUs.
24. With respect to the reversibility of air quality impacts that are reasonably expected to occur from the proposed Project, the MPCA makes the findings set forth below.
25. Air emissions from the Project will continue while the Project remains in operation and will cease if the Project is temporarily or permanently closed. While in operation, the proposed Project is expected to meet applicable air quality standards and criteria. Although *CALPUFF* predicts no exceedences of hydrogen sulfide standards or ammonia health benchmarks, if excessive air emissions or violations of the ambient hydrogen sulfide air standards were to occur, or if iHRVs for ammonia were exceeded, corrective measures could be implemented. Such measures could include the initiation of a complaint investigation by the MPCA and requiring the Project Proposer to make operational and maintenance changes. In addition, as noted in the Project Proposer's Air Emissions Plan and Complaint Response Protocol, if higher than expected levels of air or odor emissions are anticipated, notification will be made to neighbors.

26. Comments received that expressed concerns regarding potential effects to air quality: Although some of the comment letters expressed a general concern for the potential negative effects of the proposed Project to air quality, none of them included air quality data or detailed comments that clearly expressed concerns about the methods or results of the air dispersion modeling, the proposed Project's design features, or the air and odor emission mitigation measures. As discussed above in Findings 18 through 25, the analysis indicates that the effects on air quality that are reasonably expected to occur are not significant.
27. The MPCA finds that the information presented in the EAW and other information in the environmental review record is adequate to assess the impacts on air quality that are reasonably expected to occur from the proposed Project. These impacts have been considered during the review process and methods to prevent significant adverse impacts have been developed.
28. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts on air quality that are reasonably expected to occur from the Project.

Impacts on Water Quality

29. With respect to the extent of potential water quality impacts that are reasonably expected to occur from the proposed Project, the MPCA makes the findings set forth below.
30. The Project site itself will be required by the 2011-2016 Feedlot General NPDES/SDS Permit to meet a zero discharge standard. The 2011-2016 Feedlot General NPDES/SDS Permit requires Stormwater Pollution Prevention and Management Plans that include best management practices (BMPs) for the operation of the Project to be developed and implemented on the site.
31. All livestock will be housed in an engineered total confinement building and not have access to surface waters. Manure will be stored in a manure storage structure that meets the design criteria of Minn. R. 7020.2100.
32. All manure generated at the Project will be transferred to nearby landowners. The manure is expected to be applied at agronomic rates. Fields available for land application of manure are prioritized based upon phosphorus and potassium soil test values. Fields with lower levels of phosphorus and potassium receive manure first. Other factors used to determine nutrient needs are crop grown, yield goal, organic matter content, manure credits, and other legume credits. Nutrient application rates will be determined by utilizing recommendations provided by the University of Minnesota Extension Service.
33. The 2011-2016 Feedlot General NPDES/SDS Permit prohibits the land application of manure to snow-covered or frozen ground, or after December 1, except emergency applications. Solid manure can be land-applied to frozen and snow covered ground in emergency applications subject to the following conditions:

- a. Manure is applied more than 300 feet from sensitive features including lakes, streams, open tile inlets, sinkholes, water supply wells, mines and quarries, intermittent streams, unbermed drainage ditches, or public waters wetlands;
 - b. No active snowmelt is occurring that can create runoff from an application field, as determined by two or more inches of snow on the field and maximum temperatures that exceed 40 degrees Fahrenheit or are predicted to exceed 40 degrees Fahrenheit within 24 hours of spreading manure;
 - c. Prohibited when the probability of rainfall over 0.25 inches is greater than 50 percent, as predicted by the National Weather Service, within 24 hours of the end of the application period;
 - d. Slopes must be less than or equal to six percent on entire area to be applied;
 - e. Water or ice cannot occupy tillage furrows to the extent that additional snowmelt or precipitation cannot be contained between furrows or in other depressional storage areas within the field; and
 - f. Fields used for land application must meet a total phosphorus loss risk index number of two or less (low to very low relative risk), as calculated according to the Minnesota Phosphorus Index, the University of Minnesota, Department of Soil, Water, and Climate.
34. In order to avoid contaminating the groundwater at the manure application sites when the ownership of manure is transferred, the permittees must inform the receiving landowners of the nutrient content of the manure and applicable rules pertaining to the application of manure.
35. The Project Proposer must retain the following information when transferring manure.
- Name and address of facility where manure is generated;
 - Dates and quantity of manure transferred;
 - Manure analysis results;
 - Name and address of entity or individual taking manure from feedlot;
 - Name of company or individual that applied manure;
 - Minnesota Department of Agriculture license number of commercial applier; and
 - Field specific location of manure application areas.
36. The land application of manure, if done improperly, can adversely impact surface-water resources through manure-laden runoff or manure residue leaching into drain tile lines that outfall to surface waters. Therefore, Minnesota rule requirements and/or county setback requirements, whichever are more restrictive, must be observed around drain tile intakes located within and adjacent to manure application areas and near other surface-water resources. Additional requirements of the 2011-2016 Feedlot General NPDES/SDS Permit are included to minimize the potential for manure applied at manure application sites to come in contact with runoff and enter surface waters.
37. The quality of runoff from land application areas for the manure is not expected to significantly change if managed in accordance with the 2011-2016 Feedlot General NPDES/SDS Permit. Nutrients from manure will replace nutrients provided by other fertilizers, and improved soil tilth through the use of organic fertilizer and immediate incorporation of manure may improve runoff. Therefore, no additional impact to the quality of surface or groundwater is expected to occur as a result of increased acres being utilized for land application of manure.

38. With respect to the reversibility of water quality impacts that are reasonably expected to occur from this proposed Project, the MPCA makes the findings set forth below.
39. The prevention of adverse effects on water quality due to manure storage and application is addressed in the 2011-2016 Feedlot General NPDES/SDS Permit. Significant adverse impacts to water quality are not expected; however, if water quality impacts were to occur, the operation and management of the feedlot can be modified, thus, minimizing or eliminating any impacts to waters. Therefore, the water quality impacts that are reasonably expected to occur from the proposed Project are found to be reversible.
40. Comments received that expressed concerns regarding potential effects to water quality: Although some of the comment letters expressed a general concern for the potential negative effects of the proposed Project to water quality, none of them included water quality data, the proposed Project's design features, or the stormwater runoff mitigation measures. As discussed above in Findings 29 through 39, the analysis indicates that the effects on water quality that are reasonably expected to occur are not significant.
41. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to assess potential impacts to the quality of surface and groundwater that are reasonably expected to occur from the proposed Project. Measures to prevent or mitigate these impacts have been developed and required as proposed permit conditions.
42. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to water quality that are reasonably expected to occur.

Impacts Related to Water Appropriation

43. A new well will be drilled for this Project. The expected depth of the well is between 50 and 125 feet. The total water usage for the Project is expected to be approximately 6.62 million gallons per year. The projected 25-year service consumption is 165.5 million gallons for the Project.
44. The water appropriations will be subject to the DNR Water Appropriation Animal Feedlots and Livestock Operations Individual Permit (DNR Water Appropriations Permit). The DNR reviews the permit application upon approval of the MPCA Feedlot permit, which determines final animal numbers and, hence, water consumption. The purpose of the DNR permit program is to ensure water resources are managed so that adequate supply is provided to long-range seasonal requirements for domestic, agricultural, fish and wildlife, recreational, power, navigational, and quality control.
45. The DNR permit program balances competing management objectives, including both the development and protection of water resources. Minn. Stat. § 103G.261 establishes domestic water use as the highest priority of the State's water when supplies are limited. If a well interference arises, the DNR has a standard procedure for investigating the matter. If a commercial operator is found to be causing the problem, the operator must correct it.

46. With respect to the reversibility of water appropriation impacts that are reasonably expected to occur from this proposed Project, the MPCA makes the findings set forth below.
47. The prevention of adverse effects on water appropriation due to increased usage of water by livestock is addressed in the DNR Water Appropriations Permit. Significant adverse impacts to water quantity are not expected; however, if well interference occurs, the operation and management of the feedlot can be modified, and impacts to waters could be reversed. Therefore, the water appropriation impacts that are reasonably expected to occur from the proposed Project are found to be reversible.
48. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to assess potential impacts to the quantity of surface and groundwater that are reasonably expected to occur from the proposed Project.
49. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to water appropriation that are reasonably expected to occur.

Cumulative Potential Effects

50. The second criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is the “cumulative potential effects.” In making this determination, the MPCA must consider “whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effects; and the efforts of the proposer to minimize the contributions from the project” (Minn. R. 4410.1700 subp.7.B). The MPCA findings with respect to this criterion are set forth below.
51. The EAW, public comments, and MPCA follow-up evaluation did not disclose any related or anticipated future projects that may interact with this Project in such a way as to result in significant cumulative potential environmental effects.
52. The EAW addressed the following areas for cumulative potential effects for the proposed Project.
 - Air quality;
 - Water quality of surface waters; and
 - Water quality of groundwater.

Air Quality

53. Cumulative potential effects on air quality were evaluated by comparing the Minnesota ambient air quality standards for hydrogen sulfide, iHRVs for ammonia, and odor intensity thresholds with concentrations in the air predicted by air modeling (see Findings 17–24). The modeling analysis included the estimated emissions from the proposed Project, eight nearby feedlots, and incorporated conservative background concentrations to account for the potential impacts of air emissions from other feedlots. Air concentrations were estimated for these pollutants at the

35 residences located in the three-mile by three-mile area surrounding the proposed Project. All modeled concentrations were below the health-based and nuisance odor criteria used in the analyses and no violations of air quality standards were predicted. Therefore, the cumulative potential effects on air quality are not believed to be significant in the Project area, and the proposed Project is not expected to contribute significantly to adverse cumulative potential effects on air quality.

Water Quality of Surface Waters

54. The proposed feedlot expansion and manure application sites are located in the Dismal Creek, Long Prairie River, and Crooked Lake Ditch Minor Watersheds. Row crop agriculture is the primary land use within the three watersheds, with some forage production and woodlands as well. Several livestock farms are currently present within the watersheds. According to the MPCA's 2012 report on Impaired Waters, the Long Prairie River is impaired for fish bioassessments and dissolved oxygen. These impairments affect aquatic life. Crooked Lake Ditch is impaired for aquatic macroinvertebrate bioassessments. This impairment affects aquatic life. Lake Osakis is impaired for nutrient/eutrophication and biological indicators. This impairment affects Aquatic Recreation. Dismal Creek is not listed for any impairments.
55. A Total Maximum Daily Load (TMDL) Implementation Plan has been prepared for the Long Prairie River dissolved oxygen impairment. The Long Prairie River TMDL project indicates low dissolved oxygen due to high levels of ammonia impairs water quality in the Long Prairie River. Low dissolved oxygen occurs primarily during low-flow conditions when the volume and current of the water in the river are less than average. Modeling results from the TMDL study indicate that, with ammonia reductions, it is possible to meet the dissolved oxygen standard in the Long Prairie River during low flow conditions. The TMDL report was approved by the U.S. Environmental Protection Agency on August 5, 2005. The TMDL Implementation Plan can be found at: <http://www.pca.state.mn.us/index.php/view-document.html?gid=7986>.
56. The Manure Management Plan (MMP), dated February 1, 2012, is consistent with the recommended BMPs for the Long Prairie River TMDL Implementation Plan.
57. As noted in previous findings, the Project is required by the NPDES/SDS Permit to meet a "no discharge" standard. All livestock will be housed in a total confinement building and manure will be stored in beneath barn concrete pits that have been designed by a Professional Engineer and approved by the MPCA.

Water Quality of Groundwater

58. A review of wells recorded in the Minnesota Department of Health County Well Index for Section 8, Leslie Township, Todd County, and the surrounding sections show a significant clay layer near the surface in the area of the Project. There were eight wells documented in the nine sections reviewed. For two of the wells in the area, the clay does not start until a depth of 50-55 feet. At the remaining six wells, the clay layer starts from 0-2 foot depth. The thickness of the clay layer, as recorded on the well logs, ranges from 20 feet to 152 feet. Clay soil, which is made up of fine

materials, can hold a lot of water yet transmits very little because water and other materials cannot move easily through the tiny pore spaces. Therefore, a clayey soil layer in the ground is going to slow/limit the rate and amount of material/liquids that can get down into groundwater.

59. To protect groundwater, the Project Proposer is required to follow the design criteria in Minn. R. ch. 7020 for the construction of the manure storage structures for the swine manure and the land application of the manure. The proposed plans and specifications for the manure storage pits, the design and operation of the open lots, and the MMP for Manure Transfer for the land application of the manure have been reviewed and approved by MPCA staff, and will be enforceable conditions of the Project's NPDES/SDS Feedlot Permit.
60. The producer is required to follow an MPCA approved MMP for Manure Transfer and submit an annual report to the MPCA on manure production, land application and any discharges. The approved MMP for Manure Transfer is an enforceable part the Project's NPDES/SDS Permit. The proposed Project is not expected to adversely impact groundwater from land application of manure.
61. The MMP for Manure Transfer requires that all manure testing information, as well as State requirements for limiting the application rates of the manure, be supplied to all manure recipients. Manure recipients are required to apply manure according to State law, at agronomic rates that do not apply more nitrogen than the crop can uptake. In addition, the use of the Nitrapyrin will reduce the potential for nitrate leaching by delaying the conversion of nitrogen to nitrate, thus, allowing the conversion to occur more closely to peak crop demand for nitrate-N. Lastly, manure applications done in the fall will be done when soil temperatures are below 50°F, which will further limit the conversion of applied nitrogen to nitrate-N.
62. The MPCA report "Effects of Liquid Manure Storage Systems on Ground Water Quality" (April 2001) summarizes results from ground water monitoring conducted to determine possible impacts from different types of manure storage. Results of monitoring around concrete structures show that, even at vulnerable sites, migration of contaminants beyond 100 feet is unusual. The manure storage structures proposed will be concrete, will not be open to the environment, and are designed specifically to prevent contamination of groundwater.
63. Based on information on the proposed Project obtained from air modeling, permit application and plan review processes, ongoing water quality assessments, a site visit, and presented in the EAW, the MPCA does not expect significant cumulative potential effects from this Project.

The Extent to Which the Environmental Effects Are Subject to Mitigation by Ongoing Public Regulatory Authority

64. The third criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is "the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project" (Minn. R. 4410.1700, subp. 7.C). The MPCA findings with respect to this criterion are set forth below.

65. The following permits or approvals will be required for the Project:

Unit of Government	Permit or Approval Required
MPCA	General NPDES/SDS Livestock Production, Construction, Operation (Feedlot) and Stormwater Permit
Todd County	Conditional Use Permit
DNR	Water Appropriation (Animal Feedlot and Livestock Operations General Permit)

66. MPCA NPDES/SDS Livestock Production, Construction, Operation (Feedlot) and Stormwater Permit. An NPDES/SDS Feedlot and Stormwater Permit are required for the Project. The NPDES/SDS Feedlot Permit incorporates construction and operation requirements, and includes operating plans that address manure management, emergency response protocols, and odor/air quality management. The attachments are an enforceable condition of the NPDES/SDS Permit. Permitted facilities are inspected by both State and County feedlot staff. Failure to comply with the terms and conditions of the permit will result in enforcement and possible fines.
67. County Conditional Use Permit. As a conditional use, the Project will have to obtain a Conditional Use Permit (CUP) from Todd County. Section 5.05, Part C of the Todd County Zoning Ordinance states, "In permitting a new conditional use or the alteration of an existing conditional use, the Planning Commission may recommend the imposition, in addition to the standards and requirements expressly specified by this Ordinance, of additional conditions which the board considers necessary to protect the best interest of the surrounding area or the county as a whole." Todd County will determine whether the proposed Project meets the criteria of a conditional use consistent with the Todd County Land Use Ordinance. The information developed as part of this environmental review process has been available to Todd County to aid in determining whether to issue the CUP. The county may impose further conditions, if desired.
68. DNR Water Appropriation Permit. An individual DNR Water Appropriation Permit will be required for the Project, as the Project Proposer will be withdrawing an estimated 6.62 million gallons per year. A new well will be drilled for the Project. The purpose of the DNR permit program is to ensure water resources are managed so that adequate supply is provided to long-range seasonal requirements for domestic, agricultural, fish and wildlife, recreational, power, navigational, and quality control. The permit program balances competing management objectives, including both the development and protection of water resources. Minn. Stat. § 103G.261 establishes domestic water use as the highest priority of the State's water when supplies are limited.
69. The above-listed permits include general and specific requirements for mitigation of environmental effects of the Project. The MPCA finds that the environmental effects of the Project are subject to mitigation by ongoing public regulatory authority.

The Extent to Which Environmental Effects can be Anticipated and Controlled as a Result of Other Available Environmental Studies Undertaken by Public Agencies or the Project Proposer, Including Other EISs

70. The fourth criterion that the MPCA must consider is “the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the Project Proposer, including other EISs” (Minn. R. 4410.1700, subp. 7. D). The MPCA findings with respect to this criterion are set forth below.
71. The following documents were reviewed by MPCA staff as part of the environmental impact analysis for the proposed Project:
- Data presented in the EAW;
 - Permit application; and
 - Air dispersion modeling report.
72. This list is not intended to be exhaustive. The MPCA also relies on information provided by the Project Proposer, persons commenting on the EAW, staff experience, and other available information obtained by staff.
73. The environmental effects of the Project have been addressed by the design and permit development processes, and by ensuring conformance with regional and local plans. There are no elements of the proposed Project that pose the potential for significant environmental effects.
74. Based on the environmental review, previous environmental studies by public agencies or the Project Proposer, and staff expertise and experience on similar projects, the MPCA finds that the environmental effects of the Project that are reasonably expected to occur can be anticipated and controlled.
75. The MPCA adopts the rationale stated in the attached Response to Comments (Appendix B) as the basis for response to any issues not specifically addressed in these Findings.

CONCLUSIONS OF LAW

76. The MPCA has jurisdiction in determining the need for an EIS for this proposed Project. The EAW, the permit development process, and the evidence in the record are adequate to support a reasoned decision regarding the potential significant environmental effects that are reasonably expected to occur from this proposed Project.
77. Areas where the potential for significant environmental effects may have existed have been identified and appropriate mitigation measures have been incorporated into the proposed Project design and permits. The proposed Project is expected to comply with all MPCA standards.
78. Based on a comparison of the impacts that are reasonably expected to occur from the proposed Project with the criteria established in Minn. R. 4410.1700, subp. 7, the proposed Project does not have the potential for significant environmental effects.

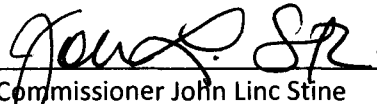
79. An EIS is not required.

80. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency determines that there are no potential significant environmental effects reasonably expected to occur from the Gourley Brothers Hog Feedlot Project and that there is no need for an Environmental Impact Statement.

IT IS SO ORDERED



Commissioner John Linc Stine
Chair, Citizens' Board
Minnesota Pollution Control Agency



Date