

E. Project Location:		County	Rock		City/Twp	Magnolia	
NW	1/4	1/4	Section	4	Township	102	Range 44
Watershed (name and 4-digit code):			Missouri - Big Sioux 1017				

F. Attach each of the following to the EAW:

- Exhibit #1 - County map showing the general location of the Project site;
- Exhibit #2 - U.S. Geological Survey (USGS) 7.5 minute, 1:24,000 scale map indicating Project boundaries;
- Exhibit #3 - Site plan showing all significant Project and natural features;
- Exhibit #4 - Map of manure application sites;
- Exhibit #5 – Aerial photographs showing all wells, tile inlets, residences, and sensitive receptors within a one-mile radius of the feedlot or on manure land application sites;
- Exhibit #6 – Minnesota Department of Health (MDH) letter;
- Exhibit #7 – Minnesota Department of Natural Resources (DNR) letter;
- Exhibit #8 – Minnesota Historical Society (MHS) information; and,
- Exhibit #9 – Air Emission/Odor Management Plan.

The National Pollutant Discharge Elimination System (NPDES) Permit application and associated documents, which include the Air Emission Plan, Emergency Response Plan, and the Manure Management Plan (MMP) are available for review at the following locations and contacts:

- Rock County Community Library, 201 West Main Street, Luverne, MN 56156
- Tammy Fischer, MPCA/Marshall at (507) 537-7146 or tamara.fischer@pca.state.mn.us
- Mary Nelson, MPCA/Saint Paul at (651) 296-3516 or mary.nelson@pca.state.mn.us

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

Binford Farms currently operates a multi-site beef and swine feedlot operation in Rock County, Minnesota. The Binfords are proposing to expand their existing 600 head (600 animal unit (au)) beef cattle operation located in Section 4, Magnolia Township by 1,500 head for a total of 2,100 head or 2,100 au of cattle. The livestock operation at this site also contains an existing 500 head (25 au), total confinement swine nursery barn and an existing 500 head (25 au) swine nursery in Section 32 of Vienna Township. There will be no expansion of the swine herd. After the cattle expansion the site will maintain an overall capacity of 2,150 au. Cattle manure will be scraped, hauled and surface applied to fields once per week as field conditions allow and incorporated as soon as possible.

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 type="checkbox"/> Dairy cows		
<input checked="" type="checkbox"/> Beef cattle	1,500 Proposed (600 head existing)	Total Confinement
<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: 1809.94
 Number of animal units proposed in this Project: 1,500
 Total animal unit capacity at this location after Project construction: 2,150
 Acreage required for manure application: 1,746.46

J. Describe construction methods and timing.

Construction is planned for the Magnolia, Section 4 site identified in Exhibit #1 in the EAW. The existing open cattle lots will be abandoned and the animals will be housed on a confinement lot that will be covered entirely by a roof. The proposal is to construct a 630-foot by 100-foot total confinement cattle finishing facility that will replace the existing open lot operation and will be identical to the footprint of the existing facility. The barn will be constructed with six-foot high concrete walls, metal rafters and a metal roof. The building will be constructed according to Minnesota State building codes and Natural Resource Conservation Service (NRCS) engineering specifications.

K. Past and future stages.

Is this project an expansion or addition to an existing feedlot? Yes No
 Are future expansions of this feedlot planned or likely? Yes No
 If either question is answered yes, briefly describe the existing feedlot (species, number of animals and animal units, and type of operation) and any past environmental review or the anticipated expansion.

Binford Farms (Eric and Grant Binford) operate five separate livestock operations in Rock County. The Binford's maintain a swine finishing site with a total of 2,000 head (600 au) in Section 33 of Vienna Township, a 2,000 head (600 au) swine finishing unit in Section 20 of Vienna Township, and a 2,000 head (600 au) swine finishing operation in Section 5 of Magnolia Township. Each of these swine finishing operations operate under separate MMP's and are not considered as part of this Project for purposes of environmental review or permitting. The entire Project consists of the three livestock production buildings identified in Exhibit #3 of this EAW. The existing Project is located in the SW ¼ of the NW ¼ of Section 4, of Magnolia Township and Section 32 of Vienna Township. Section 4 of Magnolia Township contains one total confinement swine nursery facility with a capacity of 500 head (25 au), and two beef cattle finishing facilities (one open lot and one total confinement facility, respectively) that currently holds a total of 1,120 head (1,120 au) of beef cattle. Section 32 of Vienna Township contains a 500 head (25 au) swine nursery unit.

The existing operation has not been subject to any previous environmental review activities. The proposed expansion is located at the Project site and will consist of one total confinement cattle finishing facility with a total capacity of 2,100 head (2,100 au) after expansion. The two 500 head (at 25 au each for a total of 50 au) swine nurseries will not expand. The existing open lot facility will be abandoned upon construction of the building proposal. After expansion the Project site will maintain a capacity of 2,150 au and will operate under one MPCA Feedlot Permit and MMP.

Table # 1 – Location, Barn Dimension, Capacity and Construction Date of the existing Binford Farm Operation, Rock County, Minnesota.

Animal Type	Location	Livestock Unit Dimensions	Manure Storage	Capacity (Head)	Construction Date
Swine Finishing	Sec. 33/Vienna Township	Confinement 2 barns (41' x 200' each)	Liquid	2,000	1996
Swine Finishing	Sec. 20/Vienna Township	Confinement (51' x 328')	Liquid	2,000	2000
Swine Finishing	Sec. 5/Magnolia Township	Confinement 2 barns (41' x 200' each)	Liquid	2,000	1995
†Nursery Pigs	Sec. 32/Vienna Township	Confinement (32' x 54')	Liquid	500	1988
†Nursery Pigs	Sec. 4/Magnolia Township	Confinement (28' x 76')	Liquid	500	≈1979
†Cattle	Sec. 4/Magnolia Township	Open Lot (140' x 300')	Solid (Lot/Stockpile)	600	Pre-1980
†Cattle	Sec. 4/Magnolia Township	Total Confinement (100'x240')	Solid (Lot/Stockpile)	600	2001
Shaded rows reflect livestock production that is not part of the Project for environmental review purposes. † Livestock production site reviewed as part of the overall Project for environmental review and permitting purposes.					

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

A. Adjacent land uses. Describe the uses of adjacent lands and give the distances and directions to nearby residences, schools, daycare facilities, senior citizen housing, places of worship, and other places accessible to the public (including roads) within one mile of the feedlot and within or adjacent to the boundaries of the manure application sites.

There are a total of 12 residences located within one mile of the proposed expansion. Aerial photographs provide locations of residences with respect to the existing and proposed livestock operations are shown in Exhibit #5.

The existing farm operation in Section 4 is adjacent to County Road 55. County Road 55 is a north/south-oriented road. All manure application sites are adjacent to a public road on at least one side of the field.

See attachments from the DNR (Exhibit #7), the MDH (Exhibit #6), and the MHS (Exhibit #8). Rock County has no setback requirements from residences for existing feedlots. There are no schools, daycare facilities, senior citizen houses, places of worship, public parks, etc. within one mile of this site. The site is rural in nature and located in an agricultural zone that consists of flat to gently rolling cropland. Corn and soybean row crops are the primary crops with some alfalfa and grassland production. The Project site is screened to the north and west by established grove.

B. Compatibility with plans and land use regulations. Is the project subject to any of the following adopted plans or ordinances? Check all that apply:

- local comprehensive plan
- land use plan or ordinance
- shoreland zoning ordinance
- flood plain ordinance
- wild or scenic river land use district ordinance
- local wellhead protection plan

Is there anything about the proposed feedlot that is not consistent with any provision of any ordinance or plan checked? Yes No.

If yes, describe the inconsistency and how it will be resolved.

Are there any lands in proximity to the feedlot that are officially planned for or zoned for future uses that might be incompatible with a feedlot (such as residential development)? Yes No

If yes, describe the potentially affected use and its location relative to the feedlot, its anticipated development schedule, and any plans to avoid or minimize potential conflicts with the feedlot.

C. Nearby resources. Are any of the following resources on or in proximity to the feedlot, manure storage areas, or within or adjacent to the boundaries of the manure application sites?

- Drinking Water Supply Management Areas designated by the MDH (Exhibit #6)? Yes No
- Public water supply wells (within two miles) (Exhibit #6)? Yes No
- Archaeological, historical or architectural resources (Exhibit #8)? Yes No
- Designated public parks, recreation areas or trails (Exhibit #7)? Yes No
- Lakes or Wildlife Management Areas (Exhibit #7)? Yes No
- State-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities (Exhibit #7)? Yes No
- Scenic views and vistas (Exhibit #7)? Yes No
- Other unique resources? Yes No

If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

The Project (existing and proposed livestock production sites and land application areas) lie within the Rock River Watershed, a minor watershed in the Missouri River Basin. Rock River, Champepadan Creek and Elk Creek appear on the Total Maximum Daily Load (TMDL) 303d impaired waters list for aquatic life, aquatic consumption, and/or aquatic recreation. The issues of concern include mercury, ammonia, and fecal coliform.

The Project operators will follow the MPCA approved MMP that is designed to protect water resources. The protective activities include manure injection and incorporation rather than surface application without incorporation, land application at rates that do not exceed crop needs, thereby reducing or eliminating the possibility that excess nutrients will reach the water resources; and setback distances to sensitive receptors. A table of the applicable MPCA and County land application setback distances is found in §5.D.4. of this EAW. The manure management practices will prevent the operation of the existing and proposed livestock facilities to create a significant environmental impact on water quality.

Topeka shiners have been documented in the Rock River and in Champepadan and Elk Creeks in the vicinity of the Project area. Management practices that will be implemented to prevent sediment, feces, nutrients or other organic material directly into the streams are observing winter setbacks of 300 feet from streams or intermittent waterways. Non-winter applications will be incorporated within 24 hours when applied within 300 feet. Manure in non-sensitive areas will be incorporated as soon as field conditions allow incorporation. Phosphorus management will be implemented where soil P already exceeds 21 part per million (ppm) Bray P1.

All animals are totally confined and no grazing of livestock will occur at this feedlot.

3. Geologic and soil conditions.

A.

Approximate depth (in feet) to:	Feedlot	Manure Storage Area	Manure Application Sites
Ground Water (minimum)	>6	>6	>6
(average)			
Bedrock (minimum)	>60	>60	>60
(average)			

B.

NRCS Soil	Feedlot	Manure Storage Area	Manure Application Sites
Classifications (if known)	306B	306B	306B, 490, 97, 327B, 140, 92A

C. Indicate with a yes or no whether any of the following geologic site hazards to ground water are present at the feedlot, manure storage area, or manure application sites.

	Feedlot	Manure Storage Area	Manure Application Sites
Karst features (sinkhole, cave, resurgent spring, disappearing spring, karst window, blind valley, or dry valley);	No	No	No
Exposed bedrock;	No	No	No
Soils developed in bedrock (as shown on soils maps).	No	No	No

For items answered yes (in C), describe the features, show them on a map, and discuss proposed design and mitigation measures to avoid or minimize potential impacts.

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

A. Will the project involve installation or abandonment of any water wells, appropriation of any ground or surface water (including dewatering), or connection to any public water supply? Yes No
 If yes, as applicable, give location and purpose of any new wells; the source, duration, quantity and purpose of any appropriations or public supply connections; and unique well numbers and the Department of Natural Resources (DNR) appropriation permit numbers, if available. Identify any existing and new wells on the site map. If there are no wells known on-site, explain methodology used to determine that none are present.

- B.** Will the project involve installation of drain tiling, tile inlets or outlets? Yes No
If yes, describe.
- C.** Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch? Yes No
If yes, identify water resource affected and give the DNR Protected Waters Inventory number(s) if the water resources affected are on the PWI. Describe proposed mitigation measures to avoid or minimize impacts.

5. Manure Management.

A. Check the box or boxes below which best describe the manure management system proposed for this feedlot.

- Stockpiling for land application
- Containment storage under barns for land application
- Containment storage outside of barns for land application
- Dry litter pack on barn floors for eventual land application
- Composting system
- Treatment of manure to remove solids and/or to recover energy
- Other (please describe)

Include Phytase in swine rations to reduce phosphorus levels in manure.

B. Manure collection, handling, and storage.

Quantities of manure generated: 21,421.22 tons by 21,421.22 tons by 50,000 gallons
total 50,000 gallons species 1 (cattle) species 2 (swine)

Frequency and duration of manure removal: number of days per cycle 7 Days—Cattle
183—Swine

Total days per year: 52 days/2 days

Swine manure and wastewater will be collected during the year and stored in deep pits (concrete) under slotted floors. In the spring and fall the manure will be agitated in the deep pits, pumped out into tankers and land applied by injection as fertilizer. Cattle manure will be scraped and surface applied when field conditions support the weight of the tractor and spreader. Saturated soils will prevent application or cause severe soil compaction if manure is applied under these conditions. Likewise, winter applications will occur if snow accumulation does not prevent access to fields. If conditions do not allow applications, cattle manure will be stored on clay-based soils until field conditions permit application.

During winter spreading of cattle manure, fields that have the least slope and are the furthest away from surface water will be given priority for application. Winter setbacks of 300 feet from sensitive areas will be observed. Non-winter applications will be incorporated within 24 hours when applied within 300 feet of sensitive areas. Manure in non-sensitive areas will be incorporated as soon as field conditions allow incorporation. Phosphorus management will be implemented where soil phosphorus already exceeds 21 ppm Bray P1.

A manure application plan for sensitive acres is developed that will regulate the application rate and frequency over a six-year period and will not result in soil test P buildup.

Manure is stockpiled on clay base soils when field availability is restricted due to crop production (See Exhibit #5). These sites are rotated each year and a crop is grown on area previously used for stockpiling. Swine manure is stored in under building pits that have pit fan ventilation. Manure is agitated prior to removal and field applied by a certified custom applicator each fall after crops have been removed. Nursery pit storage is applied in spring and fall.

C. Manure Utilization.

Physical state of manure to be applied: liquid solid other, describe: _____

D. Manure Application.

1. Describe application technology, technique, frequency, time of year and locations.

Cattle manure will be scraped and hauled into a box spreader and surface applied to next years corn production acres. All lots are emptied on a weekly basis. All cattle manure is surfaced applied and is incorporated during the spring and fall. Swine manure is removed during the spring and fall. It is agitated in the deep pits, pumped into tanker spreaders, and applied to row crop fields. The manure is immediately injected into the soil during application. The box spreader and liquid tanker are calibrated by the weight and area method. Fields are selected by soil test results that identify which fields will benefit most from more manure application. A map of land for application of manure is shown in Exhibit #4 in this EAW.

2. Describe the agronomic rates of application (per acre) to be used and whether the rates are based on nitrogen or phosphorus. Will there be a nutrient management plan? Yes No

The cattle application rate will be a reduced nitrogen rate and the swine rate will be a maximum nitrogen based rate. Field priority will be based on a phosphorus (P₂O₅) soil test and potassium (K₂O) with the lower levels of these receiving the manure first. Other factors that will determine nutrient needs will be crop grown, yield goal, organic matter content, precious manure credits and other legume credits. Nutrient rates will be determined by utilizing U of M Extension Service bulletin, "Fertilizer Recommendations for Agronomic Crops in Minnesota". This procedure has been developed from continual land grant research as the one that best predicts the amount of that nutrient in the soil that can be used by plants. Soil sampling is done on all of the cropland every two years to monitor crops needs and target acres that will positively respond to manure applications.

Crop	Average yield	Nitrogen needed	Phosphorus needed
Corn	175 bu/ac	140 lbs. N/ac	60 lbs. P ₂ O ₅ /ac
Soybeans	50 bu/ac	245 lbs. N/ac	41 lbs P ₂ O ₅ /ac

N = nitrogen
ac = acres
bu = bushel

3. Discuss the capacity of the sites to handle the volume and composition of manure. Identify any improvements necessary.

None of the land for manure application is labeled as highly erodible by NRCS. Based on an MPCA review and approval of the MMP for the existing and proposed feedlots, the proposers have an adequate land-base to properly apply animal waste as fertilizer. The Project proposers will abide by the MPCA feedlot rules regarding land application practices and environmental sensitive features (Minn. R. 7020.2005).

All application acres are producer controlled. Land is either owned or rented by the producer and is always available for application. Application rate for cattle will be based on 50 to 60 pounds of nitrogen for corn. This will require 863 corn acres per year. Supplemental nitrogen will need to be added to the corn crop to meet the nutrient needs of the crop based on a yield goal of 175 bushel corn. No supplemental P₂O₅ and K₂O will be needed. This rate lowers the buildup of soil test Phosphorus. Liquid swine manure will be applied at a nitrogen-based rate of 140 pounds per acre and this will require about 10 acres with some build up of soil test P and K. Weekly scrape and haul of solid cattle manure reduces the need for more storage space. The nursery barn has a six month storage capacity and needs to be applied in the spring and fall.

4. Describe any required setbacks for land application systems.

None of the land for manure application is labeled as highly erodible by NRCS. Based on an MPCA review and approval of the MMP for the existing and proposed feedlots, the Project proposers have an adequate land-base to properly apply animal waste as fertilizer. Rock County does not have any specific ordinance directed at the land application activities and follow the MPCA feedlot regulations pertaining to setback distances. The Project proposers will abide by the MPCA feedlot rules regarding land application practices and environmentally sensitive features (Minn. R. 7020.2005):

Table #2 MPCA Animal Waste Land Application Setback Distances

Feature	Winter	Non-Winter With Immediate Incorporation (<24 hours)		Non-Winter Not incorporated within 24 hours	
		With P Mgmt.	No P Mgmt.	With Vegetated Buffer	Inadequate Vegetated Buffer
Lake, Stream	300'	25'	300'	100'	300'
Intermittent Stream* DNR protected wetlands** Drainage ditch w/o quarry*	300'	25'	300'	50'	300'
Open Tile Intake***	300'	0	0	300	300
Well, mine or quarry	50'	50'	50'	50	50
Sinkhole with no diversion	Downslope 50' Upslope 300'	50'	50'	Downslope 50' Upslope 300'	Downslope 50' Upslope 300'

*Intermittent streams and ditches pertain to those identified on USGS quadrangle maps, excluding drainage ditches with berms that protect from runoff into the ditch and segments of intermittent streams which are grassed waterways. USGS quadrangle maps can be found at County Soil and Water Conservation District Offices or can be viewed on the internet at <http://www.terraserver.microsoft.com> [August 17, 2004].

**Wetland setbacks pertain to all protected wetlands identified on DNR protected waters and wetlands maps (these maps are often located in County Soil and Water Conservation District

offices and typically include all wetlands over ten acres).

***The open-tile intake setbacks do not take effect for solid manure applications until the year 2005.

The proposed Project will operate under a nitrogen based land application plan which includes soil testing for the presence of phosphorus-loading pursuant to MPCA Feedlot rules (Minn. R. 7020). In the event that a phosphorus-based land application plan is required, the phosphorus-based setback distances will apply. The phosphorus-based land application rates are designed to protect surface-water quality.

E. Other methods of manure utilization. If the project will utilize manure other than by land application, please describe the methods.

None.

6. Air/odor emissions.

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

The floor and other surfaces of buildings, pens, and the surfaces of animals are all sources of odor. Manure collection and storage facilities, feed storage facilities, dead animal disposal and storage areas and manure exposed to the air during land application are also sources.

Particulate matter is generated by truck traffic around the site.

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.

Odor management practices implemented for the swine unit include thorough washing and disinfection of interior nursery building at the end of each cycle. Special attention is paid to cleaning the ventilation fans and pit exhaust fans. Dust is an odor carrier and controlling it will reduce odor emissions. The producer will maintain clean dry floors, eliminate manure buildup and cleanup any spilled feed. All these can be a significant odor source. Swine manure will all be injected immediately into soil. Fields have adequate separation distances from neighbors. Diet manipulation reducing crude protein from animal and plant protein sources and utilizing synthetic amino acids will reduce potential odor. Detailed odor management techniques are attached to this EAW as Exhibit #10.

The cattle feedlot will practice a weekly scrape and haul system that will reduce manure volume and potential odor emission in the lot. Spilled feed will be cleaned up around bunks or the commodity storage area. Organic bedding, such as straw, corn stalks or other bedding material will be utilized in the lots to reduce emissions. Manure will be incorporated in spring and fall prior to standard tillage operations for crop production, except in special protection areas where manure will be incorporated within 24 hours. Setbacks will be observed from nearby residences for manure application and stockpiling. Weather conditions, primarily wind speed/direction and humidity will be evaluated before manure is land applied to insure minimal impacts on neighbors and the public.

C. Answer this item only if no feedlot design features or mitigations were proposed in item 6.B.

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.

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.

Neighbors will be notified of manure application when nursery pit is agitated and emptied. Regular cattle manure applications will maintain a low volume of manure thus reducing potential odor sources.

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

Noise from the ventilation fans may be detectable up to 500-feet from the barns. The only other noise will be truck traffic entering and leaving the site.

If particulate matter generated by truck traffic becomes an issue, the owners will use a dust suppressant to abate fugitive particulate matter emissions.

No noise or dust problems have occurred at this site. The nearest neighbor is 1/8 mile away. All weather access roads to feedlot are blacktop or concrete surface roads.

7. Dead Animal Disposal

Describe the quantities of dead animals anticipated, the method for storing and disposing of carcasses, and frequency of disposal.

There are two mortality collection areas located off site. Both have impervious clay surfaces. One site has screening fence on three sides. The other is screened from view by grain storage bins. If rendering service is not available, a composting system will be implemented based on recommendations from Minnesota Department of Agriculture and the Board of Animal Health. Mortalities are removed as discovered from lots. Klarenbeek Rendering is used for the collection and disposal of dead animals. They pick up mortalities on a per call basis. Rendering service has been reliable and timely. The predicted annual mortality rate is approximately 30 head for nursery swine, and approximately 16 head of beef cattle.

8. Surface Water Runoff.

Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff.

There will be no runoff concerns since open lots will be abandoned and existing lots and buildings will be converted to total confinement facilities. New and existing buildings will have cattle housed under roof on total concrete confinement.

9. Traffic and Public Infrastructure Impacts.

A. Estimate the number of heavy truck trips generated per week and describes their routing over local roads. Describe any road improvements to be made.

The loads are always semi truck loads—1.5 loads of market cattle per week; 6 loads of nursery pigs per year; 2 loads of gluten feed; 2-3 loads of hog feed per week and all feedstuffs are grown by producer and utilized by livestock operation, which reduces the number of loads of grain to be hauled off the farm.

B. Will new or expanded utilities, roads, other infrastructure, or public services be required to serve the project? Yes No
If yes, please describe.

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

Unit of government	Type of Application	Status
<input checked="" type="checkbox"/> MPCA	NPDES/SDS Livestock Production Construction, Operation and Stormwater Permit	Pending with this EAW
<input checked="" type="checkbox"/> County	Building Permit	To be applied for
<input checked="" type="checkbox"/> County	Conditional use or other land use permit	To be applied for

*(List any other approvals required along with the unit of government, type of approval needed, and status of approval process.)

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.)*

Land application of manure can be a concern with respect to water quality. The MPCA’s impaired waters database was reviewed to determine if the facility would contribute to any existing impaired surface waters or add to the TMDL for surface waters in the watershed. The Project (existing and proposed livestock production sites and land application areas) lie within the Rock River Watershed, a minor watershed in the Missouri River Basin. Rock River, Champepadan Creek and Elk Creek appear on the TMDL 303d impaired waters list for aquatic life, aquatic consumption, and/or aquatic recreation. The issues of concern include mercury, ammonia, and fecal coliform.

The Project operators will follow the MPCA approved MMP that is designed to protect water resources. The protective activities include manure injection and incorporation rather than surface application without incorporation, land application at rates that do not exceed crop needs, thereby reducing or eliminating the possibility that excess nutrients will reach the water resources; and setback distances to sensitive receptors. A table of the applicable MPCA and County land application setback distances is found in §5.D.4. of this EAW. The manure management practices will prevent the operation of the existing and proposed livestock facilities to create a significant environmental impact on water quality.

Animal agriculture as an industry is known to contribute to atmospheric acidity (NH₃, H₂S), nutrient transport and deposition (nitrogen compounds), global warming (methane, nitrous oxide), and ozone layer depletion, however, little is known about agriculture's contribution to the latter. There is, however, no evidence to suggest that the proposed Project would contribute significantly to any of these phenomena.

The Project produces a variety of beef cattle for the drug-free market, as well as, cattle produced through the sub therapeutic use of antibiotics. The Project proposers are aware of the environmental and public health concerns related to antibiotic use in cattle and will not use any antibiotics without the supervision of a veterinarian.

Beef feedlots are known to be a potential source of flies if open lots are not managed properly. The higher the moisture and humidity (i.e., wetness) of the cattle lot, the greater the likelihood that a fly population will increase due to the suitability of the fly-breeding habitat. The Project proposers will adhere to a frequent manure harvest from the open lots based on moisture and humidity, as well as, use a variety of chemical sprays to reduce or eliminate the fly population in and around the feedlot operation.

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.

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:

**Beth G. Lockwood, Supervisor, Environmental Review Unit
Operations and Environmental Review Section
Regional Environmental Management Division**

Date:

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, Room 300, 658 Cedar St., St. Paul, MN 55155, (651) 296-8253, or voice mail: (800) 657-3794. For TTY, call (800) 627-3529 and ask for Minnesota Planning. This form can be made available in an alternative format, such as audiotape. This form is available at <http://www.mnplan.state.mn.us>.