

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Granny's Poultry Cooperative Ltd.
PROPOSAL NAME: Land Application of Lagoon Sludge
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Waste/Scrap
CLIENT FILE NO.: 5757.00

Note: For the purposes of this Summary the terms biosolids and sludge solids are used interchangeably to describe a mixture of biosolids and sludge solids.

OVERVIEW:

On March 2, 2015, the Department received an Environment Act Proposal (EAP), filed on behalf of Granny's Poultry Cooperative Ltd., for the removal of sludge from an existing wastewater storage pond located in NE 27-7-6 EPM in the Rural Municipality of Hanover. The sludge will be removed from the cells of the pond, transported to agricultural land, surface applied at prescribed agronomic rates, and cultivated into the soils within 48 hours of being applied. Surface application will occur between September and November of 2015. The registered land owner of the agricultural land located within NW 9-8-6 EPM in the Rural Municipality of Ste. Anne has agreed to have the sludge applied to their agricultural land. Final decommissioning of the cells of the wastewater storage pond will occur within approximately one year thereafter.

The Department, on March 19, 2015, placed copies of the EAP report in the Public Registries located at the Legislative Library, 200 Vaughn, Winnipeg, the Millennium Public Library, 4th Floor, 251 Donald St., Winnipeg; and the Online Registry, <http://www.gov.mb.ca/conservation/eal/registries/index.html>, and provided copies of the EAP report to the Technical Advisory Committee (TAC) members. As well, the Department placed public notification of the EAP in the Steinbach Carillon on Thursday, March 19, 2015. The newspaper and TAC notifications invited responses until April 17, 2015.

There were no comments from the public.

On June 5, 2015 Manitoba Conservation forwarded requests for additional information from the TAC to the proponent. The proponent's July 7, 2015 response to the requests was then distributed to the participating TAC for review and comment on July 21, 2015.

Copies of that letter and all of the TAC correspondence were sent to the Public Registries.

There were no further comments.

COMMENTS FROM THE PUBLIC:

There were no comments from the public

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

**Water Quality Management Section, Water Science and Management Branch –
Conservation and Water Stewardship**

April 23, 2015

- *Calculation issues:*
 - *The “dry tonnes available” calculated field in Tables 5.5, 5.6 and 5.7 has failed to take into account the density of the material sampled so the value for cell one needs to be multiplied by 1.18 and the value for cell two by 1.13.*
 - *The blended nutrient value in Table 5.7 appears to be a simple average for most parameters. However cell two contains roughly 3 times the material as that in cell one and hence a weighted average calculation is needed to more accurately represent the nutrient content of the blended material.*
 - *Since cell 2 has a much higher nitrogen concentration, these two errors will result in a much higher land requirement for an N based application rate and a moderately higher land base requirement for P based application rates. The land requirement will need to be recalculated and new spread agreements arranged if necessary.*
- *Dewatering of the biosolids is mentioned but no details are given. The water will be nutrient rich so both the method of dewatering and the management of the water must be detailed in the proposal before it can be properly reviewed.*
- *The blending process has not been described in the proposal.*
 - *The material has a very high water content and there is a potential for environmental impact during blending due to runoff or leaching of nutrient rich water. This process will need to be detailed and include any mitigation measures planned to prevent environmental impacts.*
 - *Uniform blending is also critical for accurate application of nutrients. Detailed description of the blending process is needed to properly evaluate the proposed method of applying a blended product.*
- *Follow-up soil sampling (Olsen-P 0-15 cm, and nitrate-N 0-60 cm), one and two years post application is necessary to demonstrate compliance with the Nutrient Management Regulation.*
- *Tables 5.5, 5.6 and 5.7 all reference a 2015 soybean crop as the planned crop upon which nutrient application rates are based. With a fall 2015 application as is proposed, the 2016 crop should be used. The proponent needs to clarify if*

soybeans are planned on the spread field for 2016 or If another crop is planned, application rates will need to be revisited. Therefore either the year or the crop (and assorted rates) needs to be corrected in the table.

Proponent Responses – July 7, 2015:

• Comment 1

- Density was assumed to be 1.0 kg/L following the method applied by Environmental Protection Agency (EPA) Biosolids Management Handbook, Part 3, Section 3.3 C Dry Weight Basis. Tables 5.5, 5.6 and 5.7 (attached) have now been revised to account for the appropriate densities listed above (1.18 for cell one and 1.13 for cell two).
- This is accurate; Table 5.7 did determine a simple average for the “blended” rate. The revised Table 5.7a presents the weighted average value for all parameters. Weighted Average Value differs from an average in that a weighted average returns a number that depends on the variables of both value and weight. In this case the weighted value is based on the dry tonnes biosolids available (corrected for density).

The following is an example calculation for Total Kjeldahl Nitrogen (TKN):

$$\text{Weighted Average Value} = ((6.80 \text{ kg/tonne} \times 566 \text{ tonnes}) + (22.70 \text{ kg/tonne} \times 1693 \text{ tonnes})) / (566 \text{ tonnes} + 1693 \text{ tonnes}) = 18.72 \text{ TKN kg/tonne}$$

- Yes, based on the 2016 crop target nitrogen recommendations as indicated in the revised Table 5.7a (which now has accounted for density and weighted average values) does require a total of 82 ha (202 acres). The cooperating farm producer has approved a higher nutrient land application rate via email communication (attached). The anticipated prescription rate will be nitrogen based for 56 kg nitrogen / ha providing approximately 57% of the P2O5 requirement.
- Comment 2
- Currently, under EAL 2583 Granny's is permitted to discharge to the forcemain connection to the Rural Municipality of Hanover – Blumenort aerated wastewater treatment lagoon. Cell 1 (West) where the surface water that is located, is being pumped and discharged into the forcemain connection as allowed under the EAL 2583 and the agreement between Granny's and the RM. No water will be released outside of the licenced system. The solids will then be mechanically stockpiled within Cell 1 and 2 and allowed to gravity drain. Stormwater and leached water will be drained away from the stockpiles and also be pumped into the forcemain connection.
- Comment 3
- As indicated the biosolids will be dewatered within the cells and the water runoff or leachate will be discharged into the forcemain connection. The physical process of

blending the material is anticipated to occur as follows: 1) Solids from one of the cells will be physically bucketed and stockpiled on the bank of the berm to the second cell. The solids of the second cell will be then stockpiled parallel to the stockpile of the first cell. All materials will remain within the licenced premises of the lagoon cells. Then at the time of loading and transport to the application Site, the material will be bucketed at appropriate ratios (approximately 3:1), mechanically manipulated to blend as best as possible, loaded, transported and spread at the prescribed application rate. The air dry material will be land applied from specially equipped solid materials end spin spread trucks. The equipment will be calibrated for the prescribed application rate based on mass per load, spread width, and spread length. Qualified applicators are anticipated to be retained to complete the application of material.

- Comment 4
 - The proponent will comply with all requirements of the Environment Act Licence granted.
- Comment 5
 - The cropping year is to be 2016. The crop and target rates are confirmed with the cooperating farm producer. Tables 5.5a, 5.6a and 5.7a are all revised accordingly.

July 30, 2015

- Our concerns have been addressed.

Soil, Animal Waste and Conservation Section – Environmental Approvals Branch – Conservation and Water Stewardship

- *The nutrient content and application rate of the blended contents of Cell 1 and Cell 2 (Table 5.7) should be recalculated using a weighted average. Cell 2 contains a greater quantity of material than Cell 1 and using a weighted average will provide a more appropriate approximation of nutrients and a more appropriate application rate.*
- *Provide further information on the drying bed location.*
- *Provide detailed information on the dewatering process and how any liquid from the dewatering process will be managed.*
- *Provide further information on how the material from each cell will be thoroughly mixed to ensure a well blended product prior to application.*
- *It is recommended Olsen phosphorus be included in the soil analysis for the 15-60 cm soil sample prior to application.*

- *It is recommended soil samples from the lands receiving biosolids be taken 1 year post application and submitted to Manitoba Conservation and Water Stewardship to ensure unacceptable nutrient loading or other environmental impact has not occurred as a result of biosolid application.*
- *The spread field is within the Red River Valley Special Management Area and the application of biosolids must comply with the restriction on fall spreading as outlined in the Section 14.2(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98).*

Proponent Responses – July 7, 2015:

- Please see the response outlined above for Comments 1.
- Please see the response outlined above for Comment 2. Drying beds will be within the licenced lagoon cells on-site.
- Please see the response outlined above for Comment 2.
- Please see the response outlined above for Comment 3.
- As outlined in Section 1.4 of the EAP, the proponent will adhere to the following Acts and Regulations that apply to the project and will be adhered to throughout the project, including any requirements assigned in the subsequent EAL:
 1. The Environment Act C.C.S.M. c. E125 (1987)
 - a. Licensing Procedures Regulations 163/88
 - b. Classes of Development Regulation 164/88
 - c. Environment Act Fees Regulation 168/96
 - d. Livestock Manure and Mortalities Management Regulation 42/98
 - i. Designation of Red River Valley Special Management Area
 - e. Environmental Regulations for Treatment and Disposal of Biosolids in Manitoba, Mike Van Den Bosch, P.Eng., Municipalities & Industrial Approvals, Manitoba Environment
 2. The Water Protection Act C.C.S.M. c. W65 (2005)
 - a. Nutrient Management Regulation 62/2008

Note: The final bullet is applicable to the last three comments presented by the TAC member.

Disposition:

- No further response was received from Soil, Animal Waste and Conservation Section – Environmental Approvals Branch – Conservation and Water Stewardship, which is assumed to indicate that they are satisfied with the information received and have no concerns.

Highway Planning and Design Branch – Infrastructure and Transportation

- *MIT has reviewed the proposal under the Environment Act noted above and we do not have any concern provided that the sludge will be hauled to the fields using trucks.*

However, if pumps and hoses will be used within any Provincial Trunk Highway's or Provincial Road's right-of-way, a permit will be required from MIT.

Permit applications may be obtained by contacting Mr. JC Boily at (204) 346-6288 or by email at Jean-Camille.Boily@gov.mb.ca.

Proponent Responses – July 7, 2015:

- At this time it is not anticipated that any pumps or hoses will be used with Provincial Trunk Highway's or Provincial Road's right-of-way as the material will be trucked from the lagoon site to the application field.

Disposition:

- No further response was received from Highway Planning and Design Branch – Infrastructure and Transportation, which is assumed to indicate that they are satisfied with the information received and have no concerns.

Environmental Compliance and Enforcement Branch – Conservation and Water Stewardship

- *In Section 8.1 Final Objectives for the Site it states that a portion of the current lagoon area would be redeveloped into a new emergency cell. Compliance and Enforcement Branch would like clarification as to the intended use of the "emergency cell".*

Proponent Responses – July 7, 2015:

- Currently the Granny's wastewater from the processing of poultry is received by the forcemain that is connected to the RM of Hanover and Blumenort aerated wastewater treatment lagoon. In the unlikely event that the RM of Hanover and Blumenort lagoon could not receive wastewater due to a pipeline disruption or pump station malfunction, the processing plant would be required to stop operations for the duration of repairs. The re-development of an emergency lagoon on-site is for temporary, short duration storage to manage the risk of stopping operations and impacting the lineage of operations from the farm to the retail distribution centres. The intent is to purge the temporary wastewater back to the RM of Hanover and Blumenort lagoon when appropriate to do so.

Disposition:

- No further response was received from Environmental Compliance and Enforcement Branch – Conservation and Water Stewardship, which is assumed to indicate that they are satisfied with the information received and have no concerns.

Water Control Works and Drainage Licensing Section – Conservation and Water Stewardship

- *Any water control works (drains, culverts, dykes, dams, etc.) associated with this project will require licensing under the Water Rights Act – an application is attached for the proponent's convenience. Any inquiries in this regard may be directed to the local Water Resource Officer. Their contact information may be found at:*

http://www.gov.mb.ca/conservation/waterstewardship/licensing/pdf/areas_of_focus_jan_23_12.pdf

Proponent Responses – July 7, 2015:

- At this time it is not anticipated that any water control works are required with this project.

Disposition:

- No further response was received from Water Control Works and Drainage Licensing Section – Conservation and Water Stewardship, which is assumed to indicate that they are satisfied with the information received and have no concerns.

Community Planning Services – Municipal Government

- *No concerns.*

Wildlife and Fisheries Branch – Conservation and Water Stewardship

- *No concerns.*

Air Quality Section – Conservation and Water Stewardship

- *Air Quality has reviewed above proposal and provides the following comments:*
 - *The proposal is not expected to have any significant impact on air quality; and*
 - *It is suggested that the EA License Clause regarding odour nuisance be included.*

Disposition:

- The draft Environment Act Licence contains a clause specifying that the Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation, or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.

Lands Branch – Conservation and Water Stewardship

- *No comment on the EAP as the parcel is privately owned.*

Office of Drinking Water – Conservation and Water Stewardship

- *No concerns.*
- *There are no users of surface water for drinking in the area and the EAP noted that measures will be taken to protect groundwater resources.*

Office of the Fire Commissioner

- *No concerns.*

Water Use Licensing Section – Conservation and Water Stewardship

- *No concerns.*

Parks and Protected Spaces Branch – Conservation and Water Stewardship

- *No comments or concerns to offer.*

PUBLIC HEARING:

A public hearing was not requested and is not recommended.

CROWN-INDIGINOUS CONSULTATION

The Government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations, Métis communities and other Indigenous communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or Indigenous right of that First Nation, Métis community or other Indigenous community.

The proposal involves the removal of biosolids and sludge solids from a wastewater storage pond and applying it on privately owned agricultural land. Adverse effects on surface water or habitat for wildlife or fisheries are not anticipated.

Since the quantity of land required for the project is not overly large and there is a very large quantity of other agricultural land in the area, it is concluded that Crown-Indigenous consultation is not required for the project.

RECOMMENDATION:

The Proponent should be issued a Licence to remove sludge solids from the cells of the wastewater storage pond located at NE 27-7-6EPM for application and incorporation to the proposed receiving land location at NW 9-8-6EPM subject to the specifications, limits, terms and conditions of the Licence. The Licence should be assigned to the Compliance and Enforcement Branch.

PREPARED BY:

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July 14, 2016

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