

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: City of Steinbach
PROPOSAL NAME: Land Application of Lagoon Biosolids
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Waste/Scrap
CLIENT FILE NO.: 5659.00

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 July 5, 2013, the Department received an Environment Act Proposal (EAP), filed on behalf of the City of Steinbach, for the removal of sludge from two cells of the City's aerated wastewater treatment lagoon that are located in SE 8 - 7 - 6EPM. The sludge would be removed from the lagoon site, transported to farmlands, and land applied in accordance with provincial regulatory requirements. One cell is intended to undergo the sludge removal, transport, and land application activities in 2013 and the other is anticipated to occur in 2014-2015. Registered land owners of the parcels of land involved had been contacted and are willing to have the sludge applied to their agricultural land. The parcels of land on which the sludge may be applied are located within: SE 8-7-6EPM, SE 9-7-6EPM, NW 10-7-6EPM, N¹/₂ NW 15-7-6EPM, SE 22-7-6EPM, and NE 22-7-6EPM in the Rural Municipality of Hanover and NW 11-7-6EPM in the City of Steinbach.

The Department, on August 8, 2013, 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, August 8, 2013. The newspaper and TAC notifications invited responses until September 6, 2013.

There were no comments from the public.

On September 16, 2013 Manitoba Conservation forwarded requests for additional information from the TAC to the proponent. Copies of that letter and all of the TAC correspondence were sent to the Public Registries on September 20, 2013.

The proponent's September 26, 2013 response to the requests was then distributed to the participating TAC for review and comment on September 27, 2013.

There were no further comments.

COMMENTS FROM THE PUBLIC:

There were no comments from the public

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Community Planning Services – Municipal Government

- *Steinbach Community and Regional Planning reviewed this application for any potential areas of concern to be addressed as part of the environmental evaluation pursuant to The Environment Act. The proposal is to apply biosolids from the Steinbach sewage lagoon onto surrounding land.*
- *The City of Steinbach is proposing to apply Biosolids from the wastewater treatment lagoon onto approximately 770 acres of nearby land. The Environment Act Proposal done by MMM Group indicates Biosolids from Cells 1 and 2 will be excavated and applied via incorporation on privately owned and City of Steinbach owned land.*
- *The Steinbach wastewater treatment lagoon is located in the Rural Municipality of Hanover. However, lands proposed for biosolids application are located partly in the City of Steinbach and partly in the RM of Hanover. The fields located within the RM of Hanover are designated “Rural Area” in the RM of Hanover Development Plan. The proposed spread fields located in the City of Steinbach, in the NW ¼ 11-7-6 EPM are designated partly “Parks and Green Space” and partly “Industrial Policy Area”.*
- *The RM of Hanover Development Plan Policy 3.3.23 states sewage treatment lagoons “should locate in rural areas ...where their activities or nature is more suitable to a rural location ...and shall be listed as either permitted or conditional uses in the zoning by-law”. The development plan policy 3.3.2 also states that agricultural activities should remain the dominant land use in the Rural Areas.*
- *The subject land in the RM of Hanover is zoned “R” Rural Zone in the RM of Hanover Zoning By-law. The Zoning By-law states lagoons for the storage and/or treatment of domestic sewage are conditional uses in the “R” zone and require a minimum site area of 20 acres and a minimum site width of 400 feet.*
- *The subject land in the City of Steinbach is zoned partly “A” Agricultural Zone and partly “MI” Light Industrial in the City of Steinbach Zoning By-law. Agricultural activities are provided for in the “A” district. However, the “MI” zone is intended to provide for light manufacturing, processing, service, storage wholesale and distribution operations with all operations contained within an enclosed building with some limited outside storage. This office seriously*

questions whether the application of biosolids is appropriate in an area zoned “M1” Light Industrial.

- *There are a number of single family dwellings, a museum and light industrial uses in close proximity to proposed application sites in the City of Steinbach. This raises concerns about separation distances and the incremental impact of increased odour on individual dwellings and local attractions.*
- *Thank you for the opportunity to comment.*

Proponent Responses – September 26, 2013

- Based on the City of Steinbach Zoning By-Law No. 1882 (September 2010), Part 7.1.1 Zoning By Law Map, reproduced in the City of Steinbach Land Application of Lagoon Biosolids EAP identifies the NW1/4 11-7-6EPM as partly “Agriculture” and partly “M1 – Light Industrial”. There are no proposed fields in the EAP identified as “Parks and Green Space”.
- The proposed application land is designated as light industrial and is currently being used for agricultural crop production, the “M1” proposed area is approximately 3.2 ha (8 acres) in size. The application of biosolids as an organic fertilizer amendment should not be viewed as anything different than proper nutrient management and recycling which is endorsed by the Canadian Council of Ministers (CCME). The CCME *Guidance Document for the Beneficial Use of Municipal Biosolids, Municipal Sludge and Treated Septage (2012)* states that “Municipal biosolids or treated septage must be applied in a manner that benefits the current land use through fertilization or soil development without compromising future land use objectives”. The application of the biosolids to the current land base is not perceived as impeding or compromising future land use objectives as the material is being applied at an agronomically appropriate rate and is not anticipated to exceed maximum metal concentrations or have long-term human health impacts.
- The application of livestock manure (e.g. poultry, turkey, hog, dairy, beef) is a common practice on the agricultural lands within the Rural Municipality of Hanover and the City of Steinbach, the application of biosolids on the proposed land parcels will be no different than the common practice of applying livestock manures as per the *Farm Practices Guidelines for Pig Producers in Manitoba (2007)*. During the application of biosolids operation will maintain appropriate buffer zones as outlined in the EAP Table 6.3 for residential areas (400 m), occupied residence (75 m), property lines with residence (10 m), and property line without residence (1.0 m).

Disposition:

- No further response was received from Community Planning Services – Municipal Government, which is assumed to indicate that they are satisfied with the information received and have no concerns.

Fisheries Branch – Conservation and Water Stewardship

- *Fisheries Branch has reviewed this proposal to apply biosolid material from the city of Steinbach wastewater treatment lagoon Cells 1 and 2 onto land within 7-6 E. As noted in the proposal Manning Canal and tributaries are situated within this area. If the local study areas shown in Figure 2 are the proposed areas where the biosolids will be applied then there are a number either adjacent to surface water. The applicants have indicated that they will incorporate biosolid material within 48 hours or less of surface application and ensure setback distances of 8 m, according to the Nutrient Management Regulation, will be established around all Order 3 or higher drains to minimize any potential for biosolids to enter the water.*
- *Some of the proposed parcels are shown adjacent to second order surface waters. According to the Nutrient Management Regulations, biosolids can be applied right up to but not through these features.*
- *Fisheries Branch has been requesting the retention of a 15 m riparian area adjacent to 1st and 2nd order surface waters and 30 m on 3rd order and higher as well as lakes. From the figures provided it would appear that currently there are limited riparian features left along any of surface waters. We would strongly encourage the incorporation of higher setback values but at minimum would request 8 m on **all** features regardless of the order. These surface waters all contribute to the health of the downstream receiving waters.*

Proponent Responses – September 26, 2013

- The proponent will adhere to the 8 m setback distance from Order 3 and higher drains as required in the Nutrient Management Regulation (MR 62/08). However, if at the time of biosolids application, high water levels, surface slopes to drains or obvious erosion/runoff areas are observed, the proponent will endeavour to increase the setback distance.

Disposition:

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

Livestock Section – Conservation and Water Stewardship

- *Monitoring and Reporting*
 - *It is strongly recommended that an annual soil nutrient monitoring report be provided to demonstrate that biosolid nutrient application was acceptable. The report should be submitted to Manitoba Conservation and Water Stewardship and all land owners involved. It should be conducted after harvest each year for*

the three year project for all lands which receive biosolids. The bench mark soil sampling strategy should be used to monitor soil nutrient concentrations.

- *Stockpiled Biosolids*
 - *It is strongly recommended the proponent provide a detailed strategy on how to prevent and/or mitigate any leached nutrients from the stockpiled biosolids once removed from the storage area.*
 - *It is recommended the proponent provide details where the biosolids from Cell 2 will be stored.*
- *Available Land for Biosolid Application*
 - *The following fields available for biosolid application identified in Table 2.2 do not have a corresponding Landowner Agreement.*
 - *NE 22-07-06 EPM1*
 - *SE 22-07-06E*
 - *NE 08-07-06 E*
 - *The proponent must obtain corresponding Landowner Agreements in order to ensure there are sufficient suitable lands available for biosolid application.*
- *Biosolid Application Timing*
 - *It is strongly recommended biosolids be incorporated no less the 48 hours after land application in order to reduce the risk of nutrients escaping into surface water as well as reduce nuisance odour.*
 - *Biosolid application shall be incorporated no less the 48 hours after land application between September 10 and November 10. The 'local study area' falls within the Red River Valley Special Management Area (RRSVA) and is susceptible to nutrient loss through runoff/snowmelt events increasing the risk of nutrient losses to surface water.*
 - *Biosolid application shall be prohibited between November 10 of one year and April 10 of the following year.*
- *Biosolid Application Rate*
 - *'Phosphorus-removal' based biosolid application rates shall be calculated using recent soil nutrient analysis and must be in compliance with the phosphorus thresholds as outlined in the Nutrient Management Regulation (MR 62/08) and the Livestock Manure and Mortalities Management Regulation (MR 42/98).*
 - *Biosolid application shall be prohibited on lands with soil test phosphorus 180 ppm or greater.*
 - *Biosolid application shall be prohibited on land with soil nitrate-nitrogen exceeding Nutrient Management Zone limits.*
- *Environmental Program and Strategies requests the proponent to clarify the following:*
 - *Section 2.3.2:*

- *E ½ 15-7-6 E is identified as a field available for biosolid application in Figures 2 to 7 and has an associated landowner agreement. However, this field is not identified in Table 2.2.*
- *SW 10-07-06 EPM is also referred to as an available field (page 6), however, it is not identified in Table 2.2 nor is has an associated Landowner Agreement.*
- *Figure 6:*
 - *The portions of NE and SE 08-07-06 EPM have been identified incorrectly as soil series OBOd. These portions are mapped as GNL5-OBOd5, as referenced in the Soils of the Rural Municipality of Hanover Report D82 (Hopkins et al., 1993).*
- *Section 4.1.3*
 - *The regulated soil residual nitrate nitrogen limit for Zone N3 is referenced incorrectly as 90 lb ac⁻¹. The regulated limit for Zone N3 is 30 lb ac⁻¹.*
- *Table 5.2*
 - *Provide calculations and formulas for Available Organic N, Total Available Nitrogen (years 1 to 3).*

Proponent Responses – September 26, 2013

- The proponent would adhere to any monitoring requirements outlined in the Environment Act Licences issued for this project.
- Currently Cell #1 is stock-piled in a drying bed outside of the current licenced area and is under an Environment Act Order by Manitoba Conservation Water Stewardship. Currently, Cell #1 biosolid material is placed over geotech material to prevent leaching from occurring and leach water and storm water runoff is being pumped back into Cell #1.

Biosolids from Cell 2 will not be stockpiled. When application of the biosolids from Cell 2 is scheduled to occur, the biosolid material will be dredged from lagoon Cell 2 and directly placed in tanker trucks for immediate transportation to and application on approved agricultural lands.
- Landowner Agreements for the aforementioned parcels of land are attached to this letter (*Note: Landowner Agreements are not attached to this Summary*).
 - NE22-07-06EPM1 – Mark Reimer email communication attached
 - SE22-07-06EPM1 – Mark Reimer email communication attached
 - NE08-07-06EPM1 – Lorne Reimer email communication attached.
- Incorporation of the biosolid material will be adjusted by the proponent to occur within 48 hours after land application. The proponent will adhere to the Nutrient Management Regulation (MR 62/08) in order to ensure that biosolid application will not occur between November 10 of one year and April 10 of the following year.

- Calculations to determine prescribed rates for biosolid application will be based on compliance with phosphorous and nitrogen threshold levels as outlined in the Nutrient Management Regulation (MR 62/08) and the Livestock Manure and Mortalities Management Regulation (MR 42/98). Any fields within the LSA that have soil test phosphorus levels at or above 180 ppm will be excluded from the biosolid application program.
- Table 2.2 has been updated as outlined below. The SW10-07-06EPM was referenced in error on page 6 of the EAP as available land; the intent was to only demonstrate adjacent land use designations.

Table 2.2 - Fields Available for Biosolid Application

Legal Land Location	Cooperating Farm Producer	Field Area	Manitoba Land Title #	Registered Owner
SE 08-7-6EPM and NE08-7-6EPM	Lorne Reimer	32 ha (80 ac)	2513551	City of Steinbach (land title previously included for Section 8-7-6EPM).
			2513552	
N1/2 NW 15-7-6EPM	Mark Reimer	33 ha (82 ac)	1011186	Mark Reimer
NW 10-7-6EPM	Leonard Penner	20 ha (50 ac)	1464688	Steinbach Community Development Corporation
SE 9-7-6EPM	Bob Brandt & Ray Landspring	56 ha (140 ac)	1801694	Steinbach Community Development Corporation
NW11-7-6E	Ray Lang	28 ha (70 ac)	2286206	R&M Penner Holdings Limited 5074399 Manitoba Inc. 5468877 Manitoba Ltd. Town of Steinbach
			2121716	
			2225244	
			133823	
5E22-7-6EPM	Mark Reimer	52 ha (128 ac)	1477129	Eileen Reimer Reimark Farms
			2515333	
NE22-7-6EPM	Mark Reimer	24 ha (59 ac)	2516718	Reimmark Farms

- Soil Series data presented in Figure 6 of the EAP was obtained from the Manitoba Land Inventory database with those portions of NE and SE 08-07-06EPM mapped as OBOd.

The Canada Land Inventory identifies the Glenella soil series as a 2W and the Osborne soil series as 3W however both soil series are N1 water quality management zone and thus will be treated both the same under the Nutrient Management Regulation.

- Section 4.1.3 of the EAP lists Zone N3 as 33.6 kg/ha (90 lb/acre). The proponent agrees that the correct limit is 30 lb/ac and will ensure that this is the value that will be used in calculating biosolid application rates to ensure that residual concentrations of nitrate nitrogen within the top 0.6 m of soil at the end of the season do not exceed Zone N3 limits.
- Calculations are as follows:
 - Organic Nitrogen = Total Kjeldahl N – Ammonium N
 - Available Organic Nitrogen (Year 1) = Organic N x 0.25 (mineralization) + Ammonium nitrogen
 - Available Organic Nitrogen (Year 2) = Organic N x 0.12 (mineralization)
 - Available Organic Nitrogen (Year 3) = Organic N x 0.06 (mineralization)

Disposition:

- The draft Environment Act Licence contains clauses which sets out specific requirements for monitoring and reporting details regarding characteristics of the sludge and planned lands to received the sludge application, background levels of selected soil parameters for each parcel of land planned to receive the sludge, application activities, descriptions of receiving lands, background levels of specified soil parameters, dry weight of sludge solids applied per hectare, weight and cumulative weight of each heavy metal added to each parcel of land, the amount of nitrogen, phosphorus, and potassium added per hectare for each parcel of land, results of analysis of the sludge solids and soils as required by the Licence, a copy of the analytical procedures used and the results of analyses of reference materials, and the type of crops grown on land which sludge solids were applied during the previous 3-year period.
- The draft Environment Act Licence contains clauses which
 - require that the biosolids and sludge solids originating from Cell #1 of the aerated wastewater treatment lagoon to be incorporated to the soil a minimum of 15 centimetres below the soil surface within 48 hours of application;
 - require that the biosolids and sludge solids originating from Cell #2 of the aerated wastewater treatment lagoon be injected into the soil a minimum of 15 centimetres below the soil and there is no surface expression; and
 - require that the application and incorporation or injection of the biosolids and sludge solids is acceptable to an Environment Officer.

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

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

- *Each application, from Cell 1 and Cell 2, should be calculated to meet the Nutrient Management Regulation (62/2008) which requires that in nutrient management zone N1 where Olsen soil test P, within the top 15 cm, is from 60 to <120 ppm the maximum allowable nutrient application is at 2 times the crop removal rate of P₂O₅. If Olsen soil test P is 120 to <180 ppm the maximum allowable nutrient application is 1 times the crop removal rate of P₂O₅.*
- *Each of the proposed biosolid application rate calculations should be forwarded to Manitoba for review.*
 - *The Water Quality Management Section recommends laboratory analysis for nutrient and metal concentrations on Cell 2 biosolids for use in application rate calculations.*
- *An order 3 drain runs through section NW 10-7-6e. As per the Nutrient Management Regulation (62/2008) a Nutrient Buffer Zone of 3m if vegetated and 8m if not covered must be observed. The Nutrient Buffer Zone should be measured from the water body's high water mark or the top of the outermost bank on that side of the water body, whichever is further from the water.*
- *Maps indicate that section SE 8-7-6e may contain a wetland that supports hydrophytic vegetation. As per the Nutrient Management Regulation (62/2008) a Nutrient Buffer Zone around a wetland of the distance between the water's edge and the high water mark must be observed.*
 - *Can the proponent please confirm that the total area of the setbacks from Table 6.3 of proposal and the Nutrient Buffer Zones mentioned above are excluded from the land base calculation?*
- *In a given year, the Nutrient Management Regulation (62/2008) requires that no person shall apply sludge between November 10 and April 10.*
- *The Water Quality Management Section is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses of the water. Therefore it is recommended that the license require the proponent to actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director.*
- *The Water Quality Management Section is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses of the water. Therefore it is recommended that the*

license require the proponent to actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director.

Proponent Responses – September 26, 2013:

- The proponent will provide prescription application rates based on biosolids sample analysis and field benchmark soil sample analysis to safeguard that applications of biosolids from Cells 1 and 2 will be calculated and applied to meet the Nutrient Management Regulation (MR 62/08) and licence requirements.
- As outlined in the EAP section 5.5.1 Prescriptive Rates and Nutrient Budgets: “Detailed soil sample analysis will be obtained for each field and a detailed prescription rate will be provided to MCWS as promptly as possible for a timely approval prior to land application”.
- The proponent will ensure that the 8 m buffer zone around the Order 3 drain on NW10-07-06EPM will be established at a distance from the water body’s high water mark or the top of the outermost bank on that side of the water body, whichever is further from the water.
- During the collection of soils for the project from this land parcel, the site will be assessed for the presence of a wetland. If a wetland is determined to be on the land parcel, applicable set back distances as outlined in the Nutrient Management Regulation will be adhered to when applying biosolids.
- The proponent will ensure that the appropriate land application buffers will be applied to the land base as outlined in Table 6.3 of the EAP. Groundwater wells will be confirmed prior to land application occurring on the parcel and the appropriate set back distance will be applied. Currently there are groundwater wells identified on SE8, NW10, NW11, SE22 and NE22-7-6E.

Description	Recommended Buffer Zone Distance
Identified groundwater well	50 m
Residential areas	400 m ¹ (1312ft)
Occupied Residence (other than the residence occupied by the owner of the land on which the biosolids are to be applied)	75 m' (246 ft)
Property line with residence	10 m ¹ (33 ft)
Property line without residence	1.0 m ¹ (3.3 ft)

Notes: ¹ *Farm Practices Guidelines for Pig Producers in Manitoba (April 2007)* if surface applied and incorporated within 48 hours

Legal Land Location	Field Area	Buffer Zones or Set Back Land Areas Applied	Buffer Applied
SE 08-7-6EPM	32 ha (80 ac)	0.48 ha	Groundwater well (50 m) Property line with residence (10 m)
NW 15-7-6EPM	33 ha (82 ac)	0.26 ha	Groundwater well (50m) Property line with no residence (1 m)
NW 10-7-6EPM	20 ha (50 ac)	0.78 ha	Order 3 Drain (8 m) Property line with residence (10 m)
SE 9-7-6EPM	56 ha (140 ac)	0.79 ha	Property line with residence (10 m) Property line with no residence (1 m)
NW11-7-6E	28 ha (70 ac)	0.27 ha	Groundwater well (50 m) Property line with no residence (1 m)
SE22-7-6EPM	52 ha (128 ac)	1.45 ha	Groundwater well (50 m) Order 3 Drain (8 m)
NE22-7-6EPM	24 ha (59 ac)	0.47 ha	Groundwater well (50 m) Order 3 Drain (8 m)

- Incorporation of the biosolid material will be adjusted by the proponent to occur within 48 hours after land application. The proponent will adhere to the Nutrient Management Regulation (MR 62/08) in order to ensure that biosolid application will not occur between November 10 of one year and April 10 of the following year.
- We believe this request (to actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director) is outside of the scope for this proposed project and should not be part of the license.

Disposition:

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

- The draft Environment Act Licence contains clauses which
 - cause the Licencee to apply the biosolids and sludge solids to areas within the designated area which are not subject to flooding;
 - require that the biosolids and sludge solids originating from Cell #1 of the aerated wastewater treatment lagoon to be incorporated to the soil a minimum of 15 centimetres below the soil surface within 48 hours of application;
 - require that the biosolids and sludge solids originating from Cell #2 of the aerated wastewater treatment lagoon be injected into the soil a minimum of 15 centimetres below the soil and there is no surface expression; and
 - require that the application and incorporation or injection of the biosolids and sludge solids is acceptable to an Environment Officer.
- Minimum setbacks from any occupied residence, residential area, waterways and groundwater wells are designated in the draft Environment Act Licence.
- The draft Environment Act Licence contains Clauses that require the Licencee to remove, transport, and incorporate the sludge solids into the soils in such a manner as to prevent the disruption of natural wildlife and fish habitats.
- The draft Environment Act Licence contains a Clause that requires the Licencee, during all sludge land activities, to comply with the requirements of *Manitoba Regulation 62/2008* respecting *Nutrient Management Regulation* or any future amendment thereof.

Environmental Compliance and Enforcement Branch – Conservation and Water Stewardship

- *Environmental Enforcement and Compliance has reviewed the above proposal and it is understood the proposal seeks to spread biosolids in an agronomically suitable matter with consideration of loading limits and application rates.*
- *The area of study contains waterways and a significant population base. Therefore, the application of biosolids should meet all setbacks as required in both the Nutrient Management Regulation and Livestock Manure and Mortalities Regulation.*
- *As presented in Section 6 of the proposal the incorporation of biosolids material into the ground within 48 hrs of application will greatly assist in minimizing the overland flow and reduce the risk of overflow. It appears the applicant is proposing some risk with overland flow as Section 2.1.2 indicates the biosolids will be worked into the soil within 1 to 4 days of land application. As presented there is uncertainty on what proposed measures and action will be taken if overland flow is to occur.*
- *As well, during the process of undertaking the proposed activities, Environmental Enforcement and Compliance seeks clarification on what mitigation measures will be taken to protect surface and groundwater*

during the transfer of biosolids from the cell(s) to incorporation into the ground.

Proponent Responses – September 26, 2013:

- It is the intent of the proponent to ensure that the application of biosolids meets the setback distances required under the Nutrient Management Regulation and the Livestock Manure and Mortalities Management Regulation.
- Incorporation of the biosolid material will be adjusted by the proponent to occur within 48 hours after land application. Application will not occur between November 10 of one year and April 10 of the following year.
- Biosolid material from Cell 1 consists of dry material and is proposed to be applied in dry form. The stockpiled material will be placed into trucks directly from the City of Steinbach wastewater treatment site and applied to the land parcels. The biosolid material will then be soil incorporated with 48 hours of application to minimize impacts to surface and groundwater systems. Biosolid material from Cell 2 is anticipated to be applied in a liquid form. The material will be placed into tanker trucks and transported directly to the application site, minimizing exposure during transfer.

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.
- The draft Environment Act Licence contains clauses which
 - cause the Licencee to apply the biosolids and sludge solids to areas within the designated area which are not subject to flooding;
 - require that the biosolids and sludge solids originating from Cell #1 of the aerated wastewater treatment lagoon to be incorporated to the soil a minimum of 15 centimetres below the soil surface within 48 hours of application;
 - require that the biosolids and sludge solids originating from Cell #2 of the aerated wastewater treatment lagoon be injected into the soil a minimum of 15 centimetres below the soil and there is no surface expression; and
 - require that the application and incorporation or injection of the biosolids and sludge solids is acceptable to an Environment Officer.
- Minimum setbacks from any occupied residence, residential area, waterways and groundwater wells are designated in the draft Environment Act Licence.
- The draft Environment Act Licence contains Clauses that require the Licencee to remove, transport, and incorporate the sludge solids into the soils in such a manner as to prevent the disruption of natural wildlife and fish habitats.
- The draft Environment Act Licence contains a Clause that requires the Licencee, during all sludge land activities, to comply with the requirements of *Manitoba*

Regulation 62/2008 respecting Nutrient Management Regulation or any future amendment thereof.

Air Quality Section – Conservation and Water Stewardship

- *Air Quality has reviewed above proposal and provide the following comments:*
 - *It is expected that best practices and appropriate control measures will be utilized to minimize dust generation and vehicle/heavy equipment emissions during transportation of biosolid materials.*
 - *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.

Watersheds and Protected Areas Branch – Conservation and Water Stewardship

- *No concerns.*

Office of Drinking Water – Conservation and Water Stewardship

- *No concerns.*

Office of the Fire Commissioner

- *No concerns.*

Parks and Natural Areas Branch – Conservation and Water Stewardship

- *No comments to offer.*

Health

- *The health concerns for the land application of the lagoon biosolids are related to reducing odor, limiting public access to the biosolids to protect against any disease transmission, protection of ground water supplies (drinking water) and controlling the type of crop grown on the land receiving the biosolids (no root crops). All these things have been addressed in the sections on Page 30/31 of the proposal.*

Highway Planning and Design Branch – Infrastructure and Transportation

- *No concerns.*

Water Use Licensing Section – Conservation and Water Stewardship

- *No concerns.*

PUBLIC HEARING:

A public hearing was not requested.

CROWN-ABORIGINAL CONSULTATION

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

The proposal involves the removal of sludge from an aerated wastewater treatment lagoon 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-Aboriginal consultation is not required for the project.

Post Review Adjustments to DRAFT Licence

Upon review of the DRAFT Licence, in a February 17, 2015 letter, the proponent requested specific adjustment to separation distances such that the Licence would reflect specific proposed setback distances identified in the EAP. In particular, setback distances of 400 metres and 75 metres from residential areas and an occupied residence respectively were proposed. There were no specific related comments from the TAC. Upon review, the resulting Licence has been modified to reflect these proposed distances as presented in Clauses 17. c) and d).

RECOMMENDATION:

The Proponent should be issued a Licence to remove sludge solids from the aeration cells of the aerated wastewater treatment lagoon located at SE 8-7-6EPM for injection to the proposed receiving land locations 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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October 7, 2014 – Updated: March 26, 2015

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