

DATE: January 17, 2025

TO: Public Registry

FROM: Barsha Sagan, P. Eng.
A/Senior Environmental Engineer
Industrial and Wastewater Section

SUBJECT: File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon – Information for Public Registry

Please find attached the 2nd round TAC correspondence related to Crystal Spring Colony Wastewater Treatment Lagoon (6193.00) for distribution to the public registries. The documents included are:

No	Technical Advisory Committee Member	Response Provided
1	Environment and Climate Change	
	Environmental Approvals Branch	
	• Air Quality Management	
	• Land Use, Waste Management, and Energy	May 14, 2024
	Environmental Compliance and Enforcement	
	• Regional Office	May 22, 2024
	• Hazardous Waste Program	
	Office of Drinking Water	May 8, 2024
	Environmental Programs and Remediation	
	Drainage and Water Rights Licensing Branch	May 9, 2024
	Water Science and Watershed Management	
	• Water Quality Management Section	July 16, 2024
	• Groundwater Management Section	May 08, 2024
	• Watershed Planning and Programs	November 8, 2024
	Climate and Green Plan Implementation Office	
	Parks and Trails	
2	Natural Resources and Indigenous Futures	
	Wildlife and Fisheries Branch (wildlife)	
	Wildlife and Fisheries Branch (fisheries)	
	Forestry and Peatlands Branch	
	Lands and Planning	
	Crown Land Specialist	
3	Business, Mining, Trade and Job Creation	
	Mines	May 16, 2024
	Petroleum	
4	Sport, Culture, Heritage and Tourism - Historic Resources Branch	
5	Municipal and Northern Relations	
	Community Planning Branch	
	Office of the Fire Commissioner	

6	Labour and Immigration - Inspection and Technical Services	
7	Transportation and Infrastructure	
	<ul style="list-style-type: none"> Environmental Services and Consultation 	
	<ul style="list-style-type: none"> Highways Operations Capital Region, Transportation Operations Division 	May 24, 2024
	<ul style="list-style-type: none"> Hydrologic Forecasting & Water Management, Technical Services & 	May 21, 2024
8	Health, Seniors and Long-Term Care – Southern Health-Santé Sud Regional Health Authority	June 19, 2024
9	Fisheries and Oceans Canada	May 8, 2024

From: [Morin, Michael](#)
To: [Sagan, Barsha](#)
Cc: [Singh, Purushottam](#); [Dev, Asit](#); [Amarakoon, Shiromi](#)
Subject: FW: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon-due May 20, 2024
Date: May 14, 2024 2:09:16 PM
Attachments: [BMCE2021-011 - Crystal Spring Lagoon EAP TAC Response - 240415 Sealed.pdf](#)

Hi Barsha,

The Water Power team does not have any comments on the responses from the consultant.

Mike

From: [+WPG569 - EnvCEPortage](#)
To: [Sagan, Barsha](#)
Cc: [Kmet, Kim](#); [Kneeshaw, Tyler](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 22, 2024 10:47:21 AM

Hi

Environmental Compliance and Enforcement, Environment and Climate Change has reviewed the response from the consultant and has the following comments:

- Environmental Compliance and Enforcement would like to see a contingency plan (apart from the excessive 15% in volume) regarding the weeping tile management during periods when the weeping tile water volume is greater than expected or when the lagoon is near capacity and heavy rains come.

Mariah Whiter

Environment Officer

Environmental Compliance and Enforcement Branch

Environment and Climate Change

Phone: (431) 355-0261 Email: Mariah.Whiter@gov.mb.ca

309 – 25 Tupper Street N. Portage La Prairie, MB, R1N 3K1

To report an Environmental Emergency, please call our **24 hour Emergency Response Line at 1-855-944-4888**

From: [+WPG569 - Drinking Water - Approvals](#)
To: [Sagan, Barsha](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 8, 2024 2:14:55 PM

No concerns.

Office of Drinking Water (ODW)

Cory Vitt, P.Eng. M.Eng. CPPA CMMA

(pronouns: they/them; please don't use "Mr. Vitt")

Senior Approvals Engineer

Office of Drinking Water

Cell: 204-806-1363

Email: Cory.Vitt@gov.mb.ca

NEW ADDRESS:

Box 19

14 Fultz Blvd

Winnipeg, MB R3Y 0L6

From: [Wiseman, Kylene](#)
To: [Sagan, Barsha](#)
Cc: [Butterfield, Tamara](#)
Subject: FW: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 9, 2024 11:45:16 AM
Attachments: [BMCE2021-011 - Crystal Spring Lagoon EAP TAC Response - 240415 Sealed.pdf](#)

Hello Barsha,

The Water Use Licensing Section has no concerns.

Thank you,

Kylene Wiseman, P.Geo.

Drainage and Water Rights Licensing Branch
Environment and Climate Change
Kylene.Wiseman@gov.mb.ca / Cell: 431-337-7946
Box 16 – 14 Fultz Boulevard Winnipeg MB R3Y 0L6

DATE: July 16, 2024

TO: Barsha Sagan
Environmental Approvals Branch
14 Fultz Blvd, Winnipeg, MB
R3Y 0L6

FROM: Joy Kennedy
Water Quality Management Section
Environment and Climate
14 Fultz Blvd, Winnipeg, Manitoba
R3Y 0L6

cc.

PHONE NO.: 204-945-7908

SUBJECT: CRYSTAL SPRING COLONY FARMS LTD

- The following effluent standards should be in place for Crystal Spring Colony Farms Ltd wastewater treatment lagoon as per the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* (196/2011) for discharge events:
 - BOD5 25 mg/L,
 - TSS 25 mg/L,
 - Total Phosphorus <1 mg/L,
 - Fecal Coliforms or *Escherichia coli* 200 organisms / 100mL
- The <1 mg/L total phosphorus effluent standard should be in place, at point of discharge from the Crystal Spring Colony Farms Ltd wastewater treatment lagoon. This is a standard effluent limit applied at facilities across Manitoba. Given an effluent standard (<1 mg/L) the maximum annual load of total phosphorous from Crystal Spring Colony Farms Ltd is estimated at 27.05 kg/year. This load is considered small and estimated at 0.0000367% of the total load to Lake Winnipeg.

Sincerely,

Joy Kennedy

From: [Wang, Zijian](#)
To: [Sagan, Barsha](#)
Cc: [Burland Ross, Siobhan](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 13, 2024 6:24:02 PM
Attachments: [Request to review the TAC comments for File 6193.00 Crystal Spring Colony Wastewater Treatment Lagoon - groundwater monitoring .msg](#)

Hello Barsha,

Regarding the project's proposed location, I conducted a preliminary analysis by reviewing the well logs, surficial geology, and source aquifer in the area. I also examined the shallow groundwater availability from the geotechnical investigation carried out by the proponent. I also assessed the distribution and connectivity of the shallow aquifer within the investigation boundary.

Well logs

There are three well logs available at the given location:

Status: All three wells are active.

Aquifer: All three wells are sourced in limestone aquifer, screened below 130 ft.

Well Depth: The well depths for all three wells exceed 160 ft.

Highest Water Level: The highest water levels recorded for all three wells varied from 80 to 89 ft below groundwater surface by the time of well installation.

Stratigraphy: The stratigraphy for all three wells includes layers of brown till, grey till down to approximately 130 ft and followed by limestone. The specific depths and order of these layers vary between the wells.

Surficial geology and bedrock aquifer

The surficial geology of the area corresponds to the recorded stratigraphy in the well logs, which consists of glacial sediments containing a significant amount of silt. The permeability of these sediments varies from being relatively impermeable (aquiclude) to having limited permeability (aquitard), depending on the level of sedimentation compaction. Based on the information from the well logs, the estimated thickness of the overburden, or the sediments above the bedrock, is approximately 120-140 ft. The primary source aquifer in the area is the Red River Formation limestone aquifer, which serves as a major and easily accessible bedrock aquifer. The piezometric surface, which represents the level to which water will rise in a well, is calculated to be around 80-90 ft below the ground surface. However, it is important to note that the piezometric surface may vary seasonally due to fluctuations in water levels.

Geotechnical investigation review

Additional subsurface data from geotechnical boreholes was utilized to assess the shallow groundwater availability and connectivity in the project area. During the boring process, three boreholes (TH21-14,15,23) encountered groundwater seepage. However, upon completion, the water levels either significantly increased or decreased compared to the initial encountered water level. This observation suggests that the shallow groundwater in the area is predominantly perched and stagnant. Notably, the presence of sand and gravel layers with a thickness greater than 1 ft was only observed in a few specific locations. This indicates that the shallow water pockets are highly localized with limited capacity and unable to form substantial stream flow.

Considering the intended depth of the lagoon in the design, the presence of a thick, low permeable overburden consisting of silt will act as a natural barrier between the surface hydrology and the underlying bedrock aquifer. The distance from the bottom of the lagoon to both the piezometric surface and the limestone surface is relatively large, reducing the risk of contamination to the bedrock aquifer in the event of a failure in the lagoon liner. Since the shallow groundwater in the area is primarily characterized as perched, localized, and stagnant, with limited capacity, any contamination in the shallow groundwater is expected to remain localized without significant migration. Even if there were to be a failure or leakage in the lagoon liner, the shallow contamination would likely be contained within a limited area due to the nature of the groundwater conditions. Therefore, extra groundwater monitoring is not required.

Above all, Groundwater Management has no concern to the proposed application.

Thanks,

Zijian Wang, M.Sc., P.Eng
Aquifer Sustainability Hydrogeologist
Groundwater Management
Government of Manitoba
Box18 –14 Fultz Blvd
Winnipeg, MB, R3Y 0L6
Work (431) 374-4243

From: [Kontzie, Lacy](#)
To: [Sagan, Barsha](#)
Cc: [Richmond, Kelly-Anne](#); [Dyck, Marny](#); [Lozano, Andres](#)
Subject: RE: Request to review the comments from RM of Gimli and EIWD for the Crystal Spring Colony Wastewater Treatment Lagoon EAP with File 6193.00
Date: November 8, 2024 8:51:02 AM

Good morning Barsha,

Watershed Planning and Programs staff have reviewed the proposal. The Willow Creek Integrated Watershed Management Plan indicates that flooding is common in the ditch that the lagoon effluent will discharge. However, the hydraulic assessment completed as part of the application appears to mitigate these concerns by considering actions to reduce flooding in the waterway, therefore we do not have any additional concerns.

Thank you for the opportunity to review and provide feedback into this proposal.

Lacy

Lacy Kontzie
A/Manager, Watershed Planning and Programs
Manitoba Environment and Climate Change
T: 204-761-9839

From: [+WPG1195 - Mines BR](#)
To: [Sagan, Barsha](#)
Cc: [Beruar, Omkarnath](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 16, 2024 11:19:53 AM

Good morning,

No comments from Mines Branch.

Thanks,
Sahej

++++
Sahejpal Sidhu
GIS Specialist
Mining, Oil and Gas
Economic Development, Investment, Trade and Natural Resources
Minerals, Petroleum and Geoscience
360-1395 Ellice Avenue, Winnipeg, Manitoba
sahejpal.sidhu@gov.mb.ca
++++

From: [Stairs, Denise](#)
To: [Sagan, Barsha](#)
Cc: [Sainbhi, Mandip](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 22, 2024 2:51:39 PM

Good afternoon,

Considering the “lagoon will use a trickle discharge between June and November, once the secondary cell has been tested and meets MECP effluent quality requirements.”, and this location is about 4 miles west of the PTH 8 culvert crossing, I have no concerns with the proposed. If the discharge rates change, then we would like to review the proposal again.

Denise Stairs

Regional Planning Technologist

Highways Operations Capital Region, Transportation Operations Division Manitoba Transportation and Infrastructure

211-25 Tupper St. N., Portage la Prairie, MB R1N 3K1 1-204-871-2239

From: [+WPG1166 - MIT Water Review](#)
To: [Sagan, Barsha](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 21, 2024 3:23:38 PM

Hello Barsha

The document with clarifications provided states that they have obtained a Provincial Water Infrastructure Permit for “works in accordance with The Water Resources Act for the surface water runoff from the proposed colony site and lagoon”, **however, this permit was only for a culvert access road**. It **did not** include any drainage works, nor have we received an application for any drainage works. We would need to receive and review this application before we could approve any drainage activities involving Provincial Water Infrastructure.

The proposal mentions that the lagoon will be discharged into a municipal drain, however, it appears that it will be discharging into South Malonton Drain, which is Provincial Water Infrastructure. This then flows into Willow Creek, which is also Provincial Water Infrastructure. Designated Provincial Water Infrastructure is subject to section 15.2(1) of the Water Resources Administration Act which states:

“Unless the minister has issued a permit for the activity, a person must not do any of the following:

- a. construct, or otherwise place or establish, any works or structures on, over, under, through or across provincial water infrastructure;*
- b. place material on, or remove material from, provincial water infrastructure;*
- c. perform any activity on or near provincial water infrastructure, or use the provincial water infrastructure in a manner, that*
 - i. affects or has the potential to affect its structural integrity,*
 - ii. degrades or has the potential to degrade its vegetation cover or any other covering material intended to limit erosion, or*
 - iii. has the potential to impair its function.”*

A Provincial Water Infrastructure Permit **must** be obtained by Manitoba Transportation and Infrastructure **prior to** the commencement of any construction or activity on or near provincial water infrastructure.

Provincial Water Infrastructure Permits can be applied for at: <https://forms.gov.mb.ca/pww/>.

The information in the report quotes the 100-year flood protection level, however, the province has been using the 200-year flood protection level as the standard since 2013. We would recommend that this be increased to a **200-year level** to comply with provincial standards.

Thank you,

Angela Howells

(Pronoms/pronouns: elle/she/her)

Senior Flood Protection Planning Officer

Hydrologic Forecasting & Water Management | Technical Services & Operations

Manitoba Transportation and Infrastructure

Second Floor – 280 Broadway | Winnipeg MB R3C 0R8 | 204-915-7295 | Angela.Howells@gov.mb.ca

See our new Provincial Waterway Online Map at <https://arcg.is/0Cmb4S>

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From: [Robinson, Karen](#)
To: [Sagan, Barsha](#)
Cc: [Benoit, Peter](#); [Hilderman, Tim](#); [Sturgess, Yvonne](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: June 19, 2024 9:34:47 AM

Hi

I have no concerns with this proposal.

Karen

Karen Robinson MD, CCFP, FRCPC

Medical Officer of Health

589 3rd Ave South

Stonewall, MB,

ROC 2Z0

Phone: 204-467-4410

Cell: 204-918-1051

From: [Coletti, Lucas](#)
To: [Sagan, Barsha](#)
Subject: RE: Request to review the TAC comments for File 6193.00 – Crystal Spring Colony Wastewater Treatment Lagoon
Date: May 8, 2024 3:20:23 PM

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Hello,

Yes, thank you. DFO's concerns have been addressed adequately.

Regards,

Lucas Coletti

Biologist | Biologiste

Fisheries and Oceans Canada | Pêches et Océans Canada

Fish and Fish Habitat Protection Program | Programme de Protection du Poisson et de Son Habitat

Email/Courriel: Lucas.Coletti@dfo-mpo.gc.ca