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RE: CIMA+ report "Centre de traitement des boues de fosses septiques" : Stages 3 and 4

Ottawa Riverkeeper is respectfully submitting comments regarding the CIMA+ report and the MRC's plan to treat septage regionally.

We recognize the important and urgent need to find a feasible solution for handling and treating the septage that our communities are generating. As our elected officials, your decision on this issue is incredibly important, as it will potentially impact our region's most important asset: the Gatineau River.

I continue to advocate for a project that will safeguard the health of all residents and visitors to the MRC and guarantee exceptional water quality and ecological integrity of the Gatineau River for future generations.

Please do not hesitate to contact me if you have any questions or would like a meeting to discuss my recommendations. I sincerely hope this is not my last opportunity to provide expertise and input into this significant project.

Yours truly,

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1

Ottawa Riverkeeper / Sentinelle Outaouais is a citizen-based action group that brings people together to protect and promote the ecological health and diversity of the Ottawa River and its tributaries. In 2006, Ottawa Riverkeeper released a report that identified the cumulative impacts of municipal wastewater as a major threat to the Ottawa River. More than 50% of the wastewater treatment facilities in the Ottawa River watershed provide only primary treatment. There are over 90 wastewater treatment facilities in the entire watershed, which spans the provinces of Quebec and Ontario.

Given the impacts of sewage on the Ottawa River, Ottawa Riverkeeper faces numerous issues related to sewage discharge throughout the vast watershed and has considerable experience with sewage policy and law. The Riverkeeper, Meredith Brown, is an environmental engineer and holds a Masters of Resource and Environmental Management.

COMMENTS and RECOMMENDATIONS

Methods and Criteria for Site Selection

Demographic Centre

The methods used to find territory within a radius of the demographic centre is flawed for two reasons:

1. Half of the equation is missing – trucking sludge to the ultimate disposal site.
2. Over half of the septic tanks in the MRC are situated in the Pontiac region.

Q: Why didn't the consultants consider the distance from the proposed site to the location where the sludge will ultimately be transported? There are still costs and impacts of trucking the dewatered septage to its end point. The full costs of this project will not be understood until we account for the costs and impacts associated with trucking the solids from the treatment facility to the ultimate destination.

Q: When will the MRC Council know for certain which municipalities are committed to using the proposed treatment facility? Will the Council allow septage from outside the MRC to be treated at the facility? Obviously this information is critical for the ultimate design of the treatment facility and to assess full costs and impacts. The MRC Council must state their intentions clearly.

Recommendation #1

Learn from the Regional County Municipality of Montmagny, Quebec (case study found in Appendix 1) which was also looking for the best management strategy for septic tank sludge produced in its area. The engineering consultants used software to model transportation scenarios for several alternatives. It is very interesting to note that clustering the treatment of septic tank sludge appeared to be potentially beneficial from both an environmental and economic perspective for Montmagny.

Recreation and Tourist Areas

The consultants used the MRC development plan to locate tourist and recreation areas. It should be noted that the entire length of the river is used for recreation. People swim, paddle and fish everywhere on the river, not just in “designated” areas.

Q: Why doesn't the MRC consider locating the treatment facility downstream of all of the tourist sectors identified? If effluent is released into the river near the Chelsea dam, at least it will be downstream of where most people swim and downstream of where Chelsea is proposing to take water from the river.

Recommendation #2

CIMA+ should provide at least two more alternative sites to compare with Sites A and B. A site that is closer to the final destination where the sludge will be delivered for treatment will likely rank favourably since transportation costs would be reduced. One site should be considered on the Ottawa River to see how that compares with the alternatives that dump effluent into the Gatineau River. Given that the dilution factor would be significantly higher, a site on a larger river might rank favourably, depending how the site criteria are weighted.

Soil Conditions

The soils at Sites A and B are sandy and therefore porous. Lagoons should be located in a soil with low permeability.

Recommendation #3

If lagoons are built at either of these sites, they must have a liner to prevent seepage of poorly treated effluent into groundwater.

Evaluation of Alternative Sites

I have never seen an engineering report that compares options yet does not include a decision matrix. Although a list of site criteria were presented in table format, there is no indication of which criteria are most important and there are no values given to each alternative so that the MRC and the public have a clear picture of how the recommended site was chosen. For example, shouldn't the criteria for safeguarding the water quality in the river be given more weight or importance than the criteria of zoning considerations or control of noise?

Recommendation #3

Site criteria should be weighted by CIMA+ and the MRC, ideally with public input to determine what the most important factors are to consider when choosing a site and technology. CIMA+ should construct a proper and professional decision matrix to rank the alternative sites. This matrix should be shared with the MRC council and the public.

Water Quality and Effluent Discharge Objectives

Environmental discharge objectives are established by MDDEP to preserve local resources and uses. These guidelines, expressed as maximum permissible loads and concentrations for effluent released into the environment, should be used in choosing treatment methods that best promote environmental protection.

Before recommending treatment technologies, CIMA+ should have done its due diligence to understand the present water quality conditions in the Gatineau River. For example, if phosphorus levels are already close to provincial guidelines, CIMA+ should be recommending a technology with excellent phosphorus removal to protect the aquatic environment of the receiving waters.

Q: Where is the water quality data for the Gatineau River and how does it vary seasonally?

Drinking Water

When the Province determines the Environmental Discharge Objectives for the effluent, they must take into account usage of the receiving waters for drinking purposes. CIMA+

has failed to report that there are many residents who draw drinking water from the river.

Q: Why has Mayor Green not put it on the table that her municipality wishes to draw drinking water from the river? It is in the best interest of the people of Chelsea to make sure that is taken into account as it could affect the technology that will be required to provide good quality effluent. The mayors of all of the communities that border the river should be in regular conversation with one another about future plans that could impact the river.

Recommendation #4

The MRC should understand how many people draw drinking water from the Gatineau River and which communities are considering future withdrawals. This information should be provided to MDDEP when applying for authorization of the project.

Chemicals of Emerging Concern

CIMA + states in several places in their reports that we do not have to be concerned about the nutrients and biological oxygen demand on the river because the Gatineau River has a healthy rate of flow. Remember, DILUTION is NOT the SOLUTION to POLLUTION. Septage contains far more than nutrients. It contains pharmaceuticals and a long list of chemicals that are toxic. Many are classified as endocrine disruptors. These chemicals of emerging concern can cause male fish exposed to wastewater to undergo feminization – they actually grow ovaries. Additionally, many contaminants are persistent and will bioaccumulate up the food chain – these toxins are found in fatty tissue in fish and can be present in mother’s milk if they are consuming those fish. We must be precautionary. Our water filtration systems are not designed to remove these chemicals.

Dilution

When calculating the dilution factor, CIMA+ does not take into account the seasonal variation in flow that all rivers experience. The Gatineau River has the lowest flow rates in the late summer and early fall – prime season for swimming! Also, with climate change, experts predict that our region will experience lower summer flows and warmer summer water temperatures. We certainly experienced this last summer throughout the Ottawa River Watershed. Taking these facts into consideration, the recommended

technology at both sites A & B will not meet CIMA's dilution criteria during peak recreation season on the river.

Recommendation #5

To protect water quality in the Gatineau River and maintain a reasonable dilution factor throughout the seasons, the consultants should consider situating the facility on a larger river or utilizing an alternative technology that does not release effluent into surface water.

Recommendation #6

The engineers must take climate change into account when designing the treatment facility. The facility must be designed to accommodate intense rainfall (large amount of rain in a short period of time) and lower seasonal flows.

Recommendation #7

Regardless of technology or site chosen, we should work with the engineers to design an operating system that will limit impacts on the river during seasonal low flows (i.e. limit the effluent releases during peak recreation season).

Recommendation #8

The people who use the Gatineau River for recreation and drinking water should be alerted *before* effluent is released into the river. The public has a right to know.

Endangered Species in the Gatineau River

CIMA+ failed to mention that the Gatineau River is home to several species of fish and amphibians that are listed both provincially and federally under endangered species legislation. These species are listed by a 2007 COMGA report titled "Portrait du bassin versant de la rivière Gatineau". Given that the impacts of sewage effluent on fish and amphibians are well documented by experts, the MRC will need to provide the Ministère des Ressources naturelles et de la Faune with a plan for how they will protect these endangered species.

Feasibility of Alternative Solutions

Almost one year into this project, we still do not have a good understanding of what our *complete* list of options are for managing and treating septage, nor do we know which of the options is the most cost-effective and which of the options will have the least impact on our environment, most notably surface and ground water.

In addition, the MRC continues to ignore the fact that we are also producing significant quantities of sludge that must be managed very carefully. The current thinking is “out of sight, out of mind” – hire a waste management company to truck it away where we can turn it into someone else’s problem or resource. The sludge is the resource here – it can be turned into energy. It is not enough to just treat the liquid effluent that comes from the dewatered septage – we need to solve the whole problem in a sustainable manner.

Recommendation #9

The MRC should conduct a proper and professional feasibility study to determine the best long-term solution for managing septage in the region. The management options to explore for treating our septage should include:

1. Continue to treat septage outside the MRC in the short term until a better, more financially sound option is brought forward.
2. A larger facility that also serves municipalities outside the MRC-des-Collines and is able to treat and utilize the sludge on-site (preferably turn waste into energy to power the treatment facility).
3. Several smaller, local facilities that service a few municipalities. Systems exist that can treat both wastewater and septage and most of the municipalities within the MRC could stand to upgrade and improve their wastewater treatment to meet pending federal standards. This option may seem expensive at first; however, once transportation is taken into consideration and the cost savings of later having to upgrade wastewater facilities, this option could be attractive.
4. Tertiary septage treatment – explore systems that are operating successfully in rural communities with similar climate.

Q: How much are all the municipalities in the MRC currently paying to truck septage out of the MRC? Taking all costs into account (trucking, deterioration of water quality, etc.) for the proposed technology and recommended site, how do the costs compare with the status quo over 50 years? What are the implications for the MRC if we continue with the status quo until a proper feasibility study is conducted?

Recommendation #10

Learn from other Canadian municipalities that have implemented successful septage treatment facilities with excellent effluent quality (see Appendix 1 – Case Studies).

Recommendation #11

Explore funding opportunities with the Federation of Canadian Municipalities, the Province and the Federal government for implementing sustainable solutions for septage management.

Accountability to the Public and the Regulators

It is clear that the Province of Quebec will approve conventional treatment technology for the Gatineau River as long as the effluent meets provincial standards. We also know that experts in the field have spent the last 10 years researching the impacts of sewage and proposing better standards to adequately protect our lakes and rivers. Environment Canada tells us that the effluent from wastewater treatment facilities threatens drinking water as well as recreational users and fisheries. That is why the federal government is calling for national standards for wastewater effluent regulation – our current approach is failing to safeguard the quality of our water.

The people who use the Gatineau River don't care if you meet Provincial or Federal standards – what they want to know is that the MRC is taking *every* precaution necessary to protect and improve the water quality in the Gatineau River. Therefore, we must consider cumulative impacts and future growth along the Gatineau River.

Ottawa Riverkeeper will be acting in the best interest of the people to be a vigilant watchdog. Waterkeepers around the world have a reputation for defending their local waterbodies. My Canadian colleague, the Petitecodiac Riverkeeper, successfully held the City of Moncton accountable for failing to comply with the Federal Fisheries Act regarding toxic effluent loading from a decommissioned landfill. The court not only fined the municipality for the pollution, but they also laid charges against the engineering consulting firm who had failed to provide an adequate design that would meet the expectations of the law.

Moving Forward

It is clear that there is great interest in ensuring sure we make informed decisions that protect our communities. In my experience, encouraging innovative, cost saving procedures will in turn foster the management of on-site systems resulting in fewer failures, longer system life, and the protection of the environment and public health. Other regions that have tackled wastewater management problems have had great success by including several experts and practitioners in the structured problem solving process. When the Town of Mississippi Mills was debating alternative technologies, their consultants organized a 2-day “Value Engineering” session where two independent consulting firms were invited to attend in addition to the design engineers, OCWA operators and town staff (see Appendix 1 #5 for more information). The value engineering session was a very organized, systematic process that identified over 120 ideas for improving the project. This is precisely the kind of thinking we require if we want to be recognized as leaders in water protection and find an affordable, yet effective solution to our regional septage problems. Our close proximity to Gatineau, Ottawa and Montreal gives us access to many academics and professionals with expertise and experience in the wastewater field.

Recommendation #12

Form a committee to consult with moving forward. The committee should include independent experts and representatives from local and regional interest groups. Transparency around decision-making will improve trust and will likely result in an affordable solution that our region has confidence in.

Recommendation #13

No further decisions should be made on technology or site selection until recommendation #9 is carried out.