

**SUBMISSION TO THE CLEAN ENVIRONMENT COMMISSION  
ON THE SIO SILICA SANDS PROJECT IN MANITOBA**

The Environmental Act of Manitoba sets the guidelines for protection of our environment. “The intent of this Act is to develop and maintain an environmental protection and management system in Manitoba which will ensure that the environment is protected and maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for this and future generations”. One of the main criteria is that the process “prohibits the unauthorized release of pollutants having a significant adverse effect on the environment”.

During the recent Clean Environment Commission (CEC) hearings regarding the SIO Silica Sand proposal to mine silica sand in several rural municipalities in southeast Manitoba, arguments have been heard for and against this project. As you review the various submissions in the coming months, I am asking you to focus on seeing the forest through the trees; that is, to understand or appreciate the larger situation or problem, rather than considering only a few parts of it. The quality of rural life in our municipalities is about so much more than just money.

Some of the important issues to consider from these hearings:

1. The deals to amass the many hectares of affected lands for the SIO Silica Sands project seem to have occurred largely under the radar. There has been little transparency in the various events that led up to the recent hearings. Approvals have taken SIO to this point without the necessary due diligence required for a project of this magnitude and impact. SIO has been unwilling to share important studies with us, if they were ever completed.
2. Extraction of silica sand would take place in the vicinity of the major populations of southeast Manitoba including the RM’s of Springfield, Hanover, St. Anne and Tache. According to the 2021 Census, this could impact in excess of 78,000 people and 27,000 households. These figures only include the larger clusters and do not reflect the smaller municipalities with more sporadic populations in the southeast.
3. Sio’s legal counsel, Mr. Duncanson, in his March 15<sup>th</sup> rollup, spent considerable time criticizing the credentials of the expert witnesses that testified on our municipalities’ behalf while glorifying the worldly qualifications of SIO’s experts. The truth of the matter is, the majority of experience of their experts involves bedrock mining, not sand. He repeated this with our groundwater experts. After expounding the qualifications and experience of SIO’s experts, he stated: “The reality, panel, is that groundwater modelling is largely an exercise of professional judgement.” Therefore, that is opinion, and not necessarily fact.
4. The drilling technique that is expected to be used is untested on projects of this industrial scale and has not been used for mining silica sand in this manner. In addition, voids created in the vicinity of the wells are likely to cause collapse of the overburden over time due to underground caverns that will be created by the extraction of the sand. Most of the

drilling experience that has been relied upon by SIO is through bedrock, not sand. SIO has not provided the geotechnical reports necessary to evaluate this scenario.

5. Drilling thousands of wells through the shale barrier between the Red River carbonate and the Winnipeg sandstone aquifers will likely cause mixing and contamination of water from the two aquifers. Stantec, SIO's expert, confirmed that the shale layer between the two aquifers is friable. The thickness of the shale barrier is variable depending on the location and does not always meet the thickness that Stantec tested or that they stated was required. There are also concerns about introducing trace metals between the aquifers.
6. SIO is proposing an ultraviolet light system to treat the water raised to the surface by the drilling process which will then be reintroduced back into the aquifers. The extraction process will cause the water to be turbid. It is a fact that turbidity has an impact on the effectiveness of this type of disinfection system because the suspended particles block the light, thus rendering it much less effective. At minimum the water should be passed through a pre-filtering system. The ultraviolet lights must be kept clean in order for them to be most effective. The degree of system maintenance over time is an unknown factor and is unlikely to be effectively monitored by the Province.
7. Levels of potential dust and proposed controls to mitigate it are unknown. According to the Canadian Centre for Occupational Health and Safety, repeated exposure to silica can cause cancer and organ damage. Sio covered but did not remove the open piles of silica sand from drilling their test holes, and only after complaints were lodged by residents. There is no guarantee that they will manage the transfer and storage of sand effectively.
8. Drilling will take place on private land parcels of varying sizes, some very small. There is a strong probability that property values would be affected based on the knowledge that these wells will exist into perpetuity with unknown consequences in the future. It will likely be a required disclosure when marketing individual affected properties.
9. Little attention has been given to the noise and light pollution that will be produced by these operations and how these factors will affect residents and wildlife, as well as the control of the hours/days of operation. SIO has said that they will be drilling 24/7 between April and October. However, the operational hours of the processing plant were not discussed because they claimed that the processing plant was a different application.
10. Sio has already demonstrated that they have no qualms about levelling old growth forests. In that regard SIO's operation is similar to the clear-cut forestry industry. No consideration has been given to wildlife habitat from the removal of large tracts of trees or consequences to food sources, water, shelter, migration and other issues important to wildlife. Trees capture and store carbon from the atmosphere. No consideration has been given to the impact of reduction of carbon capture due to a massive reduction of trees, nor to a reforestation proposal.

11. There is no guarantee that this silica sand will be used exclusively for the manufacture of batteries and solar panels and other products that will support green energy. There is no guarantee that there will be quality jobs. There is, however, an opportunity for SIO to sell the sand for the purpose of fracking, which is NOT green energy. In addition, the processing plant in Vivian would operate using petroleum products.
12. The license that SIO is applying for is only for the first 4 year period out of a horizon of 24 years. It is their expectation that all future license applications will be a foregone conclusion, without any significant review of their operations in previous periods.
13. SIO claims to have spent around \$35 million dollars towards this project. There is a concern that they will claim that they acted in good faith and will continue forward and beg forgiveness later. It is concerning that this claimed investment could affect related future considerations from the powers that make the final decisions.

Major players of SIO do not live here. They do not have a vested interest in our future. They will take the goods and make hundreds of millions of dollars with no guarantees to Manitobans. They will go back to their comfortable homes where their lifestyles are currently not at risk. If they were concerned about our communities, in good faith they would commit the cash reserve up front for mitigation of potential negative outcomes.

This investigation by the CEC is a test of our democracy. There are examples all over the world where large corporations have appropriated the natural resources of various countries without consideration for the people or the environment. There is a reason why Canada has environmental laws, and its citizens expect the powers that make decisions to respect them.

I live in the RM of Springfield near Birds Hill Park. We have witnessed gravel pit operators who dig deeper than allowed, creating large standing lakes of our water. We have also fought to control the subdivision of lands to ensure they are consistent with our municipal planning and zoning requirements. The intent has always been to protect our water, manage sewage and protect wildlife and flora and maintain our quality of life. Many of those who are trying to skirt the rules do not live in our municipality. So again, they are not concerned with the long-term impact.

Mr. Duncanson, legal counsel for SIO, in his final comments at the CEC hearing in Beausejour March 15<sup>th</sup> suggested municipalities should absolve SIO of any potential environmental cleanup responsibility, indicating that SIO will be paying millions of dollars in taxes to the affected municipalities, and part of this is meant to cover the impact on municipal services. I would argue that these tax dollars are meant to address normal wear and tear on municipal infrastructure, not the destruction of infrastructure. Accordingly, they claim that the direct benefit from SIO mining around Vivian to the RM of Springfield, for example, is estimated at \$2 million to \$3 million annually plus indirect revenue. This is a pittance compared to the revenue stream that they will extract. The total expense budget for the RM of Springfield alone for 2023 is estimated in excess of \$32,000,000. The revenue from property taxes and other sources is approximately the same, so clearly there is little left over to spend on the alleviation of environmental issues. Any

contamination of the aquifer will reduce property values and would be prohibitively expensive to remediate, if even at all possible. Much of the financial benefits gained now would be lost to financial support that the Province would ultimately be required to pay to our municipalities for mitigation of future environmental impacts from this project.

SIO has spent plenty of dollars on a barrage of newspaper advertising, radio commercials, and flyers in our mailboxes, trying to convince us that this project is good for our economy with very little downside. For example, in a request for feedback from the public on their website, they claimed in one of their flyers that nearly 7 out of 10 respondents support their project. However, they haven't provided unequivocal evidence to back their claims, or that this was a significant number of respondents.

SIO says there is no evidence to support our claims regarding adverse effects to our water. However, there is no evidence to support their claims that it won't. SIO didn't do their due diligence or would not reveal it to us. The truth is that no one knows for sure what the long-term impacts will be. It is also evident that there is no known solution to fix some of the potential outcomes, regardless of how much money is thrown at it. You can't restore the aquifers to their pristine state. You can't repair the protective shale layer between the aquifers. There is the question of how green this project actually is when all of the factors are considered.

The obvious shortcomings based on SIO's data should not be ignored. It is unethical to blindly approve such applications when there are obvious significant gaps in the evidence provided by SIO Silica Sand and a questionable net benefit to Manitoba over the long run.

I ask the Clean Environment Commission to deny SIO Silica Sand this license and anything related to this project.

Helen Garrod  
RM of Springfield