INTRODUCTION

Thank you for your consideration

As a retired geoscientist after a lengthy career in geological mapping and interpretation with the Ontario Geological Survey, I have inadvertently developed an interest in the province’s management of aggregate resources as a result of personal experience with the process while protecting a family-owned wetland from the impacts of a proposed aggregate pit. In 2010, I served on the Technical Expert Panel for the State of the Aggregate Resource in Ontario Study.

Both groundwater and surface water are poorly protected under the ARA, and its associated administrative policies and procedures. In fact the manual to aggregate inspectors specify that perched water tables are to be ignored and only the regional water table be taken into account. Perched water tables are important to preserving and supply moisture adjoining highly elevated farmland and wetlands.
In situ gravel and sand deposits, being porous, are important for the infiltration of precipitation, in particular heavy sudden down pours. Then they become important for filtering, purifying and slowly allowing the precipitation to reach the regional water table to allow Ontarians a steady supply of fresh ground water during dry seasons. The most important are gravel deposits located at the head waters of Ontario’s rivers and along their water courses. Removal of aggregate in these operations incrementally increases the amount and rate of water runoff adding to the severity of floods rather than allowing slow infiltration of precipitation into the water table. In situ aggregate deposits are as valuable to society as are the aggregate deposits being removed. Thus they require conservation as they are more of a public resource than a private resource.

Thick aggregate deposits serve another important function, that of protecting the water table and its water from man-made pollution. Above water aggregate extraction is allowed to excavate down to 1½ meters of the water table, removing water storage, filtering, temperature moderation and purification. Surface pollution from agricultural run off and chemical (petroleum) drips and spills which frequently occur in aggregate operations quickly reaches the water table. Below water aggregate extractions are even more dangerous as there is a direct entrance for runoff into the water table. As well, a remaining man-made square lakes act as catch basins for pollution forever. Even more of a problem is where aggregate deposits are underlain by aquifers or have aquifer flowing through them which if breached, can and do alter the regional water table. Where breached, and aquifer forms a cold water spring that is near impossible to reseal. Many times where breaching occurs, it is hidden by berms and no trespassing signs and nothing is done about it, even when the MNR aggregate inspector becomes aware of it by many complaints of water flowing on to adjacent property or water wells going dry.

BACKGROUND INFORMATION

SAROS, among its many omissions and deficiencies in its reports ignores the impacts on the water budgets of an area containing aggregate extraction(s) as a cost. The author of this submission to the ARA review served on the SAROS technical committee. The subject was brought up for inclusion in the reports in different meetings by several of the NGO’s but the MNR who controlled the study and the report authors closely connected to the aggregate industry, carefully avoided any inclusion on the effects of aggregate excavation on surface drainage and ground water. However, presentations
by Environmental Commissioner Ontario (ECO), Mr. Gordon Miller and Gravel Watch Ontario (GWO) have referred the detrimental effects an aggregate operation can have on the water but the two presentations do not present specific examples. The following is a specific example.

Zorra Township’s Robinson Gravel Pit

In 2003, Zorra Township announce their intent to purchase a 37 hectare property for an above the water table aggregate pit on the south south slope of a moraine near Harrington, Ontario (Lot 29, Concession 1) (Robinson Pit). (An above water, specifies that all activity must remain above the water table and surface drainage changes must not extend beyond the property). In 2004, Harrington and Hoyle, Landscape Architects had a Hydrological Assessment Report done by Andrew Pentney, Groundwater Science for Zorra Township. An obtained preview of the report from the Township showed that the report was highly deficient. I pointed out the problems to the Conservation Authorities, the Township and MNR office. Not only was the elevation of the water table wrong, the site plans call for the haulage road surface traversing the wetlands to be below the elevation of the water table. The purpose was to reduce the height of the needed berms to mitigate noise. Harrington and Hoyle was permitted to have unsatisfactory amendments made to the report and site plans so that aggregate extraction could still be allowed. Mr. Pentney ignored the pertinent Oxford County hydrogeological maps which shows the wetlands of Zorra Township’s property being a water discharge zone, and the evidence provided by cold water springs elsewhere in Zorra’s PSW and on adjoining properties. Together, the evidence showed that Zorra’s aggregate extraction would occur within 1 ½ meter above a prolific aquifer and that they could easily intersect the aquifer in the wetlands where they planned to construct a haulage road, high berms and a settling pond with their machinery.

To combat the local residents at an OMB hearing, Zorra Township reserved a financial war chest comprised of ratepayer taxes. After 7 years of effort, the Harrington Creek Eco Group realized that they could not mount an expensive OMB defense of their ground water domestic sources which tapped into the aquifer from under Zorra’s gravel pit.

In the wetlands, against all promises that the township would not and could not intersect the aquifer, it did so almost immediately as it bulldozed the wetlands to construct its berms and ditches along the haulage road in the Spring of 2010. Spring
water could be seen from the concession road was pouring out at several points as the vegetation was bulldozed. This water was flowing to the road and through a dry culvert into property across the road. Complaints were immediately filed to the MNR inspector Chris Black and Zorra Township. There was no acknowledgement of the complaints and photographs. However, it was noticed heavy earth packers were moved in to suppress the springs. It did slow the water but not entirely. With time these man-made suppressed springs are growing back with increasing water volumes and are adding to the water flooding across the road onto the facing property toward Harrington Creek.

In late summer of 2010, not only was silt and mud was entering my property with each heavy rain, a heavy flow of spring water started flowing from toward Zorra’s settling pond within the wetlands. I file complaints with the MNR and insisted that Zorra’s pit manager, Aden Corcoren and I investigate what the problems were. He finally agreed. He arrived with the clerk of the Township, Mr. Don MacLeod accompanying him. I showed them the clay silt flowing on to my property and into the PSWs. Then we walked to the settling pond, and a big bubbling spring was seen coming up from its bottom causing water to overflow the banks of the settling pond. I quickly photographed the spring.

Mr. MacLeod immediately said if I complained too loudly about the water flowing across my property, Zorra Township could/would use its authority to put a municipal drain to carry the water to Harrington Creek across my property (and PSW).

Mr. MacLeod also strongly point out that I would be heavily prosecuted if I trespassed on the property with he seeming to fail to realize that it was Zorra Township who was trespassing on my property continuously with their water and silt. I was only pointing out what could be seen from the road and to avoid trespassing, I had requested a visit with Mr. Corcoren. The unappreciated threats appear to be the norm with the aggregate industry.

I press my complaints to the aggregate inspector, Chris Black. Finally he replyed that he would investigate. I wanted to visit the site with him to show him the damage to my property. He ensured that I did not accompany him on his visit. However he did issue a noncompliance report and I believe the MOE was called in to suggest a solution breach in the aquifer.
Zorra Township placed a blanket with heavy rocks over the spring. This hid the obvious bubbling of the spring in the settling pond. At the same time Zorra constructed an overflow on the settling pond. Spring water continued to seeped as strong as ever from under the bank with the weighted down blanket, entering the pond and out the overflow, eventually flooding my property. I complained to Chris Black but he insisted the the problem was solved. Since 2010, water continues to flow into my property from the settling pond. It is a stream of water that never stops nor freezes over as it would if it were surface water runoff.

The purpose of the settling pond was to catch silt laden storm and spring-time melt run off and let the water seep into the adjoining wetlands. The settling pond was to replace the function of destroyed wetlands which previously had served to absorb all such water before reaching the concession road and ultimately, cold water Harrington Creek. Now the “settling” pond has become an “overflowing” pond with no capacity to hold storm water. This water now directly enters Harrington Creek after crossing a wide swath of my property on which I now cannot hike. This is contrary to the site plans and thus non compliance issue that the MNR and Zorra Township continues to ignore.

As Zorra continues its aggregate excavation it can be expected that perch water tables will be drained drying the adjacent farmland and the natural area on the north side of the moraine. It is likely at one point or another, Zorra Township will either intersect the aquifer in its pit or will have petroleum spills that will pollute the ground water. This will be hidden from the adjacent ratepayers and thus unreported.

This narrative illustrates the lack of protection of ground water built into the ARA in favour of aggregate extraction. It also illustrates the attitude toward adjacent landowners by pit owners and the MNR when there are water and silt problems and to get compliance. Much of the problem comes from a proponent driven system where the proponent has hydrogeological reports written that are tailored to allowing aggregate extraction in areas of sensitive hydrogeological areas.

Recommendation: That technical reports for an aggregate application be done by independently appointed experts appointed by the MNR rather than by the proponent.