

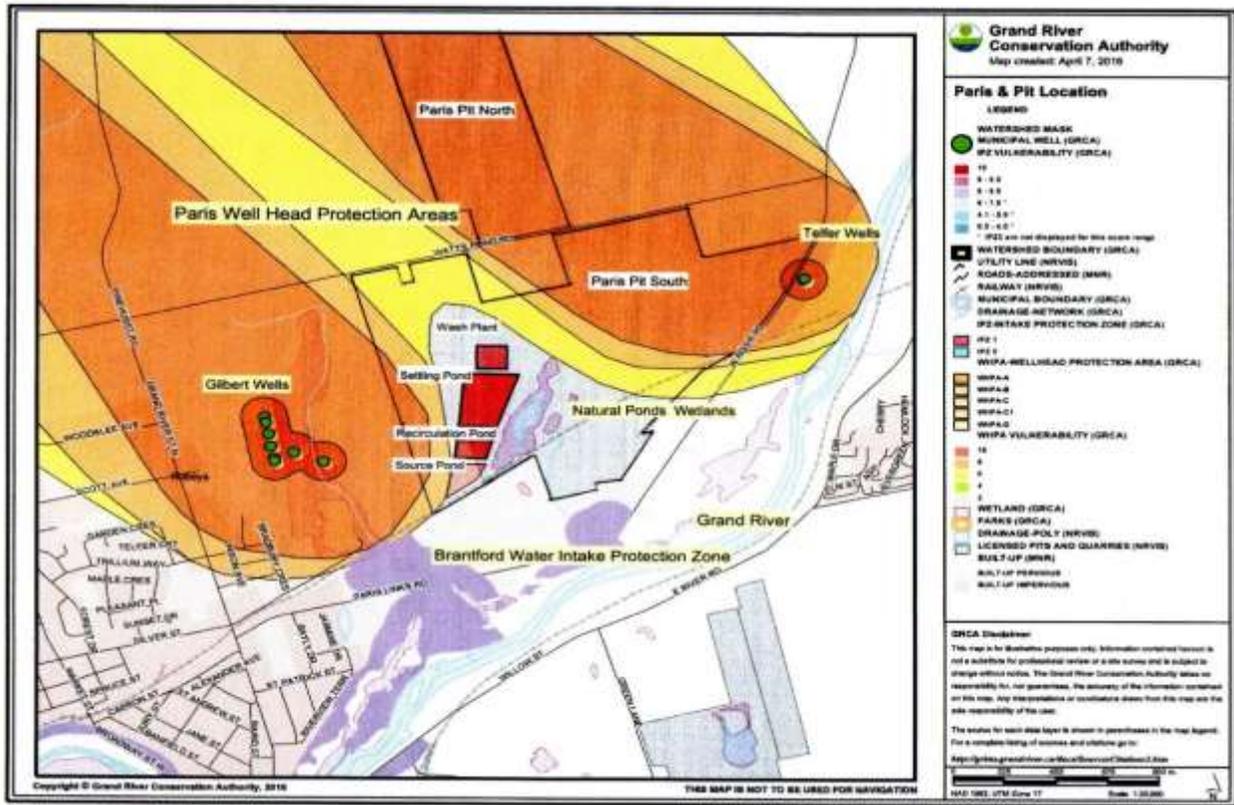
# Paris Pit : Water Quality Concerns

## CCOB Background with July 2017 Update on the Appeals.

“The first barrier to the contamination of drinking water involves protecting the sources of drinking water.”  
Justice Dennis O’Connor : Walkerton Inquiry 2002

The Paris Pit was licensed in 1974 without any environmental assessment.

**The location of the aggregate pit site in the Paris Well Head Protection Areas (WHPAs) is the main concern.**



The concern for water quality is that the combination of the planned operational activities will:

- permanently change the pollution risk status of the Paris Town wells from the existing top risk rating of high vulnerability to an actual extreme vulnerability
- facilitate the mobilization of agrochemical residues, particularly atrazine, into the aquifer both during and after aggregate extraction
- expose the Paris Town wells, the Grand River and Brantford City water intake to unnecessary and avoidable serious risks to the safety of our water and the health of our community.
- expose the on-site natural pond and wetland habitat of species at risk to serious ecological impact.

## **The Appeals**

**CCOB has now launched a Ministerial Appeal in response to the ERT Appeal decision that denied the recommendations made by CCOB's Expert Witnesses for more precautionary measures and a New Science Risk Assessment.**

In April 2016 the **Environmental Review Tribunal** granted CCOB & Brant County Council the right to appeal the MOECC's PTTW & ECA permit conditions on **the quantity of water that can be taken and the measures required to prevent and control risks to the groundwater.** Brant CC negotiated a secret deal with Dufferin whilst still working with CCOB as a partner. CCOB was only informed of this on the 25th October 2016. CCOB continued alone. The ERT Hearing took place in Paris between December 12th 2016 & February 24th 2017. Participants were CCOB, MOECC & CRH(Canada). The ERT decision found in favour of the MOECC with some changes to the Conditions but dismissed CCOB's Experts' pesticide residue concerns. The current Ministerial Appeal is the last option for CCOB to reverse the ERT's decision.

## **The Concerns**

### **Pesticide Residues**

The pit site has been farmed for corn and beans for very many years.

The concern is that the combination of the planned operational activities will facilitate the mobilization of agro-chemical residues, particularly atrazine, into the aquifer, both during and after aggregate extraction. **The concern is founded on increased scientific understanding of pesticide residue health risks at low concentrations, some as endocrine (hormone) disruptors and their long environmental persistence. Exposure to atrazine is linked to breast cancer, pre-term births, low sperm counts, non-Hodgkin's lymphoma and other health conditions.** Atrazine is identified by Environment Canada as toxic to humans and non-humans. It is in the top 100 potential persistent organic pollutants (POPs) in current use in Canada & ranked highest of 83 pesticides in the Agriculture Canada priority scheme for potential groundwater pollution. Its use has been banned in the E.U. & in Switzerland, where it is made.

### **Removal of Ground Filtering Capacity in Well Head Protection Areas (WHPAs)**

Between 10 and 15 metres depth of aggregate will be extracted down to 1 metre above the water table across the site, permanently increasing the risk of surface contamination. The extraction is permitted under the 1974 licence issued by the MNR. The MNR has refused requests by Brant County Council and CCOB for the licence to be revoked.

### **Aggregate Washing**

The Permit to take Water (PTTW) application permits the excavation of an 80,000m<sup>3</sup> source pond in the aquifer to provide the washing water at 13,000m<sup>3</sup>/day (2.86 mill. Gallons). 600,000 tonnes per year of aggregate will be washed in 72 days.

The washing process will wash off some 24,000 plus tonnes/year of silt and clay, the part of the aggregate carrying the pesticide residues. The wastewater will go to a 32,500sq.m. settling ponds where most of the silt and clay will collect as sediment.

**Leaching of contaminated water to the aquifer** below the ponds is a serious concern. The groundwater flow from below the settling pond is to the natural ponds, Brantford Intake Protection Zone & the Grand River.

**The settling pond sediment** with concentrated levels of adsorbed residues will be stored and spread throughout the site including the WHPAs. The Environmental Compliance Approval (ECA) covers the treatment and disposal of the waste wash-water & sediment. **The Conditions being appealed are completely inadequate to protect the aquifer.**

### **Site Rehabilitation**

**At the time of rehabilitation the water table will be only 1 metre below the surface.** Under the MNR pit licence the top soil stored in the site berms together with the accumulated sediment from the settling pond is to be used as ground cover in the rehabilitation of the pit. Both the sediment and the top soil are serious potential sources of contaminants. The intended return of the site to agriculture with use of the top soil/sediment in combination with the application again of pesticides in accordance with OMAFRA Best Management Practices is of grave concern. Most of the OMAFRA recommended herbicides carry warnings against use in areas with shallow water tables. The climate change impacts already being experienced in the summer months, the extended dry periods followed by heavy rain storms will facilitate the mobilization of both aged and current residues and enable rapid leaching to the now shallow groundwater in the WHPAs.

### **CCOB gratefully acknowledges :**

Joseph Castrilli & Ramani Nadarajah, Canadian Environmental Law Association (CELA).

### **CCOB's Expert Witnesses :**

**Prof. Dr. K. Howard**, Contaminant Hydrogeologist, U. of T. 1st expert witness for the Walkerton Inquiry.

**Prof. Dr. P-G Forkert**, Medical Toxicologist, Queens University. Expert Witness ERT Hearing, CCCTE vs. MOECC, Consultant to USA EPA

**Mr. D. Malcolm, P.Eng. QPRSA**, Malroz Engineering