



CITY OF STEINBACH

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Municipal Excellence Award 2012

City of Steinbach

September 2011

City of Steinbach Class 1 Waste Disposal Ground

The City of Steinbach is pleased to submit our Class 1 Waste Disposal Ground project for this year's Municipal Excellence Award.

The City of Steinbach Solid Waste Department has a mandate to encourage community-wide waste reduction and offer educational information to all residents as well as students in the surrounding school systems. Plans for the end use of this site will be of a recreational nature, which will blend in with the encroaching residential development plans.

Site Description and Current Operations

The City of Steinbach Landfill is a "Class 1" regional collection facility located on 62 hectares of land on the south side of Steinbach's City boundaries along Hanover Road East. There is a 400 metre (¼ mile) buffer of active farmland (dairy, grain, poultry) located between new residential developments north of the facility.

The regional landfill services residents and businesses from the City of Steinbach, R.M. of Ste. Anne, Town of Ste. Anne, R.M. of La Broquerie, R.M. of Hanover, and Moose Lake Provincial Park. The landfill accepts co-mingled residential solid waste, and segregated recyclable materials (e.g. metals, used oil, yard waste, used tires, waste wood).

In addition, the City Engineering Dept encourages on-going projects within the City limits to dispose of all "clean" excavated soils at the landfill, which are used to cover waste material, minimizing litter and nuisance birds at the site.

The entire landfill is situated atop a substantial natural deposit of relatively impermeable soil, which is an ideal location for landfill operations. However, there was a spring runoff stream (Keating Drain) that meandered through the site. In January of 2008, this stream was redirected around the south and west side of the facility with guidance and required permits from the Water Stewardship Board.



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Groundwater monitoring is established with eleven monitoring wells located around and within the landfill facility property lines. These wells have been strategically completed in various soil layers throughout the site to allow us to monitor the groundwater conditions at the site. Tetra Tech (formerly Wardrop Engineering) has performed monitoring well testing three times per year since 1993. Historical data compiled from this testing suggests there are no impacts to the groundwater due to landfill site operations. The old landfill site was opened in 1946, and is scheduled to be closed in 2012/13. In 2010, a Class I license was received from Manitoba Conservation to develop the recently opened Class I Waste Disposal Ground, which doubled the footprint of the original landfill site.

Creativity and Uniqueness to Manitoba

In 2007, the City of Steinbach partnered with Dillon Consulting of Winnipeg to design the expansion of the Steinbach Waste Disposal Ground (WDG). The scope of the project design would include all the required Manitoba Conservation environmental standards as well as some additional innovations to further improve environment controls at the site.

A state of the art leachate evaporation pond is the highlight of the design which allows leachate collected at the facility – off site transport and disposal of leachate may be eliminated entirely. Leachate will be collected from collection sumps at the base of the active disposal area and brought to the evaporation pond where a stainless steel spraying system will promote rapid evaporation of the leachate.

Another first for our landfill facility is a “de-watering pond” which allows the facility to accept select liquid waste (non-sewage). The de-watering pond allows solids to settle so the liquid portion the liquid portion can be removed for disposal at our Steinbach lagoon facility. The concrete floor of the pond allows removal of remaining solids with a front-end loader which spreads the material out for drying on a raised section of the lined pond. After the solids have dried sufficiently, the material may be re-used as cover material for the active disposal area.

Overall impact on your community and the benefit to the community

The regional facility provides the community with a place to dispose of their waste materials in an environmentally responsible manner, with segregated recyclable material bins, a Waste Oil & Filter collection depot (the Steinbach facility was the first MARRC



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collection facility in Manitoba), yard waste disposal for composting, and other waste diversion programs for white goods (refrigerated appliance collection for disposal through Provencher Appliance in Winnipeg), automotive battery collection, clean wood for chipping, propane tanks, and used tires.

The City also hosts a "Hazardous Waste Collection Day" on an annual basis – this event is hosted and facilitated by the City of Steinbach Solid Waste Department and Steinbach Fire Dept.

Cost/Benefit Analysis

New waste disposal ground was constructed adjacent to existing landfill. Site has demonstrated suitability for landfilling; by developing new landfill adjacent to the existing one, existing landfill infrastructure could continue to be used, and in some instances, was retrofitted or replaced. This provided some cost savings for the project. In addition, by locating the facility in an area that is already accustomed to having a landfill, the impacts to the public and community in general were reduced.

Operating a "Class 1" landfill facility under current environmental regulations and standards has a significant impact on the cost of our operating procedures. However, in our opinion, the long term benefit to our environment far outweighs these costs. What we do know respective to our Steinbach facility is that regardless of the fact that Steinbach and surrounding area are the fastest growing areas in Manitoba, we continue to see a drop in overall tonnage entering the facility five years in a row. The message of "Reduce, Re-use, Recycle, and Refuse" has really taken hold of our residents as is proven by our yearly MMSM statistics which show Steinbach and surrounding area to consistently be one of the best recycling areas in Manitoba.

Sustainability

As our diversion practices get better and better, we reap the immediate benefit of increasing the longevity of our current Landfill. We estimate a lifespan of approximately 20+ years at this site after which, it is in the City of Steinbach's long-term plans to convert the entire landfill site to a recreational facility for the City.



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Even following the ultimate closure of the Steinbach WDG, a monitoring program will be maintained to ensure well and GHG (Green House Gas) emissions testing at the facility indefinitely to ensure the safety and health of the public and our environment

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