

# Gravel Extraction in Water Aquifers of the Medicine Flats

## Executive Summary

We understand that development permits to extract gravel in the water table (within the alluvial water aquifer) of the Red Deer River/Medicine River Flats continue to be submitted. If current applications are approved there is potential for many more in the future. We believe gravel mining in this area has already produced significant permanent environmental damage (i.e. the history on South side of Highway 54. Our collective history on the South side of Highway 54 (County [NE 12], Stewart [NW 12] & AENV [SE 12] pits) has left some 480 acres barren, scarred and useless except for some motor boats running up and down in the abandoned pits. Homes have had to be abandoned; historically excellent water wells and dugouts went dry. Extracted connected channels have left a pathway for the flooding river to rip through, moving tons of mine tailings down the river. The County's own report issued in 1993 in response to another gravel extraction application suggested that the Medicine Flats should **be rezoned to a NO development zone** as this area has the lowest tolerance for high river flows of any reach along the Red Deer River system. What has changed now?

Gravel is an important commodity. However, its one time value must not be allowed to outweigh the risk of permanently damaging a precious water aquifer and impacting those that depend on it. Everyone recognizes that secure supplies of gravel are important to maintain good roads in the county. The County's report of Oct 18, 2005, indicated secure supplies were available for 20 graveling cycles or 80 years. Based on this, even with an ambitious building program the county would have sufficient supplies for 57 years for both the re-graveling and capital programs. Furthermore, there are locations in the County and beyond, already identified where gravel removal can occur above any proven high water table with significantly less environmental impact.

We don't need to endanger a sensitive ecological area like the Medicine River Flats Aquifer with more gravel pits. There is no doubt that under every parcel of land in this area there is some gravel and there will always be people and organizations willing to exploit this gravel resource for gain, regardless of the permanency and severity of the consequences.

When do we say enough is enough? We believe now is the time to put this issue to bed once and for all. Please **STOP** any further gravel extraction operations in the Medicine Flats area aquifers (proven high water table).

We ask that the approval authorities carefully review all the data that is presently available on this issue. Consideration must be given to the cumulative effect which multiple approvals of gravel extraction have on the landscape, the aquifer, the people that live in the area, the environment, the rivers, the fish habitat and the downstream water users.

To assist in this deliberation we have researched the history and facts pertinent to the Medicine Flats Aquifer. This summary lists the key issues that should be considered before any further applications are approved. Details on each point are provided.

1. An in depth Cumulative Environmental Impact Study needs to be done to determine the effects of past gravel extraction applications in the Medicine Flats area and then consider what future gravel applications would have on the landscape, the precious aquifer, the people living in the area, the river itself, the newly rejuvenated fishery and their habitat and the multiple users of the water downstream of this point.
2. Gravel extraction below the water table (not only in this area) has proven to result in irreversible changes to the landscape, limit agriculture operations, interrupt the flow of water through the aquifer, cutting off the supply of water to domestic wells and dugouts and provide a path for flood waters to further damage the area, including re-routing of the River.

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3. The quality of the water in the Medicine Flats Aquifer (water body) is rated tops in the annals of water quality. How many gravel extraction applications does it take to destroy this quality and permanently affect the quality of the water in the aquifer and downstream?
4. We know that the large quantity of fresh water moving through the gravel to the Medicine River supports active fish spawning beds. Gravel excavations have proven to interrupt this flow and this interruption has the potential of destroying the fragile fishery and the down stream river ecology.
5. Noise is an important issue for existing residents as there are homes that are located close to the proposed applications. Some of these homes are far closer than the 800 meters indicated on the 6M Holdings Ltd. gravel extraction application. Most of these homes are here because they enjoy the quiet serenity of country life, uninterrupted by industrial aggregate removal and aggregate associated activities.
6. The decision on just one application will set a precedent. We know that multiple applications are waiting to fall in behind. The decisions made now will determine the future for generations to come. Therefore the decisions made at this point, as we see it, will be to abandon the Medicine Flats to multiple gravel operations or correctly to reserve this delicate and precious water aquifer as a protected area for the river ecology and our future generations.