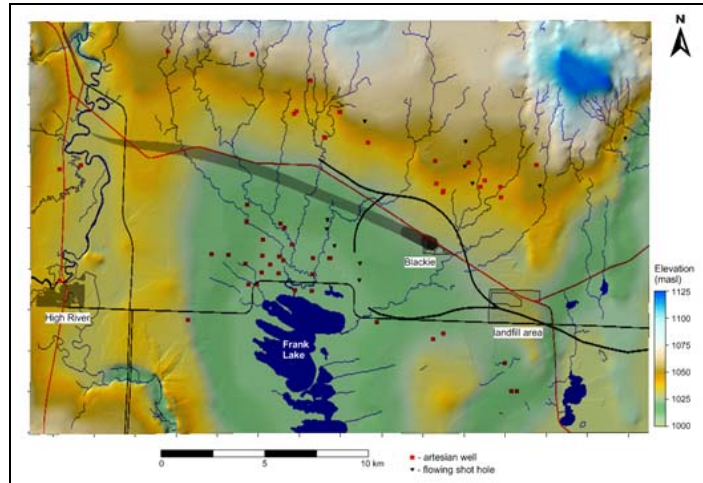


Independent investigation of the feasibility of a major landfill for the disposal of urban and possibly industrial waste by BFI on behalf of the City of Calgary, Alberta

Project Location:	Blackie, Alberta
Client(s):	Group of concerned citizens
Date Completed:	2012
Project Budget:	\$ 60,000

Medium scale DEM of the region under investigation. The landfill area is in the lower right quadrant of the map. The Town of Blackie is located southwest from there. It is the supposed endpoint of BFI's streamlined capture zone extending towards the west-northwest to the High River. Dots indicate flowing wells.



Project Summary

The City of Calgary is in need of additional landfill sites to dispose of an increasing amount of urban waste. BFI is the City's major contractor for waste disposal. Under the auspices of BFI a feasibility study had been done for a site close to the town of Blackie with favorable rail access to the nearby City of Calgary and to the United States towards the south. The hydrogeological part of the feasibility study showed some unusual results with respect to the capture area for the Blackie water supply. This capture area supposedly extended west-northwest more than 17 km to the High River, indicating this river to be the only source of water pumped at the Blackie water supply. WDA Consultants Inc. was hired to confirm or disprove BFI's hydrogeological concepts.

Services Provided

- * Collect and evaluate all geological and hydrogeological material publically available.
- * Evaluate all material provided by BFI.
- * Collect field data to support or reject the results of BFI's numerical model.
- * Document the occurrence of flowing wells and shot holes as indicators of discharge areas with upward flow.
- * Interview all owners of wells in the area as to the characteristics of their wells and drilling reports available.
- * Summarize all data and findings into an evaluation report.

Deliverables or Results

- * Preparation of a summarizing report entitled "Survey of groundwater in the Blackie Area, Alberta as impacted by the planned Prairie Sky landfill of BFI", 71 pages.
- * The report showed the hydrogeological concept and the geological evaluation of the natural clay layers supposedly underlying BFI's planned landfill site to be seriously flawed. The groundwater flow systems and the capture area of the Blackie water supply extend towards the north and possibly also in the direction of the planned landfill. The approval of the landfill was subsequently rejected by the Municipal District of Foothills No. 31.