

Summary of Comments on Waste Management's Thorhild Landfill Re-Zoning Application Binder

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Request

- Concerned Citizens of Thorhild County Requested:
 - Technical Review of Waste Management's (WM) "Rezoning Application" to Evaluate Potential for Proposed WM Landfill to Protect
 - Public Health
 - Groundwater & Surface Water Quality
 - Interests of Thorhild County Residents
 - For as Long as Wastes Proposed for Deposition Will Be a Threat
 - Reviewed Rezoning Application
 - Developed Report Based on Review

Qualifications to Undertake Review

- BA, MSPH and PhD Degrees in Public Health & Environmental Engineering
 - University of North Carolina 1957
 - Harvard University in 1960
- 30 yrs University Graduate-Level Teaching & Research on Water Quality & Waste Management Issues, Including
 - Research on Landfill Liner Issues for US EPA
 - >\$5-million in Research
 - >500 Papers & Reports
- Taught University Graduate Courses on Landfilling of Wastes & Groundwater Quality

Qualifications to Undertake Review

- Since 1989: Full-Time Consultant on Water Quality & Solid & Hazardous Waste Management Issues
- Published >1100 Papers & Reports on Research Findings
 - Including >150 Papers/Reports on Landfill Issues; Many Available on Website www.gfredlee.com
- 45 years' Experience Reviewing Impacts of Landfills
 - Reviewed >85 Landfills in USA, Canada, Other Countries
- AAEE Board Certified Environmental Engineer
- AAEE Chief Examiner for Assessing Qualifications of Professional Engineers Who Seek to Become AAEE-Certified in Water Quality & Solid Waste Management

Overall Assessment

- WM-Proposed Thorhild County Landfill Would Have Adverse Impacts on Residents of Thorhild County
 - Significant Threats to Public Health, Groundwater Quality, Surface Water Quality
- Poor Location for Landfill
- Inadequate Buffer Lands to Dissipate Waste Releases from Landfill before Trespass onto Adjacent Lands
 - e.g., Odours
- High Groundwater Table
 - Easily Polluted
 - Can Lead to Pollution of Surface Water
- Groundwater beneath Adjacent & nearby Properties
 - Used for Domestic & Animal Water Supply
 - Important to Protect Groundwater Quality

Overall Assessment

- Proposed Landfill Containment System Would, at Best, Only Postpone Pollution of Groundwater & Surface Water by Landfill
 - Landfill Liner System Will Eventually Fail to Prevent Groundwater Pollution
 - Landfill Cover Will Allow Water to Enter Landfill to Generate Leachate
 - Proposed Groundwater Monitoring for Pollution by Landfill Will Not Likely Detect Groundwater before Offsite Pollution Occurs
 - WM Consultants' Estimates of Landfill Gas Generation Rate
 - Fail to Consider Long Term Generation of Landfill Gas That Can Pollute Area near Landfill

Overall Assessment

- Waste in Proposed Landfill Would Be Threat over Very Long Periods of Time
 - Well-Beyond Time That WP Proposed to Fund Monitoring & Maintenance & Provide Remediation (Landfill Care) of Environmental Pollution by Landfill
 - Waste Management Only Proposes to Provide Postclosure Care for 25 Years

Overall Assessment

- Funds Would Be Needed to Support Landfill Care & Remediation after Period Proposed by WM for Its Responsibility for Monitoring, Maintenance, & Remediation
 - Postclosure Funding Needed for Landfill Care for as Long as Wastes in Landfill Will Be Threat

Overall Assessment

- Need Landfills for Receptacle for Wastes That Cannot Be Recycled
- Such Landfills Must Be:
 - Sited with Adequate Buffer Lands
 - Designed, Constructed, Operated, Closed, & Supplied with Assured Postclosure Funding
 - Plan to Reliably Monitor & Remediate All Adverse Effects to
 - Truly Protect Public Health & Environment for as Long as Wastes in Landfill Will Be Threat

Overall Assessment

- Need Perpetual Postclosure Fund Derived from Landfill Disposal Fees
 - Collected by WM & Made Available to Government
 - Without Perpetual Postclosure Fund, WM Landfill Will Likely Become Significant Financial Burden to Thorhild County Residents & Possibly Other Albertans
- Proposed WM Thorhild County Landfill Falls Far-Short of Providing This Level of Protection

Overall Assessment

- Rezoning Application Contains Large Amounts of Inadequate & Unreliable Information Regarding “Protection” Provided by Proposed Landfill
 - Nature of Protection
 - Extent of Protection
 - Long-Term Reliability of Protection

Overall Assessment

- A Credible Landfill Application Should
 - Address All of These Issues in Meaningful & Reliable Manner
 - Provide Full Disclosure of Potential Impacts of Proposed Landfill
- Complete & Reliable Information Needed by County Official to Evaluate Potential Impacts of Proposed Landfill

Conclusion

Rezoning of Proposed Site Land to Enable
Development of This Proposed Landfill
Should Not Be Approved by Thorhild
County

Additional Comments

- Details in Support These Conclusions in Report
- Questions?

Further Information
Consult Website of
Drs. G. Fred Lee and Anne Jones-Lee



<http://www.gfredlee.com>