

Methods Used for TCC Threats Assessment

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Source Protection Committee Meeting
February 16, 2010



Different threats assessment approaches used by XCG & GENIVAR (Jagger Hims) for TCC studies

- Both methods conform to Technical Rules



- Assign Vulnerability Scores
- Prepare List of Activities that “are or would be Threats”
- Prepare Maps of Areas that “Are or Would Be” Drinking Water Threats

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Prepare Maps* to determine circumstances for specific prescribed threats

- Managed Lands (*used regional data, i.e., provincial land use data/census agriculture data*)
- Livestock Density (*used regional data, i.e., provincial land use data/census agriculture data*)
- Impervious Surfaces (*used Ontario Road network data*)



Prepare Maps* to determine circumstances for specific prescribed threats

- Managed Lands (*used parcel data & orthophotos*)
- Livestock Density (*used parcel data & orthophotos*)
- Impervious Surfaces (*used Ontario Road network data*)

**where Vulnerability Score > 4.2 for surface water and >6 for groundwater*



- Used earlier field reconnaissance, parcel assessment data & MOE threats table to identify potential significant threats within specific vulnerability zones
- Sent letters to owners with potential significant threats and conducted follow-up interview to collect information regarding specific circumstances
- Refined significant threats based on interviews
- Enumerated significant threats
- Used parcel assessment data together with a correlation table (developed in-house) that relates MPAC property use codes to NAICS land use code
- Linked parcel assessment data to MOE Look Up Table Database (using relationship between MPAC & NAICS) to identify potential significant, moderate & low threats through GIS analysis
- Used professional judgement to verify significant threats (e.g. eliminated *Church:waste disposal*) – changes recorded in geodatabase
- Enumerated significant threats

Pros and Cons

- Both methods conform to Technical Rules



- More confidence in accuracy as field verified
- Initial contact made with landowners with potential significant threats
- Identifies significant threats only (as required in Technical Rules)



- Desk top GIS analysis
- Broader approach enumerated Significant, Moderate & Low threats
- May be useful for monitoring Moderate & Low threats