

PUBLIC INFORMATION FORUM
January 22, 2008

CBSES STUDY FINDINGS
PRESENTATION

Part B Sensitivity Analysis
Part C Implementation

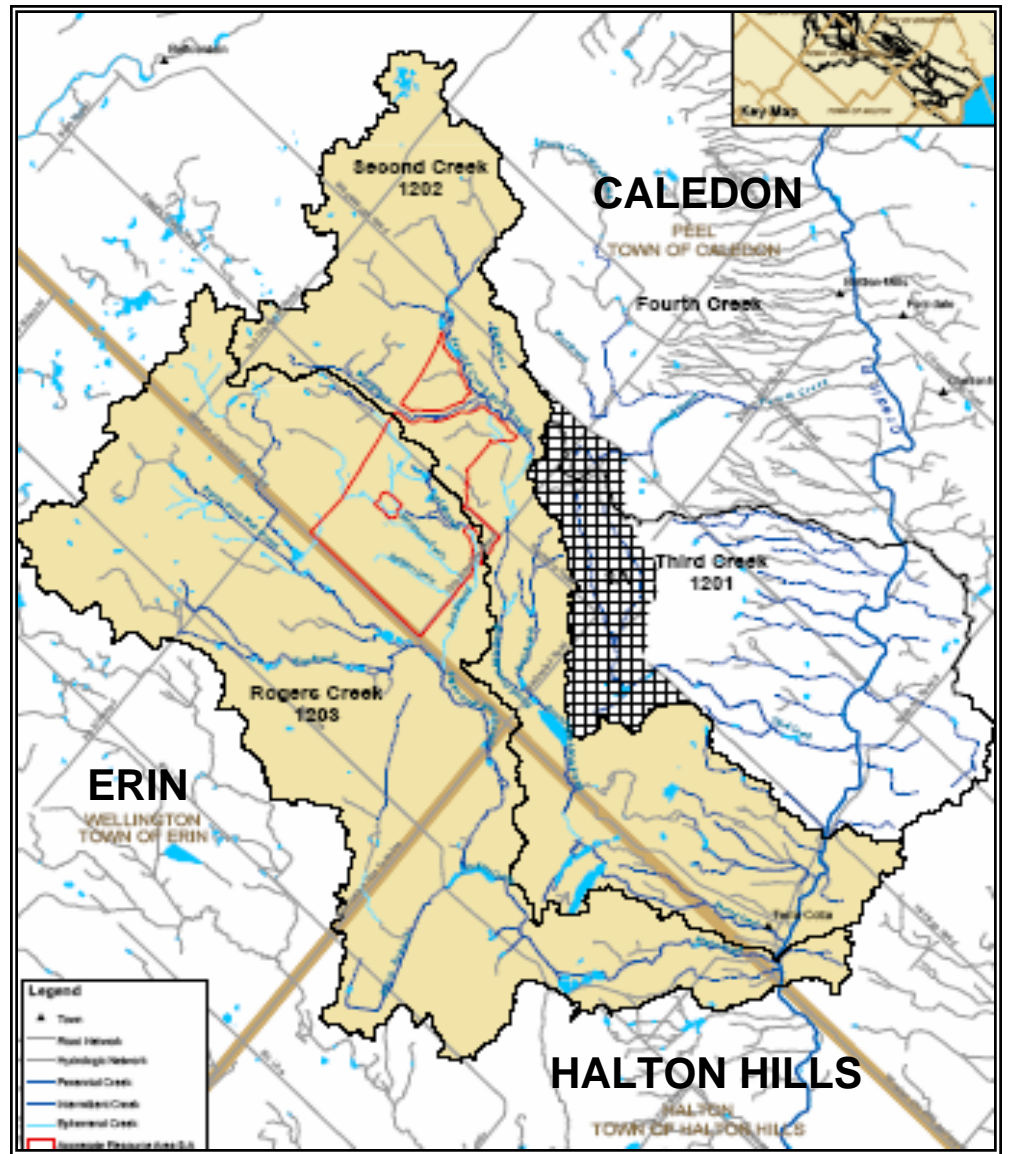


COMPREHENSIVE BROADER SCALE ENVIRONMENTAL STUDY

CALEDON AGGREGATE RESOURCE AREA 9-A

CBSES STUDY AREA

- Two Subcatchments in Credit River Subwatershed 12:
 - Rogers Creek Subcatchment
 - Second Creek Subcatchment
- Supplemental Assessment Area



CBSES STUDY TEAM

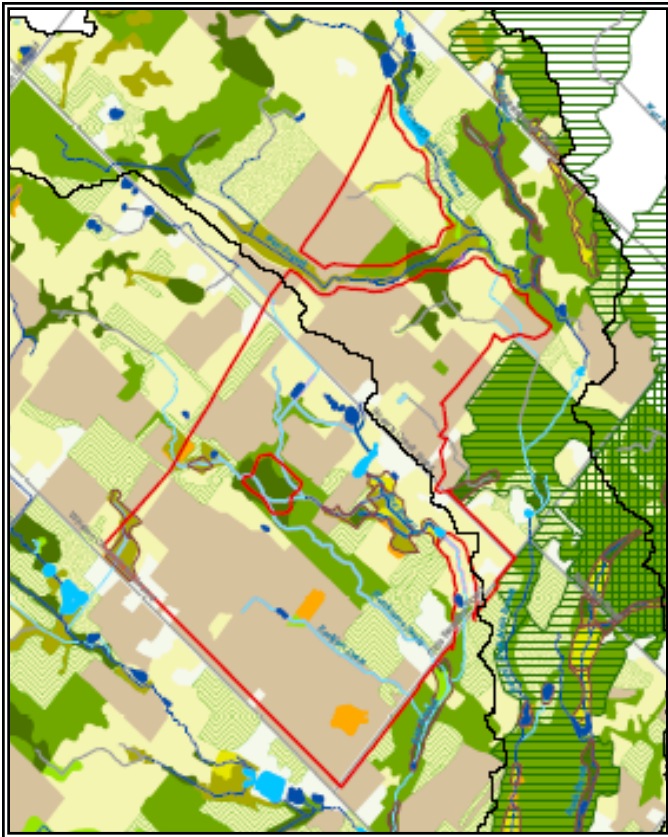
- Comprehensive Multi-Disciplinary Study:
 - Planning and Land Use - MHBC
 - Hydrology (Surface Water) - CRA
 - Hydrogeology (Groundwater) - CRA
 - Fluvial Geomorphology - JTBES
 - Water Quality - LGL/CRA
 - Aquatic Habitat and Fisheries - LGL/Ecoplans
 - Terrestrial Ecology - LGL/Goodban
- In consultation with Lead Agencies (& their experts)
- CCC/Public input at key points in the Study process

PART B – SENSITIVITY ANALYSIS

- Analyzing Potential for Change or Impact from Potential Development in Study Area
- Primary Focus is Aggregate Resource Area 9-A
- “End Receptors” include:
 - Water supply, wetlands, fisheries , forests, property damage/flooding, channel erosion/sedimentation
- Assessing Water-Related Changes Using Computer Models
- Conservatively Based on Worst-Case Impacts
- Preliminary Study Area Objectives & Management Measures - refined in Part C



PART B: Direct Impacts

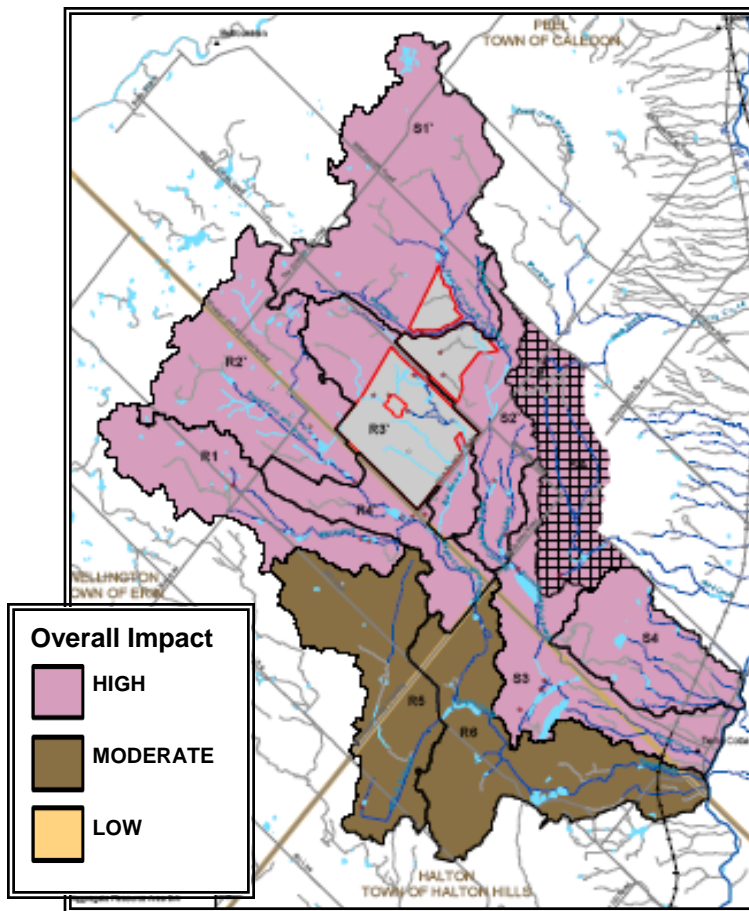


- Direct Impact - Actual removal, fragmentation, or alteration of environmental features and habitats within footprint of development area
- Hypothetical worst-case scenario - Assume all terrestrial and aquatic features removed, regardless of significance of feature or other constraints
- Feasibility determination needs to be Site-Specific

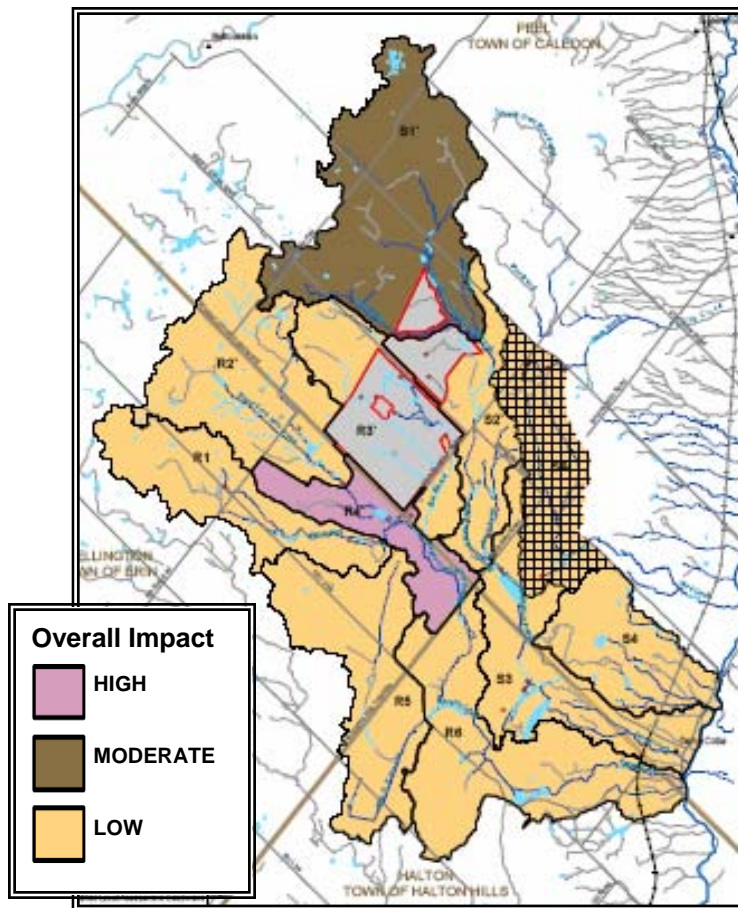
PART B: Indirect Impacts

INTERIM CONDITION “SCENARIO B”

- Full active bedrock extraction
- Hypothetical worst-case scenario *without* mitigation
- Combined catchment impacts ranked as High, Moderate, or Low
- Overall high impact
- Mitigation would be necessary to meet environmental Objectives



PART B: Indirect Impacts



REHABILITATION CONDITION “SCENARIO C”

- Long-Term Rehabilitation Condition
- Hypothetical removal of Entire Resource Area 9-A
- Reasonable passive concept
- Combined catchment impacts ranked as High, Moderate, or Low
- Overall low impact
- Must be managed at site-specific level

PART B: Conclusions

- Without mitigation, aggregate development within Resource Area 9-A would have unacceptable impacts to water-related environmental features in the Study Area
- Active mitigation measures and monitoring would be necessary during aggregate extraction and until long-term rehabilitation condition is achieved
- Rehabilitation can be done in a passive manner
- Mitigation and Rehabilitation, as well as associated impact assessment, must be planned at a site-specific level

PART C – IMPLEMENTATION

- Implementation Report – Recommended Plan
 - Plan for use by Agencies - as well as Applicants, Landowners, and others
 - Guide assessment and implementation of potential future development
 - Includes long-term monitoring of Study Area and Adaptive Management
 - Principal focus is Resource Area 9-A but information is provided relative to other development or changes

PART C – Components of Recommended Plan

1. Study Area Objectives
2. Management Measures and Protection Plan
3. Comprehensive Adaptive Management Plan (CAMP)
4. Long-Term Monitoring Program
5. Direction for Site-Specific Developments
6. Opportunities for Enhancement/Restoration
7. Policy Conformity Assessment

PART C: Study Area Objectives

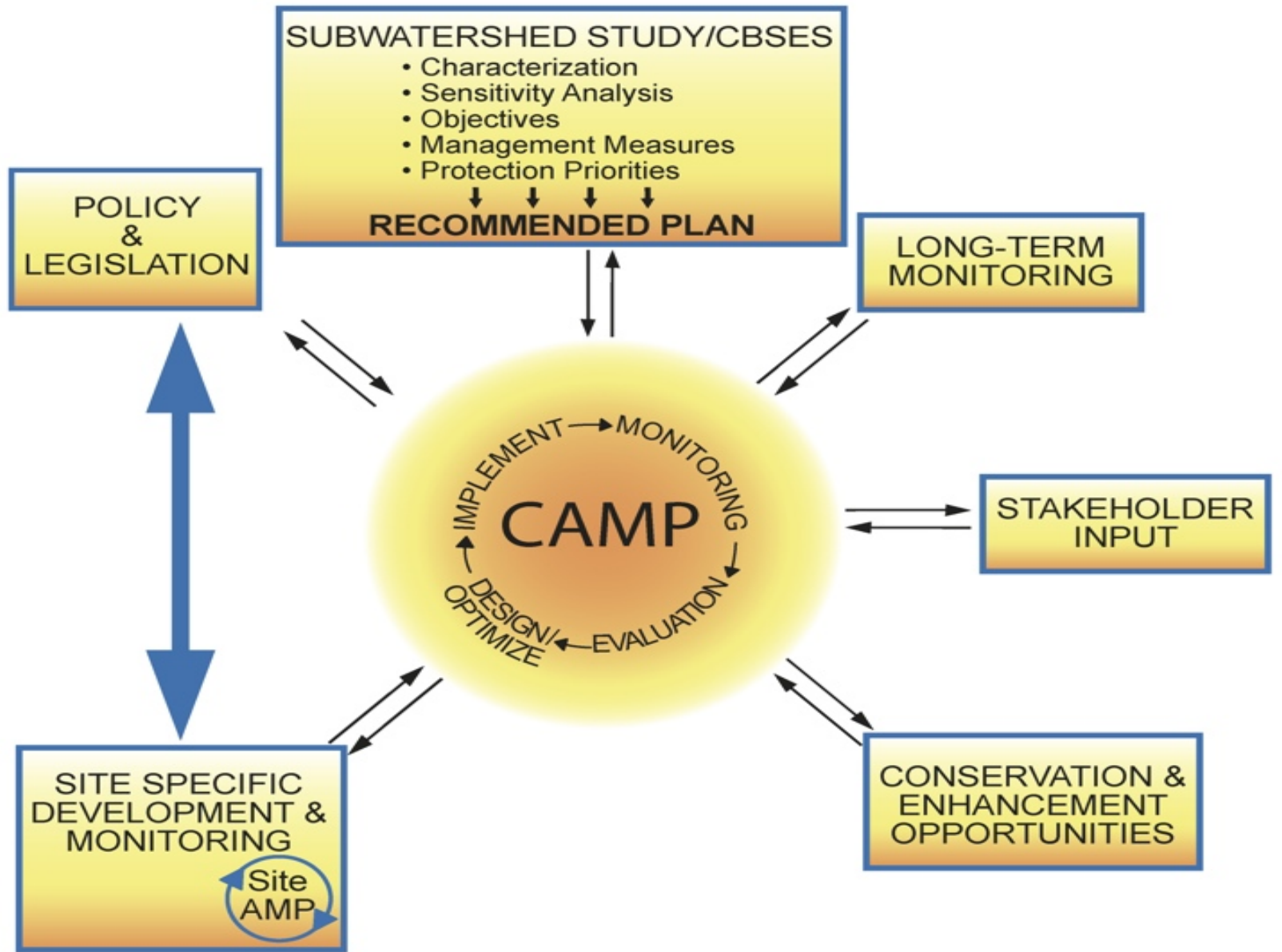
- Existing Official Plan Objectives
 - Provide comprehensive protection of environmental features with the Study Area
- Refined Study Area Objectives
 - Provide added detail to existing OP objectives
 - Include input from 2007 Public Work Shop
 - To be used for preparing and assessing site-specific proposals within Resource Area 9-A

PART C: Management Measures

- Management Measures are necessary to ensure protection of important environmental features and functions
- Include “structural” and “non-structural” measures
- Include enhancement/restoration opportunities

PART C: Management Measures

- Key principles:
 - Minimize changes to groundwater levels
 - Maintain streamflow
 - Protect water quality
 - Protect environmental systems and linkages
 - Implement enhancement opportunities
 - Adaptive Management
 - Evaluate performance using monitoring of “Sentinel Features” (creeks, wetlands, etc.)



PART C: Long-Term Monitoring

- There is on-going, long-term agency (primarily CVC) monitoring as part of the Credit River Integrated Watershed-Wide Monitoring Program (IWMP)

Meteorology

Benthic monitoring

Hydrogeology

Water chemistry

Fluvial geomorphology

Hydrology

Fisheries

Wetland and terrestrial ecology

- Identified opportunities for CVC to refine/enhance the existing program
- Some refinements already initiated by CVC

PART C: Direction for Future Applicants

- Provide direction and guidance to future applicants in relation to aggregate extraction proposals within Resource Area 9-A:
 - Includes site-specific study and reporting requirements in relation to relevant policies, legislation, and the CBSES
 - Describes potential resource management and mitigation approaches and considerations
 - Identifies adaptive management principles for management, mitigation, and monitoring approaches at the site level
 - Provides process and requirements for determination of site-specific Sentinel Features and associated Monitoring Targets

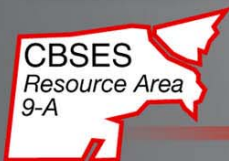
PART C: Enhancement Opportunities

- Includes a variety of conservation enhancement and restoration opportunities for Study Area
 - Restoration or enhancement of natural environment features
 - Stewardship and education opportunities
- Can be undertaken as part of proposed land use change or as separate projects

PART C: Policy Conformity

- Comprehensive broad-scale foundation for future site-specific work
- Completed CBSES will satisfy Caledon Official Plan requirement for Aggregate Reserve areas

THANK YOU



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