Cumulative Effects Management: Alberta’s Institutional Framework

Adding it All Up
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Stephanie Clarke
Alberta Environment & Sustainable Resource Development
Presentation Overview

- Setting the Context
- Integrated Planning for Tomorrow
- Next Generation Policy Assurance
- Knowledge and Performance Measurement
Setting the Context
Mgmt Approach: Evolution

Pre-1990
- Paradigm of abundance
- Meeting env’tal standards
- Mgmt of pollutants
- Independent regulation of media and substances
- Command and control

1990-2010
- Mgmt within watershed capacity
- Mgmt of impacts of single operation
- Emergence of risk-based approach
- Greater opportunity for public participation
- Shared responsibility

Present
- Mgmt within env’tal limits
- Mgmt across env’tal media
- Mgmt of cumulative effects of multiple contributors
- Mgmt of risk and opportunity
Cumulative Effects Management System

- **Plan**
  - Holistic Approach
  - Proactive Planning and Management
  - Outcomes/Results Based
  - Flexible, Place-Based Implementation
  - Adaptive
  - Knowledge-Based
  - Collaborative

- **Do**
  - Strategic Direction
  - Set/Refine Outcomes & Strategies
  - Deliver

- **Check**
  - Evaluate & Report Performance
  - Adaptive Management Action

- **Adapt**
Integrated Planning for Tomorrow
Provincial Alignment
Land Use Framework

- Emphasizes provincial leadership for sustainable development
- Balances social, economic and environmental considerations
- Provides increased certainty
  - Integrates and coordinates provincial policy
  - Aligns planning and decision-making
- Encourages stewardship and conservation
Regional Plans

- Key strategy under the Land-Use Framework; supported by the Alberta Land Stewardship Act, 2010
- Define economic, environmental, and social outcomes for a region in relation to land-use
- Align provincial policies related to land/environment at a regional level – involves specific tradeoffs
- Define the cumulative effects management approach for the region – managing impacts to air, land, water, and biodiversity
Lower Athabasca Regional Plan

• First LUF Regional Plan (effective 1 Sept 2012)
• Product of more than three years of consultation
• Two Main Components:
  o Strategic Plan
  o Implementation Plan – includes Regulatory Details
• Key Strategies:
  – Management Frameworks (air, water, biodiversity)
  – Regional Strategic Assessment
  – Conservation Areas
  – Recreation/Tourism Areas
  – Aboriginal Engagement
Next Generation Policy Assurance
Key Enhancements

- Promoting regulatory excellence
- Broadening the range of regulatory/non-regulatory tools
- Strengthening flexibility and responsiveness of our tools
- Incorporating performance-based approaches
- Improving compliance assurance
- Managing clusters of activities involving multiple parties
Environmental Management Frameworks

- Indicators are chosen
- Triggers and limits are set

- Ongoing monitoring and assessment of conditions relative to triggers and limits

- Management actions taken as needed at triggers and limits
- Results reported
Example – Lower Athabasca Air Framework – NO$_2$
Triggers and Limits

- Progressive action, based on level of measured air quality

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Potential Actions</th>
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<tbody>
<tr>
<td>Level 4</td>
<td>Ambient air quality exceeding air quality limits</td>
<td>Emission reduction plan, amend approval, enforcement</td>
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<td><em>Limit = 45 ug/m$^3$ (24 ppb)</em></td>
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<tr>
<td>Level 3</td>
<td>Ambient air quality below but approaching the air quality limits</td>
<td>New operating conditions on facilities to maintain air quality below limits</td>
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<td><em>Trigger = 30 ug/m$^3$ (16 ppb)</em></td>
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<td>Level 2</td>
<td>Ambient air quality below air quality limits</td>
<td>Enhanced monitoring</td>
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<tr>
<td></td>
<td></td>
<td><em>Trigger = 15 ug/m$^3$ (8 ppb)</em></td>
</tr>
<tr>
<td>Level 1</td>
<td>Ambient air quality well below air quality limits</td>
<td>Standard monitoring</td>
</tr>
</tbody>
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Knowledge and Performance Measurement
Regional Strategic Assessment

- RSA: Comprehensive assessment of cumulative impacts to social, economic and environmental valued components

South Athabasca Oilsands

- SAOS RSA process built around meaningful engagement with stakeholders
- Information gathered through RSA will support key objectives:
  - Development of sub-regional plan for the SAOS, as per LARP
  - Enhancement of Project EIA process
Monitoring, Evaluation & Reporting

• Existing system – partnership approach
• Joint Canada-Alberta Monitoring Program for Oilsands

• New Provincial System
  o arms-length environmental monitoring agency
  o central coordination
  o integrated monitoring, evaluation and reporting across media
  o scientifically credible, open and accessible
Knowledge & Performance Management

5 Functions:

- **Management actions**: Address the things preventing progress
- **Defining Outcomes**: Desired conditions and functions
- **Selecting indicators**: Environmental stresses and conditions
- **Monitoring Indicators**: Make data accessible on an information system
- **Evaluating Targets and Thresholds**: Compare indicator values with target or threshold

- **Assessment**
- **Monitoring**
- **Assurance**
- **Evaluation**
- **Reporting**
- **Data Mgmt**
- **Knowledge**
Wrapping Up

• Alberta continues to work to institutionalize cumulative effects management in collaboration with our stakeholder community.

• These efforts will be pronounced in regional land-use planning, enhancements to our policy assurance approach, and integrated monitoring evaluation and reporting system.
Questions?

Stephanie Clarke
Environment and Sustainable Resource Development
stephanie.clarke@gov.ab.ca