

Press Release



December 22, 2011

CEMA delivers Report Card on Regional Sustainable Development Strategy (RSDS)

Fort McMurray, Alberta – The Cumulative Environmental Management Association (CEMA) releases a detailed independent assessment on the status of issues assigned to the association in the Regional Sustainable Development Strategy (RSDS). An analysis of the 38 issues reviewed by CEMA determined the following:

- 100 % completed: 10 issues:
 - Air - Oxides of Nitrogen. Cumulative impact of increasing NOx emissions – These emissions can contribute to the increase of ambient NOx concentrations, formation of ground level ozone, acidification, vegetation and human health effects. Produced by high temperature combustion processes;
 - Air - Sulphur Dioxide (SO₂) - Impact of increasing SO₂ concentrations on human health, vegetation and wildlife. SO₂ ambient air quality guidelines are stipulated, major contributor to acid deposition;
 - Fisheries- Fish Conservation: Activities in the region will result in changes to inflow (volume) which in turn will alter fish habitat;
 - Terrestrial Wetland Assessment – The undetermined impact on wetland vegetation communities due to basal aquifer drawdown and the uncertainty of lateral distance of impact. This surface drawdown may cause the wetlands to dry up over a significant area, depending on the volume of water removal required to dry a wetland;
 - Terrestrial End Land-Use – Continuity of landforms, watershed and vegetation communities across oil sands mine closure landscapes is necessary for the development of sustainable landscapes and a diverse ecosystem including a diversity of landforms, indigenous vegetation, near natural water patterns and wetlands and a natural experience;

- Terrestrial End Land Use - Re-establishing a diverse ecosystem including a diversity of landforms, indigenous vegetation, near-natural water patterns and wetlands in the reclaimed landscape;
 - Terrestrial Land Use – use of native species and traditional plant species in reclamation in the closure planning design;
 - Terrestrial Traditional Use Values and Mitigation - which vegetation species existed in the pre-disturbance landscape and which species will be established in the reclaimed landscapes;
 - Terrestrial- Diversity of soil types to promote potential for vegetation diversity. The re-creation of single type (homogeneous) topsoil across the reclaimed landscape may not provide an “equivalent capability” for the return of a diversity of native vegetation communities. Research is required to understand the soils and technology necessary to re-establish a diversity of vegetation types, in a reasonable period of time. The requirement to salvage all the presently existing mineral soils may be necessary to prevent the permanent loss of capability to re-establish and sustain equivalent vegetation and other biological diversity;
 - Terrestrial – Forest Values Cumulative Impact of development on annual allowable cut and other forest values.
- 95% completed: 3 issues:
 - Wildlife Traditional Use Values and Mitigation – Impact of development on wildlife of high traditional value – moose, rabbits, aquatic fur bearers, grouse, waterfowl and squirrels;
 - Terrestrial - End Land Use Uncertainty about the type of wildlife that reclaimed land will support and sustain and whether the wildlife (Moose, rabbits, aquatic fur bearers, grouse, waterfowl and squirrels) that will be sustained is congruent with traditional needs;
 - Surface water Sustainability - Impacts of multiple developments on long-term hydrological and biological integrity of watersheds such as Muskeg River and Kearl Lake.
- 90 % completed: 10 issues:
 - Air - Acid Deposition – Surface water. Impacts on buffering capacity, biological productivity and species composition of acid-sensitive rivers and lakes;
 - Air - air pollutant interactions: Cumulative impacts from concentration and deposition of air pollutants on human health, wildlife and vegetation in the region (individual emissions and their interactions including synergistic effects of ozone);
 - Cumulative impact of concentration of air pollutants (Air Toxics Priority Substances Lists 1&2) on human health and wildlife (especially amphibians) due to air emissions;
 - Surface water - Changes in flows, sediment concentrations and channel regime in receiving streams in local basins and their impacts on fish habitat;
 - Surface water -Drainage Regime. Restructuring of drainage regimes may contribute to increased erosion and result in impacts to wetlands and change flow rates in tributaries, increase sediment and have an impact on fish habitat;

- Surface Water-water quality - Silt and other contaminants increase from logging and developments;
 - Surface water - water quality. In-stream flow needs in the Athabasca River and developed tributaries;
 - Terrestrial Biodiversity Conservation - Protection of areas in the lease that are not underlain by economic oil sands and are not specifically needed for a mine as biodiversity in-situ conservation areas;
 - Terrestrial Diversity of Soil Types to Promote Potential for Vegetation Diversity – The productivity of soils used to support commercial forests are based on the use of a soil rating procedure called the “Land Capability Classification or Forest Ecosystems in the Oil Sands Region (LCCS)”. The rating system is new and requires monitoring to determine the factors that influence productivity and the long-term sustainability of the forests established and the establishment and viability of other uses;
 - Terrestrial Cumulative impacts on wildlife-habitat changes. The uncertainty about cumulative impact of individual and multiple oil sands developments on wildlife as a result of the habitat loss and larger scale (regional) fragmentation of the ecosystem has major implications to regional wildlife populations. This is particularly important for wildlife species of concern in Alberta such as Red, Blue and Yellow listed species. Changes in habitat availability, connectivity and diversity. Preservation of habitat or threatened animals, increased mortality risks due to industrial activity and increased traffic flow.
- 80 % completed: 6 issues:
 - Air - Acid deposition-soils: Impacts on productivity and vegetation composition of local and regional acid-sensitive soils;
 - Air - Acid deposition wetlands. Acidification of wetlands may impact mosses and lichens and cause sphagnum moss invasion in poor fens, resulting in changes to wetland composition/diversity;
 - Air-Ground level Ozone. Impact of ground-level ozone on human health and vegetation(Ground level ozone is a secondary pollutant formed from NOx and VOC emissions);
 - Surface water- Changes in open water areas, including lakes and streams. This is an overall issue of watershed management and cumulative changes in flow regimes due to development;
 - Terrestrial Biodiversity Assessment – The Canadian Biodiversity Strategy recommends that environmental impact assessments address impacts to biodiversity. There is uncertainty about the acceptable level of detail and scope of assessments, and the expectations for restoration. Impacts to biodiversity include changes in landscape and community levels, changes in species and genetic levels, and impacts to rare species such as rare plants. Soils, plants and wildlife tend to be treated separately rather than in an integrated fashion as an ecosystem;
 - Terrestrial – End Land Use – Mitigation of cumulative environmental effects through regional development planning and integrated mine plans for oil sands development.

- 75% completed: 5 issues:
 - Air - Effects of deposition of heavy metals and acidifying compounds on traditional plants used by First Nations and Aboriginal Communities in and around the oil sands developments;
 - Air - Acid deposition vegetation - impacts on biological productivity of acid-sensitive vegetation and changes in species composition and diversity, including impacts on the success and sensitivity of re-vegetation on reclaimed areas;
 - Air -Heavy Metals Deposition - Impacts of increasing levels of heavy metal deposition on soil and vegetation, fish, wildlife and/or human health;
 - Air – inhalable particulate matter PM10 and PM2.5– impact of inhalable particulate matter on human health and wildlife;
 - Eutrophication.

- 50 % completed: 4 issues:
 - Surface Water – End Pit Lake (EPL) Water Quality - Impact of on habitat conditions for biota in the lake itself and for the river/creek into which it will discharge. Uncertain water quality in the EPL which is a final landscape feature. This results from the proposal to put tailings in the lake and cap it with water and the quality of water that will be in these lakes from local runoff;
 - Surface Water – End Pit Lake (EPL) - Use of chemical specific guidelines for toxic elements of water discharges instead of Toxic Units: e.g., from End Pit Lakes;
 - Terrestrial End Land Use - The reclaimed landscape will be used for recreational purposes with the potential for intensive recreational activities including fishing and hunting pressures because of increased access. The capability to support and/or the land to recover after use from these types of activities has to be incorporated into the closure planning. Public information about the government policy with respect to assurances that the cost of end land-use will not be passed along to the public and information about how industry will finance end land-use over the long term;
 - Wildlife – Traditional Use Values and mitigation – Concern that increased activity in the region has and will result in increased “unregulated” tourism which may occur on traditional trap lines. What protection do trap line holders have against this.

“CEMA has completed a considerable amount of research into cumulative effects of oil sands development in Alberta over the past 11 years”, stated Glen Semenchuk, CEMA Executive Director. “But, the job isn’t finished, as increased growth in the multi billions of dollars of development is planned and all of the RSDS issues are not yet completed.”

In September 1998, based on the anticipation of further oil sands development, Alberta Environment (AENV) created the RSDS. The 72 issues addressed by the RSDS were identified from project-specific environmental impact assessments in the region. CEMA

was formed, to address 37 of the RSDS issues (Eutrophication was later added) including:

Acidification, air contaminants, biodiversity, culture and historical resources, fish habitat, ground level ozone, landscape diversity, reclamation, surface water quality, trace metals, and wildlife habitat.

A complete list of all 38 of the RSDS issues studied by CEMA and the recent assessment of CEMA's efforts can be found at www.cemaonline.ca.

CEMA is a multi-stakeholder society that is a key advisor to the provincial and federal governments committed to respectful, inclusive dialogue to make recommendations to manage the cumulative environmental effects of regional development on air, land, water and biodiversity.

For more information:

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