Cumulative Environmental Management Association

SUSTAINABLE TIMES

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CEMA Executive Director

The Members of the Cumulative Environmental Management Association – Wood Buffalo Region (CEMA) are pleased to announce the appointment of Mr. Ken Weagle to the position of Executive Director.

Ken's primary responsibility will be to provide leadership in support of CEMA Members in execution of their mandate. CEMA, established in 2000 as a not-for-profit society, is mandated to provide recommendations to government and industry on managing environmental impacts of development in the region.

"CEMA is fortunate to have a person with Ken's skills and experience in this critical position", says CEMA President Don Klym. "Ken has extensive experience in Canada and internationally in multi-stakeholder environmental initiatives. Recently he worked in the Northwest Territories as executive director of the Mackenzie Valley Land and Water Board."

Ken says he is excited about his new role. "CEMA has a new and innovative approach to environmental management and I'm looking forward to being a part of this very important work."

The appointment was effective April 16, 2001. Ken will be located in CEMA's office in Fort McMurray, Alberta. For further information regarding CEMA, email cema.admin@home.com. CEMA also has a new website (www.cema-wbr.org) which is still under construction.❖

Ken Weagle, CEMA's new executive director

RAC joins CEMA

Mike Boyd, the current chair of the Reclamation Advisory Committee (RAC) revealed recently announced RAC's intention to become a CEMA working group. The decision to join RAC was made at the February 28 Cumulative Environmental Management Association (CEMA)meeting. RAC's association with CEMA will provide a broader mandate for members of RAC to discuss reclamation for all development activities in the Regional Municipality of Wood Buffalo.

Prior to joining CEMA, RAC participants formed a subgroup to address reclamation issues in the Regional Sustainable Development Strategy (RSDS). Members of the RAC subgroup will continue to work closely with stakeholders from the Sustainable Ecosystems Working Group (another CEMA working group) to address these concerns. Some of the RSDS-related issues that the RAC subgroup will be involved with include the effects of seepage water from reclaimed landforms and tailings ponds, reclaiming consolidated tailings, and re-establishing a diverse ecosystem which includes indigenous vegetation and near-natural water patterns and wetlands.❖

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CEMA Working Group Focus: Water Working Group

The CEMA Water Working Group has been very productive these past few months. Originally set to begin work in July 2002, the Water Working Group (WWG) was formed earlier in response to concerns by many stakeholders about existing conditions of the surface water in the Athabasca oil sands area. The objectives of the WWG are to develop management plans for the watershed integrity of the Muskeg River Basin, and for instream flow needs (IFN) on the Athabasca River downstream of Fort McMurray oil sands operations. In addition, the WWG will communicate information on historical and ongoing initiatives relating to water and fisheries and examine issues related to the management of wastewater releases.

To date the WWG has completed a proposal to study fish overwintering in the lower Athabasca River (downstream of Fort McMurray). This proposal has been adopted as a work plan for the first phase of the IFN assessment. The WWG, in a partnership with the Regional Aquatics Monitoring Program (RAMP), has already begun this overwintering study. The WWG has also initiated a review of existing water quality models for use in IFN assessment and expects this to be completed by April of this year. In addition, the WWG is in the midst of designing a work plan to compile water quality and fisheries data within the Regional Municipality of Wood Buffalo.❖

Regional Water Quantity

While the overall runoff amount in North-eastern Alberta has been average over the past decade, the past five years has seen both record high and record low runoff years. In both 1996 and 1997, areas to the south of Fort McMurray experienced record high annual streamflow, with 1996 being one of the highest years on record for this region. On the other hand, 1999 was the lowest runoff year on record in the entire region, and 1998 saw the second lowest runoff amount in the area south of Fort McMurray.

The lower Athabasca River also experienced extreme runoff conditions during the past 10 years, recording an historical high in 1997 and the three lowest runoff years on record in 2000, 1999 and 1993.

Drinking Wilderness Water

No surface water can be considered safe for human consumption without treatment, even in Canada where wilderness waters are normally of excellent quality. Even the cleanest-looking water could be contaminated with bacteria, viruses, fungi and parasites. On short trips it is best to bring water from home. When drinking wilderness water, follow these guidelines: 1) choose a water source carefully, 2) purify the water, and 3) keep the environment clean.

Choosing a water source: Well water, fast-moving rivers and the deepest parts of lakes are the best places to collect water. Avoid still water, shoreline water and water close to human settlements/campsites. Runoff water from streams below glaciers is often cloudy with silt and should be filtered. Hot-spring water often contains unsafe micro-organisms. During winter, it is best to use an open-water source, or to collect water through a hole in the ice.

Water purification: There are many ways to purify water. Boiling water is the most effective method. Water should be boiled for at least five minutes, longer at higher altitudes. When boiling is not feasible, water can be treated chemically with chlorine (bleach or tablets) or iodine (tinctures, tablets, crystals). Filtering water is another option, but follow the filter instructions carefully. When used or cleaned improperly, filters can become contaminated.

Keeping the environment clean: It is everyone's responsibility to minimise their impact on the environment. When washing, use as little soap as possible. Dispose waste water by scattering the water over a wide area at least 100 metres away from any water source or campsite. Leftover food should be completely burned or packed out. Human waste and tissue should be disposed in a hole 20 cm deep and at least 100 metres away from any water source or campsite.

Source: Health Canada and Environment Canada pamphlet "Wilderness Water – A Guide to Wilderness Drinking Water", 1994

***Quote**: The best way to escape from a problem is to solve it.*

- Alan Saporta

Boreal Caribou Committee

According to Alberta's Wildlife Act, the woodland caribou is a 'threatened' species, with declining populations and a decrease in distribution compared to historic conditions. The status of the woodland caribou prompted the formation of the Northwest and Northeast Regional Standing Committees, which merged in 1999 to form the Boreal Caribou Committee (BCC). The main purpose of the BCC is to understand the problems facing woodland caribou, and to work with industry and government partners to improve practices for the benefit of the caribou in northern Alberta.

To date, the BCC and its subcommittee, the Boreal Caribou Research Program (BCRP), have created accurate maps of caribou distribution, and refined their knowledge of caribou habitat preferences and use. Work done by the BCC has also improved understanding of population trends and predator-prey dynamics, and made advances in understanding how caribou and wolves respond to industrial developments.

Future goals of the BCC include improving distribution maps, continued population trend monitoring, evaluating the effectiveness of new practices in mitigating impacts on caribou, evaluating means of speeding the vegetation recovery of old industrial clearings, and examining cumulative effects.❖

Past and present distribution of Woodland Caribou in Alberta. ***Photo from: Alberta's Threatened Wildlife (http://www.gov.ab.ca/env/fw/threatsp/index.html)***

Ambient Air Quality

Air is one the most heavily monitored environmental parameters in Northeast Alberta. In the Athabasca oil sands area, air quality is measured by the Wood Buffalo Environmental Association (WBEA). WBEA operates a community-driven environmental monitoring program that measures ambient air quality as well as environmental effects of emissions. While WBEA is not affiliated with either CEMA or RSDS, WBEA's data is used by both groups.

WBEA began monitoring air quality in 1997, replacing the Regional Air Quality Co-ordinating Committee (RAQCC), and now monitors at eleven different stations ranging from as far north as Fort Chipewyan and as far south as Fort McMurray. WBEA continuously monitors sulphur dioxide (SO_2), oxides of nitrogen (NO_x), total hydrocarbons (THC), total reduced sulphur compounds (TRS), carbon monoxide (CO), ozone (O_3), particulate matter less than 2.5 µm ($PM_{2.5}$), and various meteorological conditions. The intermittent sampling program monitors particulate matter less than 10 µm (PM_{10}), and volatile organic compounds (VOC). The passive monitoring program monitors SO_2, NO_2 and O_3. The air quality data are compared to relevant guidelines to determine not only current air quality conditions, but also the potential for negative health and environmental effects due to exposure to ambient concentrations.

In 2000, WBEA released its 1999 Annual Report which included a review of the air quality data. This review concluded that for all compounds measured in the WBEA, with the exception of $PM_{2.5}$, the maximum concentrations were below the Alberta ambient air quality guidelines, as well as guidelines for other jurisdictions. The maximum concentrations of $PM_{2.5}$ were directly attributable to natural causes, such as forest fires.❖

World's Top Ten Most Polluted* Cities

1. Mexico City, Mexico
2. Beijing, China
3. Xi'an, China
4. Delhi, India
5. Jakarta, Indonesia
6. Manila, Philippines
7. Bangkok, Thailand
8. Santiago, Chile
9. Bombay, India
10. Los Angeles, USA

** Based on particulates*

Source: www.worldbank.org/nipr/wolfpres/no_frame/sld008.htm

CALENDAR OF REGIONAL MEETINGS

MAY, 2001
16 – Sustainable Ecosystems Working Group, Ft. Mac
17 – Reclamation Advisory Committee, Ft. Mac
17 – Wildlife and Fish Working Group, Ft. Mac

JUNE, 2001
5-6 – Cumulative Env. Management Association. Ft. Mac
19 – Terrestrial & Environmental Effects Monitoring, Ft. Mac
20 – Reclamation Advisory Committee field trip
21 – Reclamation Advisory Committee, Ft. Mac
26 – Regional Aquatics Monitoring Program, Ft. Mac

WEBSITES OF INTEREST

ALBERTA ENVIRONMENT HOME PAGE
http://www.gov.ab.ca/env/

BOREAL CARIBOU RESEARCH PROGRAM
http://cervid.forsci.ualberta.ca/caribou/BCRP.htm

CUMULATIVE ENVIRONMENTAL MANAGEMENT ASSOCIATION (UNDER CONSTRUCTION)
http://www.cema-wbr.org

DRINKING WATER AWAY FROM HOME
http://www.hc-sc.gc.ca/ehp/ehd/catalogue/bch_pubs/dw_away.htm

TRADITIONAL ECOLOGICAL KNOWLEDGE
http://www.carc.org/pubs/v20no1/utility.htm

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
http://www.wbea.org

CEMA Briefs

NO_x/SO_2 Management Working Group: The mapping group meeting was held on March 20th in Calgary. The development of maps marking receptor sensitivity to acid deposition is progressing. This work will feed into the NSMWG management system.

Trace Metals and Air Contaminants Working Group: TMAC has reviewed the first draft of the "Review and Assessment of the Deposition and Potential Bioaccumulation of Trace Metals" Report from Dillon Consulting Ltd. The report will be revised before sending out for expert review.

Sustainable Ecosystems Working Group (SEWG):

- Landscape and Biodiversity: The Landscape Subgroup and the Biodiversity Subgroup have now merged into a single subgroup. Work has begun on data collection regarding indicators.
- Cultural and Historical Resources: This is a new subgroup under SEWG responsible for the issues regarding local culture, recreation and historical sites.
- Non-renewable Resources: This is a new SEWG task group that will compile information on mineral and energy resources in the oil sands area.
- Wildlife and Fish: Members have developed a Terms of Reference for contract work to compile baseline information on eight priority species.

Water Working Group: Members have completed a proposal to study fish overwintering in the lower Athabasca River, begun a review of existing water quality models for use in in-stream flow needs assessment, and are developing a work plan to compile water quality and fisheries data within the region (see article on page 2).

Traditional Ecological Knowledge: The Reclamation Advisory Committee's TEK subgroup have now joined the CEMA TEK Standing Committee. This committee is currently developing their strategy and work plan.

Cumulative Environmental Management Association

This newsletter is a joint effort between Alberta Environment and CEMA. For additional copies of this newsletter or to submit an article, please contact Lisa Zaplachinski (AENV) at 403-297-5937 (lisa.zaplachinski@gov.ab.ca) or Brenda Erskine (Suncor) at 780-743-6480 (berskine@suncor.com).

Alberta ENVIRONMENT SUSTAINABLE RESOURCE DEVELOPMENT