



SUSTAINABLE TIMES



CEMA Update Issue

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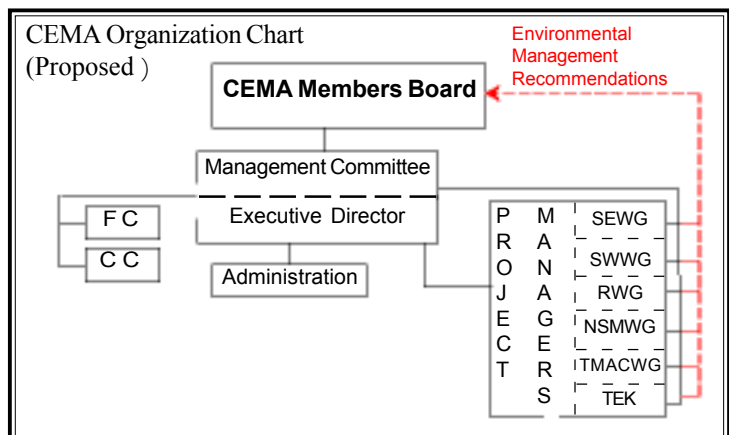
The last five years has been a time in which CEMA has seen many achievements and successes in its development from a concept to a functioning organization. The operating committee of CEMA has proposed a change to CEMA's work process to help CEMA deliver its mandate in a timely, and

efficient manner while respecting the needs of all its member organizations. The proposed organizational model defines clear accountabilities and incorporates additional resources to the CEMA Office, and is the first and most important step in allowing to CEMA to function in this manner.

The design principles for the organizational model will uphold CEMA's vision, purpose, and objectives of protection of the environment, consensus based decisions, consultative approach to develop and apply environmental tools, thresholds, guideline and objectives. CEMA needs to continue to be

stakeholder driven and transparent. The new organizational plan is designed to improve CEMA's ability to get work done effectively, on time, and on budget, while keeping an efficient administrative process and open communication.

CEMA members met on June 19, 2003 to discuss the proposed organizational change and decide to proceed with implementing the changes.



CEMA'S NEW INTERIM EXECUTIVE DIRECTOR SAYS SO LONG



Maged Said - Executive Director

CEMA was fortunate to have found Maged Said as an interim Executive Director to replace Ken Weagle who had stepped down from this position in January. Maged, who himself will be leaving this

position in August was well qualified to provide direction and leadership to the CEMA membership. Maged has put his energy towards enhancing and promoting the working groups efforts to reach recommendations in a timely manner.

Prior to taking on the role of Executive Director, Maged was Albion's General Manager of Health/Safety and Environment. Maged sees the main Challenges of CEMA to be an ongoing commitment towards achieving final results of CEMA work group tasks and improving

communications and the profile of CEMA within the Community and member organizations. Currently, the role of the Executive Director is demanding and includes:

- Responsible for upholding the vision, purpose, and objectives of CEMA
- Accountable to the OC for the execution of the CEMA integrated work plan
- Facilitating decision-making at the Working Group level as required
- Fiscal and administrative responsibility for the association
- As Chair of the funding committee the ED is responsible for obtaining agreement on the amount and source of funding and bringing it forward to the membership
- Develop CEMA procedures and guidelines
- Responsible for recommending adjustments to CEMA's governance and operating policies
- Develop internal and external communication tools and processes
- Responsible for determining the role and managing the performance of direct reports

Maged Said (Interim Executive Director)
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CEMA'S NEW PRESIDENT



Ted Ostrowski - President

Ted is a long time resident of Fort McMurray and has seen this community progress and evolve for the past 25 years.

Apart from being the CEMA president, Ted is the Environmental Affairs manager for

Syncrude. He is able to fulfill his role as CEMA president as part of the responsibilities of his position as Environmental Affairs Manager. The time commitment required as CEMA President is fully supported by Syncrude's upper management as Syncrude has a strong commitment to ensure local initiatives such as CEMA are successful.

Ted's Civil Engineering degree has provided the foundation for all the work experience he has had with Syncrude including time with mining operations, mine engineering,

as well as serving as the Manager of mine development and Manager of research and development. This in turn has provided the knowledge and experience for his current position with Environmental Affairs as well as the work he is responsible for with CEMA.

As President, Ted sees his role as a facilitator to help CEMA refine its focus in order to reach their key objectives (i.e. provide recommendations) within appropriate timelines. Ted sees this as essential in order to maintain the credibility of CEMA and to continue the interest and participation of its member organizations. Maintaining timelines and ensuring the value of the product are the top priorities. Ted also sees his role as a communicator of CEMA's business to outside agencies to inform them of what CEMA is, the work CEMA is doing and our progress and achievements to date.

Ted Ostrowski (President)
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CEMA Working Group Updates

NO_x/SO₂ Management Working Group

Co-chairs: Judy Smith, Shell Canada, Kim Eastlick, EUB, Tom Marr-Laing, Pembina Institute

The NSMWG continues to make progress on the development of the Acidifying Emissions Management Framework. The framework will provide a management system for oxides of nitrogen (NO_x) and sulphur dioxide (SO₂) as they relate to acidification. Management objectives will be defined for soil and lakes based on both field-monitoring and modeled evaluations. Management actions will occur based on a *time-to-effect concept*. This concept bases the urgency and certainty of action to control acidifying emissions on the time frame when adverse impacts may occur.

The management system will be implemented in stages, beginning with an interim framework, followed by a final framework and a revision roughly six years after initial implementation. The management system will be supported by a research program to address limitations of acid deposition models and to improve the detection and assessment of acidification risks and impacts. The recommendation for the management system from the NSMWG may be tabled at a special CEMA Meeting in October 2003.

The data collected during the Ozone Field Monitoring Program conducted in 2001 and 2002 is currently being analyzed. A workshop will be held in fall 2003 to discuss the results of the analysis and determine further work to address ozone issues. The workshop will involve members of NSMWG and experts in the field. A final report on the monitoring program is expected in late 2003.

Trace Metals and Air Contaminants Working Group

Chair: Ron Pauls, Syncrude Canada Ltd.



The purpose of the Trace Metals and Air Contaminants working group (TMAC) is to assess the risks posed by trace metals and other air contaminants to human health and ecosystems under existing environmental management systems, and, if required, recommend changes to manage those risks. Members divided

work into two categories: (1) trace metals, and (2) air contaminants. In August 2002 CEMA approved recommendations for trace metal management (*see Sustainable Times Issue 5, December 2001*). Alberta Environment endorsed the proposed trace metal adaptive management approach and management system in January 2003.

With the trace metal recommendations complete, TMAC has been busy addressing the issue of regional air contaminants. This work has been divided into three phases: a regional air contaminants emission inventory, regional air contaminant air modelling, and a regional air contaminant health risk assessment. The emissions inventory work, contracted out to Clearstone Engineering, was completed in February 2003. Work on phase two, air modelling, is currently being conducted by RWDI West Inc. Work on phase three, if considered necessary, is not expected to begin until late 2003/early 2004.

Did you know?

The "crude oil" pumped out of the ground is a black liquid called **petroleum**. This liquid is made up only of hydrogen and carbon. The carbon atoms link together in chains of different lengths. Hydrogen-Carbon chains of different lengths have different properties and behaviours. As the chains get longer, they get heavier.

Chains with 4 or less carbons are all gases (e.g. methane). Chains with 5 - 18 carbons are all liquids at room temperature, and chains with 20 or more carbons are all solids at room temperature.

Chains with 5 - 7 carbons are light liquids called **naphthas** (e.g. solvents). Chains with 7 - 11 carbons are blended together and used for **gasoline**. Chains with 12 - 15 carbons are **kerosene**, followed by **diesel fuel**, **heavier fuel oils**, and **lubricating oils**. Chains with more than 20 carbons form solids, like paraffin wax, tar and asphaltic bitumen, which is used to make asphalt roads.

All of these different substances come from crude oil. The only difference is the length of the carbon chains!

Adapted from www.howstuffworks.com/.

Surface Water Working Group

Co-Chairs: Pat Marriott, Alberta Environment and Mike Baker, Shell Canada



The Surface Water Working Group is composed of three technical subgroups that are collectively responsible for achieving specific

aspects of the overall working group objectives.

The Water Quality subgroup is responsible for developing and recommending reach specific water quality objectives for the lower Athabasca River. This subgroup has recently completed a report assessing current water quality guidelines. The report also notes variables of concern identified through stakeholder consultation that will assist the group in refining a list of priority variables requiring further study/analysis. In addition, a study using dye tracers was recently completed that provided information on river mixing under low flow conditions. The subgroup intends to create a 2D water modelling tool by late 2003 as well as provide reach specific water quality objectives by 2004/05.

The Muskeg River Integrity Subgroup has recently completed a stakeholder workshop that identified and prioritized study / scientific investigation requirements. Based on this workshop, a management system, including management objectives, will be designed to manage factors that might limit the sustainability of the Muskeg River watershed. The intention of the subgroup is to present the recommendation to CEMA in 2004/2005.

The In-stream Flow Needs (IFN) subgroup intends to establish environmental criteria and management systems to address the instream flow needs of the lower Athabasca River. Current studies completed include a fish habitat evaluation and tracking study using radio tagging and fish capture, a final report on river segmentation and 2001-2003 fisheries data is also recently completed. A contract is currently in progress to develop an IFN scoping document. An open water river hydraulics survey is also ongoing and expected to be completed by the end of this year (2003).

Consideration is being given to assess best practice for IFN management and evaluate the need for an interim objective before the IFN group completes its work plan.

Sustainable Ecosystem Working Group

Co-chairs: Judy Smith, Shell Canada; and formerly Gail MacCrimmon, Pembina Institute

The Sustainable Ecosystem Working Group's vision is to "Protect, sustain and restore the resource values of the region". Within this context, SEWG has identified its own resource values that include ecological, economic, social, cultural and landscape values. In order to achieve its vision,



SEWG has undertaken the task of guiding development and resource use within the region so the cumulative effects do not exceed the carrying capacity of the environment. Ultimately, SEWG's goal is to recommend management objectives for the ecosystem and landscape resulting in a

management system for the protection, sustainability and restoration of terrestrial and aquatic ecosystems and landscapes in the region.

Since its inception, SEWG has developed a team of highly skilled and dedicated personnel residing on a series of task groups. Overseeing individual task groups is the Critical Path Analysis Task Group. The primary role of CPAT is to ensure that the work plans of SEWG and its subgroups are well linked and coordinated with a common schedule, the Working Group initiated the Critical Path Analysis Task Group.

Significant progress has been made on research conducted by each of the groups, including a breakthrough deliverable courtesy of the Management Tools Task Group. This task group has identified three management tools that can be implemented in the region to reduce ecosystem disturbance and habitat fragmentation caused by development. The three tools include Minimal Impact Exploration, Integrated Landscape Management and Constraints Mapping. These are discussed further in the next sub-section of this Sustainable Times.

The Development Scenarios Task Group has been assigned the challenge of mapping development scenarios for the Regional Municipality of Wood Buffalo for 2000, 2010 and 2020.

The maps consist of all major ecological disturbances including, but not limited to, open pit and in-situ oil sands mines, municipalities and linear disturbances. A final product was delivered by Golder Associates in Q2, 2003.

The Resource Use Task Group is currently collecting information on resource use in the region including traditional land use, recreational use, development, etc. The purpose of this exercise is to incorporate social values into the SEWG management objectives for the region. The Resource Use study, which was initiated in 2002, will be quantified through a literature review, an intensity mapping analysis, and two workshops with internal CEMA and external users. A final product will be delivered by Q2, 2004.

Knowing what is out there is the first step to ensuring its future in the natural or reclaimed landscape. This is the task of the Alberta Ground Cover Classification (AGCC) Task Group. The task group contracted the University of Alberta to produce a ground-cover map which describes the vegetative nature of the landscape according to the AGCC vegetative classification. The source information for the creation of this product included satellite imagery and the Alberta Vegetation Inventory (AVI). Stand origin in non AVI areas was derived from Phase 3 forest inventory maps. The final product was delivered in Q4 2002.

Add to this the efforts of the Modeling Task Group and the Management Options Task Group, is well powered to move ahead on existing projects and the challenges of the future as SEWG continues to explore synergies with other groups such as Alberta Environment's Integrated Regional Management (IRM) and the University of Alberta's Adaptive Management Experiment (AME).

SEWG Management Tools Summary



The cooperative efforts of the dedicated CEMA members sitting on the Sustainable Ecosystem Working Group (SEWG) have released the results of the Management Tools Task Group.

The group has brought forward three management tools recommendations: minimal impact

exploration (MIE), integrated landscape management (ILM) and constraint mapping.

The *Guidelines for the Implementation of Ecosystem Management Tools in the Athabasca Oil Sands Region* was completed by Lornel Consultants and AXYS Environmental in Q4, 2002.

These tools are a supplement to the management objectives and management system that are being developed by SEWG. They provide guidelines for an initial set of management tools that will reduce ecosystem disturbance and fragmentation in the Regional Municipality of Wood Buffalo (RMWB).

It is expected that the eventual SEWG management system will include these and other additional management tools that address the key ecosystem management issues within SEWG's mandate.

CEMA members have voluntarily adopted the tools for their operations in the RMWB, but are also available to non-CEMA members with applicable development activities within the RMWB.

Minimal Impact Exploration (MIE) is a field operations tool that employs construction methods that reduce the size of the footprint on terrestrial ecosystems from routine oil and gas exploration, including seismic and exploration well activities. As well, an objective of MIE is to minimize the amount and cost of reclamation that exploration programs require.

MIE refers to the reduction of disturbance from exploration activities. MIE includes the Low Impact Seismic (LIS) – based on reducing the width of line clearing techniques for geophysical operations, and Minimal Impact Site and Access Construction (MISAC) to reduce the effects and size of drilling operations on the landscape.

In the oilsands region, leaseholders are required by the crown to either drill evaluation wells or shoot seismic on their lands in order to continue to hold the lands. The criteria for the minimum level of evaluation (MLE) must be met before the next stage of tenure begins. The resulting exploration activities are a significant contributor to ecosystem disturbance and fragmentation. To minimize these effects and reduce the exploration footprint, the oil and gas industry has been developing various low impact techniques. These techniques are continually improving as new equipment and processes are developed to further reduce exploration footprint.

Integrated Landscape Management (ILM) is a planning tool that coordinates industrial activities so that a reduced footprint is created on the landscape while producing economic efficiencies and cost savings for all companies involved. ILM is a tool that can incorporate MIE and Constraints Mapping into its process.

ILM is the minimization of the size, duration and intensity of industrial footprints through maximized coordination of activities among industrial land users. ILM is also an effective tool in reducing the industrial pressures on forest resources.

In an effort to manage multiple use of the land base, an Integrated Resource Management policy (IRM) and framework was developed, recommending regional strategies and linking operational plans. In 1999 the Alberta government reaffirmed its commitment to sustainable resource development and environmental management, by developing a policy described in Alberta's *Commitment to Sustainable Resource and Environmental Management*.

As a result of this reaffirmation by the provincial government the Alberta Chamber of Resources in conjunction with Alberta-Pacific Forest Industries established Integrated Landscape Management (ILM) as a key management tool to manage project specific and cumulative environmental and social impacts as a result of industrial activity.

ILM is industrial activity coordinated in such a manner that a reduced footprint is created on the landscape while producing economic efficiencies and cost savings to all related industry participants. It is based on the premise that all industrial activities within a common area are inter-related and it recognizes that to maintain functioning ecosystems, user coordination at a landscape level is required. However, ILM is voluntary on the part of industrial tenure holders and can include the use of other tools such as MIE and Constraints Mapping.

Constraints Mapping is a planning tool that provides companies with a graphic representation of the suitability of a land area for construction of a project. The map produced represents a number of options that the engineers, planners and assessors can use to site surface facilities in an effort to avoid sensitive environmental, cultural and engineering constraints.

A constraints map is a graphic representation of the suitability of a land area for construction of a project, whether a facility or linear corridor. The map ideally appears as a continuous series of areas represented by varying colors, each color representing a different degree of suitability. Areas of high suitability indicate areas of low constraint (i.e., it's better to build here), while areas of low suitability indicate areas of high constraint (i.e., it's not the best place to build here). This range of suitability represents a gradient of options that provides one source of information on which engineers, planners and assessors can use to assist them in optimizing the siting of surface facilities.

Some areas, due to mandatory or voluntary restrictions, are "no-go" areas in which development would rarely occur if at all. As to what constitutes "suitable" areas is based on a many considerations, such as environmental features and engineering design requirements. Some areas, or buffers, surround a feature to provide an additional level of protection.

Reclamation Working Group

Chair: Noreen Easterbrook (Albian Sands)

"Reclaiming the world, one CEMA guideline at a time"



A successful resource development project is not finished until it looks as though there had never been any resource project there at all.

This is the objective of the Reclamation Working Group (RWG) — to provide recommendations to ensure that reclaimed landscapes within the region meet regulatory requirements, satisfy the needs and values of stakeholders and are environmentally sustainable.

RWG is comprised of a main Working Group that coordinates the work of six subgroups. The six groups focus on the development of guidelines for specific aspects of reclamation (Landscape Design, Wetland & Aquatics, Soil & Vegetation, Biodiversity & Wildlife, End Pit Lakes, and Reclamation Criteria). Each of the subgroups is assigned specific technical objectives toward achieving the overall RWG goal. A sequential framework was created for these RWG subgroups to create greater integration of workplans and tasks within the working group and to minimize duplication within the CEMA body.

A focus for the RWG is to ensure that each subgroup is given the resources to complete their tasks on time and to bring forward their deliverables to the CEMA membership for review. As RWG has chosen to complete many of their tasks in-house, rather than through consultants, this process has enabled member agreement for their completed products.

As part of RWG's continuing effort to facilitate integration within the subgroups, a two-day Regional Reclamation Issues Workshop was held June 23 – 24, 2003 in Ft. McMurray and was attended by a broad range of stakeholders within the RMWB. The workshop purpose was to promote better understanding among RWG members on how the six subgroup workplans and tasks are integrated within RWG goals and objectives and to promote cooperation on cross boundary issues in reclamation for end land uses.

Landscape Design – “Creating landscapes right from the start”... The Landscape Subgroup’s mandate began with the objective to develop guidelines for the design and management of landforms that have a potential for seepage from tailings deposits, coke and sulphur. While a focus remains on seepage waters, the subgroup is working on a high level approach to develop guidelines that will address all areas of landform design. The guidelines will also focus on physical aspects to achieve targeted end land uses and landscape goals including, geotechnical, surface water and erosion, ground water and seepage, and microtopography.

A significant accomplishment of the Landscape Design Subgroup is the completed *Landscape Design Checklist*. The checklist is a concise and comprehensive checklist of design objectives for the design, construction, reclamation and maintenance of landforms and landscapes within the Athabasca oil sands region. The main intention of the checklist is to provide the overall framework for design and iterative evaluation of all reclaimed landscapes and landforms in the region and is the first step towards developing the Landscape Design Manual.

The checklist will assist design teams to ensure the landform is integrated with the overall closure plan and design requirements including morphology, geotechnical issues, surface and groundwater quality, in order to accommodate operational, closure and reclamation goals. The landscape designer can address the 21 design issues within the checklist, so that landscape performance will sustain proposed end land uses and equivalent capability.

This landscape design tool was reviewed by a broad contingent of CEMA working group members at the Landscape Design Checklist Workshop on February 27, 2003. The Landscape Design Checklist is initially approved by RWG members and will be reviewed by CEMA members this fall.

Soils and Vegetation – “Soil scientists are down to earth”

The efforts of the Soil/Vegetation Subgroup have paid off in several milestones as members pursue the mandate of continuous improvement of the Land Capability Classification System (LCCS) and Vegetation Manuals. A five-year research plan was developed and prioritized and a state-of-the-knowledge literature review entitled Shrub Planting for Boreal Ecosite Re-establishment in the Oil Sands Region was conducted. Then began a review of data and analysis on Prioritization Shrub Planting for Boreal Ecosite Re-establishment in the Oil Sands Region. Field calibration of the LCCS and establishment of additional long term Soil-Vegetation Monitoring plots were conducted, completing the final year of a three-year program. These efforts will continue and will ultimately lead to the achievement of long-term productivity in upland forests and other ecosystems.

In addition to these accomplishments, the first phase of the Priority Shrub Species, Seed Collection, Processing and Germination Report has just been completed. This report outlines the methods and results for collection, cleaning, storage and germination of five priority native shrub species. This information will assist reclamation efforts by providing a better understanding of the propagation techniques for the five shrub species.

Biodiversity & Wildlife – “Wild but diverse”

The Biodiversity and Wildlife Subgroup has been busy wrapping up background investigations and field work. The subgroup provided assistance in the development of Alberta Forest Biodiversity Monitoring Program (AFBMP) protocols and field testing of terrestrial biodiversity monitoring protocols. A matrix of wildlife information requirements was constructed and a literature review was initiated to determine if any new techniques have been used in the past ten years to re-establish wildlife habitat on reclaimed land in the boreal forest. The group is looking forward to apply their research to the development of guidelines and methods for the creation of diverse ecosystems, including biotic communities and varied landscapes.

Subgroup members are amending segments of the Vegetation Manual (Appendix J) by the inclusion of Priority 1 and 2 species and various literature sources. A panel of consultants will review the amended Appendix J for information gaps this fall. The panel findings will then be integrated into Appendix J to ensure that it is complete and up-to-date, within the Vegetation Manual.

End Pit Lake – “We think deep”

The main objective for the End Pit Lake Subgroup is to develop a guidance document for the establishment of end pit lakes in the reclaimed landscape. Scenario modeling for potential end pit lakes was seen as a first step in developing a strategy, with specified parameters, which address the overall objective of developing productive and biologically sustainable lakes capable of supporting aquatic life. The initial modeling is investigating how lake configuration, influent flow rates, sediment oxygen demand, decay rates and residence time affect end pit lake water quality as well as looking at what processes control wind speed and direction and its overall effect on end pit lake water quality. The Phase 1 modeling draft report has just been completed and is being reviewed by a task group.

The Phase 2 modeling will extend the modeling scenario to work on the limitations and constraints that occurred initially and to expand the modeling to include water quality, end pit lake filling stage and the analysis to the inflow salinity decay half life. The examination of biological processes, such as food-chain accumulation, algal growth and gas formation will

also be investigated after the influences of end pit lake physical characteristics are understood. Completion of the scenario modeling will then initiate the development of the Decision Support Document, a first step towards the guidance document.

Reclamation Criteria – “We Rule”

The Reclamation Criteria Subgroup mandate is to provide a process and specific criteria for operators to obtain reclamation certification of all industrial disturbances on public land, in the RMWB. The subgroup was initiated because of stakeholder concerns on the lack of reclamation requirements on well sites and linear corridors and the need for mine reclamation specialists to know what targets they are to aim for. The first priority, a review of existing legislation for all industrial disturbances with applicable criteria in this region is currently being completed in-house. This review and forthcoming discussions on equivalent land capability will determine and recommend additional reclamation guidelines and certification criteria for land disturbances in the region.

Another RWG product, *The Ecosystem Site Reclamation Guidelines for Non Specified Lands*, has been reviewed by the RWG membership. The main premise is that reclamation of disturbed areas should use sound ecological principles to return an ecosystem that is capable of evolving into vegetation consistent with the area. Ongoing stakeholder input is being acquired, as these guidelines will affect all industrial activity within the RMWB. The document will be forwarded to the CEMA members this fall.

Wetlands & Aquatics – “Think inside the bogs”

The Wetlands & Aquatics Subgroup addresses issues related to sustainable, functional and productive zones, within constructed wetlands and aquatic ecosystems. The subgroup saw the need for a forum to bring together experts with the latest scientific and traditional knowledge on wetlands.

The Creating Wetlands in the Oil Sands Reclamation Workshop, upcoming in October 1 – 3, 2003, has been designed to meet three objectives: to acquire leading scientific knowledge on the creation and study of wetlands; to investigate the challenges of creating a range of wetlands; and to assist in the revision of existing wetlands reclamation guidelines. Scientists experienced in the field of wetlands reclamation of mining activities from across Canada and the United States have been invited. A compilation report of all presentations and discussions from the workshop will be integrated into the wetlands guidelines in 2004.

Traditional Environmental Knowledge (TEK) Standing Committee

Co-Chairs: Pat Marcel (ACFN) and Sandra Cardinal (ALPAC)



The Traditional Environmental Knowledge (TEK) Standing Committee was established by CEMA in 2000 to guide the efforts of the working groups to integrate and use traditional knowledge to help ensure the land, forest, air, water wildlife and biodiversity in the CEMA study area are protected, sustained and restored over the long term.

One of the most notable accomplishments in 2002 was the development of the CEMA Traditional Environmental Knowledge Work Plan. The Work Plan contains thirteen objectives and five visions which are broken down further into goals and steps required to accomplish them. The five visions are as follows:

“...One of the most notable accomplishments in 2002 was the development of the CEMA Traditional Environmental Knowledge Work Plan...”

1. Elders will be involved in the CEMA process. Their knowledge will be accepted and respected by CEMA members.
2. To understand what TEK is. To agree and accept the definition and to integrate it into CEMA work plans.
3. TEK committee will develop an agreement to collect, document, protect and share TEK.
4. CEMA will support community TEK initiatives.
5. TEK integrated into all CEMA management processes and recommendations.

An official definition of TEK was developed by the TEK Standing Committee in 2002 (see below). This definition will help ensure that CEMA members have a common understanding of what TEK is. It is currently being translated into Cree and Dene.

A TEK Project Officer was hired in February 2003, to help implement the TEK Committee Work Plan visions and to provide support to the TEK Committee in the area of administration, information management and contract management. Since that time, the TEK Committee has held monthly meetings, and significant progress has been made towards completing the tasks outlined in the Work Plan. Some highlights are as follows:

The following TEK Contracts have been initiated and work is currently underway on:

1. *An annotated bibliography of existing Traditional Environmental Knowledge (TEK) resources in the CEMA study area.*
2. *Use of Traditional Environmental Knowledge (TEK) in natural resource management plans within North America, with emphasis on Canada, and options for incorporating TEK into CEMA's work.*

These projects are expected to be completed by the end of September and October 2003, respectively. When complete, the first contract will assist CEMA's Work Groups in understanding what information has been collected, and identifying where information gaps exist. This information will also provide a starting point for determining how TEK can be integrated into the work plans. The information and recommendations provided by the second contract will assist CEMA in developing a strategy to incorporate TEK into its work plans and management processes.

The TEK Committee is currently in the process of planning a CEMA Regional Elders Council. The proposed Elders Council will encourage communication between the Aboriginal communities and CEMA's Work Groups, and enable the communities to share their views and provide input into scientific research in the area. The proposed role of this Regional Elders Council is to provide advice and guidance on the collection, interpretation and use of TEK, which will be used to assist CEMA (and its Work Groups and Standing Committees) in making sound recommendations related to cumulative environmental impacts. The TEK Committee hopes to hold the Inaugural Elders Council Meeting in the fall of 2003.

The TEK Committee is also currently working on developing a CEMA Agreement for Sharing of Traditional Environmental Knowledge (TEK). The purpose of this agreement is to facilitate the sharing of TEK, and the integration of TEK into CEMA's work. The agreement will also protect TEK and respect the right of the individual(s) or community to determine the use of any TEK that they provide.

Other TEK Committee activities completed or in progress are as follows:

- The TEK Committee has recently recruited a new TEK Committee Member from the Federal Government (Jennifer Shames, DFO).
- The TEK Project officer is working with ATC, WBEA and RAMP on a Regional Communication Guideline.
- The TEK Committee has committed to assist the TMAC Work Group with their Trace Air Contaminants (TAC) Risk Communication.

Official CEMA Definition of TEK

“Traditional Environmental Knowledge (TEK) is a body of local environmental knowledge and beliefs transmitted through oral tradition and first hand observation based upon living in close contact with nature. It includes a system of classification, a set of empirical observations about the local environment, a system of self-management that governs sustainable resource use, and an understanding of the relationships of living beings (including humans) with one another and the environment. Environmental aspects are closely tied to social and spiritual aspects of the knowledge system. The quantity and quality of TEK varies among community members, depending upon gender, age, social status, intellectual capability, and profession (hunter, spiritual leader, healer, et cetera). TEK is both cumulative and dynamic, building upon the experience of earlier generations and adapting to the new technological and socioeconomic changes of the present.”



These are the People in your Neighbourhood...



Jordan Kuschminder - Vice President

It's seems a round about way of getting there, but since his arrival in Fort McMurray, Jordan Kuschminder has certainly made his presence felt.

As Senior Environmental Specialist for the Athabasca Chipewyan First Nation and recently elected member of the CEMA Operating Committee,

Kuschminder has found himself thoroughly immersed in all things CEMA.

"Really, I've been up to my nose in CEMA," Kuschminder said with a laugh during a recent conversation with Sustainable Times. "Of about 36 committees I was on 24 or 25 of them."

This exposure to CEMA and the variety of issues and challenges it has undertaken only adds to the depth of knowledge Kuschminder brings to the association. His academic quest has taken him from an Alberta campus to the Argentine pampas studying environmental sciences at the University of Alberta and the National University of Mar del Plata in Argentina. His education was rounded out during his time at the University of Oklahoma.

Kuschminder has been in the Wood Buffalo region for over two years now and has found his role to be both challenging and changing.

"Working with the ACFN I've been balancing between environmental policy and negotiations work," he said, noting that his participation in CEMA came as a result of a strong stand by the Athabasca Chipewyan leadership.

"Even before I got on board, the band was at the CEMA table," Kuschminder said. "Chief Cyprien made a very strong decision to commit to the CEMA process."

Kuschminder said the openness of the band and the willingness of its leaders to discuss and work through the issues with other stakeholders has made his new role on the Operating Committee far easier.

This OC, he said, is a bit of a departure from past committees.

"I do think this OC is different from the previous OC. Most of the past OC were made up of founding members. There are no founding members on this OC. We're not focused on start-up (as past Operating Committees were.)

"We see this OC as having moving past that," he said, noting that CEMA has turned a corner and must now focus on delivering on the promise.

"Let's have CEMA work and provide what has been promised to stakeholders," he said. "People want to see the recommendations coming through."

The promise of CEMA goes to the heart of its business. Kuschminder hopes it will also go to the hearts of the businesses – the industry – that the association looks to for continued support.

"CEMA is a discharge of duties," he said. "It's about regulatory signoff and it's a process that all the stakeholders have to commit to."

As the association moves forward beyond the "start up" and into the "delivery" phase, Kuschminder says that more than tacit, tangible support from industry stakeholders is more important than ever before.

Despite the challenges, Kuschminder is confident that CEMA will emerge ready to deliver on the promise.

CALENDER OF REGIONAL MEETINGS

July 2003

15 - TMAC
16 - OC
17/18 - RWG-SV
22 - TMAC

August 2003

20 - OC (tentative)
25-27 - RWG-WA
28 - SEWG - WFSG
22 - TMAC

September 2003

8/9 - SEWG
10 - RWG - SV
10 - SWWG
11 - SEWG - LBSG
11 - RWG - SV
11 - SWWG - WQ
12 - WBEA - TEEM
16 /17 GM
18 - SEWG - CHR
22 - RWG - B&W
23 - RWG - LD
24 - RWG
25 - WBEA

Glossary:

CEMA: Cumulative Environmental Management Association
CC: Communications Committee
OC: Operating Committee
NSMWG: NO_x/SO₂ Management Working Group
RAMP: Regional Aquatics Monitoring Program
RWG: CEMA Reclamation Working Group
SEWG: CEMA Sustainable Ecosystems Working Group
SWWG: CEMA Surface Water Working Group
TEEM: Terrestrial Environmental Effects Monitoring Program
TMAC: CEMA Trace Metals & Air Contaminants Working Group

Moving On...

The authors of *Sustainable Times* send our best wishes to the following members who have moved on from CEMA to other adventures...

Ken Weagle (Former Executive Director), Don Klym (Former President), Dan Smith (Former Vice President), Ken Smith, Gail MacCrimmon and Dave Morris. Thank you all for your considerable contributions to CEMA.