

SOUTHERN ALBERTA LAND TRUST SOCIETY & MANNING CENTRE FOR BUILDING DEMOCRACY

The Athabasca Watershed Partnership

Application of Market Instruments to the Management and Conservation of the Athabasca Watershed

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The Athabasca Watershed Partnership is a proposal to investigate application of a partnership structure and market mechanisms with the objective of maintaining and preserving the Athabasca watershed in a state where the ecosystem services it provides are unimpaired for the use and enjoyment of future generations

Executive Summary

The Athabasca River traverses a diverse landscape rich in ecological, cultural, forestry, petroleum and mining resources. Population growth and increased economic activity have placed unprecedented demands on the watershed – stakeholders are increasingly motivated to assess the issues and take appropriate conservation activities. Recognizing this desire, the Southern Alberta Land Trust Society partnered with the Manning Centre for Building Democracy in 2007 to examine ways of harnessing the power and ingenuity of the entrepreneur and the free market to the cause of conservation within the watershed.

Whereas considerable resources continue to be invested in regional planning and establishment of desired outcomes, there is a growing need to identify mechanisms to raise the capital required to fund conservation projects that are available throughout the watershed. The Athabasca Watershed Partnership Project (“Athabasca Project”) has consulted with many key stakeholders to test a variety of concepts around the mechanisms to raise the capital necessary for conservation and the efficient delivery of projects. A variety of models, including the Alberta Gas Trunk Line model and various utility models have been discussed.

The Project has identified a number of benefits and key issues that should be explored further. In particular, it acknowledges that the Government of Alberta has a number of initiatives under Water For Life and the proposed Land Use Framework that will identify desired outcomes and establish regional plans. As such, the Athabasca Project proponents can focus their attention on the task of implementation and project delivery. As a short-term priority, the Athabasca Project should work with Alberta Government policy makers to ensure that the LUF is flexible enough to incorporate a Watershed Partnership model for project delivery.

The study results will be presented at a workshop September 17th, 2008. At that time, a consensus will be sought as to the viability of the concept and the merits of continuing to develop the concept.

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1 Introduction

Climate change and unprecedented growth are placing new demands on Alberta's watersheds. The Government of Alberta's Water for Life Strategy calls for citizens, communities, industry and government to work together to share responsibility and work together to improve conditions within the Alberta's watersheds. The Strategy's focus on collaborative partnerships has created exciting new opportunities for innovative approaches to managing the availability of water to meet ecological, economic and social needs.

At 1,538 kilometres, the Athabasca River is Alberta's longest river and one of the few free-flowing (undammed) rivers left in North America. It stretches from the Columbia Ice Fields in the Rocky Mountain headwaters to its mouth in Lake Athabasca. Its delta joins those of the Peace and Birch rivers to form a 6,000 km² complex of wetlands--one of the world's largest freshwater deltas, and one which has supported aboriginal communities for thousands of years. It is also an important staging area for migratory waterfowl, hosting up to 400,000 birds in spring and more than one million each fall. The delta is largely undisturbed by settlements and has been designated as a RAMSAR wetland site and a UNESCO World Heritage Site.

Athabasca flows vary considerably with fluctuations in spring runoff, icing conditions and precipitation recharge within the watershed. Whereas the mean annual flow rate at Fort McMurray is about 650 m³/s, the maximum daily peak discharge of 4,700 m³/s was observed in 1971. Conversely, the lowest observed minimum daily flow was 75 m³/s in 2001.. Due to icing conditions, winter low flows can persist over a two to four month period.

The Athabasca supports a diverse landscape with municipal, industrial, recreational and ecological uses. Unlike the South Saskatchewan River Basin, in which a high percentage of the flow is allocated and new diversion license have been curtailed, the Athabasca's cumulative allocation is only 3.6% of total annual flow. The issues facing its communities range from water quality considerations (including dissolved oxygen in the middle reaches of the river) to peak-flow quantity (that is important for recharging the Delta's ecosystems) to winter low flows (that can impact under-ice aquatic ecosystems). In addition, attention is being focused on the quantity and quality of water entrained within mine-site tailings storage systems.

At the same time that concerns have been raised, an encouraging number of solutions are being proposed by both industry working groups and ecological organizations. For example, The Pembina Institute's 2006 Report "Troubled Waters – Troubling Trends" recommended a number of policy considerations including full-cost accounting, economic instruments, incentives for research, and adaptive licensing strategy to respond to changing conditions. The Cumulative Environmental Management Association (CEMA) has several working groups addressing issues related to setting objectives that balance ecological, social and economic needs. Alberta Environment and Department of Fisheries and Oceans in February 2007 published a Water Management Framework that defines allowable withdrawals throughout the year and emphasizes conservation and demand management.

Finally, Alberta Environment has also initiated the formation of a Watershed Planning and Advisory Council for the Athabasca that will develop recommendations regarding water quantity, water quality and desired outcomes for the watershed.

Whereas considerable effort is underway regarding setting objectives, achievement of outcomes is generally funded within individual industrial projects. As in most jurisdictions in North America, watershed-wide initiatives generally rely on charitable foundations or public sources that compete with taxpayer priorities for health care, education and transportation. Therein lies the opportunity for the Athabasca Project to explore innovative partnership structures for funding watershed-based conservation and protection projects.

1.1 The Athabasca Project

In 2007, the Southern Alberta Land Trust Society agreed to partner with the Manning Centre for Building Democracy in examining ways of harnessing the power and ingenuity of the entrepreneur and the free market to the cause of conservation. A consultation in October of 2007 brought together business people, government representatives, academics, and other stakeholders to discuss the topic and provide ideas for possible strategies and future pilot projects. With the resulting information in hand, the two main proponents, Preston Manning and Alan Gardner, developed two possible pilot concepts: the Athabasca Project and the Foothills Project.

The Foothills Project is a proposal to incorporate market-based instruments into a variation of the existing conservation easement mechanism with the purpose of attracting a wider audience and thus potentially protecting a much larger and contiguous habitat and watershed landscape. The Foothills Project proposal is the subject of a separate report.

The Athabasca Project is a proposal to incorporate an entity to manage a river system, possibly based on the very successful Alberta Gas Trunk Line or alternative models deployed in jurisdictions throughout the world.

1.1.1 Overview

The main objective of the Athabasca Project is to investigate the feasibility of using a public-private partnership approach to undertake infrastructure and watershed management projects within the broader Athabasca River watershed. The approach draws upon several precedents that have shaped the Alberta landscape.

Public-private partnerships are used throughout the world for the delivery of a variety of capital-intensive infrastructure projects. More recently in Alberta, public-private-partnerships have been used to deliver road networks, provincial buildings and water-related infrastructure.

Unlike single-purpose infrastructure projects, watershed-based projects involve multiple stakeholders and a multiplicity of desired outcomes. Water is owned by the Crown and merely allocated temporarily

to authorized uses. Therefore stakeholders expect a particularly high level of accountability and transparency around potential uses.

Mrsrs. Manning and Gardner observed that river systems are a complex network of storage features (glaciers, snow packs, aquifers and wetlands) and an interconnecting distribution system (lakes, streams and rivers). In a way, a watershed system is analogous to an energy production and distribution system that consists of reservoirs, storage caverns, bulk storage and pipelines. The analogy creates an interesting opportunity – to examine how Albertans responded to the emergence of the natural gas infrastructure in the 1950's.

At the time, there was considerable angst in Alberta about the development of natural gas infrastructure to export energy to eastern markets that could potential disadvantage Alberta communities in their pursuit of reliable and inexpensive energy supply. Under then-Premier Ernest Manning, the Government of Alberta created a new enterprise, the Alberta Gas Trunk Line Company (AGTL) that ultimately became Nova an Alberta Corporation. Non-voting shares were sold to the public but sales were initially restricted to Alberta residents. Voting shares, totalling 2002, were divided among gas producers, gas exporters, Alberta's gas utilities and the Alberta government in such a way that no single group would control the company policy or sell the enterprise to an outside group. By combining non-government capital with an accountable and transparent governance structure, AGTL became one of Canada's largest corporate entities and expanded into petrochemicals and the purchase of a large oil company (Husky Oil).

So the AGTL experience represents an example of a partnership model that achieved a compromise between multiple competing interests and a mechanism to raise capital to undertake a major infrastructure project. Preston Manning has observed that the formation of AGTL itself was not a clear first choice for any single stakeholder, but rather it emerged on the basis that it represented a compromise that was acceptable to most and a mechanism to mobilize investment and physical infrastructure. It created a unique public/private partnership distinguished by:

- Incorporation by a Special Act of the Legislature
- Protection of public interests via statutory provisions, government ownership portion and a two-phase (facilities and rates) regulatory regime
- A unique corporate structure involving key private interests, the Government of Alberta and the capacity to raise private investment capital to build and maintain the system.

Turning to the Athabasca watershed as a complex system that moves water to satisfy economic, social and ecological needs, The Athabasca Project proponents hypothesized the creation of a special-purpose organization with its purpose "to maintain and preserve the Athabasca watershed in a state where ecosystem services it provides are unimpaired for the use and enjoyment of future generations." In support of this hypothesis, they began to ask the following questions:

- Would the need and feasibility be examined and established by a senior Alberta regulatory authority such as the AEB, PUB and/or a Joint Panel?
- If feasible, would it be established by a Special Act of the Legislature?

- What ownership structure would balance the public interest with the needs of capital providers?
- How would key economic, community and environmental interests in the watershed be granted “standing” by statute in regulatory proceedings involving the partnership?

This Proposal examined a several alternative partnership models with the intent of identifying potential next steps for consideration in the establishment of entity and/or mechanisms to address these questions.

1.1.2 Advantages

A key advantage of a market-based approach to watershed conservation is that it offers another mechanism to bring new resources, capital and expertise to implement projects on a collective-interest basis. Executed properly, it could avoid rigorous government regulation and direct subsidies that often precede conservation projects.

Other advantages of this proposed conservation approach include:

- Granting of status to key stakeholders in selecting appropriate projects and/or conservation measures that align with mutually-defined outcomes;
- Providing a mechanism to raise the significant capital required for projects within the watershed;
- Bringing additional intellectual and financial capital to the selection, funding and implementation of conservation and protection measures; and,
- Utilizing precedents regarding partnership structures that have been applied in Alberta and other jurisdictions.

The Athabasca Project is consistent with many of the Government of Alberta’s initiatives around sustainable development and preservation of healthy ecosystems and environment. For example, it embodies the collaborative spirit of Water For Life in which healthy aquatic ecosystems, reliable water supplies and safe drinking water are paramount. Under Water For Life, an Athabasca Watershed Planning and Advisory Council (WPAC) is proposed that will establish water quantity, water quality and other objectives for the watershed. An Athabasca Watershed Partnership would presumably assemble the funds and execute strategic projects that promote the achievement of WPAC-derived outcomes.

Similarly, under the Province’s Draft Land Use Framework (LUF), healthy ecosystems are a specified outcome in which the life-supporting capacity of air, water, land and biodiversity are maintained or enhanced, and the intrinsic value of nature is respected. The LUF proposes 6 regional plans in Alberta: Given its geographic coverage and diversity of landscapes, the Athabasca watershed covers three regions - the North, North-Central and North-East regions. More specifically, the LUF proposes the use of market-based instruments (MBIs) that harness market forces to incent stewardship including: environmental fees (green tax reform), speciality markets, deposit-refund systems, tradable permits, incentives for proactive action (provider gets), liability provisions (polluter pays) and information disclosure on environmental performance.

1.1.3 Potential Models

To achieve its objective, the Athabasca Project can select from several partnership models that have been implemented elsewhere in Alberta and other jurisdictions. Alternative structures include:

- “AGTL” Model
- “Municipal Corporation” Model
- “Regulated Utility” Model
- “Danube River” Model

The AGT Model would involve the establishment of a special purpose entity that embodies elements of AGTL’s shareholder and governance structure and provides for statutory mechanisms for stakeholder input into strategic initiatives and projects. The AGTL model establishes an independent partnership with public-sector control exercised predominantly at the Provincial level through special classes of shares and specified regulatory processes regarding capital project approvals and setting of rates and/or tariffs.

The Municipal Corporation Model would entail the establishment of a for-profit, arms-length organization accountable directly to municipal government(s) within the watershed but operating at arms-length from direct political direction. An example is available within Aquatera, a regional utility formed in 2003 by the City of Grande Prairie, County of Grande Prairie and Town of Sexsmith as the first regional utility corporation in Alberta and a model of regional cooperation. Approval was granted in April of 2002 by the Minister of Municipal Affairs for the City to control a corporation acquiring the assets and liabilities of the City’s water, wastewater and solid waste operations and providing related services with subsequent approval of investment by the Town and County in March, 2003. Finally, in May, 2003 the Minister approved a regulation allowing for rate-setting authority to remain with the individual municipalities served by the corporation. Aquatera is a para-municipal organization for tax purposes which means it not subject to income tax and receives the same GST rebates as a municipality.

The Regulated Utility model provides for a well-defined model consistent with the evolution of investor-owned electric and gas utilities in Alberta. With a capital structure that defines acceptable debt-equity ratios and specified rate of return, it provides for stability of investment that capital providers seek combined with rate-protection for subscribers and mechanisms to reconcile stakeholder differences and advancing their interests. The Regulated Utility Model would identify strategic watershed projects and apportion costs to downstream beneficiaries on a pre-determined basis on a “user-pay” basis.

The Danube River Model is exemplified by the International Commission for the Protection of the Danube River (ICPDR) established to implement the Danube River Protection Convention. The River spans 19 countries and has 81 million people residing within its watershed. The Convention was signed by 14 countries in 1998 with the objective of achieving environmental goals by 2015. The ICPDR uses contractual commitments by the 14 countries with bilateral agreements to resolve issues between adjacent countries and a Secretariat for administration and coordination. As a heavily-populated region, the ICPDR focuses on a nutrient loading (nitrogen and phosphorous) to the River and has seen more than \$4 billion in investment in municipal wastewater infrastructure.

1.1.4 Funding

There is considerable interest in infrastructure-intensive conservation projects as investment funds seek “green” investments to round out their portfolios. The keys to an acceptable capital structure will be:

- Securing long-term commitments from downstream beneficiaries with appropriate demand and commodity charges that assure the sustainability of the projects
- Addressing the difference between expected high rates of return for resource development projects (higher-risk, higher-reward) vs. the lower rates of return generally associated with ecological protection projects.

2 Stakeholder Consultation

During the formative stage of the Athabasca Project, key stakeholders were canvassed with a workshop held in October 2007 that brought together a representative sample of key stakeholders. Since that time, numerous presentations and meetings have been held to identify key issues and opportunities associated with the concept and gather feedback. On September 17, 2008, the information gathered through the consultation process will be presented at the Consultation on Market-based Conservation. This consultation will include the initial participants plus a wider group as determined by the presentations and meetings.

2.1 Consultation Participants

Numerous stakeholders from a wide range of organizations were consulted through the Athabasca Project consultation process including government, researchers, industry, agriculture, economists, academics, non-government organizations and various stakeholders. It should be emphasized that the goal during consultation was not to seek endorsement – as such, participant comments were solicited in the spirit of collaboration and candor. **Please note: many of the comments were personal and thus did not represent the formal position of their company or organization.**

2.2 Feedback

The overall response to the Athabasca Project was very encouraging. Support for the increased deployment of capital for watershed-based initiatives is growing and participants understand Alberta’s dual obligations to meet the energy needs of North America while serving as a custodian of headwaters for the MacKenzie Delta, Hudson’s Bay and Gulf of Mexico. There is a recognition and desire to identify and fund strategic projects that inure to long-term benefit of the watershed.

The primary challenges regarding the implementation of a partnership model related to:

- Timing and compatibility with emerging LUF and Water For Life initiatives
- Selecting an appropriate governance structure and degree of government control

- Assurance of adequate rate of return for investors
- Acknowledgement of First Nations' and Metis interests and rights about water

Regarding timing, both the existing Water For Life Strategy and the emerging LUF Framework and Water For Life call for the establishment of a Watershed Management Plans and Regional Plans respectively. There is a strong sentiment that these initiatives must “run their course” as they represent community-wide collaboration to define desired outcomes within the watershed. Participants are currently engaged in shaping the Framework and Plans themselves, and reluctant to seriously contemplate implementation until the regulatory and policy landscape is more firmly established. Therein lays one of the timely opportunities for the project – namely the opportunity to ensure that the emerging frameworks are flexible enough to accommodate the implementation of a Watershed Partnership Approach to raising capital and executing projects.

Regarding governance, the selection of an appropriate governance structure was of particular interest to participants. A balance must be sought between the capital-efficiency of for-profit or arms-length organizations vs. the transparency and accountability offered through government-led programs.

The assurance of an adequate rate-of-return is of particular interest to potential subscribers and capital providers alike. As the benefits from conservation efforts often span multiple generations and generate meaningful “ecological returns” over the long-term, potential subscribers remain vulnerable to economic and commodity cycles. As such, it will be important to find a mechanism to support the projects in the long-term while minimizing government subsidies and/or guarantees.

Finally, it is acknowledged that First Nations and Metis interests in water will play a key role in shaping policy and practise around watershed conservation projects and the Watershed Partnership. Given the complexity associated with these issues, a specific initiative is required to solicit input from Treaty 6 and Treaty 8 interests within the watershed.

The following is a sample of the feedback that was received during the consultation:

- The philosophy of a collaborative regional approach is consistent with Land Use Framework and Water For Life
- The existing system for allocating diversion rights under the Water Act should be respected and maintained
- A Partnership should strike a balance between transparency/accountability and efficiency/timeliness of project delivery offered by government-led and industry-led Models respectively.
- The timing for implementation may need to wait for the completion of Regional Plans and WPAC plans to define priority outcomes
- Regional planning and implementation will facilitate longer-term participation by industries and rights-holders that are otherwise abstain or withdraw during economic and commodity downturns

- The triple-bottom-line approach to ranking priorities should find a mechanism to assign appropriate weighting to ecological objectives so that social-economic factors don't overwhelm long-term ecological benefits
- Look to existing models of implementation for lessons-learned and seek simplicity in the final mechanism for implementation
- Respect the geographic and cultural diversity of watershed stakeholders and promote inclusiveness despite the challenges this diversity brings

2.3 Barriers/Concerns

During the consultation process the stakeholders identified a number of barriers/concerns that may affect the proposed Partnership approach. The following are a sample of potential obstacles for the proposed project (*N.B.: Responses to stakeholder comments are in Italics*):

- What could a Partnership model do that the rights-holder couldn't achieve with the right incentives? *The Partnership could organize and finance upstream conservation efforts that a single rights-holder would not normally undertake.*
- It is not yet clear as to the degree to which specific issues affect the health of the watershed; therefore a priority should be first placed on developing a scientific basis for action. *It may be necessary to strike a balance between investments in "precautionary" initiatives and "scientifically-driven" priorities to ensure that timely action is taken in selected areas.*
- There is confusion in the marketplace regarding the proliferation of ecological and watershed initiatives underway. *The branding of the Partnership will need to clearly distinguish between other objective-setting processes and the unique implementation focus of the Partnership.*
- Structuring the project as "innovative and unique" may discourage capital investment. *The project should emphasize the use of existing structures and mechanisms that promote security of investment and address investor priorities.*
- There are few precedents regarding apportionment of costs to downstream beneficiaries. *Pricing mechanisms will be required that ascribe a suitable value to the beneficial result and the corresponding mechanisms for receiving credits.*
- Conservation projects are often used to offset specific on-site impacts, therefore as conservation projects become less available to proponents, project economics will be harmed. *Proponents may require a mechanism for ensuring appropriate credit-granting mechanisms create an incentive for participation.*
- There is an issue with funding and what Albertans see as priorities. Funding generally goes to areas of highest priority. Currently, health care and education are the top priorities for Albertans which may make it difficult to get funding for environmentally based projects. *Emphasis should be placed on educating consumers and stakeholders as the present value of long-term conservation approaches and their role in supporting a healthy economy.*
- Conservation and watershed protection is typically viewed as a public good – therefore funded through public finances or the not-for-profit sector. Industry may be reluctant to divert funds from site-specific initiatives to broader, regional initiatives. *A mechanism needs to be found to allow ensure industry investment is appropriately credited.*

2.4 Suggestions

While the overall response to the Athabasca Project was positive, the stakeholders provided a number of suggestions to potentially strengthen the proposed concept. The following is a list of the most relevant suggestions:

- Ensure a compatibility with the partnership approach and the emerging Land Use Framework, Water and Watershed Planning processes to ensure the processes can accommodate a range of project-deliver and partnership mechanisms
- Seek to enhance and/or streamline existing policy frameworks to provide greater regulatory certainty so that projects can be quickly scoped out, approved, funded and implemented;
- Avoid duplication of effort with well-established objective-setting processes (CEMA, WPAC, etc) and focus on funding and implementation of projects;
- Find a way to avoid further diluting limit capacity within stakeholder communities to participate in the establishment and direction of a partnership approach
- Ensure the focus is well-defined and avoid broadening into important areas that may nonetheless be peripheral to the core business of project implementation

3 Suggested Path Forward: Next Steps

At the completion of the Consultation on Market-based Conservation, to be held on September 17, 2008, the consultation findings will be examined to determine if it is feasible to move forward with further work on a pilot project. If consensus is reached between key stakeholders, then the next steps will most likely be:

1. Meet with the LUF and Watershed policy teams to ensure the frameworks contemplate a variety of approaches to implementing watershed-based projects
2. Meet with CEMA and the Athabasca WPAC (when formed) to explain the benefits of developing an implementation partnership in parallel with their objective-setting efforts.
3. Solicit from stakeholders a short-list of potential conservation projects throughout the watershed and test their effectiveness against existing and proposed policy direction
4. Select an appropriate pilot project, develop a business plan and meet with potential funders to test the feasibility of a pilot project.

4 Conclusions

At this stage of the Athabasca Project, the preliminary findings are encouraging. Unfortunately, the planning initiatives that currently apply to the Athabasca Watershed, together with individual project approvals, already command the time and energy of key stakeholders, therefore inhibiting progress on the development of a new partnership concept. A mechanism is needed to bring new resources to the establishment of partnership mechanisms.

Secondly, until the Province's Land Use Framework is promulgated, stakeholders may be reluctant to commit resources to concept development. The timing of next steps should be carefully chosen.

Finally, the Athabasca Project would like to express sincere appreciation to all who have contributed to our consultation process. The feedback and insight have been invaluable.