

Green Stimulus Opportunities

**Selected Projects Ready For Implementation
Supplement to 2009 Budget Recommendations**

Green Budget Coalition

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December 2008



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The Chinese use two brush strokes to write the word 'crisis.' One brush stroke stands for danger; the other for opportunity. In a crisis, be aware of the danger - but recognize the opportunity.

- John F. Kennedy, April 12, 1959

The Atlantic Canada Chapter of the Sierra Club Canada welcomes the opportunity to propose three projects we feel will ensure we seize the necessity offered by the current economic crisis to create sustainable prosperity in Atlantic Canada.

The following three projects, developed in collaboration with the Ecology Action Centre and the Sentinelles Petitcodiac Riverkeeper, will create immediate employment opportunities in the region while assisting us in achieving reductions in greenhouse gas emissions, water conservation, and protection of biodiversity:

- 1. Labour Market Strategy: Green Jobs**
- 2. Sustainable Transportation: Revitalizing Rail in Nova Scotia**
- 3. Infrastructure and Biodiversity Protection: Petitcodiac River Restoration Project**

For further information on each of these projects, please do not hesitate to contact:
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1. Labour Market Strategy: Green Jobs

Project Name: Aggressive Labour Market Strategy for Development of an Energy Efficient Building Sector

Description: This project proposes the development of an energy efficiency and conservation human resource needs assessment for the building sector in Newfoundland and Labrador, thus advancing the knowledge and action on efficiency skill development, training and best practices. We anticipate expanding this program to the other Atlantic provinces. This human resource/labour market strategy is proposed in an effort to gain a better understanding of the labour/skill gaps, barriers to recruitment and retention, opportunities and potential growth in the energy efficient building sector and provide go forward suggestions and buy in from the industry to meet identified challenges. The implementation phase of this project will include incorporation of suggestions into existing education and recruitment programs.

Issue focus: Climate and water, reduction of greenhouse gas emissions and water use through efficiency improvements and best practice in the building sector.

Province(s): Atlantic Canada

City/Cities: Communities throughout Atlantic Canada

Project & funds would primarily be administered by: Atlantic Canada Sustainable Energy Coalition (non-governmental organization). The Atlantic Canada Sustainable Energy Coalition (ACSEC) is an alliance of four community based, environmental organizations that offer expertise in policy research and analysis, project implementation, and public education.

Expected environmental benefits: Currently, the building sector contributes 12% to Canada's energy demand. The Pembina Institute, Canada's sustainable energy think tank, has recommended that at least 50% of all new buildings and homes to be net zero energy by 2015 in order for Canadians to combat climate change. Ensuring energy efficiency when new homes are built is important to avoid lost opportunities, and retrofitting existing homes will create jobs and savings as well as reduce emissions. Scores of recent energy efficiency potential studies have highlighted the significant value of efficiency in the building sector. Local examples in Quebec and New Brunswick help illustrate the point. The potential energy efficiency savings from the residential and commercial sectors alone topped 37% and 27% respectively for NB and 14% and 24% for Quebec.

Expected economic benefits: While estimates of job creation do not exist for every Atlantic province, the New Brunswick White Paper on Energy Policy estimates direct and indirect job creation in the efficiency industry reaching close to 2,500 new jobs annually in New Brunswick alone. Further, additional studies have demonstrated that building retrofit projects have been shown to be significant sources of new employment and, in commercial and industrial settings, often result in productivity gains that flow from improved lighting, ventilation, and indoor air quality (ECO, 2004).

Provincial jurisdictions in Ontario, BC, Quebec and US states are seeing increased demand for energy efficiency and Atlantic Canada is showing signs of a trend toward the same (CMHC, 2007). Federally, this is also the case with energy efficiency playing an important role in public building design, as is illustrated for example in the Human Resources and Social Development Canada (HRSDC) 2007-2009 Sustainable Development Strategy (2006). The strategy establishes Building Energy as one of its top priorities and key to "reducing energy consumption and greenhouse gas emissions" (HRSDC, 2006).

Cost: \$400,000 for implementation in all Atlantic provinces, based on cost estimate of \$100,000 for Newfoundland and Labrador project.

Timeline: April 1, 2009 - September 30, 2010 (12 months for NL project, 18 months for entire Atlantic region)

Fisheries



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Achieving Sustainable Fisheries: Shifting Gears and Market Development

Recommended Budget Allocation: **\$10 million** over 3 years

Description: In 1991, Fisheries and Oceans Canada offered financial assistance to fishermen who wanted to convert their bottom trawl gear to bottom longline, in efforts to reduce the impacts of fishing on the marine environment as well as to stimulate the economy in coastal communities. With a growing emphasis on sustainable prosperity, as well as a growing demand for local and sustainably caught seafood, significant environmental and economic benefits can be achieved by supporting gear substitution, modification and marketing of such initiatives. In 2008, the need to both protect and restore the marine environment, as well as stimulate rural, coastal economies presents a unique opportunity to revisit past programs offered by the federal government.

A dedicated fund used to support Canadian fishermen and businesses in coastal communities to switch to sustainable fishing gear, manufacture gear modifications (ie. Bycatch reduction devices for the lobster fishery, trawl net modifications to reduce bycatch, vessel retrofit to switch to less damaging gear types) would rejuvenate rural economies in coastal areas. Given the marketability of seafood that is caught with a low impact on the marine ecosystem (for example, trap caught shrimp rather than trawl caught shrimp, rod and reel tuna rather than longline tuna, harpoon rather than longline swordfish) and the public demand both within Canada and in international markets, an ideal opportunity exists to couple the shifting of fishing gears with targeted marketing and product development for sustainable seafood.

Geographic Scope: Nova Scotia, Newfoundland, Prince Edward Island, New Brunswick, Quebec, British Columbia

City/site(s): Various, would depend on eligibility criteria, focus on rural communities with marketing efforts in urban areas.

Project & Fund management/administration: Funds would be administered by the federal government, with input from the fishing industry and marine conservation community. Federal funds should be partially matched with provincial funding for marketing and product development. (NS and BC have already allocated some funds to marketing).

Expected environmental benefits: Reduced impact of fishing gear on the seafloor, reduced rates of bycatch and discards, restoration of the marine ecosystem over appropriate temporal and

spatial scales, re-establishment of multi-species fisheries; reduction in fossil fuel emissions as low impact gear can also have lower fuel requirements, especially if coupled with behavioural changes.

Expected economic benefits: Stimulation of gear sales and gear manufacturing and innovation, particularly for bycatch reduction devices and gear substitution. Increased economic benefit to coastal communities (i.e. Bottom, longliners employ more people than bottom trawl vessels); promotion of small scale, sustainable fisheries will generate economic spinoffs in coastal communities through local food promotion, product innovation and experiential tourism (already being explored in NS communities); value added local processing and marketing will stimulate regional economies and provide access to international seafood markets, particularly higher end markets. Long term economic benefits will be achieved through sustaining the marine environment and ensuring that wild fish stocks recover (fisheries as a renewable resource).

Cost: \$10 million. \$8 million for gear substitution and modification, as well as license by back to shift allocations to more sustainable gear types. \$2 million for marketing to leverage additional funds from the provinces.

Project time period: 3 years, with ecosystems based fisheries management objectives met in accordance with funding allocation.

Other comments: This project links the chain of custody, from the harvestor to the seafood supplier and finally to the consumer; and seeks to create new markets and develop new marketing strategies. Similar projects for sustainable forestry, organic farming and renewable energy projects will generate a shift to a “green” economy for Canada. The environmental benefits will be seen on the water, on the sea floor and ultimately through sustainable fish stocks.

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issues brief

Green Economic Stimulus Proposals for Budget 2009

We believe the present economic situation represents a rare opportunity for Canada to simultaneously address both the current economic and environmental crises. The two are not mutually exclusive, but intertwined. By combining an economic stimulus measure with a green stimulus expenditure program Canada can encourage domestic green technology manufacturing and potentially become a leader in a number of growth industries. Moreover, a large proportion of green stimulus spending involves skilled jobs that are not subject to the boom and bust cycle Canada experiences in certain other sectors. Finally, the greater energy and resource efficiency that accompanies a greening of the economy is also good for Canada's economic productivity, which has been lagging behind many of our trading partners.

Green Technology Development in the Salmon Aquaculture Industry

Description:

Peer-reviewed scientific studies have documented the negative effects that open net-cage salmon farming has on the viability of wild salmon populations and the marine environment. To address this problem the David Suzuki Foundation and its allies in the Coastal Alliance for Aquaculture Reform have been working with Marine Harvest Canada, B.C.'s largest farmed salmon producer, to encourage the Province of B.C. to establish an Aquaculture Innovation Fund that would facilitate development of closed system technology solutions for fish farming. As a result, B.C.'s Finance Committee recently recommended inclusion of this Fund in Budget 2009. The intent of this Fund is to leverage investment from the private sector and in-kind contributions from industry to support the development of two commercial-scale closed containment salmon farms in BC.

This funding is structured to leverage private investment in two commercial-scale closed containment salmon aquaculture systems with the goal of maintaining economic benefits provided by the salmon aquaculture industry via green technologies that minimize the environmental impact and potential market losses from production of salmon in unsustainable operations.

Cost:

\$8.5 million in fiscal year 2009-10 in the form of a contribution to the Province of B.C.'s Aquaculture Innovation Fund.

Economic Benefit:

Federal government participation would facilitate the development of innovative salmon aquaculture technology to address the negative environmental effects salmon farming has on wild salmon stocks and the environment while providing continued opportunity for this coastal economic activity.

The marketplace is expressing concerns about the sustainability of farmed salmon supply and market access may be challenged for Canada's net-cage reared product.

Farmed salmon are listed in the 'avoid' category by sustainable seafood consumer programs like SeaChoice. In November 2008, the Food Marketing Institute announced a program to develop seafood sustainability guidelines to help its chain and independent supermarket members (26,000 retail stores in the US alone) address growing concerns related to fisheries and environmental responsibility. Over 85 per cent of B.C.'s farmed salmon is exported, largely to the USA.

Supporting this initiative can help Canadian farmed salmon meet the growing market demand for product produced under strict sustainability criteria. It also creates opportunities for made-in-Canada technology to be marketed globally.

Environmental Benefit:

Successful development of a closed system for salmon aquaculture will reduce the parasite and mortality risk to wild salmon populations and will reduce the site level effects that open net cage farms have on the benthic environment.

Fisheries Recovery Initiative

Description:

Canada's fisheries play a significant role in coastal communities and provide millions of dollars of export trade for Canada. Fishing pressure is driving many wild stocks into decline, risking the economic future of these fisheries. Markets around the globe are demanding fish products certified as sustainable. Some countries and companies have announced that in the future they will only purchase seafood products that have been assessed by third party certification programs like the Marine Stewardship Council. Canadian fisheries must be managed in a manner that enables successful and continuing eco-certification. Government reforms to fisheries management – e.g. providing observer coverage, getting baseline research, and ensuring traceable chain of custody – are essential to maintaining global markets.

Increased funding and engagement by the Department of Fisheries and Oceans for improvements to fisheries practices and fisheries management is needed to complement investments by the fishing industry, conservation organisations and Provincial governments in establishing and meeting these requirements.

Cost:

\$20.5 million per year over five years including:

- \$5 million per year for eco-certification specific initiatives and requirements for marine fisheries
- \$2.5 million per year for labelling and chain of custody improvements for certified fisheries
- \$13 million per year for implementation of wild salmon recovery and salmon habitat conservation initiatives

Economic Benefit:

This initiative will serve to help maintain markets for Canadian seafood products. It will also provide employment for fisheries observers and provided economic development opportunities through application of new technology in fisheries management and

fisheries practices. Additional employment can be realized in development of a labelling system that improves tracking of fisheries products. Significant employment can be realized through salmon recovery initiatives, particularly habitat recovery and reclamation work. In addition, well designed market mechanisms to regulate access and fishing effort can increase value and productivity from the resource

Environmental Benefit:

Robust, resilient and diverse fish stocks in Canada's oceans will help ensure healthy oceans for generations to come. Sustainable fishing practices will reduce habitat degradation and will ensure that essential ecosystem processes continue to provide the services necessary to maintain functioning marine environments.

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Oceans and Lands Conservation



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issues brief

Integrated Management Planning and Marine Protected Areas (MPAs)

Description:

Canada's diverse and abundant coastal resources have the potential to accommodate ecologically and economically sustainable activity if they are properly managed. Marine planning can maximize economic and social benefits of development and decrease conflict by increasing certainty around economic opportunities in specific areas while maintaining ocean health.

The development of integrated management plans in Canada's oceans will help define where and how marine protected areas should be designated. This process will also result in zoning of ocean areas and provide increased certainty to all economic development initiatives.

Funding is required to establish inter-agency planning secretariats, to support stakeholder forums and marine use analyses, and to establish formal marine protected areas. Federal leadership in establishing marine use and conservation plans will facilitate provincial government and First Nation and aboriginal community engagement and will address Canada's international commitments to the Convention on Biodiversity and the UN Environment Programme to have a system of MPAs in place by 2012.

Cost:

\$20 million per year for three years (\$2 million per year for each of Canada's 5 Large Ocean Management Areas plus \$10 million per year for MPA designation costs)

Economic Benefit:

Economic development and the growth of existing marine oriented industries often stall due to conflicts and uncertainty about environmental impacts. An investment in integrated management planning and the establishment of conservation plans will help establish certainty throughout Canada's oceans and help facilitate economic development and prosperity while maintaining essential ecosystem services from flood protection to food harvesting.

Environmental Benefit:

This initiative will serve to reduce the risks to specific ocean ecosystems, provide for recovery and improved health of marine fish stocks and reduce the risk of catastrophic ecosystem impacts from industrial activity. Coordinated management in combination with conservation designations will ensure improved health of our oceans.

Canadian Wilderness Investment Initiative: CPAWS' Proposals for Federal Budget 2009

December 18, 2008

Purpose:

- To stimulate the economy while investing in long term environmental stewardship and sustainability.

Economic benefits:

- Jobs in construction and engineering, conservation research and application (biology, GIS), parks management, environmental education and tourism;
- Improving international position of Canadian resource industries as “green suppliers” to meet growing demand for environmentally friendly products
- Enhanced certainty for industry about the requirements for operating in a way that ensures sustainable land and marine use;
- Increase in ecotourism industry, offering short and long term economic benefits for rural communities;

Environmental benefits:

- Canadian leadership in protecting some of the world's most important remaining large-scale wilderness
- Better protection for wildlife, including species at risk, and improved ecological integrity in Canada's parks and protected areas;
- Support for developing green technology and practices that will reduce negative human impacts on wilderness ecosystems.

Social benefits:

- Employment and skill development in rural and Aboriginal communities and among youth;
- Enhanced public appreciation of Canada's natural environment through more meaningful experiences in nature;
- Increased opportunities for citizens to engage in nature and physical activity;
- Increased partnerships between the voluntary sector, government agencies and private sector

Parks for today and tomorrow: Infrastructure upgrades to enhance ecological integrity

National parks

Recommended Investment: \$250M over two years to Parks Canada

National parks are saddled with an enormous infrastructure deficit, which not only creates risks to public safety, but also causes unnecessary harm to the wildlife and ecosystems Parks Canada is legally mandated to protect.

This proposal will support upgrades to national park infrastructure, including roads, sewage treatment plants, interpretation and visitor centres, and other park facilities. Parks Canada has already committed to using leading environmental technology to maximize the environmental benefits of infrastructure renewal, which presents an opportunity for the federal government to showcase environmental leadership to Canadians and to the world.

One of the biggest infrastructure renewal priorities in national parks is to mitigate the impacts of roads. Roads are a major cause of wildlife mortality, and create significant barriers to wildlife movement, both of which threaten the ecological integrity of parks. As an example, more than 10% of the big horn sheep population in Kootenay National Park is killed each year on Hwy 93/95, while many aquatic ecosystems are disrupted by culverts that block fish passage. Building wildlife crossing structures and fencing can reduce large mammal mortality by 80 to 95%, while upgrading culverts will allow fish to pass under roads and restore aquatic ecosystem health.

Economic benefits: Direct employment in construction in rural communities starting in spring 09, and associated multiplier effects; enhanced competitiveness for the tourism industry, along with related long term economic impacts.

Environmental benefits: Reduced wildlife mortality, healthier aquatic ecosystems, reduced visitor impact through better waste management and energy conservation, and enhanced environmental education programs and facilities.

Social benefits: Improved public safety, more meaningful visitor experiences.

Provincial and territorial parks and surrounding areas

Recommended investment: \$250M to Infrastructure Canada to improve environmental protection and education through infrastructure upgrades in provincial and territorial parks and protected areas, and in areas surrounding parks and protected areas.

Provincial and territorial parks are also a core part of Canada's environmental stewardship program and tourism industry. Parks like Algonquin (ON), Strathcona (BC) and Mont Orford (QC) are beloved by Canadians, and provide important opportunities for residents and visitors alike to connect to the natural world. Yet much of the infrastructure in these parks, including roads, trails, sewage treatment plants, visitor centres etc is old, in disrepair, and environmentally ineffective. Upgrading provincial and territorial park infrastructure to leading environmental standards will provide short term employment in rural communities, better protect park ecosystems, enhance public safety and develop a more competitive ecotourism product for the future.

Visitor centres in parks and protected areas across the country provide opportunities to showcase environmental stewardship priorities to Canadians and international visitors. Upgrading these facilities (and building new facilities) to the highest green building standards and showcasing these green building technologies to the public will help build support and interest in environmental programs.

One example of such an initiative, ready for capital investment, is the Saskatchewan Boreal Forest Learning Centre, a partnership initiative outside Prince Albert National Park which includes a proposal to build the Jack Milliken Centre (\$800K) as a core ecotourism facility.

Wildlife frequently move in and out of parks, ignoring park boundaries. Thus, the ecological health of our parks also depends on how surrounding lands are managed. Roads and other infrastructure on surrounding lands can have devastating impacts on park wildlife populations.

For example, habitat fragmentation and roads in the Bow Valley adjacent to Banff National Park cause significant wildlife mortality and stress to the adjacent park ecosystem. One wildlife crossing structure was built in 2004 as part of the Kananaskis G8 Legacy Fund, but subsequent research shows that two more structures are needed, at a cost of \$10M over two years. Building these could be a partnership initiative with the Province of Alberta, community of Canmore, and Parks Canada, and result in over 50 jobs.

Establish New National Parks and Marine Protected Areas

Recommended investment: See Green Budget Coalition submission for details (Action on Nature: Conserving Canada's Treasured Oceans and Lands, p. 25).

- National Parks -- \$30M per year for five years followed by \$50M per year on-going management funding;
- Marine Protected Areas -- \$30M over three years followed by on-going management funding.

Economic benefits:

National parks and marine protected areas provide substantial economic benefits. In 2001, Parks Canada's program spending of \$300M per year resulted in visitor spending of \$1.5 billion and supported 38,000 full time equivalent jobs, many of them in rural and remote communities.

The process of establishing these protected areas will generate immediate employment in rural and Aboriginal communities supporting research and public consultation processes. Once parks are established, jobs will be created to build infrastructure such as visitor centres, to operate the park, and to service a growing nature-based tourism industry.

Environmental benefits:

National parks are Canada's flagship conservation areas, as well as our most important tourism attractions. The federal government committed in the 2008 election campaign to protect more of Canada's lands and waters. Over the next two years, this proposal will result in 3 new national parks, four expanded parks, and two new NMCA's. This will result in enhanced ecosystem protection and progress towards meeting Canada's international commitment to complete networks of protected areas by 2010 (land) and 2012 (marine).

Engaging communities and voluntary sector in completing land and marine use planning

Recommended investment: \$30M per year for two years to support community, First Nations, and voluntary sector engagement in land and marine use planning.

Across Canada, land and marine use planning initiatives are underway or getting started with the aim of reducing conflict and increasing certainty about land/sea resource development and protection. Properly implemented, these processes have enormous potential to result in win-win outcomes that would satisfy federal obligations under the *Species at Risk Act*, enable sustainable economic opportunities for mining, fishing, forestry, tourism, hydro, wind and other energy development, while also enabling biodiversity protection, carbon storage, climate adaptation, and protection of cultural values.

For these processes to work effectively, however, resources are needed to enable communities, Aboriginal groups and civil society to participate in an informed way. During this period of economic crisis and job loss in the traditional resource sector, as well as in the voluntary sector, supporting community engagement in land and marine planning processes would provide short term employment while building capacity to participate in a more diversified and knowledge-based economy in the future.

Funding could flow through existing federal funding programs, for example Environment Canada's Eco-Action program to ensure timely delivery of results.

Specific planning processes that require support for community and voluntary sector engagement include:

1. Ontario's Northern Boreal Conservation Initiative -- This initiative could also be funded directly, on a cost-share basis with Ontario, to support First Nations and civil society engagement;
2. Marine planning and conservation – marine use and conservation plans in five Large Ocean Management Areas (LOMAs)¹;
3. Northwest Territories – Protected Areas Strategy and legally mandated land use planning processes;
4. Quebec – plan for the Far North announced by Premier Charest in November 2008;
5. Species at Risk Act implementation requires extensive consultation that would benefit from enhanced community and Aboriginal capacity (for example woodland caribou critical habitat consultations and Action Planning);
6. Manitoba – land use planning on the east side of Lake Winnipeg, including a UNESCO World Heritage proposal;
7. Alberta Land Use Framework –land use planning will be completed over the next 18 months for the South Saskatchewan River Basin and Peace-Athabaska Watersheds;
8. Saskatchewan –Athabaska (northern 25% of province), and Missinipe land use planning processes, as well as a Sturgeon River conservation plan to maintain the

¹ Gulf of St Lawrence, Placentia Bay/Grand Banks, Scotian Shelf, Pacific North Coast, Beaufort Sea

viability of Canada's only free ranging herd of Plains bison still within historic Plains bison range

9. New Brunswick – Crown lands management planning and Protected Areas System planning
10. BC. First Nations Resource Use Planning - could be cost shared with British Columbia

Economic benefits: Approximately 400 jobs, largely in rural and Aboriginal communities, to conduct GIS mapping; cultural, resource and ecological values data collection; and community engagement, which will build leadership capacity and resource stewardship skills for the future.

The longer term certainty provided by completed land and marine use plans will enhance social and legal licence for investment by industrial and tourism sectors, build a more diversified economy, and provide for employment and benefits agreements with First Nations that will increase self-sufficiency.

Environmental benefits: Comprehensive planning processes are the best mechanism for integrating environmental considerations, including protection of species at risk, water, climate and biodiversity, into decisions about land and marine use.

Re-connecting Canadians to Nature

Recommended investment: \$30M for Youth Conservation Corps programs to employ young Canadians in environmental stewardship projects across Canada.

Youth Conservation Corps programs exist in parts of Canada (eg BC, YK, NS, NF), the United States and in many other countries. These programs provide opportunities for young people to work on projects that contribute to the conservation of natural heritage and environmental protection, while developing skills and appreciation for the importance of protecting our environment. Jobs are highly varied, from building and repairing trails in parks, to assisting scientists with wildlife research projects, rehabilitating waterways, and delivering environmental education and interpretation programs. All relate to conservation and environmental stewardship and provide opportunities to work outdoors in nature.

The downturn in the economy will have a serious impact on youth employment. At the same time, Canadian youth are increasingly isolated from the natural world, and missing the well documented health and well being benefits of spending time in nature. The time is right for the federal government to re-invest in a Canadian Youth Conservation Corps, in partnership with provincial and territorial governments, to employ young Canadians, while enabling them to experience Canada's natural wonders, develop life skills, and learn about environmental stewardship.

This program could be delivered through existing federal and provincial/territorial mechanisms, including current Youth Conservation Corps programs, and federal agencies such as HRSDC and Parks Canada.

Economic benefits: Approximately 2000 additional youth summer jobs; healthcare savings from encouraging youth to adopt healthy lifestyles that include nature-based activities.

Environmental benefits: Implementation of conservation projects across Canada; and the training of environmental stewards for the future.

Leveraging the Olympics and 100th Anniversary of Canada's Parks:

Recommended investment: \$20M over three years to fund a joint CPAWS, Parks Canada and BC Parks initiative to promote and celebrate Canada's parks.

BC will be hosting the Winter Olympics in 2010. Parks Canada and BC Parks will be celebrating their 100th anniversaries in 2011. These two special occasions provide an opportunity to promote Canada's parks to Canadians and the world over the next three years.

CPAWS, as the only environmental NGO focused on parks and wilderness conservation in Canada, is well-placed to work in partnership with Parks Canada, BC Parks, as well as the tourism, arts, health, and other sectors to develop and launch a high profile public campaign highlighting Canada's wilderness and magnificent parks system and its value to Canadians and the world.

Economic Benefits: Encouraging Canadians and international visitors to experience and appreciate Canada's parks and wilderness will contribute to building stronger, more diversified rural economies.

Environmental Benefits: Building stronger public and multi-sectoral support for conserving Canada's parks and wilderness

Social benefits: Parks and wilderness are integral parts of Canada's identity and pride. The Olympics and 100th anniversary of Parks Canada and BC Parks provide opportunities to reinforce the protection of Canada's natural heritage as a core Canadian value, and increase the health and well-being of Canadians, by encouraging them to engage in healthy lifestyles that include nature-based activities.

A green stimulus package for the forest industry:

CPAWS supports a green stimulus package for the forest industry that would re-tool the industry to become a leader in a Canadian green industrial strategy. To achieve this goal, we recommend the following elements for a forest industry stimulus package:

Investments in green power from waste: Pulp and paper mills are many provinces' largest consumers of electricity. These same mills produce millions of tonnes of biomass waste that could be a source of biomass-derived heat and electrical energy, turning mills into net contributors to the grid.

Investments in biorefinery add-ons: Pulp and paper mills create by-products that can act, in many ways, like the organic molecule mix found in oil. They are the perfect source for a host of valuable chemicals and products that range from ethanol to rayon.

Species at Risk. Increasingly, customers of paper and wood products are demanding that forest companies protect species such as the Boreal woodland caribou. By implementing a Recovery Strategy for this threatened species, the federal government can give forest companies the opportunity to increase their green market share by conserving critical habitats within their tenures.

Land use plans. Some leaders in the forest sector have made private investments in environmental land-use plans to identify habitats to be protected. If the federal government were to require and invest in supporting the development of such plans for the whole industry, it would level the playing field and position Canada's industry as green.

The northern portion of our forests has not been allocated to the forest industry. Before that happens, we need land-use plans that address ecological needs, First Nations rights and the economic potential of these regions. The federal government has a responsibility for completing these plans in the NWT. It could also invest in ways to support recent commitments such as those made by Ontario and Quebec to protect at least 50% of their northern Boreal regions. (See above on federal investments in land use planning activities).

Protecting forest carbon stores and sinks. Canada's Boreal forests and peatlands store approximately 186 billion tons of carbon. These areas play a significant role in mitigating climate change. We need federal incentives to keep the carbon stored where it is. Federal funding to incent industry to protect intact forests while carbon markets are being developed would help achieve this goal.

We have more wilderness forests than any other country in the world. The current economic climate provides us with an opportunity to be smart about how we use them to support our future.

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Stimulating the Knowledge Economy while Conserving Canadian Lands and Waters

Issue

Modern landscape management requires an established information base – in particular the base topographic mapping – necessary to support regulatory and planning decisions. Remarkably, this base does not exist for all of Canada.

Proposal

Complete the digital information base necessary to support planning and decision-making while stimulating knowledge economy jobs in the rapidly growing geomatics sector.

Cost/Time Frame: \$50 million over 2 years

- Topographic mapping in Nunavut: \$10 million over 2 years
- Tools for Regional Environmental Assessment: \$4 million over 2 years
- Forest and Wetland Inventory: \$36 million/2 years

Components

Topographic Mapping in Nunavut

As part of the *Northern Regulatory Improvement Initiative*, the Minister of Indian and Northern Affairs engaged Neil McCrank to Review Regulatory Systems across the North. McCrank delivered his report in May 2008 and recommended an immediate acceleration of land-use planning across Nunavut. In response, the Nunavut Planning Commission is planning to complete land-use plans within two years.

Land-use planning in Canada requires digital topographic maps as a base input – maps which show the location of terrain, lakes, rivers, vegetation cover, human development and place names. Nunavut is the only jurisdiction in Canada which does not have topographic maps complete for its territory. As a result, land-use planning cannot be completed to the standard common to the rest of Canada without this information resource. Under the guidance of Geomatics Canada, this mapping could be contracted to the private sector over 18 months at a cost of \$10 million.

Tools for Regional Environmental Assessment

In anticipation of the review of the Canadian Environmental Assessment Act in 2010, the Canadian Council of Ministers of the Environment is recommending means to reduce duplication and streamline the federal regulatory process. A key recommendation relates to regional environmental assessment – a method to streamline project based assessments by proactively undertaking assessments at a landscape scale. The approach is widely supported by industry, NGO's and governments.

However regional environmental assessments are complex and information intensive. They require technical solutions to manage the robust amounts of geographic, biophysical and other scientific information that will accrue through the process. As demonstrated by delays attendant to the Mackenzie Gas Pipeline, proactive design of these solutions, through the private sector, will save time and expense when the regulatory process convenes

Forest and Wetland Inventory

In 2003, the NRTEE recommended five indicators be used to measure Canada's stocks of natural capital: air quality, water quality, greenhouse gas emissions, wetland extent and forest cover. Reporting has been undertaken on the first three measures however reporting of changes in extent of wetlands and forest cover has never commenced due to disagreements over approaches. In 2008, Natural Resources Canada achieved a national consensus on approaches to classifying wetlands and forest cover across federal/provincial and territorial jurisdiction.

The creation of forest cover and wetland inventories involves creation of maps from satellite and aerial imagery and engages a broad array of technical expertise. The work would be contracted through the private sector, result in job creation countrywide and result in an invaluable dataset for use in an array of forestry and conservation applications.

Delivery Mechanism

This spending measure takes advantage of federal mechanisms already established. Geomatics Canada presently has the programs and criteria in place to rapidly contract the needed work to the private sector, in consultation with the Canadian Forest Service, Environment Canada and other federal, provincial and territorial interests. Geomatics Canada is part of Natural Resources Canada.

Environmental Benefits

This investment would advance information infrastructure required to effectively manage Canada's lands and waters. It lays the groundwork for broadly accepted reforms to Canada's regulatory framework and aids in planning, assessment and monitoring industrial developments affecting Canada's nature.

Economic Benefits

This investment streamlines future economic development while investing in promising knowledge economy jobs – a medium-term target for retrained natural resource and manufacturing sector workers. This investment would create 670 jobs in the private sector over two years.

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issues brief

The Development of a National Environmental Health Tracking System.

Description:

Investments in infrastructure and workforce development are needed to establish Canadian capacity to track environmental hazards, exposures, and health impacts, communicate information, and respond. Modelled after the U.S. Environmental Public Health Tracking Program, immediate funding priorities include development of effective tracking methods, sub-national pilot programs, training and recruiting health professionals to collect and interpret data, supporting environmental health research, and disseminating information to health professionals, policy-makers at all levels of government, and the general public.

Cost:

- \$27.5 million (The Pew Environmental Health Commission recommended an annual investment of \$275 million to fund an environmental health tracking system in the US. Scaled relative to population, \$27.5 million is required in Canada.)

Economic Benefit:

Funding a national environmental health tracking system would create jobs for a knowledge-based economy related to hardware and software design, environmental monitoring, data analysis, research, public health practitioners, and knowledge translation/communications. In addition, information from the environmental health tracking system will help to reduce environmental hazards to health which have been estimated to cost the Canadian economy up to \$9 billion annually at present.

Environmental Benefit:

A national environmental health tracking system will address current information gaps about environmental hazards, exposures, and health impacts. Information from the tracking system will support more effective prevention of and response to environmental health hazards for a healthier Canada.

Investing in Canada's Municipal Green Infrastructure: Maintaining, Enhancing and Restoring Ecosystem Services

Description:

The recent initiatives by the government of Canada to assist local landowners and conservation groups to protect remaining natural areas in developed regions of the country (e.g., 2006 federal budget programs: \$225 million investment in private lands acquisition and stewardship in southern Canada) have helped immensely to secure ecosystem services that benefit Canadians. We now call on the government to expand its efforts to maintain, enhance and restore Ecosystem Services.

Cost:

- \$120 Million over the next five years to enhance the Greencover Canada forage conversion program of the federal Agricultural Policy Framework and expand the Watershed Evaluation of Beneficial Management Practices study.

- \$35 million per year in ongoing funding to allow Environment Canada to properly steward, manage, and expand the network of National Wildlife Areas and Migratory Bird Sanctuaries. Many of the sites in the network protect fragile ecosystems and habitat for wildlife close to urban centers in southern Canada and as such contribute directly to the health and wellbeing of millions of Canadians, including providing recreational opportunities such as bird-watching.

Economic Benefit:

The economic benefits provided by intact ecosystems is substantial. For instance, the economic benefits provided by southern Ontario's Green Belt alone have been conservatively estimated at \$2.6 billion annually; an average value of \$3,487.00 per hectare.

Environmental Benefit:

Recognition of the irreplaceable value of ecosystem services and the impact of human development on them is emerging nationally and globally. For instance, the United Nations Millennium Ecosystem Assessment concluded that about 60 percent of the world's ecosystem services are being used at an unsustainable rate. In Canada, the establishment of "Green Belts" of protected farmland, forests, watersheds, wetlands and other green spaces around a number of cities in Canada has helped to protect critical essential ecosystem services that sustain air and water quality, local food production, and quality of life for millions of Canadians.

Renewable Energy



www.greenbudget.ca

December 17, 2008

Select Renewable Energy Projects Ready for Implementation

The following is selected list of renewable energy projects that are very close to development but have been stalled as a result of access to capital. They include in no particular order:

- Pukwis Community Wind Park, Lake Simcoe, ON (Wind)
- Tuktoyaktuk Wind Park, Tuktoyaktuk, NWT (Remote wind-diesel hybrid)
- Windy Hills Caledon, Caledon, ON (Wind)
- McKay Creek Hydro, Kyuquot, BC (Mini-hydro)
- Waterfront Green Power Project, Toronto, Ontario (Wind/Solar)

While this list is certainly not exhaustive, the projects are community-driven projects (groups that have more difficulty in raising capital than larger developers) that are in very late stages of project development and would be realized with some immediate capital assistance. There are many other projects that the Pembina Institute is aware of at different stages of development, but those described herein are somewhat unique in their proximity to development.

The Institute has no vested financial gains from any of the projects, and the descriptions provided below have been made by the proponents themselves.

For more information contact Tim Weis, timw@pembina.org or any of the project proponents listed.

Pukwis Community Wind Park

Pukwis Community Wind Park is an 80 MW wind farm venture between the Chippewas of Georgina Island First Nation and Windfall Ecology Centre. The joint venture partners have worked together since 2002 on numerous projects including an innovative community wide energy efficiency housing retrofit pilot that is now being replicated in First Nation communities across Ontario with funding from the Ontario Power Authority.

Collaboration on Pukwis began in 2003 and has advanced steadily in accomplishing pre-construction milestones.

Pukwis Phase I (20 MW) is now ready to move from feasibility to construction.

Pukwis Community Wind Park construction is currently constrained due to inadequate electricity distribution infrastructure connecting Georgina Island with the Hydro One Networks 44 kV line on the mainland.



An infrastructure investment of \$9 million would enable the necessary interconnection upgrades to proceed allowing the overall wind project to move forward. With the necessary approvals already in place, work would begin immediately.

Major Milestones:

- ✓ Secured site with capacity for 80 MW wind farm
- ✓ Compiled 3 years of wind resource data confirming viability
- ✓ Secured grid access with 2 Connection Impact Assessments with Hydro One Networks
- ✓ Completed long lead time environmental assessment work items
- ✓ Established community investment co-op (Pukwis Energy Co-op)
- ✓ Completed turbine micro-siting and grid connection engineering studies

Pukwis is located on Georgina Island, a 1,291 hectare First Nation Reserve located 1.5 km off the south east shore of Lake Simcoe. The site is strategically located within the Greater Toronto Area. The project will provide much needed electricity to northern York Region.

Pukwis will consist of 40 utility scale wind turbines with nameplate capacity of 2 MW each. They will be connected to the Ontario grid through Hydro One Network's Brown Hill Transfer Station and produce enough electricity to power 28,000 homes and displace 60,000 tonnes of greenhouse gases annually. *A \$9 million investment will begin transmission line construction immediately, and leverage the total project investment of \$41 for phase I, and \$164 million for the entire project.*

Project construction is being financed by equity raised within the GTA through a cooperative share offering and by traditional commercial loans backed by Ontario's Standard Offer Program (SOP).

For further information contact:

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Tuktoyaktuk Wind Energy Project

The community of Tuktoyaktuk is located on the Beaufort Sea at the mouth of the Mackenzie River delta. Tuktoyaktuk, along with the three other Beaufort communities, have undertaken wind energy projects to create local economic development, reduce their annual energy costs and reduce the pollution and liability of diesel imports into their communities.

Being the largest of the four Beaufort communities, the hamlet of Tuktoyaktuk has been agreed upon by the region leadership to create a “hub” project that can serve as a technical support centre for further regional development. This decision was made at the remote community wind energy conference hosted by Tuktoyaktuk in 2007 (www.remotewinerenergy.ca).

The Northwest Territories Power Corporation issued its first request for wind power projects as a result of this conference, and the current effort in Tuktoyaktuk is a response to this RFP and the first step in an overall strategic development plan for wind energy projects in the area. The Tuktoyaktuk project will offset approximately 90,000 litres of diesel fuel per year.

Final planning for the 250 kilowatt Tuktoyaktuk Wind Energy Project is underway and will be completed in early 2009.

Major accomplishments to date

- ✓ 2-years of local wind resource data and analysis
- ✓ Technical development study
- ✓ Secured local utility interconnection commitment
- ✓ Over \$1 million of project funding secured by the NWT government
- ✓ Regional strategic wind development plan

An additional \$1 million is required to complete the project. Given the long lead times and short construction window available in the Arctic, unsecured capital can lead to 12 month at a time delays. Construction can begin as early as 2010 if addition support were received immediately.

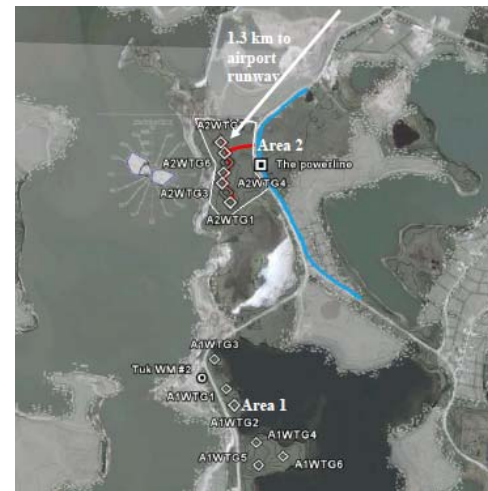
The stated goal of the NWT Wind Energy Strategy is to apply the lessons learned from the Tuktoyaktuk project to facilitate future developments in the communities of Paulatuk, Ulukhaktuk and Sachs Harbour. Facilitating the Tuktoyaktuk project will leverage additional regional projects, all in communities which are known to have superior wind resources.

Canada has almost 50% of the global market share of medium-scale wind turbine manufacturing capacity, although it currently exports the majority of what it produces. Supporting wind-diesel projects in Canada will not only help improve the sustainability of remote Arctic communities, but will also help develop this market niche occupied by Canada.

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Windy Hills Caledon

Windy Hills Caledon Renewable Energy is a group of local residents developing a 10 Megawatt community-owned, wind-based sustainable energy project in Caledon Ontario, part of the Greater Toronto Area (GTA). This project has the potential to produce enough power to provide over 15% of Caledon's households with clean emission free energy.



Milestones achieved to date:

- ✓ Secured rights to connect 10 MW to the grid (CIA completed in September 2008)
- ✓ Wind resource assessment is completed (finished June 2007) concluding that a commercially viable project can be operating within 24 months of overcoming financial shortcomings outlined below.
- ✓ Environmental assessment in progress having begun in May of 2007.
- ✓ Completed significant public consultation.

While this project will be able to qualify for Ontario's standard offer contract when the program is re-instated by the Ontario Power Authority (May 2009), there are several anomalies to this project that are making it marginal from an investment perspective. They are:

1. Increased approval and construction costs as the turbines are widely dispersed to accommodate the many local set-back restrictions set by the Town of Caledon and the Conservation authority, given that the turbine sites are within the Greenbelt.
(+\$1,000,000 over normal)
2. More intensive Environmental Assessment tasks given the vast area that is being covered (+\$200,000 over normal)
3. The need for up to 10 kilometres of enabler lines to connect all of the turbines to the utility grid for which we have approval to connect our 10 megawatts of power
(+1,300,000 over normal)

With the federal government providing the additional \$2,500,000 that these anomalies create, the project would remain at its initial capital cost of \$25,000,000 and at its projected investment return for local residents and businesses would remain intact.

Project benefits:

230,000 t reduction in CO₂ emissions over 20 years
\$7,500,000 in development and construction jobs to local companies
\$1,000,000 to landowners needing income for greenbelt properties
\$1,000,000 to local municipality in new taxes
\$9,000,000 to local companies for operating project
\$12,700,000 to local investors
\$20,000,000 to turbine manufacturer setting up in Quebec

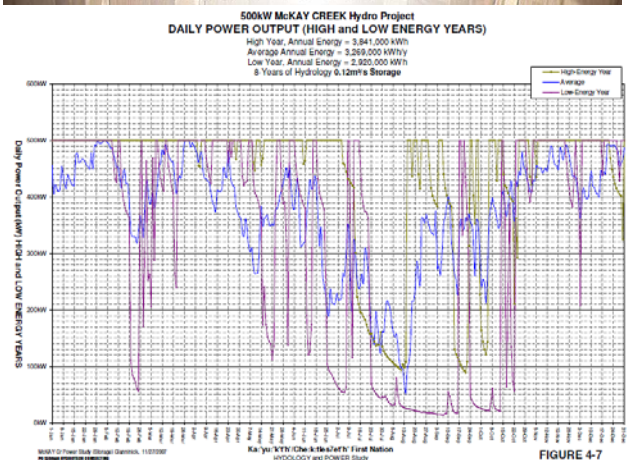
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McKay Creek Hydro Project

Kyuquot, a remote community on the northwest coast of Vancouver Island is home to the Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN). Kyuquot currently receives electricity from a private energy supplier who built a 50 km power line connecting the community to the BC Hydro grid. Kyuquot currently pays \$0.35/kWh to the private energy supplier – over 5 times the rate of most BC residents.

During frequent power outages in the winter, Kyuquot residents are forced to run their own diesel or gas generators. Affordable and reliable electricity has hampered economic development plans such as expanded tourism and local fish processing. KCFN has partnered with a local logging company to pursue a 1.0 MW hydro project. The hydro project will not only supply Kyuquot's electricity needs but will be able to sell surplus energy to sell to BC Hydro in an area of the province in need of new power.



Major accomplishments to date

- Prefeasibility and full feasibility studies
- Hydrology and power study
- Preliminary design
- Obtained local grid access
- Financial analysis
- Fish impact study

The total cost to take the project to final design and construction is projected to be \$4,100,000. After final design has been completed, construction can begin in the spring of 2010. Despite being a central part of Kyuquot's infrastructure, the project has been put on hold awaiting financing, either through the recently ratified Maa-nulth Treaty or through a combination of grants and debt financing.

In order to start the project immediately, KCFN requires a contribution of \$2,050,000, which will enable us to debt finance the balance of the required funds. Without such support debt financing is difficult for First Nations and the project will need to wait until the completion of the on-going treaty process.

The McKay Creek hydro project is backed by BC Hydro's Standing Offer Program, providing an estimated \$396,000 of revenue annually as a long-term revenue stream to the community, as well as providing stable and affordable power for further economic development projects such as seafood processing, tourism and community expansion.

The next phase of the McKay Creek hydro project could begin immediately in 2009 with construction completion targeted for late 2010.

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Waterfront Green Power Project

Total Project Value	\$21.5 M
Infrastructure Investment	\$7 M (33%)
Delivery Date	2010
Immediate Job Creation	200 (Ontario)
Retrained Workforce	approx 50%

Location: GTA

Sponsor: Toronto Renewable Energy Co-op (www.trec.on.ca)

Description

An expansion of the successful turbine project on Toronto's waterfront and in partnership with Toronto Hydro at Exhibition Place from the current 0.6 MW capacity with an additional 6.6 MW of capacity using both wind and solar photovoltaics. The current turbine was first urban-based commercial scale wind turbine in North America and the first large-scale wind energy co-operative in Canada was erected in December 2002 and started generating power in January 2003.



Ability to Proceed Upon Funding

Site approval from ExPlace for more turbines and solar PV project. Additional location secured through partnership with Toronto Hydro. Transport Canada and NavCan approvals completed, existing environmental assessment and grid connection from previous turbine. Initial funding in place in order to begin immediately.

The funding of \$7M overcomes cost barriers that are holding up the development of these projects which are planned and ready to proceed.

Proven Track Record

Builders of North America's first urban wind turbine in joint venture with Toronto Hydro at Toronto's Exhibition Place.

Additional Benefits

- Offsetting approx 8,324 tonnes of CO₂ annually
- High visibility
- Urban and Green Energy focus

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Incent Alternative/Renewable Energy: Environmental Tax Proposal to Monetize Capital Cost Allowance Deductions for Assets Eligible for Class 43.1 and the New Accelerated Class 43.2

Issue

Although taxation measures are in place to incent alternative energy production, the incentive does not apply to small producers who are not yet in a current tax paying position. With the economy in a time of relative weakness it is struggling firms and industries – or the new and starting company – that is specifically cut off from making the investments that can secure their success.

Proposal

Stimulate the nascent alternative/renewable energy sector to create jobs by providing monetization via adjusted/new CCA tax measures.

Cost

Determination of foregone revenue.

The proposal would have no substantial costs to the Government. These are deductions that are presently available to taxpayers to the extent that positive income is earned. To the extent that there is no taxable income in the year or the immediate three preceding years, the monetization of these CCA claims is merely advancing the tax benefit to an earlier time frame in order to provide a necessary source of financing which is recaptured upon disposition and serves to advance the taxability of the income stream earlier than it would otherwise be.

Economic Benefits

This measure will increase energy productivity while creating significant new jobs in a sector where Canada seeks to establish competitive advantage. See attached document for further detail.

Environmental Benefits

This proposal would leverage significant new investments in green energy infrastructure. It would also reduce greenhouse gas emissions, promote cleaner air, encourage the development of environmental technologies and generate additional investment in efficient and renewable energy generation.

Investment in a variety of renewable energy production assets are encouraged including:

- Wind turbines.
- Electrical generating equipment that uses only geothermal energy.
- Small hydroelectric facilities.
- Stationary fuel cells.
- Photovoltaic and "active" solar equipment used to heat a liquid or gas.
- Equipment powered by certain waste fuels (e.g. wood waste, municipal waste, biogas from a sewage treatment facility).

- Equipment that recovers biogas from a landfill.
- Equipment used to convert biomass into bio-oil.

See attached document for further detail.

Contact: Craig Stewart, WWF Canada: 613.852.1316

Environmental Tax Proposal to Monetize Capital Cost Allowance Deductions for Assets Eligible for Class 43.1 and the New Accelerated Class 43.2

Overview

To address the current global economic conditions, the Federal Government intends to implement a stimulus package in the Budget to be tabled on January 27, 2009. A stimulus package is unavoidable as the Canadian economy has clearly entered recession and demand from the US has fallen dramatically. As part of a global response to this unprecedented economic downturn, Canada must do its part to ensure that the economy is protected from the various influences on it from the global marketplace.

While the makeup of the stimulus package remains to be defined, it will be important to stimulate the economy through a broad range of instruments including monetary policy, fiscal measures and tax policy. The direct impact of spending through new programs or infrastructure investments has significant limits both in terms of capacity to manage and execute projects and the speed at which jobs can be created. One of the most effective ways to provide stimulus in the economy is to trigger private capital investment that can take advantage of the natural leveraging effect of private equity investment and private sector job creation.

A big challenge in the current financial crisis is the need to get debt financing markets flowing again. If there is no demand to borrow money by bankable projects or entities, these markets will not recover. This challenge is further exacerbated by the high level of anxiety within the financial sector about the quality of potential projects and their anticipated cash flow and hence the reluctance to lend money. As a result, even though central banks are pumping liquidity into the market there is an equally pressing need to create the demand for this liquidity by enabling new equity investments in companies that can leverage additional funding through borrowing.

In its deliberations on the makeup of a stimulus package, the Federal government should favour mechanisms that will enable money to flow quickly, enabling new equity investments by private companies. These investments are naturally leveraged by a factor of 2 or 3 times because this capital can be used to access debt to finance the acquisition of new capital assets. In particular, support for the acquisition of capital assets that are productive, or that improve the competitiveness of the economy should be a priority for any Government stimulus package. It is these investments developed in the private sector that will create the greatest boost for the economy and that will have the most lasting benefit per dollar spent.

An additional challenge in developing an economic stimulus package is to ensure that it is targeted to both encourage and facilitate existing and new enterprise. This is important for industries that are currently in crisis such as the automotive sector. It is also critical in cyclical industries like forestry and mining where strategic investments now will leave us poised to take

advantage of future demand for our resources as prices recover in the coming months and years. It is critical that an economic stimulus package should lead to an increase in productivity – through improved labour and energy productivity.

The easiest place to improve productivity quickly is by improving energy productivity. Investment in energy reduction and alternative energy also helps safeguard the economy from the effects of oil shocks as was experienced this past Summer. These components of our economy have massive potential for growth both domestically and regionally. Given the signals that are beginning to emerge around the Obama economic stimulus package in the United States, green technology and energy productivity will see a lot of activity over the next five years. It will be important for Canadian industry to remain competitive from an energy use perspective and for our innovators to be providing the new green solutions that the global marketplace will by necessity need to acquire.

Improving On a Successful Tool

Fortunately the Federal Government has already defined a specific depreciation class and set of rules to support innovation in highly efficient energy assets, under Class 43.1 and 43.2. However, because of the current economic climate these incentive measures are not usable simply because taxpayers do not have sufficient taxable income to absorb the deductions available under the accelerated capital cost allowance (ACCA) program. Augmenting the tax treatment of such assets by providing for the monetization of these incentive measures is a fast, fair and effective strategy to immediately boost investment in projects across Canada to deliver improved energy productivity. Monetizing the ACCA deduction for assets eligible for Class 43.1 and 43.2 would allow firms that are not yet profitable (including many SMEs in emerging alternative energy segments of the energy sector) or early stage firms to access the necessary capital to sustain their operations and in many cases provide the necessary leverage to lower the cost of capital to both facilitate and expand operations. This will enable Canadian SMEs to make immediate investments in new green energy projects without incurring significant additional costs for the government. This proposal would be in line with proposed changes in the United States, changes that are supported by all segments of the renewable energy market.

This submission contains a proposal to allow corporations that are not in a taxable position to monetize capital cost allowance (CCA) and ACCA within the existing eligibility requirements of the Income Tax Act (ITA) and Regulations. The proposal will stimulate investment within the existing parameters and structure of Class 43.1 and 43.2.

Class 43.1 is a,

special CCA class that focuses on industrial processes. Class 43.1 is designed to encourage taxpayers who either generate and sell electricity or use energy in other

industrial sectors to make efficient use of fossil fuels and increase their use of both alternate and renewable energies.¹

Class 43.2 was,

introduced in 2005 and is available for assets acquired after February 22, 2005 and before 2020. For assets acquired before February 23, 2005, CCA is provided at a 30% declining balance rate under Class 43.1. The eligibility criteria for both Class 43.1 and 43.2 are generally the same except that cogeneration systems that use fossil fuels must meet a higher efficiency standard for Class 43.2—4750 BTUs as opposed to 6000 BTUs. The rate of CCA under class 43.2 is 50% straight line subject to the half year convention.

This proposal would leverage significant new investments in green energy infrastructure leading to the creation of significant numbers of new jobs in the Canadian economy. It would also reduce greenhouse gas emissions, promote cleaner air, encourage the development of environmental technologies and generate additional investment in efficient and renewable energy generation.

Because the mechanism and criteria already exist under the Income Tax Act and Regulations, it is a simple proposal to implement and can be adjusted to stimulate acquisitions in whatever timeframe the Government deems appropriate.

A. Background

As part of its environmental objectives the Government has stated:

The objective of the Government's environmental initiatives is to have the most impact where it matters most – in the places Canadians live, work and play.

The Government of Canada has introduced a number of initiatives over the years impacting on the tax treatment of assets with a goal to reduce energy consumption or the creation of new green energy supply. Budget 2005 introduced a new ACCA class for certain highly fossil-fuel efficient and renewable energy generating equipment to further encourage business to undertake investment decisions in green capital investment more quickly than otherwise would be the case. This class was expanded and extended in duration by the Government in Budget 2007.

Class 43.2 has a CCA rate of 50% for certain Class 43.1 assets acquired on or after February 23, 2005 and before 2020. The assets eligible for this class include cogeneration equipment that would otherwise be included in Class 43.1, if the equipment is part of a high efficiency cogeneration system with an annual heat rate from fossil fuel that does not exceed 4,750 BTUs per kilowatt-hour of electricity production. Those systems which exceed the 4,750 BTU limit

will not enjoy the 50% accelerated rate allowed under class 43.2, and revert to 30% CCA if they reach an efficiency level of 6000 BTU per kilowatt-hour.

¹ <http://www.fin.gc.ca/activty/consult/class431-1e.html>

Investment in a variety of renewable energy production assets are encouraged including:

- Wind turbines.
- Electrical generating equipment that uses only geothermal energy.
- Small hydroelectric facilities.
- Stationary fuel cells.
- Photovoltaic and "active" solar equipment used to heat a liquid or gas.
- Equipment powered by certain waste fuels (e.g. wood waste, municipal waste, biogas from a sewage treatment facility).
- Equipment that recovers biogas from a landfill.
- Equipment used to convert biomass into bio-oil.
- Budget 2007 extended the timeframe and expanded eligibility for class 43.2 to emerging energy sources-wave and tidal energy- and to a broader range of existing applications involving active solar heating, photovoltaics, stationary fuel cells, production of biogas from organic waste and pulp and paper waste fuels. The broader range of applications and emerging energy sources are eligible for ACCA for assets acquired after March 19, 2007 and before 2020.

In financing many capital projects, ACCA is often a significant inducement for investors. Taxpayers in a taxable position receive immediate benefits through additional claimable CCA deductions which reduce taxable income, which affects taxes payable (including installment payments) at both the Federal and Provincial levels and thereby, in turn, generates the financing to offset part of the purchase price of the underlying capital assets.

The incentives the government has provided for business to invest in efficient and renewable energy production equipment through the ACCA are not accessible to all firms acquiring such property and may be counterproductive in meeting the above-noted objective. While flow-through share treatment is available for soft costs associated with renewable energy projects under Class 43.1 and 43.2, it is insufficient for start-up companies to access the financing required after the soft costs have been incurred to justify development of either a pilot project or a commercially viable plant. The lack of incentives for the commercialization stage of project development has been identified as a key drag on Canadian success of our strong research and development capacity. ACCA is only a viable incentive for existing integrated firms that have taxable income to absorb the deductions generated through ACCA. This limits access and frustrates the development of projects where capital is needed most. It also has the undesirable effect of turning small firms with stranded deductions on their books into takeover targets by large taxable companies that have the ability to absorb the business into their own and access the incentives with little cost.

B. Details of the Proposal

In order to stimulate and incent investment in efficient renewable energy production equipment within the existing timelines (or shorter timelines if Government deems them appropriate as a stimulus to advance acquisitions into an earlier timeframe) and requirements of the ITA and Regulations the following details are provided on the mechanics of the monetization proposal:

- Eligible production equipment would be required to meet all existing criteria for eligibility;
- To access the 50% ACCA rate of class 43.2,, eligible equipment would need to be acquired after the announcement date and before 2020 (or such earlier timeframe as the Government deems appropriate) in accordance with existing measures;
- For the eligible taxpayer who is in a tax loss position in any particular taxation year, to the extent that CCA or ACCA deductions would be claimable by the taxpayer who incurred the capital cost in respect of the eligible equipment (if there were sufficient taxable income to absorb the deductions) such amount at the applicable general corporate tax rate would be refundable to the taxpayer in respect of the taxation year in which the claim was made at the time that the taxpayer filed a return of income in respect of that taxation year;
- The amount of CCA claimed would go against the pool of un-depreciated capital cost and thereby foreclose the ability to duplicate CCA claims in the future;
- For any disposition of the property, proceeds will serve to recapture CCA up to the capital cost of the assets in the class.

C. Assessment

Any new tax incentive in this economic climate should only be advanced by Government where it is clear that it can create an immediate and effective stimulus and should be assessed by criteria that determine environmental effectiveness, fiscal impact, economic efficiency, fairness and simplicity. These factors are relevant to ensure that new tax incentives are provided only where they are most likely to make a difference and where the cost can be seen to produce excellent economic returns. Class 43.1 and 43.2 were implemented because they rated highly on these factors; the monetization proposal similarly meets all the relevant factors and simply extends the benefits of these CCA classes to eligible taxpayers who are not in a taxable position.

The Government's goal of stimulating and providing incentives to investments in efficient renewable energy production equipment is enhanced by making the measure accessible to all firms regardless of their taxable position. With the economy in a time of relative weakness this monetization proposal would be a low cost method of providing a lower cost of capital for major acquisitions for struggling firms and industries as well as new and start-up companies.

The tax system is often perceived as a delivery mechanism for certain Government programs without the need for applications and judgment on the merits or scrutiny in delivering grants.

However this mechanism piggy-backs all existing requirements of the ITA and Regulations and is therefore subject to stringent criteria.

In the case at hand, the proposal meets all the factors for assessing its merits:

Effectiveness: *The extent to which a proposed measure influences behaviour towards the desired objective, including consideration of whether the proposal can be targeted effectively.*

The proposal would provide a source of financing that is presently unavailable to that portion of the investor population who do not operate within an integrated company or who are not themselves profitable. It would enable a firm to receive a degree of necessary financing from a guaranteed source and encourage the development of the project by the proponent as opposed to the proponent expending time and effort to seek financing and possibly compromise or lose control of the project. It would provide a “bankable” incentive directly to the taxpayer in the same way as investment tax credits are refundable for scientific research and experimental development to small Canadian controlled private corporations and film tax credits are refundable and bankable by film producers. This would significantly help in reducing the cost of capital for acquisitions of major capital investments.

Fiscal cost: Determination of foregone revenue.

The proposal would have no substantial cost to the Government. These are deductions that are presently available to taxpayers to the extent that positive taxable income is earned. To the extent that there is no taxable income in the year or the immediately three preceding years, the monetization of these CCA claims is merely advancing the tax benefit to an earlier time frame in order to provide a necessary source of financing which is recaptured upon disposition and serves to advance the taxability of the income stream earlier than it would otherwise be. Assuming that a particular project that is being advanced enjoys positive taxable income within three years of the equipment being put into operation, the costs to the Government are indeed minimal.

The proposal could be viewed as generating revenue for the Government when one takes into account the spin-off benefits of employment and the positive impact on the environment. In addition, allowing for the monetization of these CCA claims will improve the after-tax return of these investments. The resulting financial benefit will support additional investment in technologies that contribute to the broader objectives of contributing to a reduction in greenhouse gas and other harmful emissions that cause smog and the diversification of Canada’s energy supply.

Economic efficiency: How would the proposal affect resource allocation decisions in the economy and the impact on economic growth and competitiveness.

The monetization of the CCA claims would provide a source of financing for companies that cannot access conventional sources of capital and ensure that projects are developed where it matters most – in the relevant communities. It will provide highly targeted assistance to exactly the companies that need assistance, building their long-term competitiveness. As a definitive source of capital the proposal, when implemented, will provide the necessary leverage factor to attain additional bank financing.

Fairness: The equity of the proposal in terms of its impact on different businesses, sectors and regions;

The CCA rates for Class 43.1 and 43.2 are special incentive measures to promote a clean environment and invest in efficient and renewable energy production equipment. As such, the

incentives are available to all business sectors in all regions who comply with the requirements under the ITA and Regulations for investment. What is presently unfair is the inability of start-up firms or firms that are not in a taxable position to invest in a pilot project or construction of an energy efficient project because of lack of access to conventional capital markets.

Monetizing CCA for taxpayers in the commercial mainstream will help level the playing field and ensure fairness and access to all eligible participants.

***Simplicity:** Understandable, ease of administration and ease of compliance.*

Because the CCA system and its application are well-established in the tax system, the mechanics for the application of the proposal exists. The only extension that requires legislation is the monetization of CCA claims when they create a negative tax position for any particular taxpayer. Accordingly, the mechanism is well understood, easy to comply with and part of the existing administration.

Does this proposal set a dangerous precedent in that others would seek similar benefits in other areas?

No, it does not set any precedent at all. The government has already singled out renewable energy projects for special treatment. No other class in the CCA system receives accelerated CCA whether at the 30% or 50% rate.

The government has successfully held its ground on the principle that acceleration over and above economic useful lives will only be available for Class 43.1 and 43.2. This proposal on a cost effective basis merely ensures that lack of access to financing or the absence of taxable income will not be an impediment to achieving energy efficiency and clean environment goals.

D. A Proven Track Record

Refundable tax credits have a proven track record of delivering tax efficient encouragement. When the limited partnership structures utilized in the film industry resulted in abuse of the structure and less than 1/3 of the tax benefit ended up in film production, the Government introduced a refundable tax credit which was directed to film producers and eliminated the middle-men in the process. This resulted in a targeted incentive that was effective in delivering support directly to the producer of the film product at a far cheaper cost to the Government than the tax shelter mechanism previously employed. This approach has had success in ensuring a viable and sustainable film industry in Canada with a well established talent pool earning high end salaries resulting in a cultural contribution to Canadian society.

Likewise the current scientific research and experimental development (SR & ED) program evolved from a tax shelter mechanism to a refundable program for qualifying expenditures within certain prescribed limits for the performance of research and development. The essentially similar program resulted in the development and sustainability of start-up firms which helped in the maturing of the high tech sector at a cost significantly less than the previous research and

development program. As a consequence of the SR & ED program, small start-up firms were instrumental in leading the revival of the technology sector.

Under both of the above, the Government saw the merit of rewarding the producer or the performer by allowing access to government tax support whether the taxpayer was in a taxable position or not.

These programs were instrumental in achieving beneficial results, particularly for those that were in need of a source of financing to secure the development of the project.

Similarly, the proposal being advanced here does not breach new ground but rather builds on successful tax programs in a similar way utilizing existing administrative and compliance regimes to deliver a financing benefit in an earlier timeframe than would otherwise be the case and in the process ensures the development of the project in a timely and efficient manner.

E. Conclusion

Providing monetization for CCA and ACCA under class 43.1 and class 43.2 merely levels the playing field by providing access to the CCA tax incentive measures to all firms whether tax paying or not in any particular taxation year. The cost to government of facilitating access is minimal because large integrated taxpayers are positioned to reap the benefits by acquiring the start-ups or partnering with them. Allowing direct access through monetization ensures a made-in-Canada solution by not forcing small start-ups to give up equity to finance development of their projects. As a result this is a classic win-win scenario where small Canadian controlled private corporations benefit, the government benefits by providing a relatively inexpensive but efficient and effective stimulus to the economy and the overarching objective of environmental well being for Canada is promoted.

As stated earlier, this proposal on a cost effective basis will ensure that lack of access to financing or the absence of taxable income will not be an impediment to achieving energy efficiency and clean environmental goals. But just as important, it is a mechanism that will provide the necessary stimulus to the economy and will generate immediate rewards.

A Remote Community Wind Energy Incentive Program

- Wind energy represents a significant opportunity for Canada's northern, remote and Aboriginal communities who are largely dependent on diesel-powered electricity generation that is expensive, polluting and leaves communities at the whim of import prices and long-term availability.
- Wind energy projects in Canada's northern, remote and Aboriginal communities have not been able to benefit from Federal power production incentive programs for wind energy because the incentive level is not high enough to address the higher costs associated with wind energy production in the North
- The Canadian Wind Energy Association (CanWEA) has worked with a wide range of experts and stakeholder to design a Remote Community Wind Incentive Program that has garnered the support of many Northern organizations and communities. It would provide assistance in two ways:
 - A grant to cover 5% of capital costs for wind energy projects (large cities and industry) and 10% of capital costs for wind energy projects in remote villages, and
 - A power production incentive of 2 cents / kWh (for large cities and industry) and 10 cents / kWh for remote villages that would be paid for the first 10 years of operation
- A Remote Community Wind Incentive Program should be implemented as a **specific set-aside to Northern and remote communities through the ecoENERGY for Renewable Power Program.**
- A Remote Community Wind Incentive Program would cost \$61 million over 18 years (an annual cost of \$3.4 million / year), and would achieve the following:
 - 34 new wind energy projects (55 MW of capacity) in remote, Northern and Aboriginal communities;
 - \$300 million dollars in total diesel fuel savings in participating communities;
 - 10% (128 MWh) of electricity demand met by wind energy in remote communities;
 - 77 kilotonnes of CO₂e emission reductions per year, equivalent to taking more than 12,600 cars off the road;
 - foster the development of mid-range Canadian wind turbine technology, an industry in which Canada is poised to be a world leader.



Canadian built wind turbines currently operating in Alaska

Transit



www.greenbudget.ca



David
Suzuki
Foundation



issues brief

Improved Rail Infrastructure Between Vancouver and Border at White Rock, BC

Description:

Project would enable high-speed passenger services between Seattle and Vancouver. Work would include a new rail bridge over Fraser River, improved railbed twin tracking and measures to restrict pedestrian access.

Cost:

- Refurbishment of railbed on 35 miles of track from Vancouver train station to US border: cost estimate: \$20 million
- Replacement of New Westminster rail bridge over Fraser River to allow more capacity: 2007 estimate of \$110 million from Gateway Council.

Rough estimate of total: ~\$130, with significant potential for cost sharing with rail companies, Province of BC

Economic Benefit:

Short term: construction jobs. Long term: improved tourism and trade links with Washington state and US.

Environmental Benefit:

Faster and more frequent rail service promises to shift Seattle-Vancouver travellers to low-emission rail transport rather than be car or air. There are plans to eventually extend high-speed rail down the Pacific Coast to California, greatly increasing the scope of benefits.

Construction of the Evergreen Line in North East Metro Vancouver

Description:

Commuter rail line in densely travelled greater Vancouver area.

Cost:

The Federal government has already announced \$67 million in funding, but there is currently a \$170 million funding shortfall.

Economic Benefit:

This is the most pressing transit investment in the Metro Vancouver region. This will provide huge time commute benefits to NE Metro Vancouver residents

Environmental Benefit:

This should allow for a large mode shift from cars to transit for many commuters in NE MetroVancouver.

Rapid Bus Component of the BC Transit Plan – in MetroVancouver, Victoria and Kelowna

Description:

Federal funding for the capital investments is needed to provide new high-capacity express-bus services traversing the metropolitan areas of Metro Vancouver, Victoria and Kelowna, as laid out in the BC Transit Plan.

Cost:

- Total estimated cost of rapid bus network in BC Provincial Transit Plan (2008): \$1.2 Billion
- Total federal funding requested to fund the \$11.1 Billion plan: \$3.1 Billion. (28%)
- Estimate of federal funding required for implementation of Rapid Bus network = 28% of \$1.2 Billion: \$336 Million

Economic Benefit:

Manufacturing and construction jobs. Low-cost provision of transit that as past experience shows has been readily adopted by users in Vancouver. Rapid bus service will provide huge time commute benefits to many throughout Metro Vancouver, Victoria and Kelowna.

Environmental Benefit:

This should allow for a large mode shift from cars to transit for many commuters.



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2. Sustainable Transportation: Revitalizing Rail in Nova Scotia

Project Name: Revitalizing Rail in Nova Scotia

Description: The proposed \$60 million project would fund a rail shunt from the container terminals to Burnside (\$15 million), a commuter rail service in Halifax (\$30 million), and extend rail service to Woodside via Windsor Junction (\$15 million). These costs would include rail line upgrades, rail car acquisitions and improvements, and an updated signaling system.

Since the advent of the automobile, Canada's rail infrastructure has often been overlooked in favor of building highways. However, recognizing the environmental benefits of transporting freight and commuters by rail, it is imperative that Nova Scotia's rail network be reinvigorated. If Canada and Nova Scotia are to meet their climate change commitments, a shift to more sustainable transportation modes is required. This is consistent with Premier MacDonald's commitment at the New England Governors / Eastern Canadian Premier's Conference in August to double the mode share of sustainable transportation for passengers.

The federal government has committed to reducing greenhouse gas emissions by 20 per cent from 2006 levels by 2020¹ and the province has committed to reducing emissions to 10 per cent below 1990 levels by 2020². If these goals are to be met, both the nation and the province need to invest in rail infrastructure. Confederation was built on the idea of a railroad linking the coasts, in these times of ecological crisis this vision should be renewed, even if the concept from coast to coast only refers to linking the shorelines of the province of Nova Scotia.

Issue focus: Climate through transportation systems.

Province: Nova Scotia

City/Cities: Halifax Regional Municipality with connections to Windsor Junction and other rail links.

¹ Environment Canada. (2008). Turning the Corner: Detailed Emissions and Economic Modelling. Retrieved from http://www.ec.gc.ca/doc/virage-corner/2008-03/571/p1_eng.htm on December 16th, 2008.

² Province of Nova Scotia. (2007). Environmental Goals and Sustainable Prosperity Act. Retrieved from http://www.gov.ns.ca/legislature/legc/bills/60th_1st/1st_read/b146.htm on December 16th, 2008.

Project & Funds would primarily be administered by: Province of Nova Scotia in conjunction with municipal units.

Expected environmental benefits: Reduction in greenhouse gas emissions by up to 80 per cent. For freight movement the energy expended by rail is 1/6th that of tractor trailers. Using a rail shunt to move containers between the terminals in Halifax and Burnside Industrial Park removes up to 800 tractor trailer movements per day from downtown Halifax. This will save greenhouse gas emissions, but also affects noise levels, livability of the area and business operations. For passengers the exact greenhouse gas savings depend on the type of vehicles that would be replaced by travel rail travel. The uptake rate of rail over private vehicle will also be a consideration.

In 2004, emissions from cars and trucks in Nova Scotia totaled 4210 kilotonnes of ghg emissions (gasoline automobiles: 1490 kilotonnes; light duty trucks: 1500 kilotonnes; heavy duty trucks: 1220 kilotonnes). If rail transit alleviates 15-30% of traffic on Nova Scotia highways, this project could save up to 80% of emission or between 631.5-1263 kilotonnes per year. This is equivalent to 10.5-21 kilotonnes saved per million dollars spent.

Expected economic benefits: This project can tie into directly to the Atlantic Gateway initiative. If done by truck, increased freight movements will require additional expenditure on roads. A twinning of the 100 Series highways may be needed if rail were not used. The province is currently looking at the feasibility of converting the rail cut in South End Halifax to a truckway. The expense of such a project could reach \$100m. The rail projects proposed here would alleviate the need for the truckway. Traveling by train could also result in significant savings for car drivers and business travelers.

Cost: \$60 million dollars for all three rail developments: \$15 million for rail shunt from the container terminals to Burnside; \$30 million for commuter rail service in Halifax; and \$15 extending that rail service to Woodside via Windsor Junction would cost an additional \$15m. These costs would include rail line upgrades, rail car acquisitions and improvements, and an updated signaling system.

Timeline: Five years.

Water Infrastructure



www.greenbudget.ca



David
Suzuki
Foundation



issues brief

Increase Funding for the *Plan of Action for Drinking Water in First Nations Communities*

Description:

The 2006 Report of the Expert Panel on Safe Drinking Water for First Nations recommended “one last big push” in federal spending on water and wastewater systems on reserves to fix high-risk systems and address the root causes of persistent water quality problems in First Nations communities. Immediate investments should support improvements in infrastructure and distribution systems, training and certification, monitoring and testing, technical support, and governance capacity.

Cost:

Budget 2008 allocated \$330 million over 2 years; an additional \$300 million investment in 2009 would accelerate progress and lay the groundwork for sustainable systems.

Economic Benefit:

This investment will create jobs related to infrastructure development and ongoing monitoring, operations, and governance. As the expert panel noted, it will also help stimulate other kinds of business activity that depend on reliable access to clean drinking water and high quality water infrastructure.

Environmental Benefit:

While the number of high-risk water systems in First Nations communities has declined, Health Canada’s most recent progress report identified 85 systems with “major deficiencies in several aspects” that may be prone to failure. As of November 30, 2008, Drinking Water Advisories were in effect for 103 First Nations communities. Ensuring adequate and safe drinking water in First Nations communities is an urgent environmental health priority.



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3. Infrastructure and Biodiversity Protection: Petitcodiac River Restoration Project

Description: The project aims to restore the river to natural conditions by removing the Petitcodiac causeway and replacing the structure with a bridge. This project has been thoroughly evaluated and received all necessary approvals. Please see project website at <http://www.qnb.ca/0099/petit/index-e.asp>.

Issue focus: Nature, water, biodiversity, species at risk

Province: New Brunswick

City/Cities: Moncton and communities adjacent to the river.

Expected environmental benefits: The project will result in improved fish passage and aquatic habitat (including endangered Atlantic salmon), wetlands restoration, water quality, sediment transport, tidal exchange, and navigation.

Expected economic benefits: Immediate direct and indirect benefits to employment in construction, trades, and engineering, materials procurement. Longer-term economic benefits will be gained by tourism, recreation and transportation sectors.

Costs: \$48 million federal funding, combined with the already-committed provincial share of \$20 million towards the total project cost of \$68 million.

Timeline: According to the Petitcodiac River restoration project plan, the current project timeline will proceed in three phases: preliminary construction 2008-2010, gate opening and monitoring: 2010-2012, causeway removal & bridge construction 2012-2016. The Petitcodiac River Project website describes these phase as follows:

- Phase 1 involves planning, remediation work and site preparation to prevent erosion. This includes shoreline and erosion protection up and down the river channel, waterline relocation, drainage improvements, and dyke and aboiteaux construction. Once this work is complete, the gates of the causeway will be opened in the spring of 2010.
- Phase 2 involves allowing the river to flow freely as a tidal river. With the gates open, the seasonal response will be monitored for up to two annual cycles as the river, fish population, and the surrounding habitat adjust to the change.
- Phase 3 involves the construction of a 280-metre-long bridge. The new structure will have four lanes of traffic, and will tie into the existing Findlay Boulevard and approach ramps on the Riverview side of the Petitcodiac. Building the new bridge

will take three to four years to complete, depending on federal/provincial funding support and seasonal weather conditions. Once the new bridge is completed, the existing gates structure will be removed to allow for an eventual river opening of between 72 and 225 metres in width.



December 19, 2008

Priority Green Stimulus Water Infrastructure Projects in the Great Lakes Basin

The following information presents water infrastructure projects in the Great Lakes Basin that could be implemented within the next 12 to 18 months and will create economic stimulus alongside realising environmental benefits.

Attached is a prioritised list of projects in seven Areas of Concern (AOC), and specific levels of direct investment that would be instrumental to their delisting. There are significant data gaps in calculating a total dollar amount for infrastructure needs in some municipalities. We have therefore chosen to focus, on an interim basis, on the seven AOCs with the most reliable information available.. We have also attached a recent press release and backgrounder from the Great Lakes Saint Lawrence Cities Initiative (GLSLCI). These documents make a concise case for infrastructure investment now that will meet short-term economic goals as well as position the cities of the region for ongoing success in the clean, green economy of the future. The GLSLCI will develop more comprehensive figures, which we intend to communicate to you early in the New Year.

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Attached:

- Table 1: Green Budget Coalition Schedule of Green Stimulus Wastewater Infrastructure Projects in the Great Lakes
- Great Lakes and St. Lawrence Cities Initiative news release, "Canadian and U.S. Great Lakes and St. Lawrence Mayors Say Urgent Investment in Public Infrastructure and Creating Jobs is Key to Economic Recovery"
- Great Lakes and St. Lawrence Cities Initiative media backgrounder

Table 1: Green Budget Coalition Schedule of Green Stimulus Wastewater Infrastructure Projects in the Great Lakes Basin

Project name	Description	Province	City/site	Implementing level of Government	Expected environmental benefits	Expected economic benefits	Initial Cost
City of Hamilton sewage treatment plant upgrades	Upgrade Sewage Treatment Plant and address combined sewer overflows (CSOs)	ON	Hamilton	Municipal	-Decrease overall water pollution from chemicals and pathogens - Reduce contaminated sediment deposition -Protect sensitive near-shore ecosystems and aquatic habitat, beaches and recreational areas	Direct and indirect benefits to employment in construction, trades, and engineering, materials procurement Direct benefits to tourism, recreation , real estate and transportation sectors	Total: \$600 Million
Toronto storm sewer treatment	Storm sewer control and treatment projects are planned in the City of Toronto at 5 locations	ON	Toronto	Municipal	As above	As above	\$20 Million
City of Windsor sewage treatment plant upgrades	Upgrades to Windsor's Lou Romano Plant	ON	Windsor	Municipal	As Above	As Above	\$184 Million
Windsor combined sewer overflow upgrades	Address CSOs in the City of Windsor	ON	Windsor	Municipal	As Above	As Above	\$30 Million
Niagara Falls combined sewer overflow upgrades	Address CSOs in Niagara Falls	ON	Niagara Falls	Municipal	As Above	As Above	\$13 Million

Welland combined sewer overflow upgrades	Address CSOs in Welland	ON	Welland	Municipal	As Above	As Above	\$13-50 Million
Belleville stormwater management plan	Upgrades to the Belleville Stormwater Project	ON	Belleville	Municipal	As Above	As Above	\$3 Million
Red Rock sewage treatment plant upgrades	Upgrades to the sewage treatment plan in Red Rock	ON	Red Rock	Municipal	As Above	As Above	\$1 Million

References:

1. Unless otherwise noted, *Status of Restoration Activities in Great Lakes Areas of Concern A Special Report*, IJC, (2003).
http://www.ijc.org/php/publications/html/aoc_rep/english/report/index.html
http://www.ijc.org/rel/boards/annex2/aoc_map.html

2. Information pertaining to projects in the City of Toronto has been made available by city staff



NEWS RELEASE

Canadian and U.S. Great Lakes and St. Lawrence Mayors Say Urgent Investment in Public Infrastructure and Creating Jobs is Key to Economic Recovery

December 12, 2008, Toronto – Canadian and U.S. mayors passed a resolution [www.glslcities.org/news.htm] today that calls on the Canadian and U.S. national governments to prepare an urgent economic recovery package that accelerates public infrastructure investments, creates jobs and promotes a healthy and sustainable environment and economy in the Great Lakes and St. Lawrence region.

“Canadian and U.S. Mayors agree that we need massive investments in public infrastructure that will both create jobs in the short term, and build essential infrastructure for a greener, cleaner economy into the future,” said Toronto Mayor David Miller, Founding Canadian Chair of the Great Lakes and St. Lawrence Cities Initiative (the Cities Initiative). “The need is urgent and time is of the essence.”

The mayors of the Cities Initiative Board of Directors, gathering for their mid year meeting in Toronto, shared information on proposed economic recovery packages in Canada and the U.S. There was particular interest in President-elect Barack Obama’s repeated commitment to invest in green infrastructure and innovation.

“We need to lead by example by calling on our national governments to partner with cities to invest in infrastructure projects like sewer, water and transportation systems,” said Chicago Mayor Richard M. Daley, Founding U.S. Chair of the Cities Initiative. “These investments will not only benefit our region, but the Great Lakes and St. Lawrence economy, one of the most important regional economies in the world.”

At their meeting, the mayors examined ways to expedite the funding cities need to start construction on infrastructure projects, thus creating new jobs, in early 2009. Mayors agreed that a key to moving quickly was getting funding directly to cities, where projects are ready to be delivered without bureaucratic delays.

“Getting the money out the door and shovels in the ground by next year is the key to stimulating our local and national economies,” said Thunder Bay Mayor Lynn Peterson, Chair of the Cities Initiative. “There is concern amongst Canadian municipalities that the federal Building Canada process cannot deliver fast enough. We need a new process, more like the gas tax process, to get money to cities as quickly as possible.”

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Lynn Peterson, Mayor of Thunder Bay, Chair

Richard M. Daley, Mayor of Chicago, Founding United States Chair

David Miller, Mayor of Toronto, Founding Canadian Chair



“The Quebec government has prioritized water and wastewater projects for infrastructure investment. This is very positive for St. Lawrence municipalities,” said Salaberry-de-Valleyfield mayor Denis Lapointe. “Now we must work together to get these financial resources in the hands of municipalities to create jobs that are needed for both our economic recovery and environmental improvement.”

Founded in 2003, the Great Lakes and St. Lawrence Cities Initiative is a binational coalition of mayors and other local officials that works actively with federal, state, provincial, tribal and first nation governments to advance the protection and restoration of the Great Lakes and the St. Lawrence River. With leadership from Mayor Richard M. Daley of Chicago, Founding U.S. Chair, and Mayor David Miller of Toronto, Founding Canadian Chair, the Cities Initiative has grown to include sixty-one member municipalities from across the Basin.

-30-

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Media Backgrounder

URGENT INVESTMENT IN INFRASTRUCTURE KEY TO ECONOMIC RECOVERY, JOB CREATION, IN GREAT LAKES-ST. LAWRENCE REGION

Why invest in green cities in the Great Lakes and St. Lawrence region?

- According to the Brookings Institution, the Great Lakes and St. Lawrence region is the second largest economy in the world. Investing in this region will drive national economic recovery in both countries.
- The Great Lakes-St. Lawrence region is home to 40 million Canadians and Americans. Quebec and Ontario, and the eight Great Lakes states represent 58% and 28% of the Canadian and U.S. Gross Domestic Product (GDP) respectively, representing a regional economy worth over \$4 trillion.
- The Great Lakes and St. Lawrence system is the most significant source of fresh drinking water not only in North America but in the world and is estimated to contain 20 percent of the world's freshwater resources. As water resources continue to dwindle in other parts of the world, the region will become an even more attractive place to live and conduct business.
- With a declining manufacturing base and a strong research community, the region has an available trained workforce and innovation capacity to transform itself into a world leader in the development and application of green technology and environmentally-sustainable public infrastructure. A rapid economic recovery package from both Canada and the United States could serve as a catalyst for this transformation.
- Investing in public infrastructure delivers direct and immediate results, creating jobs and other spin off benefits. Each year, municipalities carefully plan many infrastructure projects. An economic stimulus will allow these projects to move ahead immediately. Municipalities are experienced money managers. Legislation dictates that municipal governments are not permitted to run a deficit.



How much investment is needed for economic recovery in the region?

- The International Monetary Fund (IMF) has called on governments to invest the equivalent of approximately 2% of GDP into their economies to stimulate economic recovery.
- For the Canadian and U.S. Great Lakes and St. Lawrence regional economy, this would be equivalent to investments worth approximately \$86 billion (2% of approximately \$4.3 trillion regional economy). This is an investment of approximately \$15 billion in Ontario and Quebec and approximately \$71 billion in the U.S. states bordering the Great Lakes.
- The Brookings Institution calculated that the return on investment in protecting and restoring the Great Lakes could be at least 2:1.
- The Canadian federal government has pledged to expedite existing infrastructure funding that, combined with provincial and municipal matching dollars, would result in an \$8 billion investment nation-wide. It is estimated that every billion dollars worth of investment will create tens of thousands of jobs.

What are the region's infrastructure needs?

- Financing water, wastewater and transportation infrastructure is a major challenge for municipalities. Public investment has been on the decline in the last thirty years, but investment needs to maintain, upgrade and expand infrastructure have been on the rise.
- Local governments are investing over \$15 billion annually to protect and restore the Great Lakes and St. Lawrence resource, based on a GLSLCI-Great Lakes Commission survey of 2006 investments. State, provincial and federal government investments are less than 10% of what local governments are investing.
- Despite this massive annual investment by municipalities, it is not keeping up with need. The U.S. Environmental Protection Agency estimates the U.S. wastewater infrastructure deficit is over \$200 billion on a national level, with \$73 billion of that in the eight Great Lakes states alone. In Canada, the immediate national water infrastructure needs are estimated to be over \$30 billion according to a recent Federation of Canadian Municipalities study, with a larger overall infrastructure deficit of \$123 billion. Environment Canada estimates the wastewater infrastructure deficit is between \$10 and \$20 billion over the next fifteen years.



What type of investments could advance green cities while stimulating job creation?

By directing investments strategically at public infrastructure that promotes environmental sustainability and job creation in the Great Lakes and St. Lawrence region, the combined efforts of Canadian and US Governments could make significant advancements in:

1. Reducing combined sewer overflows and stormwater run-off, particularly associated with climate change and increased storm activity, which contribute to Great Lakes and St. Lawrence pollution.
2. Expanding public transit to reduce traffic congestion and greenhouse gas and smog emissions.
3. Modernizing ports and other transport hubs to allow for multi-modal transfer of cargo to reduce truck traffic and increase the use of more energy efficient modes of transport including rail and shipping on the lakes.
4. Improving the energy efficiency of public buildings through retrofits of existing public buildings and innovative design of new buildings.
5. Reducing the energy intensity of water and wastewater treatment and distribution systems through optimization of plants, measures to reduce water loss in the distribution system, and stormwater runoff controls and aggressive water conservation measures to reduce overall volumes of water to be treated.
6. Significantly expanding renewable energy projects that reduce a municipality's dependence on carbon-based energy sources like coal.

The Great Lakes and St. Lawrence Cities Initiative is a bi-national coalition of 61 mayors and other local officials that works actively with federal, state, provincial, tribal, and first nation governments and other stakeholders to advance the protection, restoration and promotion of the Great Lakes and St. Lawrence River basin. For more information, please visit our website at www.glslcities.org.

Wetlands



www.greenbudget.ca



Proposal: A Green Infrastructure and Economic Stimulus Program for Canada
A Wetlands for Tomorrow Proposal
Submitted to: The Government of Canada

NEED: To stimulate the Canadian economy through employment while addressing national priorities regarding a cleaner environment, sustainable communities, and local infrastructure needs.

ISSUE: An investment in Canada's wetland infrastructure will boost local, provincial and national economies. This investment will also improve water quality, address climate change through carbon sequestration, enhance biodiversity, and benefit Canadians by maintaining a healthy environment and providing recreational opportunities. Ducks Unlimited Canada (DUC) is well positioned to deliver the investment and leverage additional resources from partners who share an interest in protecting and improving Canada's natural capital.

PROPOSAL: DUC proposes an investment of **\$135 million by the Government of Canada** in green infrastructure important to the conservation of Canada's wetland resources. This investment would create an estimated 1275 person-years of employment over a five year period beginning in early 2009. The total investment required to complete the necessary work is \$192 million with the remaining \$57 million being contributed by DUC and its partners. Priority investments are:

- 1) Restoring lost or degraded wetlands in Canada – this investment will be used to restore 57,000 acres of wetlands in 4,300 locations across Canada.
 - a. Investment required: \$79 million
 - b. Proposed Government of Canada contribution: \$56 million
 - c. Proposed DUC and partner contribution: \$23 million

- 2) Upgrading existing wetland infrastructure – improved operations and maintenance of 7,400 wetland projects encompassing 1,045,000 acres will ensure that benefits from wetland projects continue to flow from capital investments.
 - a. Investment required: \$113 million
 - b. Proposed Government of Canada contribution: \$79 million
 - c. Proposed DUC and partner contribution: \$34 million

The investment of \$135 million builds upon the twenty-year partnership under the North American Waterfowl Management Plan (NAWMP) and complements the investment the Government of Canada made to the conservation of ecologically sensitive lands in 2007 through the Natural Areas Conservation Program. The proposal will increase Canada's natural capital asset base over and above the accomplishments of these programs. DUC is poised to begin

investing this funding in February 2009 and anticipates that more than half of the total investment would occur in the first two years of the funding arrangement.

POSITIVE OUTCOMES: Investing in Canada's wetland resources provides multiple benefits and contributes to the long-term stability of Canada's natural assets while providing much needed short to mid-term economic stimuli. Benefits include:

- 1) **Employment:** Wetland restoration and management requires local contractors for design, construction, operations, and repair; as well as professional employment for engineering and ecological consultants. This proposal is expected to generate 850 years of direct employment across Canada and another 425 years of indirect employment.¹ Much of this investment will occur in rural communities and will support small to medium sized companies that do not have the extensive equipment for large infrastructure programs (e.g. road development).² This will increase the diversity of business benefiting from wetland conservation infrastructure investments. DUC utilizes a competitive bid process for contract work to ensure access by all qualified contractors.
- 2) **Carbon Sequestration:** Restoration and maintenance of wetlands provides air quality benefits and mitigates greenhouse gases through carbon sequestration, helping Canada to meet objectives within the Climate Change Action Plan. Sequestering carbon through this program demonstrates strong leadership on climate change.
- 3) **Improved Water quality:** Recent DUC-led research demonstrates that wetlands provide substantial water quality benefits and align with government priorities regarding water quality, such as those identified for Lake Winnipeg.
- 4) **Biodiversity Conservation:** Wetlands provide habitat for up to 600 species of wildlife in Canada, including many species at risk, and an investment in these areas will help meet objectives set under the United Nations Convention on Biological Diversity
- 5) **Engaged Partners:** DUC is a member of the Green Budget Coalition (GBC), which comprises twenty of Canada's leading environmental and conservation organizations. Investment in wetlands will contribute to the objectives identified in the GBC's *Recommendations for Budget 2009* that focus on climate, water, and nature. This investment will help enable the Government of Canada to meet its commitment to migratory bird conservation as identified in the North American Waterfowl Management Plan.

¹ This was calculated based on investment in construction, land negotiations, consulting services, and DUC management costs. Conservative estimates were used: on average each \$250,000 of investment creates one direct employment year and half a year of indirect employment.

² See Project Map in Appendix 1.

- 6) **Enhanced Recreation:** Wetlands provide numerous recreational opportunities that benefit the tourism industry. For example, birdwatching is a significant and growing activity that will benefit from improved wetland infrastructure. Opportunities for hunting, fishing, and ecotourism will also improve resulting in increased economic activity.

IMMEDIATE ACTIONS: The work on many individual projects can begin as early as February 2009 and will provide immediate economic stimuli to numerous small to mid sized businesses. The following are examples of the types of projects where work could begin in 2009:

- 1) ***Wetland Restoration in Southern Ontario.*** In southern Ontario, 75 per cent of original wetlands have been destroyed or degraded and wetlands continue to disappear as a result of agricultural, urban and industrial land use pressure. The *Ontario Wetland Restoration Program* will invest in projects which provide tangible community actions that restore the lost functions and values that wetlands provide society. Delivery of this project will focus at the scale of the watershed which aligns with existing activities and plans of Conservation Authorities in Ontario. DUC's wetland restoration program is a voluntary program with a multitude of options that caters to the diverse desires of Ontario landowners. Key program components include simple projects like plugging a drainage ditch to restore the hydrology of a small wetland, up to large scale projects including water control structures and dykes. The program will also focus on developing new innovative restoration techniques and opportunities that cater to the needs of landowners, land managers and surrounding communities. Provision of a diversity of project options will ensure that investments in wetland restoration are dispersed to a broad spectrum of small to medium size Ontario based companies. **The *Ontario Wetland Restoration Program* will restore 660 wetlands (21,600 acres) over five years at a cost of \$12.8 million.**

Historic and ongoing wetland loss has significant negative impacts on water quality and quantity, flooding, biodiversity, agriculture and outdoor recreation (fishing, hunting, trapping, bird watching, ecotourism). Restoration of degraded or destroyed wetland systems in Southern Ontario will help mitigate these environmental issues. For example, wetland restoration is an essential component of recovery plans for species at risk like the Least Bittern.

- 2) ***Cumberland Marsh Restoration Project:*** The Cumberland Marsh is integral to the Saskatchewan River Delta (SRD), which straddles the Saskatchewan-Manitoba border and is the largest inland freshwater delta complex in North America. The initial investment in Cumberland Marsh, which took place in 1974, has begun to exceed its useful life expectancy and action must be taken to protect the integrity of this ecosystem. An investment in upgrading this infrastructure is vital to sustain the ecological integrity of Cumberland Marsh. This will help to maintain the traditional way of life for area

residents, engage them in this work, and insure the area's long term environmental sustainability.

The immediate investment in the *Cumberland Marsh Restoration Project* requires \$19.8 million over five years and will generate 44 years of construction employment. Much of this will be heavy equipment operators throughout the winter months and will include the use of locally-available labour. This will provide major economic stimulation in the Village of Cumberland House, Saskatchewan, and the Cumberland House Cree Nation.

The SRD is located within the Western Boreal Forest, an important area for waterfowl continentally. With thousands of square miles of wetlands and river channels, the Cumberland Marsh provides critical habitat for 40 species of mammals, over 120 species of birds and a high diversity of plants. The benefits to restoring the Cumberland Marsh wetlands are numerous and include water filtration, economic benefits through tourism, hunting, trapping and fishing, and critical habitat for hundreds of wildlife species. The most significant benefit is to the Government of Canada's Climate Change Action Plan through carbon sequestration and the carbon storage capacity of this area. The managed basins of the Cumberland Marsh project in conjunction with the protected areas adjacent to the managed basins store an estimated 133,000,000 tonnes of carbon. DUC research indicates that losing just 10 per cent of the carbon stored in the managed wetland areas of the Cumberland project would be equal to the annual CO₂ emissions of 40 Large Final Emitters.³ This project is already moving through the Environmental Impact Assessment process.

- 3) ***Restoring small wetlands in Prairie Canada:*** Wetlands are among the Earth's most productive ecosystems but unfortunately are also one of the Earth's most threatened ecosystems. Estimates on wetland loss indicate that up to 70 per cent of wetlands have been lost or degraded in settled areas of Canada.

An investment of \$45 million in wetland restoration in Prairie Canada would be used to restore approximately 10,000 acres of small wetlands in cooperation with partnering agricultural landowners. This would reduce phosphorus and nitrogen loading to our waterways, increase carbon sequestration capacity of the Canadian landscape, and help address the need of migratory birds. In addition, this program will provide benefits to farmers and ranchers through financial compensation for the ecological goods and services restored wetlands provide. Many of these benefits will accrue to cattle producers who have forage land where wetland restoration helps meet their production needs.

³ Large Final Emitters [LFEs] are those facilities that emit the equivalent of 100,000 tonnes (100 kT) or more of carbon dioxide annually.

Wetland loss is significantly deteriorating Canada's aquatic environments. For instance, algae blooms on many Canadian lakes, such as Lake Winnipeg, are a symptom of increased nutrients delivered from upstream watersheds. In addition, the Prairie Pothole Region of Canada is the single most important area for breeding waterfowl in North America.

DUC recently completed Phase I of a multiphase research project to determine the impacts of wetland loss and associated drainage activity in the Broughton's Creek watershed located in south-western Manitoba. The results demonstrate that wetlands provide benefits in terms of water quality and carbon sequestration and that their continued loss deprives Canadians, now and in the future, of these benefits. This research determined that wetland loss since 1968 in the Broughton's Creek watershed has had negative environmental implications including a 31 per cent increase in nitrogen and phosphorus load from the watershed, a 41 per cent increase in sediment loading and the release of 34,000 tonnes of carbon. This extrapolation is to a small portion of the Canadian Prairies – but the results are substantial. The numbers would be staggering if the impact of all wetland loss was determined.

- 4) ***Commune de Baie-du-Febvre Wetland Restoration:*** Commune de Baie-du-Febvre is located in the Lac St-Pierre floodplain of the Saint-Lawrence River and is a critical wetland within this coastal system. Commune de Baie-du-Febvre was initially restored by DUC in the early 1990s. Over time, the wetland infrastructure has deteriorated and the wetland is no longer fulfilling its wildlife or societal potential. **An investment of \$850,000 over three years will restore nearly 1,000 acres of wetlands and associated uplands.** Already, \$280,000 has been invested in the first phase of the project with the balance planned for 2009 – 2010.

Lac Saint-Pierre is a Ramsar-designated world class wetland which has also been designated as a UNESCO World Biosphere Reserve. Lac Saint-Pierre hosts thousands of migratory birds and is one of the most important staging areas in Quebec. A key attribute of the Commune de Baie-du-Febvre is the largest Great Blue Heron rookery in North America. This wetland is also recognized as supporting significant biodiversity, including waterfowl and other bird species, over twenty species of fish, as well as amphibians and mammals. The wetland is a focal point for local naturalists, while supporting consumptive activities like hunting, trapping and fishing.

In addition, declines in recreational and commercial fisheries on Lac St. Pierre have generated an urgent need to restore coastal wetlands that provide critical spawning and nursery habitat for fish. As such, the project will be co-managed for waterfowl and fish. The wetland restoration project will improve fish access, improve the value of the wetland habitat for fish, waterfowl and other wetland species, take advantage of existing dykes and rebuild water controls to reduce future impacts of sediment run-off from adjacent uplands.

WHY Ducks Unlimited Canada: As a large, private non-government organization (NGO), our organization is well positioned to assist the Government of Canada in addressing the nation's green infrastructure given an existing staff complement of over 400 professionals who have experience in wetland restoration and operations across Canada. DUC's staff and offices are located predominantly in smaller communities where they generate significant economic activity and are well-positioned to do more.

DUC manages an inventory of over 8,000 conservation projects across Canada that provide environmental and recreational benefits to Canadians now and into the future. DUC, in partnership with Federal, Provincial, Territorial and Municipal governments and other conservation minded NGOs, has aggressive plans under the NAWMP to expand this wetland infrastructure. Building on DUC's staff compliment and expertise can help increase wetland infrastructure investment over time by leveraging funding from within Canada and abroad.

DUC has experience in partnership development and delivery of partnership goals. The North American Waterfowl Management plan (NAWMP) is a partnership between the Government of Canada, Provincial and Territorial governments and Canadian NGO's. Since 1986 this partnership has invested \$1.2 Billion in conservation of Canada's wetlands and associated habitats. The majority of these revenues (52%) have originated from U.S. sources, largely thru DUC and its U.S. affiliate for the conservation of migratory bird habitat. DUC and its Canadian partners have secured 7.1 million acres across Canada under the NAWMP. The success of NAWMP in Canada is a testimony to DUC's capacity to deliver large scale, science-based conservation programs in the interest of broader partnerships.

DUC is supported by more than 173,000 Canadians from all regions and walks of life, who share an interest in the development and maintenance of conservation infrastructure and who can help leverage additional funding from other partners such as other governments, corporations and individuals.

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Ducks Unlimited Canada (DUC) is a private non-profit organization dedicated to the conservation, restoration and management of Canada's wetlands and their associated upland habitats for the benefit of waterfowl, other wildlife, and people.

APPENDIX 1 – DUC Wetland Restoration Projects (2003-2008)

