

British Columbia Ministry of Transportation's Environmental Enhancement Fund

Achieving Environmental Sustainability for Transportation Infrastructure

**for Transportation Association of Canada Environmental
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Aerial photo of Inland Island Hwy. through Morrison
Creek watershed.

Inset photos of salmon spawning on constructed
spawning platform and constructed rearing pond in a
secured environmental area done by BC Ministry of
Transportation along Morrison Creek.



Ministry of
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Abstract

As environmental agencies move from a "hands-on" review and permitting role to one of no permitting or approvals based on the acceptance of Best Management Practices and an auditing role, the concern is: has environmental due diligence and sustainability been met on projects and operational activities?

In 2002 the provincial Ministry of Environment (MoE) (formerly Water, Land and Air Protection) announced that they would no longer be reviewing and permitting projects or operational activities under their legislation. In order to meet fiduciary obligations and environmental "due diligence," the British Columbia Ministry of Transportation (MoT) developed a Memorandum of Understanding with MoE which covered four areas: communication and approval process, enforcement resolution procedures, operational best management practices and the creation of an environmental enhancement fund. This paper discusses the Environmental Enhancement Fund, its concept, rationale, project implementation, partnering initiatives and project successes.

Although environmental mitigation and compensation measures are still an important and required aspect of highway projects, particularly based on CEAA/DFO "no net loss" objective, environmental benefits and opportunities can be lost when formal review and permitting are no longer required. Consequently, the MoT offered to establish a \$ 2 million a year enhancement fund that would be tied to the Ministry's capital plan to meet and exceed environmental sustainability of its infrastructure projects. The program was to run for two years. The MoE stewardship personnel and environmental and project managers from MoT for the three regions of the province met to develop lists of environmental enhancement projects. These were prioritized and costs estimated. The projects and their costs were entered into a data base registry with an equitable distribution, where possible, for the three regions. Initially there were more projects identified that in total exceeded the \$2 million. In year one 16 projects were identified at a total cost of \$3.8 million. In year two 70 projects were identified at a cost of \$ 4.0 million.

A diverse range of environmental enhancements were undertaken in both years. A large number of fisheries access and habitat improvement projects involved partnerships with DFO, First Nations and Stream-Keeper groups. In addition, a number of property acquisitions of environmentally sensitive lands were achieved through partnering with groups such as: Nature Trust, Ducks Unlimited, Land Conservancy and the Pacific Salmon Foundation. Examples of a number of these projects highlight the successful ability of the MoT and its partners in meeting and exceeding environmental sustainability objectives for transportation infrastructure. The Environmental Enhancement Fund offers a model for transportation agencies and municipal governments to ensure environmental due diligence on capital projects

INTRODUCTION

The provinces of Alberta and Ontario in the 1990's moved to reduce provincial environmental permitting and approvals for government and private sector projects. Conversely, the Federal Government through CEAA and Fisheries Act, Species at Risk Act and other regulatory initiatives through Health Canada are imposing more permitting (authorizations) and approval mechanisms.

In 2001, British Columbia elected the provincial liberal party who indicated that they were going to reduce the number of ministries and "red tape". In 2002 the Ministry of Environment Lands and Parks (MELP) was split into three operating agencies: Ministry of Water Land and Air Protection (MWALP), Ministry of Sustainable Resource Management (MSRM) and Land and Water BC (LWBC). The only agency issuing permits (Section 9 permit under the Water Act) would be LWBC.

The MWALP, who was responsible for Waste Management Act, Wildlife Act and the Fisheries Protection Act, was to develop operating protocols to meet regulatory functions under these acts. However, the MWALP still retained the Enforcement Division and officers could still lay charges under these acts and the Federal Fisheries Act. The concern was how could an agency like MoT through its capital, rehab and maintenance activities meet environmental due diligence in the absence of permits and approvals and not be charged should an environmental offence occur. The solution was to enter into a Memorandum of Understanding which committed the MoT to a communication process, develop an enforcement resolution

process and table a set of “Best Management Practices” that the ministry and its agents would adhere to in their daily operations.

As the Ministry was in discussions with MWALP on the MOU and the development of the operating protocols and the suite of Best Management Practices, the MWALP enforcement staff charged the Ministry, using the Federal Fisheries Act, with damage to riparian habitat from brushing a 120 km section of Highway 16. Ironically the brushing was to provide improved sight distance for motorists on a section that has one of the highest moose/vehicle collision rates in the province!

This incident highlighted that, although no approvals or permits were now required for the brushing operation, damage to habitat can easily occur when no controls or specifications are in place. Consequently the MoT executive, in discussion with their counterparts in MWALP, decided to create the Environmental Enhancement Fund, a \$2 million dollar investment, to ensure that the MoT would provide mitigation and compensation for Ministry operations.

In order to cover the transition period until the BMPs were endorsed and in use, the Fund was identified only for a two year period. The announcement of the Fund came late within the first fiscal year and in order to identify projects that could benefit from these expenditures, a major set of regional meetings were required between staff from both MoT and MWALP.

Development of the FUND

Senior managers of the Stewardship Branch of MWALP and MoT’s Environmental and project managers’ met in Victoria, Vancouver, Kamloops and Prince George to discuss projects that met the required criteria. These were: projects that could be directly tied to a project; in the immediate vicinity or as an extension of a project, or indirectly tied to capital construction based on working with MWALP and other stakeholders to refine the list, determine funding eligibility, estimate costs, assess technical feasibility and prioritize projects. Additional projects were developed with MWALP and other interested parties (e.g., DFO, environmental stewardship groups). The projects were evaluated through various factors including:

1. Environmental benefit.
2. Links to MOT Capital Projects.
3. Technical feasibility.
4. Cost-effectiveness (bang-for-the-buck).
5. Potential good news stories and goodwill considerations.
6. Partnering with environmental agencies, environmental stewardship groups, etc. (including in-kind contributions of \$ labour, technical resources).

Projects from both Ministries were developed and compiled into a provincial listing. Many projects were rejected because the time frame for funding was insufficient. These were for the most part were culverts to be replaced by bridges for fish access, but the time frame to enter into contracts for design, tender and construction exceeded the funding envelope. Dyking and rip-rap works were also rejected because they provided no long-term environmental habitat benefits.

Although it was expected that the number of projects would fall well within the \$2 million allocated, the accepted number of projects totalled \$4 million!

The number of acceptable projects were again revisited and ranked as to their value both from an economic investment, value in habitat development or protection or stewardship values and, where possible, an equitable distribution in the number and dollars spent on projects within each of the 3 regions of the province. The projects were then placed into a database by type, region and costs.

The three general types of EEF projects all have tangible environmental benefits:

1. **Environmental property acquisitions** – preserve and conserve sensitive habitats, including wetlands, riparian corridors, marine foreshores and streams, to benefit fisheries, drinking water supplies, recreational uses and to promote community stewardship.
2. **Works to improve/restore upstream fish passage at MOT roads** – reduce streambed scour, erosion and sediment inputs at road crossings, improves valuable fish populations, such as salmon, that act as sentinels for healthy watersheds, and promotes community stewardship.
3. **Construction of fish and wildlife habitat enhancement works and other fish and wildlife projects** – includes construction of habitat ponds and channels, and Roosevelt elk relocation. Improves valuable fish and wildlife populations, promotes community stewardship, forges and strengthens partnerships, provides excellent positive communications and includes riparian planting projects and bank stabilization works to provide fish and wildlife habitat and create healthier watersheds.

The MoT executive previously endorsed carry-over of unspent EEF \$ from the \$2m fiscal 03/04 allocation. Therefore, the 04/05 allocation was \$3.073m (\$2m allocation plus \$1.073m carry-over). The 04/05 projects are primarily upgrades for fish passage at MoT road crossings and fish and wildlife habitat enhancement works, the majority of which have to be completed by the end of the summer during the in-stream work window.

As initial EEF projects were completed, partnerships strengthened and largely through word-of-mouth communications, numerous proposed projects flooded-in resulting in a running list of 50-100 potential projects available at any time.

Completed projects as of October, 2004 are listed in Table 1. Over 30 projects were completed including 21 in progress for a total of 51 projects.

Table 1-Completed Projects as of 2003/04

COMPLETED ENVIRONMENTAL ENHANCEMENT FUND PROJECTS			
Completed Environmental Properties Projects - Watershed Protection and Conservation			
Project Description	Region	Status	Water Resources Benefits
1. Codd Island (Pitt Meadows) Property Acquisition	1 - SCR	Complete.	Preserves sensitive freshwater inter-tidal habitat along Alouette River and Blaney Bog.
2. Mud Bay (Surrey) Conservation Covenant	1	Complete.	Manages area for conservation purposes, includes restrictions on future buildings and protects streamside riparian area.
3. Englishman River (Parksville) Block 602 Property Acquisition	1	Virtually complete.	Protects and preserves wetlands, riparian corridor and fish habitat along sensitive river (on endangered rivers list, drinking water supply source).
4. Miscellaneous Van. Island (e.g., blocking accesses to habitat areas)	1	Complete.	Prevent off-road access into sensitive habitats, including watercourses, Craig Creek, Englishman River, Kennedy Lake.
5. Okanagan River (Oliver) Property Acquisition (Nemes property)	2 – SIR	Complete.	Protects and preserves wetlands, riparian corridor and fish habitat along sensitive river (on endangered rivers list).
6. Okanagan River (Oliver) Property Acquisition (Quintal property)	2	Complete.	Protects and preserves wetlands, riparian corridor and fish habitat along sensitive river (on endangered rivers list).
Completed Fish Habitat Restoration Projects – Benefits to Fish and Stream Corridors			
7. Fraser Valley (Abbotsford) Fish Hatchery Fisheries Channel	1	Complete.	Benefits fish.
8. Anderson Pond on Chilliwack River Culvert Installation	1	Complete.	Benefits fish.
9. Coghlan Creek (Langley) Fish Passage	1	Complete.	Benefits fish and includes bank stabilization

	and Bank Stabilization.			measures
10.	Yorkson Creek (Langley) Fish Passage Restoration	1	Complete.	Benefits fish and includes bank stabilization measures.
11.	Trent River (Courtenay) Side-channel and Estuary Eco-gift	1	Side-channel complete, eco-gift	Benefits fish and includes re-vegetation program (riparian planting). Preserves estuary
12.	Englishman River In-stream Habitat Works (<i>Steelhead Recovery Plan</i>)	1	Complete.	Benefits fish and localized bank stabilization.
13.	Chemainus River Instream Habitat Works (<i>Steelhead Recovery Plan</i>)	1	Complete.	Benefits fish and some localized bank stabilization.
14.	Quatse (Port Hardy) Instream Habitat Works (<i>Steelhead Recovery Plan</i>)	1	Complete.	Benefits fish and some localized bank stabilization.
15.	Campbell River Spawning Gravel Placement (<i>Steelhead Recovery Plan</i>)	1	Complete.	Benefits fish.
16.	Englishman River Bank Stabilization and Fish Habitat Restoration	1	Complete.	Includes bank stabilization measures to prevent further sediment inputs.
17.	Kerr Creek (Ucluelet) Debris Jam Removal and Fish Habitat Restoration	1	Complete.	Benefits fish, eliminates alluvial fan of aggraded material blocking fish passage and reduces erosion and sediment inputs.
18.	Big Bend (Gold River) Fish Passage and Habitat Complexing at Hwy. 28	1	Complete.	Benefits fish and includes bank stabilization measures.
19.	Goldstream (Langford) Off-channel Habitat Pond	1	Complete.	Benefits fish.
20.	Bonsall Creek (Duncan) Stream Restoration at Hwy. 1	1	Complete.	Benefits fish and includes bank stabilization measures.
21.	Ayum Creek (Sooke) Side-channel and Estuary Enhancement	1	Complete.	Benefits fish.
22.	Hilton Springs (Comox) Fish and Wildlife Channel	1	Complete.	Benefits fish.
23.	Alice Lake (Port Alice) Tributary Off-channel Pond	1	Complete.	Benefits fish.
24.	Little Qualicum Instream Habitat Works (<i>Steelhead Recovery Plan</i>)	1	Complete.	Benefits fish and some localized bank stabilization.
25.	Stream north of Campbell River near Elk Falls Mill Fish Passage Restoration	1	Complete.	Benefits fish and includes bank stabilization measures to prevent further sediment inputs.
26.	Menzies Creek (Campbell River) Fish Passage Restoration at Hwy. 19	1	Complete.	Benefits fish and includes bank stabilization measures to prevent further sediment inputs.
27.	Black Creek (Merville) Spawning Enhancement	1	Complete.	Benefits fish.
28.	Mills Creek (Port McNeill) Fish Passage Restoration at Hwy. 19	1	Complete.	Benefits fish.
29.	Mariner's Pool Cowichan River (Duncan) Bank Stabilization	1	Complete.	Stabilizes an eroding bank and improves fish habitat along Heritage River.
30.	Coal Creek (Courtenay) Sidechannel	1	Complete.	Benefits fish.
31.	McKay/Tum Tum Creek (Revelstoke) Culvert Stabilization	2	Complete.	Reduce erosion and sediment inputs.
32.	Vaseaux Wildfire Restoration	2	Complete.	Helps to stabilize exposed slopes and reduce erosion.
33.	Lava Creek (New Aiyansh) Culvert Replacement With Bridge	3 – NR	Complete.	Benefits fish and reduces streambed and bank erosion.

ENVIRONMENTAL ENHANCEMENT FUND PROJECTS IN-PROGRESS			
Project Description	Region	Status	Water Resources Benefits
1. Stoney Creek (Abbotsford) Riparian Planting and/or Willband Creek Fish Habitat Enhancement	1	Pending.	Enhances riparian zone and benefits fish.
2. Silverdale Creek Wetlands Mission (Property Acquisition)	1	Property negotiations underway	Protects and preserves wetlands, riparian corridor and fish habitat along Silverdale Creek.
3. Sigurd Creek Floodplain (Squamish) Property Acquisition	1	Property negotiations	Protects and preserves wetlands riparian corridor and fish habitat along Sigurd Creek



		underway.	and Squamish River.
4. Craig Creek (Parksville) Riparian Area Acquisition	1	Property negotiations underway.	Protects and preserves wetlands riparian corridor and fish habitat along Craig Creek.
5. Somenos Marsh (Duncan) Property Acquisition	1	Property negotiations underway.	Protects and preserves wetlands riparian corridor and fish habitat along Bings Creek and Somenos Lake.
In-progress Fish Habitat Restoration Projects – Benefits to Fish and Stream Corridors			
Project Description	Region	Status	Water Resources Benefits
6. Puntledge River (Courtenay) Powerhouse Side-channel Intake	1	Pending.	Benefits fish.
7. Puntledge River Bear James Park Side-channel Slotted Screen Installation	1	Pending.	Benefits fish.
8. Tappen Creek (Salmon Arm) Fish Passage	2	Completion in 2005.	Benefits fish and includes bank stabilization measures to prevent further sediment inputs.
9. Chisholm Creek Culvert Replacement	2	Under construction.	Benefits fish and reduces streambed scour and bank erosion.
10. Purser Creek Culvert Replacement	2	Assessment underway.	Benefits fish and reduces streambed scour and bank erosion.
11. Michel Creek bank stabilization	2	Assessment underway.	Completion with fiscal 2006 funding.
12. Lardeau River bank stabilization	2	Assessment underway.	Completion with fiscal 2006 funding.
13. Slocan River bank stabilization	2	Assessment underway.	Completion with fiscal 2006 funding.
14. Coy Creek Rest Area Interpretive Signage	2	MWLAP to complete.	
15. Summit Lake Toad Mitigation	2	Assessment underway.	Wildlife project.
16. Radium Hill Bighorn Sheep Mitigation	2	\$ provided to MWLAP to complete.	Wildlife project.
17. Hwy. 97B Culvert Retrofit	2	Underway.	Benefits fish and includes bank stabilization measures.
18. Powerline Creek (Kitimat) Culvert Replacement With Bridge	3	Completion scheduled for fall 2005.	Benefits fish and reduces streambed scour and bank erosion with culvert replacement.
19. Stoddart Creek (Fort St. John) Culvert Replacement with Bottomless Arch	3	Completion scheduled for 2005.	Benefits fish and reduces streambed scour and bank erosion with culvert replacement.
20. Agnes Creek (Queen Charlotte Islands) Culvert Replacement	3	Completion scheduled for 2005.	Benefits fish and reduces streambed scour and bank erosion with culvert replacement.
21. Other Queen Charlotte Islands Fish Passage Restoration	3	Under assessment with 1 or more sites to be completed by spring 2005.	Benefits fish and reduces streambed scour and bank erosion with culvert replacement.

Table Notes:

1. Many projects have multiple partners who contributed in-kind to the projects (e.g., \$, technical and administrative resources, materials, labour, equipment, etc.).
2. Of the in-progress projects, some will be complete by spring 2005, others may fall through or be deferred and substitute projects may develop.
3. Fisheries projects generally benefit wildlife by providing more diverse wildlife habitat and additional nutrients (e.g., decomposing salmon carcasses) for animals and plants.
4. *Italics represent projects supported by MOT Culvert Retrofit Program.*

As of March 2006, about 80 environmental projects will have been delivered over three fiscal years. Of these completed projects:

- about 12 are acquisitions of high fish and wildlife value habitats for protection in-perpetuity with long term conservation management and title held by stewardship groups or the BC Ministry of Environment,
- 45-50 are upstream fish passage restoration to allow fish like migratory salmon access underutilized habitats upstream of ministry road crossings,
- 25-30 on-the-ground and in-stream construction of fish and wildlife habitat features such as rearing ponds and spawning channels, and,
- There are miscellaneous projects, like developing mitigation for a threatened toad population that crosses a highway during the adult breeding and juvenile out-migration periods and two Roosevelt elk relocations to capture elk vulnerable to high speed collisions and relocate them to more remote areas to augment existing populations or restore populations to their historic range.

Land Acquisition Projects

As mentioned earlier, the announcement of the Fund and development of the project list late in the year meant that good deal of the \$2 million could not be spent by the first targeted fiscal year-end deadline. Although most of the projects are fish and fish habitat related, land acquisition opportunities provided a great opportunity to provide long-term sustainability. It was decided that the MoT needed to partner with environmental NGOs such as, The Nature Trust of BC, Ducks Unlimited Canada and The Land Conservancy of BC in order to purchase and protect valued habitat.

Areas of the province targeted for the acquisitions in the Okanagan, Lower Mainland and east coast of Vancouver Island are under ever rising development pressures from community expansion and growth, which threaten the valuable wetlands, riparian areas, fish habitat and other environmental areas extremely sensitive to human infringement.

The NGOs retain title to the environmental properties and manage them for conservation purposes in-perpetuity. For many of the acquisitions, other funding and in-kind contributions up to 25 times the value of the MOT contribution was secured by the NGOs providing a high leveraged funding ratio of the ministry's funding.

During the first year of the EEF in fiscal 03/04, six environmental property projects were implemented based on fair market appraisals of the property values. These projects total \$927,000. The Habitat Conservation Trust Fund, an arms-length agency of MWLAP, provided complimentary administrative services to help complete these projects, a valuable in-kind contribution. About twelve habitat acquisitions have been completed in the first three years of the program.

The following describes two of the land acquisitions, the value and contribution to long-term protection:

1. The Quintal Property near Oliver in the Okanagan



- The acquisition of 16 hectares of wetland and riparian habitat adjacent to the Okanagan River and Hwy. 97 south of Oliver will now be managed and protected as an important conservation corridor
- It is adjacent to three other protected properties that tie into the South Okanagan Wildlife Management Area comprising almost 305 hectares of contiguous floodplain habitat
- It is a significant feeding and breeding ground for 25 species of waterfowl and habitat for many species of concern
- The project cost is \$270,000 with a MOT EEF contribution of \$240,000 for the acquisition
- Another acquisition along the Okanagan River, the Nemes property, was secured through financial support of the EEF with property negotiations provided by The Land Conservancy
- The Habitat Conservation Trust Fund (HCTF) is providing in-kind administration for all of the property acquisitions secured by the EEF, projected to be \$1.125m of EEF \$ by March 31, 2005

2. Englishman River, Parksville on Vancouver Island

- The Englishman River near Parksville is designated as one of the most endangered rivers in BC because of threats and impacts from urbanization, water extraction, water quality degradation and habitat loss
- A very active multi-partner Watershed Recovery Plan team exists for the Englishman River to help protect and restore it
- It is the initial watershed targeted by the Pacific Salmon Foundation's Strategic Salmon Recovery Plan to help rebuild the fish stocks that are present in it, including all of the pacific salmon species and steelhead

- The recovery plan has been initiated and the acquisition of Block 602, entailing 173 hectares of the river valley and riparian corridor, is a major effort to restore the watershed
- This acquisition is led by The Nature Trust and dovetails well with other EEF projects, including steelhead recovery plan efforts and DFO habitat restoration work on the lower river that are occurring to help re-build the once vigorous fish stocks
- The property acquisition costs are \$1.5m with a MOT EEF contribution of \$125,000 and many other partners are making substantial financial and other valuable contributions.



Other Program Successes

- Silverdale Wetlands Habitat Acquisition 45 hectares, Mission, completed July 2005. The highest priority habitat acquisition ranked by MOE for the MOT EEF. Total acquisition cost \$1.287m, MOT EEF contribution \$180k, other partners are District of Mission, Ducks Unlimited, the Canadian Wildlife Service and provincial Habitat Conservation Trust Fund (HCTF).

Sigurd Creek and Squamish River 71 ha floodplain Habitat Acquisition, completed March 2005. The number two priority habitat acquisition ranked by MOE lower mainland for the MOT Environmental Enhancement Fund. Total acquisition cost \$140k, MOT EEF contribution \$100k and MOE land acquisition \$40k contribution plus in-kind property negotiations.

Cathedral Grove MacMillan Provincial Park Addition 141ha Habitat Acquisition, Port Alberni, completed March 2005. Total acquisition cost \$2.5m, MOT EEF contribution \$100k, MOE land acquisition \$2m, The Nature Trust of BC \$400k.

Greater Georgia Basin Steelhead Recovery Plan (GGBSRP) instream habitat restoration projects totalling \$180k on Silverhope Creek and Karen Creek on the lower mainland and Quinsam, Quatse, Englishman, Chemainus and Little Qualicum Rivers on Vancouver Island completed summer 2005. MOE is the technical lead and the BC Conservation Foundation is the delivery partner. HCTF is the largest funder of the GGBSRP (\$500k for fiscal 06).

Quinsam River Cascades Fish Passage Project, Campbell River, completed summer 2005. This fall, thousands of pink salmon that would not have otherwise been able to navigate the cascades made it through because of the newly modified cascades and accessed the upper 14km of habitat upstream, providing valuable salmon recruitment and nutrient enrichment for the ecosystem. MOT EEF contribution is \$10k to \$70k project.

Mamquam River, Squamish rewatering, sidechannel and groundwater channel project. MOT EEF contribution of \$100k on ~\$275k project, initiated summer 2005, currently ongoing and planned to be a multi-year habitat restoration project.

Roosevelt elk relocation projects initiated on Vancouver Island and the Sunshine Coast (occurring over this fall/winter) in partnership with MOE and local fish and game clubs.

Instream gravel placement to create about 12,500m² of new spawning habitat in the Campbell River and Puntledge River on Vancouver Island with numerous other funding and in-kind project partners, completed summer 2005. MOT contribution of \$40k of ~\$350k total cost of projects.

Taylor River groundwater and off-channel restoration projects ~3,000m², Port Alberni, completed summer 2005. MOT is the lead for this project. MOT EEF costs of \$75k.

Approximately 20* fish passage restoration projects on MOT managed stream crossings (e.g., culvert retrofits or replacements) across BC to allow fish to access underutilized habitats that had been cutoff by poorly designed or installed road crossings completed this year. *Includes some projects supported by MOT's environmental Culvert Retrofit Program.

The Pacific Salmon Foundation (PSF), made a presentation to MOT for the EEF at the PSF's Nov. 12 Fundraising Dinner in Nanaimo attended by about 250-300 people to acknowledge MOT fish habitat projects, including those partnered on with the PSF. The PSF is highly respected and the leading non-profit society in BC dedicated to restoring salmon stocks through private, corporate and government donations and partnerships.

Employee Recognition and Positive Communications

The EEF has, because of the partnering with agencies and NGO groups, resulted in environmental stewardship recognition for the Ministry and its employees.

A recognition luncheon was hosted by the Deputy Minister's from MoT and MoE to recognize the success of the program and to invite many of the staff and NGO partners throughout the province who have worked and contributed time and funds to make many of these projects a success. The lunch afforded the Deputy Minister of Transportation to announce the fund continuing into 2006/07.

The Manager of the EEF, Sean Wong a fisheries biologist, who has been the singular reason for getting the projects compiled, valued, scheduled and completed received recognition at the Deputy Minister's luncheon. Sean not only does all the paper work, contracts and reporting but works in the field where he can. On many of the projects on Vancouver Island and the Lower Mainland he has personally spent many hours in the field directing construction activities and ensuring quality management. Sean has been recognized by the Nature Trust, Ducks Unlimited (with their Platinum (Teal) award) and recently at a banquet hosted by the Pacific Salmon Foundation.

In December 2005 thirteen employees of the British Columbia Ministry of Transportation and Highways have been recognized by Fisheries and Oceans Canada (DFO) for their diligence in improving fish habitats while constructing and maintaining public roadways in northern B.C. The following is from a DFO press release...

"The 13 staff members—who work in a large area around Prince Rupert, Kitimat, Terrace, Smithers and Queen Charlotte Islands—have received an Industry Award from DFO's North Coast Area office. The award is presented to individuals and companies that demonstrate excellence and innovation in protecting fish habitat. The award also recognizes the importance of proactive habitat protection, a preferred option to Fisheries Act enforcement.

The Ministry staff worked in partnership with DFO and stewardship groups to apply innovative techniques to improve or replace existing road culverts to allow fish to pass through them and reach upstream habitat. In many cases, the existing culverts had been longstanding barriers to fish”.

Several positive media reports and communications, including environmental stewardship signage and posting of web-based information, resulted through various partnership projects. Ministry news releases and other government information was provided to the public, but more significantly, several communications were done working with stewardship groups and regulatory agencies and many stewardship organizations promoted much of the work accomplished.

Future

The future looks bright. The success of the EEF to-date and the never-ending number of environmental enhancements that require funding or partnering has led the executive of the ministry to temporarily extend the program and submit a business case to the Transportation Capital Board to continue the EEF as a base program. If approved, \$2 million will be allocated every fiscal for on-the-ground environmental enhancements linked to the ministry’s highway infrastructure, including an ambitious capital program leading up to the Vancouver 2010 Winter Olympics and beyond.

This guarantee of funding will allow many projects that require a 2-4 year assessment, design and construction schedule to be brought into the program. Also, having more discretion with the funding will assist many project managers and NGO groups in “improving their projects.

The EEF is an innovative concept that meets:

- “Due diligence” when permits and approvals are no longer required.
- One of the BC government’s five great goals “*to lead the world in sustainable environmental management, with the best air and water quality, and the best fisheries management, bar none.*”
- Setting an exemplary standard in environmental stewardship for a major development proponent. Delivering high value, on-the-ground EEF projects linked to the highway infrastructure, in a cost-effective manner through private and public partnerships that restore and conserve BC’s wild natural resources go a long way in achieving this.
- Provides opportunity to work with agencies, First Nations and NGO groups to ensure environmental sensitive areas and habitats are protected, repaired and functioning on a sustainable basis; and,
- Develops trust and excellent working relationships with agency personnel and the NGO groups

In summary, the EEF is a concept and model that can be adopted by transportation agencies and municipalities across Canada. The long-term benefits exceed the initial costs and consequently transportation projects can truly be said to be environmentally sustainable through the BC Ministry of Transportation’s Environmental Enhancement Fund.