

Interest Rate = 10%
 Inflation Rate = 2%

Year	Capital Cost	Operation and Maintenance Costs					Repairs and Upgrading	Total
		Chlorination	U.V.	Electrical	Sludge Removal	Operator		
2001	\$51,634.07	\$1,000.00	N/A	\$3,249.38	\$1,000.00	\$10,000.00		\$66,883.45
2002	\$51,634.07	\$1,020.00	N/A	\$3,314.37	\$1,020.00	\$10,200.00		\$67,188.43
2003	\$51,634.07	\$1,040.40	N/A	\$3,380.65	\$1,040.40	\$10,404.00		\$67,499.52
2004	\$51,634.07	\$1,061.21	N/A	\$3,448.27	\$1,061.21	\$10,612.08		\$67,816.83
2005	\$51,634.07	\$1,082.43	N/A	\$3,517.23	\$1,082.43	\$10,824.32		\$68,140.48
2006	\$51,634.07	\$1,104.08	N/A	\$3,587.58	\$1,104.08	\$11,040.81	\$1,700.28	\$68,470.61
2007	\$51,634.07	\$1,126.16	N/A	\$3,659.33	\$1,126.16	\$11,261.62		\$68,807.34
2008	\$51,634.07	\$1,148.69	N/A	\$3,732.52	\$1,148.69	\$11,486.86		\$69,150.81
2009	\$51,634.07	\$1,171.66	N/A	\$3,807.17	\$1,171.66	\$11,716.59		\$69,501.14
2010	\$51,634.07	\$1,195.09	N/A	\$3,883.31	\$1,195.09	\$11,950.93		\$69,858.49
2011		\$1,218.99	N/A	\$3,960.98	\$1,218.99	\$12,189.94	\$9,386.26	\$18,588.91
2012		\$1,243.37	N/A	\$4,040.20	\$1,243.37	\$12,433.74		\$18,960.69
2013		\$1,268.24	N/A	\$4,121.00	\$1,268.24	\$12,682.42		\$19,339.90
2014		\$1,293.61	N/A	\$4,203.42	\$1,293.61	\$12,936.07		\$19,726.70
2015		\$1,319.48	N/A	\$4,287.49	\$1,319.48	\$13,194.79		\$20,121.23
2016		\$1,345.87	N/A	\$4,373.24	\$1,345.87	\$13,458.68	\$2,072.64	\$20,523.66
2017		\$1,372.79	N/A	\$4,460.70	\$1,372.79	\$13,727.86		\$20,934.13
2018		\$1,400.24	N/A	\$4,549.92	\$1,400.24	\$14,002.41		\$21,352.81
2019		\$1,428.25	N/A	\$4,640.91	\$1,428.25	\$14,282.46		\$21,779.87
2020		\$1,456.81	N/A	\$4,733.73	\$1,456.81	\$14,568.11		\$22,215.47
Present Worth	\$317,270.68	\$9,739.01	\$0.00	\$31,645.75	\$9,739.01	\$97,390.13	\$5,170.69	\$470,955.28

Summary

Total Present Worth	\$470,955.28
Total Present Worth with Taxes	\$541,598.57
Engineering	\$93,425.75
Contingency	\$54,159.86
Total	\$689,184.18
Annual Costs Over 20 Year Life	\$80,951.57

Hydro-Logic (CASS) - SBR

Interest Rate = 10%
Inflation Rate = 2%

Year	Capital Cost	Operation and Maintenance Costs				Repairs and Upgrading	Total
		Chlorination	U.V.	Electrical	Sludge Removal		
2001	\$59,035.55	N/A	\$150.00	\$1,850.11	\$1,000.00	\$10,000.00	\$72,035.66
2002	\$59,035.55	N/A	\$153.00	\$1,887.11	\$1,020.00	\$10,200.00	\$72,295.66
2003	\$59,035.55	N/A	\$156.06	\$1,924.85	\$1,040.40	\$10,404.00	\$72,560.86
2004	\$59,035.55	N/A	\$159.18	\$1,963.35	\$1,061.21	\$10,612.08	\$72,831.37
2005	\$59,035.55	N/A	\$162.36	\$2,002.62	\$1,082.43	\$10,824.32	\$73,107.28
2006	\$59,035.55	N/A	\$165.61	\$2,042.67	\$1,104.08	\$11,040.81	\$73,388.72
2007	\$59,035.55	N/A	\$168.92	\$2,083.52	\$1,126.16	\$11,261.62	\$73,675.78
2008	\$59,035.55	N/A	\$172.30	\$2,125.19	\$1,148.69	\$11,486.86	\$73,968.59
2009	\$59,035.55	N/A	\$175.75	\$2,167.70	\$1,171.66	\$11,716.59	\$74,267.25
2010	\$59,035.55	N/A	\$179.26	\$2,211.05	\$1,195.09	\$11,950.93	\$74,571.88
2011		N/A	\$182.85	\$2,255.27	\$1,218.99	\$12,189.94	\$75,729.27
2012		N/A	\$186.51	\$2,300.38	\$1,243.37	\$12,433.74	\$76,164.00
2013		N/A	\$190.24	\$2,346.39	\$1,268.24	\$12,682.42	\$76,487.28
2014		N/A	\$194.04	\$2,393.31	\$1,293.61	\$12,936.07	\$76,817.03
2015		N/A	\$197.92	\$2,441.18	\$1,319.48	\$13,194.79	\$77,153.37
2016		N/A	\$201.88	\$2,490.00	\$1,345.87	\$13,458.68	\$77,496.44
2017		N/A	\$205.92	\$2,539.80	\$1,372.79	\$13,727.86	\$77,846.37
2018		N/A	\$210.04	\$2,590.60	\$1,400.24	\$14,002.41	\$78,203.29
2019		N/A	\$214.24	\$2,642.41	\$1,428.25	\$14,282.46	\$78,567.36
2020		N/A	\$218.52	\$2,695.26	\$1,456.81	\$14,568.11	\$78,938.71
Present Worth	\$362,749.82	\$0.00	\$1,460.85	\$18,018.25	\$9,739.01	\$3,156.13	\$492,514.19

Summary

Total Present Worth	\$492,514.19
Total Present Worth with Taxes	\$566,391.32
Engineering	\$97,702.50
Contingency	\$56,639.13
Total	\$720,732.96
Annual Costs Over 20 Year Life	\$84,657.29

Hydro-Logic (Schreiber) - BioReel

Interest Rate = 10%
Inflation Rate = 2%

Year	Capital Cost	Operation and Maintenance Costs					Repairs and Upgrading	Total
		Chlorination	U.V.	Electrical	Sludge Removal	Operator		
2001	\$51,774.05	N/A	\$150.00	\$7,884.00	\$1,000.00	\$10,000.00		\$70,808.05
2002	\$51,774.05	N/A	\$153.00	\$8,041.68	\$1,020.00	\$10,200.00		\$71,188.73
2003	\$51,774.05	N/A	\$156.06	\$8,202.51	\$1,040.40	\$10,404.00		\$71,577.02
2004	\$51,774.05	N/A	\$159.18	\$8,366.56	\$1,061.21	\$10,612.08		\$71,973.08
2005	\$51,774.05	N/A	\$162.36	\$8,533.90	\$1,082.43	\$10,824.32		\$72,377.06
2006	\$51,774.05	N/A	\$165.61	\$8,704.57	\$1,104.08	\$11,040.81	\$2,208.16	\$72,789.12
2007	\$51,774.05	N/A	\$168.92	\$8,878.66	\$1,126.16	\$11,261.62		\$73,209.43
2008	\$51,774.05	N/A	\$172.30	\$9,056.24	\$1,148.69	\$11,486.86		\$73,638.13
2009	\$51,774.05	N/A	\$175.75	\$9,237.36	\$1,171.66	\$11,716.59		\$74,075.41
2010	\$51,774.05	N/A	\$179.26	\$9,422.11	\$1,195.09	\$11,950.93		\$74,521.44
2011		N/A	\$182.85	\$9,610.55	\$1,218.99	\$12,189.94	\$12,189.94	\$23,202.34
2012		N/A	\$186.51	\$9,802.76	\$1,243.37	\$12,433.74		\$23,666.39
2013		N/A	\$190.24	\$9,998.82	\$1,268.24	\$12,682.42		\$24,139.71
2014		N/A	\$194.04	\$10,198.79	\$1,293.61	\$12,936.07		\$24,622.51
2015		N/A	\$197.92	\$10,402.77	\$1,319.48	\$13,194.79		\$25,114.96
2016		N/A	\$201.88	\$10,610.83	\$1,345.87	\$13,458.68	\$2,691.74	\$25,617.26
2017		N/A	\$205.92	\$10,823.04	\$1,372.79	\$13,727.86		\$26,129.60
2018		N/A	\$210.04	\$11,039.50	\$1,400.24	\$14,002.41		\$26,652.20
2019		N/A	\$214.24	\$11,260.29	\$1,428.25	\$14,282.46		\$27,185.24
2020		N/A	\$218.52	\$11,485.50	\$1,456.81	\$14,568.11		\$27,728.94
Present Worth	\$318,130.82	\$0.00	\$1,460.85	\$76,782.38	\$9,739.01	\$97,390.13	\$6,715.18	\$510,218.38

Summary

Total Present Worth	\$510,218.38
Total Present Worth with Taxes	\$586,751.14
Engineering	\$101,214.57
Contingency	\$58,675.11
Total	\$746,640.82
Annual Costs Over 20 Year Life	\$87,700.43

APPENDIX C
CRITERIA CHECK LIST

CRITERIA CHECK LIST

For Quantitative Criteria 1 = Low, 5 = High. For Qualitative Criteria 1 = Poor, 5 = Excellent. For YES / NO Questions 1 = NO, 5 = YES

CRITERIA	COMPANY	ABYDOZ 3 Reactors	ABYDOZ 1 Reactor	Premier Tech 3 Biofilters	ABL 3 Sand Filters	BAE-Newplan Oxidation Ditch	ABL 1 Sand Filter	CMS Rotordisk	BAE-Newplan Lagoon	P.J Hannah Concrete RBC	P.J Hannah Fibreglass RBC	Premier Tech 1 Biofilter	CMT Blivet
Equivalent annual cost.		1	1	2	2	2	2	3	3	3	3	4	4
Degree of operator attention.		5	5	Y	Y	5	5	4	4	4	4	5	4
Septic tank required.		Y	Y	N	N	Y	N	Y	N	Y	N	Y	N
On-site concrete required.	N	N	N	N	N	Y	N	Y	N	Y	N	N	Y
Local representation.		Y	Y	Y	Y	Y	N	N	Y	N	N	Y	N
O&M contracts proposed.		Y	Y	Y	Y	Y	N	Y	N	N	N	2	2
Land area required.		2	2	2	2	5	3	2	5	2	2	2	Y
Filters required.	N	N	N	Y	Y	N	Y	N	N	N	N	N	N
Odour from system.	N	N	N	N	N	Y	N	N	Y	N	C	UV	UV
Chlorination or UV proposed.		UV	UV	UV	UV	C	UV	C	UV	C	C	UV	UV
Proposal quality.		4	4	4	4	4	3	4	3	4	4	4	4
By-pass during peak flows.		Y	Y	N	N	Y	N	Y	Y	Y	Y	N	Y
Equipment redundancy in proposal.	N	N	N	N	Y	N	N	Y	N	N	N	4	2
Ease of future expansion.		5	5	4	4	1	4	1	2	2	2	Y	N
Economical to provide 3 systems.		Y	Y	Y	Y	Y	Y	N	N	N	5	5	5
System aesthetics.		5	5	5	5	1	5	1	5	1	5	5	5

continued:

APPENDIX C

Green Municipal Enabling Fund Grant Agreement

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GREEN MUNICIPAL ENABLING FUND (GMEF)

Study no.: 5012

Project Title: Country Path Abydoz Root Zone Project

Grant Agreement

Between

THE CORPORATION OF THE TOWN OF HOLYROOD

- and -

**FEDERATION OF CANADIAN MUNICIPALITIES,
as Trustee of the Green Municipal Enabling Fund**

This document is not an offer to enter into a contract and, until executed by all parties, it is not a contract.

GRANT AGREEMENT

THIS AGREEMENT is made as of the 28th day of June 2004.

BETWEEN:

THE CORPORATION OF THE TOWN OF HOLYROOD, a municipal corporation organized and existing under the laws of the Province of Newfoundland and Labrador and of Canada

(herein called "Recipient")

-and-

FEDERATION OF CANADIAN MUNICIPALITIES, as Trustee of the Green Municipal Enabling Fund

(herein called "FCM")

WHEREAS:

- (a) the Government of Canada (herein called "GoC") and FCM have established the Green Municipal Enabling Fund (herein called "GMEF") to provide grants for feasibility studies of proposed municipal environmental projects;
- (b) the GoC has funded GMEF, which is being administered by FCM as Trustee thereof;
- (c) FCM, in its capacity as Trustee of GMEF, has agreed to provide the Recipient a maximum grant of two hundred nine thousand one hundred thirty one dollars (\$209,131) for use by the Recipient solely for the feasibility study referred to in this Agreement; and
- (d) the parties hereto need to provide arrangements for the administration and disbursement of the grant to, and its use by, the Recipient.

NOW THEREFORE, the parties hereby agree as follows:

ARTICLE I Definitions

Section 1.01. Definitions. Whenever used in this Agreement and unless the context otherwise requires, the following terms have the following meanings:

“Contribution” means each portion of the Grant Amount that is advanced from time to time by FCM to the Recipient under the terms and conditions of this Agreement;

“Eligible Costs” means those permitted expenditures described in Part 2 of Schedule A, for which the Recipient may use the Contributions;

“GAAP” means the generally accepted accounting principles which are in effect in Canada, including those published in the Handbook of the Canadian Institute of Chartered Accountants, as the same are generally applied to persons carrying on a type of business or activity similar to that of the Study;

“Grant” means the grant set forth in Article II;

“Grant Amount” means the amount to be advanced by FCM on account of the Grant up to the maximum amount set forth in Section 2.02; and

“Study” means the feasibility study described in Part 1 of Schedule A.

ARTICLE II **The Grant**

Section 2.01. Grant Purpose. FCM is providing the Grant to the Recipient for the sole purpose of assisting the Recipient in the performance of the Study and the Recipient hereby explicitly acknowledges and accepts the conditions and terms of the Study as described in Part 1 of Schedule A.

Section 2.02. Grant Amount. Subject to and in accordance with the terms and conditions of this Agreement and in reliance upon the representations, warranties and covenants of the Recipient hereinafter set forth, FCM agrees to contribute towards the Eligible Costs a grant equal to thirty three percent (33%) of Eligible Costs up to a maximum grant amount of two hundred nine thousand one hundred thirty one dollars (\$209,131).

Section 2.03. Contributions. FCM shall advance the Grant Amount in three (3) Contributions, as outlined in Sections 3.01, 3.02 and 3.03. No Contribution will be made by FCM without it first receiving from the Recipient a completed Request for Contribution in the form of Schedule C and unless the relevant conditions are met as set forth in Article III.

ARTICLE III **Conditions of Contribution**

Section 3.01. Conditions of First Contribution. FCM shall make a first Contribution in the amount of thirty one thousand three hundred seventy dollars (\$31,370) or fifteen percent (15%) of the maximum Grant Amount by no later than the 1st day of November, 2004, provided that the following conditions are satisfied:

- (a) the Recipient has obtained, or has made other arrangements satisfactory to FCM for obtaining, all appropriate authorizations, including any necessary resolution passed by the Recipient's Council and any necessary authorization from the Government of the Province of Newfoundland and Labrador for undertaking the Study and receiving the Grant;
- (b) each of the Sources of Funding as described in Part 2 of Schedule A has contractually agreed on the nature and the amount and timing of its funding of the Study;
- (c) the Recipient has delivered to FCM a Progress Report that describes the current status of each of the conditions and terms listed in Part 1 of Schedule A, and FCM is satisfied with the progress of the Study.
- (d) the Recipient has delivered to FCM, by no later than ten (10) days prior to the requested date of Contribution, the Request for Contribution in the form of Schedule C;
- (e) the Recipient has delivered to FCM a copy of the Certificate of Incumbency and Authority in the form of Schedule B; and
- (f) the Recipient has delivered to FCM a summary of expenses, together with copies of supporting invoices and receipts, evidencing, in a manner satisfactory to FCM, that the Recipient has incurred Eligible Costs for the Study equal to or greater than three (3) times the total requested Contribution.

Each of the foregoing conditions is included for the benefit of FCM and may be waived in whole or in part at FCM's sole option by notice to the Recipient.

Section 3.02. Conditions of Second Contribution. FCM shall make a second Contribution in the amount of one hundred four thousand five hundred sixty six dollars (\$104,566) or fifty percent (50%) of the Grant Amount by no later than the 1st day of May, 2005, provided that the following conditions are satisfied:

- (a) the first Contribution has taken place;
- (b) the Recipient has maintained the authorizations referred to in subsection 3.01(a);
- (c) The Recipient has delivered to FCM a Progress Report that describes the current status of each of the terms and conditions listed in Part 1 of Schedule A, and FCM is satisfied with the progress of the Study;

- (d) the Recipient has delivered to FCM, by no later than ten (10) days prior to the requested date of Contribution, the Request for Contribution in the form of Schedule C; and
- (e) the Recipient has delivered to FCM a summary of expenses, together with copies of supporting invoices and receipts, evidencing, in a manner satisfactory to FCM, that the Recipient has incurred Eligible Costs for the Study equal to or greater than three (3) times the requested Contribution.

Each of the foregoing conditions is included for the benefit of FCM and may be waived in whole or in part at FCM's sole option by notice to the Recipient.

Section 3.03. Conditions of Third Contribution. FCM shall make a third Contribution in the amount of seventy three thousand one hundred ninety five dollars (\$73,195) or thirty five percent (35%) of the maximum Grant Amount by no later than the 1st day of September, 2005, provided that the following conditions are satisfied:

- (a) the prior Contributions have taken place;
- (b) the Recipient has maintained the authorizations referred to in subsection 3.01(a);
- (c) the Recipient has delivered to FCM, a paper and an electronic copy of a Final Report in accordance to the requirements of Schedule D – GMEF Final Report Submission Requirements, and that describes the status of each of the conditions and terms listed in Part 1 of Schedule A, and FCM is satisfied with the completion of the Study;
- (d) the Recipient has delivered to FCM, by no later than ten (10) days prior to the requested date of Contribution, the Request for Contribution in the form of Schedule C; and
- (e) the Recipient has delivered to FCM a summary of expenses, together with copies of supporting invoices and receipts, evidencing, in a manner satisfactory to FCM, that the Recipient has incurred Eligible Costs for the Study equal to or greater than three (3) times the requested Contribution.

Each of the foregoing conditions is included for the benefit of FCM and may be waived in whole or in part at FCM's sole option by notice to the Recipient.

Section 3.04. Conditions of any Contribution. The obligation of FCM to make any Contribution shall also be subject to the condition that the representations and warranties confirmed or made in Article IV shall be true on and as of the date of the relevant Contribution with the same effect as though such representations and warranties have been made on and as of the date of such Contribution. This

condition is included for the benefit of FCM and may be waived in whole or in part at FCM's sole option by notice to the Recipient.

ARTICLE IV **Representations and Warranties**

Section 4.01. Representations and Warranties. The Recipient represents and warrants:

- (a) that it is a duly established municipal corporation incorporated under the laws of the Province of Newfoundland and Labrador and has the legal power and authority to enter into, and perform its obligations under, this Agreement and the Study; and
- (b) that this Agreement has been duly authorized and executed by it and constitutes its valid and binding obligations, enforceable in accordance with its terms.

ARTICLE V **Particular Covenants**

Section 5.01. Affirmative Covenants. The Recipient shall:

- (a) use the Grant only for the purposes described in Section 2.01; and
- (b) conduct the Study with due diligence and efficiency and in accordance with sound financial and business practices; maintain its accounts, management information and cost control system and books of accounts adequately to reflect truly and fairly the financial condition of the Study and to conform to GAAP.

Section 5.02. Negative Covenants. Unless FCM shall otherwise agree in writing, the Recipient shall not:

- (a) use the Contributions for expenditures that are not Eligible Costs; or
- (b) make any material change to the Study.

Section 5.03. Continuing Information Requirements. The Recipient shall, at its cost, provide to FCM the following information, each in a form and substance satisfactory to FCM:

- (a) prompt notice of any changes to the first, the second or the third Contribution dates provided in Sections 3.01, 3.02 and 3.03. These dates may, in FCM's sole discretion, be extended;

- (b) prompt notice of any proposed change in the nature or scope of the legal status of the Recipient and of any event or condition which might materially and adversely affect the carrying out of the Study by the Recipient or the performance of its obligations under this Agreement;
- (c) prompt notice of any litigation or administrative proceedings, together with any written legal documents as FCM may request, before any court or arbitral body or other authority which might materially and adversely affect the Study or the ability of the Recipient to perform its obligations under this Agreement and the Study; and
- (d) such other information as FCM may from time to time by notice to the Recipient reasonably request.

ARTICLE VI **Termination**

Section 6.01. Termination. FCM may, on not less than thirty (30) days prior notice to the Recipient, terminate this Agreement. If this Agreement is so terminated, the liability of FCM for any unadvanced portion of the Grant Amount shall be limited to an amount that, in the sole opinion of FCM, is a reasonable contribution for the Recipient's partial performance of the Study to the date of termination.

ARTICLE VII **Schedules**

Section 7.01. Schedules. As referred to in this Agreement, the following annexed Schedules form part of this Agreement:

Schedule A:

- Part 1 – Description of the Feasibility Study (see definition of "Study" and Section 2.01)
- Part 2 – Description of Eligible Costs and Sources of Funding (see definition of "Eligible Costs" and subsection 3.01(b))

Schedule B: Form of Certificate of Incumbency and Authority (see subsection 3.01(e))

Schedule C: Form of Request for Contribution (see Section 2.03 and subsections 3.01(d), 3.02(d) and 3.03(d))

Schedule D: GMEF Final Report Submission Requirements (see subsection 3.03(c))

ARTICLE VIII

Miscellaneous Provisions

Section 8.01. Publications

- (a) The Recipient shall be the owner of the copyrights pertaining to the reports or other documents prepared, under the terms of this Agreement or of the Study, by or on behalf of the Recipient. However, the GoC and FCM retain the full capacity, free of all royalties or other charges, to publish or use, at any time, or times such reports and other documents, in whole or in part, as well as any related information.
- (b) For this purpose, the Recipient undertakes to execute any document and to take all other actions that could be reasonably required of it to materialize the Recipient's rights to the reports and other documents prepared under the terms of this Agreement or of the Study, notably any clause of assignment and transfer of rights, including copyrights and other intellectual property rights.
- (c) The Recipient will have to indicate the Copyright notice in at least one prominent place in the reports and other documents related to the Study, in the following manner:

Copyright © 200X, [The Corporation of the Town of Holyrood]

All rights reserved. No part of this publication may be reproduced, recorded or transmitted in any form or by any means, electronic, mechanical, photographic, sound, magnetic or other, without advance written permission from the owner.

- (d) The Recipient shall recognize and state in an appropriate manner, as approved by FCM, the support offered by GMEF concerning the Study and the contribution of the GoC to the GMEF. Unless the Recipient has received written notice to the contrary from FCM, the following shall be incorporated into the reports and other documents produced by the Recipient in connection with the Study:

This Study has been produced with the assistance of the Green Municipal Enabling Fund, a Fund financed by the Government of Canada and administered by the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the author(s), and the Government of Canada and the Federation of Canadian Municipalities accept no responsibility for them.

(e) The provisions of Section 8.01 shall remain in force after the termination of the Agreement.

Section 8.02. Communication. The parties recognize the importance of having an agreed-upon communications approach to making public information on the Study and agree to cooperate in developing a communications strategy which shall be consistent with this Section. The Recipient shall provide information relating to the Study to the public and shall be responsible for replying to the public and media inquiries regarding the Study. Following the execution of this Agreement, the Recipient shall contact GMEF's Community Liaison Manager at FCM to obtain guidelines for the planning of communications and the respective roles of the Recipient and of FCM in the coordination and implementation of the communications strategy. The communications strategy will give suitable visibility to the Study and related technology and to the Recipient, and to GoC as the funder of GMEF. The Recipient also agrees to cooperate in providing reasonable information on the Study to other interested parties. This may be most efficiently achieved through cooperation of the parties in developing fact sheets and related Study information. The provisions contained in this Section shall remain in force after the termination of this Agreement.

Section 8.03. Notices and Requests. Any notice, demand, request or other communication to be given or made under this Agreement to FCM or to the Recipient shall be in writing and may be made or given by personal delivery, by ordinary mail, by facsimile or by electronic mail addressed to the recipient as follows:

For the Recipient:

Town of Holyrood
P.O. Box 100
Holyrood, Newfoundland and Labrador
A0A 2R0

Attention: Ms. Germaine Crawley
Town Clerk

- telephone: (709) 229-7252
- by facsimile: (709) 229-7269
- by electronic mail: gcrawley@townofholyrood.com

For FCM:

Federation of Canadian Municipalities
24 Clarence Street
Ottawa, Ontario
K1N 5P3

Attention: Mr. André Vanasse
Project Officer

- telephone: 613-241-5221, ext. 248
- by facsimile: 613-244-1515
- by electronic mail: avanasse@fcm.ca

Any notice, demand, request or other communications made or given by personal delivery shall be deemed to have been made or given on the day of actual delivery thereof, and if made or given by mail, on the 3rd day (excluding Saturday, Sunday and Statutory Holidays) following the deposit thereof in the mail, and if made or given by facsimile transmission or by electronic mail, on the 1st day (excluding Saturday, Sunday and Statutory Holidays) following the transmittal thereof. If the party giving any notice, demand, request or other communications knows or reasonably ought to know of any difficulties with the postal system that might affect the delivery of mail, such notice, demand, request or other communications shall not be mailed, but shall be given by personal delivery, facsimile transmission or electronic mail.

Section 8.04. Indemnification of FCM. The Recipient shall indemnify and save harmless FCM from and against all claims, demands, actions and costs, whatsoever that may arise out of the Recipient's performance of the Study and this Agreement or by reason of any matter or thing done by the Recipient, by members of the Recipient's Study team, or by their employees or agents, whether occasioned by negligence or otherwise. Such indemnification shall survive termination of this Agreement.

Section 8.05. Further Assurances. The Recipient shall promptly execute and deliver, upon request by FCM, all such other and further documents, agreements, opinions, certificates and instruments as may be reasonably required by FCM to more fully state the obligations of either party to this Agreement or to make any recording, file any notice or obtain any consent.

Section 8.06. Amendment. Any amendment of any provision of this Agreement, including the Schedules, must be in writing and signed by both parties.

Section 8.07. Choice of Language. It is the express wish of the parties that this Agreement and any related documents be drawn up and executed in English. Les parties reconnaissent avoir exigé que la présente convention et tous les documents connexes soient rédigés en anglais.

Section 8.08. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

Section 8.09. Choice of Forum. The parties hereto agree and intend that the proper and exclusive forum for any litigation of any disputes or controversies

arising out of or related to this Agreement shall be a Court of competent jurisdiction located in the Province of Ontario, City of Ottawa.

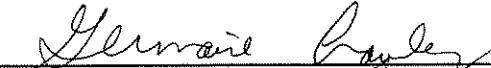
Section 8.10. Effectiveness. This Agreement shall continue in force until such time as FCM has received, and notified the Recipient of its satisfaction with, the Final Report referred to in subsection 3.03(c), or until this Agreement has been terminated in accordance with Section 6.01, whichever shall first occur.

Section 8.11. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns, except that the Recipient may not assign or otherwise transfer all or any part of its rights or obligations under this Agreement without the prior written consent of FCM.

Section 8.12. Counterparts. This Agreement may be executed in two counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same agreement.

IN WITNESS WHEREOF, the parties hereto, acting through their duly authorized representatives, have caused this Agreement to be signed in their respective names as of the date first above written.

THE CORPORATION OF THE TOWN OF HOLYROOD

per: 
Ms. Germaine Crawley, Town Clerk

per: 
James C. Lewis, Mayor

We have authority to bind the Recipient herein.

FEDERATION OF CANADIAN MUNICIPALITIES,
as Trustee of the Green Municipal Enabling Fund

per: 
Mr. Jean-François Trépanier, CA
Chief Operating Officer
I have authority to bind FCM herein

Schedule A

Part 1: Description of the Feasibility Study (see definition of "Study" and Section 2.01)

Twenty-three residences distributed along a 3100-meter stretch of County Path Road in the Town of Holyrood are not serviced by an on-site wastewater management system. The Town wants to remedy this situation in particular because the residences are in proximity to a salmon river.

The estimated cost of connecting these residences to a conventional wastewater collection system is prohibitively expensive (\$83,000 per residence). The Town wants to study the feasibility of constructing a three-cluster treatment system which is estimated to cost \$28,260 per residence. Not only would this system be considerably less expensive, but it would not contribute more wastewater to the main community systems that discharges untreated water in the ocean.

The Abydoz Root Zone system has been tested and utilized throughout Europe, where it is known as the Kickuth Bioreactor, for both municipal and industrial applications. It consists of a subsurface flow wetland engineered to treat wastewater specific to the source. In the past, wetlands have been applied at the end of treatment systems as a polishing step, but the Abydoz process uniquely uses the wetland as a combined primary/secondary treatment process. The Abydoz systems provide an enhanced level of treatment prior to any discharge to surface water body.

The use of smaller processes to manage lower flows from clusters of residences has only recently become an option. The installation of cluster infrastructure and treatment systems is expected to relieve the problem of surface exposure of residential wastewater and minimize the potential for accidental contact with humans and animals. The redirection of waste away from the soil matrix will also remove the potential for contamination of the ground water in the region.

The Town's intent through this field test is to take a leadership role in assuming responsibility for its own waste. Through the use of an innovative process, like the Abydoz system, the Town is assuming this responsibility in a sustainable way without the excessive use of resources such as electricity, water and equipment.

The Abydoz systems as proposed involve all phases of wastewater management, from collection through treatment and eventually disposal. The systems involve the construction of a collection system that transports the wastewater to three locations on the County Path Road. The wastewater is treated by passing through the Root Zone process. The treated effluent is then discharged to a surface water body as the final stage of the system. The only part of the process for which there is no on-site management is the sludge that may accumulate in the

process. This sludge will be transported to a receiving/treatment facility, which will be incorporated in the management plans prior to the start-up of each system.

The lifecycle of this field test study involves the construction of the three collection systems followed by the plant development phase, wherein the reeds are nurtured until they reach their full growth potential. There is little or no maintenance to be undertaken on the Root Zone system, once the plants are established, as harvesting or cutting of the plants is not required. The only routine procedures, that will be required from the Town, are the periodic inspection and maintenance of the dosing pumps, monitoring sludge levels and periodic removal of sludge from the equalization tanks.

The principal objective of this field test study is pollution prevention. The processes are designed to intercept and treat wastewater prior to it reaching the natural environment. Concerns of organic disinfection by-products are not an issue because there is no chemical addition. The plants do not require cultivation, therefore solid waste is not generated by the system. The effluent from the process should be satisfactory for direct discharge without requiring extraneous disinfection procedures. There are very few mechanical parts that would require energy or replacement, conserving these resources.

The field test study for the Country Path Road will be monitored, during the implementation and early operational phases, to assess the quality of influent and effluent ensuring that the system is functioning properly. The data accumulated during the monitoring stage will be used to adapt the system to local conditions as well as evaluate the impact of the climate. The field test study will include monitoring the following parameters and operational features:

- Concentrations of inlet and outlet Biological Oxygen Demand (BOD), suspended solids, nitrates-nitrites, ammonia, phosphorous, total and faecal coliforms;
- Flowrates to sections of the filter beds will be varied to determine design flow resiliency and the system sensitivity;
- Sludge generation rates and system maintenance requirements;

Seasonal system performance will be evaluated to identify sensitivity to climate; and Public perception related to the operation of the systems.

The data accumulated during the monitoring stage will be assembled for future use in designing systems for the region.

A. The study will proceed as per the description above and with the following conditions from the GMF Council:

1. That the Town of Holyrood provide a detailed monitoring plan satisfactory to FCM; and
2. That a provincial letter of support be submitted to FCM.

B. The Final Report shall be completed and submitted in accordance with the Schedule D - *GMEF Final Report Submission Requirements*.

Schedule A

Part 2: Description of Eligible Costs and of Sources of Funding (see definition of "Eligible Costs" and subsection 3.01(b))

Summarize the Study's Eligible Costs¹ as follows:

Item	Description	Amount
1	Construction of collection infrastructure for Pilot Plant #1	\$78,320
2	Abydoz Root Zone Pilot Plant #1	\$69,120
3	Construction of collection infrastructure for Pilot Plant #2	\$68,530
4	Abydoz Root Zone Pilot Plant #2	\$69,120
5	Construction of collection infrastructure for Pilot Plant #3	\$68,530
6	Abydoz Root Zone Pilot Plant #3	\$69,120
7	Engineering – Design and Project Management (Total Construction Phase of Project)	\$72,913
8	Engineering – Monitoring and Analysis (24-month)	\$69,565
9	HST	\$84,783
10	GST Rebate (57.14% of GST Component of HST)	-\$22,608
	Total Eligible Costs¹	\$627,393

1. The expenditures claimed are subject to audit by FCM near completion of the Study. The amounts contributed by the GMEF may vary as a consequence. No expenditure incurred prior to **January 28, 2004** is permitted to be included as an Eligible Cost

Funding Percentage Table

Description	Total Funding Requested	Funding % of Eligible Costs
Grant for a Field Test	\$209,131	33%

Sources of Funding² Table

Source ²	Source Name	Description/Notes	Amount	Date Committed	Percentage of Total Project Activity Cost
Federal²	Canada/Newfoundland Infrastructure Program		\$418,262	Fall 2004	67%
Green Municipal Funds	Green Municipal Enabling Fund	Grant for a field test	\$209,131	23-Jun-2004	33%
Total Project Activity Costs			\$627,393		

2. For each funding source listed, you must submit evidence of the intended financial contribution.

Schedule B

Form of Certificate of Incumbency and Authority (see subsection 3.01(e))

[LETTERHEAD OF THE RECIPIENT]

[Address]
[Date]

Federation of Canadian Municipalities
24 Clarence Street
Ottawa, Ontario
K1N 5P3
Attention: Mr. André Vanasse
Project Officer

Ladies and Gentlemen:

**Re: Green Municipal Enabling Fund – Study no. 5012
Agreement dated June 28, 2004 (“Agreement”) between the Federation
of Canadian Municipalities (as Trustee/Donor) and the Corporation of
the Town of Holyrood (“Recipient”)**

Certificate of Incumbency and Authority

I, the undersigned Ms. Germaine Crawley of the Recipient, with the authority of its municipal Council, hereby certify that the following are the names, offices and true specimen signatures of the persons each of whom will, and shall continue to be (until you receive authorized written notice from the Recipient that they, or any of them, no longer continue to be) authorized:

- to sign on behalf of the Recipient the Requests for Contributions provided for in the Agreement;
- to sign the certificates provided for in the Agreement; and
- to take, do, sign or execute in the name of the Recipient, any other action required or permitted to be taken, done, signed or executed under the Agreement and under any other agreement to which you and the Recipient are parties:

<u>No.</u>	<u>Name</u>	<u>Specimen Signature</u>	<u>Office</u>
1.	Germaine Crawley	_____	Town Clerk
2.	James C. Lewis	_____	Mayor

Yours truly,
The Corporation of the Town of Holyrood
per: _____

Germaine Crawley
I have authority to bind the Recipient
herein

Schedule C

Form of Request for Contribution (see Section 2.03 and subsections 3.01(d), 3.02(d) and 3.03(d))

[LETTERHEAD OF THE RECIPIENT]

[Address]
[Date]

Federation of Canadian Municipalities
24 Clarence Street
Ottawa, Ontario
K1N 5P3
Attention: Mr. André Vanasse
Project Officer

Ladies and Gentlemen:

**Re: Green Municipal Enabling Fund – Study no. 5012
Agreement dated June 28, 2004 (“Agreement”) between the Federation
of Canadian Municipalities (as Trustee/Donor) and the Corporation of
the Town of Holyrood (“Recipient”)**

Request for Contribution no.: _____

1. All terms defined in the Agreement shall have the same meanings herein and all references herein to Articles, Sections and subsections are to those Articles, Sections and subsections of the Agreement.
2. The Recipient hereby requests a Contribution, on or before _____, 200X, of the following amount, in accordance with the provisions of Section 2.03 and subsection 3.01(d) OR 3.02(d) OR 3.03(d);

\$_____

The Recipient requests that such amount be paid to:

Name of Bank: Royal Bank of Canada
Address of Bank: Holyrood, C.B. Newfoundland and Labrador A0A 2R0
Telephone no. of Bank: (800) 769-2520
Bank no.: 003
Transit no.: 9303
to the credit of Recipient's Account no.: 100 129 6

Provided that if this is not the first Contribution, the Recipient hereby acknowledges having received from you the following prior Contribution(s): .

Contribution no. 1 on _____, 200X of \$_____
Contribution no. 2 (*if applicable*) on _____, 200X of \$_____.

3. The Recipient hereby certifies as follows:

- (a) the Recipient has obtained and maintained in good standing, all appropriate authorizations, including any necessary by-law or resolution passed by the Recipient's Council and any necessary authorization from the Government of the Province of Newfoundland and Labrador for undertaking the Study and receiving the Grant;
- (b) each of the Sources of Funding as described in Part 2 of Schedule A has contractually agreed on the nature and the amount of its funding and all such funding that is due at the date of this Request has been received by the Recipient;
- (c) the representations and warranties confirmed or made in Article IV shall be true on and as of the date of the requested Contribution with the same effect as though such representations and warranties have been made on and as of the date of such Contribution;
- (d) the proceeds of the Contribution hereby requested will be applied exclusively for Eligible Costs in accordance with the Grant purpose specified in Section 2.01; and
- (e) provided that this is not the first Contribution, the prior Contribution(s) has/have been entirely used by the Recipient for Eligible Costs in accordance with the Grant Purpose specified in Section 2.01 within six (6) months following the date of (each) such prior Contribution.

4. The certifications in paragraph three (3) above are effective as of the date of this Request for Contribution and will continue to be effective as of the date of Contribution. If any of these certifications is no longer valid as of or prior to the date of the Contribution hereby requested, the Recipient will immediately notify FCM.

Yours truly,
XXXXX

by _____

Authorized Representative*

*As named in the Recipient's last Certificate of Incumbency and Authority

Schedule D

GMEF Final Report Submission Requirements (see subsection 3.03(e))

Green Municipal Enabling Fund (GMEF) Detailed Feasibility Study Report Requirements

Purpose of Report Requirements

The goal of the Green Municipal Enabling Fund (GMEF) is to support studies to assess the technical, environmental and/or economic feasibility of innovative environmental infrastructure projects. It is hoped that by providing such support, a greater number of innovative environmental infrastructure projects will be undertaken by municipal governments and their partners.

Recipients of GMEF grants are required to submit a final Detailed Feasibility Study report to the Green Municipal Funds (GMF) as a condition of their final disbursement request. These reports must correspond to the reporting requirements laid out in this document.

The GMEF reporting requirements are designed to facilitate the development of innovative environmental infrastructure projects based on the results of GMEF studies by asking grant recipients to provide specific information in their detailed feasibility study reports that demonstrates exactly how the option deemed feasible by the study (or the preferred option in the case of multi-option studies) can be implemented.

This document describes the GMF reporting requirements for GMEF funded detailed feasibility studies. It presents instructions and an outline for completing the two sections of the detailed feasibility study report that are required by the GMEF Grant Agreement.

Submission of Reports

GMEF grant recipients must enclose *final* copies of the Detailed Feasibility Study reports in both hard (paper) and soft (electronic) formats with their final request for disbursement. Reports that are not clearly identifiable as final reports, such as those displaying headers, footers, titles or watermarks containing terms such as "draft" or "for internal use only", will not be accepted by GMF.

Recipients must enclose at least one hard copy of the final report, including all attachments and appendices, appropriately bound with protective cover and backing. Additionally, an electronic copy of the report, including all attachments and appendices, must be submitted in Portable Document Format (PDF) with searchable text functionality. If a recipient does not have the capacity to create PDF documents in-house (typically using Adobe Acrobat software), there are

numerous firms that can provide a commercial service at reasonable costs to meet this requirement.

Required Information

Because of the wide range of study types funded by the GMEF, the GMF does not stipulate a required overall document structure for final reports. Instead, the GMF requires that certain specific information demonstrating exactly how the preferred option(s) can be implemented be included in the report. This information must be presented in sections with clearly marked titles. The sections that must be included are:

1. Financing and Implementation Plan for the Preferred Option(s), and
2. Expected Environmental Benefits of the Preferred Option(s).

The intention is that these sections should present municipal council members, potential project financing organizations (such as banks, and provincial and federal government programs like the Green Municipal Investment Fund), and other stakeholders with a solid foundation of information that will aid them in future decisions regarding the implementation of the preferred study option as an actual physical project.

Instructions for Completing Required Sections

1. Financing and Implementation Plan for the Preferred Option

In this section, the recipient must determine and propose a Financing and Implementation Plan that describes how the municipality could implement the preferred study option. This plan should be complete enough to form the basis of a future formal council recommendation to implement the option.

In completing this section, recipients are asked to contact a GMF Project Development Manager. GMF Project Development Managers are expert financial planners who specialize in the development of financing and implementation plans for innovative municipal environmental infrastructure projects. Involving a GMF Project Development Manager in the completion of this section, as early as possible in the report writing process, will ensure the quality and scope of this section of the report.

In this section, recipients are required to:

- A. Describe how the project will be financed, and
- B. Describe the political framework in which the project will take place.

Guidelines for completing these required subsections are presented below. More specific information and guidance should be obtained from a GMF Project Development Manager.

A. Description of how the project will be financed

The following are a few of the important issues that need be addressed in a project financing plan:

Who is expected to be financing the project?

- Municipality
- Private Sector
- Partnership
- Other provincial or federal government programs (such as the Green Municipal Investment Fund)
- Other (describe)

If municipal or partnership funding, how are the costs being covered?

- Operations Budget (lease, operational savings, etc.)
- Capital Reserve
- Debt
- Other (describe)

If debt, what are the details of:

- Repayment (property tax, user fees, etc.)
- Debt Structure (term, rate, lending institution, etc.)

If private sector financing:

- What is the partnership structure?
- What connection(s) exist between the municipality and the private sector partner?

Potential Economic Benefits of the Project

- Potential operating cost savings (labour, utilities, etc.)
- Potential capital cost savings (i.e. how this project saves money by differing or avoiding other projects)
- Potential economic spin-offs (such as jobs created, multiplier effects, upstream or downstream effects, etc.)
- Others (describe)

B. Description of the political framework for the project

This subsection should contain descriptions of the presence or absence of targets, action plans, by-laws or any other formal or informal programs or initiatives at the municipality that may affect the project. These may include:

Municipal environmental performance

- Past performance
- Existing innovative environmental infrastructure
- Legislated or non-legislated goals or targets

- Other indicators (describe)

Potential political barriers/bottlenecks to the project and how the barriers/bottlenecks could be overcome

- Demonstrated council or public resistance to innovation
- Upcoming elections
- Issues specific to the project (land availability, zoning, etc.)
- Timing of the council recommendation
- Other barriers (describe)

How the project fits into existing municipal plans and objectives

- Long term infrastructure requirements/plans of municipality
- Development plans
- Sustainability commitments/plans
- Others (describe)

Based on the information in the financing plan and the political framework subsections, some proponents may wish to submit a recommendation to their councils. GMF Project Development Managers can also assist in the preparation of such a recommendation. The recommendation may be of the form:

It is recommended that:

1. The report [title] be received.
2. That the project be financed as indicated in section XX.X.X of the report.
3. [Any other recommendations regarding the project that are included in other areas of the report]
4. etc.

2. Expected Environmental Benefits of the Preferred Option

In this section, the recipient must describe the net environmental benefits of the project. To do this, it must be demonstrated that the environmental effects (both positive and negative) of both the project and the baseline systems have been considered using a Life Cycle Approach as described below. Recipients are encouraged to contact their GMF Project Officer should they have any questions about completing this section of the report.

In this section, recipients are required to:

- A. Summarize the study goal(s) and compare the options being studied in a summary table,
- B. Provide more detailed information on the project system of the preferred study option,

- C. Provide more detailed information on the baseline system of the preferred study option, and
- D. Calculate the projected net environmental benefits of the preferred study option.

Descriptions of these requirements are provided below.

A. *Summary of the study goal(s) and comparison of the study options*

This subsection must contain a brief narrative description of the study and project goals including:

Study goal

- Describe the overall study goal.
- This may be to assess the technical, environmental and/or economic feasibility of an innovative environmental infrastructure project (e.g. to determine if producing green power for sale to the provincial power authority is economically feasible).
- Note: the study goal may not necessarily be an environmental goal (it may be technical or economic, as in the above example).

Primary environmental benefit of the preferred option

- Describe the environmental goal of the preferred option if the physical project is implemented.
- This may be along the lines of “lower GHG emissions from capturing and destroying landfill gas” and is potentially different from the study goal, above.

Secondary environmental benefits of the preferred option

- Describe any expected secondary environmental benefits of the preferred option if implemented.
- These are other positive effects the project may have on water, soil, the atmosphere or climate.
- For example, a recycling program may have the primary benefit of reducing the amount of municipal solid waste landfilled, but its secondary benefits could be improved groundwater quality through reduced leachate from the landfill, reduced Greenhouse Gas emissions from the landfill, reduced societal reliance on primary resources, increased community awareness of environmental issues, etc.

B. *Description of Project System*

This subsection must describe the environmental impacts (both positive and negative) of the preferred study option. This includes the following:

Identify main project elements

- Describe the project systems, including the main project elements.
- What are the production levels of the system (e.g. sq. feet of building space heated, m³ of water processed, total vehicle kilometres traveled, etc.)
- Be sure to include any elements that contribute to the environmental benefits defined above.

Identify mass & energy inputs/outputs for each element (including units)

- For example, a landfill gas flare would have a certain mass of methane as input and a certain mass of carbon dioxide as output, both measured in kg.
- Note: expected results should be calculated in units of measure (such as litres, kilograms, meters, etc.), rather than in intensities (such as kg of CO₂e per year).

C. Description of Baseline System

This subsection must describe the system to which the project is being compared (the baseline):

Define the baseline systems

- For the purposes of the GMF, there are 2 types of baselines: alternative and generational.

An **alternative baseline** is:

- The technology, process or system that is to be displaced, through retrofit or avoidance.
- This may be the existing infrastructure that would be replaced by the project, or if nothing currently exists it would be the industry standard technology, process or system.

A **generational baseline** is:

- The previous version of the technology, process or system that is being introduced by the project.
- In other words, an earlier (possibly out-dated or less efficient) version of the technology, process or system.

Identify main baseline elements

- Describe the baseline systems, including the main baseline elements.
- What are the production levels of the baseline (e.g. sq. feet of building space heated, m³ of water processed, total vehicle kilometres traveled, etc.).

Identify mass & energy inputs/outputs for each element (including units)

- As above.

D. Net Environmental Benefits of the Preferred Option

This subsection must describe the anticipated environmental results of the preferred option if implemented.

Describe the expected energy and mass flow changes from baseline to project

- Subtract the project emissions and energy use from the baseline emissions and energy use to obtain the difference
- The environmental benefit of the project is simply the amount of pollutant emitted by the baseline (usually, the amount of pollutant currently being emitted) minus amount that will be emitted by the project
- Be sure to account for all impacts and benefits in this description.

Describe potential environmental benefits outside project boundaries

- Some projects may change the amount of pollutants emitted or resources used by some third party, and this should be described and estimated here.
- For example, an alternative energy project would need to use appropriate emissions factors to calculate the amount of GHG reduced by displacing power from coal-fired generating stations. Many other industries have similar published emissions factors or other “rule of thumb” type guidelines for calculating emissions due to their products or services.

Present a Study Options Summary table

- Present a summary table containing expected environmental data for the preferred study option.
- If the study was conducted in order to determine the most feasible option out of a range of possibilities, the expected environmental benefits of all the options studied should be summarized in this table.