

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON

REPORT
RAPPORT

Our File/N/Réf. **50 19-92-0027-V**
File/V/Réf.

DATE 7 April 1998

TO/DEST. Co-ordinator, Planning and Environment Committee

FROM/EXP. Commissioner, Environment and Transportation Department

SUBJECT/OBJET **MUNSTER HAMLET WASTEWATER TREATMENT
FACILITY STATUS REPORT**

DEPARTMENTAL RECOMMENDATION

That the Planning and Environment Committee receive this report for information.

BACKGROUND

On 11 March 1998 Council directed staff to reopen the Environmental Assessment process and enter into an agreement with an independent consultant to conduct an evaluation of alternative technologies for the treatment of wastewater in Munster Hamlet. Based on their expertise and experience, the firm of Conestoga Rovers and Associates (CRA) was retained.

As an initial step, CRA was asked to provide a recommended outline of the process to be followed in conducting the evaluation. Accordingly, staff held a working meeting on 27 March 1998 with Regional Councillors, the Mayor of Goulbourn and CRA's project team. This meeting sought input in order to ensure that a fair, objective and transparent process is developed. It was recognized by all that effective public consultation will be a key component of the process. It was also the consensus of the working group that as many activities as possible be undertaken concurrently in order to compress the schedule. The attached report from CRA outlines the proposed process to be followed and provides a schedule for completion of the report.

SCHEDULE

Based on the completion of the technical evaluation and public consultation by 30 June 1998, the following summarizes an optimistic "fast-track" schedule to then implement the preferred alternative resulting from this study for the Munster Hamlet Wastewater Treatment Facility Upgrade project:

Technical evaluation including public consultation complete	30 Jun 1998
Technical evaluation report to P & E Committee and Council	14/22 Jul 1998
Detailed design of preferred alternative begins	23 Jul 1998
ESR Addendum filed with M.O.E.	1 Aug 1998
30 day public review period ends	1 Sept 1998
Tender for construction	30 Oct 1998
M.O.E. review of "Bump-up" requests complete	15 Nov 1998
Certificate of Approval application submitted to M.O.E.	15 Nov 1998
Certificate of Approval received	Jan 1999
Award contract for construction	Jan 1999

The above schedule anticipates that there will be requests to "Bump-up" the ESR Addendum to an Individual Environmental Assessment and includes the mandatory 66 day M.O.E. review period. The schedule has been shortened by six to eight weeks by initiating the detailed design phase during the Environmental Assessment review period, with the risk of additional design costs should the review require modifications. The schedule for construction is dependent upon the technology chosen as the preferred alternative.

It should be noted that the submission of an Addendum to the ESR is required to proceed with any alternative other than the rehabilitation and expansion of the lagoons and spray irrigation system.

ENVIRONMENTAL MITIGATION

As can be seen from the schedule, it will not be possible to implement the preferred alternative in 1998 and meet our commitments to the M.O.E. under our current voluntary compliance programme. In accordance with Council direction, staff met with representatives of the M.O.E. to discuss the status of the work at Munster Hamlet. The Ministry indicated concern with any delay to correction of the leaking lagoons in 1998 and that any off-site surface discharge from the spray irrigation field would be unacceptable and subject to M.O.E. investigation. In order to meet these requirements, CRA will be evaluating various means of mitigating the environmental impacts, including an expanded monitoring programme. It is expected that it will be necessary to haul treated secondary effluent from Munster Hamlet to the Robert O. Pickard Environmental Centre for disposal at an estimated cost of approximately \$500,000 in 1998 and potentially a similar amount in 1999 depending upon the preferred solution chosen.

CONSULTATION

It is recommended that a Public Liaison Committee be established to provide a forum for information exchange with the community. In addition, at least two public meetings or information sessions will be held in Munster Hamlet.

FINANCIAL IMPACT

The consulting engineering assignment to CRA, based on the proposed scope of work, is estimated at a total cost of \$270,000 which includes:

Technical Evaluation	\$117,000
Public Consultation	28,000
Addressing Bump-ups	20,000
Hydrogeological Investigations	45,000
Interim Groundwater and Surface Water Monitoring	10,000
G.S.T. (7%)	15,000
Provision for Variations (15%)	35,000

Environmental mitigation measures will result in additional costs estimated at \$500,000 in 1998, with the potential for a similar amount in 1999.

The 1998 Capital Budget estimates for this project proposed an adjustment which increased the total project authority from \$5.55 to \$6.05 million. Staff will be recommending deferral of this increase pending the completion of the evaluation.

Approved by
M.J.E. Sheflin, P.Eng.

SF/jw

Attach. (1)

CRA

CONESTOGA-ROVERS & ASSOCIATES

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(613) 727-0510 Fax: (613) 727-0704

April 7, 1998

Reference No. 12152

Mr. David W. McCartney, P.Eng.
Manager, Environmental Projects Branch
Regional Municipality of Ottawa-Carleton
111 Lisgar Street, Cartier Square
Ottawa, Ontario K2P 2L7

VIA COURIER

Dear Mr. McCartney:

Re: Proposed Work Plan
Wastewater Treatment Alternatives Evaluation
Munster Hamlet

CRA is pleased to submit our proposal for professional engineering services to complete an independent Wastewater Treatment Alternatives Evaluation for Munster Hamlet. The following provides a summary of the project background, objectives, approach, schedule, project team and professional fee estimate.

BACKGROUND

The existing wastewater treatment facility at Munster Hamlet consisting of facultative lagoons with spray irrigation have insufficient capacity, are experiencing leakage, and the spray irrigation fields are undersized. A Class Environmental Assessment (Class EA) completed in January 1996 recommended upgrade and expansion of the lagoon and spray irrigation facility. The Class EA evaluated several treatment options including reducing flows, transfer to another treatment facility, and upgrading the lagoons with either spray irrigation, snow making, wetlands or solar aquatic treatment methods.

The design of the lagoon and spray irrigation system is near completion and the RMOC were on target for tender and award of this project this year. Recently, information and other alternatives have been submitted which potentially meet or exceed the solution identified in the Class EA. This has led the RMOC to retain the services of Conestoga-Rovers & Associates (CRA) to complete an independent alternatives evaluation for the Munster wastewater treatment facility and prepare an addendum to the Environmental Study Report (ESR) if appropriate.

OBJECTIVES

The objective of this assignment is to complete an independent evaluation of treatment alternatives for Munster Hamlet based on information proposed by private enterprises. Specific objectives include:

- Review all relevant project background;
- Identify treatment alternatives including the previous ESR solutions and others;
- Complete detailed hydrogeologic investigations of the Munster site;
- Complete a thorough, detailed independent alternatives evaluation;
- Recommend a preferred solution;
- Document the study process and findings in a Report and/or addendum to the ESR; and
- Assist the RMOC in filing the ESR addendum if necessary.

WORK PLAN

Figure 1 (Project Activity Chart) presents CRA's proposed workplan to successfully complete this assignment.

Following project initiation (Task 1), several key tasks must be undertaken immediately. These are set out below.

Review of effluent quality objectives (Task 2) for the various wastewater disposal practices including surface application (spray irrigation and snow making), sub-surface discharge, and discharge to a watercourse should be undertaken. CRA will review the ESR information and consult with appropriate government agencies to accurately define the level of wastewater treatment required for each effluent disposal practice.

Additional detailed hydrogeologic investigations (Task 3) at the Munster treatment site and adjoining properties is necessary to ensure that treatment alternatives involving land application and sub-surface disposal technologies are adequately designed for this specific treatment capacity and site constraints. To thoroughly evaluate the effluent disposal practices, detailed field investigations consisting of confirming soil characteristics, soil thickness, watertable position and shallow bedrock characteristics must be completed. This task will develop the necessary hydrogeologic design criteria for the Delta proposal and other sub-surface disposal practices so that these systems can be evaluated/ designed to ensure environmental protection, and costed accurately for alternative evaluation purposes.

Interim Measures (Task 4) for the existing treatment lagoons and spray irrigation system need to be addressed early in this assignment. As this assignment will delay the implementation of upgraded treatment for the Munster wastewater treatment facility, the RMOC will have to address the potential of insufficient water storage for 1998 and protection of the environment. The current leakage of the lagoons will require additional ground and surface water monitoring, and the undersized spray irrigation system will necessitate sewage haulage to the Robert O. Pickard Environmental Centre (ROPEC) at some point in 1998. Upgrade of current lagoon cells to eliminate leakage and provide increased storage capacity will also be addressed. CRA plans to work in conjunction with the RMOC to identify a contingency interim measure

plan to address the fact that no upgrade construction for the current facility will take place this year.

The identification of applicable treatment alternatives (Task 5) will involve a re-evaluation of the ESR identified alternatives, taking into account any potentially new information presented by Delta on their snow making process, and by CMS's advanced treatment system with direct discharge to the Jock River. CRA also intends to solicit and identify other applicable treatment systems. For alternatives involving direct discharge to the Jock River, CRA will utilize the water quality assessment presented in the ESR. CRA will review and verify alternatives in the ESR that involve transfer to other wastewater facilities.

Both the identification of alternatives and their detailed evaluation with respect to technical/environmental and public/government acceptance at Munster will be undertaken through an effective public/government notification and consultation process (Task 7). This process is intended to maximize public awareness, input, and accountability in the alternative technology review process, while simultaneously maintaining technical impartiality. To achieve this, CRA has planned for a minimum of two public information centres (Tasks 7 and 13). Newsletters presenting project information and status will also be issued at project initiation and during Task 7. In addition, CRA recommended that the RMOC establish a Public Liaison Committee (PLC) and participate on the PLC. Several PLC meetings are planned to ensure that key project issues, concerns, and adequate information transfer is maintained throughout the project.

CRA's evaluation of alternatives (Task 8) will involve multi-dimensional decision-making techniques whereby various methods of ranking alternatives from different perspectives such as technical, environmental risk, public acceptance, etc. will be used. Evaluation criteria will be established with input from the public/government notification process. This type of evaluation will ensure that the preference of the participants (public, government, technical, etc.) are addressed during the evaluations.

Following selection of the preferred alternative (Task 9), CRA will confirm the selection by issuing information newsletters to the public, interested agencies, Regional Council and local municipalities (Task 10). This will allow follow-up of any outstanding issues or concerns relating to the alternative selection.

Tasks 11 through 14 will develop and refine preliminary design information for the selected option and ensure appropriate mitigation measures are developed to minimize environmental impacts. Similarly, our philosophy regarding public/government participation will be maintained through this effort.

The final Report (Task 15) will document the study process, findings, and public/government involvement, and will clearly define the technical and environmental evaluation process used to identify and select the preferred treatment option. CRA's approach to the alternatives evaluation will allow the final report to be easily transferable to serve as an addendum to the ESR if it is found to be necessary.

April 7, 1998

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Should an ESR addendum be required, CRA will assist the RMOC in placing the document on 30 day public record and assist with follow-up issues or any possible bump-up requests.

SCHEDULE/BUDGET

CRA estimates that it will require approximately 3 months to complete the technical evaluation and public consultation process. Figure 2 illustrates our allotted time for each task. It should be understood that Tasks 7 and 13, public/government notification, are difficult to estimate as these will be subject to the degree of concerns raised by the participants.

We recommend RMOC allocate a budget of \$270,000 (including G.S.T. and contingency) for this assignment, based on our present understanding of the scope of work.

PROJECT TEAM

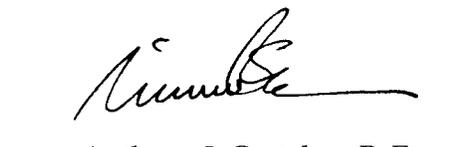
CRA's proposed project team is presented in Figure 3. Detailed resumes can be provided upon your request. CRA has assembled a highly qualified team, experienced in all aspects required to successfully complete this project.

We trust this letter adequately conveys the required workscope and process necessary to complete this independent alternatives evaluation for Munster Hamlet. Following your review, please do not hesitate to contact us to discuss any questions you may have.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES


for George Godin, P. Eng.


for Anthony J. Crutcher, P. Eng.

Encl.
GG/sr/1R

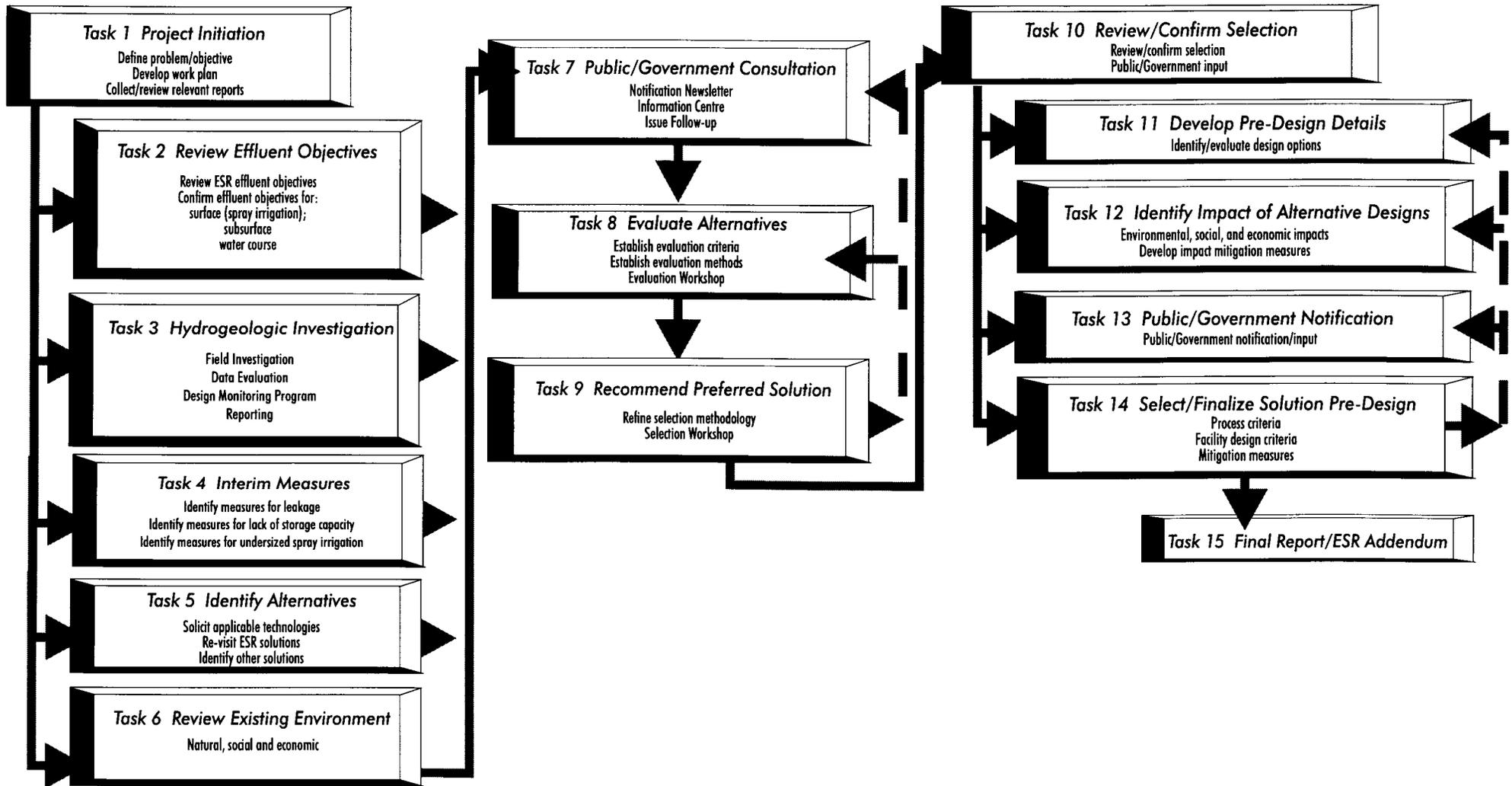
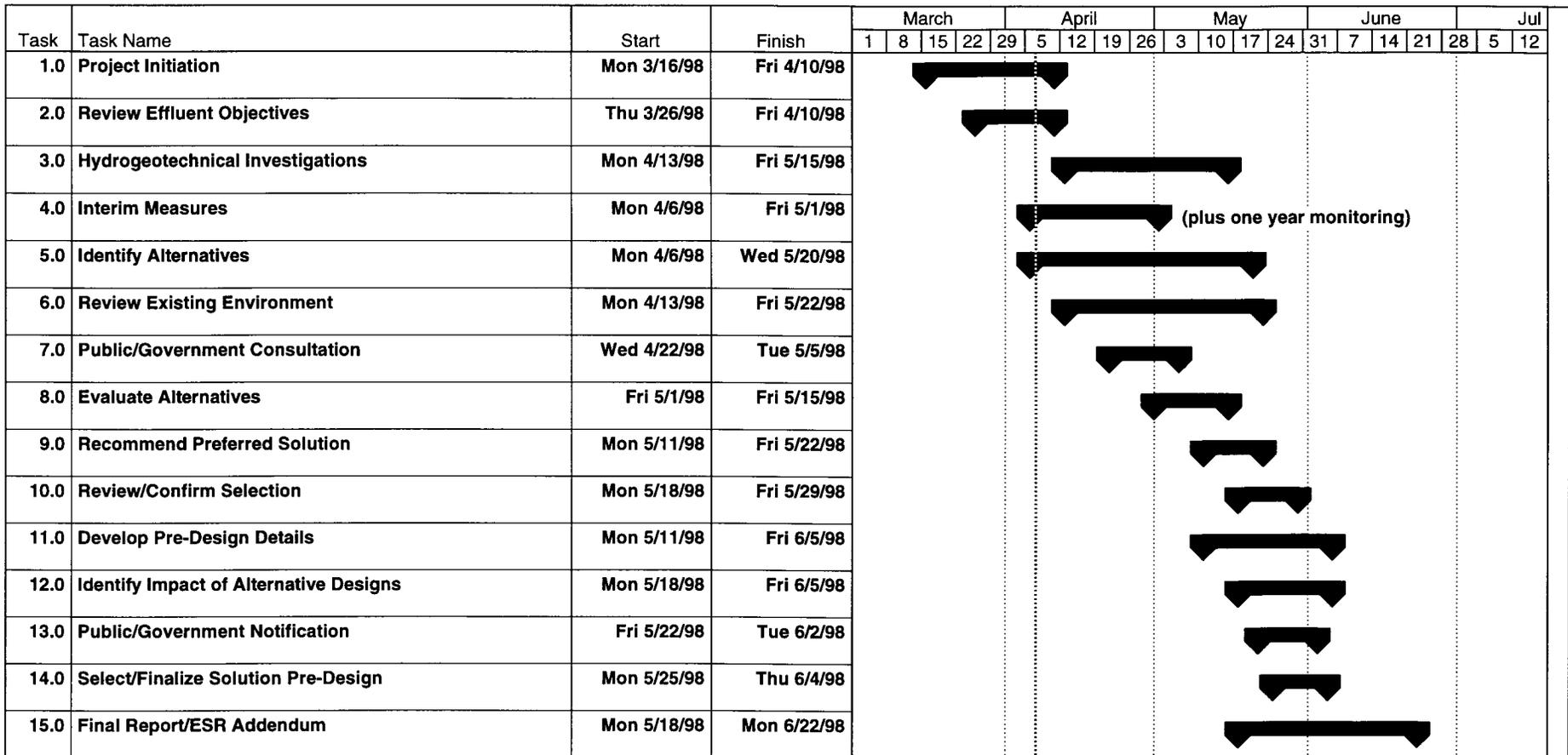


Figure 1
Project Activity Chart

**Munster Hamlet - Wastewater
Treatment Alternatives Evaluation**



CRA

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Figure 2
PROJECT SCHEDULE

Munster Hamlet Wastewater Treatment - Alternatives Evaluation

Figure 3 Project Team

