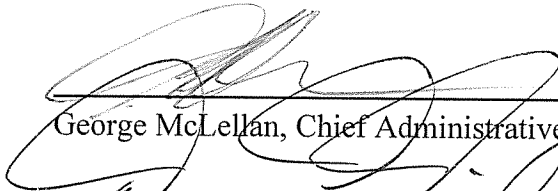
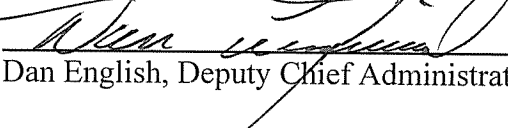


Halifax Regional Council
October 15, 2002

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:


George McLellan, Chief Administrative Officer


Dan English, Deputy Chief Administrative Officer

DATE: October 1, 2002

SUBJECT: **Case No. 00425: Water Service District Boundary Amendments for Fall River Village Area**

ORIGIN:

1. August 15, 2000, tabling of a petition at Regional Council by former Councillor Snow requesting an extension of water services to Fall River Village, Phases One through Nine; and
2. December 4, 2001, tabling of water survey results at Regional Council for the area requesting petitioning to be included within the Water Service District.

RECOMMENDATION:

It is recommended that Regional Council authorize staff to initiate for Planning Districts 14 and 17 (Shubenacadie Lakes) an amendment to the Municipal Planning Strategy, and Subdivision By-law, to extend the Water Service District Boundary for the Fall River Village area as shown on Map 1 and proceed with the public participation program as approved by Council in February, 1997.

SUMMARY

- Residents of Fall River Village have petitioned Council to extend the Water Service District. This will permit extension of central water service to their homes. This requires an amendment to the Municipal Planning Strategy (MPS).
- MPS policy gives priority to expanding Water Service Districts where there are quality or quantity problems with existing water supplies. Technical and financial feasibility are also a criteria. Other policy issues include the impact upon the development pattern and the long term performance of on-site sewage disposal systems.
- There appears to be problems with both water quality and quantity in Fall River. Extension of the water line is technically feasible.
- The estimated cost of extending the water service is approximately \$4 million. A frontage and acreage charge would be levied to recover the costs. The amount charged to property owners would be reduced if there was any Federal or Provincial infrastructure funding. This project is currently 38th on HRM's 2002-03 Infrastructure Request List.
- There is a possibility that existing on-site sewage disposal systems may become overloaded if central water service is introduced.
- It is recommended that Council proceed with public consultation to consider the merits of this request as well as its implications.

BACKGROUND

The residents of Fall River Village have expressed a desire to have centralized water services extended to their community. In support of their petition, a survey of water quality and quantity issues was undertaken. Also, there have been requests that staff communicate the nature of previous discussions which occurred when the Municipal Planning Strategy policies respecting Water Service Districts (WSD) were being considered for adoption and to explain why the area was not included in the WSD in the first place. The purpose of this report is to explain what transpired in the past and present the current proposal in the context of existing MPS policy.

Background of Current Request

Following is a brief chronology of the present request by residents for an extension of centralized water services to Fall River Village:

- August 15, 2000 - a petition to extend water services to Fall River Village, Phases 1 through 9, was tabled by former Councillor Snow.
- April 2, 2001 - a preliminary meeting was held in the community at Councillor Hines' request. The community requested that a second, more widely advertised meeting, be held.
- October 1, 2001 - a second meeting, attended by over 100 persons was held. Members of the community agreed to undertake a survey of domestic water conditions in the area.
- December 4, 2001 - the water survey was tabled at Regional Council by Councillor Hines (see Attachment B).

Although there has been interest expressed in having water service extended to other parts of the community, no other "community-based" water service extension requests have been received. However, given increasing public concern and awareness of water-related health issues, similar servicing requests can be anticipated.

Previous Requests to Extend Water Service

In early 1994, Halifax County Municipality responded to concerns about unplanned extensions of central water systems by adopting a Water Service District (WSD) policy within all municipal planning strategies. The policy defined where central municipal water services would be permitted and the circumstances under which future extensions would be considered (see Appendix A).

Preliminary discussion reports prepared in conjunction with the WSD amendments identified Fall River as a potential area to be included within a WSD. At a Public Hearing held on June 7, 1993, a resident recommended that the existing developed areas of Fall River Village be included within the WSD. However, the Windsor Junction-Waverley WSD Map, approved April 15, 1994, did not include the early phases of Fall River Village.

On October 21, 1994, the WSD boundaries were extended to include 700 acres in the Windsor Junction area as a result of applications made by Capilano Estates and Miller Developments Limited. Records are unclear as to why the developed phases of Fall River Village were not included within the initial WSD.

DISCUSSION

Existing Policy and Zoning

The area proposed for inclusion within the WSD generally comprises Phases 1 to 9 of Fall River Village as shown on Map 1. The subject area is within the Residential Designation of the Municipal Planning Strategy for Planning Districts 14 and 17 (Shubenacadie Lakes) and generally zoned R-1B (Suburban Residential). The existing zoning permits single and two unit dwellings (see Attachment A). The zone requirements are the same for developments with municipal water as without municipal water.

MPS, Financial and Servicing Considerations

This area is outside of the limits of the current Windsor Junction-Waverley WSD (see Map 1) as established under the Municipal Planning Strategy and Subdivision By-law. In order to accommodate residents' request, it will be necessary to amend these planning documents to recognize the extension of water service. Any amendments are subject to approval by Regional Council at a public hearing.

Should Regional Council decide to approve the requested amendments, it will then be necessary to address matters related to phasing of water services to the area and the manner in which capital costs will be recovered from those benefiting from the service. The estimated cost of constructing the water service is approximately \$4.0 million. Map 2 shows a concept of the water servicing layout. The MPS policy, financial and servicing aspects of this proposal will be addressed, in more detail through the MPS amendment process.

Policy Considerations

Criteria for considering amendments to expand or establish new Water Service Districts are set out in Policy P-8(b) (attached as Attachment A). The policy gives priority to water service extensions which meet the following criteria:

- areas experiencing quality and/or quantity problems with the existing water supply;
- existing communities within a reasonable distance of an existing water system where there is a demonstrated need, conditional on the availability of water; and

- areas which would provide looping of infrastructure thereby enhancing the reliability of the water system.

Additionally, the criteria stipulates that Council have regard to:

- detailed engineering and financial implications of a proposal; as well as to
- the broader planning and environmental considerations related to the development of a particular area with central water.

Technical Servicing Issues

The Halifax Regional Water Commission (HRWC) has indicated that the servicing proposal would provide for the looping of the trunk water line between the Fall River Road waterline and the Cobequid Road waterline (see Map 2). The area being considered is located immediately adjacent to and between two serviced areas.

The new waterline would also provide enhanced fire flows in the Fall River Road/Fall River Village areas as a result of the looping. Map 2 shows a possible concept layout plan for servicing the immediate area of Fall River Village. There is adequate supply from the Pockwock system to supply the additional services this expansion would create. All work undertaken would be consistent with the Municipal Specifications and the Halifax Regional Water Commission Specifications. The concept layout plan has been prepared to facilitate possible future service extensions along Fall River Road to other parts of the community.

Water Quality Survey

The survey done by the area residents provides information on both quantity and quality of the domestic water(see Attachment B). The survey addresses 81 percent of the total dwellings, and 212 completed surveys were returned. It determined that ninety-two percent of the respondents received household water from a drilled well, and the remainder drew water from other sources including the lake. Results can be categorised under issues related to water quantity and water quality.

In terms of insufficient quantity the survey found that:

- 21 percent of the respondents experienced their well run dry; and
- 15 percent of the respondents reported that it took four or more hours for the well to refill.

In terms of poor water quality the survey found that:

- 27 percent reported a bad odor;
- 13 percent reported a bad taste; and
- 43 percent reported contaminants in the water and 32 percent of these reported arsenic contaminants.

The Nova Scotia Department of the Environment and Labour states in a letter dated March 1, 2002, (Attachment C) that the consensus of Departmental staff is that the Fall River Village area "is experiencing both water quality and quantity problems. In general, well water was noted to contain

elevated iron and manganese. On rare occasions staff of the Department have noted elevated arsenic and fluoride levels in High Street, MacPherson and Lockview Road area."

The proposed expansion of the Water Service District therefore appears to meet the MPS policy criteria that areas experiencing quality and/or quantity problems with the existing water supply may be considered for inclusion within the WAS and subsequent water service extensions.

Other Considerations

Introducing centralized water service to accommodate existing residential development which uses on-site septic systems also raises other issues, particularly in regards to potential impacts on the existing septic systems. There is no conclusive information on the impacts the extension of municipal water supply may have on existing on-site septic and storm drainage systems.

The issue will be reported on broadly by the report on Water Resource Management which is currently being prepared by a consultant. The main issue relates to the possibility that existing on-site disposal systems may be overloaded as a result of centralized water service being introduced to an area. This is based on the assumption that homes on domestic water typically consume more water than those on individual wells. In addition, some of the houses in this area were constructed on smaller lots and prior to the current on-site disposal regulations utilized by the Nova Scotia Department of the Environment and Labour. A possible means of addressing this issue would be to encourage use of water conservation devices and through awareness programs aimed at educating homeowners about the operation and maintenance of on-site disposal systems.

BUDGET IMPLICATIONS:

The 2002-2003 Capital Budget includes a section on Regional Council's infrastructure funding priorities and those approved to date. The installation of water service for Fall River is 38th on the 2002-2003 HRM Infrastructure Requests list, which was approved by Regional Council on May 28, 2002. Should this project be approved by the Infrastructure Funding Partners, Regional Council may approve the Capital Budget, subject to the area being within the Water Service District Boundary.

A frontage and acreage charge will be levied to reflect the actual cost less any Federal, Provincial, or other funding. Therefore, net debt charges to the Municipality will not increase and costs to finance will be borne directly by those being serviced.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN:

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital, and Reserve Budgets, policies and procedures regarding withdrawals from and utilization of Capital and Operating reserves, as well as any relevant legislation.

ALTERNATIVES:

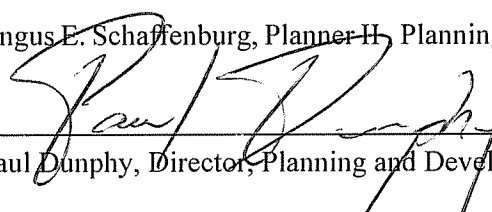
1. Refuse the requested amendments. A request to amend its Municipal Planning Strategy and Subdivision By-law is at Council's discretion and cannot be appealed. This is not recommended for the reasons outlined above.

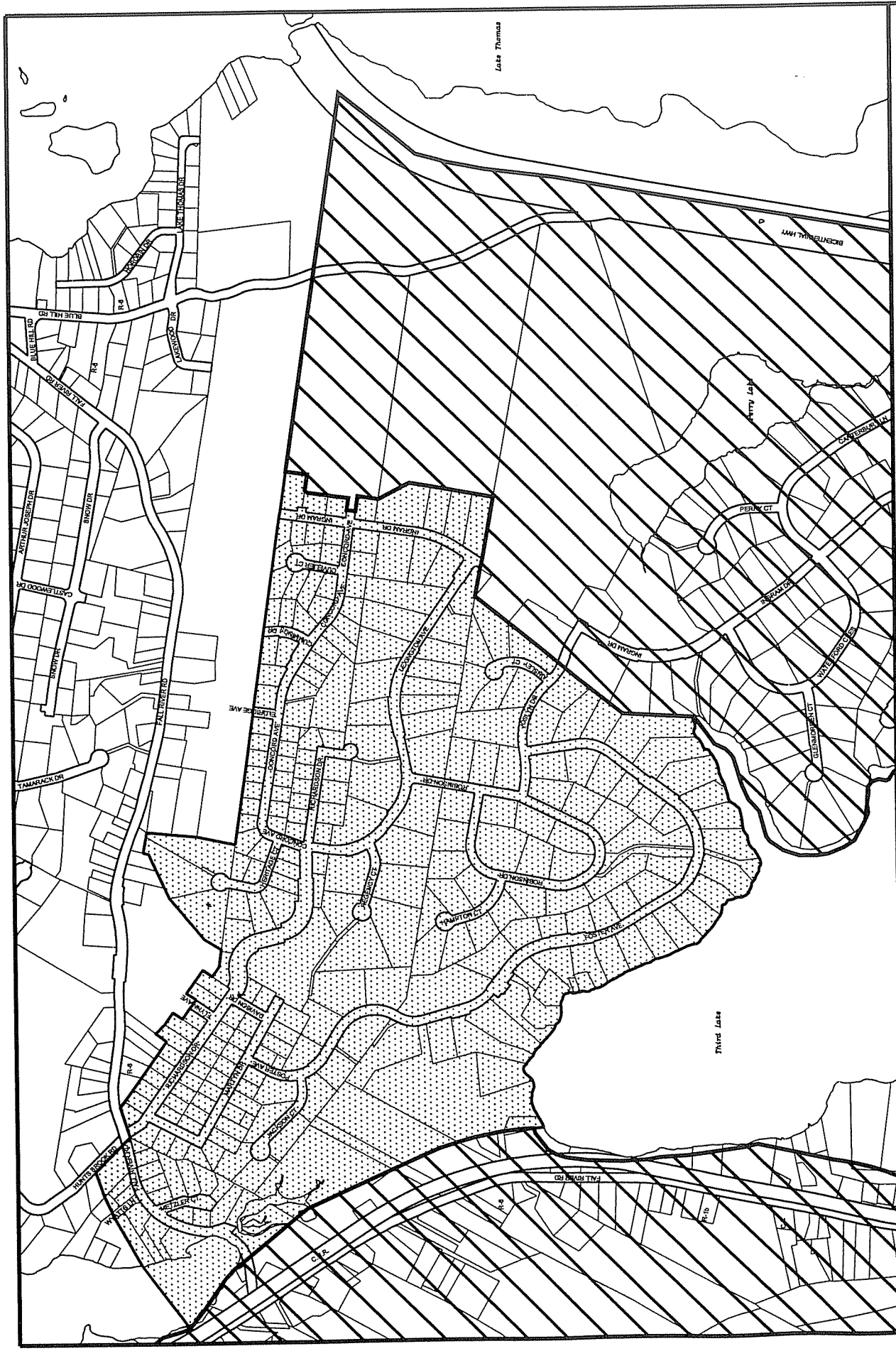
ATTACHMENTS:



Map 1: Existing and Proposed Water Service Boundary for Fall River Village
Map 2: Concept Layout Plan for Fall River Village Servicing
Attachment A: Extracts from the MPS, Land Use By-law, and Subdivision By-law.
Attachment B: Community Water Survey - 2001, Summary. (Entire survey available upon request)
Attachment C: Letters NS Department of the Environment and Labour- Mar. 1, Sept. 10, 2002.

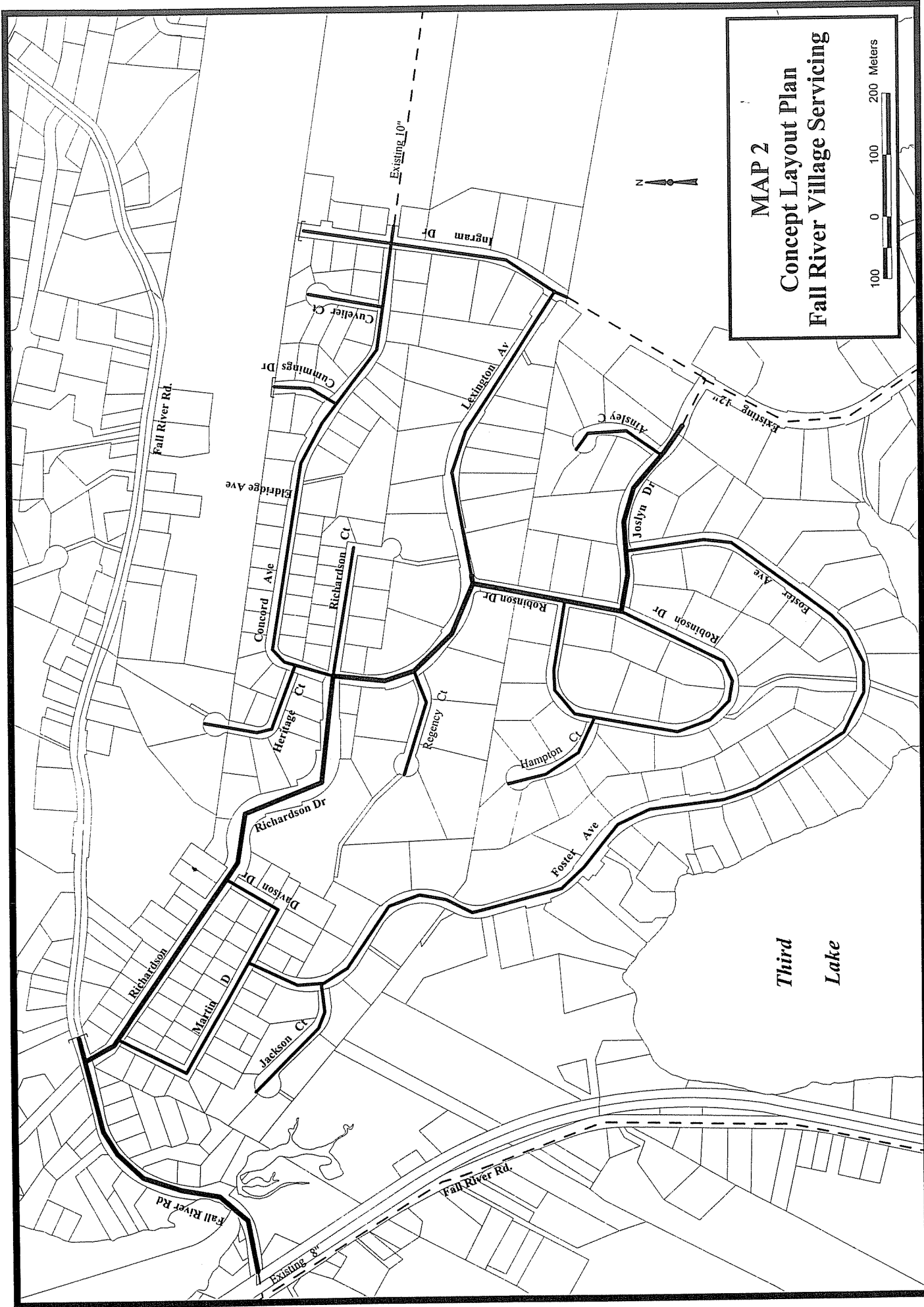
Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Angus E. Schaffenburg, Planner II, Planning and Development Services 869-4005

Report Approved by: 
Paul Dunphy, Director, Planning and Development Services



- Map 1**
-  Area within the Beaverbank, Windsor Junction, Waverley Water Service District
 -  Proposed area to be added to Water Service District



MAP 2
Concept Layout Plan
Fall River Village Servicing



**Attachment A: Extracts from the Municipal Planning Strategy,
Land Use By-law, and Subdivision By-law**

On-Site Sewage Disposal Systems

A recent study prepared by the Nova Scotia Department of Municipal Affairs identifies inadequate maintenance as primary cause of private septic tank and field failure. Although the Provincial Department of Public Health regulates both the design and installation of sewage disposal systems, there is no regular inspection or maintenance programme for such private systems.

Many individual home owners served by an on-site system are not aware of the maintenance requirements of a septic tank and field. Regular inspection and the removal of accumulated solids in the tank are the two major elements of any maintenance program.

In order to improve public awareness of septic system maintenance requirements, it may be useful to institute a public information programme which, in addition to acquainting residents with such requirements, could also be used to disperse public information on a wide range of environmental and public health matters.

- P-5 In order to improve public awareness of septic system maintenance requirements and other matters of environmental and public health concern, it shall be the intention of Council, in cooperation with the provincial government, to investigate methods of public education and information dispersal.

Septic tank pumping services are provided by a number of private firms or individuals located throughout the metropolitan area. However, the final disposal of effluent pumped from septic tanks has on occasion presented problems. Because of overall design capacity limitations at municipal treatment plants, septic tank effluent cannot normally be handled at these locations.

If adequate maintenance of private on-site sewage systems is to be encouraged, it may be necessary to license septic tank pumping firms and to establish an appropriate method and location for the final disposal for septic tank effluent.

- P-6 It shall be the intention of Council, in cooperation with the Provincial Departments of Health and Environment, to investigate both the licensing of septic tank cleaning firms and the provision of an adequate treatment and disposal system for septic tank wastes.

Water Supply

Large portions of the Plan Area are underlain with either gold bearing rock formations or pyritic slates. Wells drilled into these bedrock types can be contaminated by unacceptable levels of arsenic or sulfides and reduced Ph, respectively. While most wells in the Plan Area do not encounter these problems, concentrations of contaminated wells have led to the extension of municipal water services in some areas such as Waverley

The expansion of municipal responsibility for the provision of central water service has largely been a response to specific problems of ground water contamination or inadequate supply. It is important to overall future development and the safety of area residents that any new or expanded central water systems be sized so as to provide for the installation of fire hydrants. In addition, future systems should also be designed so that trunk water lines are looped or joined to existing systems wherever possible. This will ensure that any break in the system will affect as few users as possible.

P-8 In considering new or expanded central municipal water distribution systems, it shall be the intention of Council to provide for sufficient fire flows and the looping of trunk water lines wherever possible.

In early 1993, municipal staff expressed concern to Council about the lack of clear policy direction with respect to development accessing only central municipal water services. Central water service from the Pockwock water system had been extended to a number of areas located outside of designated serviceable areas where both municipal water and sewer services are required. The primary motivation in extending central water to these areas was to resolve identified water quality or quantity problems. However, the extension of trunk services to these areas also resulted in new development being able to access central water. The rapid rate of growth which central water seemed to encourage and the potential scale of development which could occur, coupled with the general lack of policy direction, caused staff to bring the matter before Council. Engineering concerns related to overall water system capacity and the adequacy of internal system design were significant issues as were planning considerations related to development patterns and the adequacy and demand placed on other services.

In the fall of 1993, following public input concerning the issue of central water, Council approved the designation of several Water Service Districts in areas served by the Pockwock water system. These Water Service Districts included areas to which central water only had already been extended or committed as well as areas where it was anticipated that central water would be required to resolve a community based water quality or quantity problem. Within the Planning Districts 14 and 17 plan area, Water Service Districts include Lakeview; Windsor Junction; and Waverley.

It is the intent of Council that central municipal water services will only be permitted within designated Water Service Districts. Council may, however, consider the expansion of existing Water Service Districts or the establishment of new ones when satisfied that all engineering, financial, and planning concerns have been properly addressed.

P-8(a) It shall be the intention of Council to establish Water Service Districts for those areas to which central municipal water services only have or may be extended in the future, as shown on the Water Service District Map (Map 5). It shall be the policy of Council that the extension of central municipal water services shall not be permitted outside of designated Water Service Districts. It shall further be the policy of Council that within the Water Service Districts, central municipal water services shall be provided to all subdivisions adjacent to existing municipal water services and which propose to provide a new or extended public street or highway.

P-8(b) Notwithstanding Policy P-8(a), Council may consider amending this planning strategy and the Municipal Subdivision By-law to permit the expansion of existing or the establishment of new Water Service Districts. When considering new or expanded Water Service Districts, priority shall be given to:

- (1) areas identified as experiencing problems related to insufficient quality and/or poor quality of existing sources of water supply;
- (2) existing communities within a reasonable distance of the central water supply system where there is a demonstrated need and conditional upon the availability of water supply capacity; and
- (3) areas which would provide looping of existing infrastructure thereby enhancing reliability of the water system in the local area.

In addition to the priority criteria outlined above, it shall also be the policy of Council when considering the establishment of new or expanded Water Service Districts, to have regard to the following:

- (a) the engineering and financial implications of such extensions as identified by the Master Infrastructure Plan, Implementation Plan, and Financial Plan carried out pursuant to Municipal Services General Specifications;
- (b) the potential scale of such development and the effects which this may have on existing and future levels of services, as well as the development pattern which is desired and deemed appropriate within this plan area as well as the larger Municipality; and
- (c) environmental considerations related to the long term integrity of on-site sewage disposal systems as well as natural water drainage systems.

Land Use Bylaw

PART 7: R-1B (SUBURBAN RESIDENTIAL) ZONE

7.1 R-1B USES PERMITTED

No development permit shall be issued in any R-1B (Suburban Residential) Zone except for the following:

Residential Uses

Single unit dwellings

Two unit dwellings

Offices in conjunction with permitted dwellings

Bed and Breakfasts

Day care facilities for not more than fourteen (14) children in conjunction with permitted dwellings

Community Uses

Parks and open space uses except cemeteries
Recreation uses
Denominational institutions
Educational institutions and uses
Nursing homes
Residential care facilities
Government offices

7.2 R-1B ZONE REQUIREMENTS

In any R-1B Zone, where uses are permitted as Residential Uses, no development permit shall be issued except in conformity with the following:

Minimum Lot Area:

Central water and sewer services	10,000 square feet (929 m ²) per dwelling unit
Other	40,000 square feet (3716 m ²) per dwelling unit

Minimum Frontage:

Central water and sewer services	75 feet (22.9 m)
Other	100 feet (30.5 m)
Minimum Front or Flankage Yard	30 feet (9.1 m)
Minimum Rear or Side Yard	8 feet (2.4 m)
Maximum Lot Coverage	35 percent
Maximum Height of Main Building	35 feet (10.7 m)

Subdivision By-law

- 16.1 For all proposed lots shown on a Final Plan for which endorsement of approval is requested, the Subdivider shall provide a Municipal Service System to the proposed lots. The Municipal Service System to be provided shall include, in addition to where Provincial Streets are required:

- (a) a Municipal Street System, designed to the standards of the Municipal Service System General Specifications including street paving;
- (b) a Storm Drainage System;
- (c) where the proposed Subdivision is located within a Serviceable Area or Water Service District as identified in this By-law, a Water Distribution System; and
- (d) deleted
- (e) where the proposed subdivision is located within a Serviceable Area as identified in this By-law, a Sanitary Sewerage System.

16.3 Notwithstanding the provisions of Section 16.1 (c), where a proposed subdivision is located within any Water Service District the following provisions shall apply:

- (a) where a new Public Street is proposed, the Subdivider shall install a Water Distribution System to the proposed lots which shall connect to the existing system;
- (b) no Water Distribution System shall be extended to service an existing or proposed Private Road; and
- (c) no Water Distribution System shall be extended beyond the boundaries of a Water Service District.

WATER SURVEY - 2001

Page 1 of 2

WATER SURVEY - 2001

[illegible]



**Department of the Environment
& Labour**
Central Regional Office

Suite 224, Sunnyside Mall
1595 Bedford Highway
Bedford NS B4A 3Y4

Tel: (902) 424-2560
Fax: (902) 424-0597
File: 94600-409-/BED-02

*Bernard J. Matlock, P. Eng.
Environmental Engineer*

March 1, 2002

Angus E. Schaffenburg, MCIP
Halifax Regional Municipality
Planning and Development Services
636 Sackville Drive
Lower Sackville, N.S.
B4C 2S3

Dear Mr. Schaffenburg:

Re: Water Services District Boundary Amendments : Fall River Area

Further to your letter of request dated January 30, 2002 I have consulted with staff within the Department on the issue of water quality in the Fall River area of Fall River Village, Phases 1 to 8. I would like to acknowledge that the consensus was that the area is experiencing both water quality and quantity problems. In general well water was noted to contain elevated iron and manganese. On rare occasions staff of the Department have noted elevated arsenic and fluoride levels in wells of the High Street, Mac Pherson and Lockview Road area.

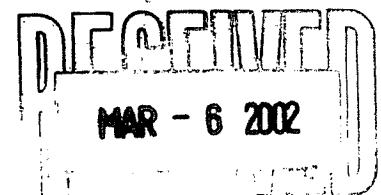
For residents using a surface water source for potable purposes I recommend that the water be both filtered and disinfected prior to use.

Should you have any questions I can be contacted at 424-2560.

Yours truly,

Bernard Matlock, P. Eng.
Regional Engineer

cc. S. Cameron
D. Wood





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& Labour
Central Regional Office

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*Bernard J. Matlock, P. Eng.
Environmental Engineer*

September 10, 2002

Angus E. Schaffenburg, MCIP
Halifax Regional Municipality
Planning and Development Services
636 Sackville Drive
Lower Sackville, N.S.
B4C 2S3

Dear Mr. Schaffenburg:

Re: Water Services District Boundary Amendments : Fall River Area

Further to your letter of request dated August 29, 2002 and my letter dated March 1, 2002 I would like to add the following comments regarding the proposed extension of water services to Fall River Village, Phases 1 to 8.

The installation of water distribution services will require an approval from the Department prior to the commencement of construction and operation of the water service in accordance with the *Activities Designation Regulations*. Please also note that any alteration of a watercourse may also require the appropriate approvals from the Department.

The Department does also encourage a homeowner awareness program aimed at water conservation to prevent excessive hydraulic loading to existing on-site sewage systems.

Should you have any questions I can be contacted at 424-2560.

Yours truly,

Bernard Matlock, P. Eng.
Regional Engineer

cc. S. Cameron
P. MacDonald