

# HALIFAX

P.O. Box 1749  
Halifax, Nova Scotia  
B3J 3A5 Canada

**Item No. 14.1.6**  
**Regional Council**  
**November 8, 2016**

**TO:** Mayor Savage and Members of Halifax Regional Council

**SUBMITTED BY:** Original Signed by   
Jacques Dubé, Chief Administrative Officer

Original Signed by   
Jane Fraser, Acting Deputy Chief Administrative Officer

**DATE:** September 30, 2016

**SUBJECT:** **Extension of Central Water Services along Fall River Road**

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## **ORIGIN**

June 21, 2016, Item 14.1.13

MOVED by Councillor Rankin, seconded by Councillor Karsten

THAT Halifax Regional Council:

- Submit the seven projects described below, totaling \$66.05 million, for cost-shared funding approval under the Clean Water & Wastewater Fund (CWWF);
- Submit the 16 proposed transit projects described below, totaling \$58.21 million, for cost-shared funding approval under the Public Transit Infrastructure Fund (PTIF); and
- Direct staff to submit applications and undertake necessary advocacy work to secure funds.
- Request the Mayor and staff to advocate with the Province and Federal Government for the equitable distribution of Building Canada Funds projects across the province, including in HRM.

MOTION PUT AND PASSED.

May 24, 2016, Item 15.4

MOVED by Councillor Dalrymple, seconded by Councillor Hendsbee

THAT Halifax Regional Council request a staff report on extending the Water Service Boundary along the Fall River Road from the Windsor Junction Road to Highway 2 including PID 00506501 and further along Highway 2 from the Fall River Road to the Highway 102 overpass.

MOTION PUT AND PASSED.

**RECOMMENDATION ON PAGE 2**

## **LEGISLATIVE AUTHORITY**

*Halifax Regional Municipality Charter (HRM Charter), Part VIII, Planning & Development*

*Halifax Regional Municipality Charter (HRM Charter), Part III, Section 74, Municipality and village services agreements, which enables HRM to enter into agreements with the Province or Government of Canada to provide or administer municipal services.*

## **RECOMMENDATION**

It is recommended that Regional Council:

1. Authorize a sole source award and reimbursement of an amount up to \$800,000 to the Halifax Regional Water Commission for the preliminary and detailed design and cost estimation for central water services to the Fall River Village Centre Designation (Map 1 & 2 );
2. Initiate the process for amending the Regional Subdivision By-law to consider expanding the Water Service Area boundary to the Fall River Village Centre (Map 2); and
3. Direct staff to consult with property owners along the proposed water main route on a potential Local Improvement Charges (LIC) By-law for both phase 1a and 1b (Map 2).

## **BACKGROUND**

The Regional Plan designates Fall River as a Rural Commuter Centre. The majority of residents and businesses in the River-Lakes Plan area (Map 1) receive water from private wells with the exception of Sobeys, located in the Fall River Centre. A portion of the neighbourhood south of the Fall River Road is within the Water Service Area boundary and some residents currently receive central water service (Map 2). The potential extension of water services along Fall River Road has been reviewed over the past several years. Building on this history, in May 2016, Regional Council requested a staff report to review the cost and feasibility of extending water services to this area. In June 21, Council also included the proposed water service extension in the list of projects for cost-shared funding approval under the Federal Clean Water & Wastewater Fund. The following sections review the planning context, history and funding commitments concerning the proposed water service extension project.

### **Planning Context**

#### **Regional Plan**

The Regional Plan identifies locations serviced with central piped water and on-site sewer as Water Service Areas. Extensions to the central water system are not permitted outside the Water Service Area. Generally speaking, the Regional Plan discourages extensions to the Water Service Area boundary as there are sufficient lands available within the service boundary to accommodate growth. The Regional Plan, however, enables Council to consider establishing new Water Service Areas (Policy SU-13) or the expansion of existing Water Service Areas (Policy SU-14), under certain conditions, including identified problems with the existing on-site water supply.

#### **Community Plan**

The Fall River Rural Commuter Centre is included in the River-lakes Secondary Planning Strategy, which supports the growth of low density development through the provision of express bus transit and central water. The secondary planning process is taking place in two phases. In Phase I, the process focused on the development of detailed regulations to support desired community form in the River-Lakes Village Centre Designation. The Village Centre is intended to be a meeting place for people from the surrounding area and visitors (Map 1). Phase II is intended to address the remaining area and reflect the

results of the watershed and transportation studies and a proposed infrastructure master plan for the area.

The properties located along the proposed water main extensions, phase 1a along Fall River Road and phase 1b along Highway 2 (Map 2), are predominantly zoned for low density single unit dwellings, commercial and institutional uses. Within the Village Centre, a mix of uses are permitted. The Secondary Plan also allows for the consideration of townhouse developments and low-rise multiple-unit dwellings ranging from three to eight units per acre within specific zones and on identified alternative housing opportunity sites.

#### Existing Uses

Within Planning Districts 14/17, most settlement is scattered along the existing highway and road system. However, in Fall River a more urban pattern is slowly developing. New subdivisions have created a small village-style centre at the Fall River Road and Highway #2 intersection. The vast majority of the residential units consist of low density single unit dwellings (91%), with a smaller percentage of housing as semi-detached (4.2%), apartments (2.7) and mobiles (2.0%).

Approximately 272 parcels front the proposed water main for phase 1a (Map 2). In addition to the single unit dwellings, there are several small to medium scale commercial businesses. At the centre of the Fall River village, the intersection of Fall River Road and Highway 2, there is the Sobeys Shopping Centre Plaza, Tim Hortons, Shoppers Drug Mart, Fall River Wellness Centre and Wilsons Gas station. In addition to residential and commercial uses near or within the village centre there are several churches, three schools, a fire station and a community recreation centre.

#### **History**

In October 2007, Regional Council approved in principle a Community Vision and Action Plan for the Fall River Growth Centre.

In March 2009, the Fall River-Shubenacadie Lakes Watershed Study was completed which examined the environmental capability of lands within the watershed to accommodate development in terms of ground and surface waters and soils. It also examined a range of future growth scenarios, alternatives for water and wastewater servicing, and management strategies for alleviating the impacts of growth. The Shubenacadie Lakes Watershed Study indicated that groundwater conditions are limited and the receiving waters of Lake Thomas and Fletchers Lake are nearing the threshold of desirable water quality objectives for the Shubenacadie Lakes. A number of ground water constraint areas near the Village Centre were identified (Map 3).

In January 2010, the Fall River Transportation Study was completed which assessed the existing road/highway network and describes infrastructure improvements that would be required under alternative future growth scenarios.

On March 1, 2011 Regional Council considered an information report on the extension of municipal water service to the Gordon R. Snow Recreation Centre. The new combined Gordon R. Snow Community Centre and Fire Station 45 is located on Fall River Road, adjacent to Lake Thomas. The facility provides traditional fire and rescue services, serves as a local emergency reception centre and provides space for recreation programming. The facility opened in February of 2009 and the original water supply system for the building consisted of potable and non-potable systems to service different functions within the building. However, the facility has also been designed to accommodate a potential future central (piped) water supply hook-up.

The 2011 information report also identified other existing institutional uses and residents located in or near the Village Centre that have, or are expected to have, water quality and quantity issues. These include Lockview High School, Ash Lee Jefferson School and the George P. Vanier Junior High School. At the time, staff conducted preliminary discussions with Halifax Regional School Board staff and a representative of Scotia Learning. Both acknowledged that the supply of central water to their respective

schools would be beneficial and were willing to participate in a process to determine feasibility and potential financial opportunities.

In January 2013, Regional Council adopted the River-Lakes Secondary Planning Strategy, which focused on the development of detailed regulations and policies for the Village Centre (Map 2). A second phase is intended to focus on options for future residential growth throughout the remainder of the River-Lakes Secondary Plan Area on the basis of the findings of Shubenacadie Lakes Watershed Study and Fall River/Waverley/Wellington Transportation Study.

### **Federal and Provincial Funding**

In Spring 2016, the federal government announced Phase 1 of its long term infrastructure plan. Funding streams included public transit, water & wastewater, affordable housing, and protecting infrastructure from the effects of climate change. The proposed Fall River water service extension was eligible for the Clean Water & Wastewater Fund (CWWF) category. Under this program, cost sharing is 50% Federal, 25% Provincial and 25% Municipal.

On June 21, 2016, Council approved a list of projects to submit to the CWWF category for funding consideration. Seven projects, totaling \$66.05 million were submitted, including the proposed Fall River water service extension. For more information, please see the staff report at the following link. <http://www.halifax.ca/council/agendasc/documents/160621ca14113Revised.pdf>

On August 16, 2016, the Prime Minister and Premier announced the infrastructure funding agreement for Nova Scotia, including a list of all projects approved for funding. The two other levels of government have confirmed funding of the Fall River central water service extension project through the CWWF program; 50% from Federal (\$3,962,870) and 25% from the Province (\$1,981,435). The deadline for receiving the funding and implementing the project is March 31, 2018.

## **DISCUSSION**

Prior to the actual construction of the water system, two legislative elements are required to enable the Fall River Village Centre area to receive central water service:

1. Amendments to the Regional Subdivision By-law to extend the Water Service Area boundary to include Fall River Road and the Village Centre; and
2. Amendments to the Local Improvement Charge By-law to allocate costs of servicing among property owners.

The following sections review the proposed water service boundary extension within the context of the Regional Plan and process for establishing local improvement charges.

### **Extension of the Water Service boundary**

#### Regional Plan

While the Regional Plan generally discourages the extension of urban infrastructure into rural areas, it recognizes that expansions to the Water Service Area boundary may be appropriate in certain circumstances including evidence of water quality or quantity problems. (Attachment A)

Since the approval of the Regional Plan in 2006, a Community Vision and Action Plan, a Watershed Study, a Transportation Study and a Secondary Planning Strategy review have been completed for the River-Lakes Plan Area. As stated in the application for federal and provincial funding, groundwater resources are notoriously poor in the area surrounding Fall River.

As noted in the Background section of this report, proposals to expand the Water Service Area boundary may be considered through policies SU-13 and SU-14 of the Regional Plan (Appendix A). These policies consider the financial ability of HRM to absorb any costs related to the expansion, the performance of the

water distribution system, water quality or quantity issues, and environmental concerns. Staff advise that the proposed Water Service Area boundary extension is consistent with these Regional Plan policy criteria because the proposal has received Federal and Provincial Funding support and responds to known water quantity and quality issues.

#### Planning Districts 14/17 Municipal and River-Lakes Secondary Planning Strategies

Planning Districts 14/17 (Shubenacadie Lakes) and the River Lakes Secondary Strategy and relevant studies anticipate that a great deal of new development will occur over time without the benefit of central municipal water. The Secondary Plan indicates that if water services is not provided that it is important in areas where contamination is possible and where the extension of central municipal water services would be costly, that alternative water sources be encouraged. Such alternatives may include rainwater collection and cistern storage facilities. (Policy 7, Appendix C).

Proposals to expand central water service have largely been a response to specific problems of ground water contamination or inadequate supply. If a wider extension of the water service boundary is considered, the Secondary Plan indicates that it is important to overall future development and the safety of area residents that any new or expanded central water systems be sized 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. (Policy 8, Appendix C)

Proposed phase 1a and 1b of the Fall River water extension project (Map 2) are consistent with policies 7, 8, RL-11 and RL-13 (Appendix C) and of the Planning Districts 14-17 ( Shubenacadie Lakes) Municipal Planning Strategy and the River–Lakes Secondary Plan. There are already signs of water contamination and water quantity constraints in the area. In addition, the extension of central water services would support the residential density, alternative housing and mix of uses that are encouraged by the Fall River Village Centre Designation. Phase 2 of the Secondary Plan process is intended to develop an overall infrastructure plan for the wider region. Consequently, a closer examination of development pressure and infrastructure impacts is required for the wider region if future extension of the water service boundary is contemplated beyond the Village Centre Designation.

### **Financing the Project**

#### Estimated costs

As a preliminary response to Council's specific motion in 2009, Halifax Water estimated that the cost of extending a water main along Fall River Road, from Windsor Junction Road to Lake Thomas Drive (Highway 2), is in the order of \$6 million. In 2015, the project was estimated at \$7.6 million. This included an extension along Lockview Road to service the Ashley Jefferson and Lockview schools and an extension from Lockview Road to Fall River Road, along MacPherson Road (see Map 2). As well, a connection from the existing water main on Ingram road to proposed Fall River Road is included in phase 1a and must traverse private property to connect with existing water mains. Halifax Water is supportive of phase 1a and both Halifax Water and HRM staff suggest that phase 1b (Map 2) be considered and possibly implemented depending on the detailed designs, project costs, public consultation and timeframe constraints.

The above cost estimates are based on a limited service area within the Fall River Village Centre and do not take into account the implications for the potential supply of central water to the larger Fall River area. The findings and conclusions of a water/ infrastructure master plan will provide the “big picture” opportunities and constraints for the greater Fall River area and will enable Council to provide direction regarding the amount of growth, desired community form and the extent of lands that might be considered for central water service. Once this direction is determined, staff can proceed with a detailed feasibility study to define an ultimate water service boundary, required pipe sizes, associated infrastructure, and detailed cost estimates.

Halifax Water and HRM staff recommend proceeding to detail design and having the consultant prepare a detailed cost estimate. Halifax Water is in general agreement with the value of the project (Phase 1 only)

as indicated in the application for Federal funding via the Infrastructure Canada – Clean Water and Wastewater Fund. Subject to future Council direction, Phase 2 would involve a comprehensive Water Master Plan with specific boundaries that would indicate the infrastructure required to fully serve the Fall River community with water and fire protection.

A number of factors will impact the cost of the project including the location of the water main with respect to the travelled right-of-way and the amount of rock encountered. A detailed design study for both phase 1a and b (Map 2) would give Council and residents a better estimate of the costs and the extent of servicing possible.

#### Local Improvement Charges (LIC)

An engineering assessment and preliminary design prepared for Halifax Water will provide estimates of the cost of providing piped water services for phase 1a and 1b (Map 2). As Regional Council has not budgeted funds to finance this project, property owners would be responsible for covering the cost of this project, less any external funds that may be available. A Local Improvement Charge (LIC) would be applied to serve two purposes: to recover Municipal costs from property owners, and to allocate those costs among those included in the project. Before an LIC Bylaw is adopted, the Municipality conducts public information meetings and surveys property owners to gauge support for a proposed project, including whether they are willing to bear the estimated cost. The survey results help guide Regional Council in its decision on whether to adopt an LIC By-law. The amount of external funding under the CWWF will greatly reduce the costs to property owners.

Typically, one public information meeting is held to gauge public support in advance of submitting an application for funding, and another meeting is held if/when funding is approved. In this case, as funding commitments have already been made, staff advise that only one public information meeting is needed to present the project limits and costs.

#### **Future Master Planning**

As noted in preceding sections, the River Lakes Secondary Planning process divided the planning process into two phases. Phase one focussed on the Fall River Village Centre Designation and Phase two is intended to review wider regional infrastructure and environmental issues, including the development of an infrastructure master plan. Regarding central water services, Halifax Water is supportive of future master planning, which is needed to determine the infrastructure required to fully serve the Fall River community with water and fire protection services. Therefore, in preparing detailed designs for the proposed water service extension, it is important that the system be sized and designed to accommodate future master planning work and potential broader water service extensions.

It will not, however, be possible to complete a detailed infrastructure master plan and meet the deadlines of the CWWF. Rather, the preliminary design will include hydraulic modelling of various development scenarios to ensure that the water system that is installed does not limit servicing of the broader area at a future date. It is expected that preliminary design must be completed by mid-January, 2017.

#### Schedule

As mentioned in the background section of this report, the project must be completed by March 31, 2018. In order to meet this deadline Halifax Water has advised that construction should start no later than May 1, 2017, which in turn requires the final design to be started in February, 2017.

It is expected that the hydraulic modelling for development scenarios as well as the public meeting will be completed prior to preparing LIC By-law amendments and finalizing the extent of the Water Service Area boundary extension for Council's consideration in January or February 2017. In order to meet funding related deadlines, it is critical that Halifax Water start the preliminary design in November, 2016.

#### **Conclusion**

The proposed expansion of the Water Service boundary is consistent with the Regional Plan, which enables water services to be extended to communities that are experiencing water quantity/quality issues.

The River Lakes Secondary Planning Strategy also anticipates the extension of central water services. In addition, two other levels of government have confirmed 75% funding to the project through the federal and provincial infrastructure funding program; 50% federal (\$3,962,870), 25% provincial (\$1,981,435).

As stated in the River Lakes Secondary Plan and in the funding proposal, relying on local groundwater supply is an impediment to providing the mix of commercial and low to medium density residential uses that are required to support a vibrant Fall River Village Centre. The proposed project would provide both central water as well as fire protection flows to the Village Centre. Therefore, staff recommend that Regional Council direct staff to proceed with a detailed design and cost estimates for extending water services into the Fall River Village Centre (see map 2). Staff also recommends that Council initiate the processes for amending the Regional Subdivision By-law to extend the Water Service Area Boundary (Map 2) and consulting affecting property owners on options for water extension and a potential Local Improvement Charge (LIC) By-law.

### **FINANCIAL IMPLICATIONS**

The estimated \$7.6 million cost of the water extension project will be covered (75%) by Federal and Provincial funding and (25%) by a Local Improvement Charge (LIC).

The two other levels of government have confirmed funding of the Fall River water service extension project through the CWWF program.

A detailed design of the water main is required to estimate construction and LIC costs and prepare for project construction. The detailed design is estimated to cost between \$500,000 and \$800,000.

The preliminary design may identify that an incremental cost is needed to oversize the proposed water main in order to accommodate potential future growth. If this is the case, Council will need to consider the appropriateness of paying a portion of the capital costs from the general rate on behalf of residents who may connect in the future. This will be addressed when the report is brought to Council to initiate amendments to By-law L-100, Local Improvement Charges.

Details of the funding plan, including whether there is a municipal contribution to accommodate growth, cannot be finalized until at least a preliminary design has been carried out which evaluates various growth scenarios.

In the event that Council decides not to proceed with the project, program funding that has been spent on design will need to be funded by the municipality. This cost (up to \$800,000) would directly or indirectly (e.g. through reserves) impact the general tax rate.

The HRM costs associated with considering expansions to the Water Service Area Boundary and new Local Improvement Charges (LIC) can be accommodated within the proposed 2016/17 operating budget for Planning and Development.

### **RISK CONSIDERATION**

The Federal Infrastructure program requires projects to be completed by March 31, 2018. As a significant amount of work is needed before construction can begin, there is a risk that the project could have difficulty in meeting the infrastructure program deadline.

Financial risks associated with project costs being higher than expected may be mitigated by reducing project limits, contingent upon the Federal and Provincial Governments approving the change in project scope. In addition the Municipality may also mitigate escalating costs by agreeing to contribute funds on behalf of residents who may connect in the future.

### **COMMUNITY ENGAGEMENT**

The community engagement process is consistent with the intent of the HRM Community Engagement Strategy. An initial public meeting must be held concerning the proposed amendment to the Regional Subdivision By-law to expand the Water Service Area boundary. Surveys are also sent to affected residents concerning potential Local Improvement Charges (LIC). In addition, a public hearing must be held by Regional Council before considering the approval of any amendments to the Regional Subdivision By-law to expand the Water Service Area boundary.

### **ENVIRONMENTAL IMPLICATIONS**

No additional concerns have been identified beyond those raised in this report.

### **ALTERNATIVES**

Regional Council may:

1. Direct staff to prepare a water servicing master plan for the Fall River area prior to preparing detailed project design and cost estimates, or considering Water Service Area boundary extensions or Local Improvement Charges for phase 1a, and b.(Map 2) This option is not recommended since the Federal Infrastructure Funding requires projects to be completed by March 31, 2018.
2. Direct staff to not proceed with the water extension project. This would entail declining the Federal and Provincial funds allocated to the project.

### **ATTACHMENTS**

|              |  |
|--------------|--|
| Map 1        | River-Lakes Plan Area and Fall River Village Centre Designation              |
| Map 2        | Existing Water Service Boundary and Proposed Water Main Extension phase 1a,b |
| Map 3        | Fall River, River-Lakes Groundwater Constraint Areas                         |
| Map 4        | Planning Districts 14/17 & River-Lakes zones and designation                 |
| Attachment A | Excerpts from relevant Regional Plan Policies – October 2014                 |
| Attachment B | Excerpts of Watershed Study recommendations – March 2009                     |
| Attachment C | Excerpts of River-Lakes Secondary Planning Strategy – 2014                   |

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A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/index.php> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

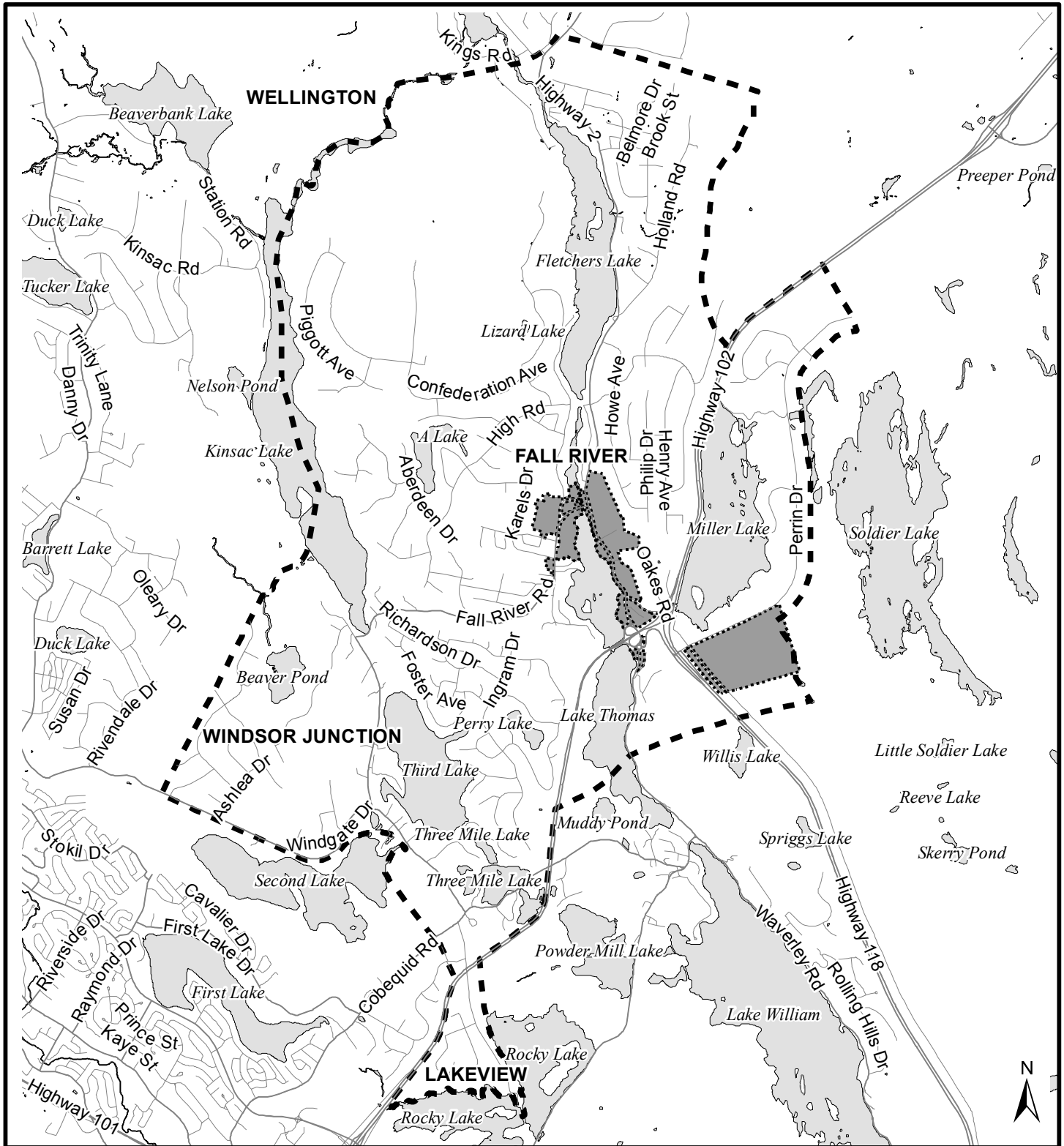
Report Prepared by: Maria Jacobs, Planner 2, Regional and Community Planning 902.490.4911

Report Approved by: \_\_\_\_\_  
Peter Duncan, Manager Infrastructure Planning, 902.490.5449

Report Approved by: \_\_\_\_\_  
Bob Bjerke, Director and Chief Planner, Planning & Development, 902.490.1627



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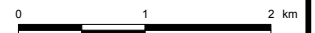




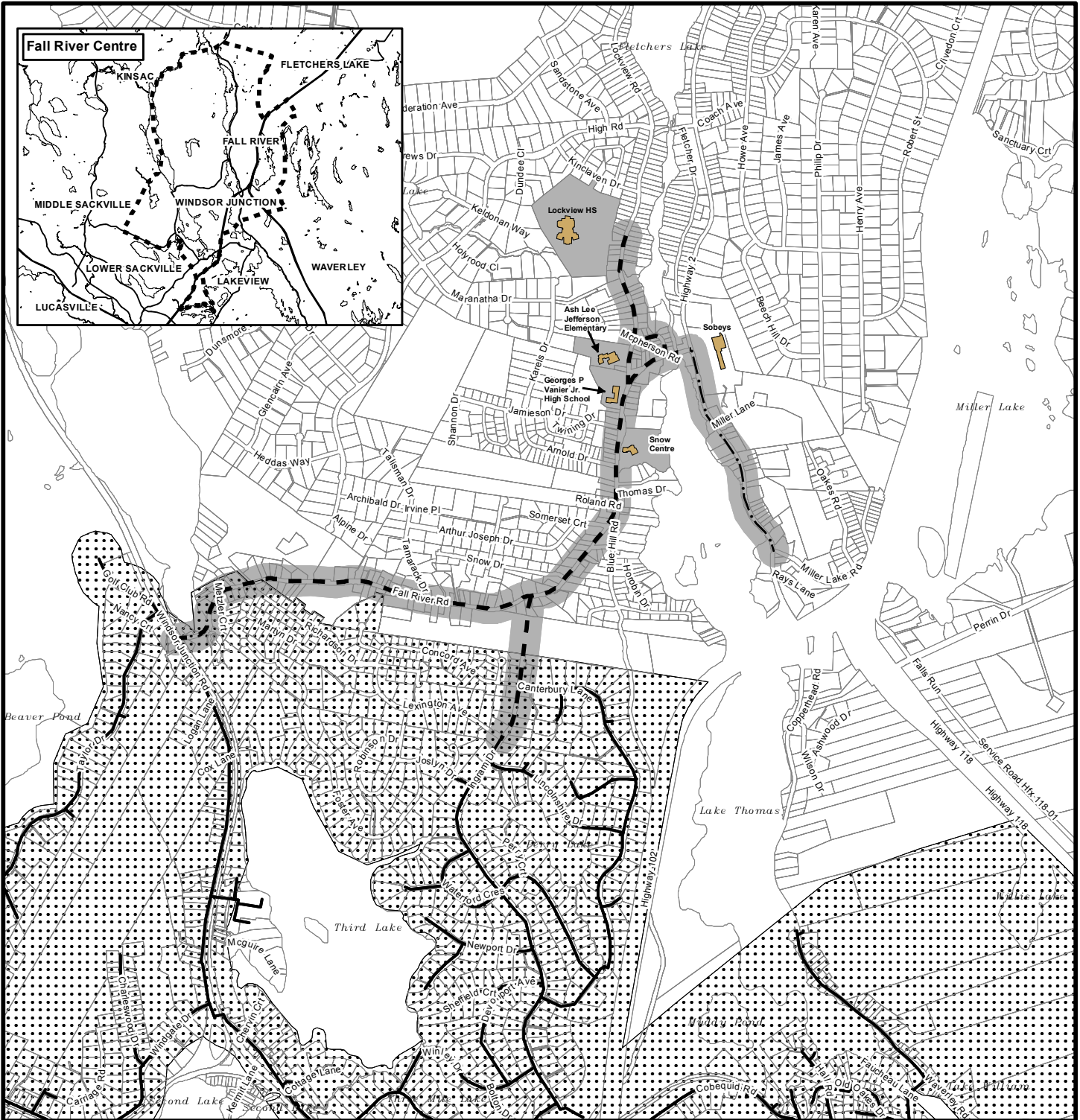
**Map 1 - River-lakes Secondary Planning Area**

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-  River-lakes Plan Area
-  The Village Centre Designation








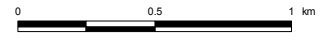
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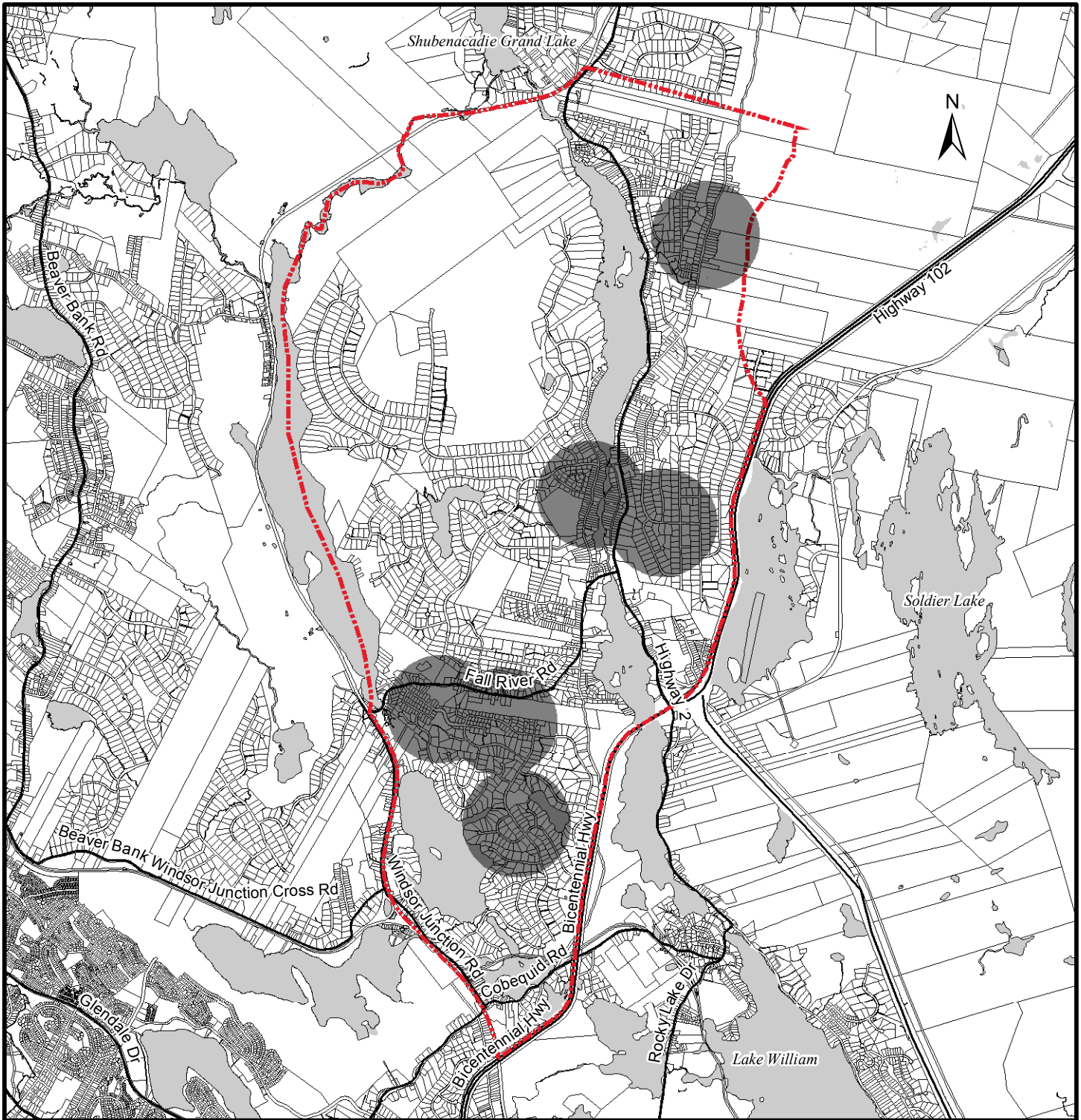
**Map 2 - Proposed Fall River Road Water Extension Phase's 1a & 1b**

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-  Water Service Area
-  Potential Water Service Boundary Extension
-  Phase 1a
-  Phase 1b
-  Existing Water Mains



The accuracy of any representation on this plan is not guaranteed.



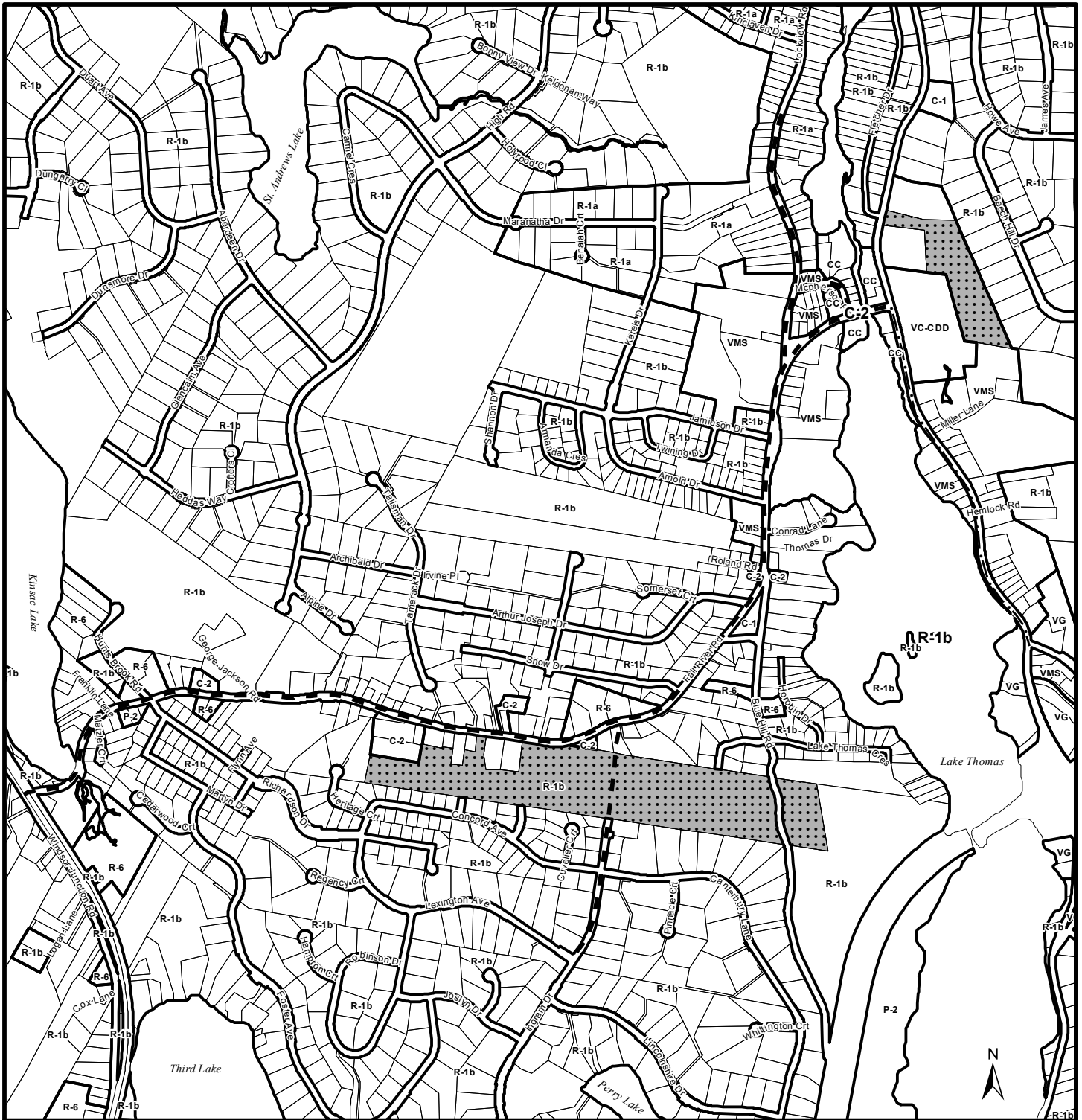
**Map 3 - Fall River/River-lakes Groundwater Constraint Areas**

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- Groundwater Constraint Areas
- Study Area
- Property Boundary
- Lake






The accuracy of any representation on this plan is not guaranteed.



# Map 4 - Zoning

Fall River

-  Phase 1a
-  Phase 1b

 Alternative Housing Opportunity Sites

Planning Districts 14 & 17  
(Shubenacadie Lakes) Land Use By-Law

### Zone

- R-1a Single Unit Dwelling
- R-1b Suburban Residential
- R-6 Rural Residential
- C-2 Community Commercial
- P-2 Community Facility
- VG Village Gateway
- VMS Village Main Street
- VC - CDD Village Core Comprehensive Development District

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This map is an unofficial reproduction of a portion of the Zoning Map for the plan area indicated.

The accuracy of any representation on this plan is not guaranteed.

## Attachment A

### Excerpts of relevant Regional Plan Policies:

**SU-13** HRM may consider establishing new Water Service Areas, subject to the financial ability of HRM to absorb any related costs, provided a wastewater management plan is also considered in accordance with Policy SU-20, if: (a) the area is within a Rural Commuter, Rural Resource or Agricultural centre and it has been determined through a secondary planning process that new growth is to be encouraged in this area; (b) an Open Space Design development is proposed within a Rural Commuter, Rural Resource or Agricultural centre pursuant to Policy S-16 [dealing with Enfield and Dutch Settlement] (c) the lands are adjacent to an existing Water Service Area and an Open Space Design development is proposed within an Urban Reserve designation pursuant to Policies IM-18 and S-16; or (d) a study has been prepared by a qualified person verifying that there is a water quality or quantity problem in an existing community that cannot reasonably be rectified by an alternative means.

**SU-14** HRM may consider expanding existing Water Service Areas to existing communities, subject to the financial ability of HRM to absorb any costs related to the expansion, if: (a) the lands are in proximity to a trunk water main planned or constructed by the Water Commission to improve the performance of the water distribution system; (b) a study has been prepared by a qualified person verifying that there is a water quality or quantity problem that cannot reasonably be rectified by an alternative means; or (c) there are environmental concerns related to the long-term integrity of onsite sewage disposal systems and a wastewater management plan is also considered in accordance with Policy SU-20.

## Attachment B

### Excerpts of relevant Fall River –Shubenacadie Lakes Watershed Study (2009) recommendations:

**R-3: HRM should consider extending central water services to the Fall-River Commercial District.**

Given the observed constraints to groundwater capacity in the Fall-River area, it is recommended that HRM consider extending central water services to the Fall-River Commercial District.

**R-4: If central water services cannot be extended to the Fall-River Commercial District, further study of groundwater resources is required before allowing development to proceed.**

The existing data examined in the Groundwater Resource Study implies that there is over-abstraction of the bedrock aquifer in intensively developed areas between Waverley and Wellington. Further assessment is warranted before any further groundwater-source development proceeds in these areas. The study strongly recommends long term monitoring of aquifers, water budget development and the development of a regional groundwater model as key steps to better assessing the recharge potential, aquifer storage potential and allowable abstraction rates for the development areas. In the interim period between these studies, no new additional development should be approved unless it can be demonstrated that the new development will not further deteriorate the groundwater supplies.

**R-5: The preferred scenario in the Fall-River Growth Centre is the Open Space Subdivision (moderate groundwater constraints applied).**

Given the lower costs associated with clustered onsite wastewater treatment, the site design flexibility afforded by Open Space Subdivision processes, the requirement for groundwater assessment attributed through the RMPS, the preferred development pattern is the Open Space Subdivision (Moderate Groundwater Constraints).

**R-6: A potential preferred location for future development in the Growth Centre is the southwestern extent of the undeveloped portion of the Centre, given existing groundwater and soils constraints.**

As discussed in Appendix C and D, the thin overburden rock land in the northern portion of the Growth Centre may be an area of aquifer vulnerability. The northeast region of this undeveloped area is located upgradient from existing groundwater users and may cause problems. The southwestern extent of the undeveloped portion of the watershed in the Fall River Growth Centre would be the preferred location for future development from an ecological and groundwater resources perspective. This may have implications for Grand Lake and Kinsac Lake that were not considered as part of this study, and further study would be required before the study team could recommend that development be concentrated in this area. This should be explored further if HRM pursues the Open Space Subdivision Scenario.

**R-7: HRM should consider extending central water services to the Fall-River Growth Centre.**

Given the current constraints to groundwater capacity in the Fall-River area, it is recommended that HRM consider extending central water services to the Fall-River Commercial District.

**R-8: If central water services cannot be extended to the Fall-River Growth Centre, further study of groundwater resources is required before allowing development to proceed.**

If central water services cannot be extended, the data examined in the Groundwater Resource Study implies evidence of long-term groundwater drawdown in the watershed with little capacity for further development of without affecting existing groundwater supplies. Further assessment is warranted before any further groundwater-source development proceeds, particularly in areas of the watershed that are situated immediately upgradient of communities with individual on-sitewells. The study strongly recommends long term monitoring of aquifers, water budget development and the development of a regional groundwater model as key steps to better assessing the recharge potential, aquifer storage potential and allowable abstraction rates for the development areas. In the interim period between these studies, no new additional development should be approved unless it can be demonstrated there is aquifer capacity to support further groundwater-based development.

## Attachment C

### Relevant Policies from Planning Districts 14-17 and River-Lakes Secondary Planning Strategy

#### 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. It can be expected that much new development will occur without the benefit of central municipal water. It is important in areas where contamination is possible and where the extension of central municipal water services would be costly, that alternative water sources be encouraged. Such alternatives may include rainwater collection and cistern storage facilities.

P-7 It shall be the intention of Council, in cooperation with the Departments of Public Health and the Environment, to identify and inform future residents of potential areas of ground water contamination and to encourage the use of alternative water sources in such areas. Furthermore, it shall be the intention of Council to encourage the Province to establish a program for the identification of areas prone to well water contamination.

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.

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. (C-Mar 28/94;M-Apr 15/94)

#### River-Lakes Secondary Planning Strategy

##### Residential and Commercial Development

Within the Village Mainstreet Zone of the River-lakes Village Centre Designation, low scale multiple-unit housing and townhouse developments maybe considered through the provisions of a development agreement. In order to ensure that these developments fit in with the desired community form of a rural village centre, density shall be limited to three units per acre. Provisions will be established to allow for the development of a commercial component on the first floor of any low-rise multiple-unit dwelling. This is in keeping with the desire to create an attractive pedestrian-oriented Village Centre. In order to prevent impact on receiving waters and to maintain the rural character of the River-lakes Village Centre Designation, requirements shall also be established to retain a minimum of 50% of the pervious surface of the site for groundwater infiltration and to retain the natural vegetation on steep slopes.

RL-11 Within the Village Mainstreet Zone of the River-lakes Village Centre Designation, HRM shall consider permitting low scale multiple-unit dwellings or townhouses through the provisions of a development agreement.

##### Site B – Fall River Village North Residential Opportunity Site

Site B is situated at the north-end of Fall River Village, running parallel with the Fall River Road. It is a 46 acre site that was once the site of the “Old Carr Farm”. It has a natural landscape with rolling hills, low lying areas and mature vegetation. These features offer an opportunity to offset the differences in scales of development if it is designed to fit into the natural landscape. The *Classic Conservation (RC-Jun 25/14;E-Oct 18/14)* Design approach also offers the opportunity to preserve the environmental and cultural assets of the site and to minimize impact on the receiving environment.

Residents from Fall River Village have concerns about the potential for traffic impact should a road connection be established from the Fall River Road to Fall River Village over this site. There are also concerns about the loss of privacy and aesthetic impact of multiple-unit housing if not situated in such a manner so as to minimize impact on the surrounding low density residential area.

In order to prevent a high concentration of multiple-unit buildings at this location, a maximum of three multiple-unit buildings with a maximum of 40 units per building shall be considered for development on this site. Council will also consider the development of townhouses, single unit dwellings, two unit dwellings or single unit dwellings to form part of this development in order to meet a range of housing needs. Overall density on this site shall be limited to 4 units per acre subject to the submission of studies to verify that the development can take place without adversely affecting the road systems, surrounding neighbourhoods and receiving waters of Lake Thomas and that there are adequate soils and water to service the development. Multiple-unit buildings and associated parking will be situated closer to the Fall River Road and parking lots for the multiple unit buildings will be kept out of the view of Fall River Road and any low density residential uses through the use of siting and buffering. The development will have to conform to the architectural requirements established under the Land Use By-law and the height of all buildings shall be limited to a maximum of three stories. The development shall also be designed to minimize the impact of traffic flow on the surrounding low density residential development.

RL-13 HRM shall consider permitting low scale multiple-unit dwellings townhouses, single unit dwellings or two unit dwellings on Site B through the provisions of a development agreement. The development shall be designed as a *Classic Conservation (RC-Jun 25/14;E-Oct 18/14)* Development pursuant to Policy S-17 (*RC-Jun 25/14;E-Oct 18/14*) of the Regional Plan to offset the bulk and appearance of alternate building forms on surrounding low density residential development and to preserve the cultural and environmental assets of this site. In considering such an agreement, Council shall have regard to the provisions of Policy S-17 (*RC-Jun 25/14;E-Oct 18/14*) of the Regional Plan.