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# Herring Cove Area Settlement and Servicing Strategy

**LandDesign**  
Engineering Services

In association with:

John W. Zuck and Associates  
Peter Klynstra Landscape Architect  
Philip Nortje Landscape Architect  
Atlantic Road & Traffic Management  
DataMap GIS+Cartographic Services

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# Introduction

## Section 1



## 1.1 General

This project was undertaken to help plan future land use for the community of Herring Cove as it faces changes that will be brought with the introduction of central sewer and water services. The project was designed to provide residents with key information about land capability and central servicing so that they could make informed recommendations about the future of their community.

The result of this project is a plan that can be implemented because it represents consensus in the community and is based on a feasible servicing strategy.

## 1.2 Approach

Herring Cove, an historic fishing village on the Chebucto Peninsula, is the first community on the coast, south of the City of Halifax. Herring Cove not only has a distinct village form and atmosphere, but is also highly regarded as a community by the people who live there. Because the introduction of central services will increase development capability, there is great potential for change in the community. The challenge for Herring Cove is to get the benefits of central services and still retain its village character and the quality of community life.

Central services benefit the village by providing existing residents with better sewer and water, by contributing to improved environmental quality, and by opening the possibility of more development so that growing families can stay in, or return to the community. More people can also help share the economic costs of building central services.

More development and more people can be accommodated by increasing density, or by increasing development area. With respect to the existing village character, there is very limited ability to increase density by infill. Although Herring Cove is almost entirely surrounded by the ocean or by crown land, there is a significant area of land at the edges of the village that can be developed once central services are available.

The character of Herring Cove is clearly centred on the historic cove and fishing village. Other important elements of community character include landscape and lifestyle elements such as the proximity of extensive wilderness areas, freshwater streams and lakes for fishing and swimming, walking trails, ocean-front open space, and walking trails throughout the area. Herring Cove exhibits an interesting blend of the old and the new, but it is clear that the fishing village character of the “Cove” is what residents wish to maintain, even those residents in the more modern, urban subdivisions away from the water.

The high value that residents give to their community and its character is substantiated in the Municipal Development Plan for District 5 and by the public consultation undertaken in the course of this study.

The main goal of this study was to explore the possibility of retaining the existing sense of place in Herring Cove, while accommodating future growth.

### 1.3 Project Outline

In general, the work followed the steps outlined below:

1. Notification  
The project was initiated and the community informed by newsletter.
2. Information gathering  
The project team gathered published information, and prepared base maps and data maps.
3. Meeting 1: Information  
The project team held a public meeting to introduce the project, present the information that had been gathered, and to request additional information.
4. Meeting 2: Design Workshop  
The project team presented corrected data maps at the next public meeting, and asked participants to define an appropriate servicing strategy and village form.
5. Defining Village Form  
The project team identified areas of community consensus and tested the resulting village form for impacts on land use, servicing, and traffic issues.
6. Meeting 3: Proposed Land Use  
At the next community meeting, a future land use map based on the Design Workshop was presented for discussion and evaluation.
7. Developing Planning Policies  
The project team documented consensus reached in the public meetings and drafted policies that would enable development in the desired village form.
8. Testing Policies  
Using the proposed future land use map and accompanying policies, the project team modeled potential development to see if the proposals would achieve the desired village form.
9. Documentation  
The project team prepared a final report draft.

This method provided time for careful analysis of village form and servicing options, close consultation with the residents, and most importantly, time to make sure that the information was correct and the recommendations reflected consensus about the community's future. The intention was to ensure that preferred development form would inform land use policy, and that land use policy would, in turn, direct infrastructure development. The policies proposed in this report will be submitted to Halifax Regional Municipality staff, who will prepare recommendations for consideration by Council





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# Synopsis of the Work

Section 2

## 2. Synopsis of the Work

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The work was carried out with the assistance and oversight of a Planning Focus Group that included members of the Herring Cove Ratepayers Association, community representatives, and HRM staff:

- Brian Dempsey (Chair, Herring Cove Ratepayers Association)
- Steve Anderson (Vice-Chair, Herring Cove Ratepayers Association)
- Peter Pelham (Herring Cove Ratepayers Association)
- Al Zong
- Reg Horner
- Alan McDonald
- Austin French (HRM Project Manager)
- Tony Blouin (HRM)
- Scott Hutchison and Mitch Dickey (HRM)

The Planning Focus Group provided invaluable information and advice about community history and current planning issues. It also provided guidance and assistance in setting meeting times and places, and distributing meeting notices.

The project followed the project outline set out in sub-section 1.3, above. Section 2 describes the findings and agreements reached as the project proceeded. Subsequent sections set out background information, recommended servicing strategies, and planning policy proposals in more detail.

### 2.1 Newsletter

An initial newsletter (15 December 1999) was sent to Herring Cove residents by the HRM to announce the project and the call for proposals from consultants. A second newsletter (25 February 2000) announced selection of the consultant and initiation of the project. In addition, the newsletter described the goals and objectives of the work, and published a schedule of three public meetings and workshops. (See Appendix A for both newsletters) The HRM also posted notices of the meetings in the Halifax Chronicle Herald.

### 2.2 Information Gathering

In preparation for the first public meeting, the study team acquired and organized background information about the physical setting, the servicing history, and the planning context of Herring Cove.

This material was gathered through:

- Discussion with the Planning Focus Group;
- Interviews with community leaders and business owners;
- Review of planning documents for Herring Cove and Halifax Mainland South;
- Review of historic and current aerial photographs and land use maps;
- Review of existing sewer and water infrastructure;
- Review of published information about the physical environment; and
- Review of land ownership patterns.

### 2.2.1 Planning Focus Group

In the first meeting with the Planning Focus Group, community leaders emphasized that they are interested in progress defined as protection of important aspects of the community at the same time that servicing issues are resolved. Residents have put a lot of sustained effort into community planning and believe that they have a good municipal plan, and that most problems have arisen when the plan was not respected or the bylaws were not enforced. However, it was also recognized that under the current municipal plan, provision of central services would allow changes that are not in keeping with the existing village character.

Representatives of the Herring Cove Ratepayers Association outlined six guiding principles that they use in discussions of servicing strategies with the HRM:

1. The community wants opportunity to review options, with accompanying rationales, regarding the siting of the sewage treatment plant.
2. The community requires assurance that property values would not be adversely affected by introduction of a sewage treatment plant.
3. The community requires assurance that any damage to property during construction would be repaired or restored.
4. The community requires an absolute guarantee that Herring Cove residents would be able to plan the kind and rate of development that would follow introduction of central services. The historic charm of the village proper must be preserved.
5. The community requires assurance that the sewage treatment plant would have no smell or noise impact

on any residents of Herring Cove, and that the plant will be buffered by parkland space.

6. The community requires assurance that construction of a plant would automatically bring water and sewer to all residents of Herring Cove at a reasonable cost.

The Ratepayers Association believes that these principles represent consensus in the community. A recent survey conducted by the Ratepayers Association confirmed support for provision of central services to all residents at reasonable cost.

### 2.2.2 Planning Background

The Herring Cove area has been included in the following formal plans:

- 1965 Town Plan (Halifax County Municipality)
- 1988 Municipal Planning Strategy (MPS) for Planning District 5 (Halifax County Municipality)
- 1995 Municipal Planning Strategy (MPS) for Planning District 5 (Halifax County Municipality)

All of these plans have recognized the special natural and cultural heritage of Herring Cove and include objectives to prevent its being swallowed up by the expanding metropolitan area. The area was originally zoned “General Building” under the 1965 Town Plan, but in 1973, zoning was adopted by Council that was intended to preserve Herring Cove as a low-density residential area with some commercial convenience uses, a fishing industry zone, and parkland on provincial and federal crown lands. The current District 5 Municipal Planning Strategy (MPS) and bylaws continue to reflect this intention. (See Appendix B: Zoning map) The special Herring Cove planning area under the 1965 Town Plan disappeared when the County was divided into planning districts and Herring Cove became part of District 5, which stretches from Fergusons Cove to West Pennant. (See Appendix B: Planning District map)

Until its annexation by the City of Halifax in 1969, the nearby community of Spryfield was part of Halifax County. Under the current Municipal Planning Strategy for Halifax, Spryfield is included in the Mainland South Secondary Planning Strategy. The Mainland South plan provides for diverse residential development at a gross density of 22 persons per acre. This represents quite a different future from that set out for Herring Cove in the adjacent District 5 MPS.

### 2.2.3 Land Use

Land use in Herring Cove Village is mixed, with residential, community services (including churches, schools, and senior housing) neighbourhood commercial, and fishing industry activities. A series of aerial photographs dating from 1931 to 1997 and a recent land use survey indicate that moderate growth continues in the Herring Cove area, and that this growth is predominantly single-family, low-density residential development. Today there are about 800 residences in the Herring Cove area. With the exception of limited areas developed with central services, most of this growth is along existing roads, contributing to growing safety concerns. (See Appendix B: Land Use map and aerial photographs from 1931, 1954, 1964, and 1997)

### 2.2.4 Land Ownership

Private lands in Herring Cove are surrounded or contained by the ocean and by provincial and federal crown land. The private parcels in the Herring Cove area are typically large lots with narrow frontage.

### 2.2.5 Sewer and Water Infrastructure

With some exceptions, notably the Churchill Estates and the Meadowbrook subdivisions, development in Herring Cove has relied upon on-site sewer and water services. Problems with water supply and sewage disposal are recognized and significant. Servicing issues are not limited to on-site problems, however. Herring Cove has been receiving untreated waste from the Spryfield, or Halifax Mainland South, area since the early 1960s. This waste is received directly through sewer main discharge to Watleys Cove, and indirectly through system overflow to the MacIntosh Run. (See Appendix F: Municipal Services map)

### 2.2.6 Physical Environment

Herring Cove is a coastal village surrounded by ocean, forest, wetlands, ponds and streams. This is in contrast to the neighboring metropolitan area, where developed lands predominate, surrounding the remaining natural lands. Herring Cove residents depend upon and value access to the ocean and the wild lands for their livelihood and recreation. This relationship is essential to the character of the community and the way of life enjoyed by the residents.

The physical environment has also helped shape the community, with the village core centred upon the sheltered

cove, and other settlement areas developing where soils are thickest and have the best drainage. The granite bedrock and thin soils limit capability for on-site services, contributing, along with the land ownership pattern, to the existing low-density development.

### 2.2.7 Documentation

The planning team prepared a digital base map using HRM computer mapping files. Most of the planning area was covered by existing 1:2,000 mapping. This data was augmented with 1:10,000 mapping in areas that were not covered by the more detailed map data.

The base map was used to record geographic information as it was gathered, in preparation for the first public meeting, where the findings would be shared with and verified by participants.

A complete list of map layers is included in the appendices.

### 2.3 Public Information Workshop 1 Thursday, 9 March 2000

The project team held the first public meeting to introduce the project, present the information that had been gathered, and to request additional information. The consultants recognized the long-standing commitment of residents to the Herring Cove community and its future, and approached this project with the hope that they could help facilitate on-going community planning.

The workshop was hosted by the Herring Cove Ratepayers Association, with Brian Dempsey presiding over introduction of the project. Peter Klynstra, one of the consultants, moderated the meeting and outlined the tasks for the evening:

- To review mapped information gathered by the consultants;
- To correct the maps and add important information; and
- To define community issues and priorities.

The following information was presented by the consultants (See maps in Appendix B):

- Land Cover, Soil, and Geology maps;
- Aerial photographs covering the period from 1931 to 1997;
- Existing Land-use map;
- Existing Zoning map;
- Existing Municipal Services map.

The approximately 80 participants, including residents, developers, and political leaders, were seated at work tables. Copies of the base map were given to each table so that participants could make corrections and add important detail, including special places, and specific problem spots. When this work was done, each table presented their marked up plans and reporting their concerns, wishes and ideas to the entire group. (See Appendix C for photographs of the maps prepared by each table.)

The presentations included many important points. Generally, the special qualities of the Herring Cove community were repeatedly emphasized. There was strong interest in having a planning area that recognizes and establishes the Herring Cove area as it existed in the Halifax County Town Plan. More specifically, many special places were identified, including skating ponds, swimming holes, woodland trails, and historic sites. Problems included issues such as water supply, surface water and habitat quality, pedestrian access through subdivisions, provision of sidewalks on streets connecting community facilities, maintenance of community facilities like the government wharf and breakwater, and requirements for new or expanded community facilities like schools and senior housing. Important open spaces, environmentally sensitive areas, and conservation zones were also identified.

As the workshop drew to a close, it became clear that there was general agreement among participants on several general goals. There was an expressed desire to:

- Maintain low-density housing, defined as minimum 10,000 square feet lot with minimum 75 feet frontage;
- Protect the historic fishing village;
- Preserve the rural charm of the neighborhood;
- Protect the MacIntosh Run and other water resources;
- Ensure protection of the area's natural beauty and ocean frontage.

The first meeting concluded with general discussion and a reminder that the second public meeting would be another workshop where participants would outline a servicing strategy and future village form.

### **2.4 Community Design Workshop Thursday, 6 April 2000**

The focus of the second public meeting was a Design Workshop. The Community was invited to attend this meeting to help design, or shape the future of Herring Cove.



### 2.4.1 Preparation for the Community Design Workshop

In preparation for the next public meeting, the consultants prepared a map combining all of the comments recorded at each table in the first meeting. (See Appendix C: Meeting #1 Summary map) The consultants also revised the community inventory data based on what was learned at the first public meeting, prepared new maps that reflected those changes, and investigated servicing options. (See Appendix D for photographs of the maps prepared by each table)

Additional inventory work included (See Appendix B):

- Elevation;
- Slope; and
- Drainage.

One of the most significant mapping projects was preparation of a Buildable Areas map showing limitations to development. (See Appendix D) Limitations were represented in two classes: Unbuildable Areas, where no construction should occur; and Conservation Areas, where construction would be difficult.

Unbuildable areas were defined as

- Crown land;
- Slopes greater than 30 percent;
- Watercourses and wetlands;
- 100 foot buffer zone along the coast, and around all watercourses and wetlands; and
- Parkland (P2, P3, churches, schools, playgrounds, and cemeteries).

Conservation areas were defined as:

- Slopes 16 to 30 percent
- Poorly drained soil.

A conceptual servicing plan was prepared, along with a preliminary analysis of costs and funding. This work was done in sufficient detail that the financial impact of servicing strategies and land use policies could be understood in general terms.

### 2.4.2 The Design Workshop

Approximately 80 people attended the second public meeting. The project team reviewed the first meeting, presented corrected data maps and new information, and outlined the workshop task, to define an appropriate servicing strategy and village form for Herring Cove.

The consultants began the workshop with slides showing examples of different development approaches. These photos, illustrating different development densities and styles, were intended as a source of ideas as participants began to think about future land use in Herring Cove.

Participants were seated at work tables again. At this meeting, copies of the Buildable Areas map were provided, and each table was asked to make any corrections to the map, and then outline the location and kind of development that they would like to see in the community by applying colours to the map that represented single-family lots, two-family lots, schools, and open space. When this work was done, each table reported on its plan and vision for future land use in Herring Cove. (See Appendix D for reproductions of the maps prepared by each table)

The group presentations included many common points. It was clear that there are many shared goals in the community and substantial agreement about future land use in Herring Cove.

- The special character of Herring Cove should be recognized in the MPS.
- The area around the Cove should remain a special marine-related land use area.
- Throughout the entire community, the predominant development form should be single family residential on large lots. This statement was qualified in couple of ways. First, it was agreed that what mattered was overall density, and smaller lots would be an acceptable way to reduce development costs and provide more open space. Second, it was agreed that two-family dwellings would be desirable to allow for supplementary income or a “mother-in-law” apartment.
- Several important areas were identified as parkland because of traditional use, historic use, or environmental protection.
- It was agreed that the entire community should be provided with central sewer and water.
- There was substantial concern about servicing costs, and general agreement that costs should be assigned on a unit basis rather than frontage.

The workshop concluded with general discussion and a reminder that the third public meeting would be an opportunity for participants to review a servicing strategy and future village form based on the design workshop.

## 2.5 Defining Village Form

The project team identified areas of community consensus and tested the resulting village form for impacts on land use, servicing, and traffic issues.

A proposed Future Land Use map was drawn up based on the substantial areas of agreement established in the second meeting. The purpose of this map was to document progress of the project to date. Its immediate use would be to find out what the impact of future land use would be on municipal infrastructure, including central servicing and transportation. This map would also be presented at the next community meeting for corrections and additions.

The project team determined that minor changes would be required to the MPS:

- A Herring Cove planning area should be clearly defined and given status under the MPS;
- Implementation of The Future Land Use Plan requires fewer zoning categories than currently exist;
- Future subdivision should be permitted by development agreement in respect of policies intended to maintain the distinctive character of the community; and
- Innovative methods should be considered for allowing and maintaining public use of private lands.

Servicing scenarios were investigated based on the assumption that central services would be available to all residences in Herring Cove. The scenarios were based on two different sets of assumptions: first, that no planning changes would be made and serviced development would occur at densities permitted in the 1995 MPS; and second, that planning changes consistent with the findings of this study would be made. Preliminary servicing cost estimates indicate that using current HRM standards, overall sanitary sewer costs do not vary significantly with density. That is, higher development densities would not dilute unit costs. On the other hand, water service costs are substantially reduced with the lower development density desired by the community.

Traffic projections indicate that serviced development densities allowed by the 1995 MPS would result in traffic volumes well in excess of current transportation scenarios. Development density resulting from full development of the plan proposed by the community would, on the other hand, result in traffic volumes consistent with current scenarios on a 25 year horizon.

### 2.6 Meeting 3: Proposed Land Use Thursday, 27 April 2000

At the third community meeting, a proposed Future Land Use map based on the Design Workshop reports was presented for discussion and evaluation. (See Appendix E) The planning team opened the meeting with the explanation that this was an opportunity for the community to comment, suggest changes, and identify errors or issues that may have been overlooked.

Five land use areas were shown on the map:

- **Fishing Village**  
includes the older parts of Herring Cove, and is intended to preserve the fishing village character, to provide community and marine services, and to allow local commercial uses.
- **Village Residential**  
includes developed and vacant land that is intended for low-density residential and related uses.
- **Community Facility**  
includes existing community services such as the fire station, post office, schools, churches, and senior housing.
- **Park**  
includes existing and proposed parklands, and is intended to provide for recreation and access to oceanfront, playgrounds, fresh water resources, and heritage sites.
- **Conservation**  
includes the crown lands that surround and enclose Herring Cove village and environmentally sensitive lands within the village such as water protection buffer zones.

Special provisions were proposed for subdivision in the Herring Cove Planning Area. Any existing lot might be subdivided into as many as three (3) lots inclusive, as long as there is sufficient area for each lot to be at least 10,000 square feet. All subdivisions greater than three (3) lots inclusive should be approved by development agreement that respects conservation and open space policies set out in the plan. Development agreements might allow lots as small as 6,000 square feet, but the land area provided for each lot, including open space, must be at least 10,000 square feet. It was anticipated that most residential development would be single-family, but two-family residential uses would be allowed as long as there was sufficient area to meet the requirements for two lots.

Participants were asked to do two things, first, make sure that the proposed Future Land Use map reflected consensus reached at earlier meetings, and second, outline the lands that should be included in the Herring Cove planning area.

There was general agreement with the proposed land use designations and policy directions, with some adjustment. A principal and strongly supported view was that the HRM should continue to consider alternative sewage treatment plant sites.

General agreement was also reached on the extent of the Herring Cove Planning Area, which would be marked with road signs at its borders (see Future Land Use map, Appendix E):

- Halibut Bay on the Ketch Harbour Road,
- The DND property on the Purcells Cove Road, and
- The old City boundary on the Herring Cove Road.

As the meeting closed, the planning team expressed its thanks to the participants and explained that they would write a report based on the information and agreements reached in the process.

### 2.7 Developing Planning Policies and Servicing Strategies

In response to what was learned at the third public meeting, the consultants revised the proposed Future Land Use map and documented consensus reached (see Appendix E). The consultants also drafted municipal servicing strategies and plan policies that were intended to enable development in the desired village form. This material is set out in sections below:

- Section 3: The Future of Herring Cove;
- Section 4: Planning Background and Policies to Support the Plan;
- Section 5: Servicing Strategy to Support the Plan; and
- Section 6: Phasing and Options for Servicing.

### 2.8 Testing Policies and Servicing Strategies

The project team modeled potential development based upon two development scenarios. Both assume the introduction of central sewerage and water services. The first scenario demonstrates development potential under the existing plan, while the second scenario demonstrates development potential using the proposed plan developed in the course of this study.

The first development scenario, using the existing Municipal Planning Strategy (MPS), Land Use Bylaw, and Subdivision Bylaw, suggests a potential for about 1450 new residential units. The second scenario, using the proposed plan, suggests a

potential for about 650 new dwellings in the study area. In both cases, the bulk of the new units would be on lands outside of the community core, indicating limited potential for infill.

Transportation modeling for this project indicates that the first, status quo, scenario would result in significant increases of traffic volume over the current GoPlan twenty-five year projections. The second scenario, based on the recommendations of this plan, predict traffic volume that is consistent with GoPlan projections.

This exercise made it clear that the existing plan would fail to meet the residents' goal of maintaining community character through low-density housing, protection of special places, and conservation of the environment, goals that are clearly stated in the existing plan. The plan revisions and servicing strategy recommended in this study are intended to help achieve the long held vision for the future of Herring Cove by:

- Revising allowable density;
- Providing for community review of subdivision proposals through development agreement;
- Introducing additional environmental protection and open space requirements; and
- Scaling and siting infrastructure (sewer, water, and transportation) to support future needs of the community.

The consultants will test the proposed plan with professionals in the planning and development community to evaluate its effectiveness and identify any difficulties with implementation.

### 2.9 Documentation

The project team prepared a draft of the project report for review by the Planning Focus Group. Their thoughtful and detailed comments made a substantial contribution to the final draft. The consultants believe that agreements reached in the public meetings and workshops have been observed, and expect that the plan will meet with general approval.

The final report was distributed as follows:

- Ten bound copies of the final report to the Planning Focus Group and HRM staff;
- One hard-copy reproducible copy of the final report to HRM staff;
- Digital map files to HRM staff;
- Digital document for electronic distribution in a file format readable on any computer.

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# The Future of Herring Cove

Section 3





Herring Cove residents have given serious and effective attention to their community plan over the years, and they continue to be actively concerned with community interests. This was demonstrated again in the course of the current settlement and servicing study, which involved many residents in a public process that gave community voice to critical issues of village form and development. Herring Cove residents are privileged to enjoy a distinctive environment, and they work actively and passionately, doing all they can to preserve and enhance this quality of life for future generations.

This report represents community consensus about village form and a servicing strategy that will help to create it. This level of agreement about where the community wants to go and how to get there is a powerful tool for those who will work to maintain and build a better community, and to preserve its distinctive cultural and natural heritage.

This planning exercise was prompted by the impending extension of central services, piped water and sewer, to Herring Cove. The existing MPS encourages a development form that is quite different than the form envisioned in this document. So far, land capability for on-site services has controlled development in Herring Cove. Provision of piped water and sewer allows much greater development density, which in turn increases requirements for other municipal services such as more schools and more road capacity. Increased density also places greater demands upon the environment to absorb development impacts that, with the policies currently in place, would result in degradation of environmental quality. If central services are provided, and the quality of life is to be maintained, then careful consideration must be given to location and capacity of the services, and to the planning policies that guide development.

One of the central ideas informing this study is that municipal services are important determinants of development form. For this reason, it is critically important to consider village form first, then design municipal service systems to support the desired form. As residents continue to monitor community development, careful attention must be given to both the MPS and its articulation of the future, and the municipal servicing systems that enable that future.

This document represents agreement in the community, and forms the basis for changes to the MPS and development of an appropriate servicing strategy.



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# Planning Background and Policies to Support the Plan

Section 4

#### 4. Planning Background and Policies to Support the Plan

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### 4.1 Introduction

The planning background for this study is presented in three main sections:

- regional context;
- community context; and
- community futures.

Discussion of regional context considers the relationship of the Herring Cove area to the Chebucto Peninsula and the Halifax metropolitan region (in particular, the adjacent Mainland South Halifax planning area). The community context section characterizes the Herring Cove area and its existing planning provisions. Finally, planning policy for the Herring Cove area is proposed. These policies reflect community consensus about future development in reference to the recently established Halifax Regional Municipality (HRM), which now includes the study area. The proposed revisions also entail some discussion of implementation measures as they are relevant.

### 4.2 Regional Context

#### 4.2.1 Location

Herring Cove is located in the eastern part of Planning District 5 of the former Municipality of Halifax County. District 5 covers the southeastern portion of the Chebucto Peninsula, with the old City of Halifax, Mainland South area, to the north, and District 4 to the west. District 5 is bordered by Halifax Outer Harbour to the east and the Atlantic Ocean to the south. The shoreline in District 5 extends from Fergusons Cove to West Pennant. (See Appendix B: Planning Districts map) The Herring Cove area, in the eastern part of District 5, is described in more detail below.

#### 4.2.2 Environment

The entire area is underlain by granite. The soil is coarse-textured and generally thin, with large areas of exposed bedrock. Boulders are common on the surface and in the soil. The topography is generally flat, with exposed granite knolls. The landscape is wooded, but barrens are common in very exposed coastal areas. Drainage is very good except in areas where it is restricted by topography in flat lowlands or troughs in the bedrock. There are many wetlands, lakes, and streams that generally flow in a southerly direction to the sea. The shoreline is rocky, with low cliffs.

The MacIntosh Run originates in Long Lake and enters the sea through Herring Cove. (See Appendix B: Watershed map)

## 4. Planning Background and Policies to Support the Plan

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Traditionally, the sea provided an ocean fishery, and the Run supported a fishery of freshwater and sea-run fish. The Run is remarkable in that remnants of the freshwater and sea-run fish populations remain.

Herring Cove village developed as a fishing community around a sheltered cove. Other settlement areas developed on areas with the thickest, well-drained soils. These areas have also been used for borrow.

The Herring Cove community is surrounded by extensive open spaces. The core of this open space is the extensive crown land holdings on the Chebucto Peninsula. A block of crown land to the west of Herring Cove that extends from the coast to the height of land at Long Lake is referred to in the District 5 MPS as the Chebucto Corridor. To the east of the village, a smaller block of crown land extends inland along the MacIntosh Run, contiguous with undeveloped land within the City that extends as far as Williams Lake. The presence of this open space and its accessibility is regarded as one of the most important aspects of the quality of life in Herring Cove. Residents are deeply concerned about the use of crown land in the Herring Cove area and expect the HRM to facilitate community participation in any deliberations about future use of these lands.

### 4.2.3 Cultural Heritage

The Herring Cove area has a rich cultural history characterized by its relationship to the sea. The cove, the village, military installations along the coast, current fishing activities and stories of marine adventure and disaster reflect this history. As technology has changed, military sites have been abandoned or turned to other uses. The fishing industry is still important, but it has changed, and recreational and tourist marine interests including sport fishing, diving, and whale watching are gaining importance. Regional navigational systems and communications have always been important within the plan area. The new Worldwide Telecom installations at Herring Cove and Ketch Harbour are part of the latest in communication technology, bringing ashore transatlantic fibre optic cables that provide high-capacity connections between North America and Europe, linking Halifax, Dublin, Liverpool, and Boston.

The community has changed in other ways. There is more suburban development, and more people commute to jobs outside of the planning area, using an improved highway system. Ribbon development now connects Herring Cove village to the metropolitan area. Development has been constrained to the road network by road frontage requirements and the high

cost of road development on unserviced land. The land ownership pattern, with typically narrow frontages, contributes to the problem. The development pattern in Herring Cove has been, and continues to be, influenced by its orientation to the cove, by the shape of land parcels, and by the abundance of crown land that effectively surrounds and contains the village.

The distinct community qualities that make Herring Cove so attractive naturally draw people to the area. The resulting development pressure threatens to change the community character that old and new residents value so highly. As a result of metropolitan growth, residents have access to a large job market, but suburban development contributes to loss of traditional land uses, including hunting, fishing, swimming and hiking. Suburban development also contributes to other problems, especially with transportation and site services, leading to pressure for urban services and infrastructure improvements.

### 4.2.4 Sewer and Water

With some exceptions, development in Herring Cove has relied upon on-site sewerage and water systems. Provincial on-site requirements for lot approval have been the effective controlling factor in development density and form.

Essentially, development has been controlled by the ability of the land to support it. The introduction of central services will change that relationship, allowing a different development form at higher density. The differences between developments using on-site and central services are substantial.

The area is not ideally suited to on-site development. The granite bedrock may not yield adequate water quantity or quality, and the generally thin soils require large lots for septic disposal. In fact, there are problems with services in Herring Cove, especially water supply.

Issues surrounding municipal services in the Mainland South area of Halifax are particularly important, having significant impact on Herring Cove. In the early 1960s, the Municipality built a sewage disposal system to service the growing urban area of Spryfield. It was decided not to discharge this system to the Northwest Arm, but to pump the sewage uphill from Spryfield to the height of land along the Herring Cove Road. From there, the sewage flows by gravity to an outfall at Watleys Cove. After the 1969 annexation of the Spryfield area by the City of Halifax, the City took over ownership and maintenance of this sewerage system. Since then, only a small number of connections have been made in the County because of the limited extent of water service. Connections have been made where water service was extended from Spryfield.

## 4. Planning Background and Policies to Support the Plan

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Connections were also made in Churchill Estates, with approval based on the provision of a central water system. In the meantime, Spryfield's growing service area population has contributed to sewage overflows into the MacIntosh Run during heavy rains. This problem has been addressed by City planning policies that recognized the limits of servicing capacity, established development holding zones, instituted an infiltration-reduction program, and called for comprehensive servicing strategies. Herring Cove residents continue to be concerned about the potential for impact on water and habitat quality from sewage overflows to the MacIntosh Run and raw sewage discharge to Watleys Cove.

The proposed Mainland South sewage treatment plant, part of the response to these problems, will help mitigate problems with the sewage outfall. If the treatment plant is located in Herring Cove, it will also bring sewer and water to the community, creating new development potential. Central services will help to alleviate old problems, but will also raise new and important questions about the future of the community.

### 4.2.5 Stormwater

Stormwater from developed areas in Herring Cove and the rest of the MacIntosh Run watershed is discharged directly to natural watercourses. Typically, runoff carries pollutants and is warmer than natural discharge to streams. The groundwater component of runoff is reduced, resulting in higher flood stages and lower base flows in streams. Contaminants and sediments also cause deterioration of freshwater habitats.

The MacIntosh Run is an important natural feature and fish habitat. The impact of development on the Run is already apparent and residents are concerned about conservation of this valued community resource. The largest urbanizing part of the watershed is, however, outside the community, in another plan area.

### 4.2.6 Transportation

Suburban development in the areas served by the Herring Cove Road and an increase in commuting to jobs outside the area has resulted in increased traffic. Ribbon development along Herring Cove Road adds to traffic problems by introducing more streets and driveways directly onto the collector road. There is also a seasonal increase in traffic with visitors to the coastline and its recreational attractions.

Residents are concerned about traffic and pedestrian safety.



One response to these problems has been the reduction of speed limits on provincial roads in the Herring Cove Area. The former City of Halifax recognized the problem within its jurisdiction, responding with plans to upgrade the Herring Cove Road and increase traffic capacity. Two areas of special concern should be noted. First, the swimming area on Long Pond is immediately adjacent to the Herring Cove Road, giving rise to parking and pedestrian safety issues. A second area of particular concern is Hebridean Drive, which has no sidewalks, but is heavily used by pedestrians within the community service core of the village.

For drivers with Peninsula Halifax destinations, the Armdale Rotary is regarded as a bottleneck. Residents are concerned that increases in population in the Spryfield and contributing areas will add to congestion in the rotary. Growing employment opportunities outside of Peninsula Halifax and construction of the Northwest Arm Drive have helped to relieve the problem by changing destinations and providing alternate routes.

Public transportation is provided by regular Metro bus service between downtown Halifax and Herring Cove. Residents have expressed interest in other alternate forms of transportation, including bicycle trails to Spryfield service areas, and further, to downtown Halifax.

### 4.2.7 The Halifax Municipal Development Plan

The Halifax Mainland South Secondary Planning Strategy sets out planning policy and specifies implementation measures in the Land Use Bylaw, including reference to other municipal bylaws and provincial legislation. The principal objective of the Mainland South Planning Strategy is to develop and maintain Mainland South as a predominantly residential area with a diverse mixture of family and non-family housing.

All Land Use Designations in the Mainland South Municipal Development Plan that border on the Herring Cove area are residential. (See Appendix B: Mainland South Generalized Future Land Use map)

Areas that are within currently serviced areas along the Herring Cove Road are shown as “Low Density Residential” on the Generalized Future Land Use Plan. The Low Density Residential areas are zoned Single Family Residential (R1) and Two Family Residential (R2). Lot requirements specify a minimum lot area of 5,000 square feet with a frontage minimum of 50 feet in both R1 and R2 zones. Central services are required for all development in this area.

Areas that are not within currently serviced areas are shown as

## 4. Planning Background and Policies to Support the Plan

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“Residential Development District” (RDD) on the Generalized Future Land Use Plan. When serviced, these areas are intended to be residential contract development areas planned and built as a whole or in phases under a unified site design that would provide a mix of residential and related recreational, commercial, and open space uses with emphasis on a mix of dwelling unit types at a maximum density of twenty-two (22) persons per gross acre.

Unserviced RDD Designations are currently zoned “Holding”. This zone permits development of detached single family dwellings with on-site services, and public parks or playgrounds.

General policies in the Mainland South section of the Halifax Municipal Development plan that are relevant to the regional context of this study are reviewed below in italics. (References to the Halifax Mainland South Municipal Development Plan with amendments to 8 January 2000 are included in parentheses.)

### 4.2.7.1 Recreation

The general objective for recreation is to provide recreation facilities in Mainland South at the same level as obtained throughout the City. Policies include:

- The City shall encourage passive recreational uses adjoining the McIntosh Run shoreline including public walkways and bicycle trails along the flood plain area and related environmentally sensitive areas reserved for public use...(X.4.1)
- The City shall develop a strategy for and seek to establish a continuous passive or active recreational open space system in the Mainland South area; such a system would include public parks, walkways, nature trails and water-oriented activities...(X.4.6)

One of the principal components of the system would be the MacIntosh Run.

### 4.2.7.2 Transportation

The general objective for transportation is sufficient, effective, and efficient transportation to serve the Mainland South area and the City. Policies include:

- The City shall pursue completion of the widening and realignment of the Herring Cove Road between the Armdale Rotary and the City limits to improve traffic flow. (X.5.1)

### 4.2.7.3 Municipal Services

The general objective for municipal services is adequate sanitary and storm water disposal systems to maintain environmental quality. Policies include:

- The City shall discourage the practice of disposing uncontrolled and unmanaged storm water directly into inland lakes and waterways. (X.6.2)
- The City shall investigate alternative measures for flooding and drainage control, and erosion and sedimentation control with regard to the disposal of storm water, and shall develop appropriate regulations or legislation to implement such measures. (X.6.2.1)
- Through negotiation with the Nova Scotia Department of the Environment, the City shall seek the preservation of the MacIntosh Run waterway as an open channel for storm water. (X.6.3)
- The City shall encourage measures for protective management of natural flood plain areas along MacIntosh Run between Long Lake and the City limits and shall negotiate with the Provincial Government to further this intent. (X.6.3.1)
- The City shall have regard for potential environmental effects of installing municipal services within flood plain areas of the MacIntosh Run. (X.6.3.2)

### 4.2.7.4 Environment

The general environmental objective is to identify and protect environmentally sensitive and ecologically valuable natural features. Policies include:

- Environmental sensitivity shall be considered as of the degree of susceptibility of natural areas to deleterious effects of urban development...(X.7.1)
- Identification features are tree cover 40% and greater in density; exposed bedrock; wetlands and streams; slopes 16% and greater...(X.7.1.1)
- Lands within 100 feet of the water's edge of any water body shall be considered to be environmentally sensitive and the Land Use Bylaw shall require a higher standard for new single-family lots adjacent to watercourses. (X.7.1.2)
- Where development proposals are being considered through rezoning or development agreement, the City

#### 4. Planning Background and Policies to Support the Plan

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- shall protect environmentally sensitive areas. (X.7.3)
- The City shall require setbacks for new development adjacent to lakes, watercourses or waterbodies for the purposes of maintaining and enhancing a high quality lakes and waterways system for development considered [in RDD areas]. (X.7.4)
- The City shall undertake an analysis of flooding along the MacIntosh Run and prepare suitable policy and regulatory controls to protect the watercourse. (X.7.4.1)
- Pending the completion of the study outlined in Policy 7.4.1, the City shall amend its Land Use bylaw to require a setback for all new development of one hundred feet from the McIntosh Run. (X.7.4.2)

In summary, the objectives of the District 5 MPS and the Halifax Mainland South MPS are substantially different. The Halifax MPS anticipates residential development with central services on all of the land bordering the Herring Cove area. In contrast to the Herring Cove plan, there is no clear intention to preserve wildlands in the MacIntosh Run corridor except as a recreational and storm drainage corridor. No conservation lands are shown in the Mainland South plan, and no intention is expressed to intervene with the province to keep crown lands in public ownership. It is true that there are policies endorsing open space and recreation systems, and protection of environmentally sensitive areas, but these same areas are slated for development at a density of twenty-two (22) persons per gross acre.

Herring Cove can be characterized as an island of development in a larger fabric of open space; the Mainland South plan visualizes patches, or at best, networks of green in an urban fabric.

##### 4.2.8 Halifax Sewage Treatment

In addition to two existing sewage treatment plants at Mill Cove and Eastern Passage, several more regional plants are currently being planned, with at least one in Dartmouth, two on the Halifax Peninsula, and one for Mainland South in Herring Cove. Although the Mainland South site has not been finally selected, the site preferred by the Harbour Solutions Project is at Hospital Point. A sewage treatment plant at this site would bring water service to the community, allowing or requiring extension of sewers.

The level of treatment planned is “advanced primary treatment”, which is deemed to meet current environmental

and socio-economic objectives articulated by the Halifax Harbour Task Force (1990), The Halifax Harbour Symposium (1996), The Halifax Harbour Solutions Advisory Committee (1998), and HRM staff.

### 4.3 Community Context

#### 4.3.1 A Special Place

Herring Cove was a village long before urban expansion created suburban pressures at its borders with Halifax Mainland South and within the community. Residents are aware of their cultural and natural heritage and value it highly. Herring Cove residents appreciate the fact that their community is a special place, distinct from the general metropolitan area.

#### 4.3.2 Current Land Use

A recent land use survey (HRM, January 2000) indicates that moderate growth continues in Herring Cove and that it is predominantly single-family development. Although the area is currently zoned to allow two-dwelling units, there appear to be very few in existence. It also appears that there has been an attrition of commercial and industrial uses, with the major exception of the new communications facility at Hospital Point. (See Appendix B: Land Use map.)

New development can be characterized as suburban. The employment base in the community has not expanded, and many residents commute to their jobs. The tendency also is to ribbon development because of road frontage requirements, the low density of development permitted with on-site services, and the high standards and cost of road construction. The land ownership pattern, generally in long, narrow strips, also contributes to the problem as it makes land assembly more difficult.

This land ownership pattern, and the constraint it places on community development, is recognized in the MPS by a policy that allows limited subdivision of lots, setting aside frontage requirements.

#### 4.3.3 Sewer and Water Services

Most of the Herring Cove area is not serviced, with the exception of lands adjacent to the Mainland South water service district (Meadowbrook subdivision) where services have been extended from Spryfield, and Churchill Estates, where sewer connections were allowed based on provision of a water system for the subdivision. (See Appendix F: Municipal

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Services map) The Churchill Estates water system uses a well field, and there have been problems with water supply in the subdivision. There have also been problems with wells on neighbouring properties, which residents attribute to drawdown from the subdivision system.

For reasons outlined above, it has not been feasible to develop subdivisions in Herring Cove using on-site services and current development standards. If central services are provided, however, a substantial amount of activity is expected.

### 4.3.4 Environment

As noted above, large areas of provincial crown land effectively limit the development of Herring Cove. These crown lands also give residents access to the surrounding wilderness resource, which is actively used for a variety of recreational pursuits.

There is an abundance of freshwater in the wetlands, ponds, brooks, and rivers in the Herring Cove area. Most of this water resource retains good habitat and recreational value. The MacIntosh Run still provides good fish habitat although it has been impacted by upstream urban development, and the lakes are popular swimming places. Development activities, including the alteration of wetlands and watercourses, removal of streamside vegetation, and the discharge of sanitary and storm sewers can all have a detrimental effect on water and habitat quality. This is a special concern with the MacIntosh Run, which flows through the urbanizing area of Spryfield, and drains directly into the Herring Cove fishing harbour.

Stormwater is normally concentrated in drainage structures, then discharged to natural drainage systems. This can cause significant environmental impact, including erosion, sedimentation, reduced base flow, increased flood stage, increased water temperature, and degradation of water quality.

Infilling wetlands and watercourses reduces the capacity of natural systems to handle drainage and increases development impacts.

Since the major watercourses in the area are at the downstream end of large watersheds, concerns with stormwater management and watercourse quality include not only developments inside, but also outside the plan area. (See Appendix B: Area Watersheds map) The headwaters of the MacIntosh Run originate in Long Lake, a municipal water supply back-up area, and the Run flows through the developing community of Spryfield before discharging in Herring Cove. Land use practices in the entire watershed are of concern to residents of Herring Cove. Two approaches are suggested: in the large part of the watershed that remains undeveloped, new

development practices can help reduce impact on the Run; in areas that are already developed, consideration can be given to adopting measures to mitigate impact and restore the Run. Herring Cove residents support protection of the Long Lake watershed (the headwaters of the MacIntosh Run) and further, support maintaining and strengthening provisions in the Mainland South Municipal Development Plan that protect the MacIntosh Run.

The coastal environment is also very important to the community. A large part of the coastline is not developed and large parts of the coast are still accessible to the public. This open space is understood to be an essential component of community character. Whether the coastal water use is visual, recreational, or part of the fishery, water quality is critically important. Residents regard the current practice of discharging raw sewage to the ocean as offensive and damaging to the fishery and shore uses. They also argue that sewage treatment is necessary and that extension of services to the community is fair compensation for receiving sewage from Mainland South.

### 4.3.5 Recreation

There are a variety of active and passive, organized and informal recreation facilities in Herring Cove. Active sports fields are located on the school grounds and at the fire station. Swimming occurs in several ponds, including Big Latter Pond and Long Pond. Swimming lessons are offered at the Long Pond site. A major community concern is traffic safety at the Long Pond Beach, which is very close to the road, and requires parking along the road. Other water activities include fishing and boating.

Walking on coastal and interior trails is very popular. Many visitors come to see the sights or walk along the ocean. Many residents are interested in maintaining backland trails that are used to reach swimming or fishing places, or just to have a pleasant woodland walk. There is also concern about access to the trail system from the village. These trails and access to them should be taken into account as the community continues to grow and new developments are planned.

### 4.3.6 Community Services

Community services, their location, and scale help create the village atmosphere. These services include the fire station, the post office, schools, churches, seniors' housing, and convenience stores. These facilities are currently scaled to the existing village community. Regional facilities, including commercial centres, recreation centres, and libraries, are found a short distance away in Spryfield.

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Many of the community facilities are grouped in the centre of town. Although there is considerable pedestrian traffic between the community facilities and the surrounding residential areas, there are no sidewalks. Residents identified Hebridean Drive as a priority for sidewalk construction. In addition, there is an interest in maintaining pedestrian ways that connect various parts of the community.

### 4.3.7 Planning Background

The history of community planning in Herring Cove is a story of citizen involvement that demonstrates deep and abiding commitment on the part of the residents. From the very beginnings of town planning in this area, the distinct character of the village and concern about its relationship to the metropolitan area has been evident.

“Herring Cove’s proximity to the metropolitan area would appear to make it desirable that its facilities and general appearance should be preserved, even if its usefulness as a commercial fishing base should decline. It should be regarded as an historical site, with some potential as a tourist and recreational area. Steps should be taken to prevent it from being swallowed up by the nearby urban development.” (1965 Town Plan)

In spite of this statement, Herring Cove was zoned “General Building” until 1973, when new zoning was proposed for the Herring Cove area. A dispute over what constituted the official zoning plan resulted in a hearing before the Provincial Planning Appeal Board. The Board concluded that it was good planning and in the best interests of the Municipality to preserve Herring Cove substantially as a low density residential area with some local commercial conveniences, a fishing industry zone, and some parkland on lands held by the provincial and federal governments. The Board ruled accordingly, instructing the Municipality to amend its zoning bylaw.

In subsequent plans, the Municipality of the County of Halifax included Herring Cove within a comprehensive plan for District 5, which extended from East Pennant to Fergusons Cove. After deliberation involving the very careful and extensive participation of a citizen committee, the first District 5 Plan was adopted in 1988. The plan as it applied to Herring Cove was guided by the same vision as the 1965 Town Plan quoted



above. Although various policies and land use bylaws were specifically tailored to Herring Cove, the Herring Cove planning area does not appear in this plan, or its 1995 revision.

### 4.3.8 Land Use Designations in the 1995 MPS

Four Land Use Designations are applied to the Herring Cove area and are shown on the Generalized Future Land Use Map in the 1995 MPS:

- Residential
- Village Centre
- Park
- Conservation

General policies for each of these designations are outlined below, with some discussion of the Land Use and Subdivision Bylaws, as they are relevant to the current exercise. In general, residents like the community they have, like the plan they have, and want to make sure that this representation of community consensus is carefully observed. It is fair to say, therefore, that the big question is really how the plan needs to be amended in order to meet changing conditions, principally the provision of central services.

#### 4.3.8.1 Residential Designation

Essentially, all private land was designated Residential. This designation is intended to encourage and protect a low-density residential environment. Although it was recognized that residential development in the area is predominantly single-unit, two-unit dwellings were indicated throughout most of the designation in order to allow a mixture of housing while at the same time preserving the low density environment. In order to ensure low density development in fully serviced areas, the plan requires each unit of a two-unit dwelling to have minimum lot requirements similar to single unit dwellings (see table 4.3.1 - page 41).

In respect of existing community occupations, fishery activities associated with individual fishermen are permitted in all residential areas. Home occupations of a limited size are also permitted provided they are limited to 300 square feet and are in keeping with the surrounding residential environment. Bed and Breakfast establishments and day care facilities are included as home occupations.

The plan recognizes the need for community facilities, including schools and senior citizen housing by including them within the Residential designation and providing for new facilities by amendment to the land use bylaw.

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Generally, existing commercial and industrial uses were accommodated within residential areas through application of a general business zone that permits continuation and expansion of existing uses, but does not allow establishment of such uses in future. The intention was to concentrate industrial and commercial land uses in other places to reduce land use conflicts and encourage economic development.

The need for local commercial services is recognized in the plan. Small scale commercial uses (< 2,000 square feet) will be considered on a site basis through rezoning to a local commercial zone. Local commercial centres (< 5,000 square feet with no single use > 2,000 square feet) will be considered by development agreement. Commercial recreation uses will also be considered through development agreement.

Existing community facility uses such as public and private institutional uses, service oriented commercial uses, and open space uses are recognized in the plan, and new community facility uses may be considered as amendments to the Land Use Bylaw.

Within the Herring Cove area several Land Use zones express the intention of the Residential Designation in the MPS: (See Appendix B: Zoning map)

- R-1 Single-Unit Dwellings
- R-2 Two-Unit Dwellings
- C-2 General Business
- P-2 Community Facility

Note: The permitted uses in R-1 and R-2 are the same, with the exception of the allowable number of units.

##### 4.3.8.2 Village Centre Designation

The Herring Cove Village Centre designation in the MPS is intended to preserve the historic character of the fishing village of Herring Cove. This designation was created in anticipation of future serviced development in an effort to set the Village Centre apart from newly developing residential areas on the periphery of the village and to protect the fabric and character of the older sections of Herring Cove.

This designation recognizes that existing residential uses, community uses, and local business uses in the older sections of the village act as a focal point for the surrounding community, and that the village character would suffer if this area were to become a principal service centre.

Community use or local tourism industry uses will be considered through changes to the Land Use Bylaw.

The following Land Use zones express the intention of the Village Centre Designation:

Several Land Use zones implement the intention of the Village Centre Designation:

- VR Fishing Village Residential
- V-2 Herring Cove Village Centre
- F-1 Fishing Industry

Note: Permitted uses in VR are similar to R-2. Permitted uses in VR and V-2 are similar, except that V-2 permits community facility and local business uses. Permitted uses in F-1 are the same as VR except that F-1 allows marine structures and commercial uses.

The Land Use Bylaw provides for minimum lot areas and frontages (and effectively, development density) within the Residential and Village Centre Land Use Designations as set out in Table 4.3.1, below.

Zone	On-site Services		Central Services	
	Minimum area	Minimum frontage	Minimum area	Minimum frontage
R1 Single-Unit Dwelling	20,000 square feet	100 feet	6,000 square feet	60 feet
R2 Two-Unit Dwelling	20,000 square feet	100 feet	6,000 square feet per dwelling unit	60 feet per dwelling unit
VR Village Residential	20,000 square feet	100 feet	6,000 square feet per dwelling unit	60 feet per dwelling unit
V-2 Herring Cove Village Centre	20,000 square feet	100 feet	6,000 square feet per dwelling unit	60 feet
F-1	20,000 square feet	100 feet	20,000 square feet	100 feet

Table 4.3.1: Minimum Lot Frontages and Areas, District 5 MPS

It is not clear that the land use intention to maintain low density development in fully serviced areas by requiring each unit of a two-unit dwelling to have minimum lot requirements similar to single unit dwellings is fully met in this scheme. The important question, however, is how well 6,000 square feet lots meet the general residential objective of encouraging and protecting low density residential environments.

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### 4.3.8.3 Park

Land areas including federal and provincial crown land along the coast were designated as Park in order to retain open space, protect heritage resources, and preserve areas of scenic value and wilderness potential. Park development along the coast provides for preservation of coastal areas for recreational use and passive access by the public.

### 4.3.8.4 Conservation

The MPS recognizes that the provincial crown lands in District 5 represent a significant wilderness resource adjacent to the metropolitan area, and that these wilderness areas form corridors connecting the metropolitan area with the coast. The plan also recognizes that provincial policies for land disposal and leasing have direct bearing upon the environment and future land use patterns within the plan area, and that the local communities have a vital interest in management plans for the crown lands. All provincial crown lands, with the exception of some park areas, are designated for Conservation.

### 4.3.9 Existing Land Use and Subdivision Bylaws

A number of issues raised during the public meetings and workshops for this project are directly related to existing Land Use Bylaws.

#### Lot sizes:

Serviced lot areas of 6,000 square feet with 60 feet frontage are smaller than the 10,000 square feet with 75 feet frontage that the community advocated in the public meetings for this project. Also, the land use policy that requires each unit of a two-unit dwelling to have minimum lot requirements similar to single unit dwellings in order to maintain single-family densities does not seem to be consistently carried through in the bylaws.

#### Frontage and Road Requirements:

The MPS and the Subdivision bylaw provide for limited subdivision of a land parcel that does not meet frontage requirements if the lot predates the 1988 plan. The Development Officer may approve a plan of subdivision showing not more than three lots (two lots plus a remainder) where one, two, or three lots do not meet the lot frontage requirements of the land use bylaw. The intention of this provision is to allow limited development of the long, narrow lots that are typical in the Herring Cove area. Elsewhere in the Subdivision bylaw, however, it is made clear that no subdivision on private roads shall be permitted where the proposed lots are connected to municipal sewer and/or water

services. It is also made clear that local roads must be built to provincial standards. These requirements suggest that limited subdivision of narrow lots in serviced areas would not be permitted.

### Sidewalks:

In Herring Cove, the subdivider shall provide sidewalks on one side of every new or extended collector street, and all new or extended local streets. Cul-de-sacs, p-loops, or crescents less than 2500 feet in length are excepted unless they are part of a pedestrian route to community or commercial uses.

### Open Space:

The open space requirement in subdivisions is 5%.

### Municipal Service Systems:

Subdivisions within the Herring Cove Water Service District must provide a water distribution system, a sanitary sewerage system, and a separate storm sewerage system.

## 4.4 Community Future

The residents of Herring Cove believe that they have a good MPS, but that it needs some revision. In addition, residents want their plan to be implemented with clear and enforceable bylaws.

### 4.4.1 Introduction

In the public process, the planning team received the very clear message that the community wants to:

- maintain low density housing;
- protect the historic Fishing Village;
- preserve rural charm of the neighbourhood; and
- ensure protection of the area's natural beauty and ocean frontage.

In summary, residents expressed the desire to maintain the distinct cultural and natural heritage of the community. Based on the results of the meeting, the consultants reached two main conclusions:

1. In order to express its unique character and identity, Herring Cove requires a boundary similar to the 1973 planning area.
2. Five land use zones are required for the Herring Cove planning area:
  - Fishing Village
  - Village Residential
  - Community Facility

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- Park
- Conservation

General intentions for each of these zones, and their extent on a Proposed Future Land Use map (See Appendix E), were prepared for presentation to the community. Participants agreed that the proposed land use designations and policy directions, with some revisions, were appropriate and represented their interests. The requirement for a plan area boundary was also confirmed and outlined on the Proposed Future Land Use map (See Appendix F).

### 4.4.2 General Policies

The following statements, representing general agreements reached in the public meetings, are proposed for adoption as the intention of Council. These statements are intended to reinforce, or sometimes revise, policies in the existing Planning District 5 MPS (1995).

#### 4.4.2.1 Herring Cove Service District

The Herring Cove Planning Area shall include lands along the Purcells Cove Road (including the federal crown lands at York Redoubt), lands along Herring Cove Road to the old City boundary, and along Ketch Harbour Road to Halibut Bay. (See Appendix F: Proposed Future Land Use map)

All private land within the Herring Cove Planning Area shall be included within the water service district.

Signage to identify the Herring Cove Planning Area will be placed at the borders along Herring Cove Road, Purcells Cove Road, and Ketch Harbour Road.

#### 4.4.2.2 Central Services

All private lands within the Herring Cove Planning Area shall be included in the service boundary.

The entire water service district shall be provided with sewer and water. (See Appendix F: Municipal Services map)

Sewer and water shall be installed at the same time.

Central sewer and water services shall be required for all new development in the water service district.

Services shall not be extended beyond the service district; the service boundary shall not be extended to include additional lands.

Connection charges for existing dwellings shall be on a per-

connection basis (not frontage).

Developers of new buildings or subdivisions shall be responsible for installation and connection charges for central sewer and water in all new developments.

Limited subdivision of existing lots that do not meet frontage requirements shall be allowed as long as reasonable access is provided; central service connections shall be extended to these lots at the owner's expense.

Siting of the Herring Cove water tower shall give consideration to reducing cost and visual impact.

### 4.4.2.3 Regional Sewage

The goal of the regional sewage system shall be to eliminate discharge of untreated waste to the Herring Cove area, directly to the ocean or indirectly through the MacIntosh Run.

In consideration of the fact that Herring Cove has received raw sewage from the regional system for decades, the HRM shall pursue a funding plan that reduces connection charges for existing dwellings to the equivalent of the provincial average cost for on-site installation.

HRM shall observe sewage treatment strategies outlined in the Halifax Harbour Solutions Plan (1998).

HRM shall carefully consider alternative sewage treatment plant sites for Mainland South in close consultation with the Herring Cove Community.

### 4.4.2.4 Storm Water

No infill of watercourses, wetlands, or flood plains shall be permitted.

Except for stream crossings or recreational uses, no development shall be permitted within a buffer zone of undisturbed ground and vegetation that extends 100 feet from all watercourses and wetlands, including floodplains. Provision shall be made for 50 foot buffer zones on existing lots that would be made undevelopable with the 100 feet requirement.

Subdivision requirements shall recognize that buffer zones can serve combined open space functions of runoff protection, recreation corridor, and wildlife habitat.

Every effort shall be made to ensure that vegetation remains undisturbed on slopes 16% and greater.

Erosion and Sediment control plans consistent with provincial standards shall be submitted with all subdivision applications.

Runoff management plans shall be submitted with all

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subdivision applications. The goal of runoff management shall be to limit runoff to pre-development levels. Infiltration shall be the preferred management approach.

The HRM shall seek to provide buffer zones around all wetlands and watercourses through various mechanisms including subdivision approval and open space acquisition.

The HRM shall seek preservation and protection of the MacIntosh Run as a fish habitat in cooperation with the provincial Department of Environment and the Federal Department of Fisheries and Oceans.

The HRM shall support public ownership and park use of the MacIntosh Run watershed lands now in provincial ownership.

The HRM shall seek ways to mitigate any negative impact of runoff and storm sewer from existing development on surface water resources in the MacIntosh Run watershed.

##### 4.4.2.5 Coastal Lands

No development shall be permitted within a 100 feet buffer zone of undisturbed ground and vegetation from coastline. Provision shall be made for a 50 feet buffer zone on existing lots that could not be developed with the 100 feet requirement.

The HRM shall negotiate to acquire coastal heritage sites (monuments) for use as park.

##### 4.4.2.6 Transportation

Individual driveway access shall not be permitted to collector or arterial roads unless other means of access is not reasonably possible. Individual driveway access should be given to local streets, or if that is not possible, to shared driveways that minimize access points.

The HRM shall seek ways to remove direct access to collector roads from existing development as land uses change.

The HRM shall recognize a street design standard that is similar in scale to traditional village roads.

Subdivision on private roads shall be allowed as long as reasonable access is provided. Roads that serve more than three dwelling units must provide right-of ways sufficient for upgrading to provincial standards if required.

The HRM shall maintain and improve Metro Transit service to Herring Cove as required.

The HRM shall initiate plans for alternate transportation, including walking trails and bicycle routes.

Subdividers shall provide sidewalks on all streets that connect



community facilities.

Subdividers shall provide sidewalks on one side of all new streets except those with no through traffic (cul-de-sac, p-loop, or crescent).

The HRM shall work with the community to provide sidewalks on existing streets that connect community facilities, including Hebridean Drive.

### 4.4.2.7 Recreation and Open Space

The HRM shall use its authority under the Municipal Government Act to require a minimum 10% open space dedication in all applications for subdivision.

The HRM shall work with the community to develop a recreation and open space plan providing for a variety of recreational opportunities and for open space linkages between community facilities and related land uses.

The recreation and open space plan shall include existing parklands, trails, and swimming and skating places.

The recreation and open space plan shall include pathways for access to recreational facilities including existing parklands, swimming and skating places, and wilderness trails.

The HRM shall initiate a trail study to identify public rights of way and traditional trails and shall work with the community to propose a trail system and means to provide community access to conservation and parklands.

HRM shall negotiate to acquire use of the land at the north end of Long Pond as indicated on the Proposed Future Land Use map as parkland. (See Appendix F: Proposed Future Land Use)

HRM shall negotiate to acquire use of the cove headlands as indicated on the Proposed Future Land Use map. (See Appendix F)

HRM shall monitor plans for the use of crown land in the Herring Cove area, actively intervening on behalf of the community to retain Crown lands in public ownership for use as wilderness conservation.

The HRM should designate crown lands for conservation use in Mainland South.

The HRM shall prepare plans to improve or relocate swimming access to Long Pond.

The HRM shall assist the community in its efforts to improve swimming access to Big Latter Pond.

The HRM shall negotiate to acquire use of the village common area connecting the schools, Churchill Estates, Harrigan Road, and Village Road, as shown on the Proposed Future Land Use

#### 4. Planning Background and Policies to Support the Plan

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map. (See Appendix: F)

Environmentally sensitive areas in Herring Cove area, including watercourses, wetlands, and buffer zones, shall be designated for conservation use.

In the review and implementation of other municipal plans with lands in the MacIntosh Run watershed, the HRM shall give consideration to water quality and habitat issues that affect the Herring Cove area.

The HRM shall support preparation of an open space plan for the Chebucto Corridor to be developed in cooperation with the crown.

The HRM shall support preparation of an open space plan for the MacIntosh Run to be developed in cooperation with the crown.

##### 4.4.2.8 Marine Facilities

The HRM shall assist community efforts to maintain the government wharf at Herring Cove.

The HRM shall assist community efforts to repair and maintain the breakwater at Herring Cove.

The HRM shall assist community efforts to provide a boat launch facility at Herring Cove.

The MPS shall retain the policy allowing Fishery support uses without requiring development permits.

##### 4.4.2.9 Heritage Resources

The HRM shall initiate a study of village character and produce guidelines for its protection. The study shall give attention to architectural and village development form.

The HRM should ensure public access to heritage sites, including Joe Cracker Memorial, for inclusion in parkland.

##### 4.4.2.10 Residential

The MPS shall encourage retention of the existing single-family residential character of Herring Cove and its extension to new development within the Herring Cove Planning Area.

Minimum Lot Area shall be 10,000 square feet per dwelling unit with 75 feet minimum frontage per dwelling unit.

Subdivision of existing lots shall be allowed to a total of three (3) lots (two plus remainder) without road frontage requirements as long as all lots meet minimum area requirements and reasonable access can be provided.

New residential uses may be permitted by development

agreement on lots that do not abut a public road if the lot abuts a traveled way.

All subdivision applications in excess of three (3) lots (two lots plus remainder) must be considered by development agreement with regard to the policies in this plan.

Lot frontages in development agreements may be reduced to 60 feet, and lot areas to 6,000 square feet as long as the total lot area and open space area divided by the number of lots is at least 10,000 square feet.

Home occupations shall be permitted, including bead and breakfast to a limit of three (3) rooms, and day care to a limit of seven (7) children.

Two-unit dwellings shall be permitted in all residential zones, but a minimum 10,000 square feet lot area must be provided for each dwelling unit.

The MPS shall continue to recognize neighborhood commercial and existing commercial-industrial uses and allow their continued non-conforming use.

The MPS shall provide for new neighborhood commercial services to a maximum of 2,000 square feet, such as corner stores, personal service outlets, or restaurants.

### 4.4.2.11 Community Facilities

The MPS shall provide for the maintenance and expansion of community facilities as required.

A school site shall be reserved in the Village Residential area off Dale Avenue as indicated on the Proposed Future Land Use map. (See Appendix F: Proposed Future Land Use)

Consideration shall be given to siting expanded seniors' facilities in the Village Residential area on the west side of Powers Pond as indicated on the Proposed Future Land Use map. (See Appendix F: Proposed Future Land Use)

### 4.4.2.12 Requirements for Residential Development Agreements

Minimum lot areas shall not include required buffer zones or open space.

Development agreements will be approved in consideration of general policies and the following standards:

- Confine development and construction activities to the least critical areas of the site and consider cluster development to minimize land disturbance.
- Maintain the overall desired density of development by

## 4. Planning Background and Policies to Support the Plan

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allocating higher densities to areas most suitable for development.

- Minimize changes to the existing topography.
- Preserve and utilize the natural drainage system.
- Adopt an erosion and sediment minimization and control plan.
- Adopt a runoff management plan.
- Design horizontal alignment of roads without tangents (except at intersections).
- Use a public road standard that is in keeping with the traditional village character.
- Retain public access to traditional trails and recreation areas.
- Provide open space connections.
- Retain open space and buffer zones in public ownership (through condominium, municipal easement, or municipal ownership, for example) for conservation or recreational uses.

### 4.4.2.13 Community Consultation

The HRM shall continue to consult the Herring Cove community about changes to the Municipal Development Plan or to other development plans that affect the Herring Cove Planning Area, including the future use of crown land.

### 4.4.3 Proposed Land Use Zones

In respect of the general policies set out above, three general land use designations are proposed:

- Residential
- Park
- Conservation

Implementation of these land use designations would require five land use zones:

- Fishing Village
- Community Facility
- Village Residential
- Park
- Conservation

Provisions for each of these zones are described below.

### 4.4.3.1 Fishing Village

This zone is intended to preserve the fishing village character, provide community and marine services, and allow community development.

Areas designated Fishing Village shall include Residential, Fishery, and Local Commercial uses.

All subdivision applications in excess of three lots (two lots plus remainder) must be considered by development agreement with regard to the policies in this plan.

Permitted Residential uses:

- Single-unit dwellings
- Two-unit dwellings
- Home occupations in conjunction with permitted dwellings
- Bed and Breakfast (3 room limit)
- Day care (limit 7 children) in conjunction with dwellings
- Arts and crafts studios in conjunction with dwellings
- Open space

Permitted Fishery uses:

- Boat and equipment manufacturing, sales and service
- Fish and shellfish wholesale and retail stores
- Wholesale and retail outlets supplying the fishery
- Charter boat services
- Fishery support uses, including breakwater, boat launch, and public wharf, fish houses and sheds, wharf storage buildings  
fishery uses except reduction.

Other uses:

- Local commercial uses
- Restaurants

### 4.4.3.2 Community Facility

This zone is intended to provide for the maintenance and expansion of community facilities as required.

Permitted Uses:

- Police and fire stations
- Open Space
- Schools
- Denominational institutions
- Senior housing
- Medical, dental and veterinarian clinics
- Public libraries, museums and galleries
- Post offices

## 4. Planning Background and Policies to Support the Plan

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- Recreation
- Residential care

### 4.4.3.3 Village Residential

This zone is intended to provide for residential development and community facilities required by an increase in population. All subdivision applications in excess of three(3) lots (two lots plus remainder) must be considered by development agreement with regard to the policies in this plan.

Permitted Residential Uses:

- Single-unit dwellings
- Two-unit dwellings
- Home occupations in conjunction with permitted dwellings
- Bed and Breakfast (3 room limit)
- Residential care facilities
- Day care (limit 7 children) in conjunction with dwellings
- Arts and crafts studios in conjunction with dwellings
- Open space

Other uses permitted by development agreement:

- Local commercial uses
- Schools
- Senior housing

### 4.4.3.4 Park

The Park zone is intended to provide for recreational access and protection of ocean front, access to playgrounds, access to water, access to heritage sites, and open space connections within the Herring Cove Planning Area.

Permitted Park Uses:

- Public parks, trails, and playgrounds
- Conservation related uses
- Museums, interpretive centres, and buildings associated with park maintenance
- Marine related navigational aids
- Historic sites and monuments

### 4.4.3.5 Conservation

The Conservation zone is intended to protect the environmental integrity of the community, and to preserve the wilderness and recreational resources that are integral with the village character.

Much of the character of Herring Cove has to do with its form: a village, or island of development in a natural setting of forest,

wetlands and watercourses, and the broad ocean. Village form owes much to the history of development around the Cove, but also to the abundance of crown land which effectively encloses the village, limits development area, and gives residents access to the wilderness.

Permitted Conservation uses:

- Conservation related uses
- Public parks and playgrounds, no buildings
- Trails
- Existing cemeteries
- Historic sites and monuments
- Navigational aids

#### 4. Planning Background and Policies to Support the Plan

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# Servicing Strategy to Support the Proposed Future Land Use Plan

Section 5

## 5. Servicing Strategy to Support the Proposed Future Land Use Plan

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The impetus for this current planning exercise is the impending extension of central sewer and water services to the Herring Cove area. Provision of central services is being considered both as a response to the Halifax Harbour Solutions Project (HHSP) and a part of that project. There is no doubt that there are deficiencies in the water supply from wells and in the effective treatment of domestic sewage waste in Herring Cove. There are also questions about the ability of the local and area traffic network to accommodate an increase in traffic that would result from the realization of development permitted by the current MPS.

This section discusses the servicing and infrastructure that would be needed to support development permitted by the current MPS, and contrasts it with the kind of community that might evolve in Herring Cove if the proposed plan is adopted.

Please note that the cost estimates in this report have been developed as a strategic planning tool; all estimates are subject to change as design becomes more detailed.

### 5.1 Background

In 1999, the Halifax Regional Water Commission (HRWC) drafted a master plan for water service in the Herring Cove area, with three options based on different service areas. This masterplan recognized HRWC responsibility to provide ample potable water for domestic use, and to provide adequate pressure and flow capacity for fire protection from the piped supply. The question remained: what area should be included in the water service district?

The Herring Cove area is not well suited for development using on-site services. Granite is not a reliable source of groundwater, and there is inadequate natural soil cover to allow septic systems to operate properly. In fact, the area does experience many problems with water quality and quantity, and with malfunctioning or non-existent on-site sewage systems.

There is, therefore, a case for extension of central services to the area, even without the added opportunity provided by the HHSP. Nonetheless, the larger project will continue discharging sewage effluent, albeit partly treated, to the Herring Cove shoreline, a situation that will demand careful attention to environmental issues in Herring Cove. It is politically untenable to continue dumping the waste of upstream communities in Herring Cove without providing Herring Cove residents with the benefits of central services and protection of their local environment.

The Planning Focus Group for this project has directed that a general estimate of cost for the servicing requirements should include discussion of two scenarios.

**The first scenario** assumes no changes to the MPS. This would result in the potential for drastic changes in land use patterns when central services are provided. This is because the one thing that has kept Herring Cove from becoming an urban extension of the metropolitan area is that it does not have central services. Without central sewer, the Provincial Regulations respecting On-Site Sewage Disposal under The Environment Act of the Province of Nova Scotia govern allowable new lot size and, indirectly, the number of people who can live in Herring Cove. With the introduction of central services, the operational limit to residential development is the 6,000 square feet lot per home set out in the current District 5 MPS, allowing about 1450 new homes in the Herring Cove area. Most lots in Herring Cove currently require 75,000 to 100,000 square feet each for on-site services. The potential impact on the community in terms of residential development density is therefore significant.

The potential for urban residential densities in the Herring Cove area and large increases in population would require a correspondingly large water supply, large sewer pipes, and pumping (lift) stations. There would be more people to share in the cost of these services, but in an urban landscape the village of Herring Cove, as we know it, would cease to exist.

**The second scenario** assumes implementation of planning changes proposed in this study. The proposed plan (See Appendix F: Future Land Use map) implies a cap of about 650 new dwellings in the study area, with most of them on currently undeveloped lands, outside the community core.

### 5.1.1 Sewage Collection, Management and Treatment

Sewage collection, by direction in the Terms of Reference for this study, is assumed to be gravity sewers with pumping stations and forcemains where required.

Attention is often focused on sewage collection, yet the reality is that management is often a more important consideration. For example, on-site sewage disposal, even in good soils, is incomplete without good septage (what is pumped from the tanks) management. In Churchill Estates, sewage is collected from the homes and goes directly into the harbour. This is no different than most of Halifax or Dartmouth, but it makes the point that sanitary servicing does not stop with a collection system.

In Herring Cove, existing conditions offer only one natural advantage for sewage disposal. The open ocean and the wave energy that is expended every day on the rocky shore provide excellent conditions for breaking down and digesting sewage. Unfortunately, most of Mainland South is taking advantage of

this asset, not just the people who live in Herring Cove and must deal with the negative side effects of the practice. The people whose community is blessed with the greatest resilience to sewage discharge are among the most responsible environmental citizens in repeatedly calling for better treatment prior to discharge. Living with this situation for so long undoubtedly gives rise to greater awareness of the real impacts of untreated, or poorly treated, sewage discharge.

The nature of Herring Cove and its development over the decades has depended on local ocean energy to assimilate the community's waste into the environment in a benign manner. That capacity is now absorbed by others outside the community, and the only solutions that present themselves are to eliminate use of the local resource by others, or join the crowd and hook up to the pipe. Given that current discharges to Herring Cove are unacceptable and require treatment, and the fact that the existing sewer main represents a large infrastructure investment, the best response seems to be that Herring Cove should hook up to the pipe, and that the sewage should be treated before it is discharged. The big question, then, is where the sewage treatment plant should be located. The details of the sanitary sewer servicing strategy for Herring Cove depend on the answer to this question.

Numerous locations have been proposed for the Mainland South sewage treatment plant. Indeed, participants in this planning process suggested several. Given uncertainty about location of the plant, we are essentially required to consider a collection system that delivers sewage to one common point for pumping to the sewage treatment plant site. The end result of this is that network requirements do not change when considering the alternative scenarios – the current plan, or the proposed plan.

Cost estimates for sanitary sewer servicing, using gravity sewers as per the existing HRM Standard Specification (2000), are shown in Appendix G.

### 5.1.2 Clear Water Sewers

The stormwater management system in the Herring Cove area currently consists of road ditches in large part, with some storm sewerage in the Churchill Estates Subdivision. There is also a clear water sewer in the Meadowbrook Subdivision.

Clear water sewers provide piped conveyance of roof drain, sump drain, and footing drain water away from buildings. Normally, catchbasins are not connected to clear water sewers and the water, remaining relatively clear, is often directed to a natural drainage system, or to an existing ditch network. Adding clear water to a sanitary sewer is harmful to the

## 5. Servicing Strategy to Support the Proposed Future Land Use Plan

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sewerage system and is illegal. Clear water sewers provide a way to dispose of clear water and remove the temptation for people to make illegal connections to a sanitary sewer.

It is questionable whether clear water sewerage is needed in the developed portions of Herring Cove. The community already exists and there is little potential for infill development. Most stormwater problems in the developed area have already been resolved and it is unlikely that new problems will arise. Indeed, little mention was made of stormwater drainage problems at the public meetings, and then only in relation to new or proposed development. Clear water sewers may not be needed in the developed areas if building density does not increase substantially, because the stormwater runoff from the community will not change appreciably.

The practicality of clear water sewers in the developed parts of Herring Cove is further complicated by the reality of the existing trunk sanitary sewer, the flow in which is already controlled by the amount of stormwater that enters it upstream. If we assume that illegal connections might be made in Herring Cove, it would still be true that only a comparatively minute amount of stormwater would enter the sanitary sewer (which might happen even if a clear water sewer were provided). Questions about the need for clear water sewerage make it difficult to suggest that the cost of providing clear water sewers would be justified in this particular instance. In detailed design, however, there may be places where the use of this approach, or others, including traditional storm sewers, may provide effective solutions to localized drainage problems in the community.

These concerns apply only to the already developed community. New subdivisions within the service area will be required to have engineered stormwater management systems, designed in conformance to HRM specifications. There is a real difference between servicing to solve problems, and servicing to create a new community. Indeed, Herring Cove residents recognize this difference, proposing policies directed towards reducing the stormwater impact of new development as part of this report.

The Water Resources Management study currently under way in HRM is expected to provide direction to this situation. However, at this time the use of clear water or stormwater sewers over the entire existing developed area of Herring Cove do not appear to be economically justifiable, and the potential benefits do not appear to be quantifiable. Given current funding levels, a decision to provide clear water or storm sewers might make the overall project too expensive. In addition, it would be difficult to justify increased costs in terms of real need, or in terms of the sensitivity (or lack thereof) of

the sanitary sewage to the small amount of water that might be added if illegal connections were made in the village.

### 5.1.3 Water Supply

The Halifax Regional Water Commission (HRWC) uses a method to control and recover project costs that is based on a two part process of separating the overall system infrastructure from the actual distribution infrastructure. The HRWC treats the business of providing a supply, a big tank on a hill full of water with enough pressure for fire hydrants, as distinct from the smaller pipe network used to deliver water to customers.

The first part of the HRWC cost approach is to examine what is involved in extending the overall supply capacity of their system to an area. This includes transmission main, pressure controls, storage tanks, and boosters, where required. This part of the water supply is designed to provide domestic, potable water supply and fire protection flows and pressures to an area, with the capability for distribution throughout the community. Because this supply extension provides service capability to an area, the HRWC recovers its costs for this work on an area basis. A per acre or hectare water supply charge is levied, initially as a one-time fee to landowners that will receive the water, and subsequently to developers as new lots are created that access the supply.

The second cost portion of water supply is the cost of getting the water from the larger system to the users. This is the distribution system cost. This cost is levied based on the actual cost of running watermain to the front of a lot. It is normally recovered on a frontage basis.

The cost estimates for providing water service in the two development scenarios differ only in the cost of the overall supply capacity required to support full build out. There is an almost \$2,000,000 premium to be paid for the full-scale system which would be required to supply development allowed by the current MPS. Conversely, the plan that the community wants, set out in this planning and servicing study, identifies an alternative to developing the Herring Cove area that costs almost \$2,000,000 less.

Cost estimates for water servicing are shown in Appendix G.

## 5.2 Traffic and Transportation

### 5.2.1 Traffic Modeling

Traffic is a constant concern to the people living in the area. All across Mainland South and this part of the Chebucto Peninsula, one of the main concerns is the overall ability of

## 5. Servicing Strategy to Support the Proposed Future Land Use Plan

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traffic to get in and out of the area. There are really only two ways to do this, through the Armdale Rotary or the Northwest Arm Drive. The HRM has established a long-term traffic model, using QRSII, an industry standard traffic network model. The model divides the HRM into cells and uses current traffic counts at key points in the network to track traffic moving in and out of any area. The traffic count points are termed “screen lines”.

There are only two screen lines required to track traffic flow in and out of Mainland South. They are at the Herring Cove Road approach to the Armdale Rotary, and the Northwest Arm Drive just before the Trunk 3 overpass.

Within an area, the traffic model uses “nodes” to represent places that generate traffic trips. One of these nodes is at the corner of the Herring Cove Road and Hebridean Drive.

A modeling exercise was conducted using the QRSII model with the scenario described by the Proposed Future Land Use map (See Appendix F: Proposed Future Land Use map) and comparing the traffic projected by the model with the Integrated Servicing Strategy study traffic projections, and the QRSII projections for the year 2026. The Traffic Table in Appendix G shows the results of the model exercise.

Despite some technical qualifications<sup>1</sup>, the fundamental results of the modeling exercise suggest that the proposed plan will closely match what has already been modeled for long term traffic in Mainland South (for the year 2026). Full development of the proposed plan, with the potential for about 650 new residential units in the Herring Cove Planning Area, would mean that approximately the same number of people will be living in the Herring Cove area as is currently modeled in the Integrated Servicing Strategy study. Development of the Herring Cove area under the existing MPS would allow as many as 1450 new homes. This number is more than the current projections in the Integrated Servicing Strategy study, and would require reconsideration of the transportation model for Mainland South. Implementing the Proposed Future Land Use plan (See Appendix F: Proposed Future Land Use map)

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1. Traffic model technical qualifications:
    - a. While the North West Arm drive screen line location is south of the St. Margaret's Bay Road Connector, the existing traffic count is just north of the Connector.
    - b. Screen line counts for 1998/99 are 3500 vph during the PM peak hour, while 1996 QRS estimates are about 1000 vph higher.



would be consistent with the current numbers in the model and would not trigger a requirement to reassess the Integrated Servicing Strategy because of development in the Herring Cove area. This also suggests that centrally serviced development allowed under current planning policy for the area would result in traffic effects well in excess of what is currently modeled.

The most obvious result of traffic modeling is that the approaches to the Armdale Rotary on Herring Cove Road are already over capacity during peak periods, and that any development that creates new traffic in Mainland South will only add to that condition. This applies to any development that has occurred since 1996, development rights that have not yet been exercised, and any planned development. If nothing is done to augment the capacity of the “bottleneck” at the Rotary, a point will be reached (and that could be soon) when the duration of the traffic congestion will be unacceptable to the public. This will eventually create a limitation on development in Mainland South simply through public recognition that traffic restrictions in and out of the area are intolerable.

The net result of traffic modeling therefore supports implementation of the proposed plan (See Appendix F: Proposed Future Land Use map) as a means of helping to manage traffic volumes within currently modeled levels to the extent that it does not worsen current projections. It must be recognized however, that any development will contribute to medium to long term concerns about the capacity of the Armdale Rotary.

### 5.2.2 Transit Impacts

Discussions with Metro Transit indicate that the Herring Cove area has a good density of bus stops, and that the route (number 20) is arranged so that the bus stop interval can be decreased as demand increases. Metro Transit normally responds to increased demand on a case by case basis based on rider-ship numbers and rider requests and complaints. It is expected that as traffic volume increases on the roads and streets in the community, distinct bus stops as lay-bys in a separate lane would become more advantageous.

### 5.2.3 Road Design Standards

The HRM maintains a distinct set of road design standards based on establishing a clear hierarchy of road and street configuration. Increased development activity in Herring Cove offers an opportunity to establish better road configuration through development agreement stipulations and takeover of private roads. Establishment of arterial/collector/local status will provide significant benefit to the community in terms of

safety and traffic flow.

Because of the existing street and road standards in the community, it is likely that the HRM will need to recognize at least one street design standard that is less than currently required for local roads. This would allow new development to proceed more economically and in a form similar to the local character.

### 5.2.4 Sidewalks

Sidewalks are recommended along Hebridean Drive, regardless of how planning policy and development proceed. This sidewalk is needed to link community facilities in Herring Cove, providing safer means for people to move through the community as traffic volume increases.

# Phasing and Options for Servicing

Section 6



## 6.1 Introduction

This part of the report gives information on how the costs of sanitary sewer and water supply might be funded. The tables illustrate the gross cost of providing full sewer and water servicing to the Herring Cove area without including any benefits that might accrue to the community through any external funding, and then show the impacts of different funding options. (See also Appendix G: Sewer Cost Estimate and Water Cost Estimate)

HRM Council has already expressed support for funding related to sewer and water servicing for the Herring Cove area as part of the construction of a new sewage treatment plant in the community.

The same geology that makes it difficult to use on-site sewage disposal methods for sewage treatment also makes the cost of installing buried services potentially expensive. This is because of the high probability that trenches will need to be excavated into bedrock. In an existing residential area, this is normally quite expensive.

In the tables, costs reflect the potential impacts of different funding scenarios. Here are some of the important assumptions:

- The typical lot size used to illustrate a per-lot cost is a 10,000 square feet, 75-foot frontage parcel of land.
- The service area is 1048 acres under the proposed new plan, and 914 acres under the existing service boundary.
- The community has access to \$1,000,000 in funding from the HHSP for integration of the sewage treatment plant.
- The community has access to an additional \$4,000,000 in funding from the HHSP for local infrastructure improvements.
- For costing purposes, it was assumed that HHSP funding would be directed first to providing a water distribution system for the Herring Cove area.
- The sanitary sewer would be installed if water were installed. This is because of construction practicalities, and the need to avoid problems that result from connecting unlimited water supply to homes with on-site sewage disposal systems of limited capacity.
- Sanitary sewer funding has been provided on a 1/3:1/3:1/3 basis in past Infrastructure Works programs in Nova Scotia as recently as 1997.

6.2 Overall Costs of Servicing

It was a stated goal of this project, at the public meetings and during Planning Focus Group meetings, to achieve a potential cost per connection in the order of what a new well and on-site system would cost. One can expect to pay in the order of \$10,000 for those assets in reasonably good soil conditions. The estimated cost to residents for central services is in line with that amount in most of the scenarios described in the tables in Appendix G.

Table 6.1 outlines a summary of the estimated gross costs (no funding applied) shown for both the current MPS and the proposed plan. Each of the three major components is shown separately, including the cost of the water service district for the entire service area, the cost of the water distribution system, and the cost of the sanitary sewage collection system. Water service district costs include the water main and water storage. These costs increase as population density increases. The HRWC indicates that the same water distribution system would apply in each scenario. The sewage collection systems have been assumed to be the same for each development scenario. There might be a change in the cost of the major pumping station to convey sewage from the Herring Cove collection system to the treatment plant, but that cost is considered to be a part of the larger HHSP project. Some sewer mains and pumping stations may be larger for the status quo option, but this is uncertain at this time, and therefore we have assumed that the same collection system will work for both development scenarios.

	Status Quo	2000 Plan
Estimate of Water Service District	\$6,300,000	\$3,800,000
Estimate of Water Distribution System	\$4,800,000	\$4,800,000
Estimate of Sanitary Sewer	\$2,400,000	\$2,400,000
Total Gross Cost	\$13,500,000	\$11,000,000
Typical 10,000 sq.ft. lot, 75 ft. frontage	\$10,218	\$9,828

Table 6.1: Summary of Cost Estimates

Table 6.1 illustrates that there are cost savings in the proposed plan, and that these savings are directly related to reduced costs of water supply. Even with a large saving in water service district costs, per lot costs only fall about \$500. This is because other system costs remain the same in each scenario, and also because there are fewer lots with larger area to pay the water service district costs. The bottom line also indicates that costs

for central services are similar to the costs of providing on-site sewage disposal and water for a single-family home.

Growth in the Herring Cove area will contribute to the need for road and street improvements throughout Mainland South. For example, the Armdale Rotary already needs improvement, and as more people move to points west of the rotary, including Herring Cove, the need for those improvements will become more critical. Infrastructure improvements, including transportation, create development potential, and development charges could be considered for new development in areas served by those improvements.

### 6.3 Cost Allocation

In Herring Cove, several characteristics of the community create complexity in fairly distributing the costs of sanitary servicing among the residents. There are wide, shallow frontage lots, long frontage lots, and long narrow lots in parts of the community. Charging residents a hookup fee based on frontage may be fair in a new subdivision, but in an existing, non-symmetric lot fabric as exists in much of Herring Cove, there is potential for significant inequities.

The costs of new municipal infrastructure have been shared in communities with similar lot patterns in Nova Scotia using a unit cost approach. Every single-family dwelling or equivalent represents a unit, and the costs are shared on a unit, or essentially, a user pay basis. The HRM should consider assessing the existing development in this manner in order to recover the unfunded sewerage costs.

At this stage in the process of providing servicing to the Herring Cove area, it is difficult to determine how to express costs in a way that clearly represents how much it could cost residents to have central sewer and water. Some homes have a large amount of frontage, which, if used as the determining factor on cost sharing, will mean that they could end up paying substantially more for servicing than a neighbour with the same land area, but less road frontage. The variation between the existing properties in the Herring Cove area, with the exception of Churchill Estates and Meadowbrook subdivisions, is substantial and could lead to a great deal of confusion over how much each homeowner might be asked to pay.

It is also difficult to calculate the contribution that future growth might make to funding services for existing development. This is because most future growth will take place in new areas that will be required to construct their own servicing. The cost of providing sanitary servicing and water distribution would therefore be borne by a developer and passed on to those new residents in the lot sale price. This new

## 6. Phasing and Options for Servicing

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development will help share in the costs of the water service district, but not in the collection and distribution costs, except where the new development requires upgrades of the collection and distribution system. The cost of servicing the existing community would therefore require sharing between the existing residents and the potential infill lots that would access the pipes needed to service the existing homes.

Another complicating factor is that many of the homes in the study area already have sewer and water services in the street (Churchill Estates and Meadowbrook subdivisions) and have already paid for the installation of pipes along their frontage.

These issues complicate any attempt to assign cost sharing of the servicing in an equitable manner. It is important to note, however, that without the future contributions of potential development areas to costs of the water service district, the gross cost per home would rise to the point where external funding would be necessary to make the project feasible.

In order to compare the hook-up costs for servicing a lot on a frontage basis to a per lot basis, we used a standard 75 foot frontage lot, 10,000 square feet in area. This “model lot” may not exist in many places, but it provides a means of comparing the different funding scenarios for development on a single-family home scale.

Alternatively, the costs could be expressed in a form of shares (Total cost minus available funding equals residual cost to the community). The residual costs to the community would then be split as determined by a formula determined by community consensus, or by law.

Two options for project funding are shown in Table 6.2, below. One funding approach totals \$4,000,000, the other \$5,000,000. Each uses the \$4,000,000 in HHSP infrastructure money to reduce the cost of servicing the existing community, that is, building water and sewer pipe in front of homes that need central services. The \$4,000,00 option reflects a situation in which the community decides to direct the \$1,000,000 integration funding to something other than sewer and water; the \$5,000,000 option reflects a situation in which the community decides to direct the \$1,000,000 integration funding to the sewer and water project. The area rate for the water service district uses the respective estimates prepared by HRWC for the 1995 MPS development scenario and the proposed plan development scenario.

Herring Cove residents argue with conviction that they would be justified in seeking additional funding for compensation because of the impact of years of sewage discharge. This costing exercise, however, is limited to the HHSP funding that has already been approved.



Table 6.2 shows how the estimated costs to the model 10,000 square foot lot with 75 feet frontage would be reduced with increasing levels of government funding. The frontage cost expressed on a per foot basis includes both sewer collection and water distribution. The cost estimates for sewer and water collection and distribution used in Table 6.2 are set out in Appendix G; these costs assume capacities to service all undeveloped land in the proposed service district.

#### 6.4 Options for Servicing

Several parts of the proposed service area may benefit significantly from application of certain so called alternative collection technologies, and possibly from a reduction of fire protection scale water supply. These alternative technologies provide respond to either extreme rock conditions combined with dense housing where services are very expensive to construct, or low density development with large frontages where services are expensive on a per connection basis.

Alternative means of sewage collection include:

**Vacuum sewer:** where a central vacuum pump station pulls sewage to a central point from valve pits located in front of homes, or clusters of homes. The central station is a relatively complex mechanical system, and the valves that provide the transition to household plumbing are not familiar technology in Nova Scotia. (The nearest large system is in Maria in the Gaspé region of Quebec.) This technology has the advantage of allowing all the pipe to follow the surface grade, reducing the need for extensive rock excavation. Operational cost to individual homeowners is limited to mechanical maintenance of the valve pits; there are no individual power bills. Vacuum sewers have the ability to transport small volumes of sewage, but are able to manage growth in flow over time.

**Pressure sewer:** where each home or cluster of homes has its own small grinder pump that pushes the sewage to a central point through a shared forcemain. The grinding provides a measurable degree of pre-treatment and the forcemain can be directed to any central sewer system. The forcemains follow the surface grade and a minimum depth of excavation is required. Each residence pays its own share of the pumping power cost. Pressure sewers have limited ability to carry flows from a growing community, and once in place, tend to limit the number of homes that can be developed more than a vacuum sewer. They are most often used to service existing developed areas that are located below a gravity sewer grade line.

The HRM has recently approved the installation of a pressure sewer at Springfield Lake in Upper Sackville. This technology, in particular, presents a good opportunity to save money in

6. Phasing and Options for Servicing

Table 6.2: Impact of Government Funding

	Status Quo	2000 Plan	Status Quo HHSP \$4,000,000	2000 Plan HHSP \$4,000,000	Status Quo 1/3 province (sewer)	2000 Plan 1/3 province (sewer)	Status Quo 2/3 province (sewer)	2000 Plan 2/3 province (sewer)
<b>Scenario 1</b> \$4,000,000 from Harbour Solutions to Water Distribution Funding								
Estimate Water Service District	\$6,300,000	\$3,800,000	\$6,300,000	\$3,800,000	\$6,300,000	\$3,800,000	\$6,300,000	\$3,800,000
Estimate Water Distribution System	\$4,800,000	\$4,800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
Estimate Sanitary Sewer	\$2,400,000	\$2,400,000	\$2,542,500	\$2,542,500	\$1,678,050	\$1,678,050	\$839,025	\$839,025
Total Gross Cost	\$13,500,000	\$11,000,000	\$9,642,500	\$7,142,500	\$8,778,050	\$6,278,050	\$7,939,025	\$5,439,025
Frontage Cost/ft., Distribution Service District cost/acre	\$123 \$4,300	\$123 \$2,571	\$57 \$4,300	\$57 \$2,571	\$42 \$4,300	\$42 \$2,571	\$28 \$4,300	\$28 \$2,571
Typical 10,000 sq.ft. lot, 75'frontage	\$10,218	\$9,821	\$5,272	\$4,876	\$4,164	\$3,767	\$5,088	\$2,692
<b>Scenario 2</b> \$5,000,000 from Harbour Solutions to Water Distribution Funding, Surplus to Sewer								
Estimate Water Service District	\$6,300,000	\$3,800,000	\$6,300,000	\$3,800,000	\$6,300,000	\$3,800,000	\$6,300,000	\$3,800,000
Estimate Water Distribution System	\$4,800,000	\$4,800,000	\$0	\$0	\$0	\$0	\$0	\$0
Estimate Sanitary Sewer	\$2,400,000	\$2,400,000	\$2,342,500	\$2,342,500	\$1,546,050	\$1,546,050	\$773,025	\$773,025
Total Gross Cost	\$13,500,000	\$11,000,000	\$8,642,500	\$6,142,500	\$7,846,050	\$5,346,050	\$7,073,025	\$4,573,025
Frontage Cost/ft., Distribution Service District cost/acre	\$123 \$4,300	\$123 \$2,571	\$40 \$4,300	\$40 \$2,571	\$26 \$4,300	\$26 \$2,571	\$13 \$4,300	\$13 \$2,571
Typical 10,000 sq.ft. lot, 75'frontage	\$10,218	\$9,821	\$3,990	\$3,594	\$2,969	\$2,572	\$1,978	\$1,581

servicing Shore Road by reducing excavation and potential blasting costs.

Village Road is an example of a long run of pipe servicing only a few homes (depending on the treatment plant location). Alternative sewage collection technologies could be used on Village Road to avoid the multiple pumping stations that would be required by conventional collection systems. Advisability of this alternative is dependent on the location of the main pumping station to be used to move the collected effluent to a new treatment plant.

The numerous private roads and the potential development pattern suggested by the proposed plan (See Appendix F: Proposed Future Land Use map), allowing subdivision of lands without full public frontage, would probably result in efficiencies from shared pressure sewer or small diameter force main lateral connections, possibly using grinder pumps.

### 6.5 Phasing of Construction

There is often some value to be obtained in sanitary servicing projects by separating the project into phases, such that the financing can be accomplished over a number of years, thereby reducing the budget amount to be assigned to one community in one year. The Terms of Reference for this study describe the Herring Cove area in three parts, suggesting the possibility of phasing the construction in those three parts. In addition, the results of the public information process have indicated that the service area should be extended in the direction of Purcells Cove and Ketch Harbour. The low number of homes and the costs to extend sewer and water to them suggest that servicing of these new areas should be deferred until there is a more defined need and cost effective solution. Except for these new (extended) areas, there are several considerations that tend to persuade against separating this project into phases. (See Appendix F: Municipal Services map)

They include:

- The funding from the Halifax Harbour Solutions Project (HHSP) may be available in one lump, and would be best spent on this community before it is reassigned somewhere else;
- The sewer and water work should be done at the same time, while the street is excavated, to build the project in an efficient manner;
- The community spoke very clearly at the public meetings – they view this as an “all for one, one for all” situation.

If funding arrangements dictate that the project must proceed in phases, the work could be divided into the following discrete parts:

- Extension of water mains and construction of a reservoir to provide water supply service to the Herring Cove district;
- Construction of the collection system on Hebridean Drive and along the west side of the cove, including hookup of homes to the existing sewer, as part of the HHSP consolidation to intercept the outfall;
- Construction of services on the east side of the Cove; and
- Construction of services along Village Road.
- Extension to the new (extended) areas by developers as required.

### 6.6 Summary

The cost estimates show that it is feasible to provide central municipal services to the Herring Cove community, based on the reduced development density proposed by the community.

If funding from the HHSP is applied to the construction of a water distribution system, the funding will essentially be targeted to benefit existing residents. This is because the integration funding will subsidize construction of the water system in the existing community, and because the water service district costs for undeveloped land will be deferred and paid for by future residents on a per acre basis.

It is essential that sewer and water both be installed at the same time. It will not be possible to install central sewer services through this rocky landscape if a watermain is already in place because of the limitation on blasting that would result. It will also be impossible for the existing on-site systems in the community, which are not considered to be ideal now, to manage the increased water use that will result once central water is made available to the residents.

The cost estimates (see Appendix G) represent only the cost of servicing homes with public road frontage. The distinction between public and private road can be found on the Municipal Services map (see Appendix F). The services in the public right of way would be designed to provide capacity for homes on the private roads and shared lanes in the community. It is recommended that the HRM support and encourage the connection of these homes to central services, but that access to central water not be provided without a new sewer connection

The potential funding available from the HHSP project should

enhance the availability of other funding for the sewage collection portion of the project. This is because the sewer servicing project would represent excellent value for the funding agencies involved, given that the sewer would be constructed concurrent with a water distribution project and can share some of the excavation and traffic control costs.

The central servicing project does have some potential for phasing, however it is highly preferable to the community to do it as a single project.

Part of the reason the project is feasible is that the Water Commission (HRWC) carries the cost of water supply to undeveloped land in the water supply district, levying a charge upon new developments as they connect to the system. A similar approach could be used to help pay for required transportation improvements. For example, improvements to the Armdale Rotary could be at least partially financed through charges to new developments in the area served by the new infrastructure.



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# Summary and Recommendations

Section 7





From the point of view of this study, the village of Herring Cove has the substantial advantage of vision. A clear vision of a special place to live is already set out in the current MPS, and there is a long history of concerted work to achieve that vision. The community shares goals and has the skills and experience to work toward them. On the other hand, the community has two major, related problems. First, there are existing servicing problems that the provision of central services would resolve. Second, the plan that is currently in effect allows development with central services at a density and in a form that is not consistent with community goals.

One way to preserve community character might be to reject the introduction of central services, but if that course were taken, the existing servicing issues would not be easily resolved. The HHSP project offers an opportunity to move forward with municipal services at a reasonable cost to the community, but revisions to the MPS would be required to enable future development consistent with existing plan goals.

The following general recommendations respond directly to the situation facing the Herring Cove area:

- The MPS should be revised before sanitary sewers are designed and built. Revisions should concentrate on changing allowable residential densities and strengthening existing MPS provisions that define the special character of the Herring Cove area.
- Sewer and water must be installed at the same time and concurrently with the HHSP project to be financially feasible.
- Services must be available to the entire Herring Cove Planning Area for reasons of efficiency and equity.
- Infrastructure improvements must respond primarily to the needs of current residents while allowing for future development.

This report is important because it documents agreement among Herring Cove residents about what it is that the community wants and needs, and because it presents information about servicing strategies that is essential for discussions between community leaders and HRM staff.



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## Appendix A: Newsletters

Information Bulletin 1 December 15, 1999

Information Bulletin 2 February 25, 2000



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## Appendix B: Background Information

Zoning  
Planning Districts  
1931 Aerial Photograph  
1954 Aerial Photograph  
1964 Aerial Photograph  
1997 Aerial Photograph  
Soils  
Geology  
Land Cover  
Land Use  
Elevation  
Slope  
Drainage  
Area Watersheds  
Generalized Future Land Use Mainland South



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# Appendix C: Public Information Workshop Documentation and Summary

[Meeting #1 Summary](#)  
[Photographs of Public Information Workshop maps](#)





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# Appendix D: Community Design Workshop's Buildable Areas and Documentation

Buildable Areas  
Photographs of Community Design Workshop maps



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# Appendix E: Proposed Land Use Workshop

Future Land Use  
Photographs of Proposed Land Use Workshop maps



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# Appendix F: Proposed Future Land Use and Municipal Services

Proposed Future Land Use  
Municipal Services



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# Appendix G: Sewer and Water Cost Estimates and Traffic Table

[Sewer Cost Estimate](#)

[Water Cost Estimate](#)

[Traffic Table: PM Peak Hour Screen Line Volumes](#)

