




CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Hamilton Water Division

| | |
|---------------------------|--|
| TO: | Chair and Members Public Works Committee |
| COMMITTEE DATE: | July 8, 2020 |
| SUBJECT/REPORT NO: | City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Paper (PW20048) (City Wide) |
| WARD(S) AFFECTED: | City Wide |
| PREPARED BY: | Bhajan Sarker (905) 546-2424 Ext. 5109 |
| SUBMITTED BY: | Cari Vanderperk Acting Director, Water and Wastewater Planning and Capital Public Works Department |
| SIGNATURE: |  |

RECOMMENDATION(S)

- (a) That each of the policy statements and implementation strategies contained in the City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Summary Tables shown in Appendix "A" to Report PW20048 be endorsed;
- (b) That the General Manager of Public Works, or their designate, be authorized and directed to adopt these statements as the guiding principles to identify servicing alternatives in the development of the City of Hamilton Water, Wastewater, and Stormwater Master Plans for the Lake Based Systems being developed under Growth Related Integrated Development Strategy 2; and,
- (c) That the General Manager of Public Works, or their designate, be authorized and directed to report to the Public Works Committee upon completion of the Water, Wastewater and Stormwater Master Plans, outlining any changes or additions to the policy statements resulting from public or key stakeholders' consultations.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

EXECUTIVE SUMMARY

The 2020 Water, Wastewater and Stormwater Master Plans (2020 Master Plans) are being prepared as a component of the City of Hamilton (City's) corporate strategic growth initiative known as the Growth Related Integrated Development Strategy 2 (GRIDS 2). One of the foundational elements of the 2020 Master Plans is the 2020 Master Plans Policy Paper (Policy Paper) which represents the guiding principles for how the City's water, wastewater and stormwater infrastructure will be developed to meet existing and future growth needs. Report PW20048 serves as the Policy Paper and is an important element in the development of several alternative servicing strategies leading to the preferred servicing strategy defined in GRIDS 2.

The Policy Paper:

- Harmonizes and documents water, wastewater and stormwater servicing policies, providing consistent direction to all City staff;
- Incorporates current regulations, legislation, best practices, criteria, and potential servicing implications;
- Encourages servicing strategies that optimize cost of services based on a long term, net present value approach;
- Incorporates current City policies on energy conservation and encourages adaptation of climate resiliency into design; and,
- Supports the City's 2016-2025 Strategic Plan, and the strategic directions of GRIDS 2.

Appendix "A" attached to Report PW20048, titled City of Hamilton Water, Wastewater and Stormwater Master Plan Policy Summary Tables, provides a listing of the policy statements by category: General, Water, Wastewater and Stormwater and includes commentary on the basis, justification and implications for each policy.

By adopting the recommendations of this report the policies contained in the City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Summary Tables becomes a governing document for the planning and design of all future water, wastewater and stormwater infrastructure. The policies will provide clear direction on when, where and how infrastructure will be established, and the policies will be a point of reference for all stakeholders with an interest in land development in the City of Hamilton.

Alternatives for Consideration – See Page 6

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Having an approved Policy Paper would streamline the identification of infrastructure for development and growth, resulting in maximizing City's existing infrastructure return on investment and staffing resources.

Approval of the Policy Paper does not create any financial commitments. At the conclusion of the 2020 Master Plans and GRIDS 2 studies, staff will be seeking Council approval of the 2020 Master Plans recommendations and associated financial obligations.

Staffing: There are no staffing implications.

Legal: N/A

HISTORICAL BACKGROUND

The City's 2006 GRIDS is based on a Nodes and Corridor Land Use Strategy, the 2006 Water and Wastewater Master Plans, a social development strategy, an economic development strategy, and a financial analysis of the growth options up to the year 2031. GRIDS 2 is being updated in 2020 to address the additional residential and employment growth forecasted out to 2041.

The 2020 Master Plans are iteratively developed along with GRIDS 2. When complete, they will identify the preferred water, wastewater and stormwater servicing strategy for the next 20 years, ensuring that the City meets its existing servicing commitments, accommodates future growth, and addresses water quality issues in the Hamilton Harbour and the City's surrounding receiving waters. The 2020 Master Plans will update the 2006 City of Hamilton Water and Wastewater Master Plans (2006 Master Plans) for the lake-based systems which addressed the servicing for growth to the year 2031.

The City of Hamilton retained the services of GM BluePlan Engineering and Wood Consultants to assist with the development of the 2020 Master Plans. The master planning process allows the City to take a holistic look at its existing infrastructure in order to identify opportunities to optimize current capacities and to develop the most efficient means of expanding its systems to service future needs.

Guiding principles and policies are required in order to most effectively develop the servicing alternatives for the proposed GRIDS 2 growth scenarios. The policies in the Policy Paper are derived from the policies utilized in the 2006 Master Plans and updated to reflect current regulations, design principles, industry practices and specific

City initiatives such as energy conservation, flooding relief and climate change adaptation.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The policies and principles outlined in the Policy Paper will form part of the City's day to day planning, design, construction, operations, and maintenance practices for the water, wastewater and stormwater systems.

The policies reflect the most recent regulations, legislation, and best management principles affecting the water, wastewater and stormwater industry, including but not limited to:

- Provincial Policy Statement
- *Greenbelt Protection Act*
- *Source Protection Planning Act*
- *Safe Drinking Water Act*
- *Places to Grow Act*
- Hamilton Harbour Remedial Action Plan
- MECP Procedure F-5-5
- City of Hamilton By-laws and existing Policies and Procedures
- City of Hamilton Climate Change Task Force Report
- City's Corporate Energy Policy

The Policy Paper was developed to be consistent with the City's 2016-2025 Strategic Plan, and the strategic directions of GRIDS 2. It supports "smart growth" principles which promote sustainability and efficiency.

RELEVANT CONSULTATION

A consultation process was undertaken during the development of the Policy Paper including a number of workshops namely:

- 1) City staff from the Hamilton Water Division as well as expertise from consultants in the field of wet weather flow control were gathered to discuss the interpretation of regulatory requirements pertaining to combined sewer overflow control; and,
- 2) City staff from the Public Works Department and the Planning and Economic Development Department gathered to assemble the content of the 2020 Master Plans Policy Paper.

Comments received at the various workshops and obtained through the circulation of draft Policy Papers have been incorporated into the final Policy Paper.

The City's established key stakeholders including, but not limited to, Bay Area Restoration Council (BARC), Hamilton Conservation Authority (HCA), Environment Hamilton (EH), and Royal Botanical Gardens (RBG) have been apprised of this Policy Paper and of this staff report to Council. These key stakeholders will have future opportunities to meet with the 2020 Master Plans study team to discuss these policies and to recommend changes or additions. If new or revised policies emerge from those engagements, City staff will communicate those changes back to Council.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

The 2020 Master Plans and its accompanying Policy Paper describe how the City's water, wastewater and stormwater infrastructure will be managed and developed to ensure existing and future services are delivered efficiently and cost effectively. By consistently applying the principles contained in the Policy Paper the City will ensure that existing infrastructure is operated and maintained to a defined standard and full lifecycle value is derived from these assets. Application of the Policy Paper will also ensure that new infrastructure is constructed to a consistent and high standard and that infrastructure expansion is strategic and is aligned with growth.

The Policy Paper is written to convey the purpose and intent of each policy but are not overly prescriptive to how the policies are to be implemented. The policies have been presented in this way to provide flexibility on their interpretation and application and to ensure the policies can continue to be effective into the future. As new technological innovations emerge, regulatory changes occur, or as servicing priorities shift, implementation of policies must change to remain relevant.

The policy structure employed in the Policy Paper will allow staff to respond to industry and environmental changes whilst continuing to adhere to the policy statement principles.

The policies have been divided into four categories: General, Water, Wastewater and Stormwater. All the policies are presented as a series of summary tables in Appendix "A" attached to Report PW20048; policies that are new in 2020 are identified in bold text within the summary tables.

General:

- Planning and Servicing Policies
- New Development
- Servicing Strategy - Municipal Servicing
- Monitoring
- Environmental Protection
- System Reliability and Security
- Climate Change

**SUBJECT: City of Hamilton Water, Wastewater and Stormwater Master Plans
Policy Paper (PW20048) (City Wide) - Page 6 of 7**

- Planning Horizon
- Existing Infrastructure
- Reserve Capacity
- Standards and By-Laws
- Efficiencies and Optimization
- Communication
- Level of Service
- Program Costing
- Strategic Plan
- Operations
- Coordination
- Services and Facility Location

Water:

- Raw Water Sources
- Water Supply and Distribution Systems - Water Quality
- Drinking Water Quality Management System
- Distribution Requirements
- Water Supply and Distribution Systems - System Reliability and Security
- Water Conservation, Efficiency and Consumption Trend
- Health and Safety
- Water Demand Projections
- Water Storage
- Operational Flexibility and Energy Management
- Emergency Conditions

Wastewater:

- New Growth Areas - Separated System
- Sewer Use Criteria
- Wastewater Collection and Pumping Systems - Reliability and Security
- Combined Sewer Overflow Hamilton Harbour Loading from Combined Sewer Overflow
- Wastewater Treatment
- Biosolids Management
- Health and Safety
- Wastewater Flow Projections
- Environmental Compliance
- Wet Weather Flow Criteria
- Wet Weather Strategies
- Capacity Allocation

Stormwater:

- Quantity Control
- Quantity and Erosion Control
- Conveyance System
- Climate Change
- Analytical Methods
- Drainage Connections
- Stormwater Management Controls Systems Design

ALTERNATIVES FOR CONSIDERATION

Alternative 1 - Do Not Approve the City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Paper.

**SUBJECT: City of Hamilton Water, Wastewater and Stormwater Master Plans
Policy Paper (PW20048) (City Wide) - Page 7 of 7**

This alternative provides no direction or framework for the development of future servicing related to growth and redevelopment (i.e. infill and intensification), which is the overall focus of the integrated Master Plans. Therefore, it maintains the status quo and could result in the following:

- More time required to develop servicing options without a guiding framework.
- Proposed servicing alternatives not being developed in accordance with current guidelines and regulations.
- Being unable to obtain regulatory review agency approvals in a timely manner.
- Prevents the City from implementing infrastructure enhancements or additions that align with current City initiatives such as climate change adaptation.

This alternative is not recommended.

Alternative 2 - Approve portions of the City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Paper.

This alternative allows for certain portions of the City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Summary Tables to be adopted now while others will be removed from the policy or reviewed and revised as required before being incorporated. As the bases of the policies are derived from regulations, legislation, or best practices, there are synergies between various policy statements that would make it challenging to segregate specific policies. This option may be undertaken; however, it must be noted that pursuing this option will add additional staff effort, additional costs to the Master Planning process, and delays in implementing GRIDS 2.

This alternative is not recommended.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Built Environment and Infrastructure

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW20048 - City of Hamilton Water, Wastewater and Stormwater Master Plans Policy Summary Tables