# Infrastructure Master Plan (2008 Review)

## Minor Policy Area changes

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| **SECTION 1 – From Vision to Action** | | |
| 1.0 Introduction | Update sentence in first paragraph re: population in 20 years. | New population and employment estimates are available |
| 1.1 Scope of the IMP | | |
| 1.2 Structure of the IMP | | |
| 1.3 Preparation of the IMP | | |
| 1.4 Ottawa's Growth Management Plans | | |
| 1.5 The Guiding Principles | | |
| 1.6 Implementation of the IMP | Update with some info on recent Provincial legislation and regulations. | The Clean Water Act and the Safe Drinking Water Act, etc. are major influences on the plan and should be mentioned. |
| **SECTION 2 - STRATEGIC DIRECTION** | | |
| 2.0 Introduction | | |
| 2.1 Setting the Stage | Take out reference to the CSO tunnel and put in reference to real time control | The City has changed its strategy for managing the system |
| 2.2 Moving Forward | | |
| 2.3 Goal Setting terminology | | |
| 2.4 The Infrastructure Planning Process | Update budget figures, names of departments, etc. | |
| 2.5 Capital Projects Lists – Water and Wastewater | Update with new dates and lists | |
| 2.5.1 Short-term Capital Projects | | |
| 2.5.2 Mid and Long-term Capital Projects | Update the dates | |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| 2.5.3 Stormwater System Planning and Projects | ***See IMP Document 1, Section Three***<br>Update with new information and current situation. | Stormwater Policies adopted by Council and work is proceeding so section will reflect this progress. |
| **SECTION 3 – UNDERSTANDING GROWTH IMPACT ON INFRASTRUCTURE** | | |
| 3.0 Introduction | Update with new population and employment information | |
| 3.1 Population Growth | | |
| 3.2 Supply and Demand Planning | Change to 'Supply Planning and Demand Management' | |
| 3.2.1 Supply Planning | | |
| 3.2.2 Demand Planning and Choices | Change 'Planning' to 'Management' | |
| 3.2.3 Demand Planning and the Environment | Change 'Planning' to 'Management' | |
| 3.2.4 Peak Demand and total Demand Planning | Change 'Planning' to 'Management' | |
| 3.2.5 Infrastructure System Examples | Add information on impact of fire flow reductions | Results of report recently completed suggest that design standards (based on peak demand) could be changed. |
| 3.2.6 Policy for Demand Planning | Change policies *For Water and Wastewater Systems:*<br><br>Undertake or permit acceptable, beneficial and cost effective total demand ~~planning~~ management initiatives to reduce total demand in public systems<br><br>Within the Water Efficiency Strategy, undertake or permit acceptable, beneficial and cost effective peak demand management initiatives to reduce total demand.<br><br>Implementation changes:<br>*For Private Services*:<br>Add bullet<br>• Prepare an urban wells policy<br>*For Water Services*:<br>Replace first bullet with these bullets:<br>• To inform water consumers of the need for water efficiency and how to become water efficient through the use of education programs, popular media and demonstration projects; | (**Continued changes for implementation**)<br>*For Water Services*:<br>Identify priority initiatives through the development and maintenance of a Water Loss Control Strategy indicating the goals, objectives, costs, benefits and best value for the broadest range of total supply–side management activities. Programs under a Water Loss Control program include:<br>• Real Loss Reduction Initiatives such as:<br>o Active Leak Detection<br>o District Metering for leak identification<br>o Speed and Quality of Repair<br>o Pipeline Asset management<br>• Water Balance Audits to account for all water usage<br>*For Wastewater:*<br>Continue to complete combined sewer separation outside of the combined sewer area and provide for an range of solutions including full separation of |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| | • To influence water consumers to reduce consumption, and alter consumptive patterns through partnership initiatives, rebates, and other financial incentives; and<br>• To direct water consumers to change consumption patterns through judicious use of regulatory and financial tools, as warranted over time.<br>Add:<br>Programs under a Water Efficiency Strategy include:<br>• Education and awareness programs;<br>• City-led plumbing fixture subsidy programs;<br>• A Peak Demand Strategy including:<br>o Municipal and private automatic irrigation management;<br>o Private outdoor water use controls. | partially separated sewers where a storm drainage outlet is available, flow control, flow restriction, extraneous flow removal and on-site storage of stormwater<br><br>*For Water and Wastewater Services*<br>Recognize the demand planning value from ongoing systems rehabilitation and consider the potential value as a factor in rehabilitation priority setting<br>For plans for demand management, maintain a 3-year priority action plan and work program including coordination with annual rehabilitation programs.<br><br>For plans for demand management, maintain 10-year long-range planning objectives and specify growth capital project requirements beyond the 10-year period based on achievement of those objectives |
| 3.2.7 Stormwater Demand Planning | ***See IMP Document 1, Section Three***<br>Update with new information and current situation. | Stormwater Policies adopted by Council and work is proceeding so section will reflect this progress. |
| 3.3 Infrastructure System Monitoring | | |
| 3.3.1 Monitoring System Demands | Demand from Population Growth<br>Add bullets to implement policy 2:<br>• Regularly review phasing plan,<br>• Adjust project priorities based on monitoring results.<br>Change policy 3 to read:<br>Assess how factors related to population growth, such as employment characteristics and demographics may impact infrastructure planning and incorporate OP targets and phasing plans into the prediction of need and timing for infrastructure servicing<br>Demand Evidenced by Systems Performance<br>Add to bullets in Implementation:<br>• Maintain sufficient permanent real time monitoring devices to provide the level of detail required to predict and plan for systems performance in both greenfields and intensification and infill situations.<br>• Identify potential priority areas for demand and supply planning initiatives based on real time performance and evidence of system deficiencies and constraints. | Implementation requires expansion and a separate plan to ensure that the policy is carried out. |
| 3.3.2 Monitoring Physical Conditions of Existing | | |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| Infrastructure | | |
| 3.3.3 Other Monitoring | | Review the impact of changes in the Clean Water Act and recommend any additions/changes to IMP policies as a result |
| 3.4 Service Delivery Methods and Alternatives | | |
| 3.4.1 Public Systems Service Delivery Methods | Maintain and regularly update service level standards to direct the design basis and service delivery basis for water, wastewater and stormwater infrastructure | Design standards and levels of service should regularly be reviewed to ensure that they are adequate to meet the challenges of climate change factors, CSO requirements and reflect the current trends in water usage and sewer flows to the treatment plant. |
| 3.4.2 Considering Alternative Services | *For a range of innovative technologies and service delivery models:*<br><br>Promote and cooperate in research and monitor servicing technologies for inclusion in City design guidelines, materials specifications, operation and maintenance practices and procedures, construction specifications and life cycle cost recovery models.<br><br>• Cooperate in investigation and research related to materials, techniques and products for a range of innovative technologies and service delivery applications;<br>• Through a comprehensive servicing study which evaluates a range of servicing options and innovative technologies, investigate service delivery methods and applications for technologies either in standard municipal servicing or to respond to special servicing needs within the City;<br>• Review specifications, costs and benefits for technologies and service delivery methods with municipal application; and<br>• Adopt or revise service level criteria, design guidelines, materials specifications, operation and construction practices to incorporate servicing technologies and methods shown to provide cost-benefit to the City. | In the Cafes, residents were most vocal in their concern that the City did not appear to be welcoming to new technologies and alternative servicing methods. There was considerable opposition to the 'big pipe' solution and support for small communal or even self-contained systems which residents felt would be more environmentally-sensitive, cost less and maintain the rural character. |
| **Section 4 – Cost and Value** | | |
| 4.0 Introduction | | |
| 4.1 Costing and Paying for Growth | Change the Policy to:<br>Use Development Charges as the primary source of funding to build infrastructure for Greenfields development and the combination or | • Water efficiency, water loss, leak detection, and flow removal programs should be considered as other options to support growth |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| | Development Charges and Water Rates or other revenue source to fund infrastructure works that build capacity for intensification and infill growth.<br><br>And change the Implementation to:<br>Consider in the formulation of revenue sources:<br><br>• The need to provide growth funding related to rehabilitation programs in the Development Charges By-law. The funds would be available to build capacity to accommodate growth when sewer and water facilities and pipes are replaced.<br>• The need to replace any reduction in funding created by discretionary exemptions, the central area residential exemption, and transition provisions or to eliminate these exemptions that reduce growth project funding;<br>• That the high percentage of dwelling units that are constructed inside the Greenbelt require: monitoring and analysis to identify infrastructure system capacity, works to provide capacity to support them; and growth-related funding to support the system analysis and capacity-building capital projects.<br>• OP targets and phasing should be mirrored in the timing of DC revenues to support capital projects and the timing of operating budget increases to cover additional operating costs.<br>• project estimates should reflect current actual costs for projects;<br>• DC and Water Rate funding must be coordinated to meet the costs of capacity-building infrastructure outlined in the DC Background Study (continued next column) | which could be offered as potential lower cost capacity-building alternatives to the development community.<br>• The City's land use, servicing and financial planning documents and tools should be well-coordinated, so that the City can afford to service the growth projections of the Official Plan and Master Plans.<br><br>The current content of this section is outdated and needs to be replaced. Issues related to Development Charges and other revenue sources have been discussed at the Cafes and internally.<br>Funding for growth capital projects is critical and a close relationship between the City's land use, infrastructure and financial planning must be maintained. |
| 4.2 Reliability of Infrastructure | | |
| 4.2.1 Drinking Water Quality | | |
| 4.3 Cost and Value of Existing Systems | | |
| 4.4 Alternative Value Assessments | | |
| 4.4.1 Green Infrastructure | | |
| 4.4.2 Personal Choices | | |
| 4.4.3 Use of Special Area Charges | | |
| 4.5 Public Private Partnerships | | |
| **Section 5 – Integrate Infrastructure Planning** | | |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| 5.0 Introduction | | |
| 5.1 Infrastructure and the Natural Environment | | |
| 5.2 Stormwater Management Planning | ***See IMP Document 1, Section Three***<br>The entire section will be reviewed, expanded and parts replaced as required and policies and implementation steps rewritten based on the Stormwater policies adopted by Council<br>http://ottawa.ca/calendar/ottawa/citycouncil/occ/2007/09-12/arac/ACS2007-PTE-POL-0037.htm | Stormwater Policies were adopted by Council September, 2007. |
| 5.2.1 Background | | |
| 5.2.2 No Net Loss on Subwatershed Basis | | |
| 5.2.3 Steps Toward a New Approach to Stormwater Management | | |
| 5.2.4 Affordability of a No Net Loss on a Subwatershed Basis Policy | | |
| 5.2.5 No Net Loss on a Subwatershed Basis Policy | | |
| 5.2.6 The Value of Stormwater Management | | |
| 5.3 Role of the Ottawa River | | |
| 5.3.1 Local Source Water Protection Issues | Change Policy to:<br>Liaise with all source water protection partners regarding source water protection issues.<br>Change implementation to:<br>• Transit and receive information to ensure mutual understanding of source water conditions<br>• Notify all affected municipalities in Ontario and Quebec regarding major water, wastewater and stormwater planning initiatives<br>• Approach all affected municipalities in Ontario and Quebec to form an Ottawa River source protection working group | To reflect Source Water Protection legislation |
| 5.3.2 Watershed Source Water Protection Issues | Change implementation second bullet | To reflect Source Water Protection legislation |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| | • Investigate opportunities and benefits arising out of an Ottawa River source protection working group for all agencies and municipalities operating in the Ottawa River watershed | |
| 5.4 Groundwater | ***See IMP Document 1, Section Two***<br>The section will be revised and expanded as appropriate as per the Groundwater Management Strategy policies and implementation.<br><http://www.ottawa.ca/calendar/ottawa/citycouncil/ara/2003/04-25/ACS2003-DEV-POL-0013.htm | Council adopted 'The Groundwater Management Strategy' in May, 2003. The Strategy has two phases. Phase one is being implemented and Phase two will be developed as part of the IMP Update. The Groundwater Resources Working Group made recommendations, which have been reviewed. |
| 5.4.1 Municipal Well Systems | | |
| 5.4.2 Land Use | | |
| 5.4.3 Rural Development Approvals | | |
| 5.4.4 Groundwater Stewardship | | |
| 5.5 Ecological Footprint | | |
| 5.6 Growth Planning for Existing Infrastructure | ***See IMP Document 1, Section One***<br>The section will be replaced with a new IMP Section 6, Supporting Intensification with Capacity Management Strategies | A Capacity Management Strategy has been prepared to address water and sewer servicing issues related to intensification and infill, especially in older areas of the City with older water pipes and combined or partially-separated sewer systems. |
| 5.6.1 Infrastructure Rehabilitation for Growth | | |
| 5.6.2 Physical Needs Assessment and Prediction | | |
| 5.6 3 Maximization for Use of Existing Infrastructure | | |
| 5.6.4 Support for Development Where Capacities are Constrained | | |
| 5.6.5 Growth Servicing Priority Assessment | | |
| 5.7 Optimization | | |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| 5.8 Role of Communication in Infrastructure Planning | | |
| 5.8.1 City of Ottawa Communication | Add two bullets under implementation:<br>• Fully integrate Infrastructure Plans, including Area Infrastructure Plans, with Land Use and Financial Plans.<br>• Co-ordinate Area Infrastructure Plans with City-wide Infrastructure Plans and systems operations as they are prepared. | Sometimes Area Infrastructure Plans are not well integrated with CDPs as they are being prepared. Where possible, they should precede CDPs but for most cases, they should be well integrated so that land use and servicing can go 'hand in hand'. As well, good coordination of the area servicing plans and the planning and operation of the overall systems should be addressed so that additions to the systems do not create operating challenges. |
| 5.8.2 External Agency Communication | Remove the third bullet re: InfraGuide | The InfraGuide project is no longer in operation |
| 5.8.3 Customers and the Public | | |
| **Section 6 – Supporting Intensification through Capacity Management** | ***See IMP Document 1, Section One***<br>A new Section will be added to the Infrastructure Master Plan. | A Capacity Management Strategy has been prepared to address water and sewer servicing issues related to intensification and infill, especially in older areas of the City with older water pipes and combined or partially-separated sewer systems. |
| **Section 6 – Existing Systems** | Change this to IMP **Section 7 – Existing Systems** and renumber all parts of the Section | Making room for the new Section 6 |
| 6.0 Introduction | This section does not contain policies but will be updated and expanded as required by Provincial legislative and regulatory changes and/or City policy or practice. | |
| 6.1 Public Service Areas | | |
| 6.1.1 Major Public Water and Wastewater Service Areas | | |
| 6.1.2 Other Public Service Areas | | |
| 6.1.3 Stormwater Service Areas | | |
| 6.2 Public Water System | | |
| 6.2.1 Public System Water Demands | | |
| 6.2.2 Public Water System Components | | |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| 6.2.3 Public Water System Quality Control | | |
| 6.2.4 Public Water System Growth Components | | |
| 6.3 Public Wastewater System | | |
| 6.3.1 Public Wastewater System Demands | | |
| 6.3.2 Wastewater Collection System Components | | |
| 6.3.3 Wastewater System Growth Challenges | | |
| 6.4 Public Stormwater Collection Systems | | |
| 6.4.1 Major Stormwater Collection System Challenges | | |
| 6.4.2 Stormwater Management Facilities | | |
| **Annex 1 – Water and Wastewater Projects** | | |
| Table A1.1 – Major Water and Wastewater Growth Related Capital Projects 2003 to 2006 | Eliminate the table | Time period is past |
| Table A1.2 – Major Water and Wastewater Growth Related Capital Projects 2008 to 2014 | Change Table to new projects and periods. | Reflect changes to project scope and timing to support OP |
| Table A1.3 – Major Water and Wastewater Growth Related Capital Projects 2015 to 2021 | Change Table to new projects and periods. | Reflect changes to project scope and timing to support OP |
| Table A1.3 – Major Water and Wastewater Growth Related Capital Projects 2022 to 2031 | Change Table to new projects and periods. | Add projects to the end of the Plan period |
| Figure 1- Existing Water Distribution System | Update as required | Reflect changes since adoption of IMP in 2003 |
| Figure 2 – Existing Wastewater Collection System | Update as required | Reflect changes since adoption of IMP in 2003 |

| IMP Section | Details of proposed policy change | Reason for proposed change |
|---|---|---|
| Figure 3 – Watersheds and Subwatersheds | | |
| Figure 4 – Growth Projects 2009 – 2014 – Water Distribution System | Update with new growth projects | Support new growth projections and timelines for the OP |
| Figure 5 – Growth Projects 2009 – 2014 – Wastewater Collection System | Update with new growth projects | Support new growth projections and timelines for the OP |
| Figure 6 – Growth Projects 2015 – 2031 – Water Distribution System | Update with new growth projects | Support new growth projections and timelines for the OP |
| Figure 7 - Growth Projects 2015 – 2031 – Wastewater Distribution System | Update with new growth projects | Support new growth projections and timelines for the OP |
| Figure 8 – Villages and Rural Services | Update as required | Reflect changes since adoption of IMP in 2003 |
| Figure 9 – Private Service Enclaves | New Figure | Provide additional useful information |