

## Sustainable Municipal Infrastructure Principles and Guidelines July 2003

**Introduction** -- The National Guide to Sustainable Municipal Infrastructure (InfraGuide) has developed a set of Sustainable Municipal Infrastructure Principles and Guidelines for municipalities to use in their decision making process. Consideration of the principles and guidelines across the three dimensions of social, economic and environmental development will yield considerable benefits:

- Improve and enhance the quality of life
- Minimize health, environmental and safety impacts
- Investigate the impacts of potential actions to manage and mitigate risk
- Manage through good stewardship
- Consistently make informed long-term infrastructure decisions
- Maximize the ability of future generations to meet their infrastructure needs
- Address the 'municipal infrastructure deficit'

The InfraGuide's mission statement and definition of Best Practices are included here to provide the organizational context necessary for the consideration of the Sustainable Municipal Infrastructure Principles and Guidelines.

**InfraGuide Mission Statement** -- The National Guide to Sustainable Municipal Infrastructure identifies and disseminates best practices and encourages innovation to support sustainable municipal infrastructure decisions and actions that protect and enhance quality of life of Canadians.

**Best Practices Definition** -- Best Practices are proven state-of-the-art methodologies for municipal infrastructure planning, design, construction, management, assessment, maintenance and rehabilitation that consider the local economic, environmental and social dimensions that contribute to sustainable communities.

**Sustainable Municipal Infrastructure Definition** -- Sustainable Municipal Infrastructure is infrastructure that is managed in a manner that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable Municipal Infrastructure maintains or enhances economic opportunity and community health and well being while protecting and restoring the natural environment upon which people and the economies depend. It is the result of the application of principles and guidelines to municipal decision-making that seeks to balance and integrate environmental, economic and social dimensions of sustainability.



## Sustainable Municipal Infrastructure Principles

Decisions about municipal infrastructure include many components such as planning, design, construction, management, assessment, operations, maintenance and rehabilitation.

When making decisions about municipal infrastructure the following principles should be applied:

**Holistic Perspective, Systems Thinking** -- Involves considering the whole system as well as its parts, recognizing that seemingly unconnected projects, activities and their component parts are in fact interrelated and interdependent.

**Equity** -- Ensure that the equity issues are considered, that benefits and costs are distributed fairly over space and time.

**Effectiveness and Efficiency** -- Seek to maximize the contribution to human health and ecosystem health as well as maximizing the contribution to a viable economy.

**Awareness, Learning, Participation and Engagement** -- Share information widely to increase awareness, generate knowledge and build capacity. Seek broad representation, participation and engagement to ensure shared responsibility and stewardship, informed decision making and recognition of diverse and changing values and their connection to decisions and actions. Use consensus building processes where possible and transparent reporting for improved accountability.

**Practicality and Incrementalism** -- Sustainability in municipal infrastructure is a dynamic, evolving process that requires the ability to create and hold on to the 'long term vision', implement, and measure progress towards sustainable municipal infrastructure in a practical and incremental fashion.



## Sustainable Municipal Infrastructure Guidelines

The above-mentioned principles are further articulated into guidelines that apply to all of the various components of municipal infrastructure decision-making:

1. Human health and safety issues are a priority consideration in the pursuit of sustainable municipal infrastructure.
2. Capture the full intended and unintended costs and benefits (monetary and non-monetary) across all three dimensions (economical, environmental and social).
3. Cooperate with and engage municipalities and others through public consultation and participation in the pursuit of sustainable municipal infrastructure.
4. Incorporate 'reduce, reuse and recycle' philosophies with respect to sustainable municipal infrastructure.
5. Encourage the use of full cost disclosure tools for municipal infrastructure services.
6. Consider the full life cycle costs (including capital investment, operational, infrastructure renewal, rehabilitation and decommissioning) across social, economic and environmental dimensions in the pursuit of sustainable municipal infrastructure to minimize overall intended and unintended costs today and for future generations.
7. Minimize the overall disruption to the community by carrying work out in an integrated manner that considers intended and potential unintended impacts.
8. Balance the demand for municipal services with social, environmental and economic priorities and consequences.
9. Weigh the impacts (intended and unintended, direct and indirect), identify and take measures to manage risks when considering innovation and reasonable alternatives for sustainable municipal infrastructure.
10. Promote the pursuit of excellence and innovation in the pursuit of sustainable municipal infrastructure through a commitment to continuous improvement and learning.

