

InfraGuide

Municipal Infrastructure

Jim Miller, P. Eng

APPEGGA Annual Conference & General Meeting

April 19-22, 2006

Edmonton AB

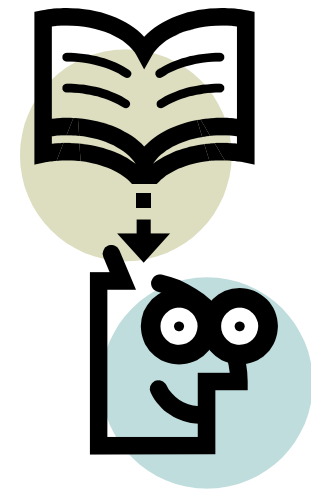
National Guide to Sustainable
Municipal Infrastructure





Presentation Overview

- **Why InfraGuide?**
- **Infrastructure Principles & Guidelines**
- **InfraGuide Committees**
- **Best Practices**
- **Environmental Protocols**
- **Published and Future BP's**
- **Conclusion**
- **Contact Information**





Why InfraGuide?

- Existing infrastructure is aging;
- Demand increases for more and better roads;
- Improved water and sewer systems required; and
- Higher standards of safety, health and environmental protection.





InfraGuide's Creation

- Created in 2000
- Four Leading Organizations that came together to create InfraGuide
 - Federation of Canadian Municipalities
 - National Research Council
 - Infrastructure Canada
 - Canadian Public Works
- Operations at NRC offices - Ottawa





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InfraGuide Mission

InfraGuide's mission is to create a culture and the technical frameworks that support sustainable community infrastructure stewardship.

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The Municipal Experience Today

- **Infrastructure deficits**
 - Funding gap
 - Need for Life Cycle Planning
 - Pressure to update
 - Deterioration compounded by growth, infilling & re-development
 - Competing interests for shrinking resources
 - Meet daily requirements





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Sustainable Municipal Infrastructure's Principles and Guidelines

- **Intergraded Systems Thinking**
- **Life cycle costs across social, environmental and economic dimensions**
- **Balances demand with consequences**
- **Incorporates "reduce, reuse and recycle" philosophies**

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InfraGuide's Technical Committees

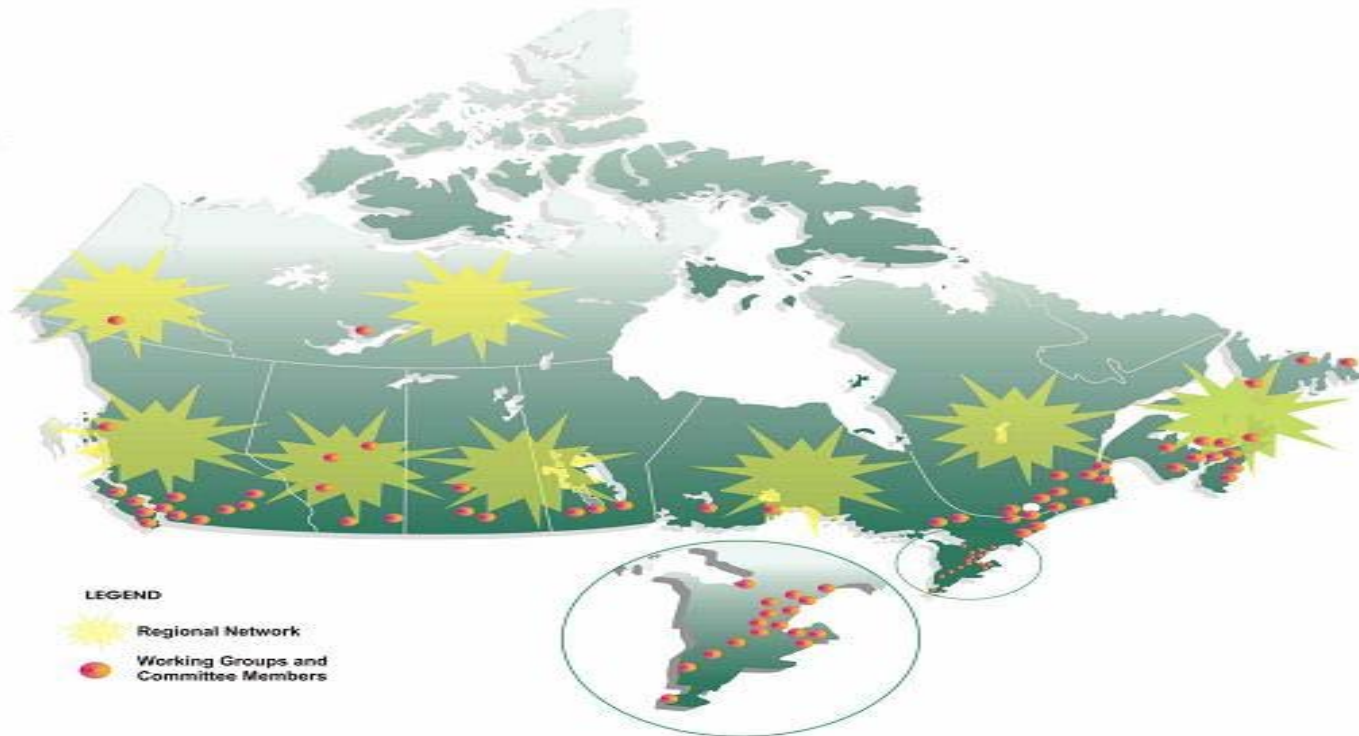
- **Environmental Protocols**
- **Decision Making & Investment Planning**
- **Potable Water**
- **Storm & Wastewater**
- **Roads & Sidewalks**
- **Transit**





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National Representation



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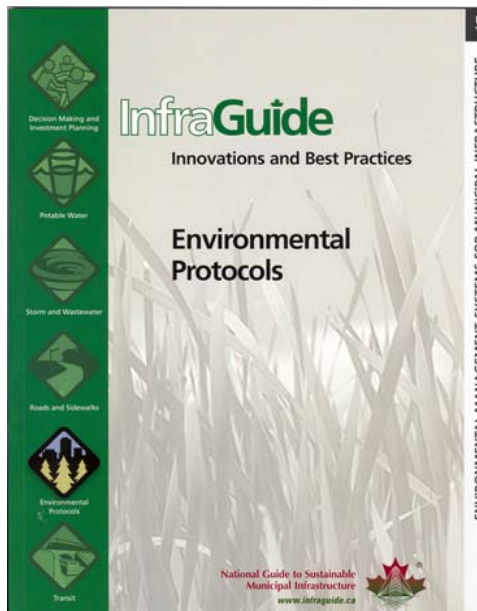




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Environmental Protocols

- **Best practices objective:**



To focus on the interaction of natural elements and their effects on human quality of life in relation to municipal infrastructure delivery. Environmental elements include land, water, air and soil.





Published Best Practices: Environmental Protocols

- **Strategic Commitment to the Environment by Municipal Corporations**
- **Accounting for Environmental and Social Outcomes in Decision Making**
- **Environmental Assessment**
- **Demand Management**
- **Environmental Management Systems**
- **Land Use Planning**





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Environmental Protocol TC Membership

- P. Eng - Yukon
- Health Professional – B.C.
- Biologist & P. Eng – Alberta
- Biologist - Manitoba
- Landscape Architect - Ontario
- Landscape Architect – Quebec
- P. Eng – N.B.
- P. Eng - Newfoundland

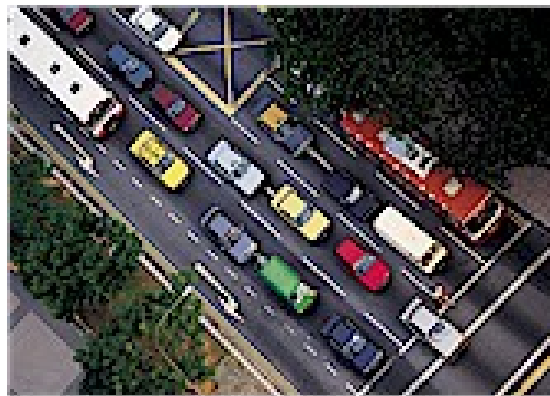
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Future Best Practices – Environmental Protocols

- Contaminated Sites
- Watershed Management
- Roadside Vegetation
- Planning for Environmental Risks & Hazards – climate change





Climate Change Impact on Canadian Municipalities

- Coastal flooding & landslides
- Urban flooding where storm drains & waste management are inadequate
- Water supply systems
- Energy transmission & distribution systems
- Buildings & transportation
- InfraGuide Best Practices are a valuable tool to help make a difference in tackling climate change





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Kelowna: 2003 Fire



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Other Experiences



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Finch Ave, Toronto, August 19, 2005





Infraguide Outcomes

Environmental protection is not the main driver of sustainable infrastructure, however it is a net result or benefit of sustainable infrastructure.

Environmental protocols are integrated in the development of all InfraGuide Best Practices.





Conclusions

InfraGuide helps municipalities:

- **Protect health, safety & environment;**
- **Lower lifecycle costs, improve reliability & risk management;**
- **Accelerate technical expertise;**
- **Use proven technologies; &**
- **Get best return on tax dollar.**





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Contact InfraGuide

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Questions?

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