

# Integrated Rainwater Management Planning: Summary Report for ISMP Course Correction Series

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**Table 2 – City of Surrey Framework for an Holistic and Balanced ISMP**

## Guiding Philosophy

- Recognize that each watershed area is unique, and its needs are unique.
- Integrate drainage planning with land use, environment, parks, and other infrastructure and community needs.
- Model the drainage system after there is some concept of overall direction – do not model just to model.
- Have short, medium and long term goals / visions for the plan area, complete with integration of opportunities.

## The Process

Stage 1 – “What Do We Have?”

Stage 2 – “What Do We Want?”

Stage 3 – “How Do We Put This Into Action?”

Stage 4 – “How Do We Stay On Target?”

## Balanced Goals

As part of defining “what we want”, the City identified these balanced goals:

- Protect and enhance the overall health and natural resources of the watershed;
- Promote participation from all stakeholders to achieve a common future vision of the watershed;
- Minimize risk of life and property damages associated with flooding and provide strategies to attenuate peak flows;
- Protect and enhance watercourses and aquatic life;
- Prevent pollution and maintain / improve water quality;
- Prepare an inventory of watercourses and wildlife for the watershed;
- Protect the environment, wildlife, and habitat corridors;
- Identify areas of existing and future agricultural, residential, commercial, and recreational land uses;
- Develop a cost effective and enforceable implementation plan; and,
- Establish a monitoring and assessment strategy to ensure goals are achieved, maintained, and enforced.

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## Scope of the Four Stages

### **Stage 1: "What Do We Have?" Review Existing Information and Data Collection**

1. A review of existing information;
2. Watershed field reconnaissance and data collection;
3. Definition of hydrologic and hydraulic conditions; and
4. A public open house to begin dialogue on community objectives.

### **Stage 2: "What Do We Want?" Vision for Future Development**

To achieve the goals, the requirements for developing a vision encompass:

5. Land use plans which will be developed to identify future land use types, stream setbacks, wildlife corridors, potential pond locations and any other opportunities or constraints for development
6. Stakeholder involvement through a public open house meeting.
7. Hydrogeological assessments;
8. Environmental assessments for habitat protection and enhancement;
9. Innovative Low Impact Development (LID) techniques and rainwater Best Management Practices (BMP) to mitigate against impacts to the lowland areas, reduce runoff volume through source controls, decrease stream velocity, protect water quality, provide erosion protection, and maintain baseflows to streams; and
10. Sound, proven numerical hydrologic and hydraulic modelling techniques.

### **Stage 3: "How do we put this into action?" Implementation Plan, Funding Strategies, and Enforcement Strategies**

11. A review of the existing Design Criteria to assess which are appropriate for this ISMP and what should be added or modified;
12. A long-range capital works plan;
13. Cost analysis;
14. A project approvals procedure;
15. A funding strategy;
16. A by-law enforcement strategy which identifies existing and missing bylaws; and
17. A list of action items with time scales.

### **Stage 4: "How do we stay on target?" Monitoring and Assessment Plan**

18. Creation of a strategic plan for monitoring and assessing that includes an explanation of why data needs to be collected and assessed in a monitoring program and how to interpret the collected data.
19. Provision of a summary of key performance indicators (KPIs), both qualitative and quantitative with a sensitivity analysis to indicate the relative magnitude of flexibility that resides in each identified KPI.
20. Summary of the type, duration, and frequency of monitoring associated with each KPI.