Outline

- Introduce the ISMP
- ISMP framework
- ISMP objectives
- Next steps
Land Use

Runoff
1. Quantity
2. Quality
Land Use

Increase in Peak Flows

Decrease in Base Flows
What is an ISMP?

Environmental
- Ecosystem services
- Climate change
- Rainfall

Economic
- Tourism
- Outdoor retail
- Fishing industry
- Natural capital

Social
- Culture
- Livelihoods
- Bequest
Why are we doing it?

- Meet **OCP Vision and Policies** (Section 9.3)
- Required by **MOE** through the **Regional Integrated Liquid Waste and Resource Management Plan**
- Valuing the natural environment
ISMP Framework

- Identify values & problems
- Define objectives & measures
- Develop & evaluate alternatives
- Implement plans
- Monitor & evaluate
Values and Problems

**Watershed Studies**
- Water quality
- Benthic invertebrates
- Drainage infrastructure
- Flow analysis
- Biophysical assessment

**Climate Change studies**
- Update rainfall estimates
- Climate adaptation

**OCP**
- Vision, principles and goals
- Policies

**Public participation**

**Identify values & problems**

**Water Balance**
## Values and Problems

### Parameters and Values

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mackay</th>
<th>Hasting</th>
<th>Seymour</th>
<th>Deep Cove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolved oxygen (mg/L)</td>
<td>10.5</td>
<td>7.97</td>
<td>7.74</td>
<td>7.74</td>
</tr>
<tr>
<td>pH</td>
<td>7.2</td>
<td>7.0</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Temperature (°C)</td>
<td>12.1</td>
<td>14.6</td>
<td>11.6</td>
<td>12.3</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>3</td>
<td>20.91</td>
<td>2.05</td>
<td>2.23</td>
</tr>
<tr>
<td>Nitrate (mg/L)</td>
<td>0.52</td>
<td>0.733</td>
<td>0.61</td>
<td>0.565</td>
</tr>
<tr>
<td>Conductivity (uS/cm)</td>
<td>138</td>
<td>132</td>
<td>186</td>
<td>126</td>
</tr>
<tr>
<td>E. coli bacteria (MPN/100)</td>
<td>194</td>
<td>124</td>
<td>969</td>
<td>550</td>
</tr>
<tr>
<td>Fecal coliforms (MPN/100)</td>
<td>211</td>
<td>124</td>
<td>969</td>
<td>550</td>
</tr>
<tr>
<td>Total cadmium (ug/L)</td>
<td>0.019</td>
<td>0.229</td>
<td>0.088</td>
<td>0.008</td>
</tr>
<tr>
<td>Total copper (Cu) (ug/L)</td>
<td>1.2</td>
<td>15.11</td>
<td>10.24</td>
<td>1.88</td>
</tr>
<tr>
<td>Total iron (Fe) (ug/L)</td>
<td>348</td>
<td>2821</td>
<td>583</td>
<td>385</td>
</tr>
<tr>
<td>Total lead (Pb) (ug/L)</td>
<td>0.5</td>
<td>17.6</td>
<td>1.911</td>
<td>0.179</td>
</tr>
<tr>
<td>Total zinc (Zn) (ug/L)</td>
<td>5.1</td>
<td>48.3</td>
<td>44.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Aluminium (ug/L)</td>
<td>N/A</td>
<td>820</td>
<td>998</td>
<td>184.1</td>
</tr>
<tr>
<td>Beryllium (ug/L)</td>
<td>N/A</td>
<td>&lt;0.1</td>
<td>&lt;1.4</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Benthic indicators</td>
<td>Very Poor</td>
<td>Poor</td>
<td>N/A</td>
<td>Very poor</td>
</tr>
</tbody>
</table>

### Notes
- Values highlighted in red indicate levels that exceed the Canadian guidelines for Drinking Water Quality.
- Alkalinity (mg/L as CaCO3) and Calcium (mg/L as Ca) are not included in the table.
- The table shows a summary of water quality parameters for different locations.
Values and Problems

- Water quality
- Benthic invertebrates
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- Update rainfall estimates
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- Vision, principles and goals
- Policies

Public participation

Watershed Studies

OCP

Identify values & problems

Water Balance
ISMP Objectives

Goal
Improved watershed health

Purpose
Identify opportunities for effective and coordinated stormwater management

Environmental Objectives

Objective 1
Maximize base flows

Objective 2
Maximize fish population

Objective 3
Maximize riparian area

Social Objectives

Objective 4
Maximize social-ecological connection

Objective 5
Maximize sense of safety and security

Objective 6
Minimize impacts on First Nations traditional use activities

Economic Objectives

Objective 7
Maximize natural assets

Objective 8
Minimize damage to infrastructure

Objective 9
Minimize institutional costs and conflict

Define objectives & measures
How do we get there?

1. Adopt ISMP objectives
2. Watershed Implementation Plans
Next Steps

**Regular Council**
- Adopt ISMP Framework and Objectives

**Workshop #2**
- Implementation Plans
- Impact of Single Family re-development
- Proposed performance targets - Development Servicing Bylaw
- Metro Vancouver Baseline Study