

# An Intro To Stormwater Management

## What is Stormwater?

Rain that runs overland from roads and roofs instead of soaking into the ground

## The Problem:

As we increase hard, impermeable surfaces we also increase:

- The amount of stormwater
- How fast it flows
- The pollutants it picks up and carries

## Managing Stormwater

### The Traditional Approach:

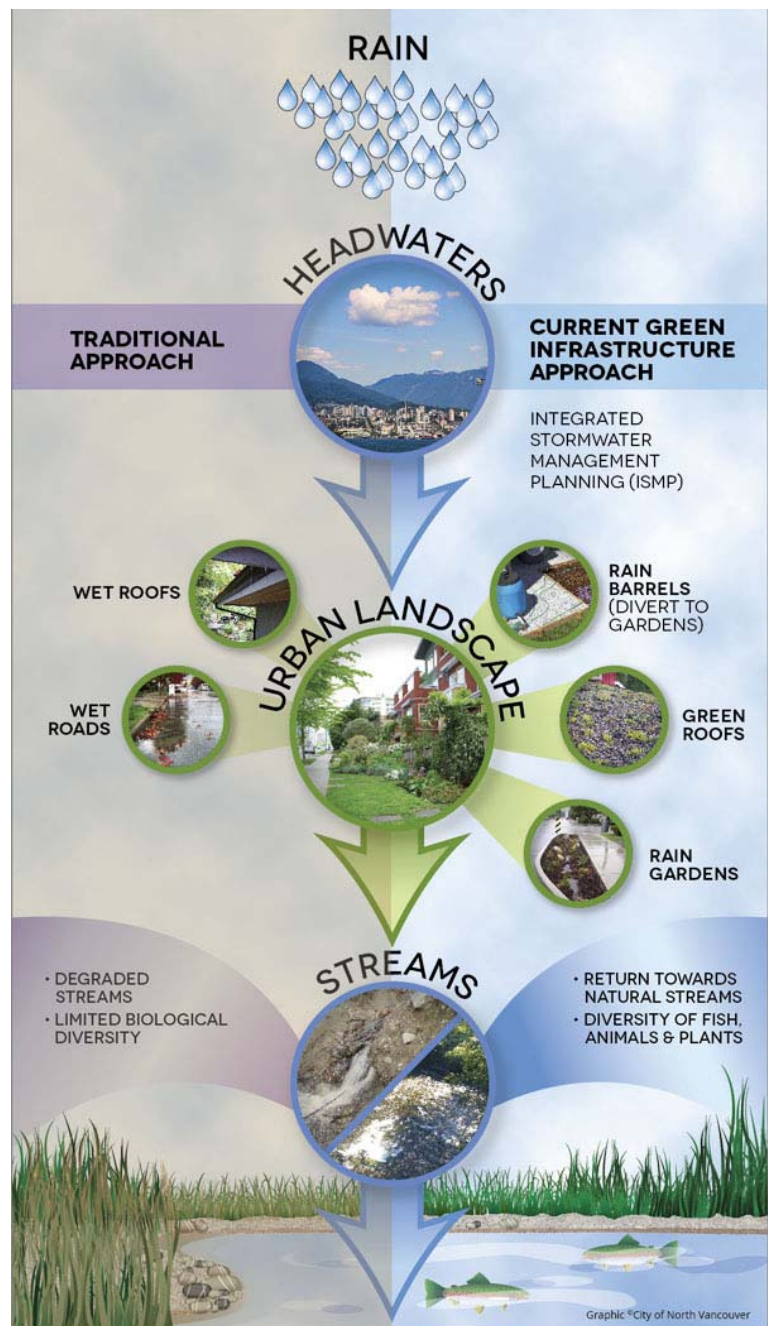
Move it as quickly as possible through pipes and engineered waterways.

### What's Wrong With Tradition?

- Erosion and flooding
- Lower water quality
- Ecological damage and habitat loss
- Expensive stormwater sewer system upgrades

### Increasing Pressures:

- Population growth and densification
- Climate change and more severe storms

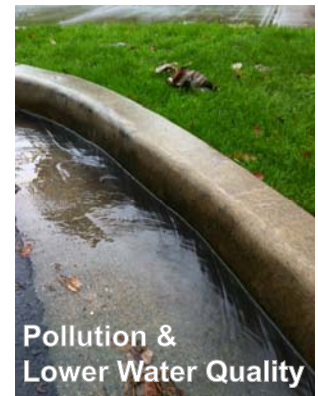
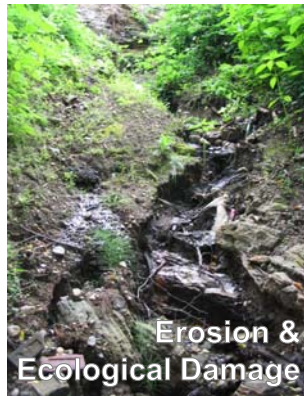


## A New Approach

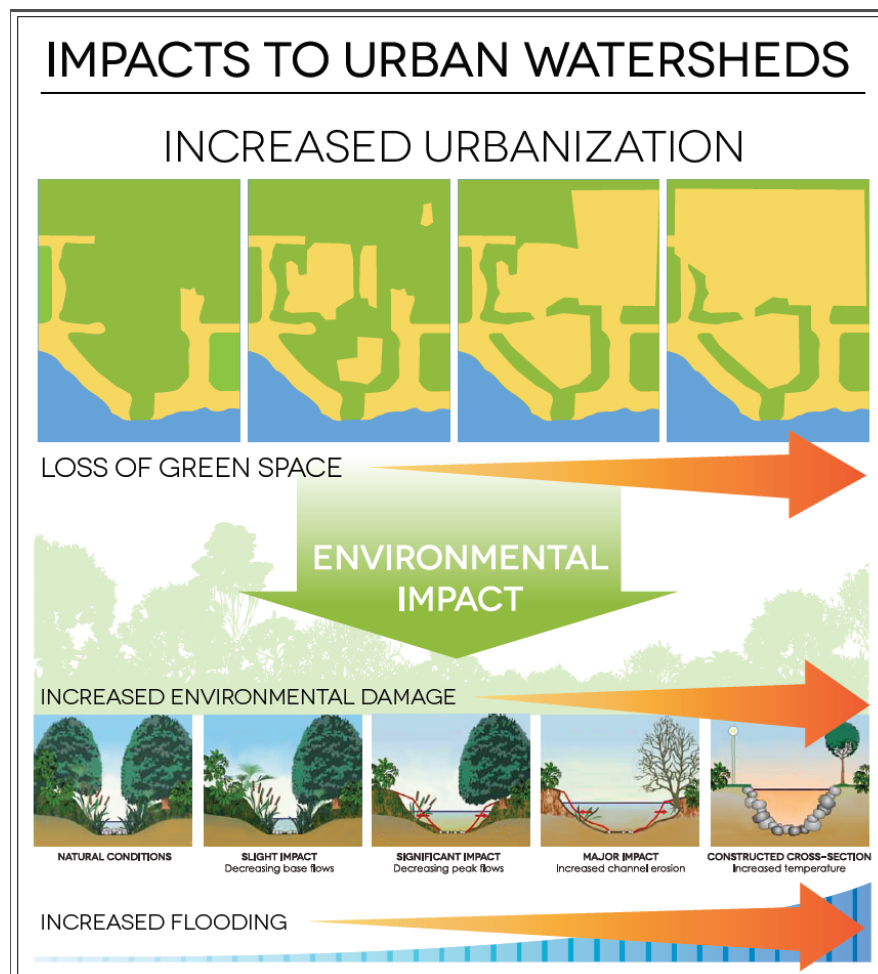
### Integrated Stormwater Management

1. Integrate stormwater management with land-use planning and environmental protection
2. Recognize the many values of our watersheds – social, ecological, recreational, and economic
3. Mimic nature to allow water to seep into the ground
4. Make the process participatory and adaptive

# Impacts of Urbanization Without Integrated Stormwater Management



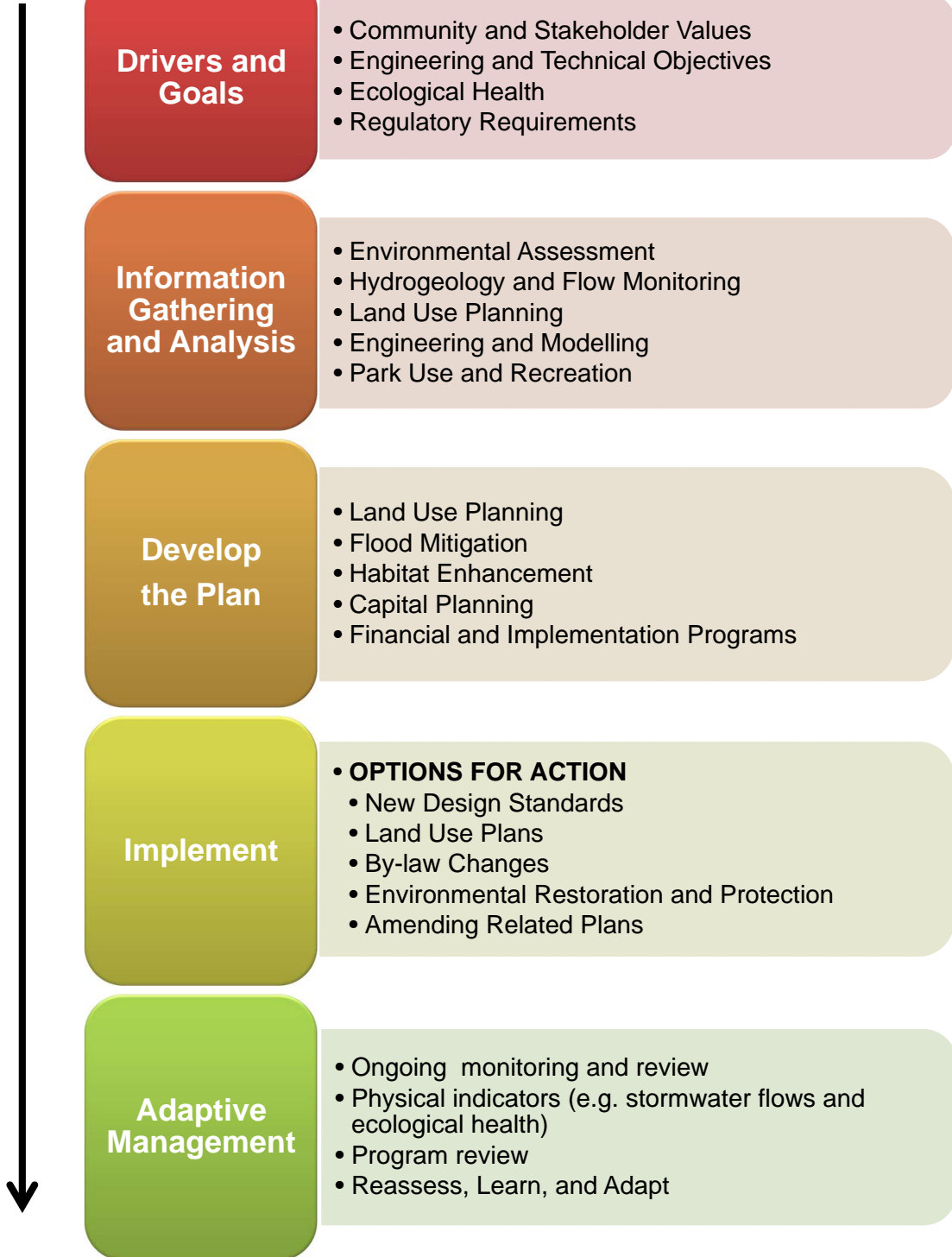
## Integrated Stormwater Management Plan (ISMP)



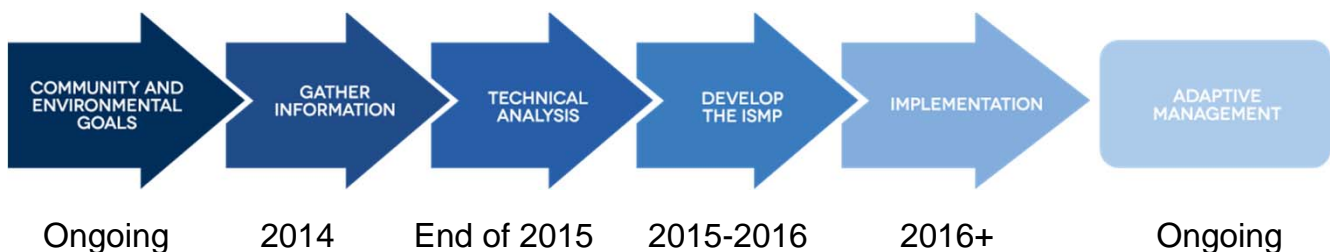


# The ISMP Process and Timeline

## Integrated Stormwater Management Plan (ISMP)



## Timeline



# Integrated Stormwater Solutions

## Doing Things Differently

A unique ISMP is needed for every community and watershed because of different conditions and values

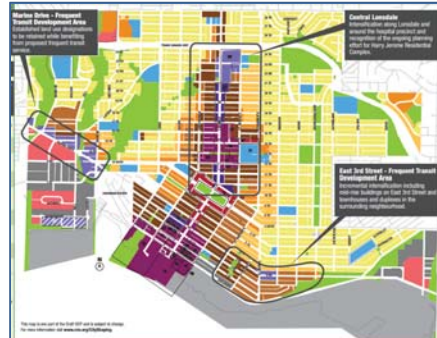
But, there are common features shared by all ISMPs:

- Reduces runoff volume, not just collection and transportation
- Considers all watershed values
- Proactive land-use planning to minimize stormwater impacts and costs
- Restores natural areas
- Mimics natural processes

## Integrated Stormwater Management Plan (ISMP)



Urban Green Space



Proactive Land Use Planning

## Land Use Changes

- More urban green space
- On-site stormwater management
- Avoid sensitive and high risk areas (e.g., floodplains, waterways, steep slopes)
- New design standards for stormwater infrastructure, paved surfaces, and new developments



Streamside Protection



Rain Barrels



Permeable Pavement



Rain Gardens



Green Roofs

## Technology and Engineering

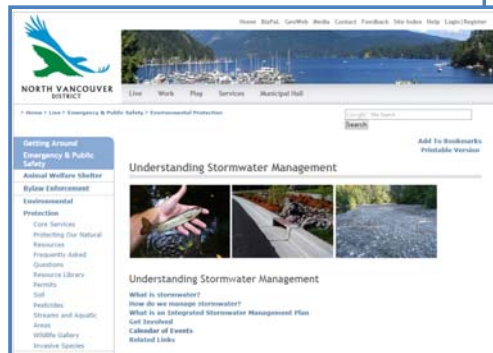
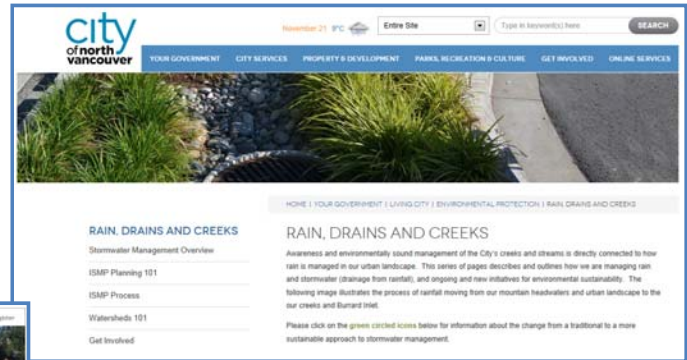
- Pervious paving and infrastructure
- Green roofs
- Design based on future development and climate change
- Grey water reuse (e.g., rain barrels, irrigation, non-potable uses)

# These Are Your Watersheds This Is Your Plan **Get Involved!**

**Get More Information**

**Go Online**

[www.cnv.org/ISMP](http://www.cnv.org/ISMP)  
[www.dnv.org/ISMP](http://www.dnv.org/ISMP)



**Have Your Voice Heard**

**Fill Out A Survey**

What are your main concerns?  
What issues should the ISMP address?  
**Online at [www.cnv.org/ISMP](http://www.cnv.org/ISMP)**

**Join the ISMP Advisory Group**

Stay involved throughout the process

Email [ISMP@dnv.org](mailto:ISMP@dnv.org) for more information



**Get Involved In Your Community**

Attend community events  
Install a rain garden, rain barrel or green roof

**Leave your email** to get regular updates and invitations to future events:

Open Houses - Workshops - Surveys



**There will be many opportunities to become more involved  
This is your chance to become a watershed leader!**

**Contact us any time at:**

[ISMP@cnv.org](mailto:ISMP@cnv.org) - City of North Vancouver | [ISMP@dnv.org](mailto:ISMP@dnv.org) - District of North Vancouver

**Integrated Stormwater  
Management Plan (ISMP)**