



# **Climate Adaptation Strategy**

## ***Acting now for a more resilient future***

Climate Change Adaptation Strategy  
Summer 2017

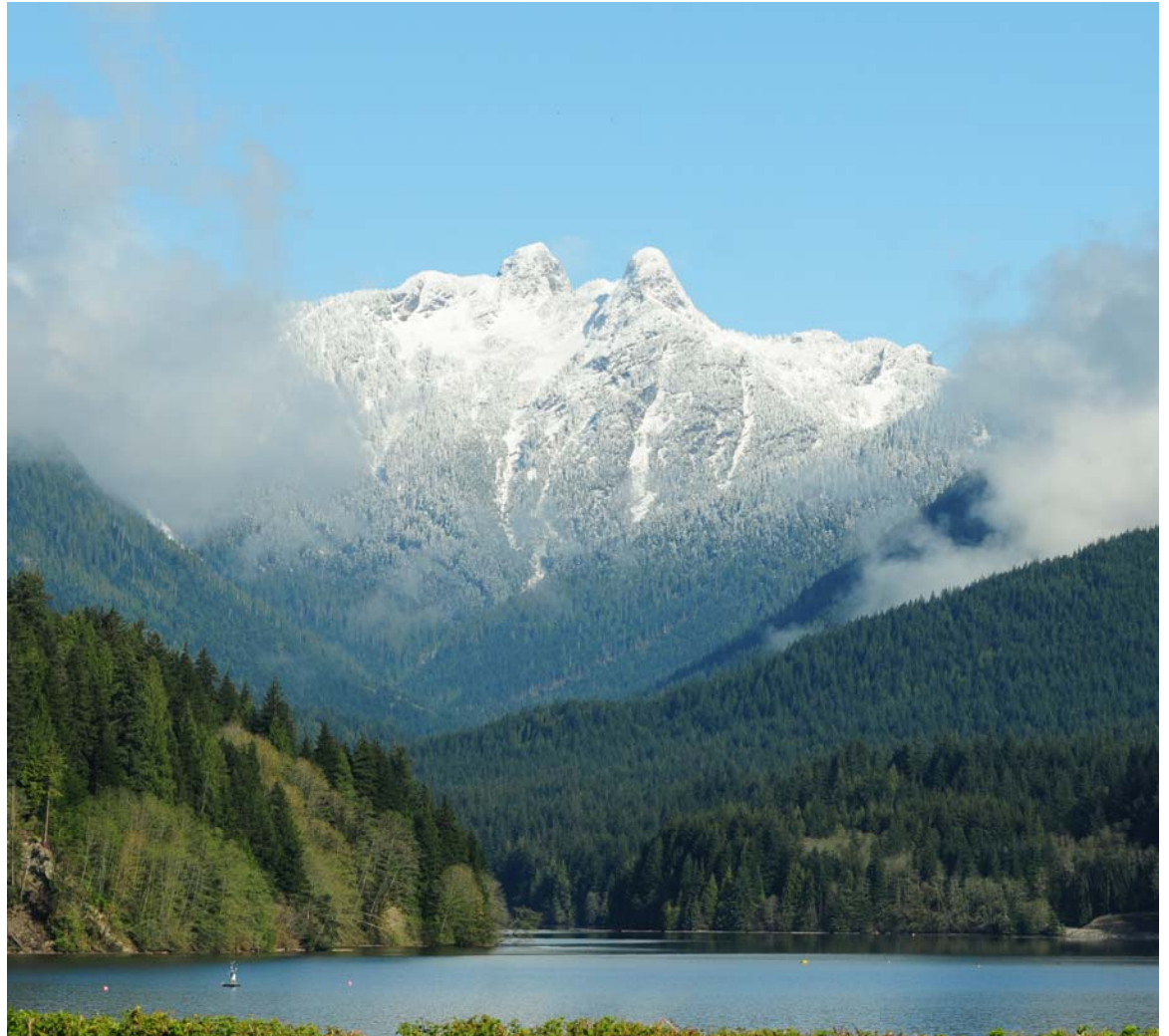




# OUTLINE

## CLIMATE CHANGE ADAPTATION IN THE DISTRICT

1. The Challenge  
The Choice  
The Opportunity
2. Adaptation in context
3. The planning process
4. Actions
5. Next steps



# GOOD NEWS STORY

## CLIMATE CHANGE ADAPTATION IS WELL UNDERWAY



# THE CHALLENGE

## THE EFFECTS OF CLIMATE CHANGE ARE ALREADY EVIDENT

Examples from 2014 - 2016:

- Record-setting summer temperatures
- Windstorms
- Droughts
- Forest fires
- Heavy rainfall events
- Limited snow / heavy snow!





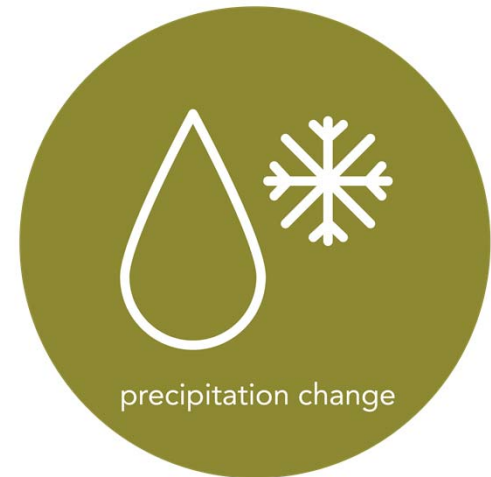
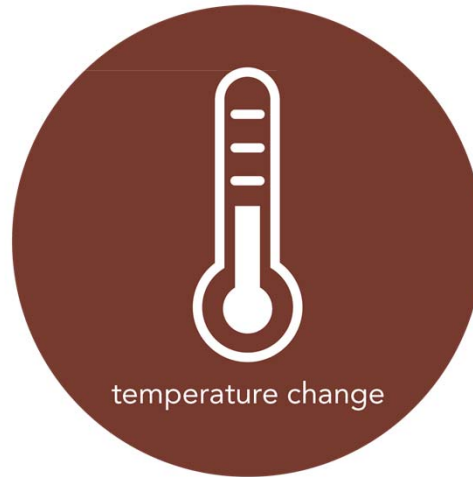
# THE CHALLENGE

## CLIMATE MODELS PREDICT THINGS WILL GET WORSE

By 2050s, in the District:

1. Warmer average annual air temperatures
2. Changing precipitation
3. Sea level rise
4. More frequent extreme weather events

>> Without action, these changes will intensify and significantly impact the District



# THE CHOICE

## TO TAKE CLIMATE ACTION

### Mitigate

- Reduce GHGs
- Avoid the unmanageable

### Adapt

- Prepare for impacts
- Manage the unavoidable

>> To become resilient to climate change, both mitigation and adaptation are needed



District of West Vancouver

# THE OPPORTUNITY

## ADAPTATION HAS ADDED BENEFITS

### Additional benefits:

- Long-term cost savings
- Improved environmental health
- Enriched public spaces
- Improved health and well-being
- Enhanced livability





# ADAPTATION IN CONTEXT

- 2015 was a landmark year for international climate action
- New 2016 BC Climate Leadership Plan
- Metro Vancouver Regional Growth Strategy
- District's OCP, Corporate Plan, and Saskawa Award

>> Need coordinated action to respond to climate change and achieve development goals

## AN IMPORTANT POLITICAL DIRECTION



Climate Adaptation Strategy

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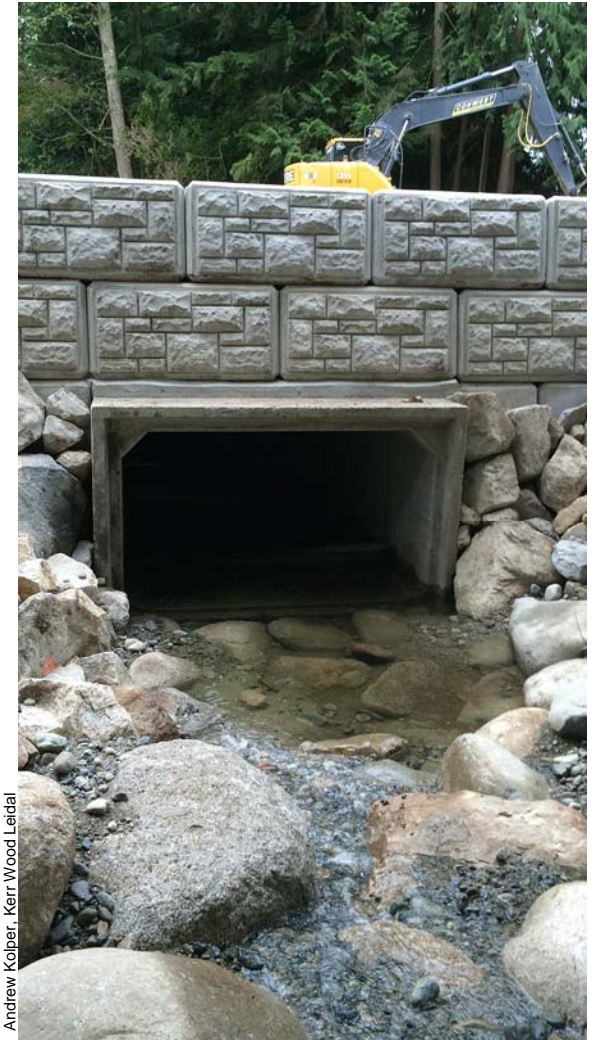


# ADAPTATION IN CONTEXT

- Natural hazard management plans and implementation strategies
- Hazard & Environmental Development Permit Areas
- Development standards for buildings, infrastructure, and utilities
- Asset Management Plan (risk-based)

>> The District needs a strategy to coordinate and integrate actions and identify gaps

## ADAPTATION IS NOT NEW TO THE DISTRICT



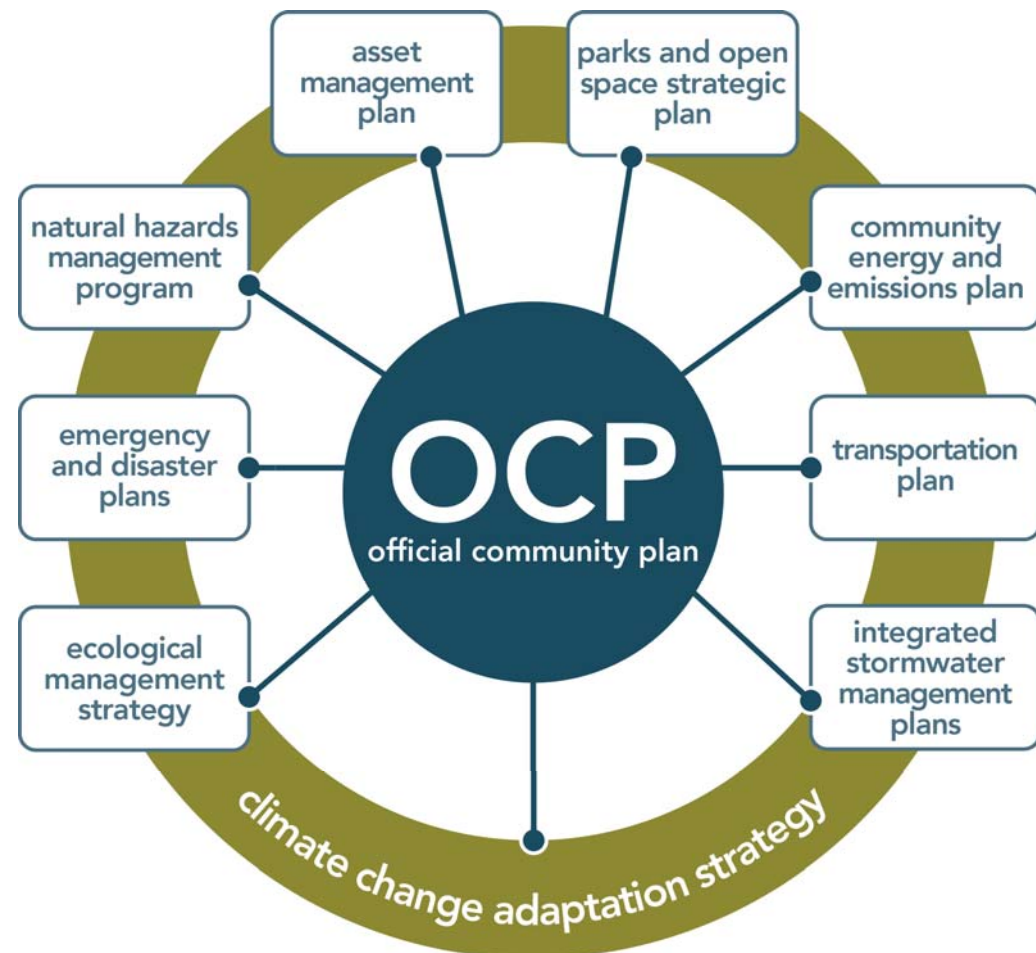
Andrew Kolper, Kerr Wood Leidal

## ADAPTATION IN CONTEXT

- Builds on and enhances existing work
- Bridges cross-departmental gaps by breaking down silos
- Better coordinate work
  - Identify synergies
  - Reduce costs
  - Achieve maximum benefit

>> The strategy will integrate adaptation into District programs and policies

AN OVERARCHING STRATEGY IS NEEDED  
TO FOCUS EFFORTS





# THE PLANNING PROCESS

## BUILDING ADAPTIVE & RESILIENT COMMUNITIES (BARC)

1. Initiate adaptation planning
2. Identify priority climate change impacts
3. Create a Climate Adaptation Strategy
4. Implement the strategy
5. Monitor progress and review actions

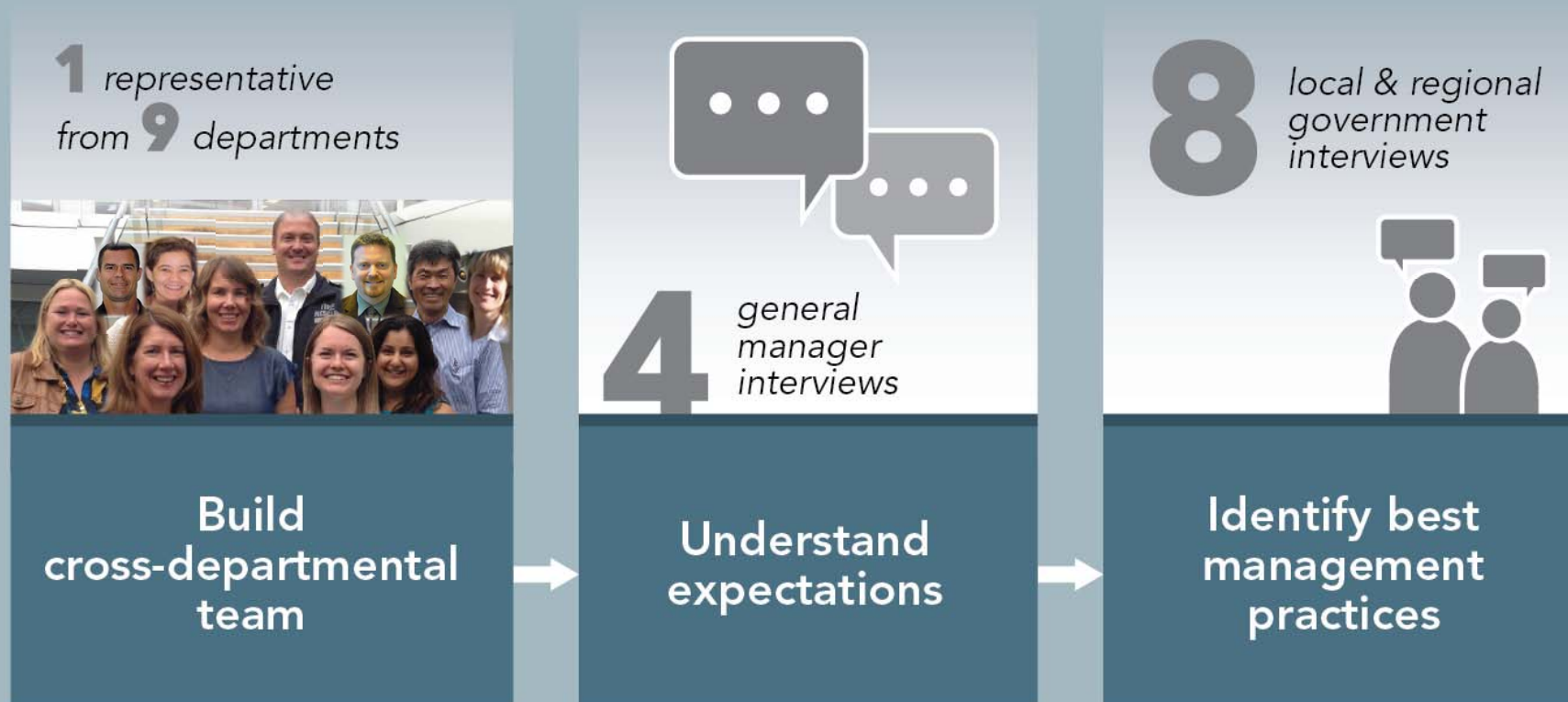
>> This is an iterative process—the strategy will be updated as new science becomes available

ICLEI Canada



# THE PLANNING PROCESS

## Milestone 1: INITIATE





# THE PLANNING PROCESS

## Milestone 2: RESEARCH



Research  
best climate  
science

[9]

staff  
focus  
groups

=

58

written  
impact  
statements

58

written  
impact  
statements

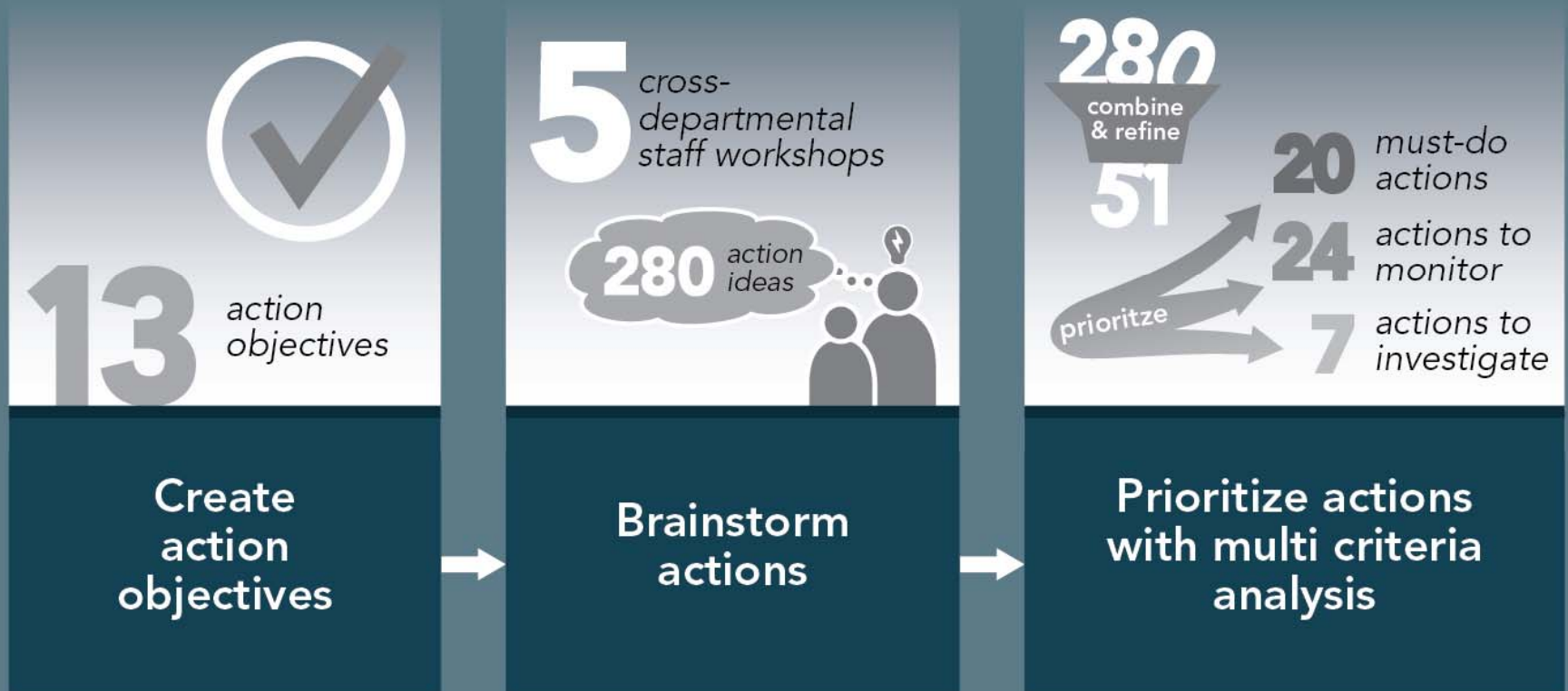


priority  
impacts

Prioritize climate  
impacts based on  
vulnerability  
and risk

# THE PLANNING PROCESS

## Milestone 3: PLAN





# ACTION PLANNING

## ACTION OBJECTIVES



1	Strengthen capacity to respond and provide continuity of service
2	Increase resiliency of municipal assets
3	Support residents with proactive management
4	Ensure robust power systems and alternatives
5	Support forest health
6	Reduce water consumption
7	Provide alternative water sources in emergency
8	Upgrade preparedness and response
9	Seek opportunities for inter-agency coordination to minimize health impacts
10	Reduce invasives
11	Restore and protect native biodiversity
12	Preserve and enhance critical foreshore habitat
13	Support implementation

# ACTIONS

## EXAMPLE MUST DO ACTION



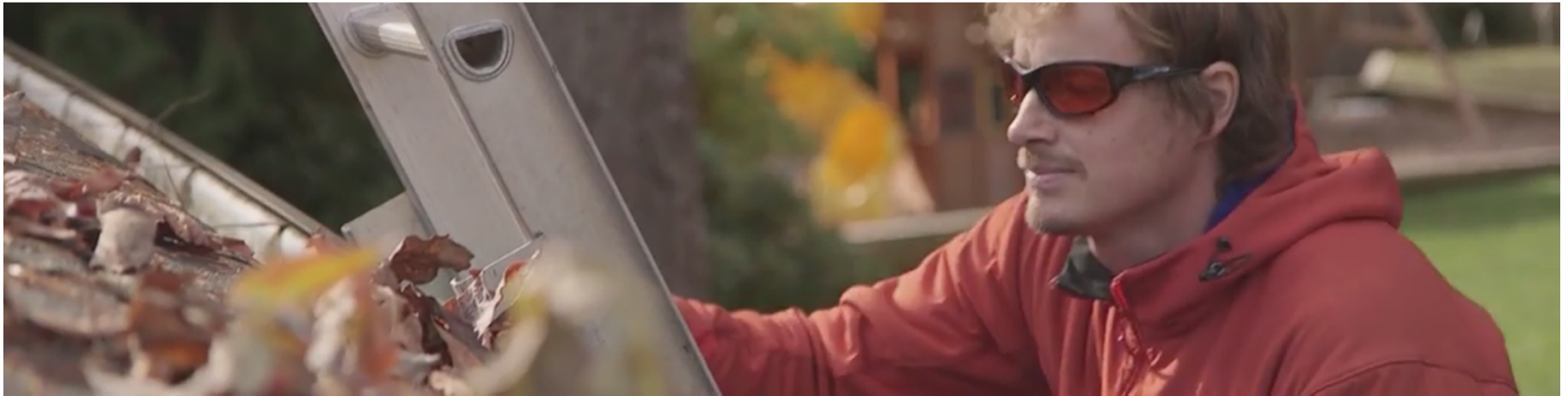
### Objective 1: Strengthen capacity to respond and provide continuity of service

Governance and Management	Assets and Operations	Education and Training
Complete Continuity of Operations Plans to ensure priority service delivery	Purchase additional technology tools to assist in situational awareness and emergency response communication	Provide targeted training for clerks to ensure emergency service requests and concerns are responded to in a timely manner
Plan for the distribution of alternative potable water supply during an emergency	Invest in additional fire suppression equipment, training, and North Shore collaborations to strengthen the capacity to respond to WUI fires	Seek opportunities for interagency coordination to minimize adverse health impacts to staff, responders, and the public during heat waves and air quality advisories



## ACTIONS

## EXAMPLE MUST DO ACTION



**Objective 3:** Support District residents in proactively managing privately owned property to adapt to more frequent and severe extreme weather

Governance and Management	Assets and Operations	Education and Training
Create and implement a Coastal Hazard Development Permit Area to protect people, property, and foreshore ecosystems from coastal impacts	Review and strengthen building and development policies to require consideration of climate change over the entire lifecycle of a structure	Develop and implement an education and incentive program to encourage more resilient choices for private development design, maintenance, and renewal

# ACTIONS

## EXAMPLE MUST DO ACTION



### Objective 2: Increase resiliency of municipal assets

Governance and Management	Assets and Operations	Education and Training
Update the CWPP and implement recommendations to strengthen capacity to respond to WUI fires	Identify natural capital, conduct risk assessment under climate change conditions, and include in AMP	Strengthen communication and education with the public about the economic, ecological, and social benefits of proactive management of the District's forested areas
Complete the ISMP and implement recommendations to maintain watershed health and reduce the impacts of extreme runoff	Implement recommendations in Debris Geohazard Risk and Risk Control Assessment for debris flood/flow creeks by integrating into AMP	

## NEXT STEPS

### Finalize Plan

- Incorporate Council's comments
- Graphic design & layout
- Regular Council meeting (late July 2017)

### Implement

- Departmental plans
- Asset management plans
- Annual financial planning

### Monitor

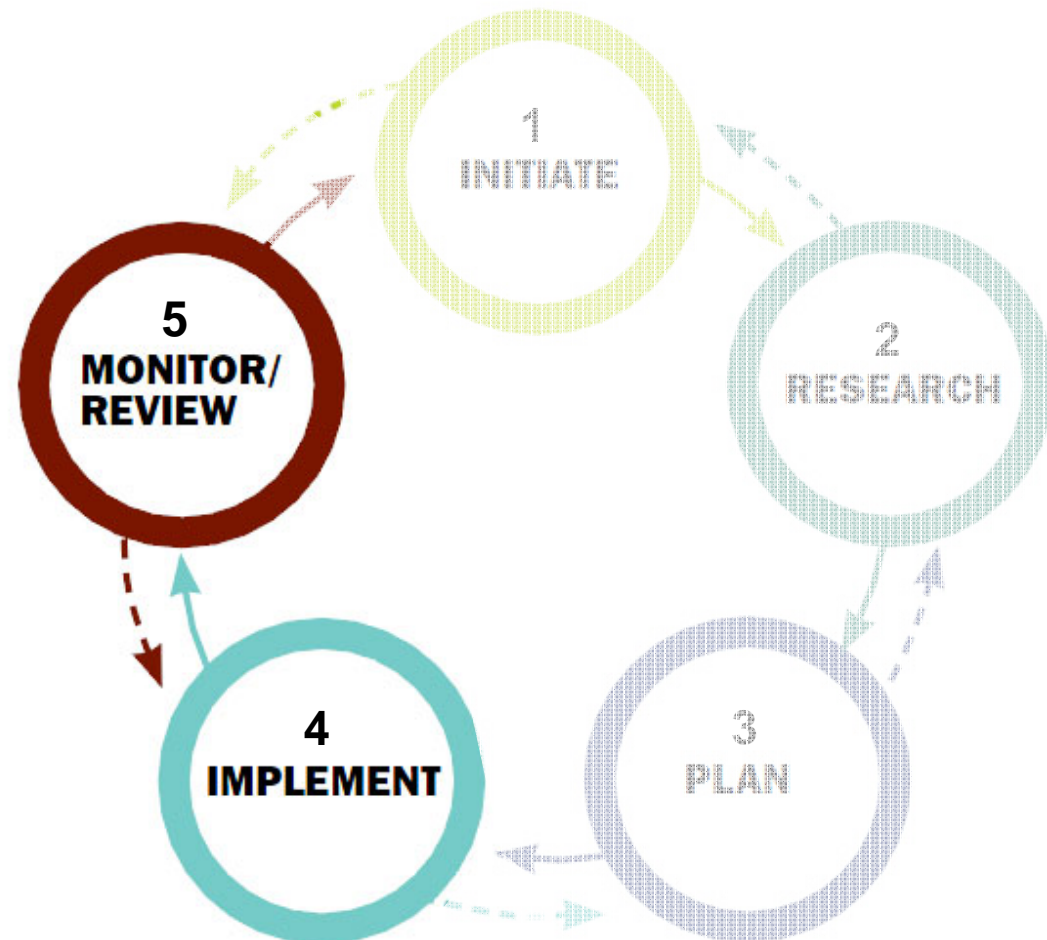
- Indicators

### Review

- Annual update
- 5-year review

>> What we value is vulnerable.  
We must act now for a more  
resilient future.

## COMPLETE MILESTONES 4 & 5



Summer 2017



# GOOD NEWS STORY!

CLIMATE ADAPTATION IS WELL UNDERWAY

