



# WATER CONSERVATION UPDATE

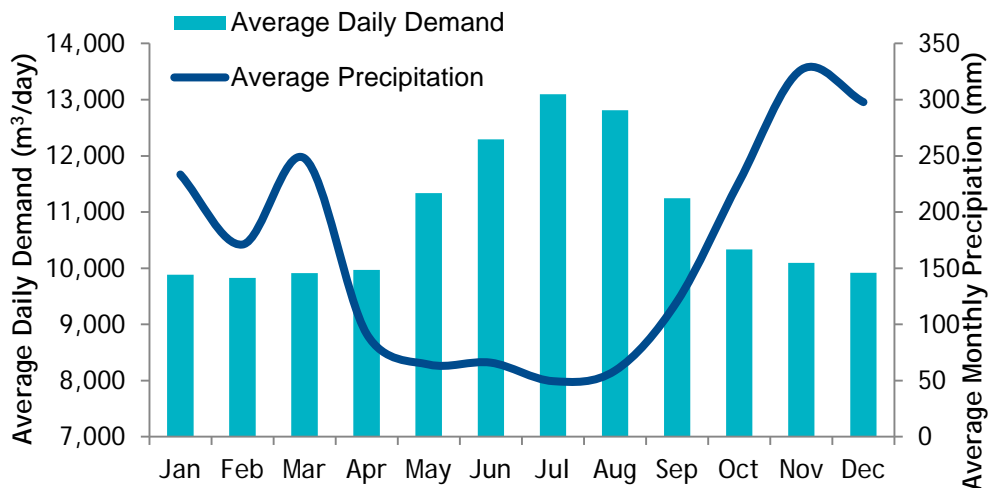
November 1, 2017



# DRINKING WATER

- Vast water system to support conveyance, treatment & disposal
- Relationship between storage capacity and efficient drinking water use

City of Vancouver Water Average Demand vs Precipitation 2014 - 2016



Drinking water doesn't *just* fall from the sky.

Treated drinking water should be used where it is needed most: cooking, cleaning and drinking.



# CLEAN WATER



## Goal:

Vancouver will have the best drinking water of any city in the world

## 2020 target:

Reduce per capita water consumption by 33% over 2006 levels

- GC Action Plan
- New SFD metered
- Prohibition on wasting water (bylaw 4848)

- Expanded Clean Water Work Plan

- Park's Board Water Conservation Action Plan

- Corporate Water Use Reduction Plan

- Prohibition on single pass systems; VBBL updates

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

# WATER CONSERVATION PROGRAMS



- School plays & workshops
- Water wise campaign
- Leak detection campaign



- Metering new single/dual family homes
- Outdoor watering education & enforcement
- Green Landlord toilet retrofit
- Laundry machine rebate with BC Hydro



- Phase out single pass water systems
- Restaurant water & energy efficiency program
- Healthcare facilities water audits



- Civic facility toilet & showerhead retrofit
- Corporate Water Reduction Plan (↓ 33%)
- Parks Water Conservation Action Plan

*“Robust by comparison with authoritative best practice guidelines.” Econics, 2015*

**17% Reduction**

**12**

civic single pass  
systems retrofits  
(8.7 M L saved annually)

**2,100**

toilets retrofits

**500**

pre-rinse spray  
valves

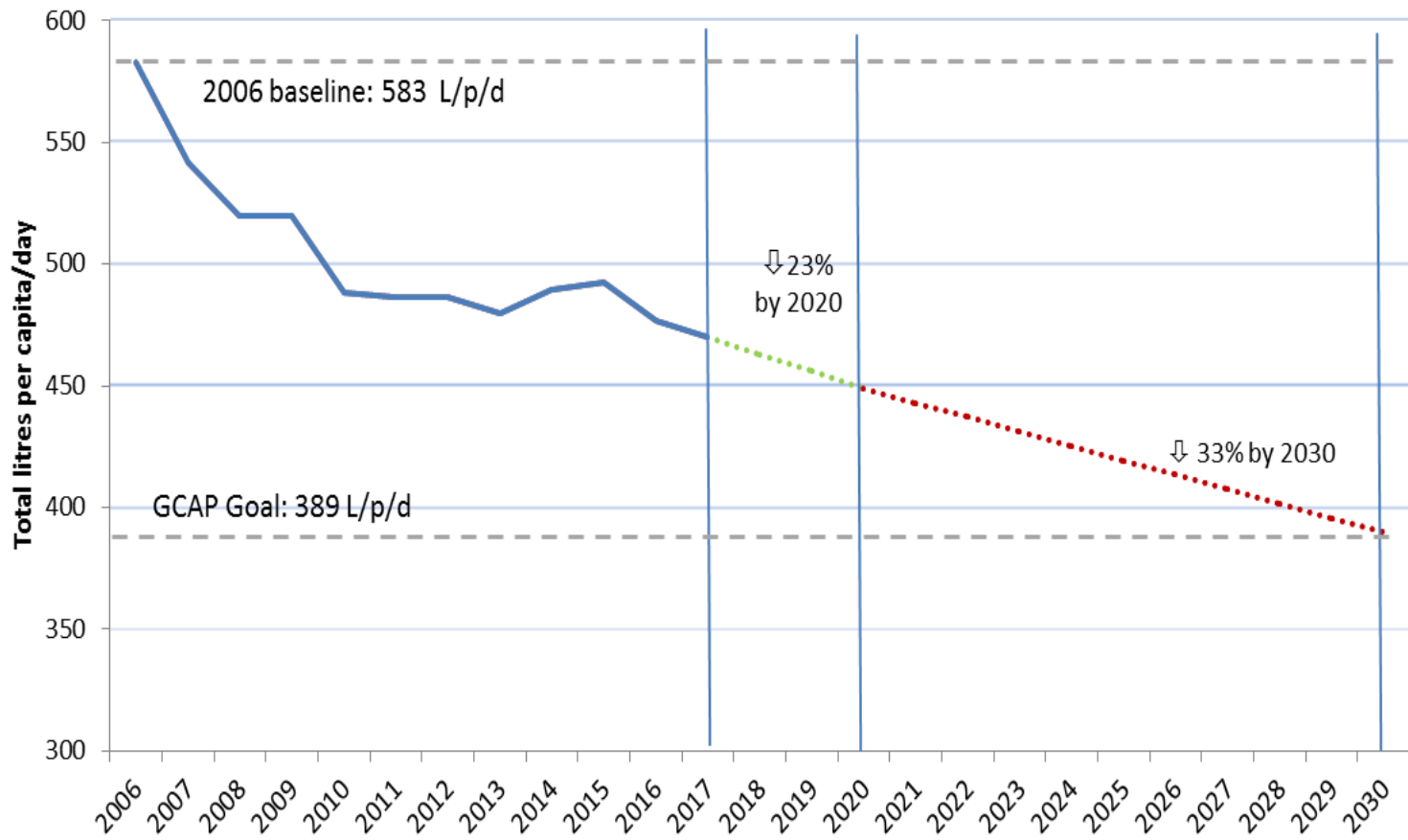
**167,000**

dye strips mailed

**~5,900**

water meters  
installed

## PROJECTED WATER REDUCTION



# METRO VANCOUVER



## Regional Supply Pressures

- Metro Vancouver 10yr plan includes Coquitlam expansion by 2030
- Review of long-term supply expansion underway
- Significant financial & environmental impact

## Metro Vancouver Studies

- Comprehensive Regional Water System Plan
- Assessment of Residential Water Metering

# WHAT WE'VE LEARNED

## Weather's Influence on Water Use:

- 1) Being too restrictive on outdoor uses has consequences
- 2) Urgency of water shortage has short term effects
- 3) Restrictions may conflict with other City goals
  - i.e. biodiversity & local food

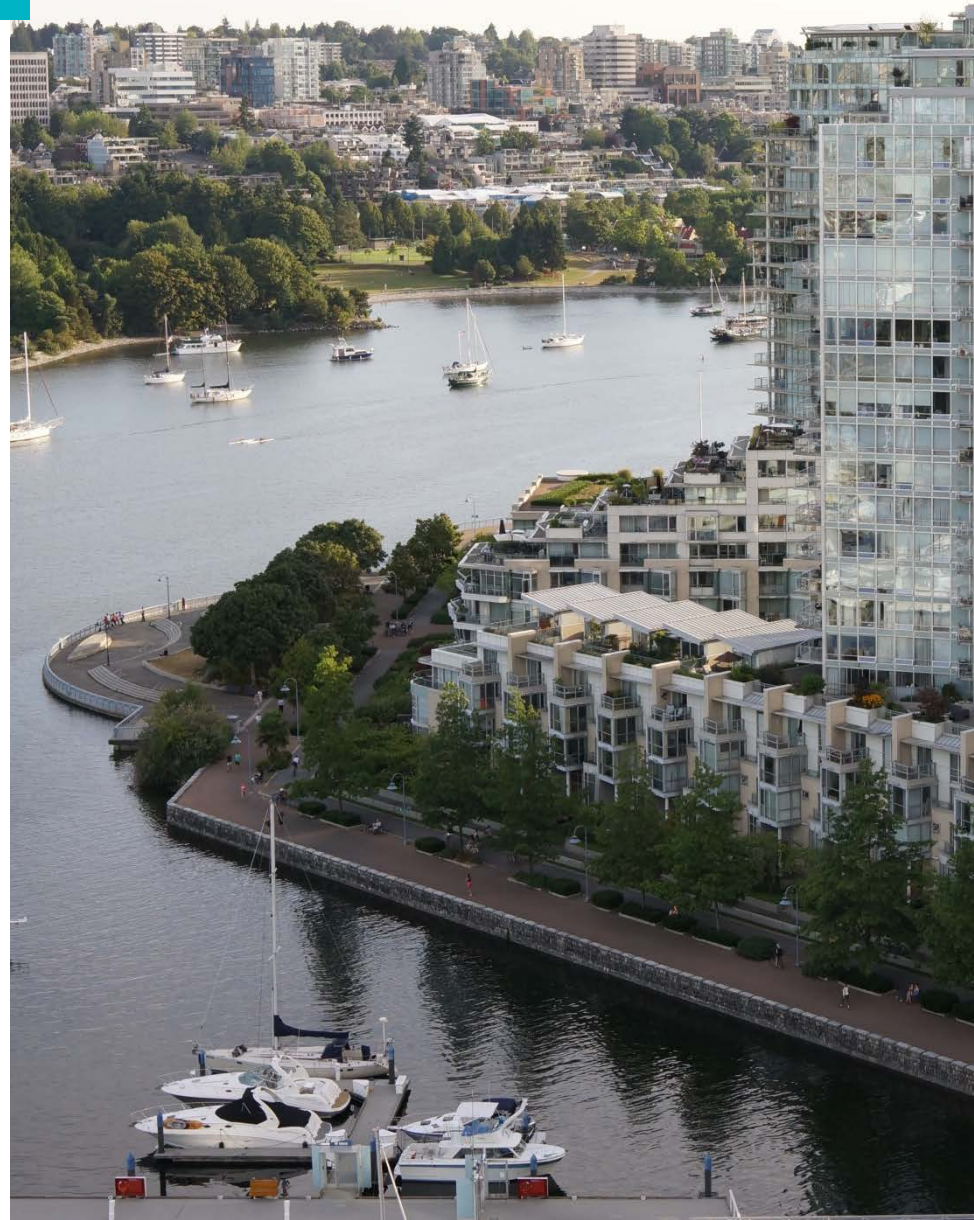
## WATER RESTRICTIONS

Stage 1 restrictions are in effect annually from May 15-Oct 15

	Stage 1	Stage 2	Stage 3	Stage 4
Residential lawn watering	RESTRICTED Even-numbered addresses: Mon. / Weds. / Sat. 4am - 9am ONLY  Odd-numbered addresses: Tues. / Thurs. / Sun. 4am - 9am ONLY	RESTRICTED Even-numbered addresses: Mon. 4am - 9am ONLY  Odd-numbered addresses: Thurs. 4am - 9am ONLY	PROHIBITED No lawn watering allowed	PROHIBITED No lawn watering allowed
Non-residential lawn watering	RESTRICTED Even-numbered addresses: Mon. / Weds. 1am - 6am and Fri. 4am - 9am  Odd-numbered addresses: Tues. / Thurs. 1am - 6am and Fri. 4am - 9am	RESTRICTED Even-numbered addresses: Wed. 1am - 6am ONLY  Odd-numbered addresses: Tues. 1am - 6am ONLY	PROHIBITED No lawn watering allowed	PROHIBITED No lawn watering allowed
Gardens, shrubs, trees	ALLOWED No restrictions	ALLOWED No restrictions	RESTRICTED Hand or spring-loaded shut-off nozzle ONLY	PROHIBITED No watering allowed
Car and boat washing	RESTRICTED Spring-loaded shut-off nozzle ONLY	RESTRICTED Spring-loaded shut-off nozzle ONLY	PROHIBITED For safety ONLY (mirrors, windows, licence plate) Commercial car washes open	PROHIBITED For safety ONLY (mirrors, windows, licence plate) Commercial car washes closed
Surface and power washing	ALLOWED Hand or spring-loaded shut-off nozzle ONLY	RESTRICTED For safety or painting prep ONLY Commercial companies exempt	RESTRICTED For safety or painting prep ONLY Commercial companies exempt	PROHIBITED Not allowed unless ordered by a regulatory authority

# LIVABLE, RESILIENT CITY

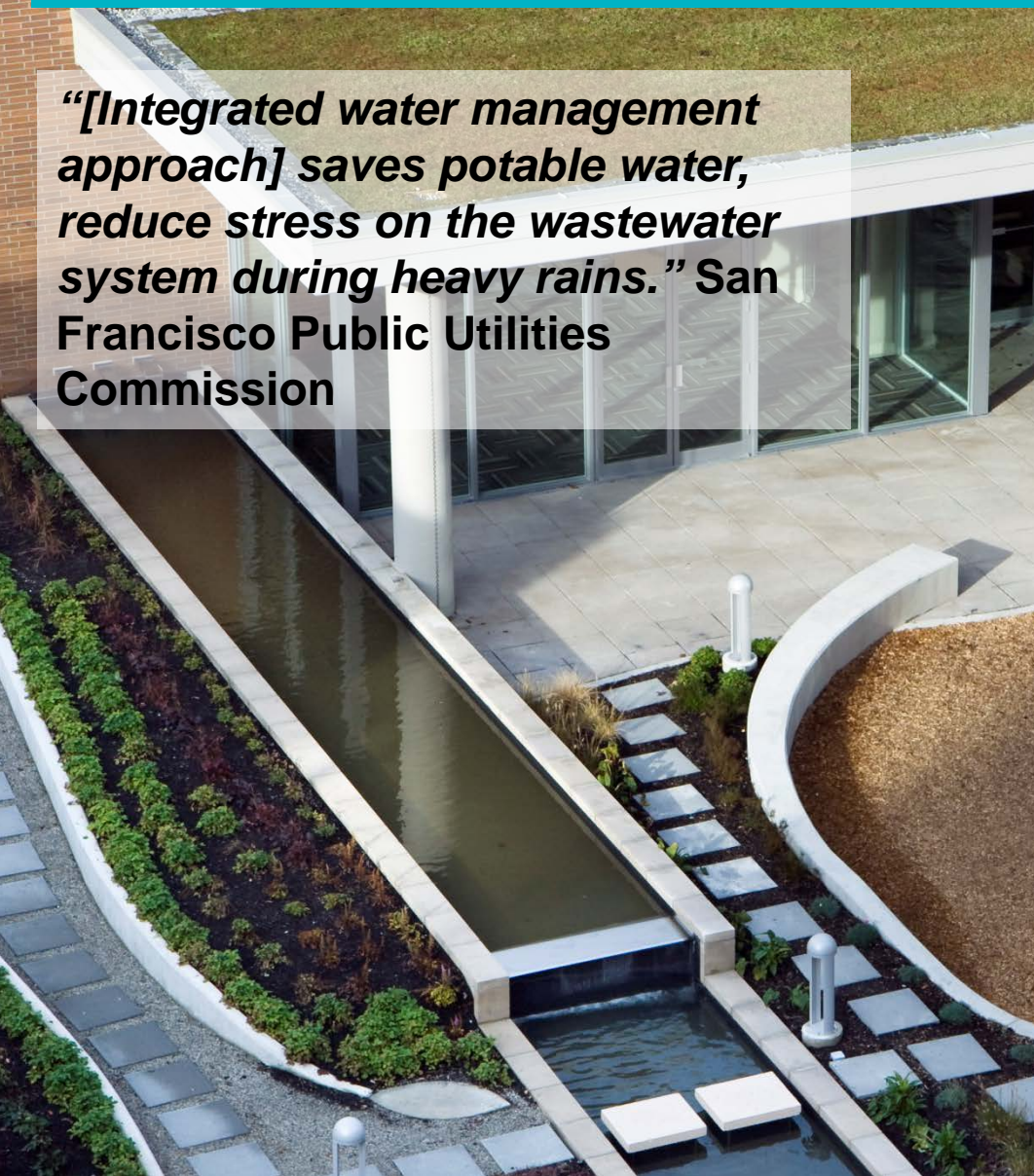
- Mitigating water costs
- Reliable supply during heat events
- Thriving, biodiverse landscapes for:
  - recreation
  - cooling
  - beauty
- Supporting food security





# INTEGRATED WATER MANAGEMENT

***“[Integrated water management approach] saves potable water, reduce stress on the wastewater system during heavy rains.” San Francisco Public Utilities Commission***



Reduce potable water consumption through expansion of non-potable resources

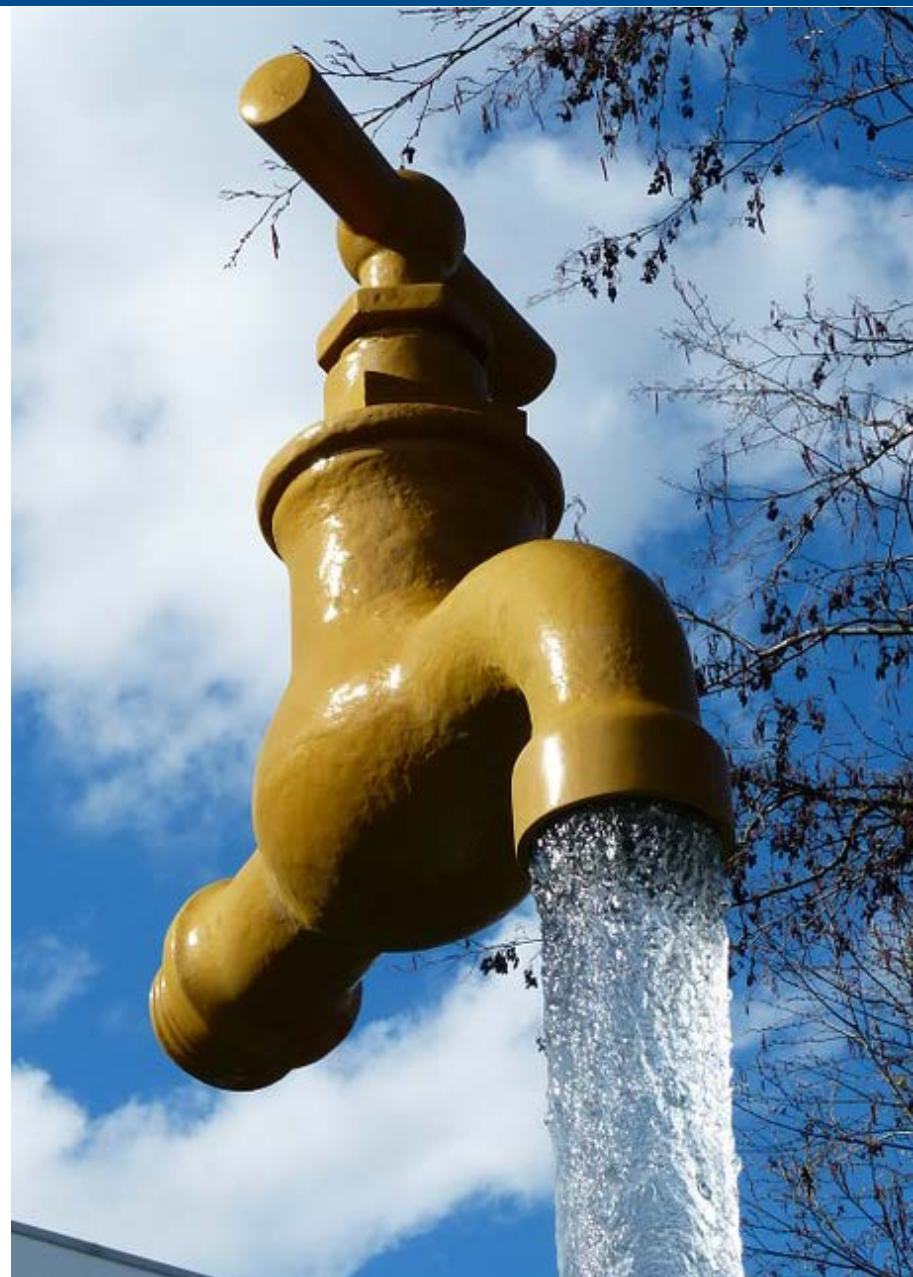
Fit for purpose

Harvest and reuse of:

- Rainwater
- Grey/black water
- Groundwater

## Conclusion & Recommendations

- Stay the course with Conservation Program
- Expand initiatives to evaluate urban integrated water management
- Evaluate metering program to acknowledge regional assessment
- Develop long term goals and targets to support business case for integrated water management





THANK YOU