

# Progress Update on GCAP Water Conservation Goal

City Council  
October 16, 2012

# Water Use Reduction – Goals

## GCAP Goal 8 – Clean Water

### Target 1: Water Quality

- Meet or beat the strongest of British Columbian, Canadian, and appropriate international drinking water quality standards and guidelines.

### Target 2: Water Use

- **Reduce total per capita water consumption by 33% from 2006 levels (from 583 to 391 litres per capita per day)**

# Benefits of Reducing Consumption

## Financial Benefits

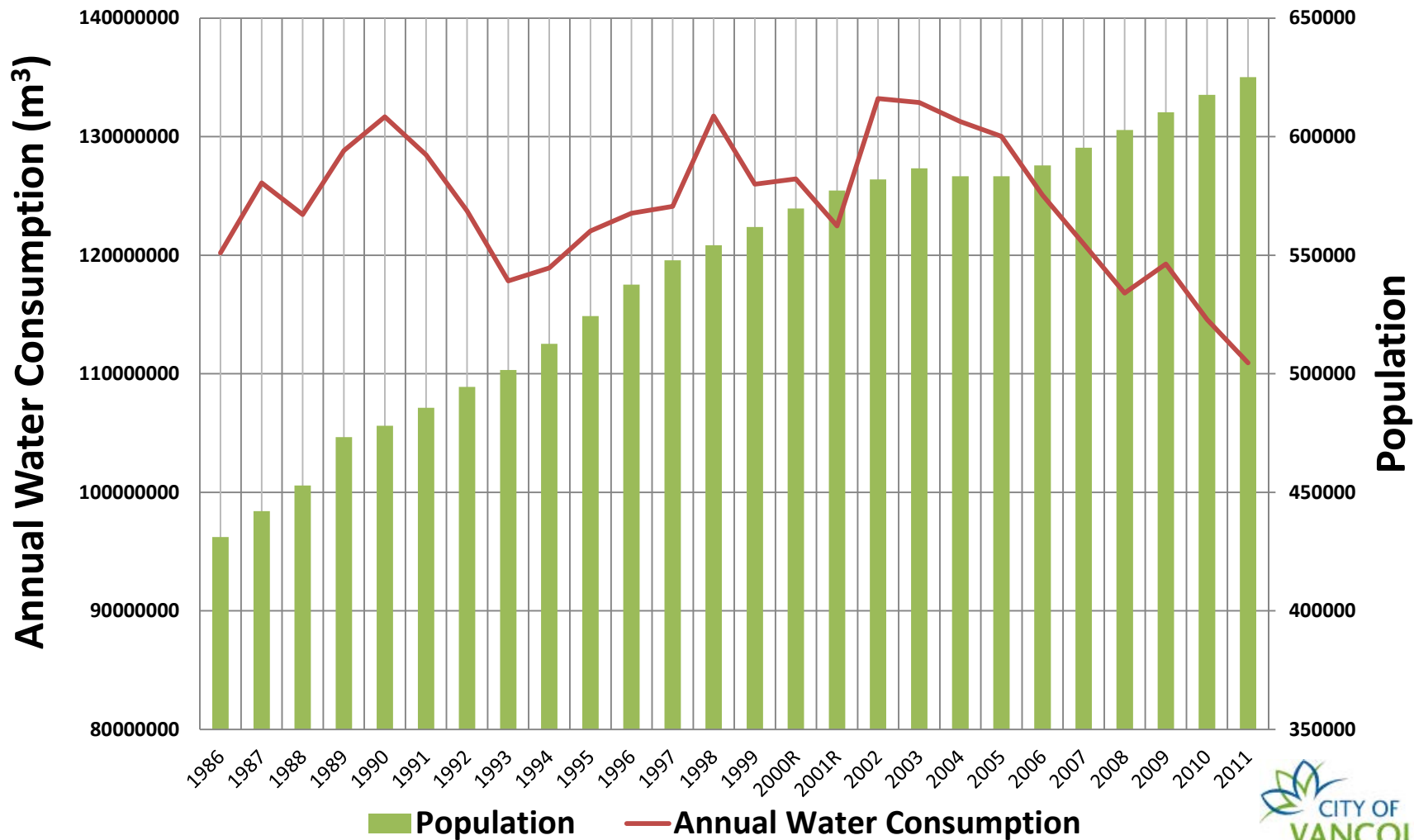
- Opportunity to defer system expansion beyond 2100 (potentially \$750M by 2050)
- Minimize transmission system growth costs
- Lower Vancouver's share of regional water costs
- Supports growth of green economy

# Benefits of Reducing Consumption

## Other Benefits

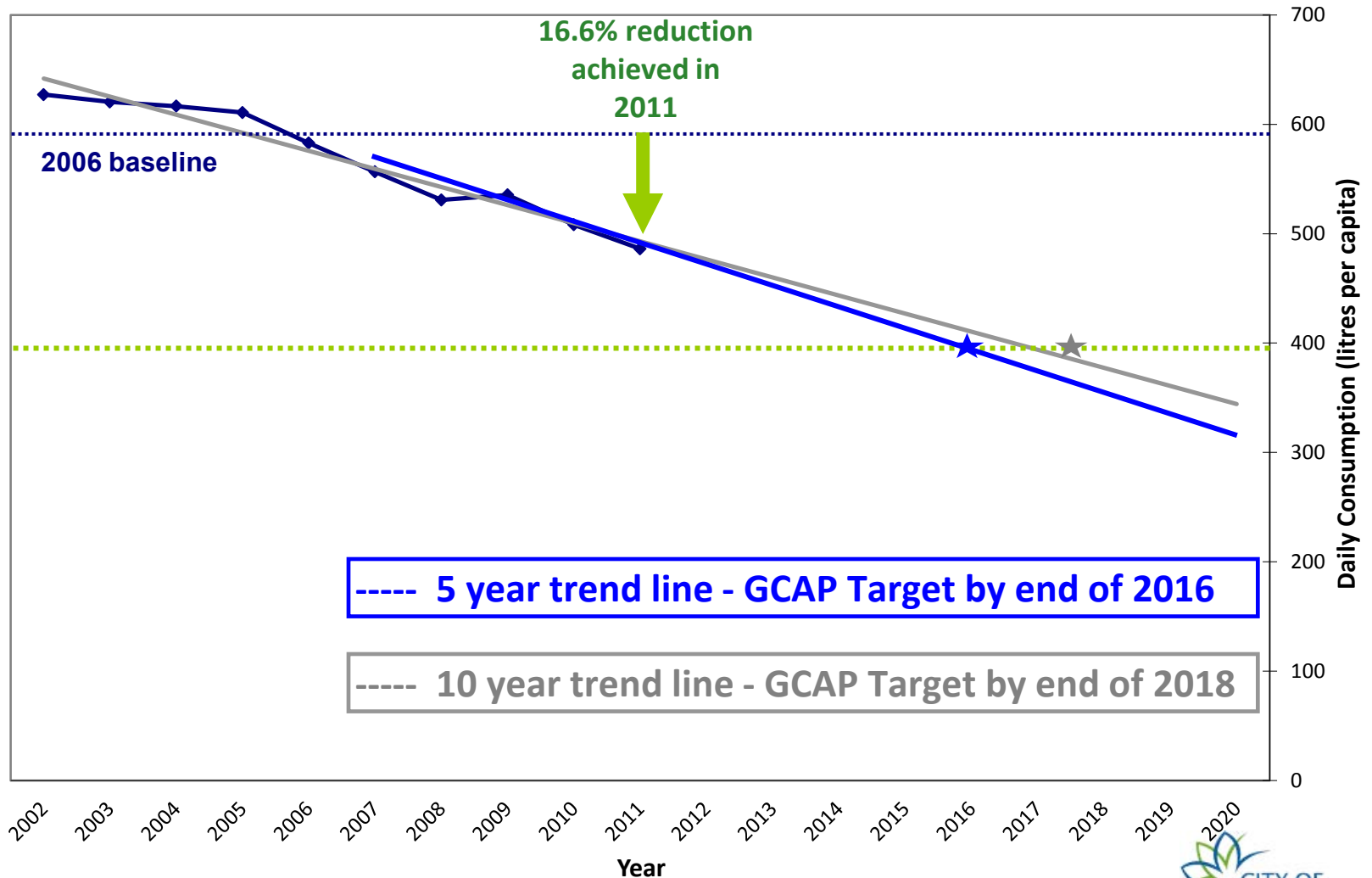
- Defers environmental impacts for system expansion
- Better adaptation to climate change
- Addresses equity concerns between customers
- Demonstrates leadership regionally

# Vancouver Water Consumption 1986 to 2011



# Progression towards GCAP target

## Per Capita Consumption Trend



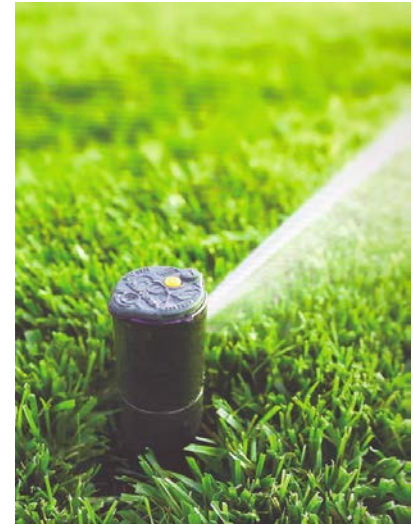
# Water Conservation Strategic Plan:

## Focus Areas

- Public Engagement
- Leadership - reducing City water use
- Policy and Regulation - tools that support conservation activity
- Technology - retrofits and incentives

# Public Engagement

- H2 Woah! - Dreamriders Theatre School Plays
  - 38 plays already presented in 2012
- Greenest City Garden Parties
  - 51 workshops hosted by residents in their gardens
- Drinking Water Week May 13 to 19<sup>th</sup>
  - Provincial awareness campaign.
  - Proclamation in Council on May 15<sup>th</sup>
- Irrigation assessment for commercial customers
  - Owners commit to conservation measures with < 2 year payback
  - 3 completed in first season





# Leadership

## Reducing City water use =

- Hydrant leak detection program
  - Program cost = \$30,000
  - Net savings = \$200,000
- Transmission main leak detection
- Civic building toilet and showerhead retrofit, partnered with Fortis BC

# Policy and Regulation

## Residential Metering

All new single family and duplex developments

- First meter installed in March
- Approx. 1500 applications expected for 2012
- Too early to determine consumption patterns for metered vs. non metered properties



## Seasonal Water Rates

- Now in effect for all metered residential and commercial properties
- Advance notice with water bill
- 2012 Rates
  - \$0.79 per 1000 L in off season
  - \$0.99 per 1000 L in summer
- Recommend extending seasonal rates to industrial and institutional customers effective January 2013

# Policy and Regulation

- Lawn sprinkling regulation enforcement
  - Began June 1 this year
  - Traditional and social media campaign once weather improved
  - Parking Enforcement Officers provided eyes on the street
    - 760 warnings issued (3 times higher than 2011)
    - 5 tickets issued

# Technology

## City Facility Toilet Retrofit

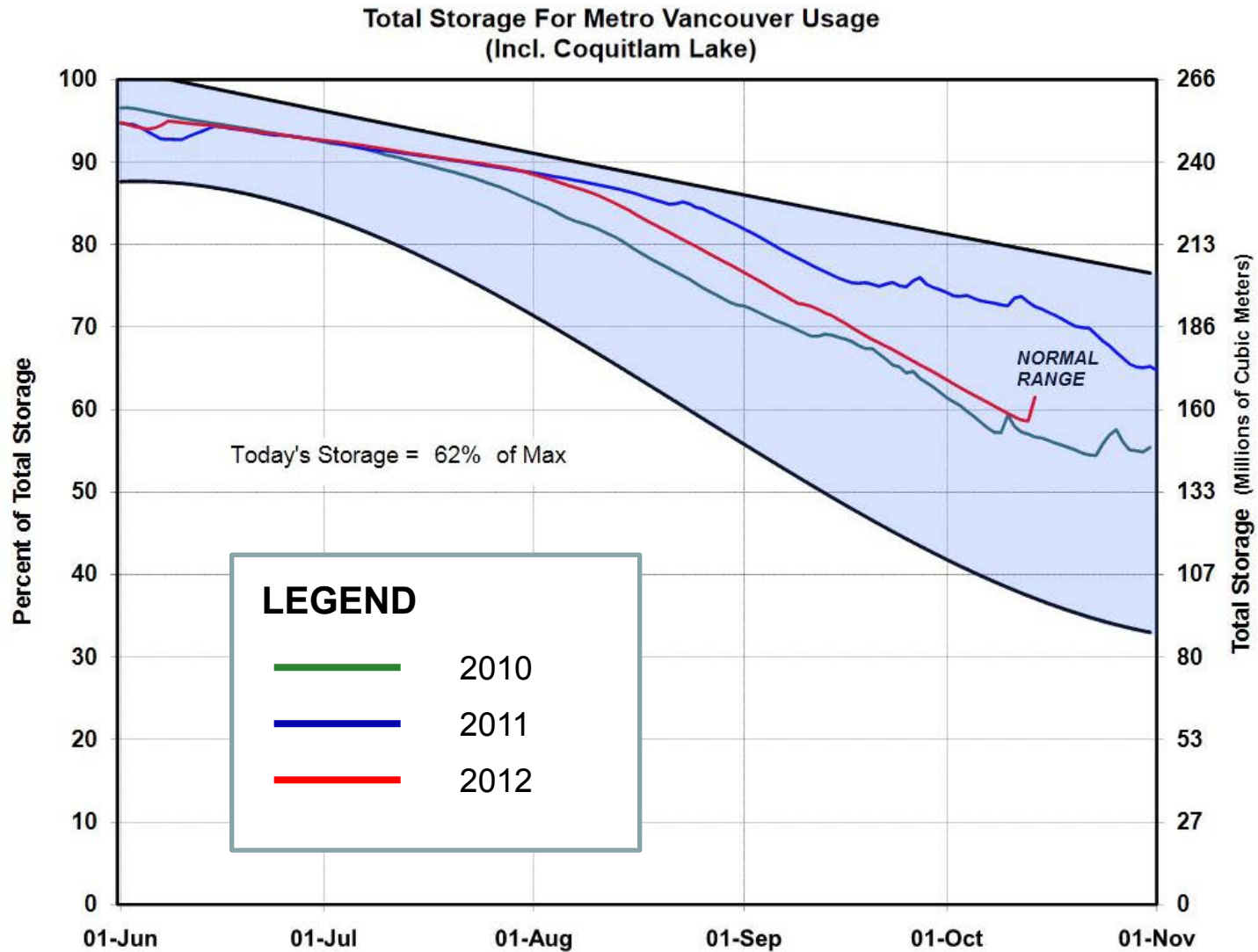
- 233 units in City-owned multi family housing bldgs
- Expecting a 17% reduction in water use



## Rental Housing Toilet Retrofit Pilot

- Partnership with private sector
- Contributed 25% of cost to retrofit 500 toilets in Concert Properties' older rental housing stock

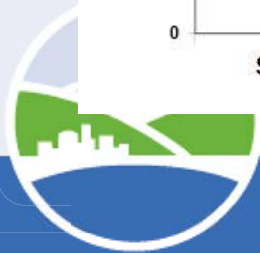
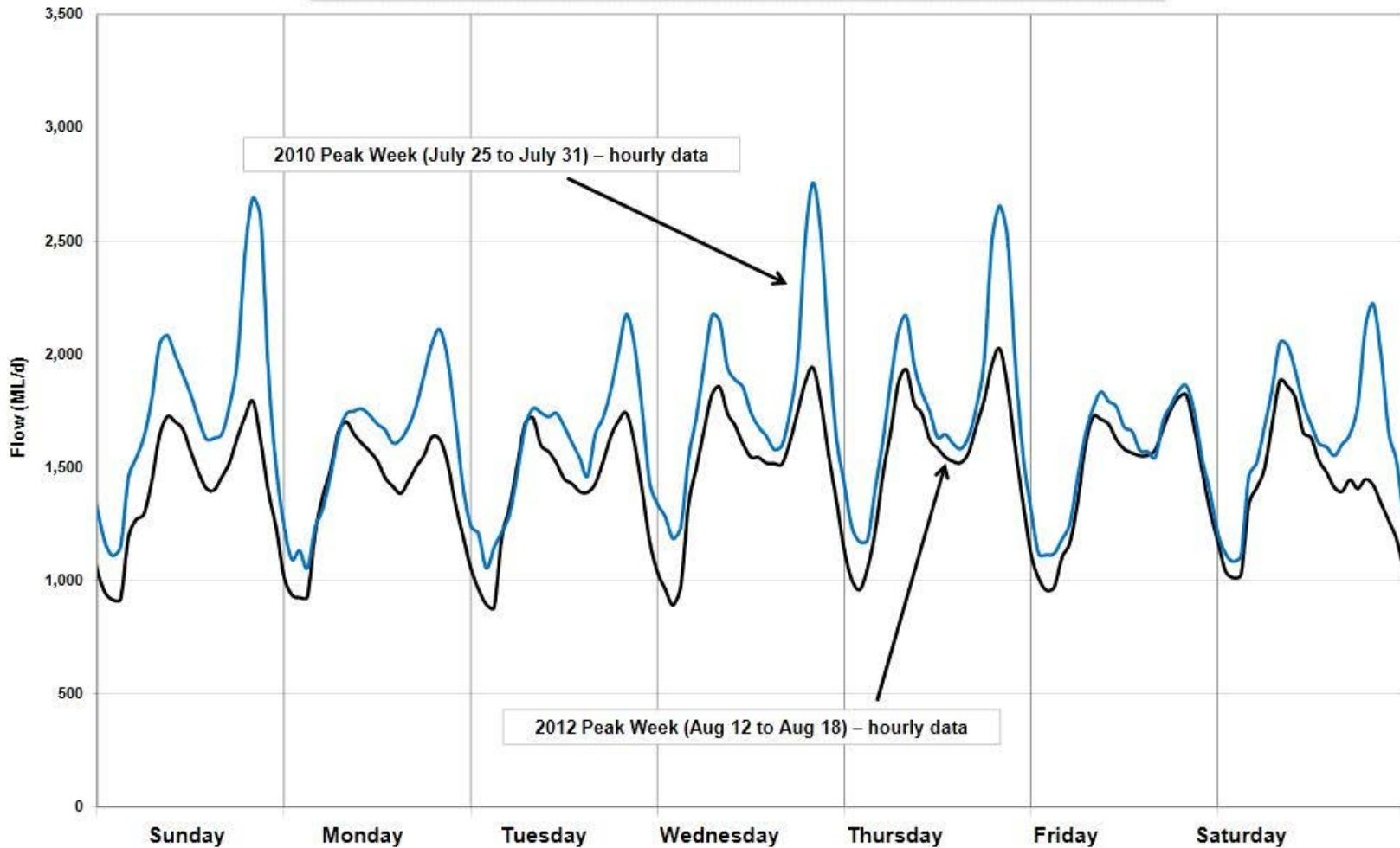
# Water Supply Performance - to date



# Water Shortage Response Plan

- Metro has a four stage water shortage response plan. Activation occurs in consultation with member municipalities.
  - Stage 1 =  
June 1 to September 30 lawn sprinkling regulations in effect every year
  - Stages 2 thru 4 =  
Escalating outdoor water-use restrictions & bans
- Stage 2 last activated in 2006 - emergency maintenance at Capilano reservoir.

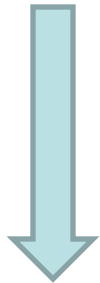
2012 vs. 2010 Peak Summer Sprinkling - System Wide





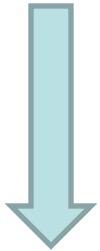
# Progress on GCAP target...

**2006**



**16.6%**  
reduction over  
2006 levels

**2012**



further  
**16.4%**  
reduction

**2020**

**33%**

Future Programs	Anticipated Reduction
Seasonal water rates	3.5%
Lawn sprinkling education and enforcement	2.3%
Private sector partnerships	2.0%
New residential metering policy	1.6%
Education, awareness and behavior change	1.6%
Water system leak detection	1.6%
Bylaw changes supporting efficient fixtures and alternate water sources	1.6%
City operations water conservation	1.2%
Commercial water audits	1.2%
<b>Total</b>	<b>16.4%</b>

# Top 3 ways to reduce consumption

- ☑ Embrace water wise landscapes
- ☑ Fix leaks in faucets, toilets and appliances
- ☑ Upgrade to modern fixtures and cooling equipment

# Conclusion

On track to achieve water reduction target of 33% by 2020

Continue conservation pilot programs to determine effectiveness

Build a comprehensive communication strategy for 2013

# Questions?

# Access to Water

- 2 new bottle refilling stations
  - Granville Island
  - Still Creek
  - Now have 8 in total
- New fountain installations
  - Main and 11<sup>th</sup>
  - Burrard & Davie (underway)
- Deployed 5 temporary fountains in July and August



# Water Meter Policy

## Current Policy - metering new homes

Aligns with both regional and provincial support of water metering to measure consumption

*(Drinking Water Management Plan, Metro Vancouver;  
Liquid Waste Management Plan, Province of British Columbia Letter of Support)*

## Economics

Gradual implementation of meters (current policy) will defer expense of developing new water sources enough to offset metering costs. Doing nothing would be more costly in long term.

## Effect of meters on consumption

Abbotsford 281 lpcd vs Mission 440 lpcd (36%)

West Van - 2006 was 716 lpcd; post metering 560 lpcd (36%)