



**WHITE ROCK**  
*My City by the Sea!*

# WATER UTILITY COMMUNITY FORUM FINANCIAL SERVICES

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# TRANSITIONING YOUR WATER BILL

- Effective after ownership transfer date, payments can be made to the City for charges outstanding, even though they were billed by EPCOR
- Payments will also be accepted by EPCOR for a period of 30 days
- During this 30 day transition period, the City anticipates that EPCOR will still withdraw payment from registered debit plan customers

# TRANSITIONING OF YOUR WATER BILL

- City water (utility) accounts will be opened for all properties being served by the water utility
- These are separate from property tax accounts
- Customers wishing to continue paying their water bills by automatic bank account withdrawals must register to join the City's utility billing pre-authorized debit program
- This is required by banking regulations
- Payment of City water bills can also be made through online banking, at financial institutions, by mail, and in person at City Hall by cash, cheque, or debit card.

# WATER BILLING CYCLE

- Currently, commercial and multi-family customers are billed monthly, and single family homes are billed bi-monthly
- The City proposes to issue all water bills quarterly:
  - End of Jan, for Oct to Dec consumption
  - End of April, for Jan to Mar consumption
  - End of July, for Apr to June consumption
  - End of Oct, for July to Sep consumption
- The first bill in 2016 will be for Nov and Dec only
- This is common practice for many municipalities
- Helps to minimize administrative costs

# WATER CUSTOMERS BILLED

- Currently, property owners, strata corporations, property management companies and some tenants are billed by EPCOR
- The City will not be billing “tenants”.
- The City will be billing property owners, strata corporations and property management companies
- We understand this change may be inconvenient for some, which is why we are giving as much notice as possible
- It is standard practice for municipalities to bill property owners, rather than renters
- Reduces administrative costs



# TRANSITIONING OF HYDRANT LEVY TO WATER BILL

- In addition to charging customers for water consumption, EPCOR White Rock Water Inc. bills the City for costs associated with the provision and maintenance of fire hydrants
- This, in turn, is charged to property owners on the annual tax notice, based on the assessed value of properties
- Under City ownership, these fees will be transitioned to a user pay basis, and will be built into the water rates
- This is considered more equitable and is common practice in other municipalities

# 2016 ESTIMATED MONTHLY WATER BILL AVERAGE DETACHED SINGLE FAMILY HOME

Estimated Fees (assumes average consumption of 743 cu. ft.)	EPCOR Water Tariff	Proposed City Bylaw
Base Charge	\$25.90	\$31.60
Additional Consumption Charge	5.64	7.00
Rate Riders (Base and Add'l Consumption)	1.45	N/A
Estimated Hydrant Levy on Tax Notice	8.59	N/A
<b>Total Estimated Monthly Bill</b>	<b>\$41.58</b>	<b>\$38.60</b>
		(\$41.58)
Proposed Reduction		(\$2.98)



# 2016 ESTIMATED MONTHLY WATER BILL AVERAGE MULTI-FAMILY PROPERTY

Estimated Fees (assumes average consumption of 348 cu. ft. )	EPCOR Water Tariff	Proposed City Bylaw
Base Charge	\$9.24	\$11.27
Additional Consumption Charge	2.27	2.82
Rate Riders (Base and Add'l Consumption)	0.52	N/A
Estimated Hydrant Levy on Tax Notice	2.91	N/A
<b>Total Estimated Monthly Bill</b>	<b>\$14.94</b>	<b>\$14.09</b>
		(\$14.94)
Proposed Reduction		(\$0.85)

# PRELIMINARY 2015 FEES (NOVEMBER AND DECEMBER ONLY)

- Proposed monthly City bills are estimated to be slightly higher than EPCOR's, **for these two months only:**
  - By \$3.85, for an average detached single family home
  - By \$1.37, for an average multi-family property
- This is because November and December are low water usage months, and many of the costs which are to be recovered by the fees are evenly distributed throughout the year.

# WATER UTILITY COMMUNITY FORUM ENGINEERING AND OPERATIONS

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# INTRODUCTION

- **Greg St. Louis, Director Engineering & Municipal Operations**
  - At the City for over three years
  - Sr. Manager of Pollution Control in Ontario
    - In charge of the operation of two waste water treatment plants
    - One storm water treatment plant
    - 43 pump stations
  - Started my career working with a consultant
    - Design, inspection of water main installation
- **Similarities between operating a water treatment plant and WWTP**
  - pumping, chemical treatment, operator certification, reporting & sampling requirements, public safety, legislative requirements, maintenance and budgeting

# CURRENT CITY INFRASTRUCTURE OPERATIONS AND PLANS FOR WATER OPERATIONS

- **Similarities with water infrastructure**
  - Manage the storm and sanitary sewer pipe network and pump stations
  - Sanitary and drainage master plans
  - Computerized models of the sewer systems
  - Financial and capital planning for replacement of infrastructure
  - Already reviewing all water utility work in the City's right-of-way
  - Sewer and water staff are working on service installations for new development
  - Many municipalities manage their own pipe network and treatment plants

# CURRENT CITY INFRASTRUCTURE OPERATIONS AND PLANS FOR WATER OPERATIONS

- **Made offers of employment to EPCOR's five certified operators**
  - They have accepted
  - Historical knowledge and experience with existing system
- **In the process of hiring a project engineer of utilities**
  - Manage the staff & training program
  - Manage the maintenance and capital program
  - Coordinate the installation of storm, sanitary and water projects
  - Ensure the safe operation of the water treatment plants
  - Oversee the completion of the Total Water Quality Management Project

# WHAT DID THE CITY PURCHASE?

- All the pipe network in the ground
- All land and rights-of-way for the operation of the utility
- Fire hydrants
- 7 Wells – #1,2,3 Oxford, #4 High, #5 Buena Vista, #6 & #7 Merklin
- Oxford reservoir & treatment plant under construction
- Merklin reservoir, High Street well, Roper reservoir and Buena Vista Operations Yard
- Ongoing Total Water Quality Management Project
- Inventory at date of transfer
- Vehicles are still being negotiated



# OPERATIONS

- **The City will:**

- Run the day to day operations
- Operate the water treatment plants
- Prepare and execute capital and maintenance plans
- Review water servicing for development
- Prepare servicing agreements for development
- Install water services
- Read water meters
- Repair watermain breaks
- Perform water quality testing
- Answer public inquiries
- Prepare annual reports
- Implement a cross connection program (back-flow preventer)
- Comply with guidelines for Canadian Drinking Water Quality

# TOTAL WATER QUALITY MANAGEMENT PROJECT

## 1. Disinfection of distribution system

- Fraser Health requirements 0.2mg/L chlorine residual by June 30, 2016

## 2. Increase storage capacity at Oxford and Merklin sites

- Seismic upgrade at Merklin site – removal of existing water tower

## 3. Additional supply to meet the future demand in 2031

## 4. Arsenic removal if limit exceeds the Guideline for Canadian Drinking Water Quality (GCDWQ)

- Arsenic concentration are within maximum acceptable limits
- Fraser Health requirements by December 31, 2018

## 5. Manganese removal if GCDWQ establishes a limit for health effects

- Currently there is only an aesthetic limit

# METRO VANCOUVER OPTION

- Consist of connecting to Metro Vancouver at the closest tie in point: South Surrey Athletic Park (SSAP) located at 148<sup>th</sup> Street and 20<sup>th</sup> Ave.)
- Would require the City to:
  - Purchase property and build a pump station on Surrey property at SSAP
  - Construct distribution lines to both Oxford and Merklin reservoirs
  - Pay Metro Vancouver for the cost of the water
- Metro Vancouver would need to perform upstream improvements to their system to meet the additional population demand
  - The City would be required to pay for these improvements
  - These improvements need to be designed and scheduled by Metro Van
  - Could take years to fully implement
- The TWQMP project would still be required as the project addresses:
  - Storage, pumping and seismic deficiencies

# PHASING

- **Phase 1 Oxford Site**
  - Construction of a treatment plant and reservoir
  - Boost pumping capacity and meet fire flows
  - Construction is almost complete
- **Phase 2 Merklin Site**
  - Construction of a treatment plant and reservoir
  - Demolish existing water tower
  - Work is scheduled to start in December 2015 continue until December 2016
- **Phase 3 High Street Site (adjacent to Mann Park Bowling)**
  - Seasonal well
  - New disinfection system required

# ARSENIC AND MANGANESE TREATMENT

- Arsenic maximum acceptable concentration of 0.010 mg/L by GCDWQ. The City is close to that concentration.
- Fraser Health requirement to provide treatment if arsenic limits exceeds GCDWQ by December 31, 2018
- Treatment of arsenic will also deal with manganese
- City to engage with the community in the new year on options and considerations with treatment

# CHEMICAL DISINFECTION

## TWO OPTIONS

### Option 1:

#### Sodium hypochlorite (Free Chlorine)

- Reacts with manganese and will cause staining of laundry and plumbing fixtures
- Lowers aesthetic quality of water
- Customer complaints due to staining
- Possible additional maintenance as chlorine reacts with manganese
- Possible additional dosing station to maintain effectiveness through the system

# CHEMICAL DISINFECTION

## TWO OPTIONS

### Option 2:

**Chloramine is a combination of chlorine and a small amount of ammonia**











- Chloramination is the process that adds chloramines to drinking water
- Naturally occurring ammonia in the aquifer
- Many cities in Canada have been using the chloramination process for decades to purify drinking water and eliminate the bacteria that cause waterborne diseases, i.e. Abbotsford
- Chloramine is a more stable and persistent disinfectant than chlorine
- It preserves the quality of water disinfected at the water treatment plant as it travels through the distribution system
- Chloramine reduces the taste and odour of chlorine in tap water



# CHEMICAL DISINFECTION - CONTINUED











- Less reaction with manganese
- Chloraminated water is safe for drinking, bathing, cooking, cleaning scrapes or cuts, doing laundry, and watering the garden
- As with chlorine, chloramines are very harmful to fish (saltwater and freshwater), reptiles and amphibians that live in water. They take chloramines right in their bloodstream through their gills and therefore must be protected from them.
- De-chlorination manholes at reservoirs
- Concern with environmental impact that must be addressed
- Develop processes for containment

# SODIUM HYPOCHLORITE BENCH SCALE TEST

Oxford Water (Wells 1, 2, & 3) Treated With Hypochlorite					Untreated Water
Contact Time	Targeted Free Residual Chlorine (mg/L after 15 min. of contact)				
	0.0	0.5	1.0	2.0	
10 Minutes					
4 Hours					
24 Hours					

Source: EPCOR Bench Scale chlorination of White Rock Well Water – April 2015

# CHLORAMINE BENCH SCALE TEST

Oxford Water (Wells 1, 2 & 3) Treated With Monochloramine		Untreated Water			
Contact Time	Targeted Combined Residual Chlorine (mg/L after 15 min. of contact)				
	0.0	0.5	1.0	2.0	
10 Minutes	Not Analyzed				
4 Hours	Not Analyzed				
24 Hours					

Source: EPCOR Bench Scale chloramination of White Rock Well Water – April 2015

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# CHEMICAL DISINFECTION

## WHAT DO YOU THINK?

- **What do you think? Give us your thoughts on feedback form**
  - OPTION 2 is being recommended to the City
  - Lab testing with chloramines showed positive results with maintaining aesthetic quality of water
  - Fraser Health has reviewed the disinfection process

# THANK YOU

- City staff will be at the relevant boards to answer questions
- A short survey and feedback form is available at the front doors
- Thank you for attending this evening's event