



Council Presentation

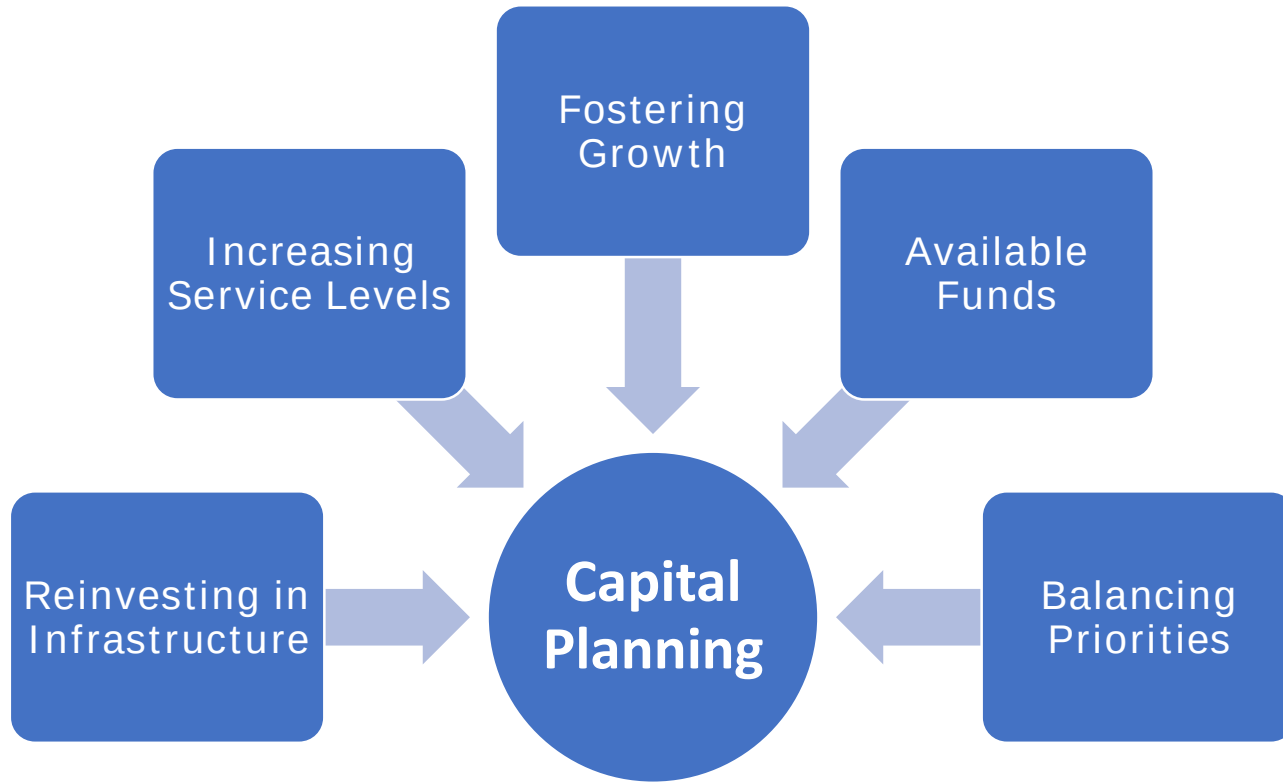
Capital Planning

Utility Rates

Water Treatment Project Update

October 29, 2019

Capital Planning



Balance between managing risk, meeting service levels and being affordable

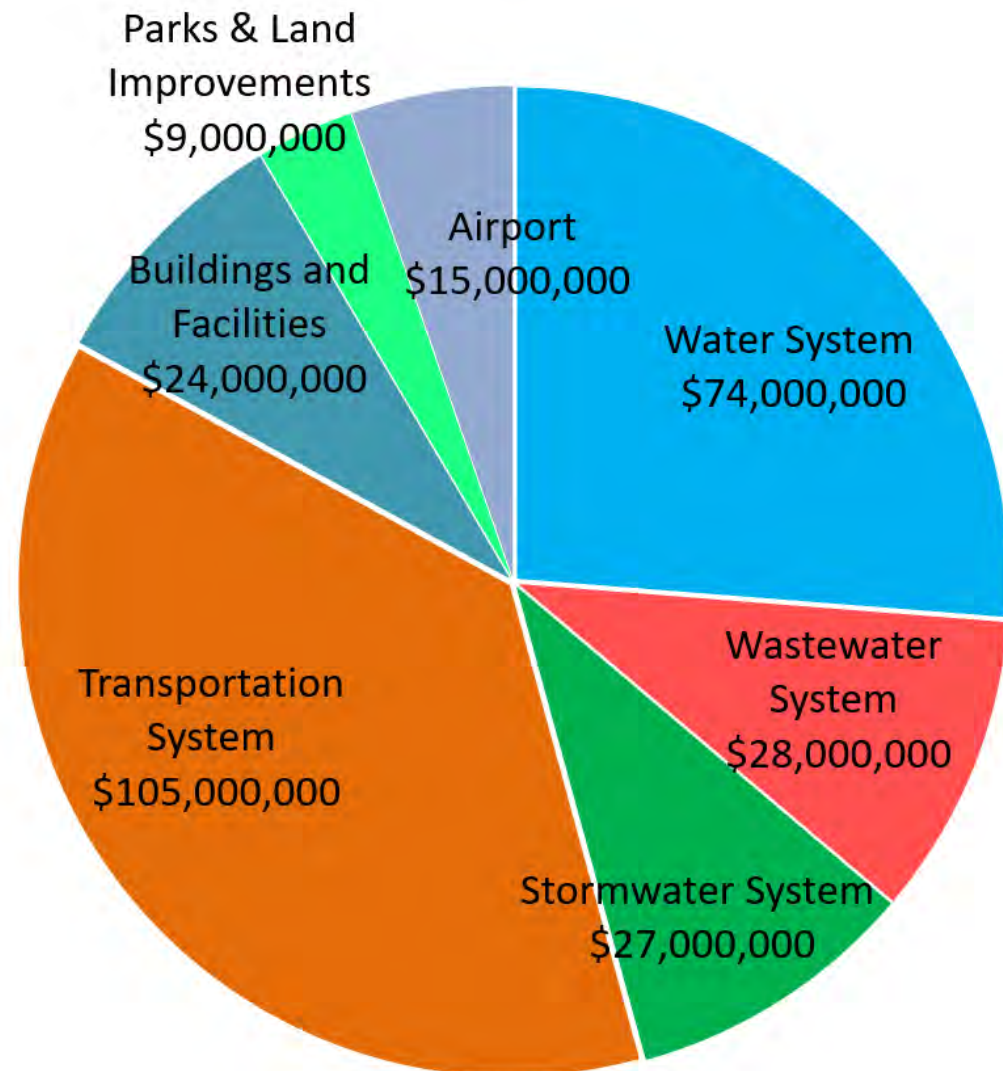
Provincial Context

- Having a sound Capital Plan is an expectation
- Strong advantage in capital grant applications
- \$10,000 of this work was funded through a planning grant from the Province



The City's Context

- Even if it were not a priority for the Province, capital planning is still part of responsible and proactive City operations
- A conservative estimate is that the City owns ~\$280,000,000 of fixed assets (That is likely a conservative value)
- Focus of today's discussion is about roads, water, wastewater, and storm capital investments



Financing Capital Projects

Must consider:

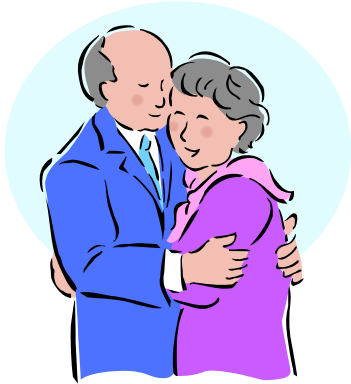
- Source of funds
- Who will pay for what?
- How much?
- What cost recovery tools will be used?

Addressing the
infrastructure deficit –
balancing our concerns
vs. those of future
generations.



Financing Capital Projects

Frank



Pays taxes for
another 20
years

Frank's
Son



Starts paying
taxes for
another 50
years

Frank's
Granddaughter



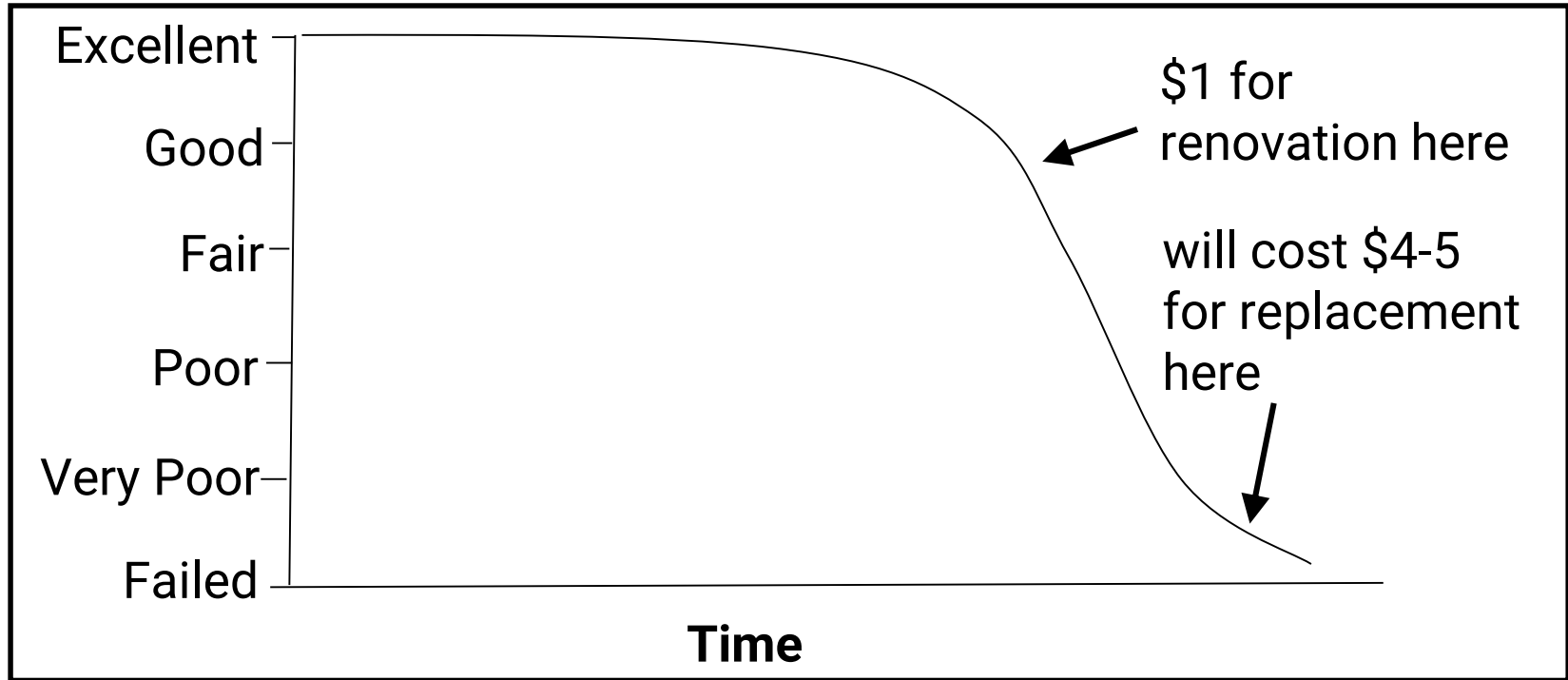
Starts paying
taxes in 19
year and pays
for 50 years

Financing Capital Projects

Investment in Rehabilitation

Level of Commitment	Frank	Frank's Son	Frank's Granddaughter
Low: Reactive			
Medium			
High: Proactive			

Being Proactive – Investing in Roads



Quesnel Works – Capital Reinvestment Program

Quesnel was doing asset management before asset management became more mainstream

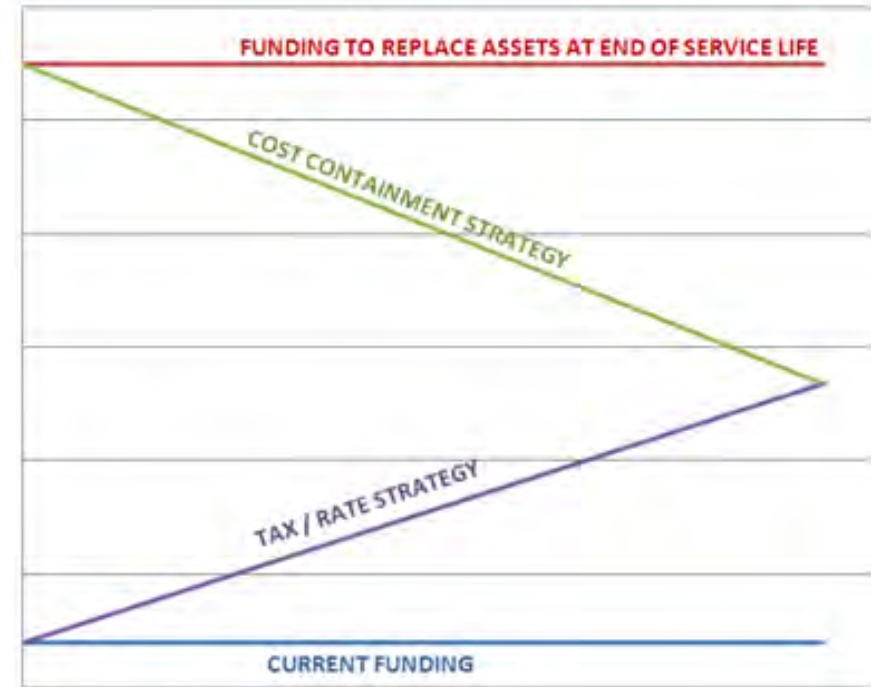
Key considerations

- Competition of capital dollars
- Need to make choices and set priorities
- Choices need to be sustainable
- Good communications and collaboration are necessary to develop a long-term plan that balances those choices



Quesnel Works – Capital Reinvestment Program – Adopted a Proactive Approach

1. Couldn't count on grant money for roads
2. Acknowledged the General Revenue issue
3. Established a funding framework – Created separate levy roads
4. Started with acceptable funding level, applied the annual Small Communities Grant and made levy increases over time
5. Invested in branding and communications



Funding of Water and Sanitary Capital Works

- Long-term financial model was developed to help understand predicted capital investment needs
 - Model has been updated over time (e.g. extended useful life of some watermains, reduced expected investment in sanitary pipes after camera inspections have occurred)
- Sanitary Utility is considered sustainably funded
(*Frank's granddaughter is not burdened unfairly*)
- Water Utility is likely approaching sustainable funding
(Estimated that the 3%/year increase continues for the next 6 - 9 years)
- 2% annual increase for inflation is a wise and appropriate practice to continue

The Capital Plan

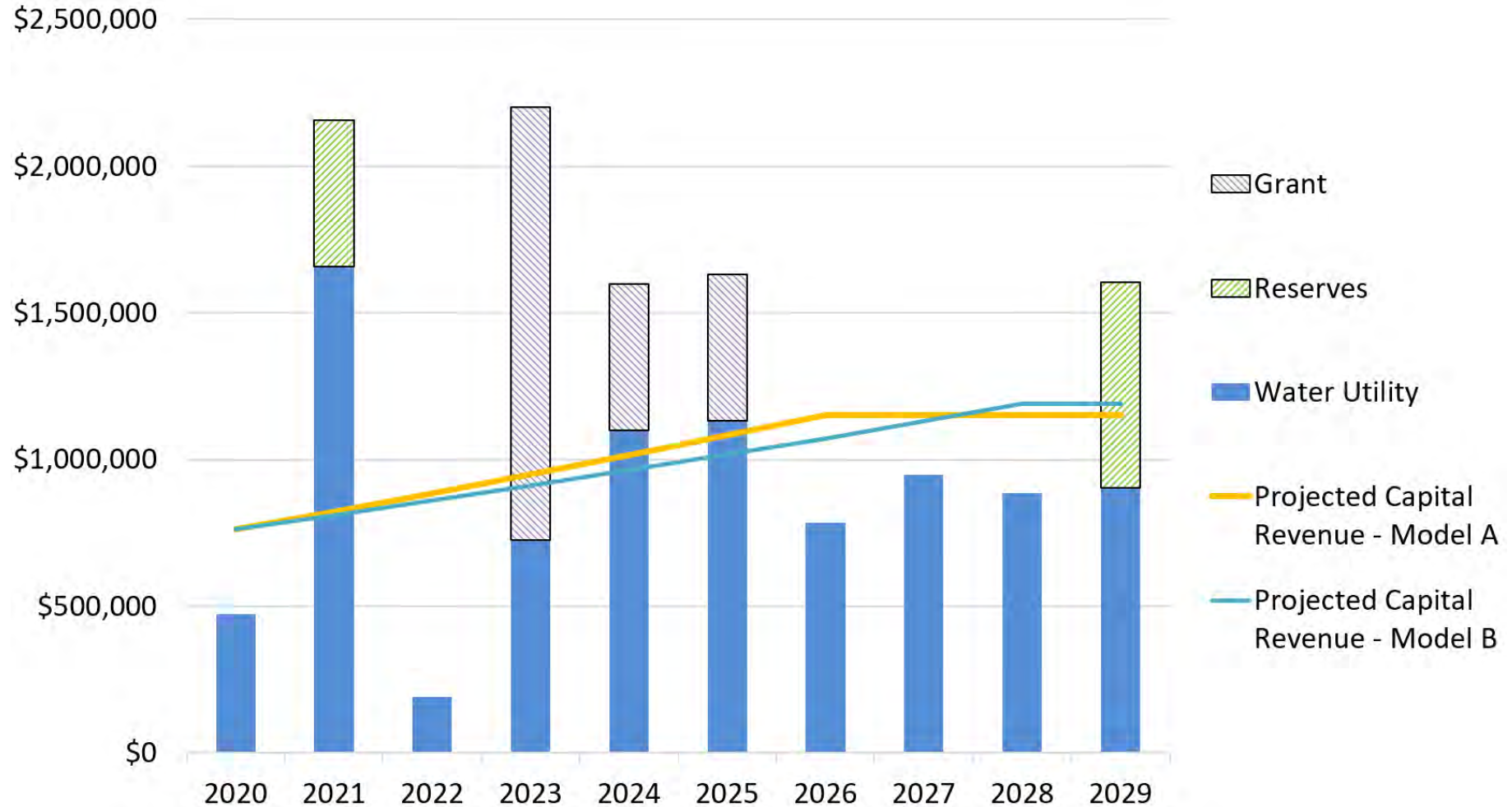
- A comprehensive list of priorities that is used as a planning tool
- 10 year timeframe has been adopted
- It is a fluid document – there are many factors that will impact the timing and budget of each project
 - Unforeseen infrastructure problems
 - Availability of grant funding
 - Direction from Mayor and Council
- FSAC to provide recommendations and then review and approval by Council

Highlights – Water

- Dragon Hill Reservoir
- New well
- Some pipe and water service replacements
- Water Treatment not included



Highlights – Water



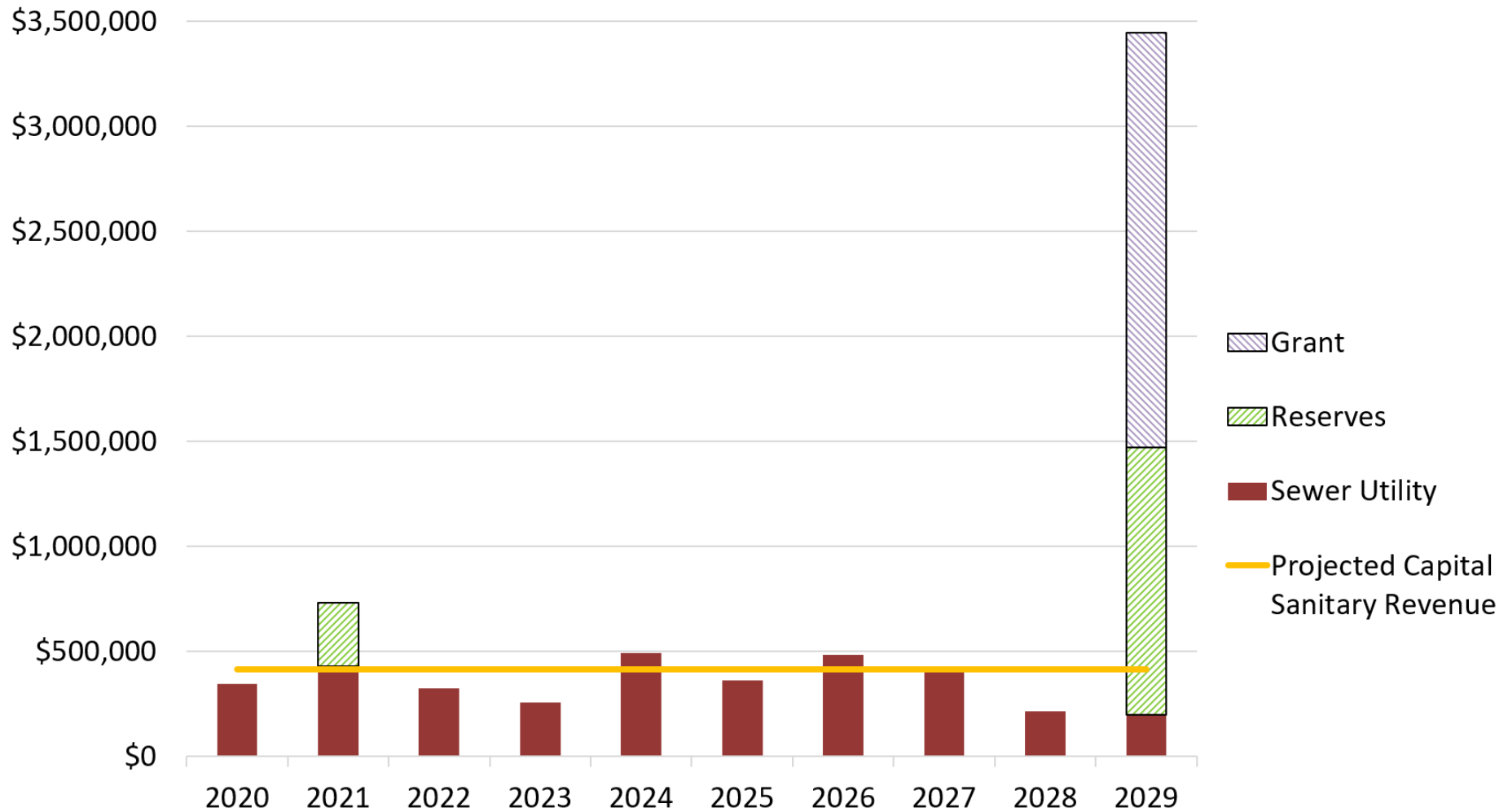
Highlights – Sanitary

- Some camera work has been done
- Continue with pipe investigations and repairs
- Routine replacement of lift station components
- Main Lift Station trunkmain replacement is an anticipated investment near the end of the 10 year period
- Includes continued reliance of Cariboo Pulp & Paper for treatment
- Capacity of the system to be addressed as development continues



Image © 2019 Maxar Technologies

Highlights – Sanitary

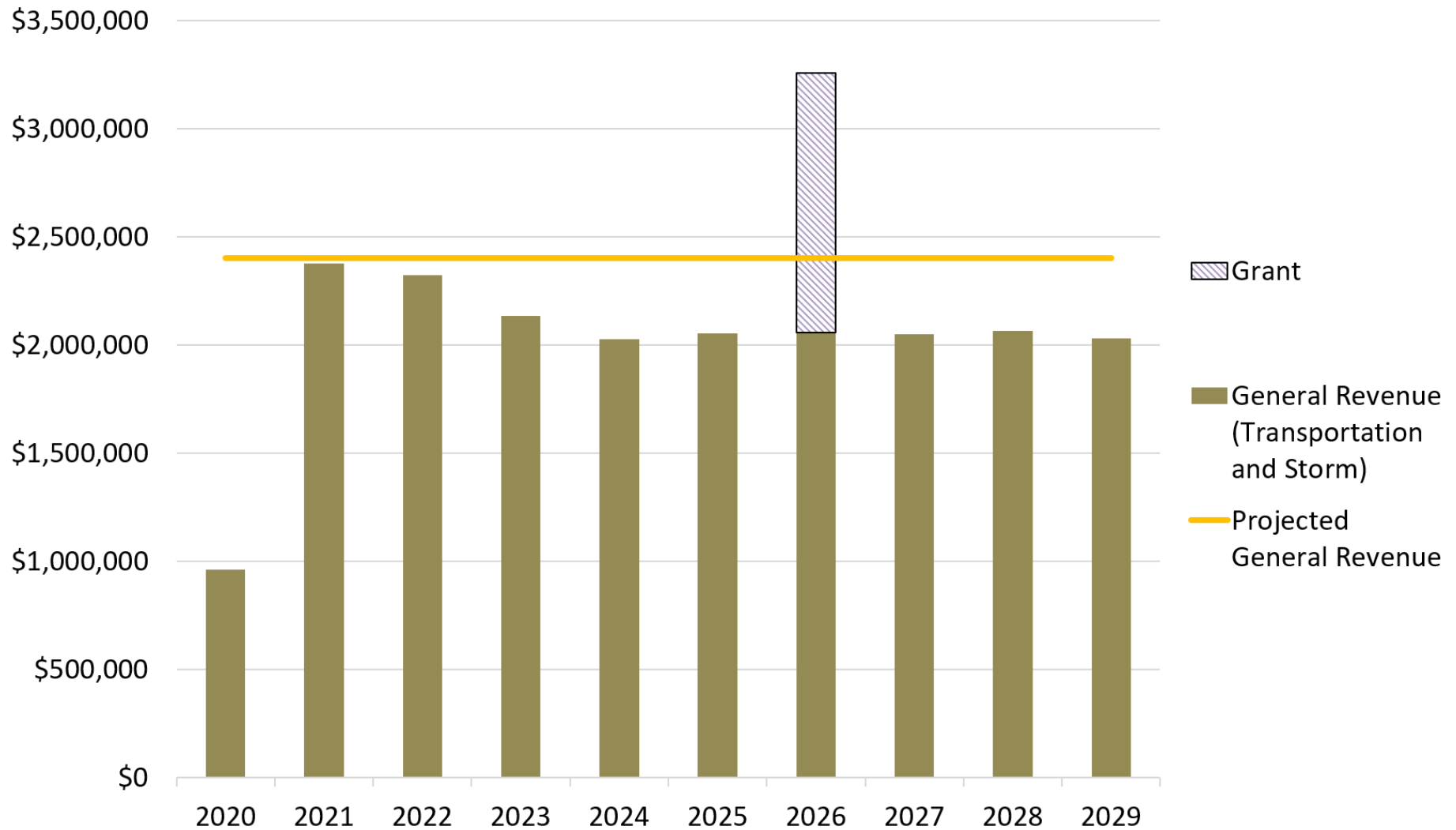


Highlights – General Revenue

- Continue annual minor road repair allowance
- Road full replacements
- Storm improvements are not a major driver of work, but some drainage improvements will work into road improvements
- Includes an allowance for Johnston Bridge works – scope and budget to be confirmed



Highlights – General Revenue



Utility Rate Updates



Utility Rates

- Separate account from General Revenue
- Pays for operations, maintenance and capital investments
- Investments:
 - Sustain existing service
 - Support growth
 - Meet regulations



Drivers of this Utility Rate Update

- South Quesnel debts are being retired over the next couple of years
- Consider if using frontage tax still makes sense
- Consider equity across types of customers

Start with the Principles

- Cover full cost of service
- Revenue stability
- Equity between different classes of customers
- Affordability
- Conservation
- Ensure rate structure is easy to understand and administer

A rate structure that is right for one community may not meet the needs of another community

Key Considerations

- Water meters are not currently included in this rate update, but would arguably be the most equitable change
- In the past frontage taxes might have made sense, but they might not now

Keep Frontage Tax and Expand Water Frontage Tax into South Quesnel

- No changes to existing customers
- Need to calculate frontage revenue
- 5% typical annual rate increase + South Quesnel frontage is close to balancing books, with no other adjustment efforts

Abandon Frontage Tax

- Acknowledges that frontage is not really an indicator of water use or fire flow demand
- Adjustment to all customer utility rates
- Over the long run the technique is simpler

Setting Water Rates

- Scenario 1: Staying with frontage taxes would mean inclusion of South Quesnel – rates would stay similar to current
- Scenario 2: If frontage taxes are deleted, making an overall rate adjustment would see larger customers paying more than their share – not recommended as likely not equitable
- For other Scenarios: Industrial, Commercial and Institution rates are held consistent - biggest variability was how residential rates are charged



Setting Water Rates

Scenario 1: Use Frontage Tax - Assign Frontage to South Quesnel & 3% Rate Increase

Scenario 2: No Frontage Tax & 40.1% Increase Across all Rate Classes

Scenario 3: No Frontage Tax, Set 70 ft Frontage Single-Family Residential Rate to Same as with Frontage and 3% Rate Increase

Scenario 4: Same as Scenario 3 but Reduce Rate by 25% for Multi-Family Customers that have 5 or More Units (First 4 Units Charged full Residential Rate)



Residential Water Rates

Scenario 1: Status Quo	Expand frontage taxes into South Quesnel
Scenario 3: Apply a 70 ft frontage cost as the average for all residential customers	- Customers with larger lots pay the same as those with small properties - Arguably inequitable for multi-family developments
Scenario 4: Same as above but provides a 25% reduction to multi-family customers for all units more than 4	Shifts some of the costs back to single-family customers

Scenario 1: Use Frontage Tax - Assign Frontage to South Quesnel & 3% Rate Increase

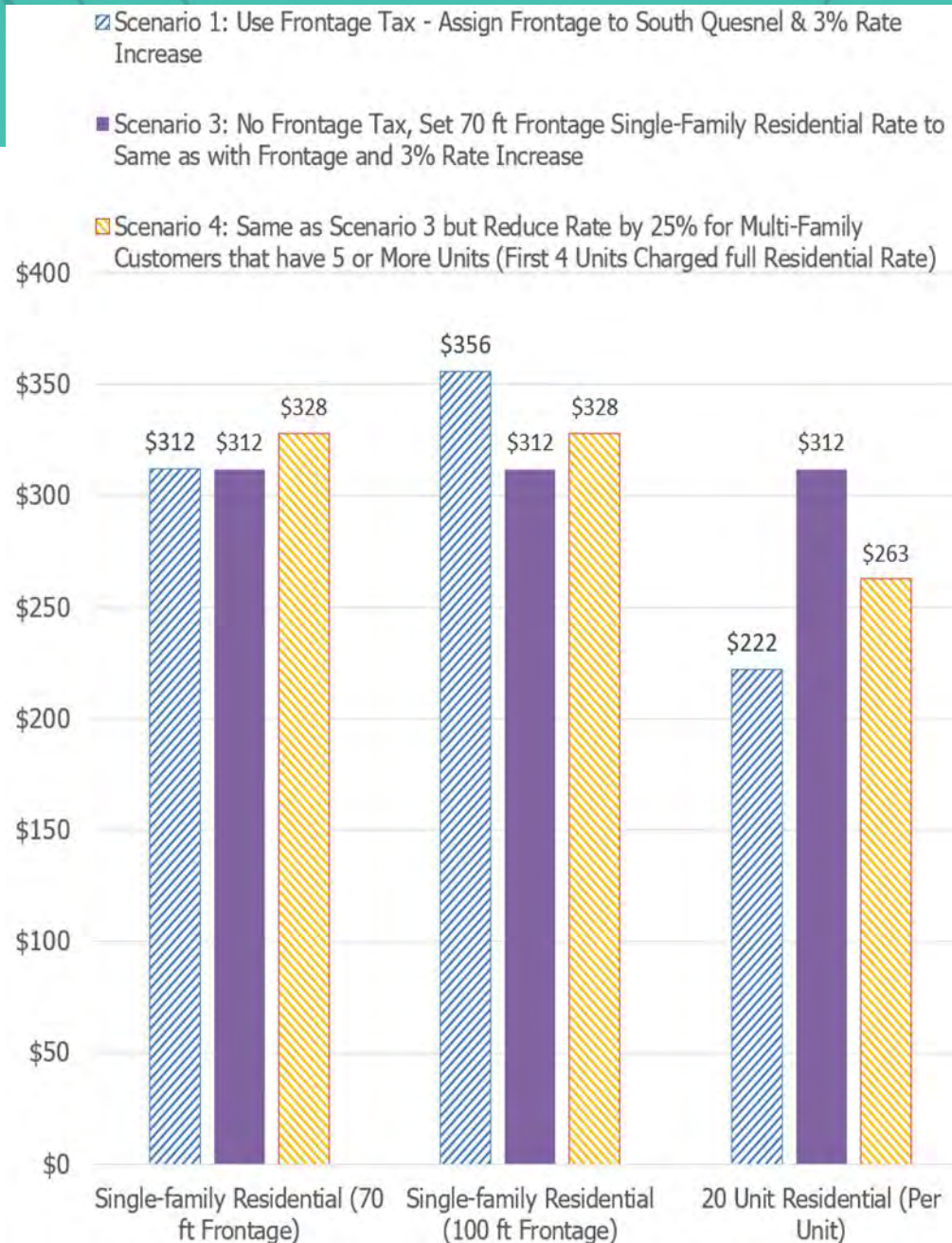
Scenario 3: No Frontage Tax, Set 70 ft Frontage Single-Family Residential Rate to Same as with Frontage and 3% Rate Increase

Scenario 4: Same as Scenario 3 but Reduce Rate by 25% for Multi-Family Customers that have 5 or More Units (First 4 Units Charged full Residential Rate)



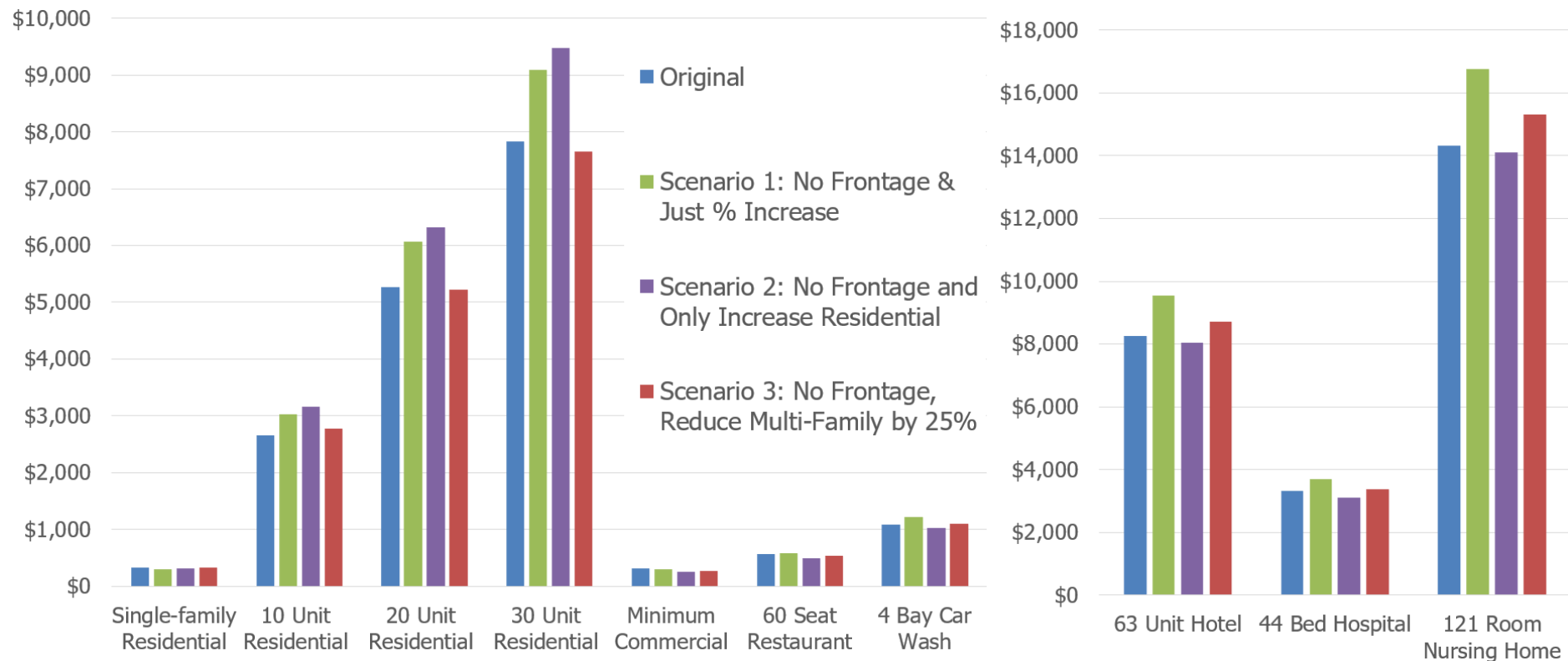
Water Rates – Frontage vs. No Frontage

- It comes down to if the City would like to abandon frontage taxes or not
- Applying reduced rate for multi-family units is recommended if frontage taxes will not be used
- Some residential customers will pay more and some will pay less compared to frontage approach
- Vacant lots will not pay frontage anymore



Setting Sanitary Rates

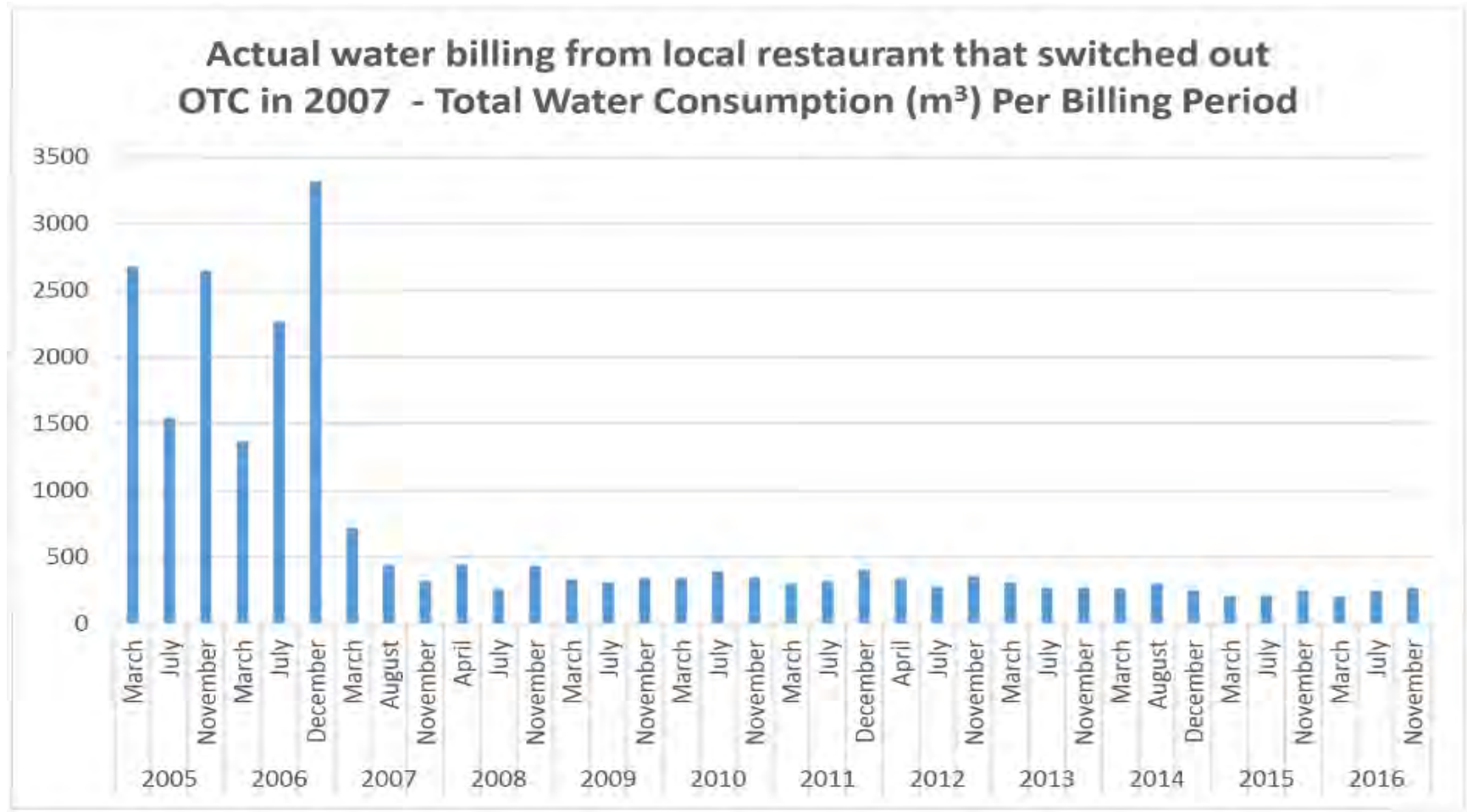
- No City sewer service in South Quesnel or Two/Three Mile Flats area
- If frontage taxes are deleted, then applying a flat rate for residential customers with a 25% reduction for multi-family dwellings (after first 4 units) is a leading option



Ensuring Customers Pay Their Fair Share

- Considered adjustments to car washes and laundromats and some other users
- The main consideration was charging for water cooled appliances
- Water conservation /xeriscaping
- Water Cooled Appliances
 - The City's water and sanitary rates include charges for these units
 - Water: \$1,447
 - Sanitary: \$1,760
 - An inventory of the units does not exist and customers are not charged for them

Example Water Use of Water Cooled Appliances



OTC = Once Through Cooler, which is another term for water cooled appliance

Source: Capital Regional District website
<https://www.crd.bc.ca/education/water-conservation/at-work/cooling-systems-rebates>

Recommended Actions Related to Water Cooled Appliances

- Short-term
 - Create an inventory – this should include estimating water flow for each unit
 - Start charging those customers the current rates
- Medium-term
 - Determine if a metered rate will be adopted
 - If a metered rate is not applied, calculate a charge for the units to reflect the expected water and sanitary flows – this may involve charging different rates for different size units
 - Recalculate water and sanitary rates across all classes to account for the additional revenue (if the number of units and water use justifies a full rate adjustment)

Next Steps Related to Overall Utility Rates

- Review preferred rate scenarios in more detail
- Adjust/delete frontage taxes
- Communicate to customers



Water Treatment Update



Project Objective

- Advance the design of a Water Treatment System for the City's potable water supply, which will be designed to address the two key aspects of water quality:
 1. Manganese
 2. Microbiological parameters including protozoa, bacteria and viruses
- Manganese removal is a priority given that the manganese level in the City water exceeds the maximum acceptable concentration (health limit) in the Guidelines for Canadian Drinking Water Quality established in 2019

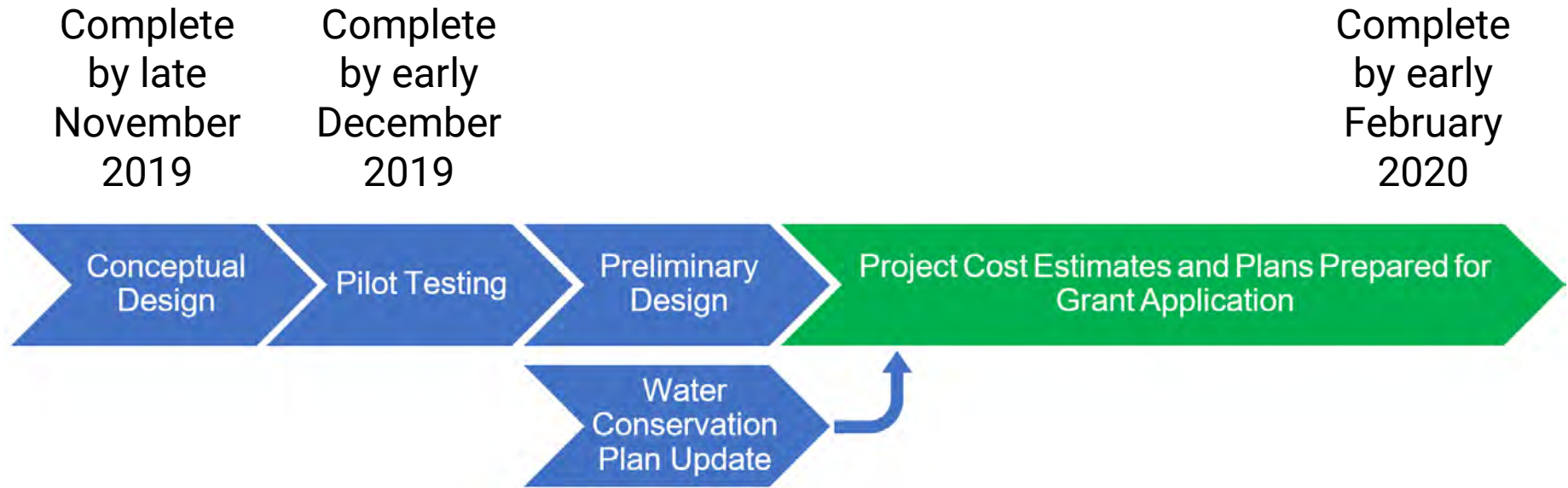
Conceptual Design and Pilot Testing

- Currently evaluating treatment technologies, site layout and hydraulics for the proposed treatment sites
- Preparing for pilot testing in November to provide information for optimizing manganese filtration
- The primary goal at this stage is to determine the best technology and confirm suitability & sizing

Treatment and Disinfection Options

- Filtration is required for manganese removal, and several options will be reviewed including media and membrane filtration
- Some wells may require UV disinfection and chlorination – this will be confirmed in the coming weeks once a Groundwater at Risk of Pathogens (GARP) study is completed
- Secondary disinfection with chlorination (low level residual) is considered best practice for all water systems and is recommended in the Guidelines for Canadian Drinking Water Quality

Advancing the Project



Thank You

