

# Wastewater Treatment

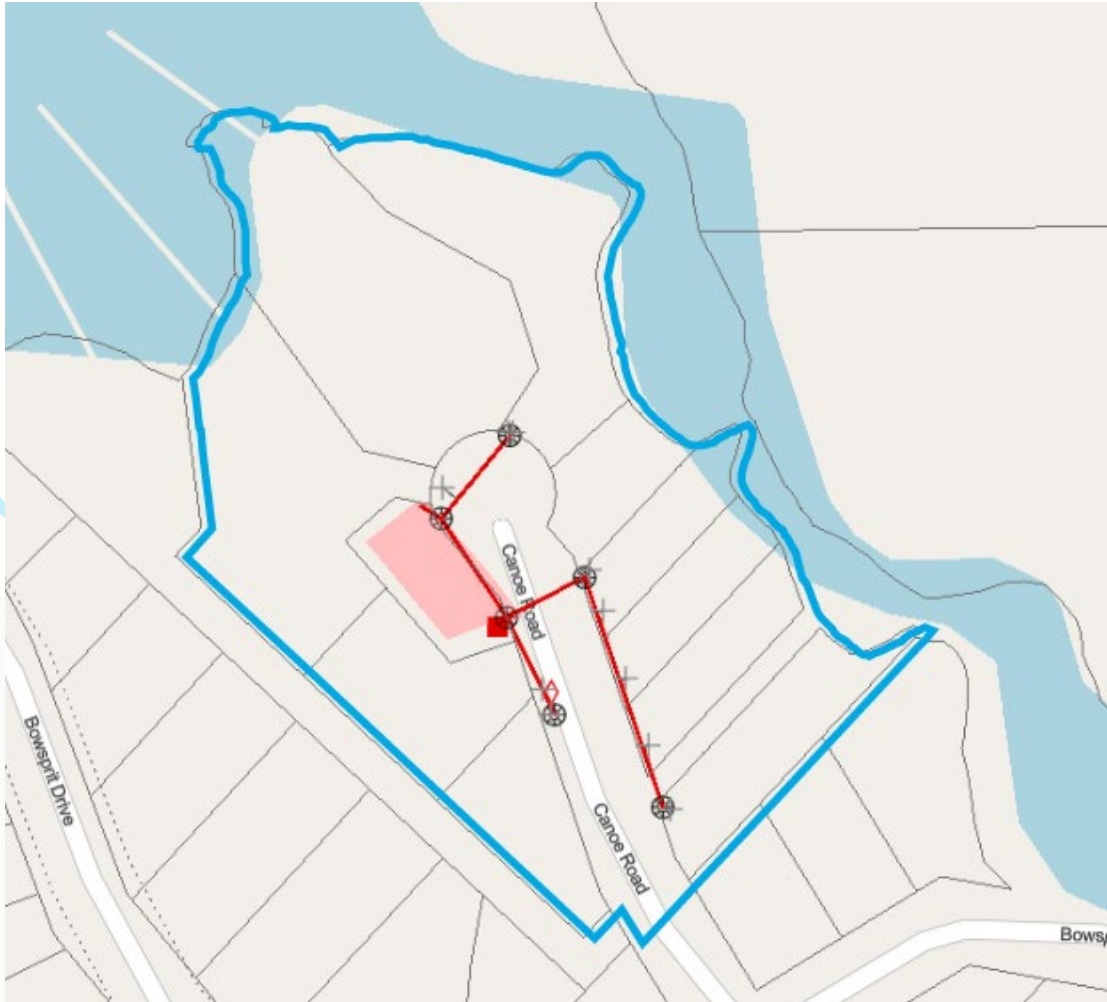
## Summer 2020 Capital Funding Update

Area A – Canoe Road

[www.scrd.ca](http://www.scrd.ca)



# Canoe Road Wastewater Service Area



# Topics

- Summary of previous review
- Capital Funding Update
- What's next?
- Questions



# Summary of previous review

- **Wastewater Service Review:** High-level review of wastewater services within the SCRD [www.scrd.ca/wastewater](http://www.scrd.ca/wastewater)
- **Asset Management Plans:** Service-specific review. Summary of service establishment, relevant bylaws and asset inventory. Preliminary life-cycle and operational cost analysis.
- **Community Engagement:** SCRD hosted information sessions to share findings and gather feedback from residents.
- **Fact Sheets:** Created to provide residents with a quick glance of the preliminary service review findings.
- **Budget Revision:** Staff prepared revised budget models to reflect new datasets and to align with resident feedback.
- **Rate Adjustment:** Some User Rates and Frontage Fees were adjusted to reflect updated budget information.

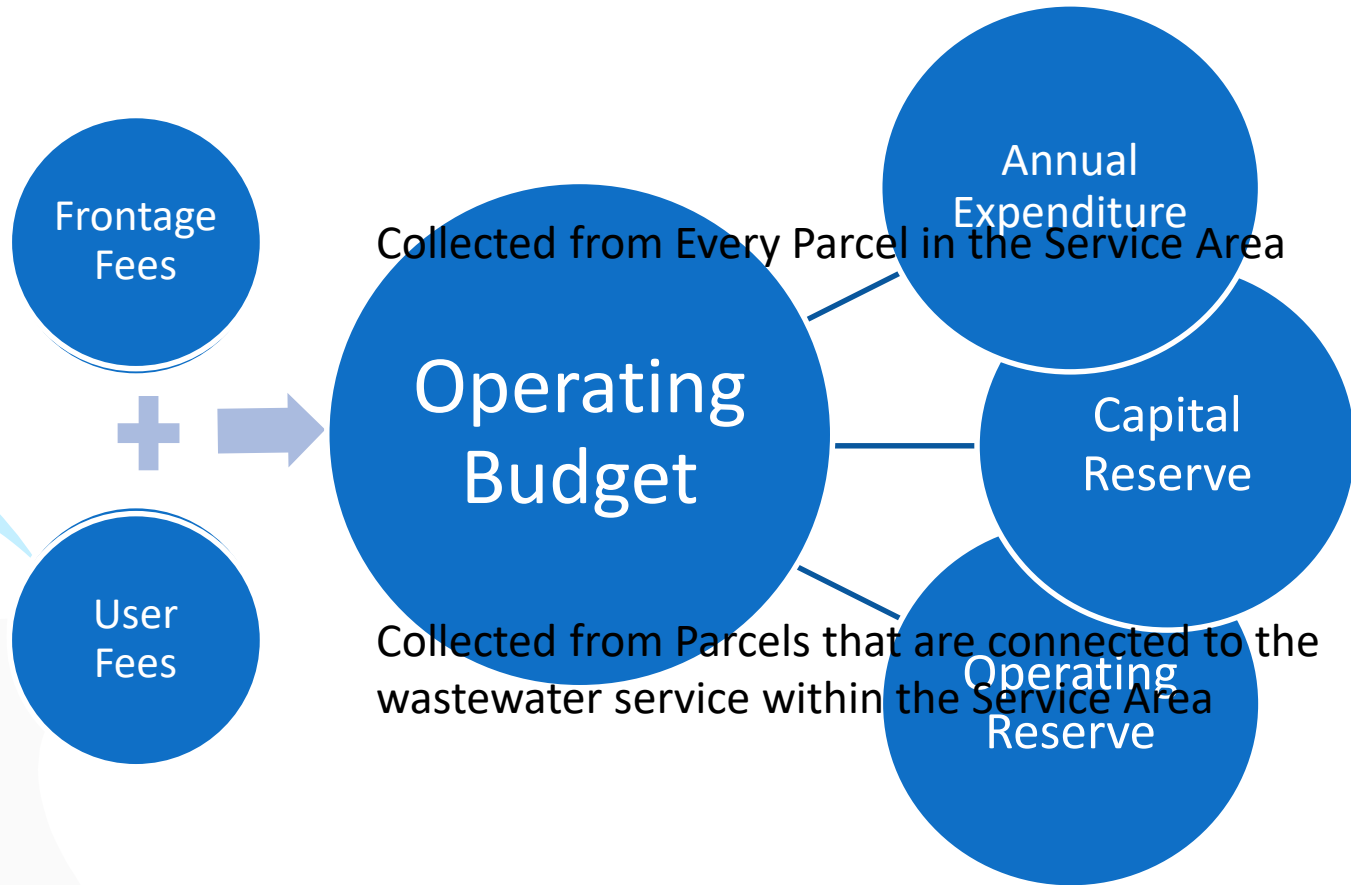


# Summary of previous review

- **Key Findings – 2019 Wastewater Service Review**
  - Existing revenue is unsustainable
    - Operations Budget often greater than revenues generated from User Fees
    - Contributions to Reserve funds deferred frequently
  - Future capital expenditures not planned for
    - Ratio of Capital Reserves : Future Capital Expenses too low



# Previous Funding Model - Recap



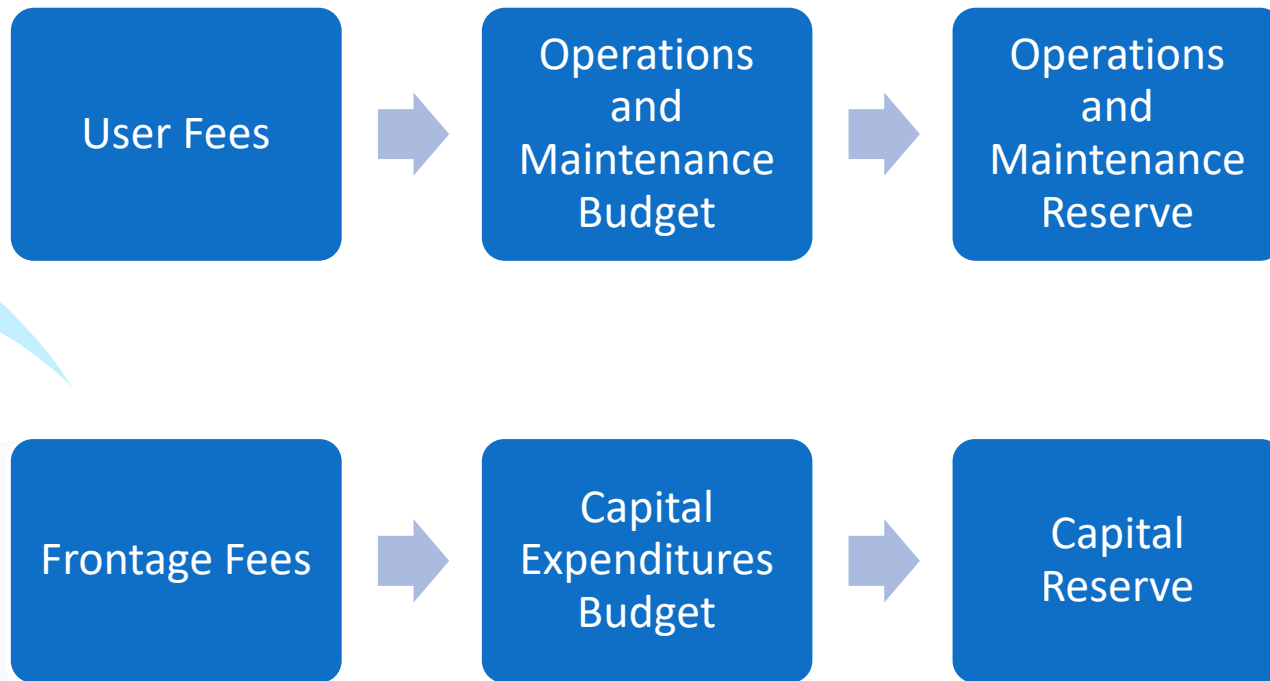
# Summary of previous review

- **Key Outcomes**

- Decoupled User Fee and Frontage Fees
  - User Fee revenue only fund Operation and Maintenance
  - Frontage Fees only fund Capital Expenses
- Extensive Review of Operation & Maintenance requirements
  - Audited Operation and Maintenance activities
  - Revised O&M Budget to ensure adequate funding
  - Established O&M Reserve minimum targets
  - **Continue to be reviewed annually**
- Developed Capital Funding Models to plan for future capital expenses.



# Sustainable Long-Term Funding Model





# Summary of previous review

## “Why Do We Need an Operating Reserve?”

- Unforeseen repairs can exceed annual operating budget
- Unable to borrow for Operational Expenses

Operating Reserves are withdrawn **only** for your service area.



# Summary of previous review

- **Impact on wastewater rates:**

- Canoe Road Wastewater O&M Budget Change ~ (325)%
- 2019 O&M Reserve Balance = \$595.00

**Canoe Road Wastewater Rate Changes 2019-2020**

<i>Year</i>	<i>User Fee</i>	<i>O&amp;M Reserve Contribution</i>	<i>Debt Obligation</i>	<i>Frontage Fee</i>	<i>Total</i>
2019	\$218.75	\$0.00	\$0.00	\$153.00	\$371.75
2020	\$929.75	\$146.83	\$424.30	\$0.00	\$1500.88
Increase	\$711.00	\$146.83	\$424.30	-\$153.00	\$1129.13

\*Reviewed Annually



# New Developments

- We Listened to Resident Feedback:
  - Analyzed historical SCRD contract data to refine long-term Capital Model
    - Reduced Engineering Allowance Estimates ~3%
    - Reduction of contingency ~15%
  - Tolerance for Debt
    - Considered financing larger portions of projects
  - Creation of 5-year rate structure proposal
    - Revised Annually
    - Provides residents advance notice of rate structure



# New Developments

- Updated Savings/Borrowing Rates to match current rates
  - Variable borrowing rates based on term of loan
- Applied variable Construction Cost Index to better reflect construction inflation rate over time

## Construction Inflation

Period	Rate
(1-10 Yrs)	1.90%
(11-20 Yrs)	3.24%
(21-30 Yrs)	2.95%
(31-40 Yrs)	3.51%
(41-50 Yrs)	4.64%
(51-60 Yrs)	4.42%



# Let's Talk Infrastructure Funding

- Provincial Legislation – Local Government Act
  - Local Service Areas in Regional Districts can be funded ONLY by participants
  - Costs are shared by a small number of people
- All infrastructure degrades over time
  - Reduced performance
  - Higher maintenance costs
- Infrastructure costs inflate over time



# Capital Funding Plan – Method

## Expenditures:

- Developed timeline of anticipated replacement using Estimated Useful Life of infrastructure
- Used most recent replacement cost estimates
- Inflated to future value using Construction Cost Indexes built from historical data
  - Variable rates based on replacement date
- Included Debt Financing Costs

## Revenue:

- Applied annual interest accrual



# Capital Funding Plan – Method

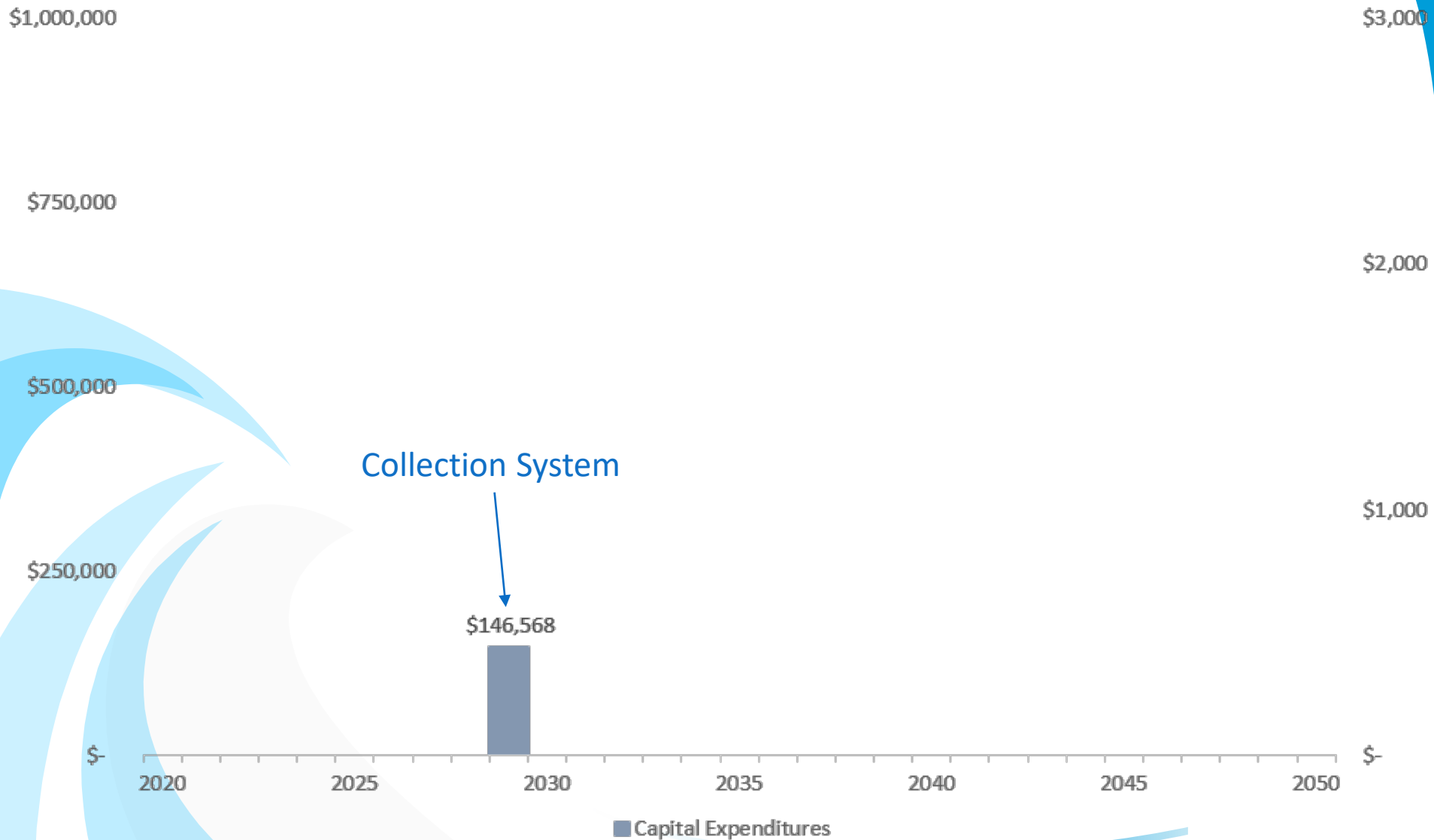
## Expenditures:

- Developed timeline of anticipated replacement using Estimated Useful Life of infrastructure
- Wastewater services have 3 main components:
  - Treatment Plant – 50 Year Life  
(Some have minor components with shorter lifespan eg. Filters)
  - Disposal System – 40 Year Life
  - Collection System - ~80 Year Life



# Canoe Road

## 30-Year Anticipated Capital Expenditures

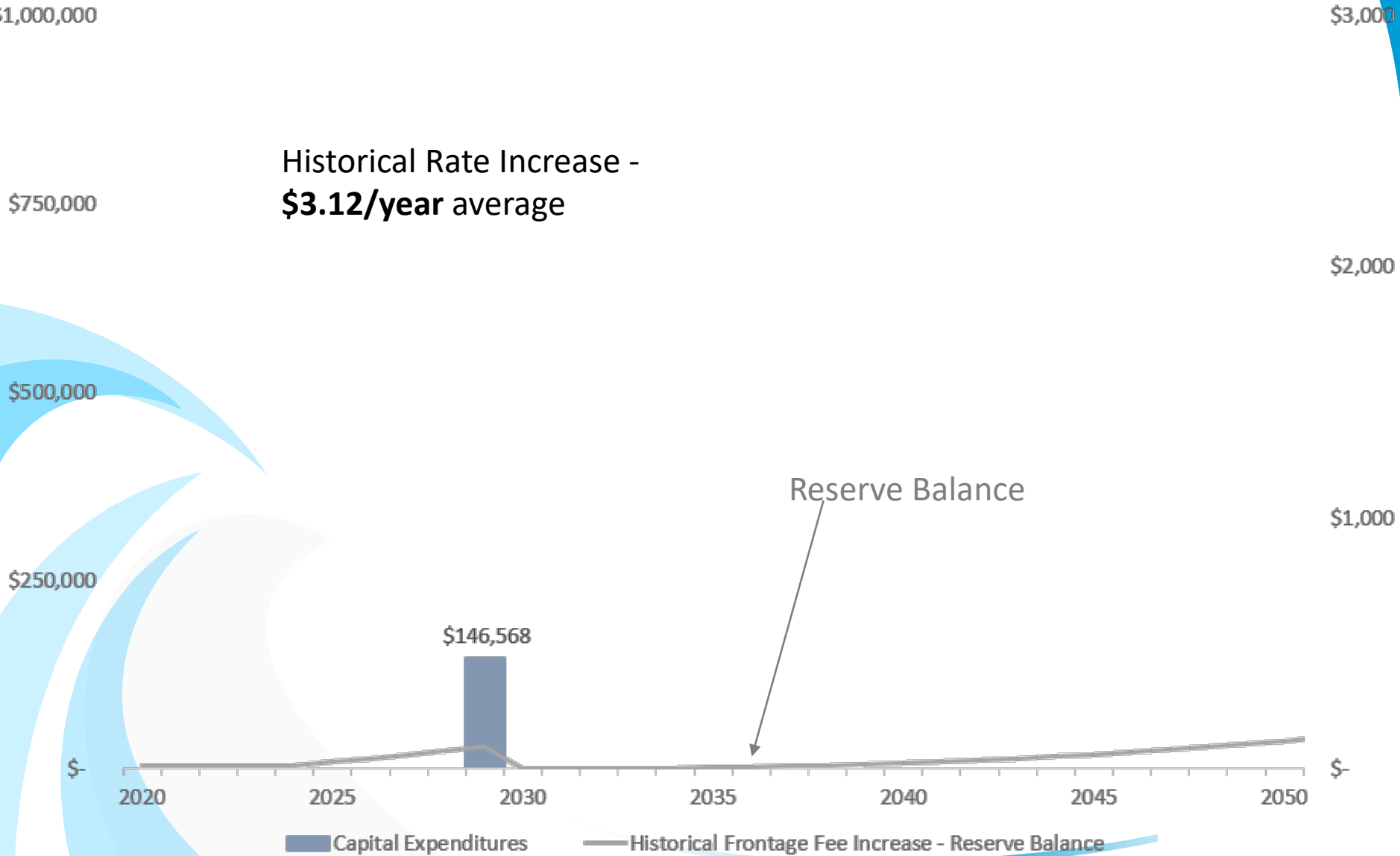




# Canoe Road

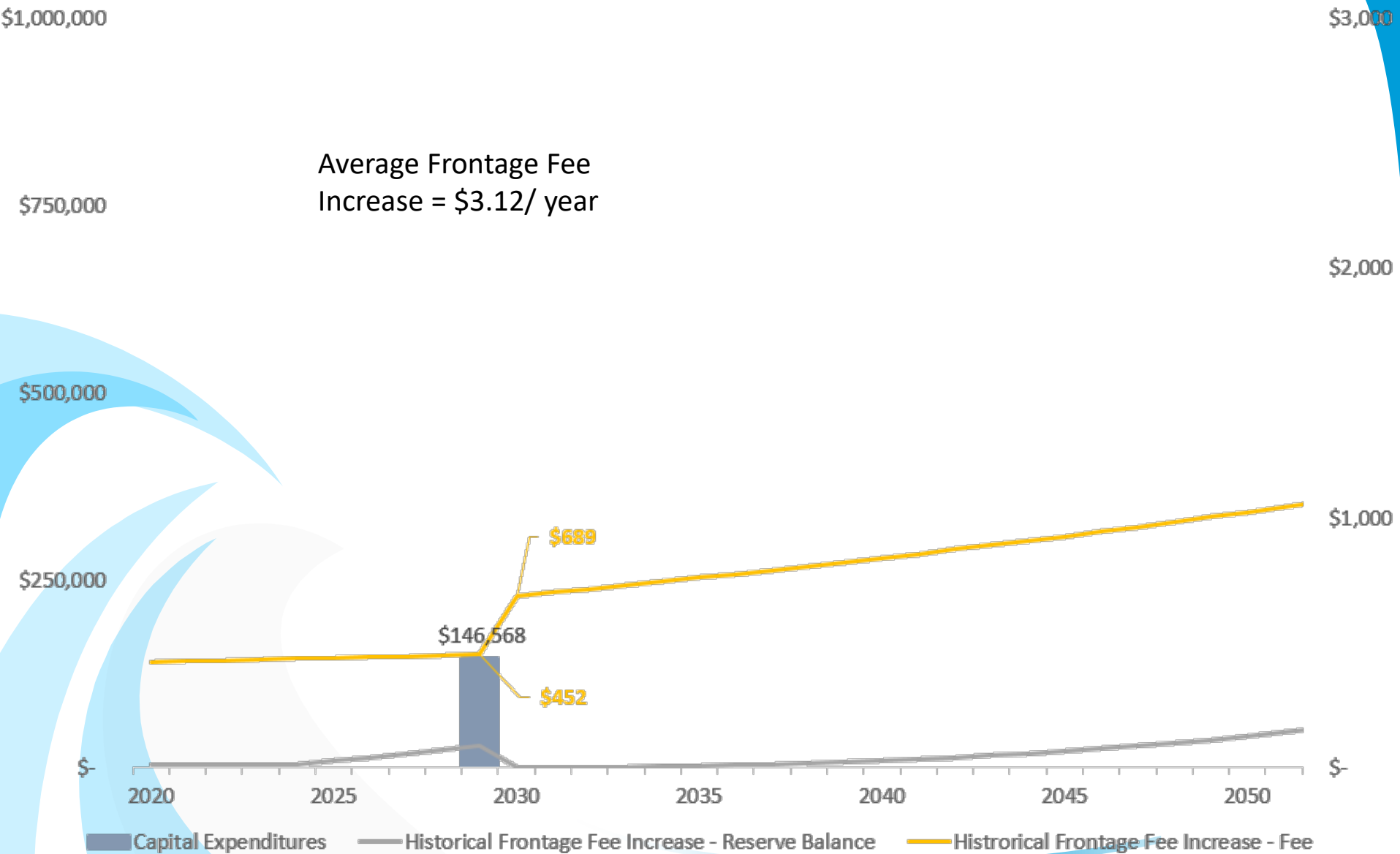
## 30-Year Anticipated Capital Expenditures

Historical Rate Increase -  
**\$3.12/year** average



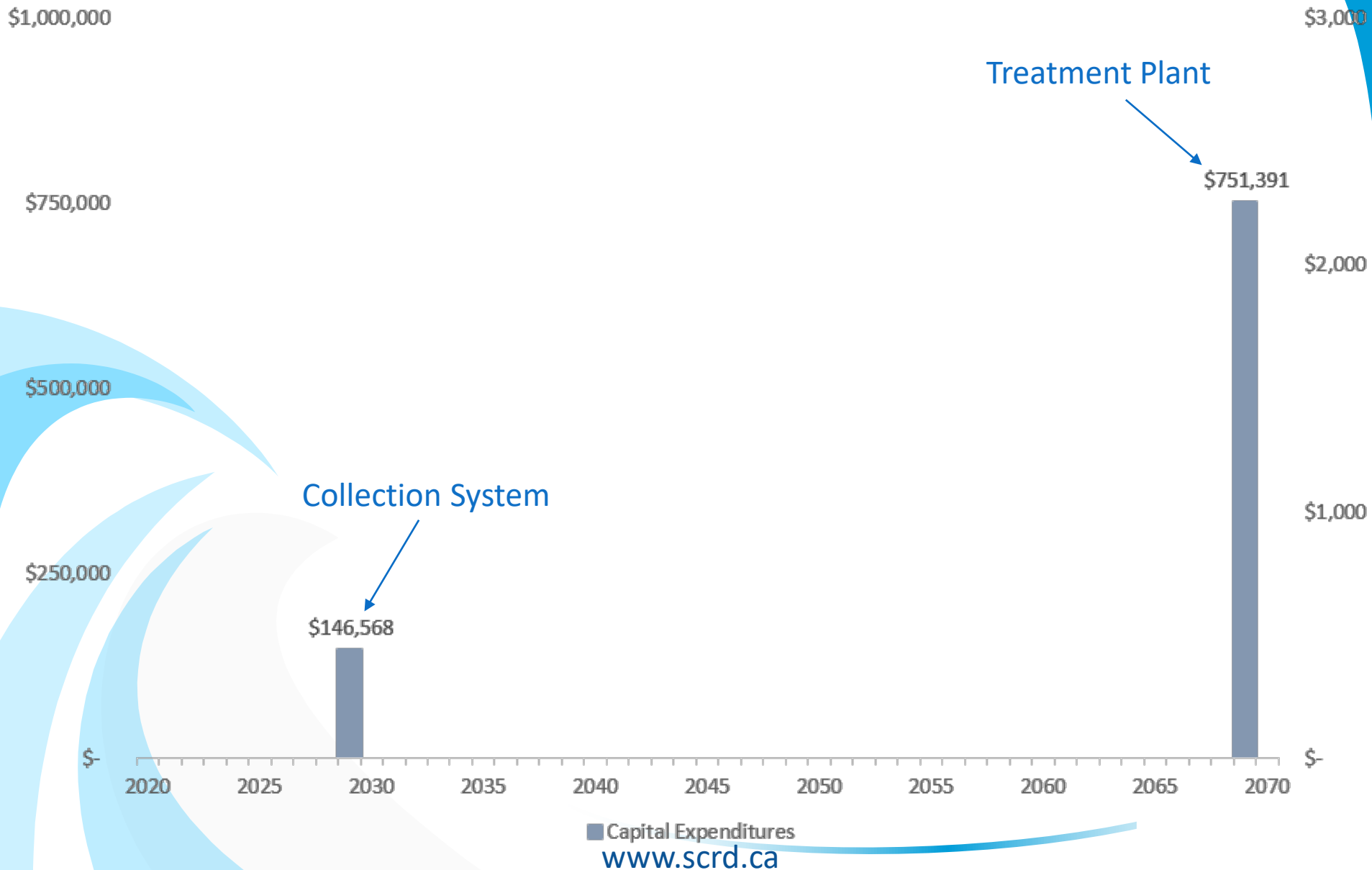
# Canoe Road

## 30-Year Anticipated Capital Expenditures



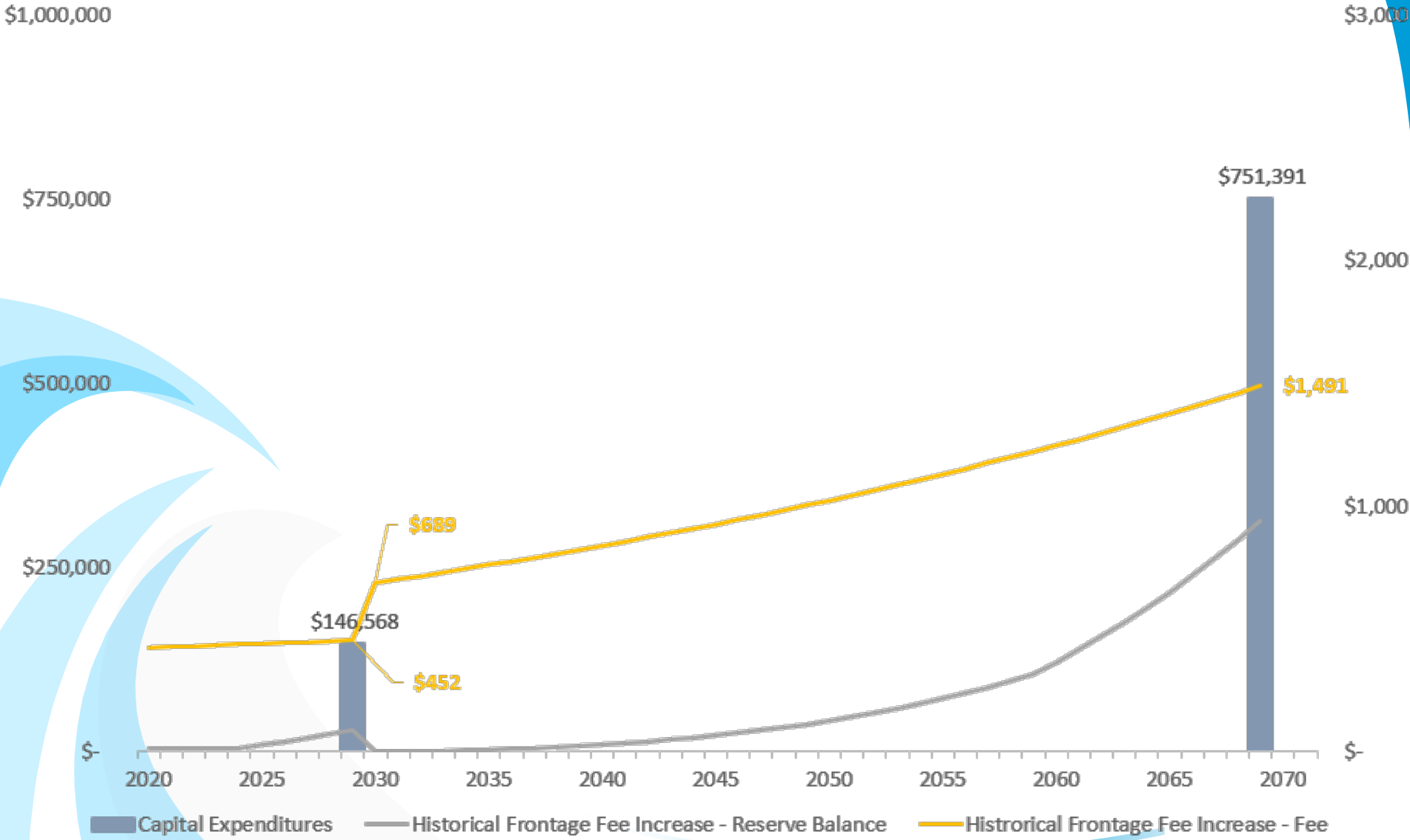
# Canoe Road

## 50-Year Anticipated Capital Expenditures



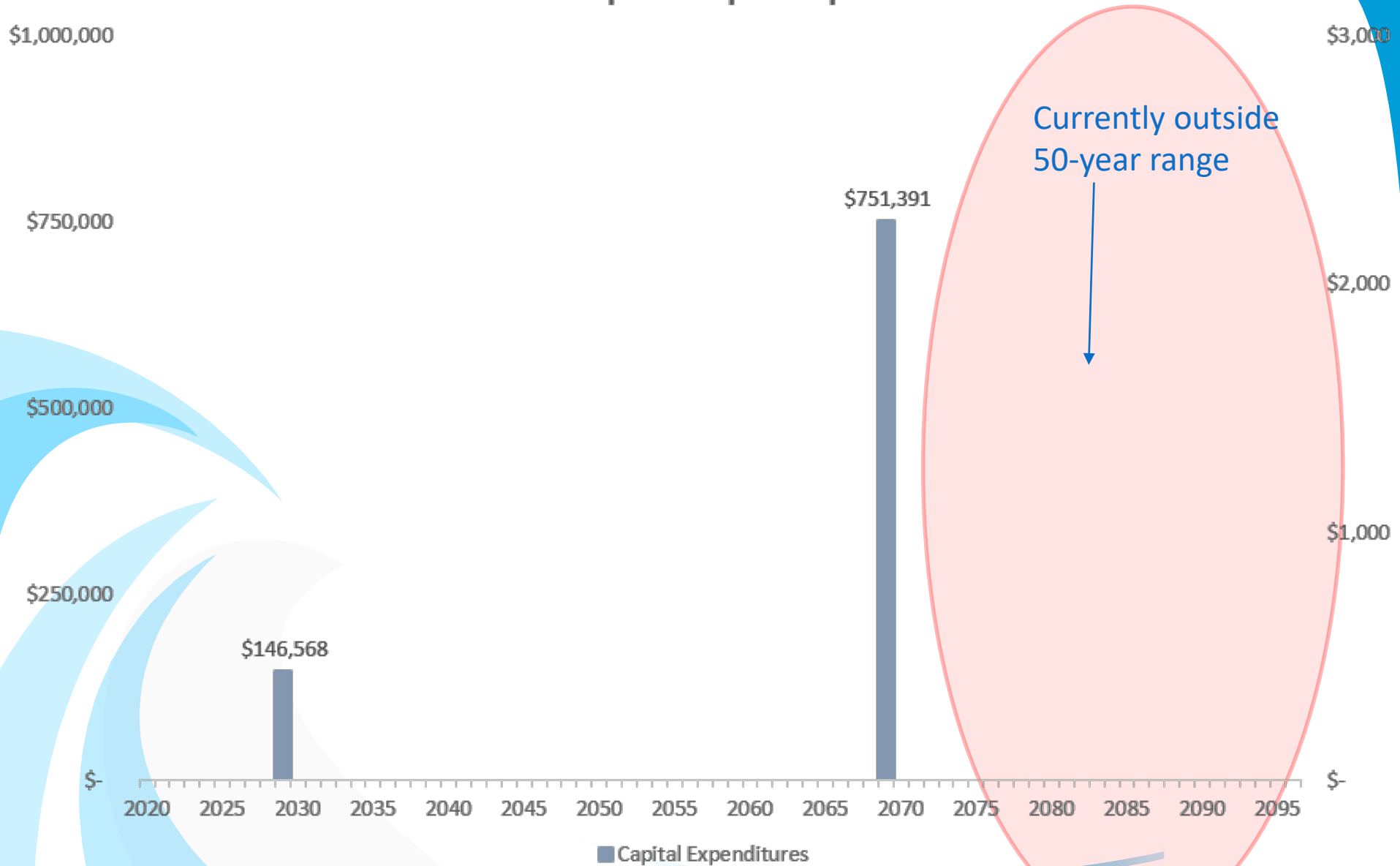
# Canoe Road

## 50-Year Anticipated Capital Expenditures



# Canoe Road

## 75-Year Anticipated Capital Expenditures



■ Capital Expenditures

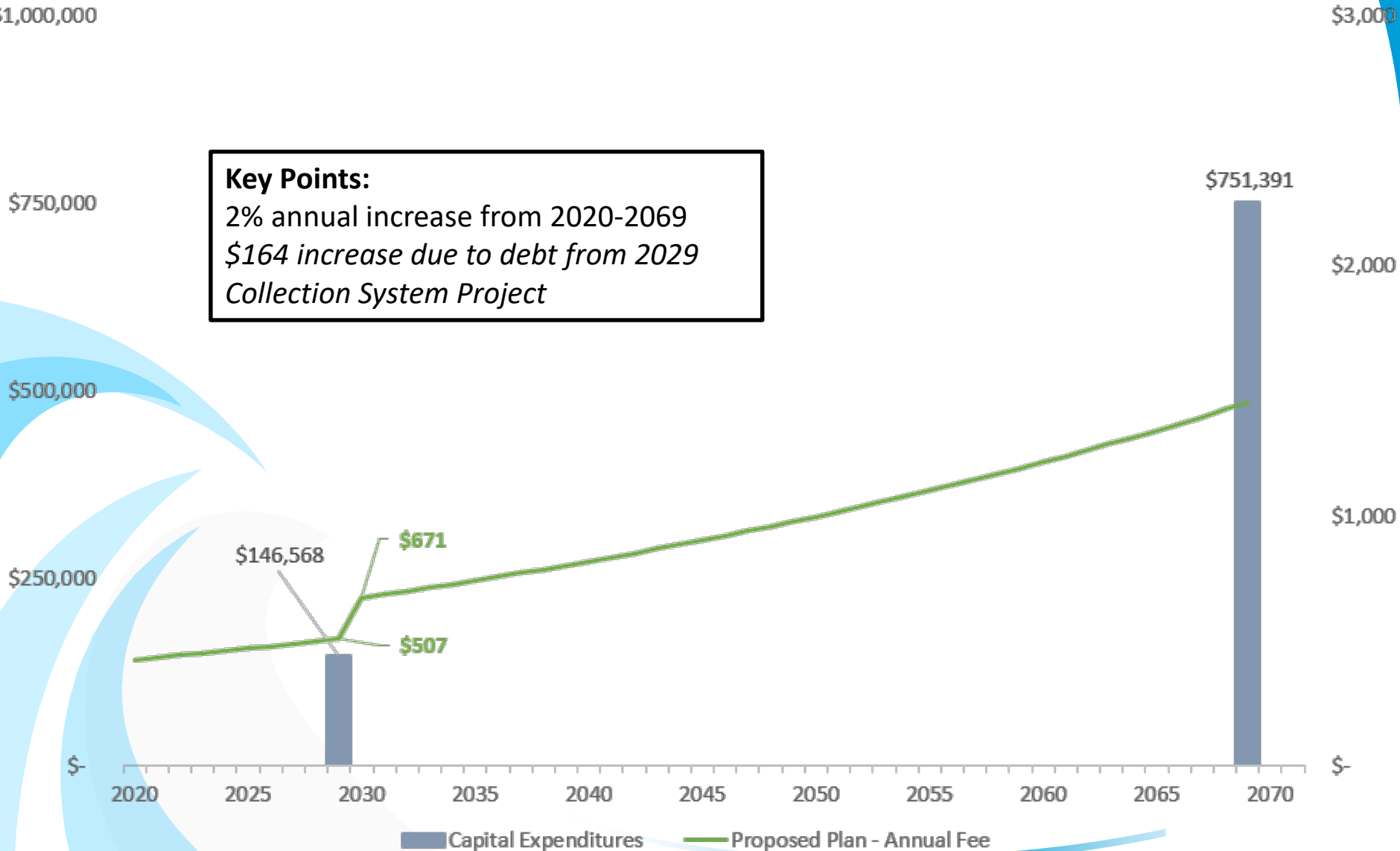
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# Canoe Road

## 50-Year Anticipated Capital Expenditures

### Key Points:

2% annual increase from 2020-2069  
*\$164 increase due to debt from 2029  
Collection System Project*

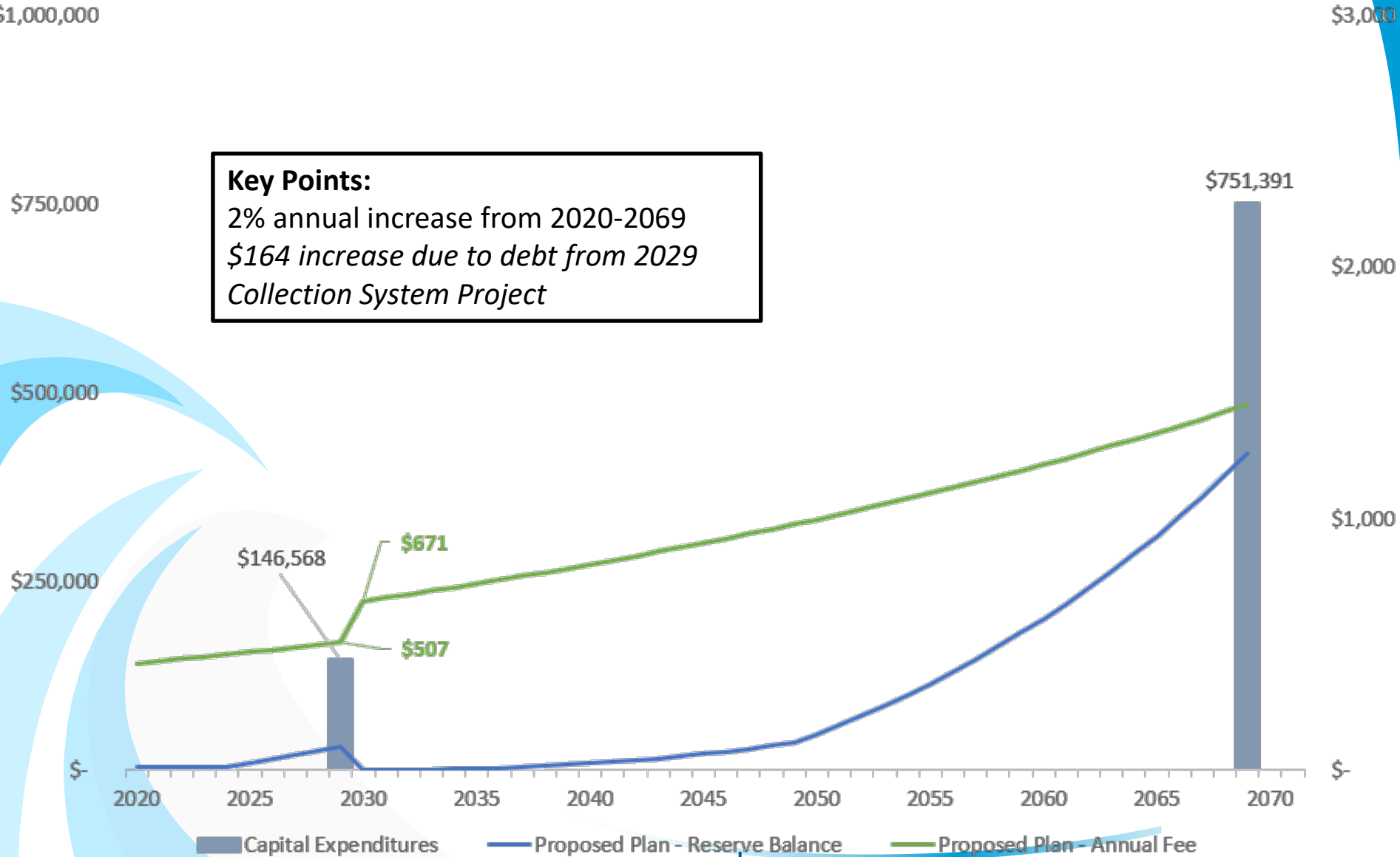


# Canoe Road

## 50-Year Anticipated Capital Expenditures

### Key Points:

2% annual increase from 2020-2069  
*\$164 increase due to debt from 2029  
Collection System Project*



# Canoe Road

## 50-Year Anticipated Capital Expenditures

\$1,000,000

\$3,000

\$750,000

\$2,000

\$500,000

\$1,000

\$250,000

\$-

\$-

### Key Points:

\$50/ year increase from 2020-2024

2% annual increase from 2025-2069

*No Debt driven rate increases*

\$751,391

\$146,568

\$624

\$424

2020

2025

2030

2035

2040

2045

2050

2055

2060

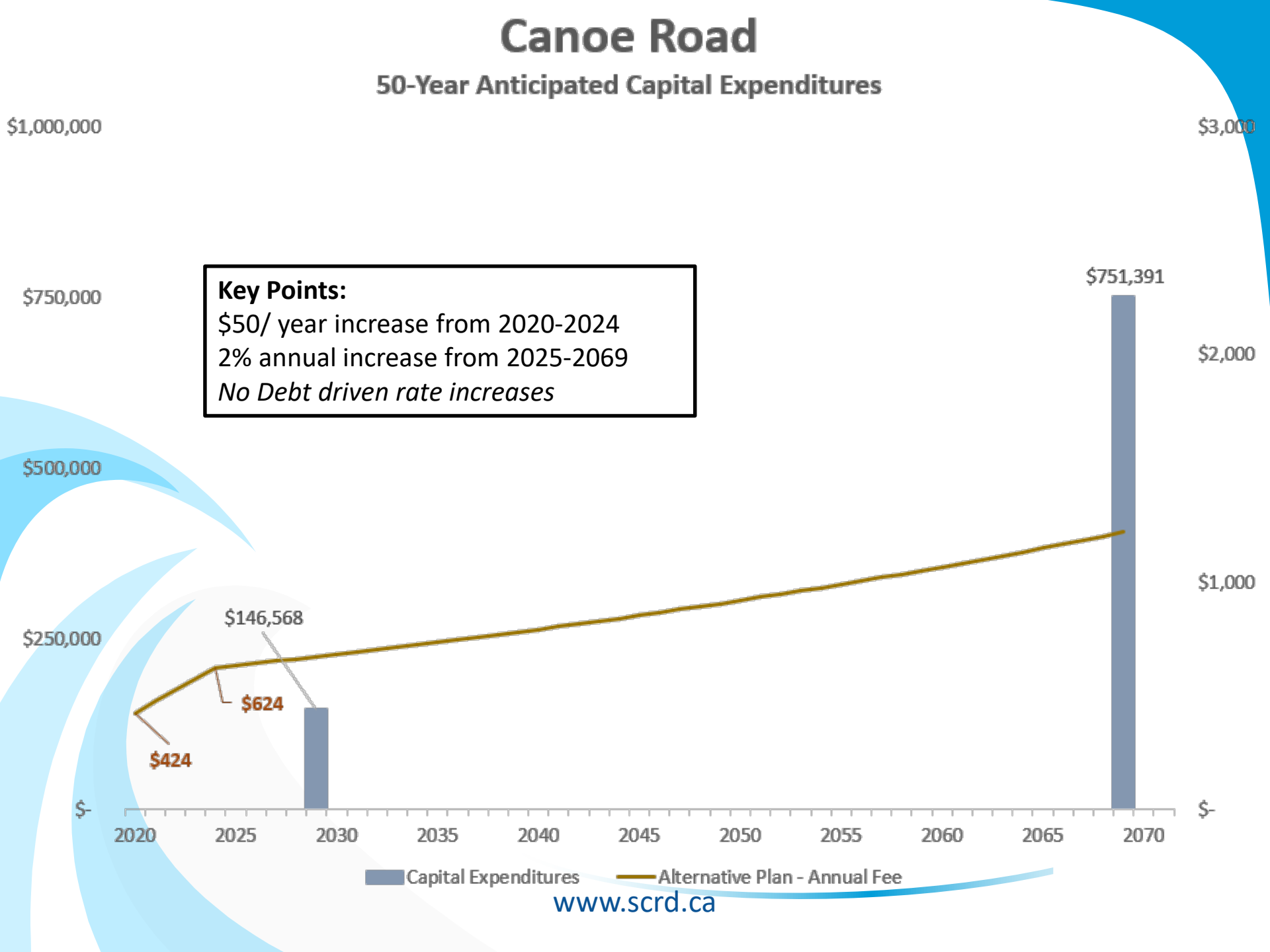
2065

2070

Capital Expenditures

Alternative Plan - Annual Fee

[www.scrd.ca](http://www.scrd.ca)





# Canoe Road

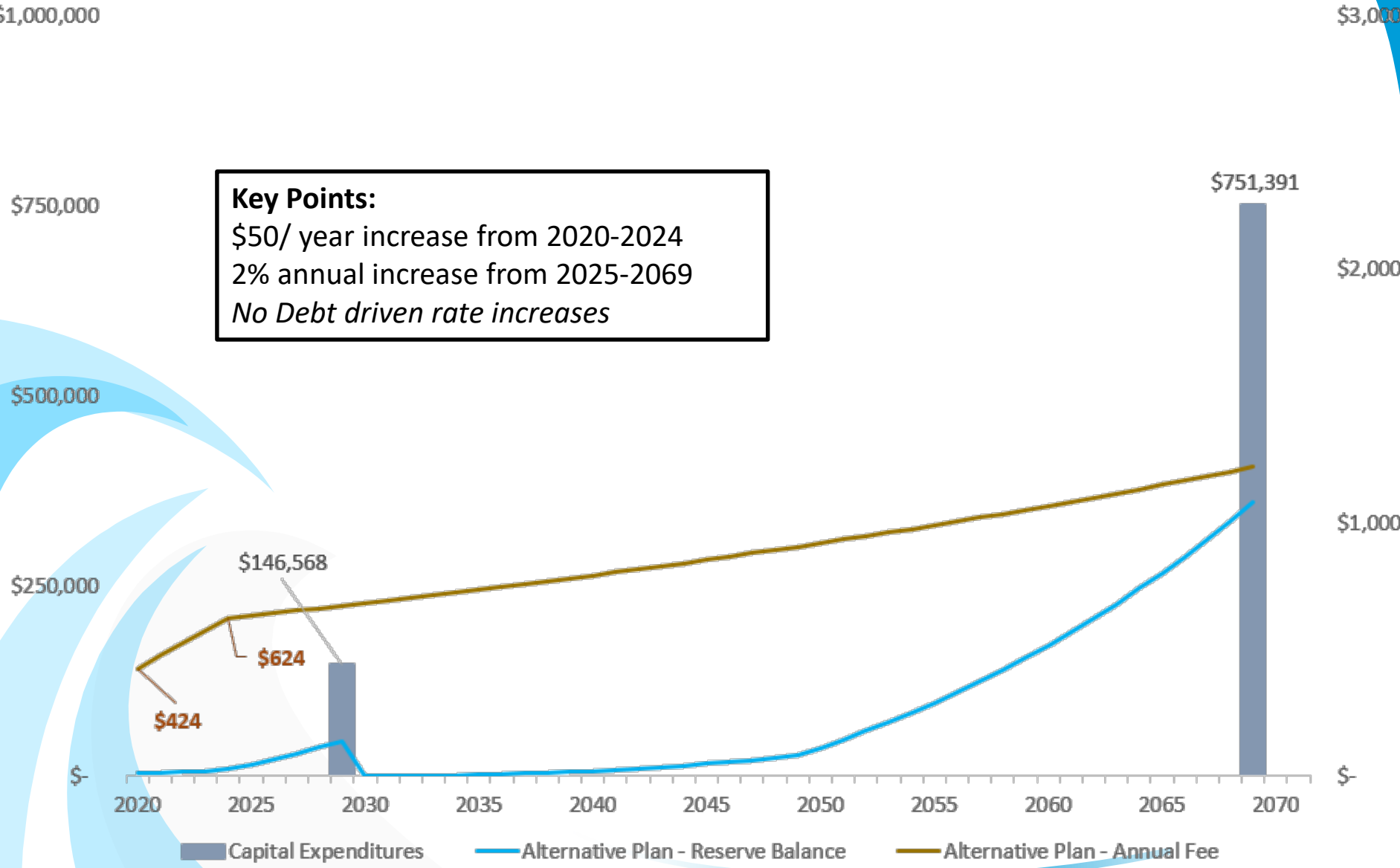
## 50-Year Anticipated Capital Expenditures

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\$50/ year increase from 2020-2024

2% annual increase from 2025-2069

*No Debt driven rate increases*



# Canoe Road

## 50-Year Anticipated Capital Expenditures

\$1,000,000

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\$500,000

\$250,000

\$-

\$2,000

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\$-

### Key Points:

2% annual increase from 2020-2069

Assumed 30% Grant for 2029 Collection System Project

\$751,391

\$146,568

2020

2025

2030

2035

2040

2045

2050

2055

2060

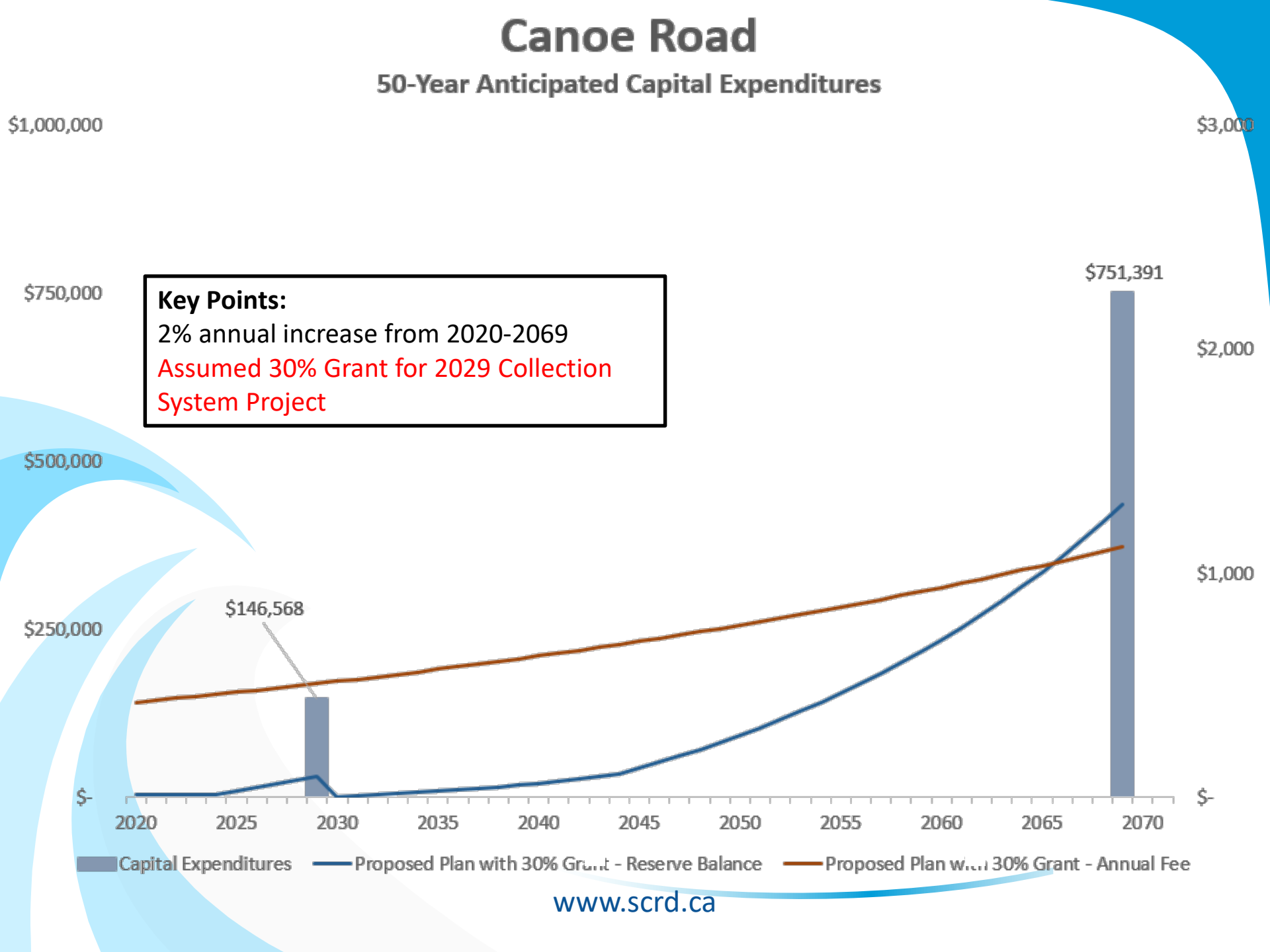
2065

2070

Capital Expenditures

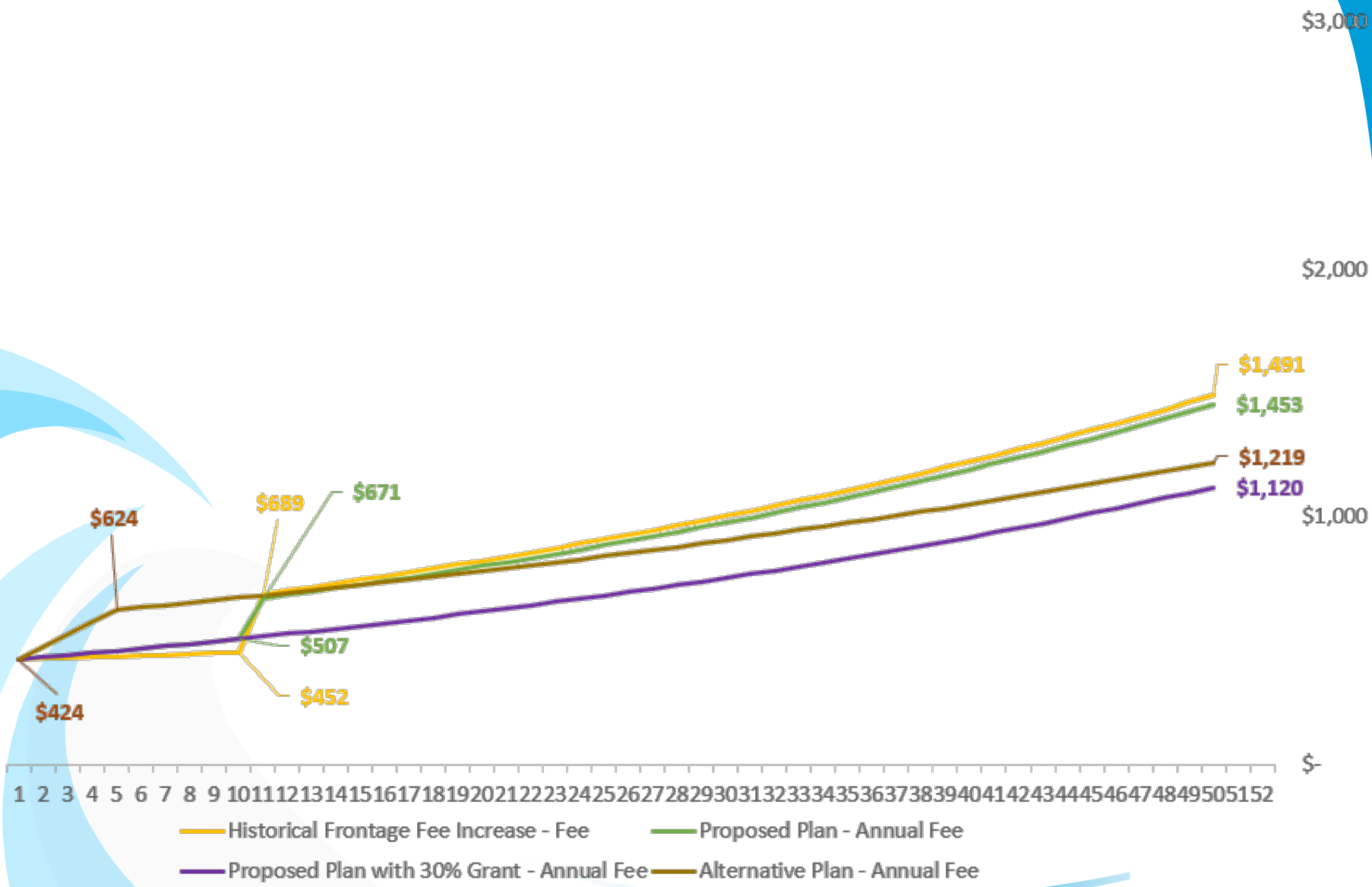
Proposed Plan with 30% Grant - Reserve Balance

Proposed Plan with 30% Grant - Annual Fee



# Canoe Road

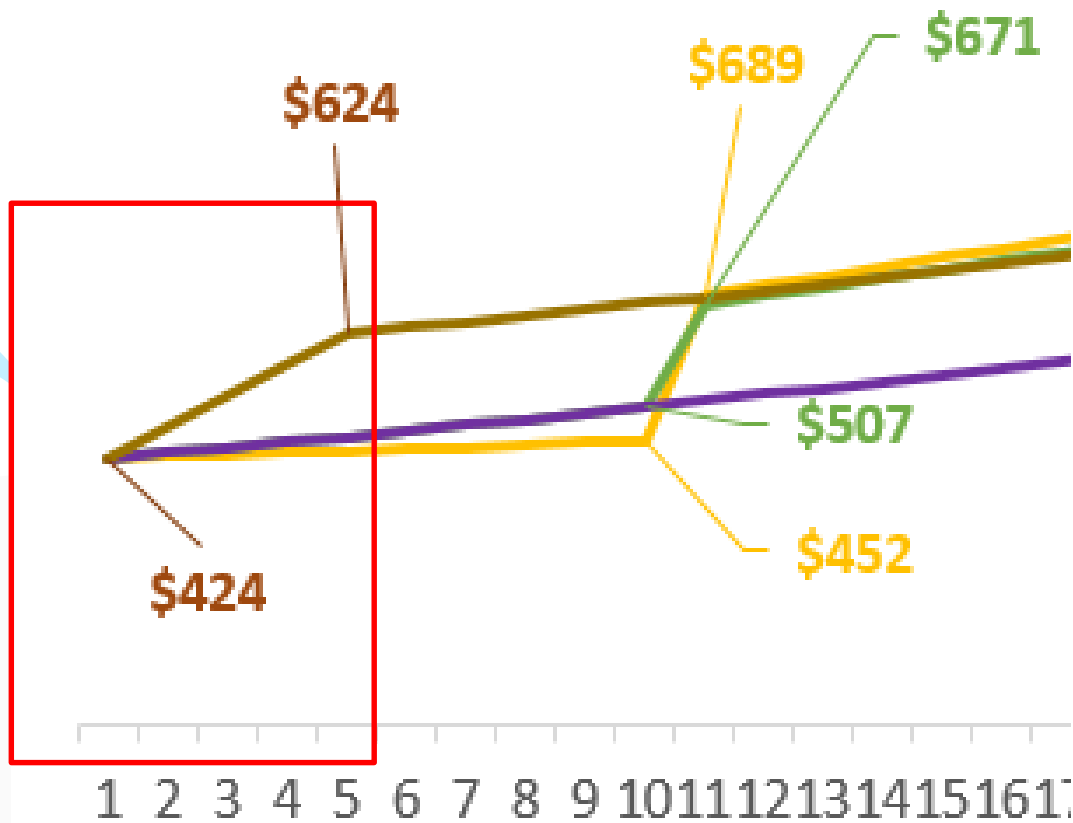
## 50-Year Fee Comparison



# Five Year Rate Structure

- Proposing to introduce a Five Year Rate structure to create cost certainty
- Future rate adjustments will be introduced five years in advance





# Five Year Rates

## Canoe Road Frontage Fees (2020-2025)

	User Fee*	O&M Reserve Contribution	Plan 1	Total	Plan 2	Total	Plan 3	Total
<b>2020</b>	\$929.75	\$146.83	<b>\$424</b>	<b>\$1,500.58</b>	<b>\$424</b>	<b>\$1,500.58</b>	<b>\$424</b>	<b>\$1,500.58</b>
<b>2021</b>	\$929.75	\$146.83	<b>\$433</b>	<b>\$1,509.58</b>	<b>\$474</b>	<b>\$1,550.58</b>	<b>\$433</b>	<b>\$1,509.58</b>
<b>2022</b>	\$929.75	\$146.83	<b>\$441</b>	<b>\$1,517.58</b>	<b>\$524</b>	<b>\$1,600.58</b>	<b>\$441</b>	<b>\$1,517.58</b>
<b>2023</b>	\$929.75	\$146.83	<b>\$450</b>	<b>\$1,526.58</b>	<b>\$574</b>	<b>\$1,650.58</b>	<b>\$450</b>	<b>\$1,526.58</b>
<b>2024</b>	\$929.75	\$146.83	<b>\$459</b>	<b>\$1,535.58</b>	<b>\$624</b>	<b>\$1,700.58</b>	<b>\$459</b>	<b>\$1,535.58</b>
<b>2025</b>	\$929.75	\$0.00	<b>\$468</b>	<b>\$1,397.75</b>	<b>\$643</b>	<b>\$1,572.75</b>	<b>\$468</b>	<b>\$1,397.75</b>

\*operating budget subject to annual review



# Operating Fees and Number of Users Connected to System

**Annual Operating Budget =  
\$5578.47\***

# of Users	User Fee*
5	\$ 1,115.69
6	\$ 929.75
7	\$ 796.92
8	\$ 697.31
9	\$ 619.83
10	\$ 557.85

\*operating budget subject to annual review



# Upcoming work

- Finalize Capital Funding Model
  - Final review of work to date.
- Continue to pursue grant opportunities for future work
- Present 5-year Rate Structure for Board Consideration
  - Provide residents with near-term rate certainty.
- Review O&M Budget (Annual Process)
  - Refine annual projection of maintenance costs.
  - Ensure appropriate Operating Reserve





# Conclusion

- Current rates are not financially sustainable.
- Multiple ways to finance 50-year Capital Expenditures.
- Annual Review will maintain up-to date information



# Questions?

- [www.scrd.ca/canoe-road](http://www.scrd.ca/canoe-road)
- [www.scrd.ca/wastewater](http://www.scrd.ca/wastewater)
- [info@scrd.ca](mailto:info@scrd.ca)

