

# Wastewater Treatment

## Summer 2020 Capital Funding Update

Area B – Square Bay



# Square Bay 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.

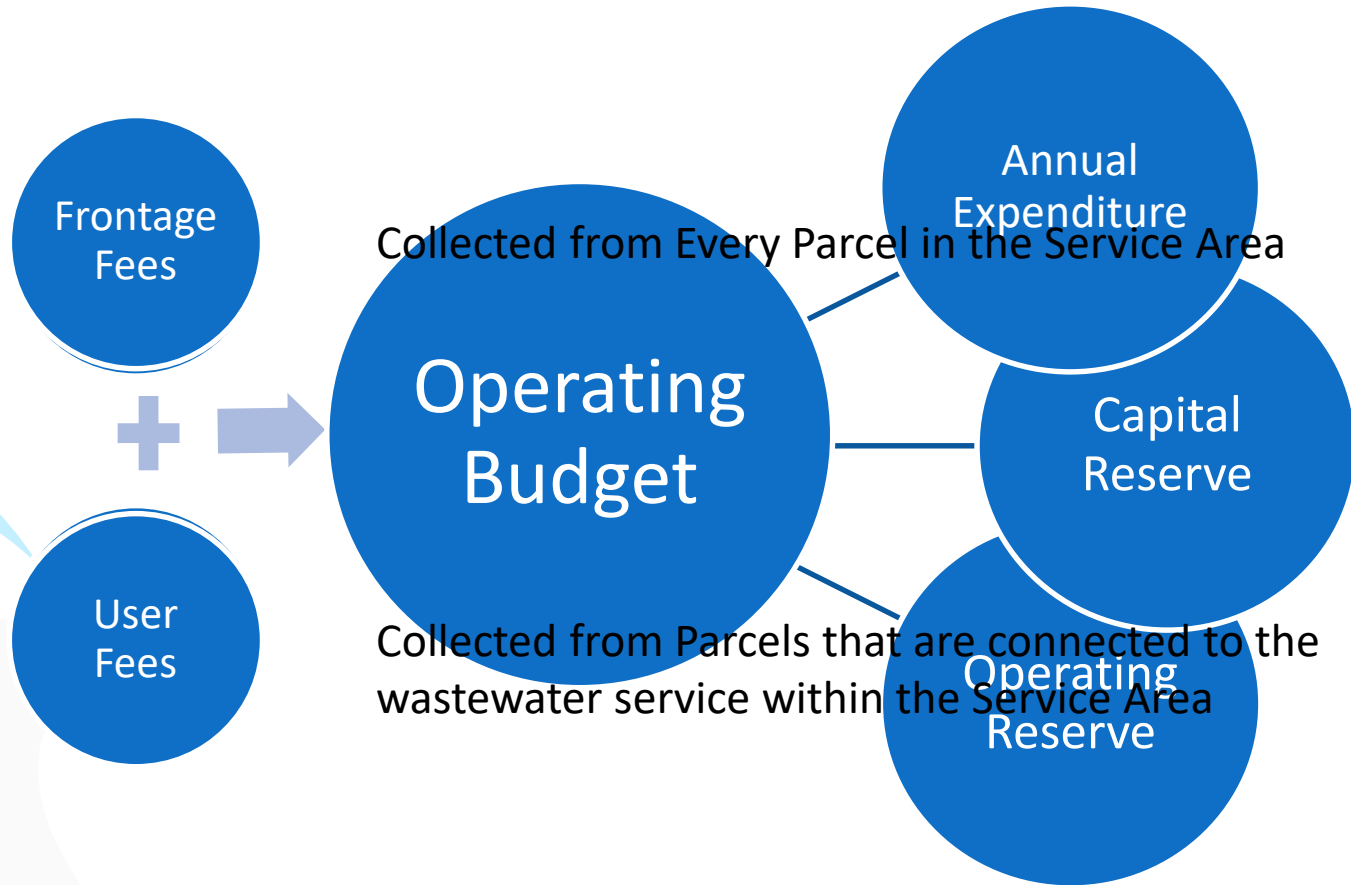


# Summary of previous review

- **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



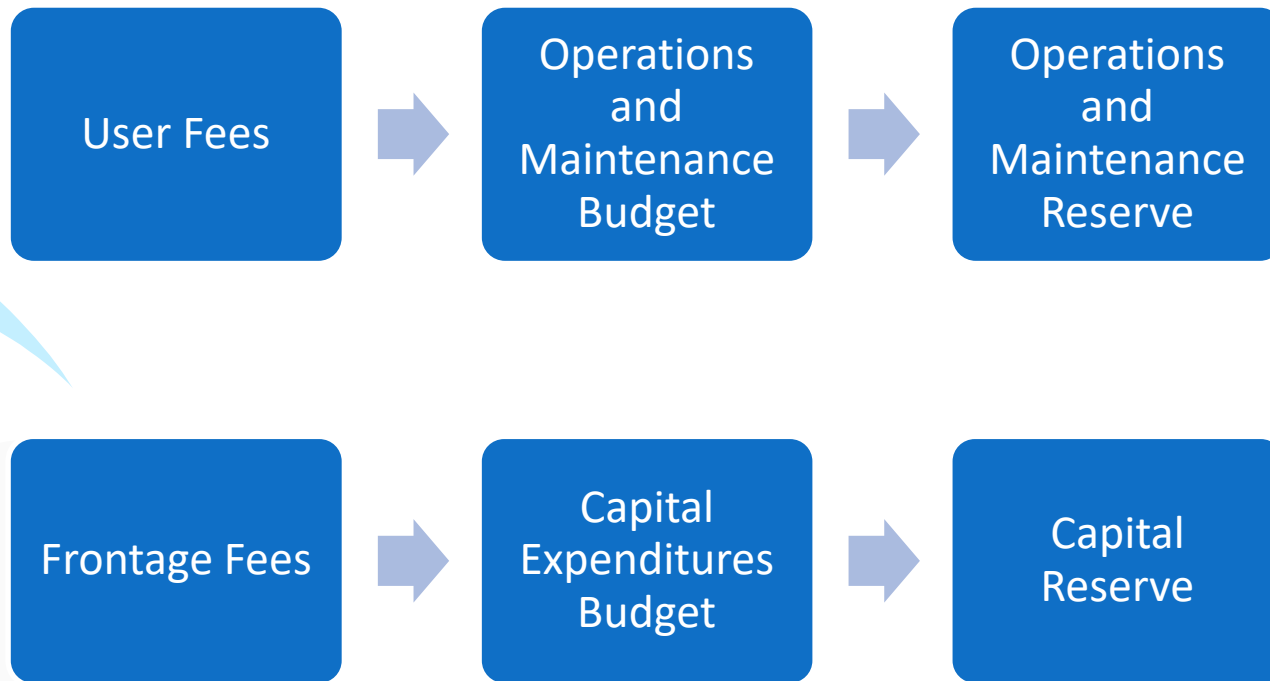
# Summary of previous review

- **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:**
  - Square Bay Wastewater O&M Budget Change ~ (59)%

Square Bay Wastewater Rate Changes 2019-2020				
<i>Year</i>	<i>User Fee</i>	<i>Debt Payment</i>	<i>Frontage Fee</i>	<i>Total</i>
2019	\$412.50	\$0.00	\$102.00	\$514.50
2020	\$501.19	\$217.42	\$0	\$718.61
Increase	\$88.69	\$217.42	-\$102	\$204.11

\*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

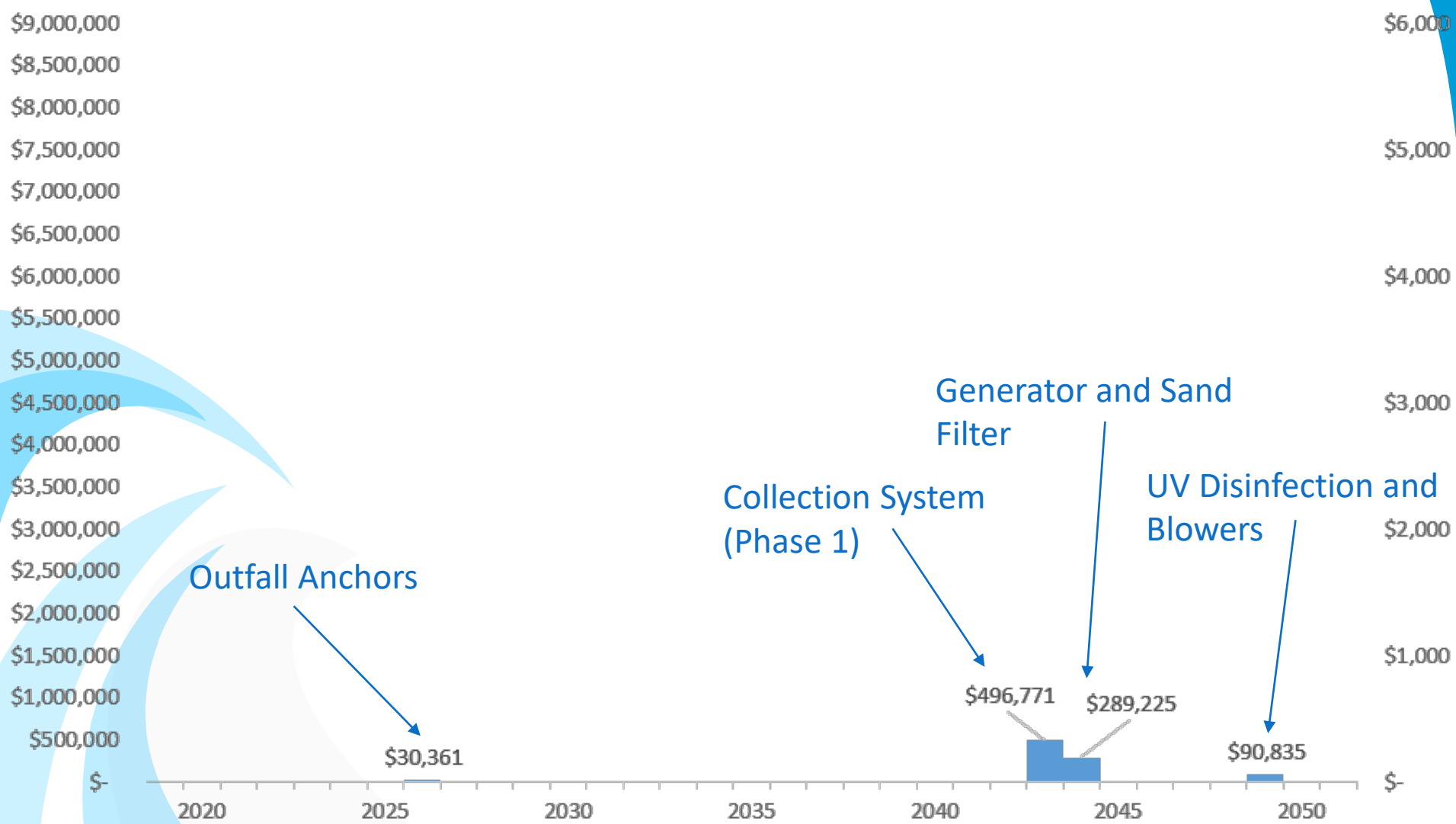
## Expenditures:

- 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



# Square Bay

## 30-Year Anticipated Capital Expenditures



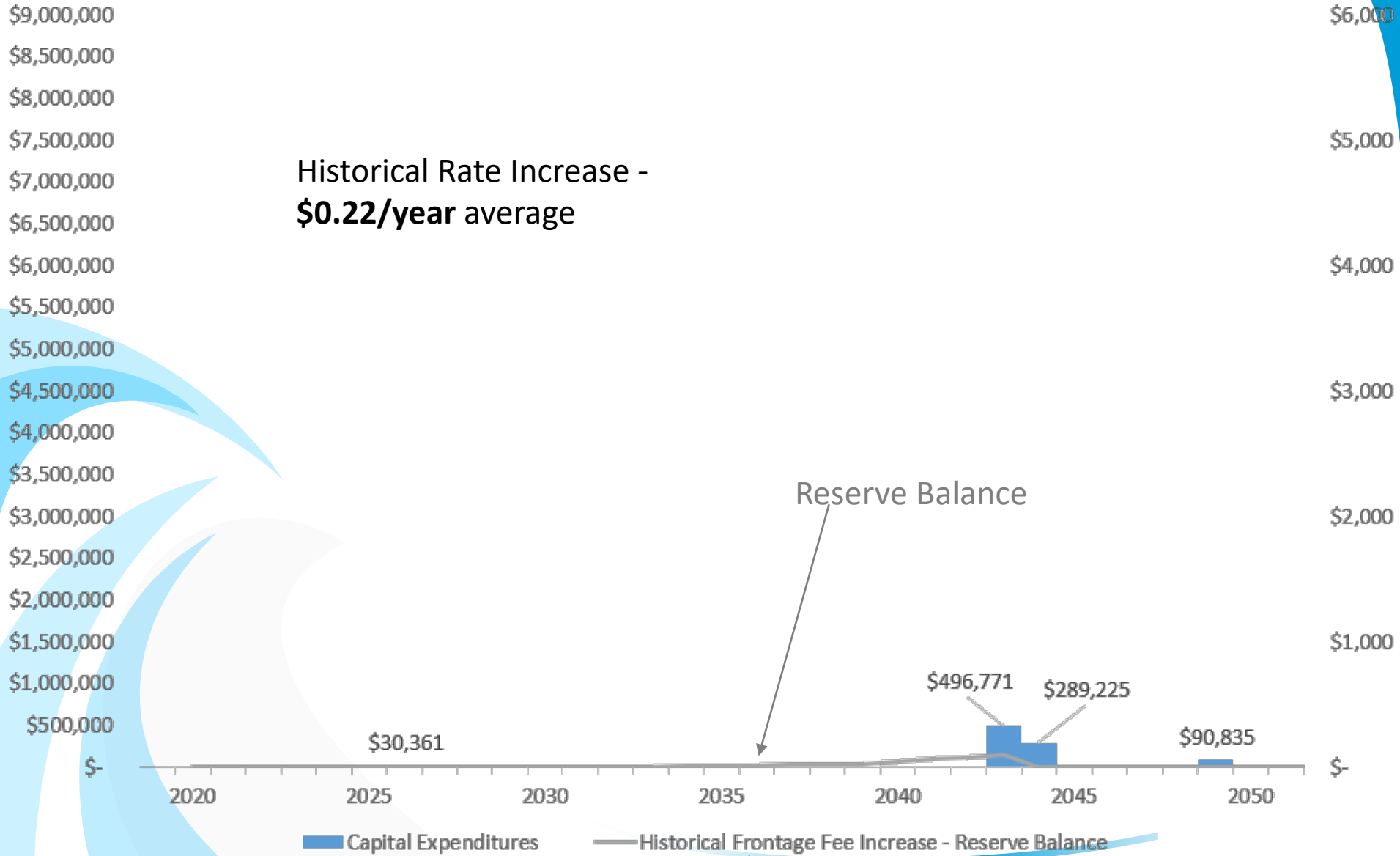
■ Capital Expenditures

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



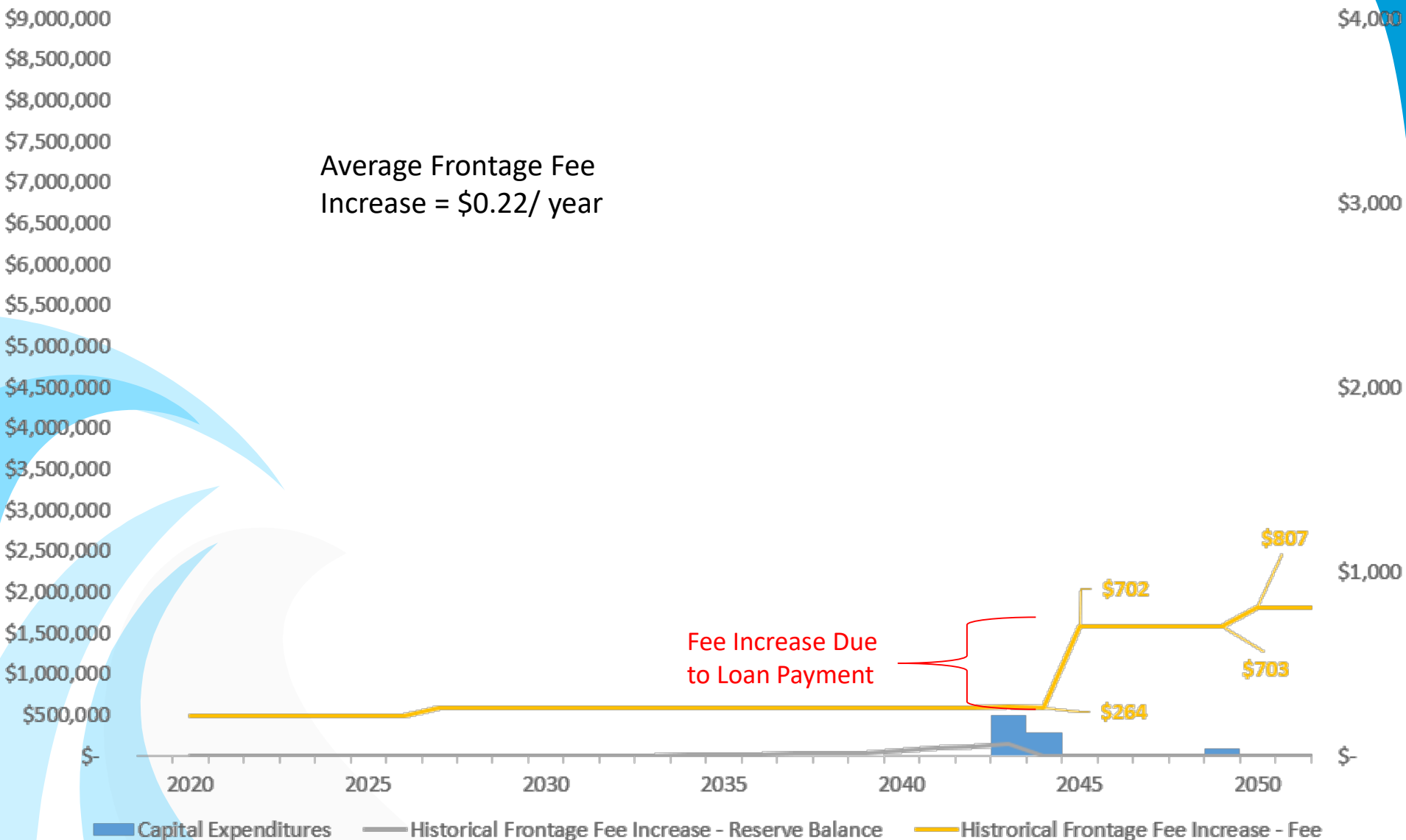
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## 30-Year Anticipated Capital Expenditures



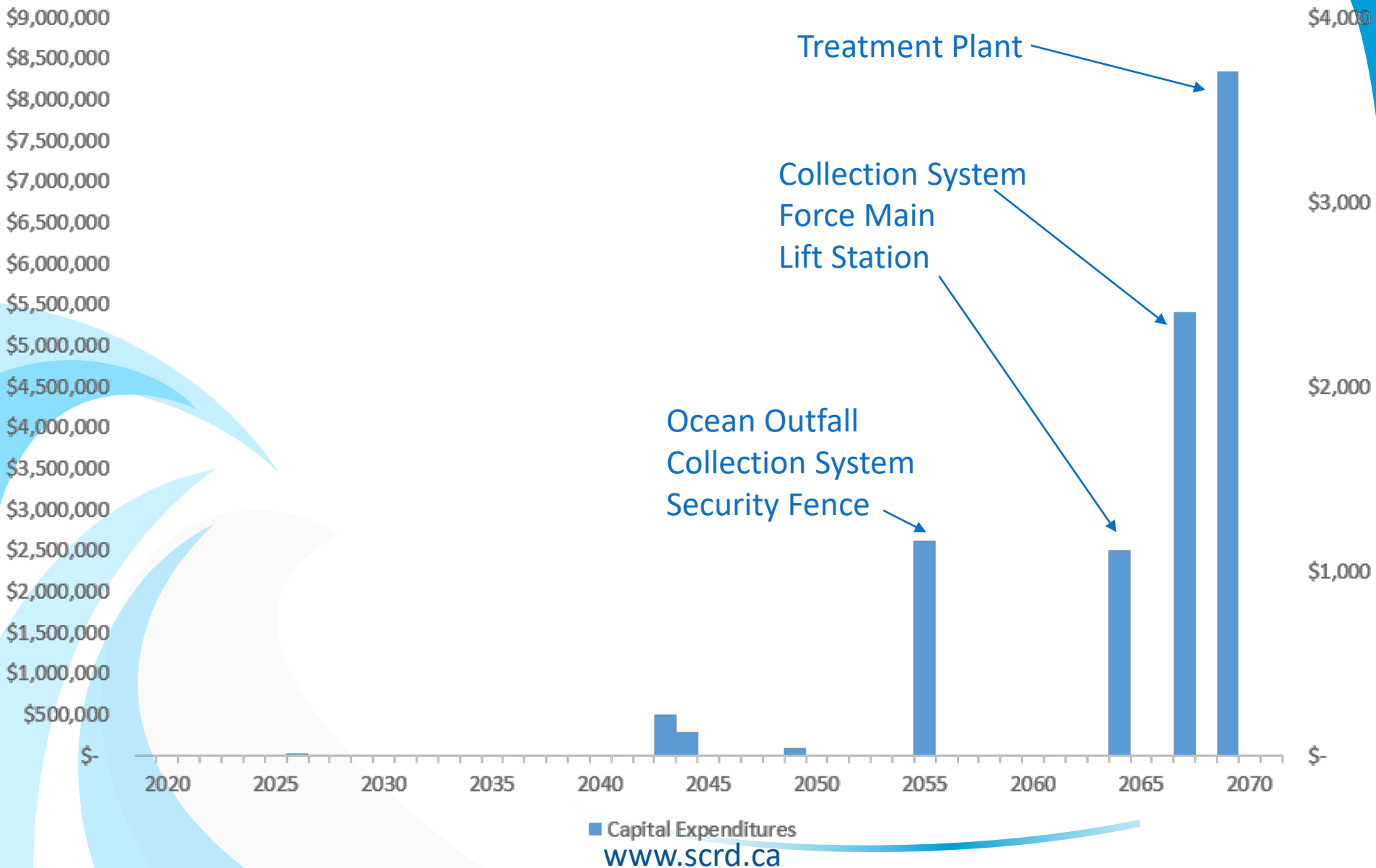
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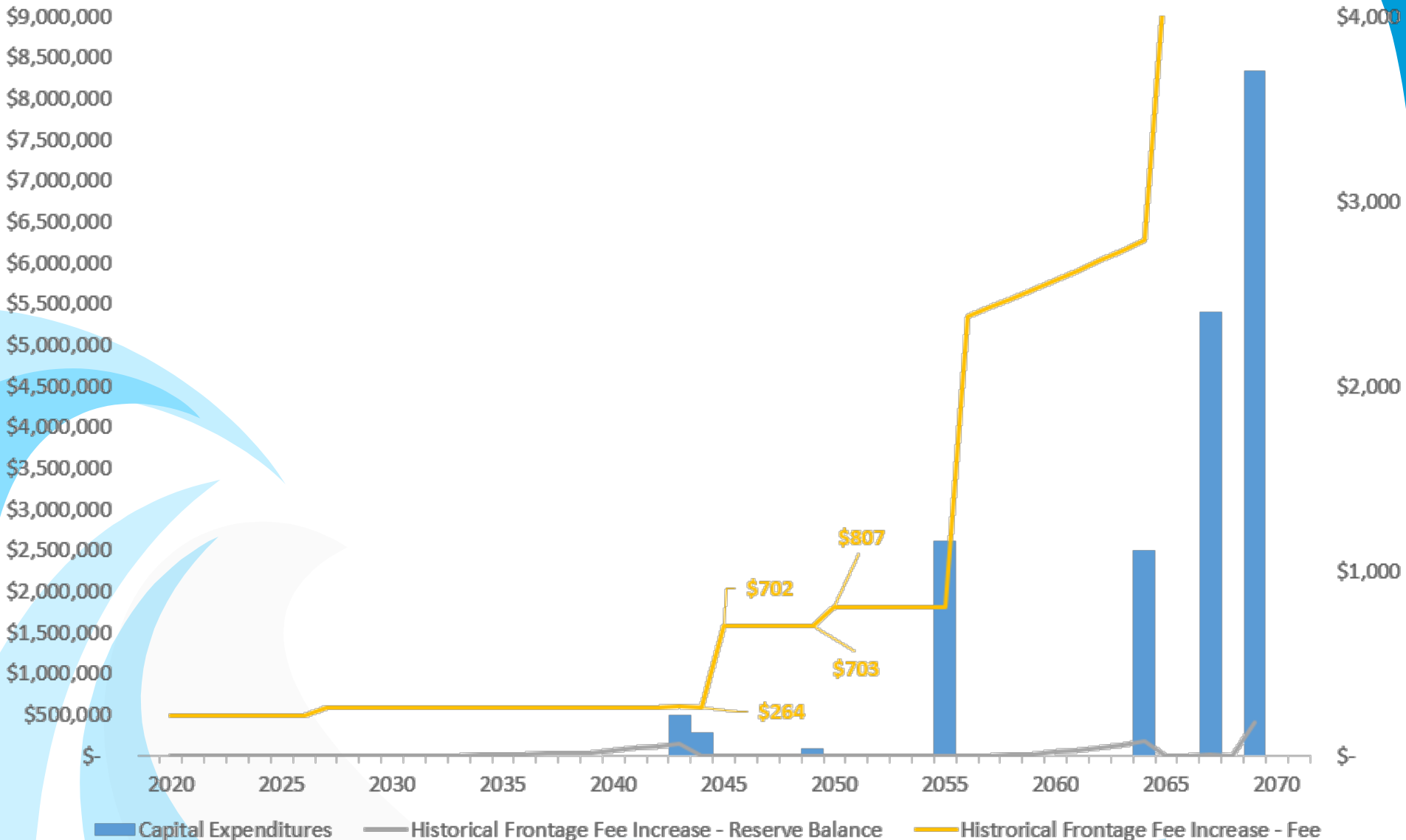
# Square Bay

## 50-Year Anticipated Capital Expenditures



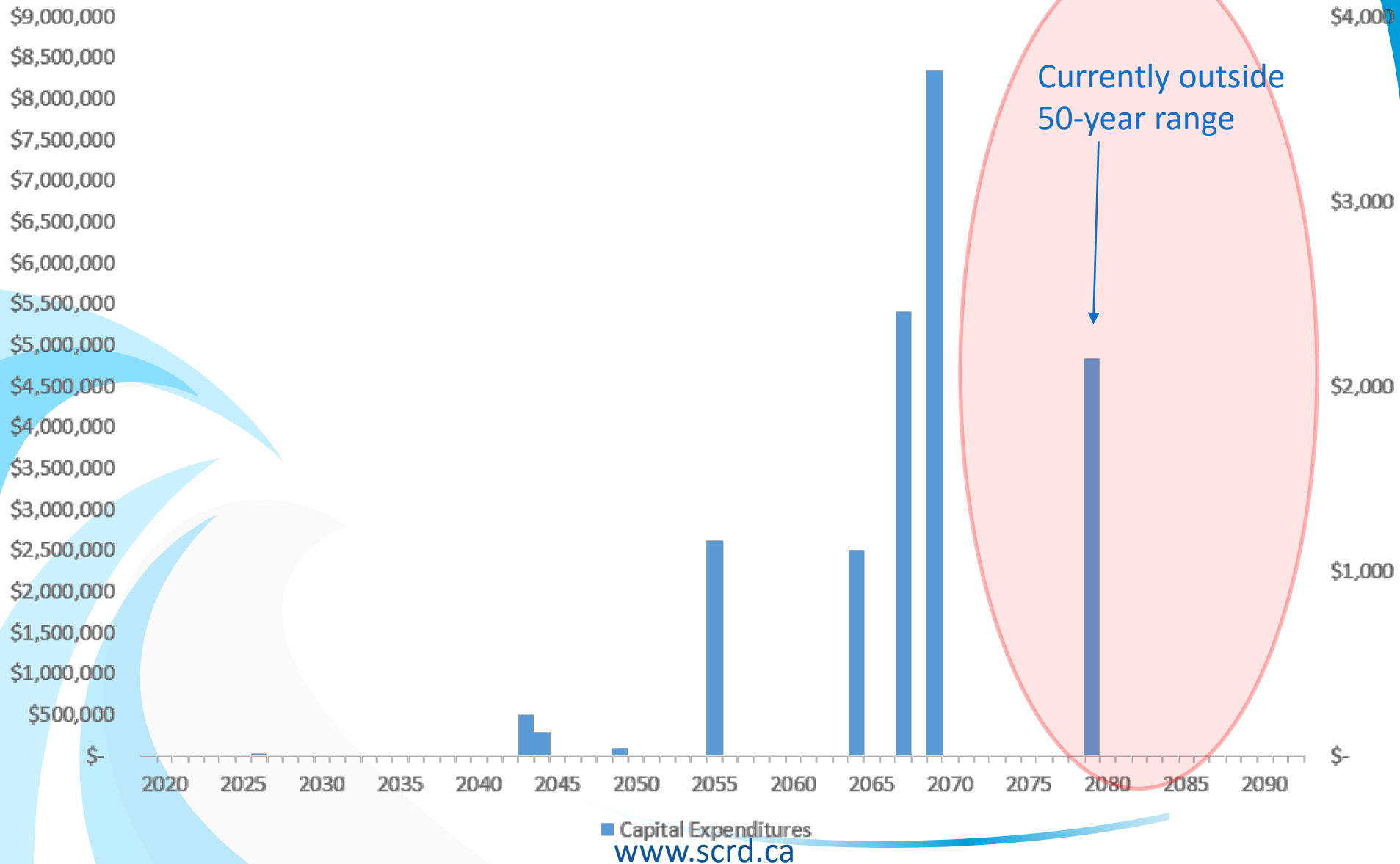
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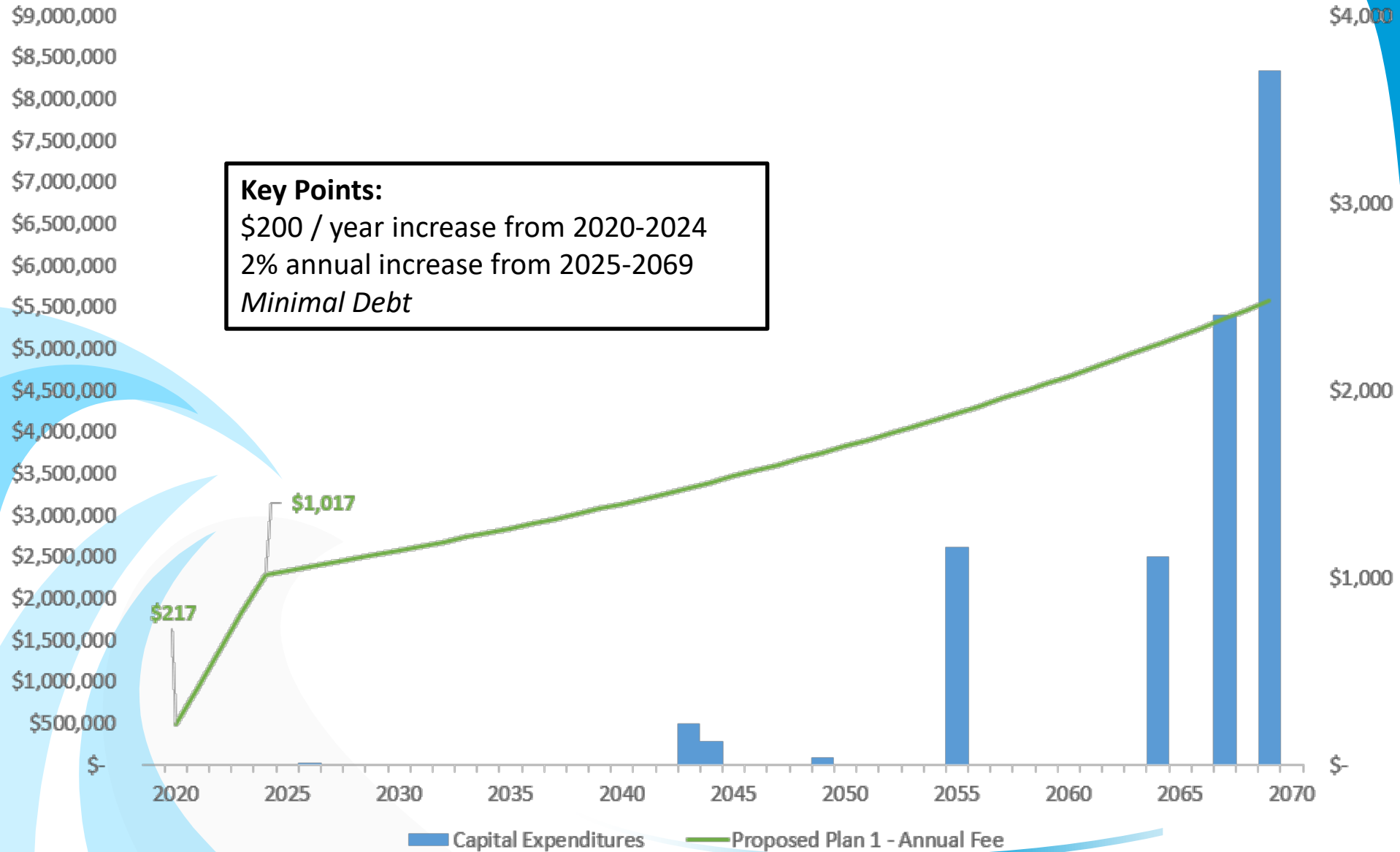
# Square Bay

## 75-Year Anticipated Capital Expenditures



# Square Bay

## 50-Year Anticipated Capital Expenditures



# Square Bay

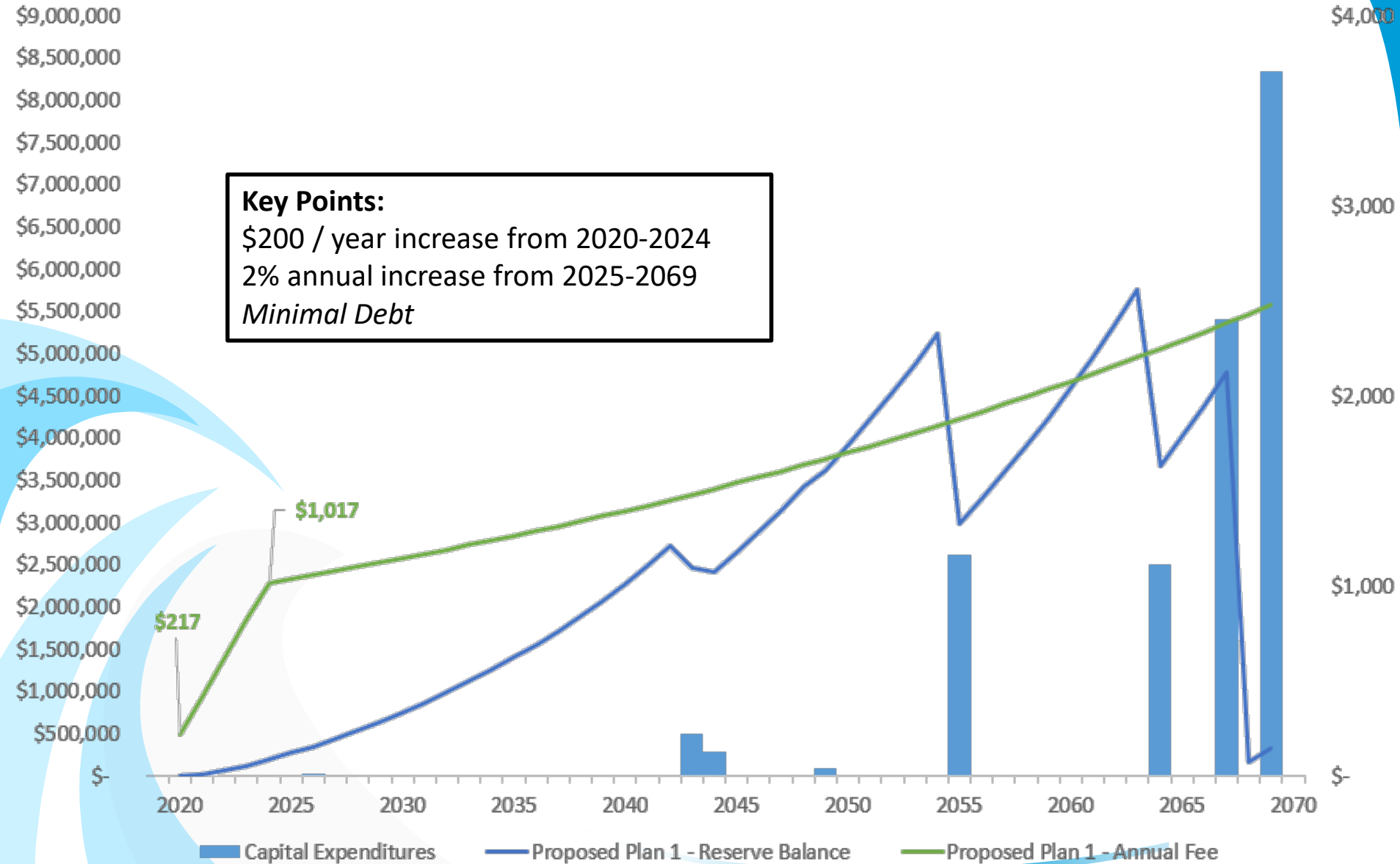
## 50-Year Anticipated Capital Expenditures

**Key Points:**

\$200 / year increase from 2020-2024

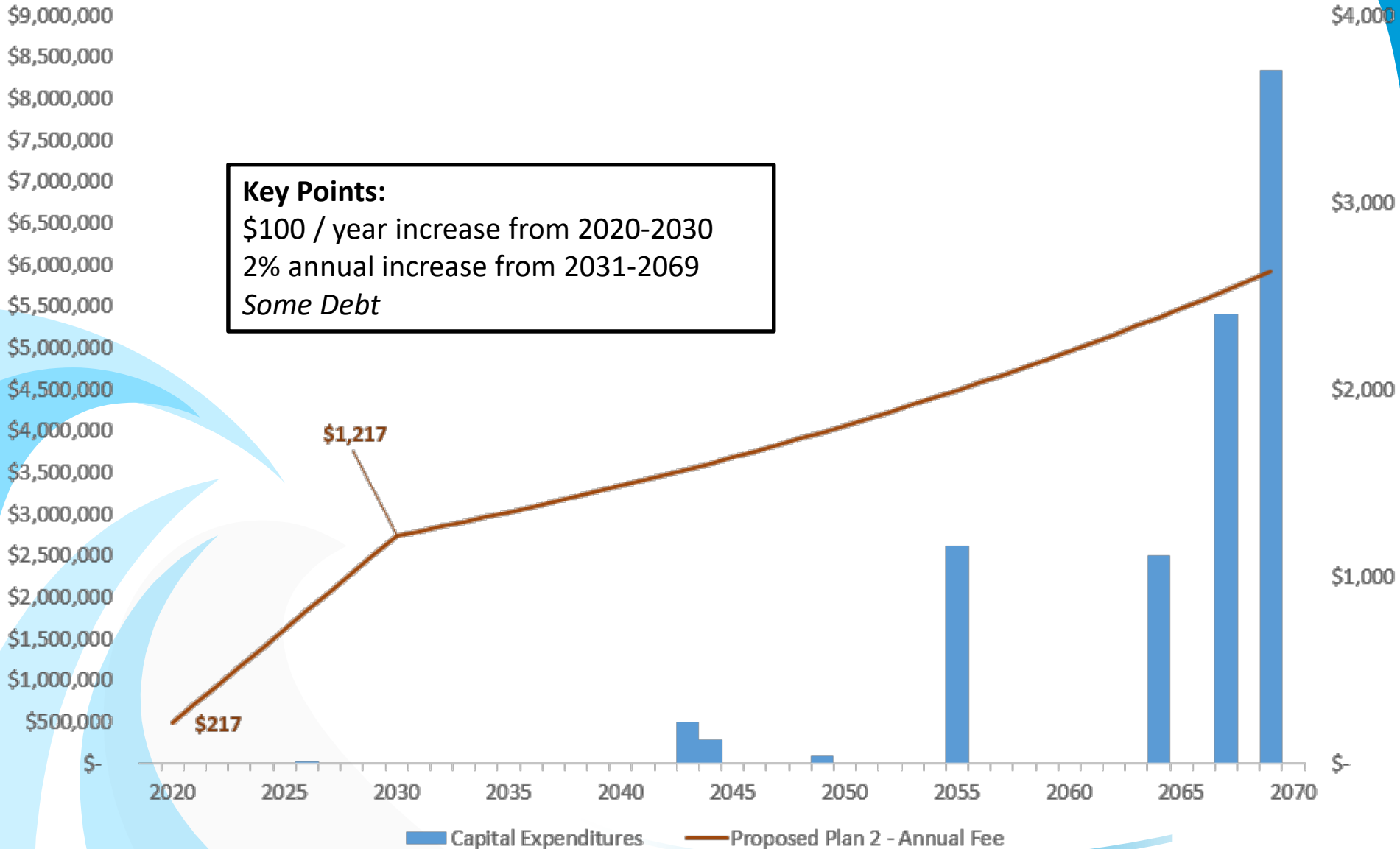
2% annual increase from 2025-2069

*Minimal Debt*



# Square Bay

## 50-Year Anticipated Capital Expenditures

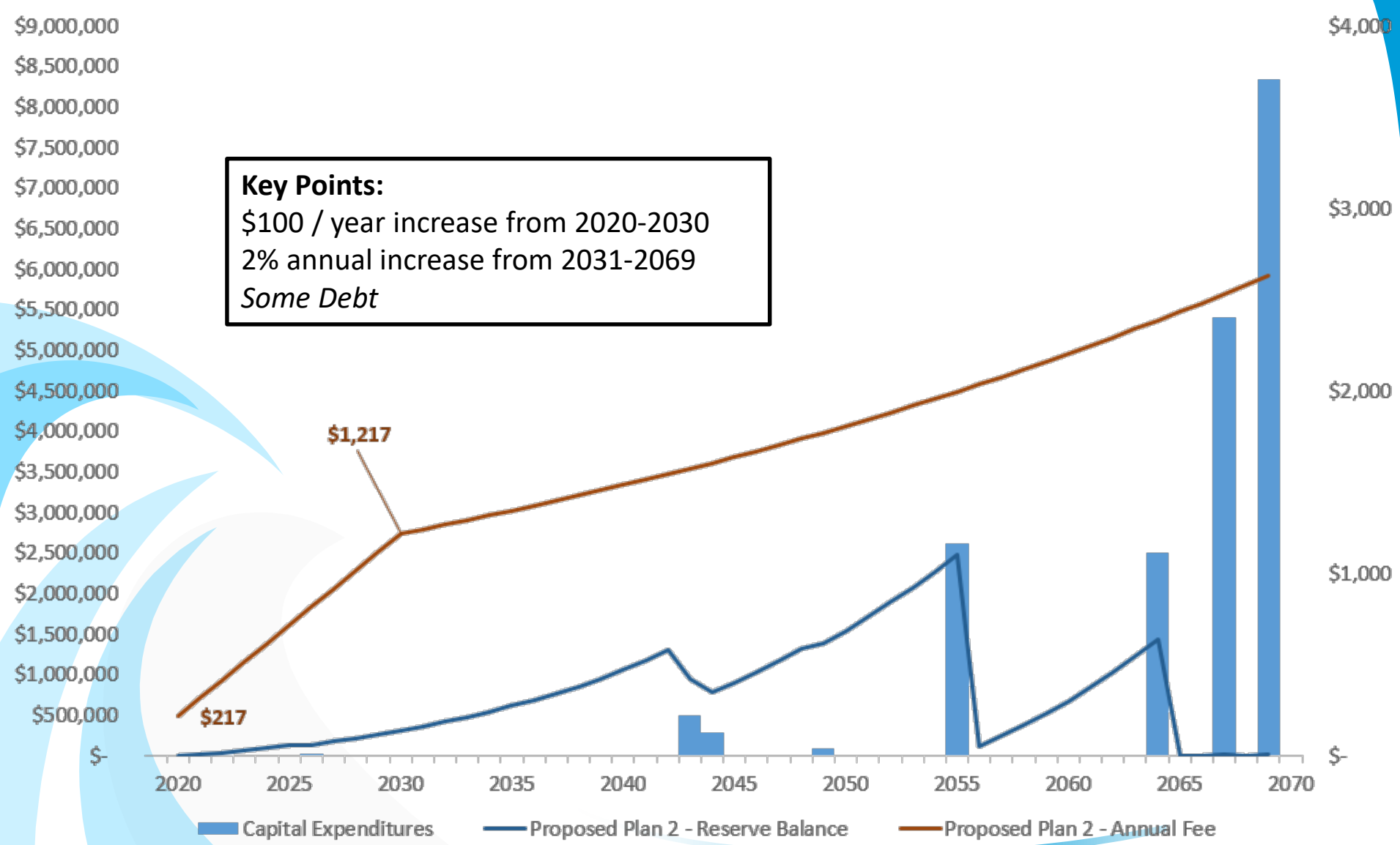




# Square Bay

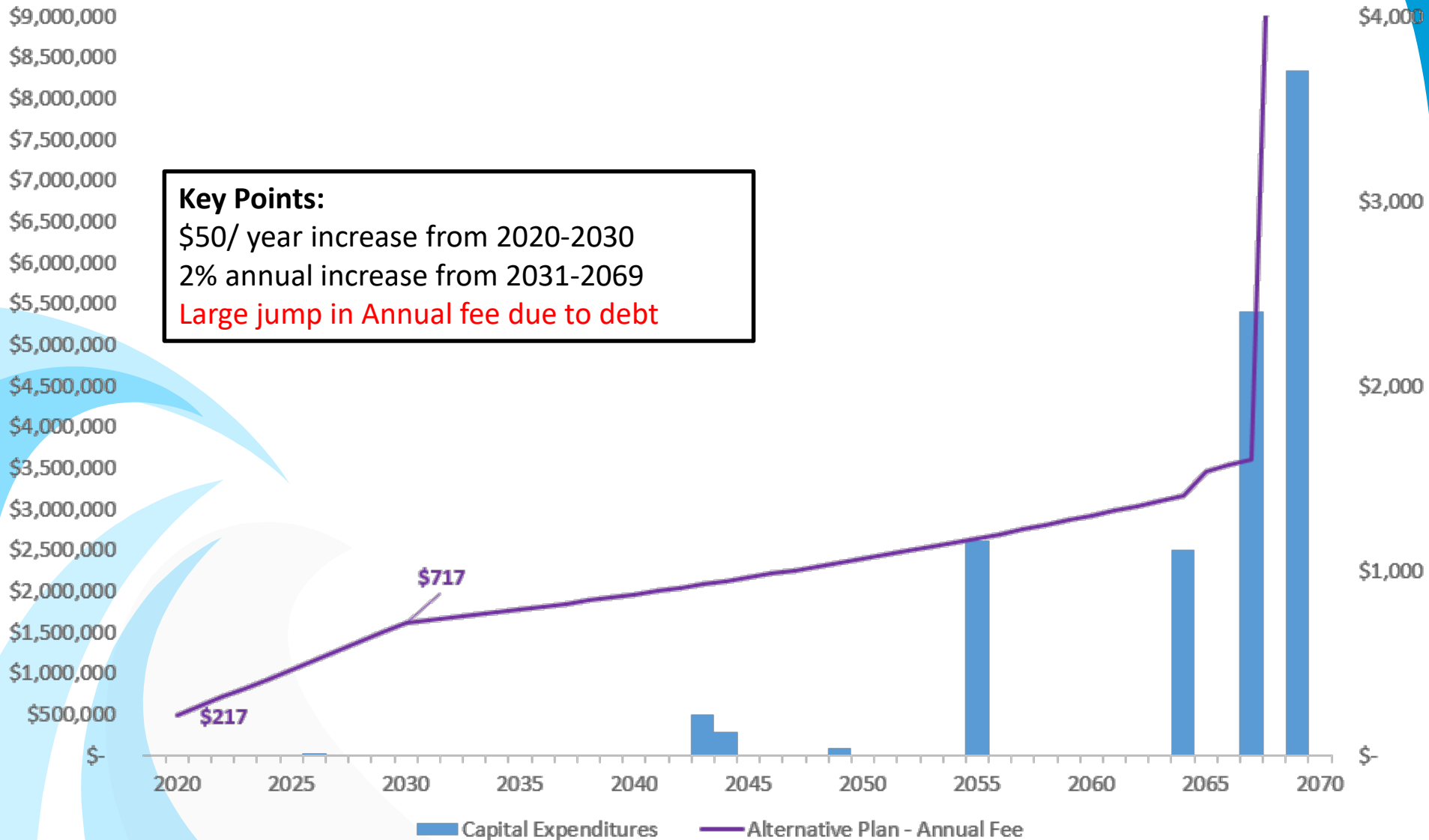
## 50-Year Anticipated Capital Expenditures

**Key Points:**  
 \$100 / year increase from 2020-2030  
 2% annual increase from 2031-2069  
*Some Debt*



# Square Bay

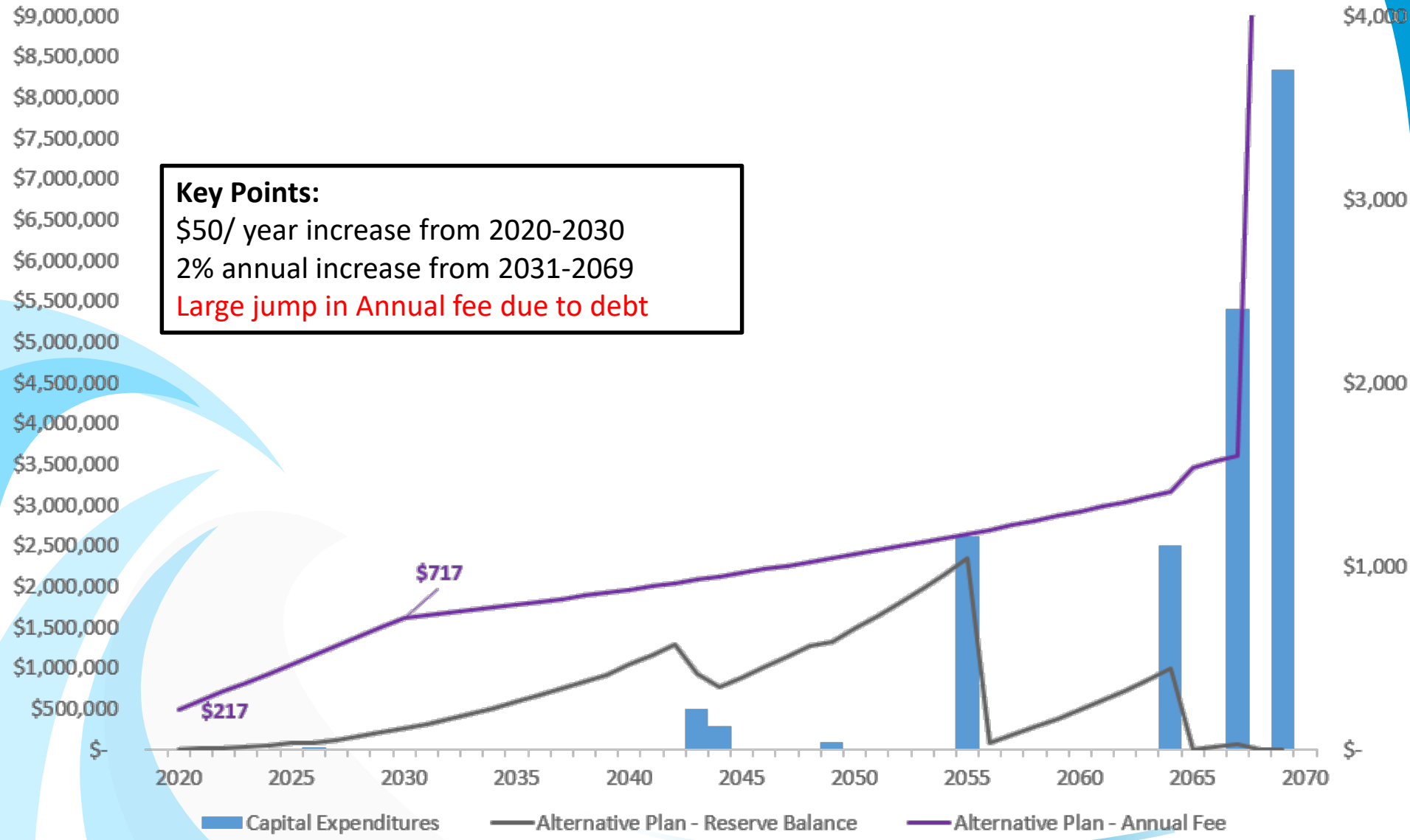
## 50-Year Anticipated Capital Expenditures



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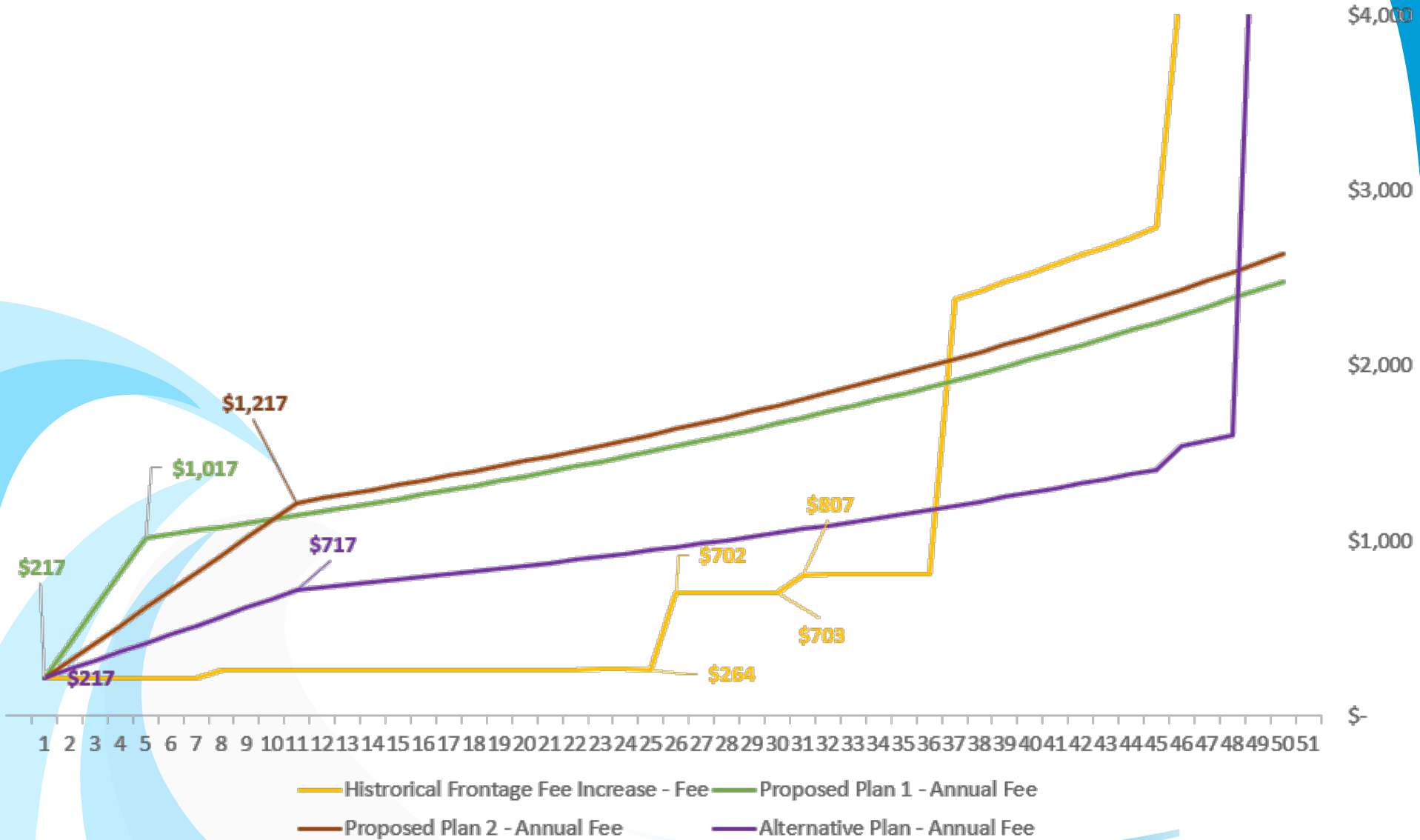
## 50-Year Anticipated Capital Expenditures

**Key Points:**  
 \$50/ year increase from 2020-2030  
 2% annual increase from 2031-2069  
 Large jump in Annual fee due to debt



# Square Bay

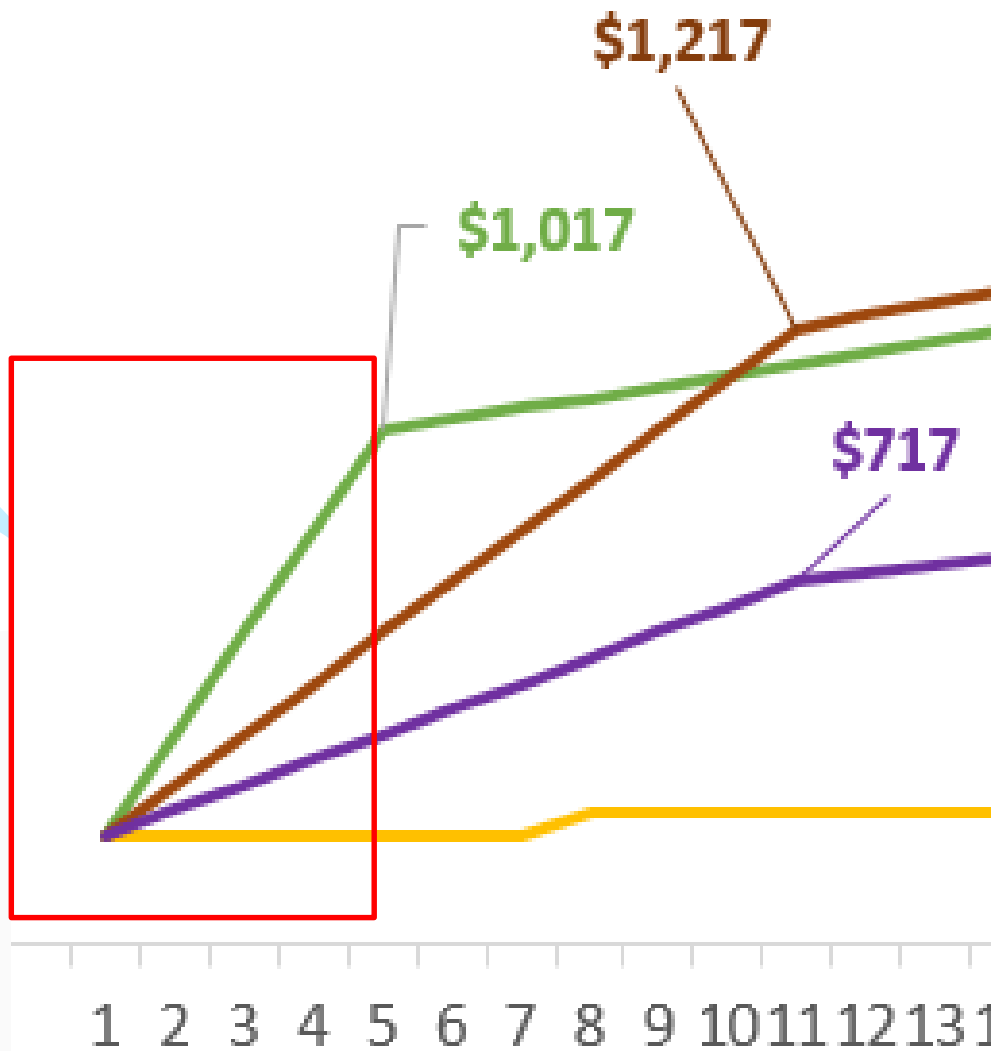
## 50-Year Annual Fee Comparison



# 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

## Square Bay Frontage Fees (2020-2025)

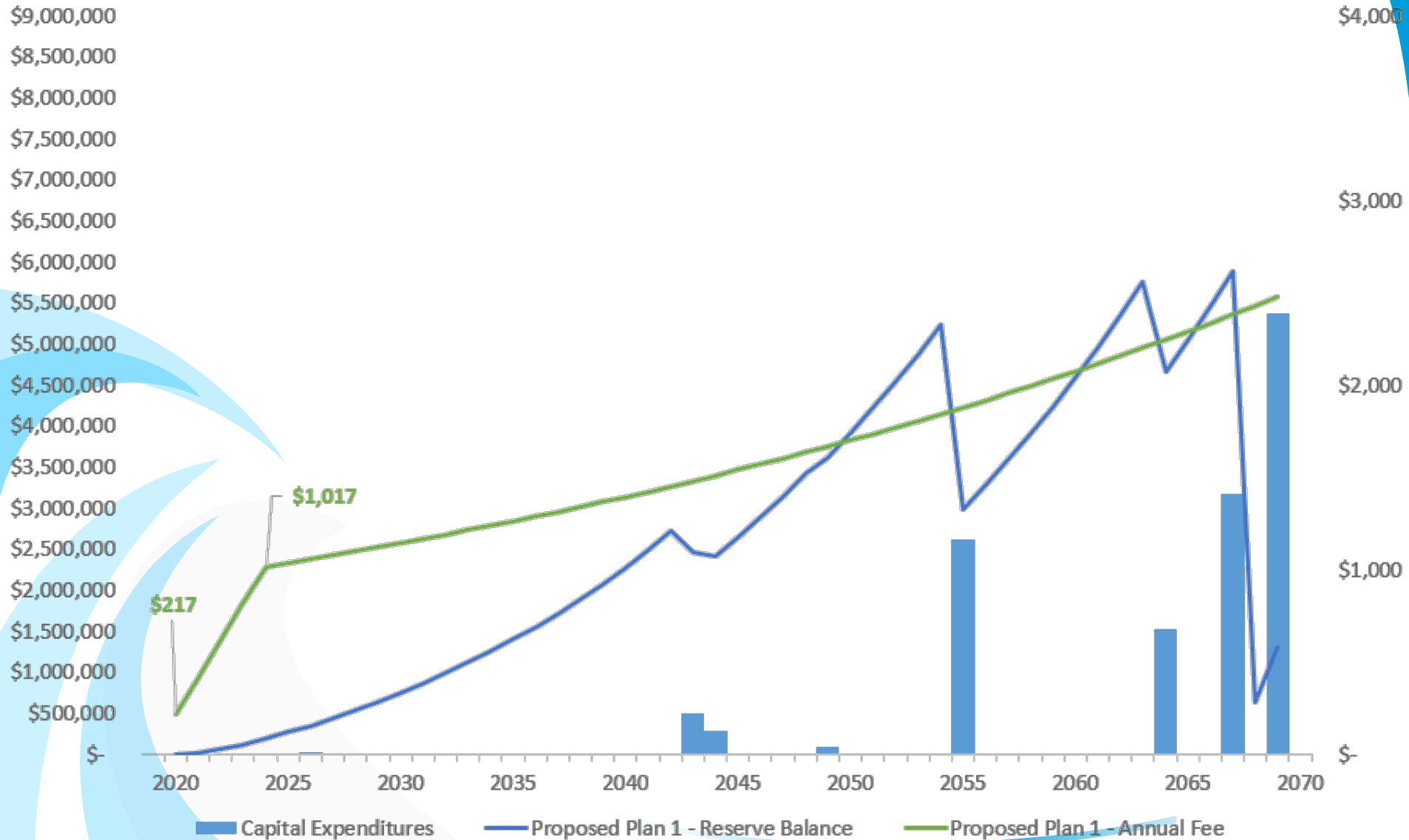
	User Fee*	Debt Payment	Plan 1	Total	Plan 2	Total	Plan 3	Total
<b>2020</b>	\$501.19	\$217.42	<b>\$0</b>	<b>\$718.61</b>	<b>\$0</b>	<b>\$718.61</b>	<b>\$0</b>	<b>\$718.61</b>
<b>2021</b>	\$608.94	\$0.00	<b>\$417</b>	<b>\$1,025.94</b>	<b>\$317</b>	<b>\$925.94</b>	<b>\$267</b>	<b>\$875.94</b>
<b>2022</b>	\$739.87	\$0.00	<b>\$617</b>	<b>\$1,356.87</b>	<b>\$417</b>	<b>\$1,156.87</b>	<b>\$317</b>	<b>\$1,056.87</b>
<b>2023</b>	\$739.87	\$0.00	<b>\$817</b>	<b>\$1,556.87</b>	<b>\$517</b>	<b>\$1,256.87</b>	<b>\$367</b>	<b>\$1,106.87</b>
<b>2024</b>	\$739.87	\$0.00	<b>\$1017</b>	<b>\$1,756.87</b>	<b>\$617</b>	<b>\$1,356.87</b>	<b>\$417</b>	<b>\$1,156.87</b>
<b>2025</b>	\$739.87	\$0.00	<b>\$1038</b>	<b>\$1,777.87</b>	<b>\$717</b>	<b>\$1,456.87</b>	<b>\$467</b>	<b>\$1,206.87</b>

\*operating budget subject to annual review



# Square Bay

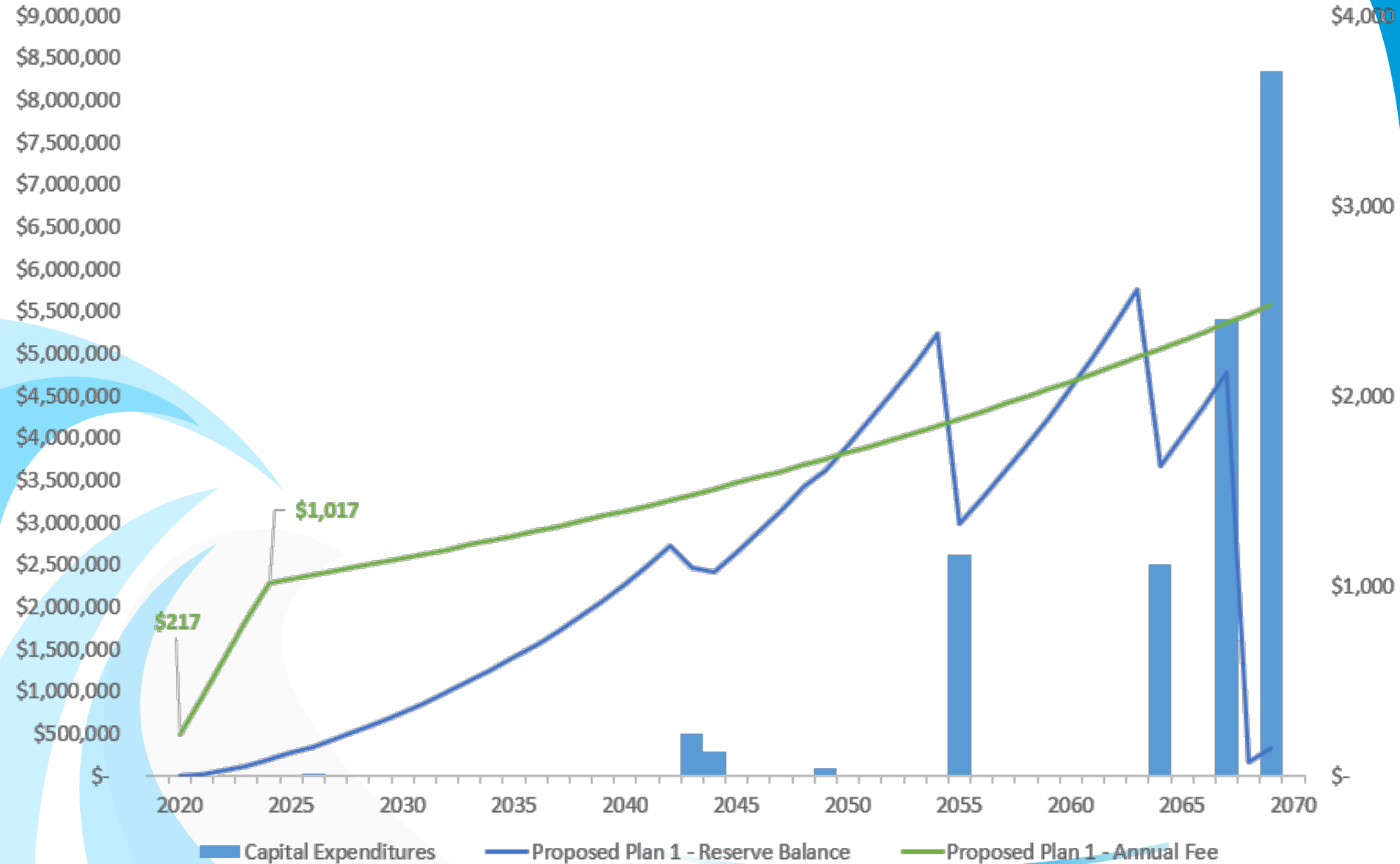
## Optimistic 3.5% longterm CCI





# Square Bay

## 50-Year Anticipated Capital Expenditures



# 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/square-bay](http://www.scrd.ca/square-bay)
- [www.scrd.ca/wastewater](http://www.scrd.ca/wastewater)
- [info@scrd.ca](mailto:info@scrd.ca)

