

# Maxwell Lake New Water Treatment Plant

Public Engagement

**Open House – Feb 11th and March 13th** 





Please provide your feedback by March 20<sup>th</sup> projects@nsswaterworks.ca

### Maxwell Lake WTP — Google Earth





### **Maxwell Lake WTP Renderings**



#### **Maxwell Lake WTP Project Objectives**

#### Improve water quality:

# Island Health Directive

Meet 4-3-2-1 Surface Water Objective

# **Upgrade from Chlorination**

DAF, Filtration and Two-Stage Disinfection

Allow flexibility for future supply reliability

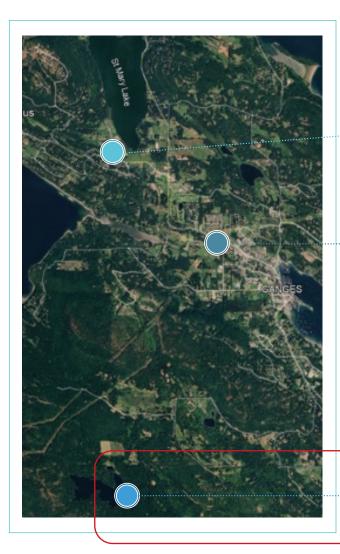
Minimize power consumption

Minimize waste disposal costs





#### **NSSWD Building Resiliency Strategy**



A series of system improvement projects, scheduled for completion by 2027, has potential benefits for improved supply across the whole system.

Joining of
Systems at
Crofton
Transfer Station

For 75 years, North Salt Spring
Waterworks has been the primary
steward of our most precious
resource on Salt Spring Island — water.

Maxwell WTP
Construction
Utilizing Rippon
Creek Diversion

Today, we're building a more resilient system to ensure a sustainable water supply for Salt Spring Island's future.

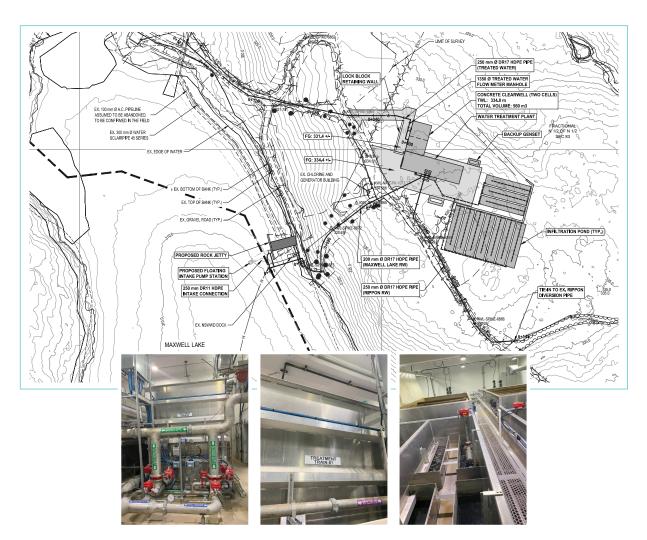
Easing of the water moratorium on the Maxwell Lake side of the system.

Raising the weir on St. Mary Lake to improve supply resiliency and sustain flows to Duck Creek. Constructing a new water treatment plant on Maxwell Lake to improve water quality and supply.

Connecting the two systems to enhance flexibility and reliability.



# New DAF Water Treatment Plant at Maxwell Lake



#### **Details:**

Specifically mandated by Island Health, Dissolved Air Flotation (DAF) technology has a proven history of effectively treating surface water sources.

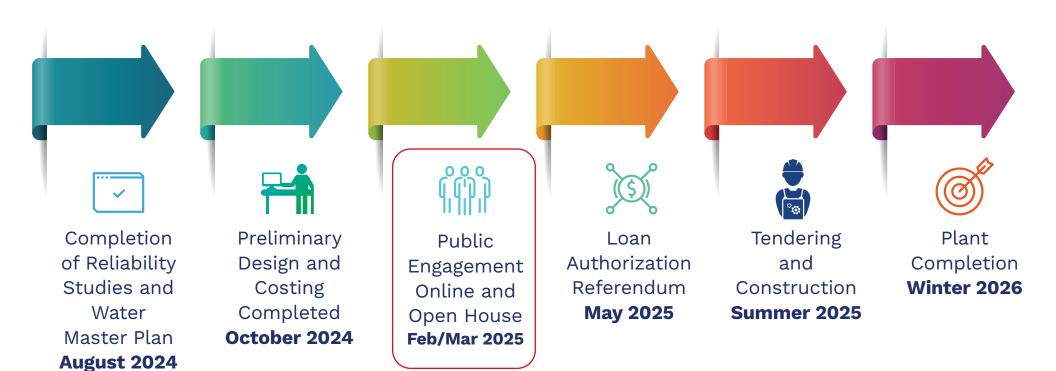
Plant cost preliminary estimate is \$12.7M plus contingency costs and an \$11.7M loan authorization is required from ratepayers.

Plant flow variability added: production capacity increased from 26L/s to 46L/s and allows for lowest flow of 2.5L/s.

Infiltration ponds provide significant reduction in waste, transportation, and disposal costs.



#### **Maxwell Lake WTP Project Timeline**





#### September 2024 Updated Schedule

| Phase | Task Name                | 2024 |     |                       | 2025 |       |       |                     | 2026    |                        |     |    |
|-------|--------------------------|------|-----|-----------------------|------|-------|-------|---------------------|---------|------------------------|-----|----|
|       |                          | Q2   | Q3  | Q4                    | Q1   | Q2    | Q3    | Q4                  | Q1      | Q2                     | Q3  | Q4 |
| A     | Preliminary<br>Design    |      |     |                       |      |       |       |                     |         |                        |     |    |
| В     | Detail<br>Design         |      |     |                       |      |       |       |                     |         |                        |     |    |
| С     | Tendering & Construction |      |     |                       |      |       |       |                     |         |                        |     |    |
| D     | Permits                  |      |     |                       |      |       |       |                     |         |                        |     |    |
| E     | Archaeology              |      |     |                       |      |       |       |                     |         |                        |     |    |
| F     | Legal<br>Survey          |      |     |                       | OPEN | HOUSE | DATES | FEB 11 <sup>t</sup> | h + MAF | R 13 <sup>th</sup> , 2 | 025 |    |
| G     | Public<br>Engagement     |      |     |                       | 1    |       |       |                     |         |                        |     |    |
| Н     | Referendum               | AC   | MAY | 8 <sup>th</sup> , 202 | 5    |       |       |                     |         |                        |     |    |

Maxwell Lake Water Treatment Plant Project Timeline





#### **Provincial & Federal Permitting**

#### **Island Health**

Archeological permit application moving forward

#### **Water Sustainability Act**

- Rippon seasonal supply water license amendment
- Rock jetty potential change approval

#### **Land Act**

• Potential Crown land tenure application for rock jetty

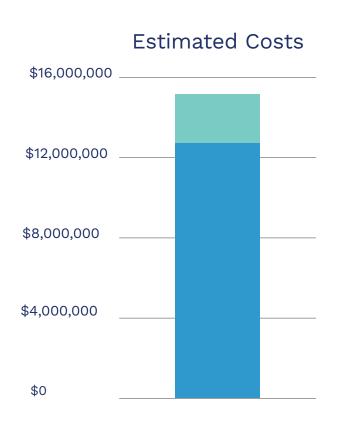
## Liaise with Island Health, Fisheries and Oceans Canada, MOE and CRD

- DFO request for review
- Submit application with Preliminary Design
- Authorization under Fisheries Act, may or may not be required





#### **Maxwell Lake WTP Funding Strategy**



| 1. Current Funding Plan |              |  |  |  |
|-------------------------|--------------|--|--|--|
| Loan Authorization      | \$11,700,000 |  |  |  |
| Existing CEC Reserve    | \$900,000    |  |  |  |
| CECs (2025-2026)        | \$2,000,000  |  |  |  |
| Total Cost              | \$14,600,000 |  |  |  |

| 2. Funding Plan with Grant |              |  |  |  |
|----------------------------|--------------|--|--|--|
| Loan Authorization         | \$5,700,000  |  |  |  |
| CHIF Grant                 | \$6,000,000  |  |  |  |
| Existing CEC Reserve       | \$900,000    |  |  |  |
| CEC Revenue (2025/26)      | \$2,000,000  |  |  |  |
| Total Cost                 | \$14,600,000 |  |  |  |

| Loan Payment Plan                           |           |  |  |  |
|---|-----------|--|--|--|
| 1. Annual Loan Payment<br>(20 yr)           | \$888,000 |  |  |  |
| Approved \$400 Surcharge<br>(starting 2026) | \$845,600 |  |  |  |
| 2. Loan Payment with Grant<br>(20 yr)       | \$414,500 |  |  |  |
| Approved \$300 Surcharge<br>(starting 2025) | \$634,200 |  |  |  |

Staff propose that surplus funds in Option 2 (\$220,000/yr) are allocated to asset management and a 0% tax increase in 2026.



#### **Funding Solutions Explained**

| 2. Funding Plan with Grant |              |  |  |  |
|----------------------------|--------------|--|--|--|
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20-year loan from a financial institution, currently \$11.7M that could be reduced with CHIF Grant.

Unique grant opportunity from Federal
 Government to support housing infrastructure has been applied for.

 Existing CEC reserve funds will be used to reduce loan amount.

The partial lift of the moratorium on the Maxwell Lake system will produce funds from Capital Expenditure Charges for new connections.



#### **Other NSSWD Conservation Initiatives**

Joining the Maxwell and St. Mary Systems in 2026

Grant Funding through CHIF

Water
Conservation
Demand
Strategy

Development in Spring 2025

Raising St. Mary Lake Weir by 2027

\$10M in Provincial Funding

WaterSavers
Rainwater
Catchment
Program

\$40,000 in rebates

CARL Watershed Project

\$250,000 over 5 years





# Referendum Voting Approval Process May 8<sup>th</sup>, 2025



