



# **DISTRICT OF LANTZVILLE TOWN HALL MEETING**

**WATER: REVIEW AND NEXT STEPS**

6:00 pm – 8:00 pm, Thursday, June 2, 2016  
Costin Hall, 7232 Lantzville Road, Lantzville, BC

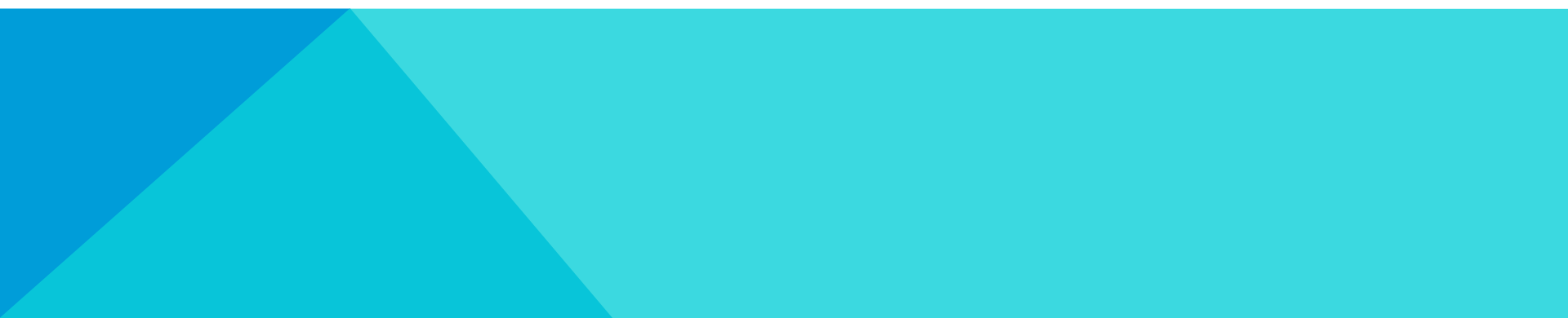
# PRESENTERS

**Fred Spears:** Director of Public Works

**Rob Hoffman:** Koers and Associates Engineering Ltd.

**Brad McRae:** Chief Administrative Officer

# OVERVIEW OF PRESENTATION

- Water System History
  - Current System
  - Council's direction and initiatives since September 2015
  - What is a Water Master Plan?
  - Next Steps
  - Public questions to Council
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# MEETING FORMAT

Staff will provide information in the **OVERVIEW** section of the presentation.

This will take approximately 30 minutes.

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**At the conclusion of the staff presentation, attendees are encouraged to ask questions either by:**

- a. Approaching the microphone and asking Council directly;
- b. Writing questions on the form provided at the entrance and submit to staff to relay to Council;
- c. Email/call/ fax the District of Lantzville your question for review and response; or
- d. Make an appointment with the Mayor, a Councillor or staff to discuss your particular questions.

# COMPLIANCE WITH DISTRICT POLICIES

The District of Lantzville Town Hall Meeting on Water complies with the 2016 District of Lantzville Public Participation Policy:

**Access:** Accurate information made available to residents

**Transparency:** Open access

**Engagement:** Opportunity to participate

**Communications :** Timely and accurate

**Respect:** Open, unbiased information sharing

**Integrity:** Decisions based on input from all parties and sound, factual information

# WATER SYSTEM HISTORY

- ❑ Water Studies (1972-Present)
- ❑ Well Drilling Program
- ❑ Lantzville/Nanaimo Emergency Agreement
- ❑ Lantzville/Nanaimo Water Agreement
- ❑ Potential Capacity Increase in the Wellfield
- ❑ Well Rehabilitation
- ❑ Investigation into current water connection design standards



# WATER STUDIES (1972-PRESENT)

A number of studies on water issues in the Lantzville area have been completed for various entities during the last 40 years, including:

- ❑ Regional District of Nanaimo
- ❑ Lantzville Improvement District
- ❑ District of Lantzville

Studies have reviewed water supply, storage, treatment, and distribution aspects as the District has evolved from a rural settlement to a more suburban community.

# WATER STUDIES (1972-PRESENT)

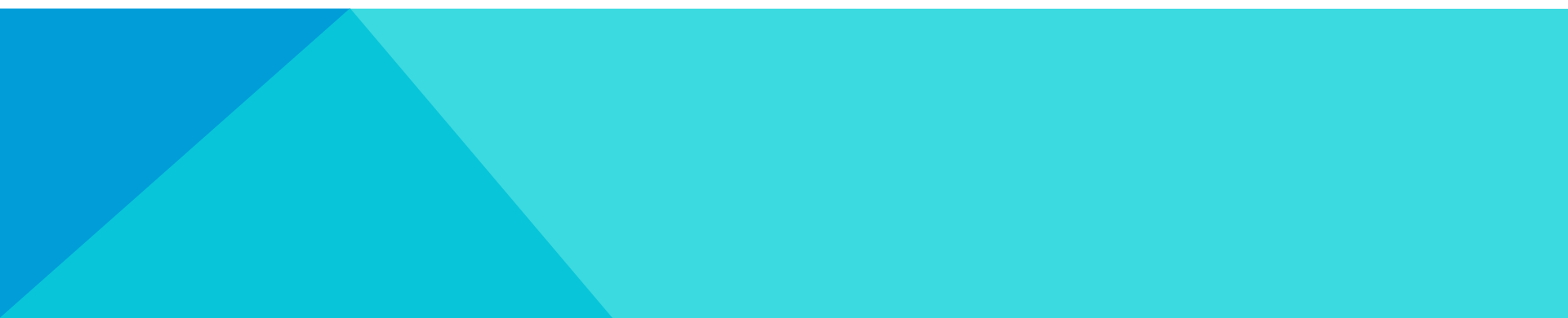
The studies have reviewed various improvement options within the community including:

- Assessment of groundwater supply
- Investigation of surface water sources
- Connections to neighbouring communities
- Improvements to the storage and distribution system

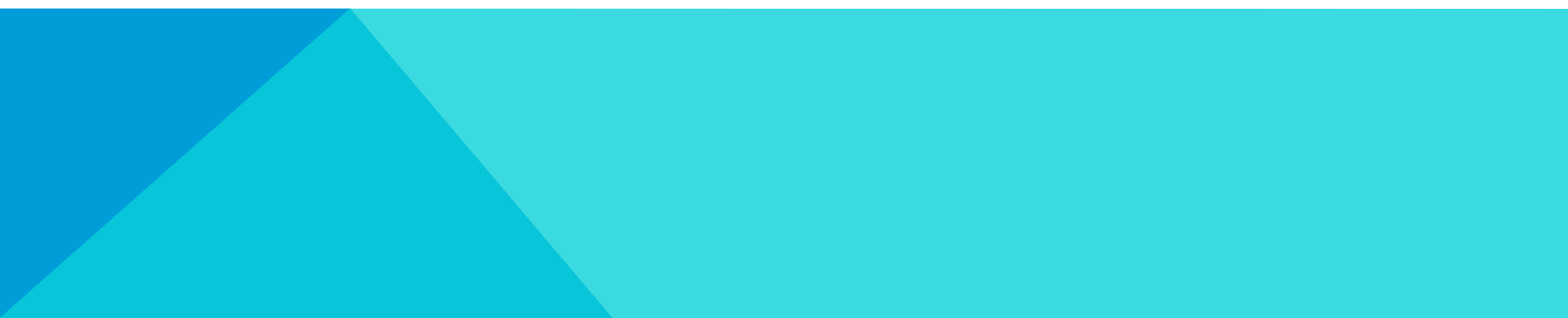
**Common Theme:** The District has been looking for ways to secure additional water supplies.



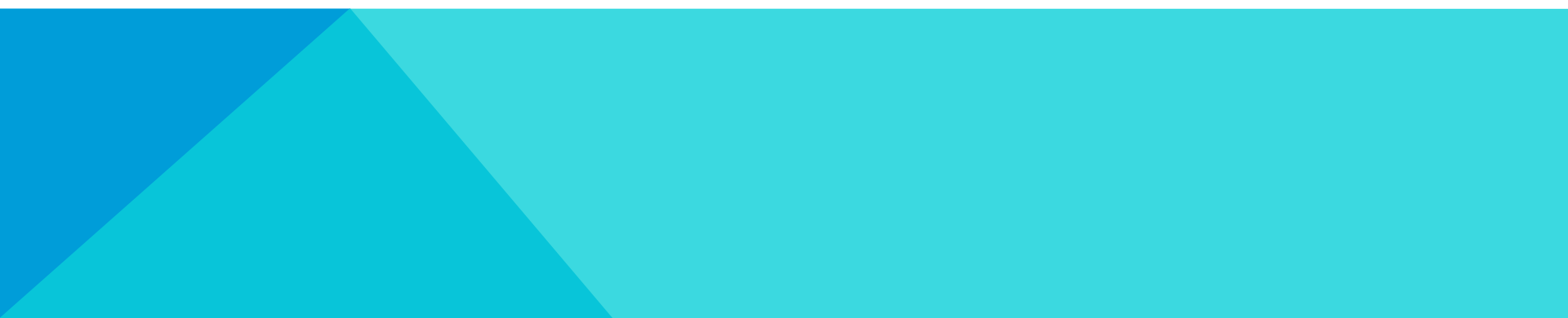
# WELL DRILLING PROGRAM

- ❑ A substantial number of wells have been drilled throughout the entire District, including those drilled by developers.
  - ❑ The locations range from the west end of Southwind Drive to the east end of Clark Drive East.
  - ❑ While increased water has been found in the act of well drilling, finding a well with adequate supply, ability to be cost effective, and in an accessible location has been difficult.
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# CONNECTION TO THE CITY OF NANAIMO

- ❑ The District looked to Nanaimo and requested an emergency connection that could be used on a temporary basis only.
  - ❑ An emergency water connection agreement was developed in 2005,(expiry 2017) which consisted of two separate underground flush-outs at the District's boundary on Schook Road that can be connected with a metered assembly on an as-needed basis.
  - ❑ This connection is meant to provide limited residential demands only, and discussions on a more permanent connection continued.
  - ❑ Nanaimo and Lantzville signed an Agreement in 2014 to allow for water connections with a number of conditions attached.
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# POTENTIAL CAPACITY INCREASE IN THE WELLFIELD

- ❑ Field testing and computer modelling resulted in an updated hydrogeologist study which identified a potential increase in the capacity of the Wellfield (2015).
  - ❑ The Wellfield has more capacity than originally thought, and the suggested maximum capacity was estimated to be 2,424 cubic meters per day.
  - ❑ To utilize this supply, replacement of Well #6, and the rehabilitation of the other Wells (4, 9, and 12) was recommended.
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# DESIGN STANDARDS

- ❑ Council noted that the standards governing the allotment per connection needed further investigation.
- ❑ A comparison to existing jurisdictions was undertaken.
- ❑ Prior to altering the existing standards, more storage and a back-up/alternate supply should be secured to address potential issues within the wellfield (Koers & Associates Engineering Ltd. 2016)

# LANTZVILLE'S CURRENT SYSTEM

- ❑ Piping and Storage
- ❑ Current Connections
- ❑ Current supply
- ❑ Water standards
- ❑ Water Deficit



# PIPING AND STORAGE

Currently the District has:

- ❑ **26km** of water pipe
- ❑ **2** storage reservoirs
- ❑ **2** pressure zones
- ❑ **1** Pressure Reducing Valve
- ❑ **1** Booster Pump Station and Chlorination Facility

# CURRENT CONNECTIONS

There are currently:  
**885** connected customers

There is a commitment to service:  
**7** additional properties (no dwelling on lot)

Close to **90%** of the customers are single residential dwellings.

# CURRENT SUPPLY SYSTEM

- ❑ The District's Harby Road Wellfield is located north of Highway 19.
- ❑ There are 4 main production wells that pump through a dedicated line to the Ware Road Reservoir.
- ❑ The District's Wellfield is estimated to be able to provide a maximum of flow of 2,424 cubic meters per day on a sustainable basis (subject to redevelopment and testing).



# CURRENT WATER STANDARDS

Current Water Standard used for planning within the District Water System:

**3,400 liters per day per connection**

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## Points of note:

1. Current standard is conservative which results in a numerical deficit as previously mentioned;
2. Current standards limits the ability to extend the system to meet the service area noted in the *Official Community Plan* (OCP) boundaries.

# **COUNCIL INITIATIVES**

## **SEPTEMBER 2015 TO MAY 2016**

### Requested amendments to the Lantzville/Nanaimo Water Agreement

**Section 6.2:** Ability to participate with Snaw-Naw-As First Nation and the City of Nanaimo in water discussions

**Section 6.6:** Removal of references to Upper Lantzville and new development and replaced with language allowing for water to all existing residents of Upper Lantzville

**Section 14.1:** Changes to future capital costs (“5% rule”)

# **COUNCIL INITIATIVES**

## **SEPTEMBER 2015 TO MAY 2016**

Requested staff to re-drill and redevelop wells



# **COUNCIL INITIATIVES**

## **SEPTEMBER 2015 TO MAY 2016**

Requested staff to review current Water Standards



# **COUNCIL INITIATIVES**

## **SEPTEMBER 2015 TO MAY 2016**

Development of a Request for Proposal for a Water Master Plan



# NEXT STEPS

## What is a Water Master Plan?

- ❑ A key document that will form the guiding principles for an integrated water utility over a 20 year span
  
- ❑ Provides guidance on how to best serve current and future needs of residents
  - Upgrading, renewal and expansion



# NEXT STEPS

What will the Water Master Plan accomplish?

- Provide an outline and summary of the process undertaken;
- Summarize comments from community feedback; and
- Identify and prioritize deficiencies that require capital improvements, which include estimated costs and staging timelines;



# NEXT STEPS

What will the Water Master Plan accomplish?

- Identify and prioritize areas for service expansion, which includes costs estimates for required works;
- Provide a conceptual plan;
- Discuss options including costs/benefits; and
- Provide recommendations for next steps including graphic representation, guiding policies, and suggestions for extending lifecycle.





# NEXT STEPS

## Limitations of the Water Master Plan?

- “Needs and Wants” need to be balanced by budget and capacity
- Information within the report will be affected by the level of engagement of residents.



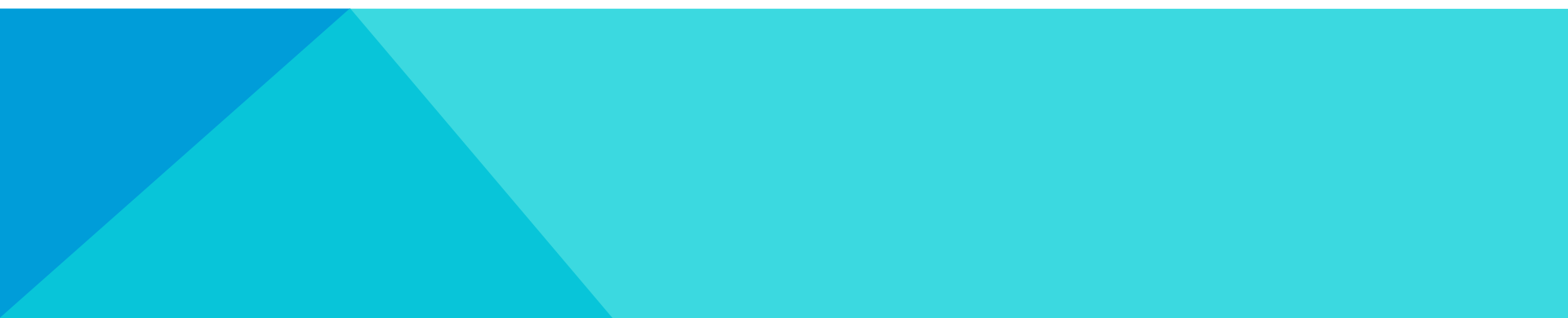
# **“CLASS D” COSTING TO PROVIDE WATER TO LOCAL COST AREA**

What is a “Class D” estimate?

- ❑ high-level, and are developed without the benefit of preliminary or detailed engineering design.
- ❑ suitable for program planning, and to obtain approval in principle to assist the decision making as more detailed information is gathered.

# **“CLASS D” COSTING TO PROVIDE WATER TO LOCAL COST AREA**

What is a “Class D” estimate?

- ❑ should be considered plus or minus 30% to 40%, depending on the complexity of the project, and include allowances for engineering design, tendering and construction services and construction contingencies.
  - ❑ As further investigation and design work is completed, the accuracy of the cost estimate should improve.
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# **“CLASS D” COSTING TO PROVIDE WATER TO LOCAL COST AREA**

Council Motion (April 15, 2016)

*THAT Staff incorporate into the Town Hall meeting in June 2016 the Class D costing information for providing water to the local cost area based on the 2015 Koers Water Supply and Distribution Study Clarification and with no developer contribution.*

# **“CLASS D” COSTING TO PROVIDE WATER TO LOCAL COST AREA**

Based on:

1. The definition of a “Class D” estimate; and
2. The April 25, 2016 Council motion; and
3. The assertion of 124 homes included as per the Koers and Associates Engineering Ltd Report; and
4. The understanding that all the below noted numbers are **approximate**:

Capital infrastructure costs to be paid by property owners: **\$3,800,000**

Cost per resident (no external financial support): **\$30,645**

Connection cost to Nanaimo: **\$5,912**

**Total Approximate Cost: \$36,600**

# PUBLIC PARTICIPATION



[dreamstime.com](http://dreamstime.com)