



# Water Resource Centre

Presented by: Public Works Manager  
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# Introduction

- Wastewater includes anything that goes down your drain
- All wastewater must be treated... it is the law
- Storm water does not have to be treated
- The Water Resource Centre at the District consists of 4 operators
- Total assets: 2 treatment plants, 9 lift stations, and 69kms of sewer line, total value = \$40 million







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# Sewer Connections

- The District inspects new sewer connections
- The District does not install new connections
- Home owners are given 2 years to connect to a municipal sewer line
- Home owners are responsible for maintaining the sewer line from the residence to the municipal line
- Connecting to the municipal sewer system benefits the community and the environment
- Your sewer fees go toward maintaining the entire sewer system



# Wastewater Treatment

- Treatment is regulated by the Ministry of Environment and Environment Canada
- There are 3 levels of treatment:
  1. PRIMARY
  2. SECONDARY
  3. TERTIARY
- The level of treatment is decided by the Provincial and Federal regulatory agencies

# Treatment Process

- Wastewater travels by gravity and force main to the Water Resource Centre treatment plant
- Large solids are removed by mesh screens
- Wastewater is aerated to mix contents and prevent odours
- Organic waste is broken down by trillions of microbes
- Larger solids are allowed to settle to the bottom
- Smaller solids are filtered out by membrane filters
- All effluent is disinfected with UV light before release to the environment









# Biosolids

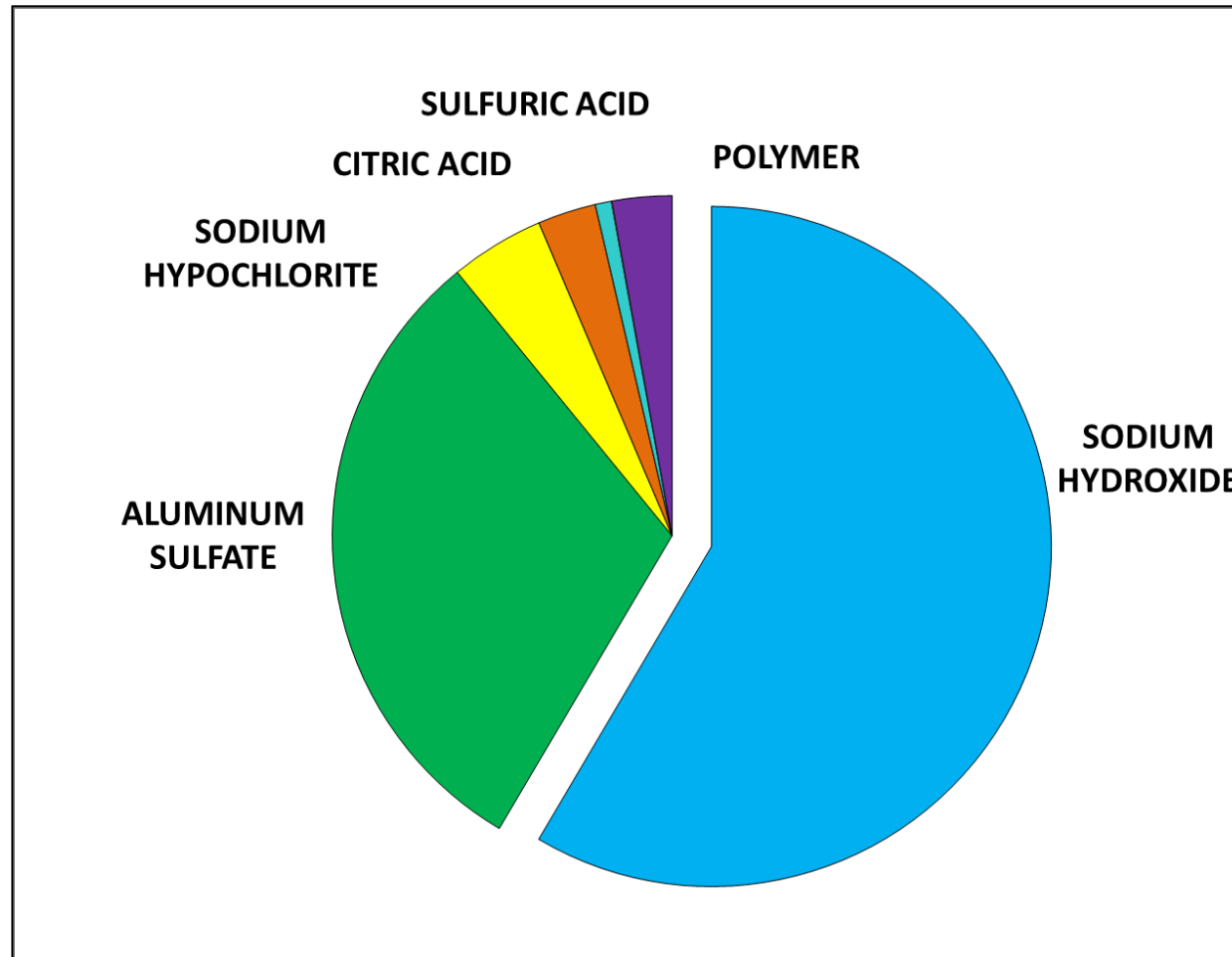




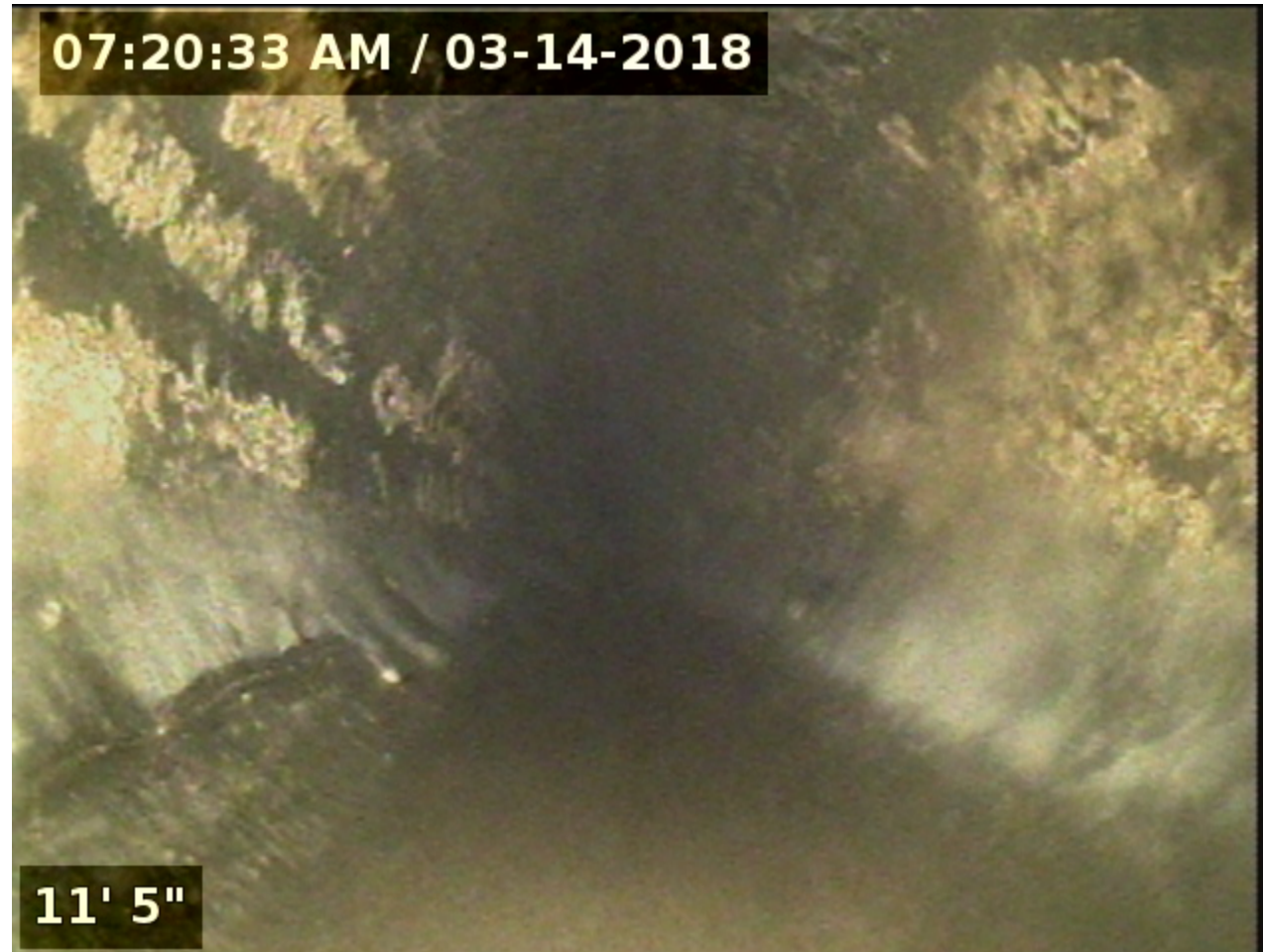
# Effluent Quality Standards

|                   | MINISTRY OF ENVIRONMENT   | ENVIRONMENT CANADA | RECLAIMED WATER        |
|-------------------|---------------------------|--------------------|------------------------|
| FLOW VOLUME       | < 4750 cubic meters / day |                    | 180 cubic meters / day |
| B.O.D.            | < 10 mg / L               | < 25 mg / L        | < 5 mg / L             |
| T.S.S.            | < 10 mg / L               | < 25 mg / L        | < 5 mg / L             |
| TURBIDITY         | N/A                       | N/A                | < 1 NTUs               |
| pH                | 6 - 9                     | 6 - 9              | 6.5 - 9                |
| AMMONIA           |                           | < 1.25 mg / L      |                        |
| LETHAL TOXICITY   | < 50 % mortality          |                    |                        |
| RESIDUAL CHLORINE |                           | < 0.02 mg / L      | > 0.5 mg / L           |
| FECAL COLIFORMS   | < 14 / 100 mL             |                    | 0 / 100 mL             |

# Average Monthly Chemical Consumption



# Sewer System – Clean Pipe





# Sewer System – Grease Deposits



# Operator Certification

- 4 levels of certification and 4 types of certification
- Operators must acquire plant operating time as well as 1.2 C.E.U.'s per year to obtain/retain certification
- Class 4 treatment plant – level 4 operator
- Class 2 collection system – level 1 operator
- Operators must have level 2 wastewater treatment certification to work alone

# Conclusion

- Wastewater treatment is an essential service
- Wastewater treatment is complex; it is a science and an art
- Staff respond to emergency situations 24/7
- Much of the work operators do is behind the scenes



# Questions?

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