

Preferred Option Wastewater Treatment

Provide Secondary Treatment for All Flows

The preferred option for the Liquid Waste Management Plan (LWMP) would ensure all effluent passes through secondary treatment as it does currently. However, upgrades and expansion to existing components will occur to increase capacity and comply with regulations over time. Disinfection for all flows will be added as a new component in the treatment process. The disinfection process will be designed to achieve recreational standards and the following treatment and discharge standards will apply.

Secondary treatment for the entire plant flow:

- Secondary treatment removes 90% of organic material and solids on average (note that the treatment plant currently achieves greater than 95% removal of total suspended solids (TSS) and greater than 93% removal of 5-day Biochemical Oxygen Demand (BOD5))
- Secondary treatment removes 80-95% of microplastics on average
- Meets effluent quality for provincial and federal regulations
- Upgrade path for next 20 years will ensure meeting capacity and effluent quality regulations moving forward
- UV disinfection system to disinfect wastewater to not exceed 200MPN/100mL fecal coliform concentration at end of the outfall pipe. Based on dilution modelling there will be sufficient dilution to stay below requirements for protection of shellfish.

Advantages

- Exceeds regulatory requirements for discharge to open marine waters
- Entire plant flow is subjected to secondary (biological) treatment
- Includes ultraviolet disinfection to protect shellfish resources
- Effluent meets standards that allow for potential for incorporation of reclaimed water reuse in the future

Disadvantages

- Secondary treatment must be sized to accommodate all wet weather flows, increasing capital and operating costs

