



BAYSHORE VILLAGE EFFLUENT SPRAY IRRIGATION CLASS EA UPDATE

DEPUTATION TO COUNCIL

August 12, 2024

STATUS UPDATE



Since last deputation to Council on December 11, 2023:

- Soil investigations and air quality modelling
- Assessment of alternative solutions
- Capital and operating cost estimates
- Preparation for and presentation at PIC on May 22
- Review of comments received
- Preparation of Draft Class EA Update Report
- Stage 2 archaeological survey of the west field on August 2
 - Artifacts from a mid-19th century homestead were found

PROBLEM STATEMENT AND ALTERNATIVE SOLUTIONS

Problem Statement

- Provide the required effluent disposal capacity without runoff to adjacent properties, ditches and Wainman's Creek
- Provide some spare capacity for operational flexibility
- Involve reasonable level of effort and costs for operation and maintenance
- Address adjacent residents' concerns
- Have reasonable capital costs for construction, equipment and land
- Be acceptable to MECP so that an approval can be obtained

Short List of Alternative Solutions

- Do nothing (for comparison)
- Alt. 3 - Establish 1 new spray irrigation field (West)
- Alt. 6 - Build effluent disposal bed on the West field and continue spray irrigation on the South field only
- Alt. 7 - Build effluent disposal bed on the South field and establish new spray irrigation field (West)
- Alt. 8 - Build effluent disposal bed and discontinue spray irrigation

ALTERNATIVE 8: BUILD EFFLUENT DISPOSAL BED AND DISCONTINUE SPRAY IRRIGATION



- Decommission all spray fields
- Build effluent disposal bed on West field, used year-round
- Can dispose of annual volume of effluent, with spare capacity
- Eliminates runoff and potential impacts on surface water quality
- Addresses adjacent residents' concerns with spray irrigation
- Reduces aesthetic impacts and eliminates potential for aerosols
- Low potential impacts on groundwater quality
- Estimated project cost: \$7.3 M
- Estimated annual O&M costs: \$80k/year
- Estimated 20-year costs: \$8.9M

PIC MAY 22, 2024



- In-person attendance: 57 persons/households
- 76 public comments received, mostly from adjacent residents and Bayshore Village residents
- Few agency comments received
- All public comments state support for the preliminary preferred solution:
 - Abandon spray irrigation and replace with year-round effluent disposal bed
- Common points in public comments:
 - Spray irrigation is not a viable option because of past/current issues and impacts to adjacent residents
 - Urgency to address issues with spray irrigation
 - Government funding needs to be obtained

PREFERRED AND RECOMMENDED SOLUTION



Build effluent disposal bed on West field

Abandon effluent spray irrigation

Continue monitoring I/I and addressing sources of I/I

EFFLUENT DISPOSAL BED DESIGN CONCEPT



- Retain Lagoon Cell B for sewage treatment
- Decommission Lagoon Cell A and fill.
- Construct new effluent pumping station
- Construct raised Type A dispersal bed
 - 400 m³/day
 - Built in multiple cells for flexibility and rotation
 - Built with imported sand from local pit
 - Total bed loading area, incl. mantle: 52,000 m² minimum

INFLOW AND INFILTRATION CONTROL



Recent reductions in wastewater flows from Bayshore Village should be maintained or improved to minimize loading on treatment and disposal system

- Repair main sewers, maintenance holes and laterals to remove known and potential sources of I/I
- Continue monitoring and disconnection of illegal sump pump discharges to sanitary system
- Frequent video inspections of sewer system to identify any new sources of I/I

NEXT STEPS - SCHEDULE



COMPLETED BY END OF

Final Report and Notice of Completion of Class EA	September 2024
30-day public review	October 2024
Topographic survey, geotechnical investigation for design	November 2024
Stage 3 archaeological assessments and excavation if required	January 2025
Preliminary design and consultation with MECP	January 2025
Detailed design and application for MECP approval	March 2025
Tendering	April 2025
Construction (contingent on receipt of ECA)	Spring 2026



RECOMMENDATIONS IN THE INTERIM

Prior to 2025 spray season

- Inspect and repair irrigation piping if needed
- Adjust layout of spray heads & piping to optimize spray area and reduce impact on private properties
- Confirm actual spray area (ha) to ensure average application rate $< 55 \text{ m}^3/\text{ha}/\text{day}$
- Meet with adjacent residents to resolve conditions for spray irrigation on North Field
- Enter in contract for provisional hauling to Lagoon City STP

Until alternative solution is implemented

- Operate the spray fields in strict compliance with conditions of Certificate of Approval
- Inspect and supervise daily spray irrigation operation - shut off area if runoff

CLOSING



Class EA Update, with public input, recommends:

- Abandoning spray irrigation and replacing with a large effluent disposal bed
- Maintaining efforts to control I/I in the sanitary sewer system
- Until new system is commissioned:
 - Improve supervision of spray irrigation system to avoid runoff
 - Apply contingency plan as needed

Request concurrence from Council of recommendations of Draft Class EA Update Report