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Water Solutions
Provider

Havelock Sewage Treatment Plant – Next Steps

Friday, October 23rd, 2020



Background

- Last Council Meeting - August 24th
- OCWA summarized the findings of the Functional Servicing Study report by Engage Engineering Ltd.
- Presented flow data from the STP with some recommended next steps



Summary from Previous Meeting

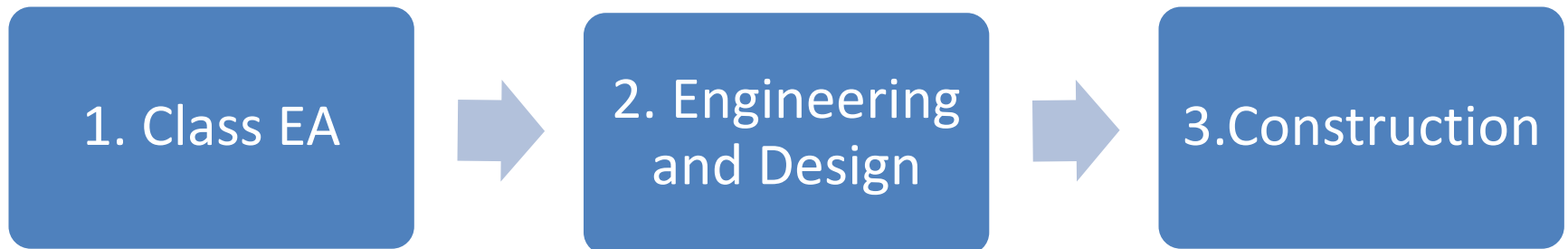
- Havelock STP is currently assumed to be at 75% of capacity based on flow data
- Plant capacity has been consistently exceeded during wet weather events/spring thaw
- New development in area will lead to additional increase in flows

Year	Average Daily Flow (m ³ /day)	Max Daily Flow (m ³ /day)	% Capacity of STP
2015	688	1,235	57%
2016	741	1,536	62%
2017	959	2,155	80%
2018	1220	2,400	102%
2019	860	1,552	72%
2020	953	1,585	79%



Current Plan

- Investigate, design and implement increased capacity to STP
- Required to follow the Municipal Class EA Process

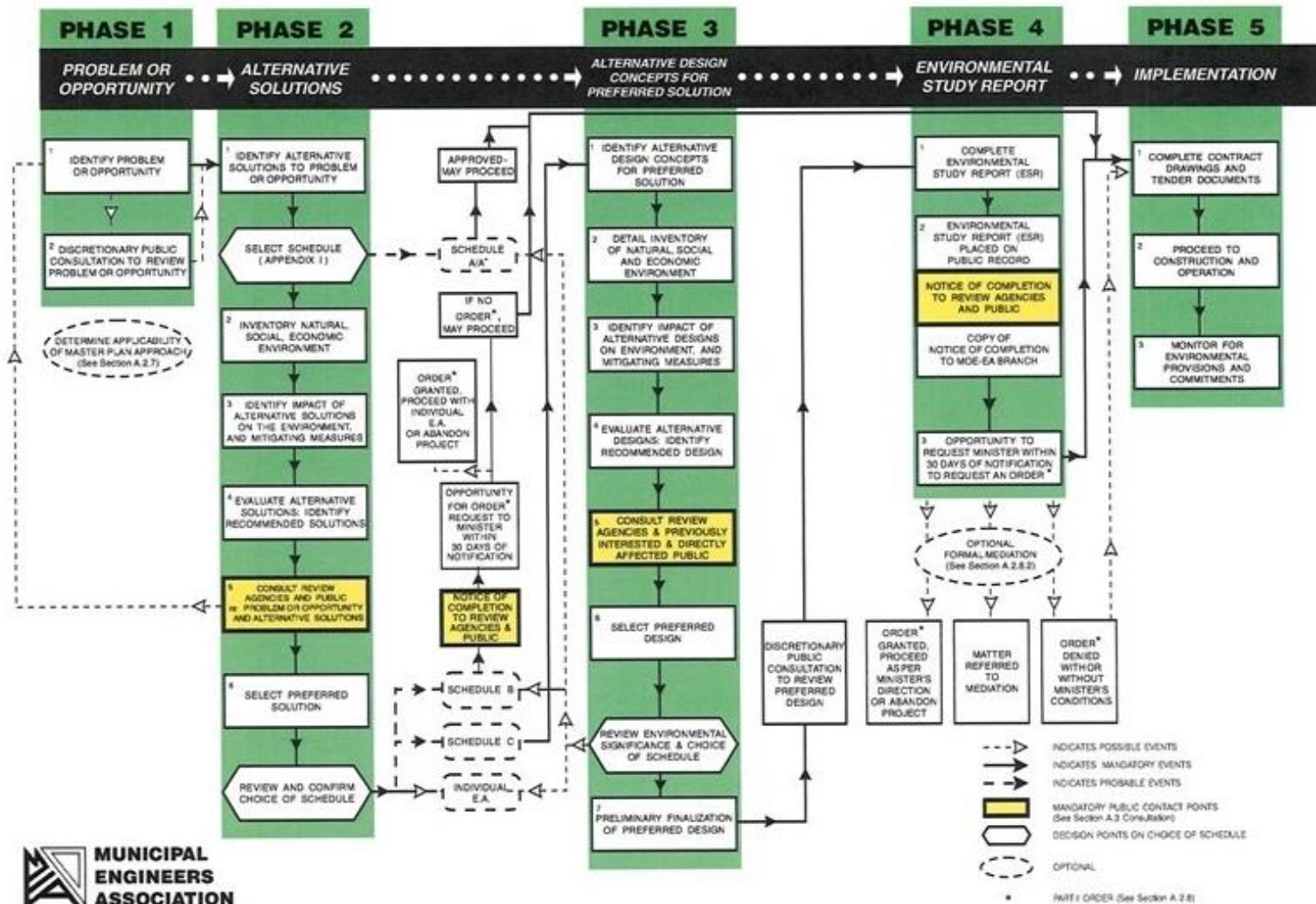




1. Class Environmental Assessment (EA)

- A mandated process to incorporate environmental factors into decision making
- Schedule C - Expand the existing sewage treatment plant beyond existing rated capacity
- Process includes four phases:
 - Identify the Problem
 - Identify Alternative Solutions to Problem
 - Identify Alternative Design Concepts for Preferred Solution
 - Completion of an Environmental Study Report

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA





OCWA's Role in Completing Class EA

- **Step 1** - Procurement of Consulting Engineering (CE) Services
 - Preparing Terms of Reference (TOR) and Request for Services
 - Issuing the TOR using OCWA's VOR process and reviewing proposals from CE Firms
 - Preparing contract with selected CE Firm
- **Step 2** - Project Management and Technical Review
 - Project Financial, Coordination and Communication
 - Acting as the Owner's Engineer
 - Attending Project Review Meetings and Stakeholder Meetings
 - Technical Review of deliverables throughout EA process



Class EA – Approximate Cost

Item	Cost Range
OCWA's Services	\$30,000-\$60,000
Consulting Engineering Services	\$75,000-\$200,000
TOTAL	\$105,000-\$260,000

- EA process can take 8-12 months
- Requires consultation with public and other stakeholders at multiple stages in the process
- Requires review of alternative solutions and their impact on the environment
- Will result in multiple deliverables requiring technical review



Capacity Increase - Summary

Item	Cost Estimate	Approximate Timeline
Class EA	\$105,000-\$260,000	8-12 months
Engineering and Design	\$375,000-\$1,250,000 ¹	8-12 months ²
Equipment Purchase and Construction	\$2,000,000-\$5,250,000 ¹	2 years ²

1. Class 5 cost estimate with +/- 50% accuracy as per the AACE Cost Estimate Classification System – As Applied In Engineering, Procurement, And Construction For The Process Industries (March 1, 2016).
2. Time may vary depending on complexity of upgrade



Next Steps – Class EA

- OCWA will prepare and submit a proposal to the Township for Project Management and Technical Services for approval
- OCWA will then prepare the TOR for procurement of a Consulting Engineering Firm



Interim Solution may be required?

- Expansion of the plant could take 4-5 years
- Plant capacity has been exceeded during wet weather, however no compliance issues or bypasses have been reported to date
- New development in area may lead to increase in flow to STP
- Recommend looking into an interim solution



Interim Solution

- Existing Lagoons - temporary storage of peak flows
- Currently decommissioned - need to investigate how to bring them back into service
 - Structural integrity of lagoon lining
 - Flow of sewage to and from lagoon
 - State of decommissioned piping
 - Ministry Approval



Ministry Approval – ECA Amendment

- Bringing the lagoons back into service requires a change to the Certificate of Approval (now called an Environmental Compliance Approval or ECA)
- Changing the ECA will require an application to the Ministry with justification as to why it needs to change and how the changes will be implemented



ECA Amendment – OCWA’s Role

- Investigation
 - Review of existing background information and drawings
 - Understanding of what needs to be changed
 - Determine scope and feasibility of solution (cost estimate)
- ECA Amendment Application
 - Preparing and submitting application form to Ministry
 - Liaison with Ministry
- Follow up Technical Studies/Reports
 - Any additional studies, reports, assessments, etc. required by the Ministry to support the application



ECA Amendment – Cost Estimate

Item	Approximate Cost
Investigation	\$5,500-\$7,500
ECA Amendment Application	\$1,000-\$2,000
Application Fee	\$5,000
Follow up Technical Studies/Reports	TBD – Ministry mandated
TOTAL	\$11,500-\$14,500



Next Steps – Interim Solution

- Submit proposal for Investigation
- Begin investigation
 - Site visit
 - Review background information
 - Assess feasibility of solution
 - Prepare cost estimate
 - Review with Township

Thank you.

