

4.0 Assessment of Environmental Impacts

The assessment of potential impacts has been undertaken in consideration of the project, as well as potential accidental events/malfunctions.

4.1 Approach to the Assessment of Environmental Impacts

Those aspects of the biophysical and socioeconomic environments deemed to have specific value to the ecosystem are identified as Valued Ecosystem Components (VEC) and Valued Socio-Economic Components (VSCs). VECs and VSCs have been identified for this project based on their intrinsic value to the ecosystem, heritage and culture, protection afforded by legislation, and professional judgment. For the purposes of this project, the following have been identified as a VEC/VSC:

- Atmospheric Environment (air quality and climate);
- Aquatic Environment (groundwater, watercourses, wetlands);
- Terrestrial Environment (flora, wildlife/wildlife habitat, birds/bird habitat and protected areas);
- Species at Risk (fish and wildlife);
- Archaeological and Cultural Resources; and,
- Socio-Economic Environment.

A central component of the EIA process is to identify the anticipated impacts on the environmental features resulting from the construction and operation of the proposed project. The approach taken involves identifying the potential for the project to interact with the existing VECs/VSCs which are present at the project locations. This step is shown in a simple matrix format (see **Table 4-1** in Section 4.3).

4.2 Approach to Project Components

As presented in Section 2, this EIA recognizes five distinct project components for the completion and operation of the WWTP. The potential impacts to the surrounding environment have been considered in terms of each distinct component. The five components of the project are:

- Site Preparation and Civil Works – includes clearing/grubbing the proposed project area, access road construction, excavation and site grading, upgrading of the gravel roadway (if necessary) and paving;
- Facilities Construction – includes construction activities for the headworks, SBR or BNR, and the WWTP building. Construction includes, but is not limited to, foundation works,

building construction, electrical, mechanical and instrument work and installation of the process equipment;

- Effluent Line Construction – includes the directional drilling and construction of the effluent connector line from the proposed facility to the connection at the existing effluent line at Bear Trap Brook, and the new connection pipe from the proposed facility to the existing Town sewer line;
- Operations and Maintenance – includes activities involved in the operation and maintenance of the WWTP for an assumed lifespan of 25 years; and,
- Accidents and Malfunctions – includes any accidents, spills, leaks or other unplanned events that could potentially occur during the project components.

The site preparation and civil works, facilities construction and effluent line construction components have been grouped together under the *Construction Phase* of the project. As previously stated in Section 2, the decommissioning of the WWTP was not considered during this EA. Decommissioning of the project would be subject to and assessed pursuant to the applicable regulatory environment of the day.

4.3 Project Interaction Matrix

This initial screening assists in determining if an interaction between the project and the environmental and socio-economic component is possible and is presented in **Table 4-1**.

TABLE 4-1: PROJECT INTERACTION WITH ENVIRONMENTAL COMPONENTS

Environmental Components		Project Components				
		Construction Phase			Operations and Maintenance	Accidents and Malfunctions
		Site Preparation and Civil Works	Facilities Construction	Effluent Connector Line Construction		
Atmospheric	Ambient Air Quality	✓	✓	✓		✓
	Climate					
	Ambient Sound Quality	✓	✓	✓		
Terrestrial	Environmentally Sensitive Areas – (Lower Saint John River (Sheffield / Jemseg IBA))	✓	✓	✓		✓
	Vegetation (Flora)	✓	✓	✓		✓
	Wildlife (Fauna)	✓	✓			✓
	Migratory Birds					
Species at Risk and of Conservation Concern	Flora/Fauna and Associated Habitat	✓	✓	✓	✓	✓
Aquatic	Groundwater	✓				✓
	Surface Water	✓	✓	✓		✓
	Wetlands	✓		✓		
Archaeological and Cultural	Archaeological / Cultural Heritage Resources					✓
Socio-Economic	First Nations / Aboriginal Interests					
	Labour and Economy	✓	✓		✓	
	Land Use	✓	✓	✓		