



## **EPB 438 Temporary Work Camp Wastewater Effluent Limits**

A “temporary work camp” means a work camp that is only used for at most 12 consecutive months and then reclaimed. A temporary work camp might be established in the mining, lumbering, construction, drilling, resource exploration or other similar industry. The preferred method of domestic wastewater disposal for a temporary work camp is to utilize the services of a licensed septic waste hauler to haul the wastewater to a Water Security Agency (WSA) licenced wastewater treatment system. Oftentimes, for camps in remote locations, sewage hauling can be impractical and the use of an onsite wastewater treatment system becomes necessary. Temporary work camps that have their own wastewater treatment systems with design flows exceeding 18 m<sup>3</sup>/day (approximately 4000 IGPD) will be regulated by WSA under Section 5 of *The Waterworks and Sewage Works Regulations*.

Wastewater treatment systems currently used in Saskatchewan can be categorized into lagoon-based technology (e.g. facultative/evaporative lagoon) and mechanical treatment technology (e.g. conventional activated sludge, rotating biological contactor, and membrane bioreactor). A temporary work camp can choose any applicable wastewater treatment system based on effluent disposal restrictions and effluent limits, so long as the wastewater treatment system meets the WSA’s pertinent regulations and guidelines. A packaged mechanical wastewater treatment system is often introduced to treat the wastewater at a temporary work camp due to its compact footprint, easy installation and disassembly, and relatively good treatment performance.

Typically, a sewage works that will continuously discharge effluent to the environment requires a Downstream Use and Impact Study (DUIS), according to Section 4.1.1. of EPB 503 – Sewage Works Design Standard. This study would evaluate the receiving environment and those uses and users downstream from the treated effluent discharge, and propose site-specific effluent limits that would ensure the downstream environment is protected. Depending on the complexity of the receiving environment and the amount of readily available information, a DUIS could take a significant amount of time to complete. To facilitate the timelines associated with temporary work camps, and because these camps will only have a short term impact on the receiving environment, the WSA has waived the requirement of performing a DUIS for temporary work camps on the condition that effluent limits found in this factsheet can be achieved by the proposed wastewater treatment system.

Based on the effluent limits set for existing mechanical wastewater treatment systems as well as available surface water quality monitoring results across the province, Table 1 outlines the effluent limits that must be met by a wastewater treatment system at a temporary work camp if a DUIS is not completed.

**Table 1. Effluent Limits for Temporary Work Camp Wastewater Treatment System**

Parameters	Limits
<b>CBOD<sub>5</sub></b>	<15 mg/L
<b>TSS</b>	<15 mg/L
<b>Un-ionized Ammonia</b>	<1.25 mg/L, expressed as nitrogen (N), at 15°C±1°C
<b>Total Nitrogen</b>	<10 mg/L
<b>Total Phosphorous</b>	<1.0 mg/L
<b>E-Coli</b>	<100 orgs/100mL
<b>Toxicity Acute</b>	Not acutely toxic at 100% effluent concentration
<b>Total chlorine residual</b>	< 0.02 mg/L

An approval to install the wastewater treatment system must be obtained from the WSA prior to starting construction of such works. As part of the Permit for Construction application documentation, the proponent shall provide the WSA with a performance guarantee letter signed by a professional engineer eligible to practice in Saskatchewan, along with the performance results demonstrated in a similar climate. Effluent quality monitoring will be required during the operation of the temporary wastewater treatment system and a performance report is to be submitted once the wastewater treatment system is properly decommissioned.

For more information on temporary work camp wastewater treatment system effluent limits setting or construction permitting requirement, please contact Engineering Approvals Unit at (306) 787-0726 or [WSA.EngineeringandApprovals@wsask.ca](mailto:WSA.EngineeringandApprovals@wsask.ca).