



Ontario Seasonal Sites: A Case Study on Accelerated Treatment Plant Start-Up

ACCELERATED
SEASONAL SITE START-
UPS DUE TO COVID-19
CRISIS

PROJECT OVERVIEW

Location: Seasonal sites across Ontario

Challenge: In March 2020, the COVID-19 pandemic caused the shutdown of all non-essential services which delayed the routine start-up of seasonal sites, such as campgrounds, overseen by Clearford.

SOLUTION

The best way to adapt to the pandemic restrictions and regulations was to take every opportunity possible to prepare sites. Without knowing when the COVID-19 restrictions would be lifted and operations could commence, Clearford's Operations team was on standby until they received the authorization to start up the seasonal sites. With careful planning, diligence, and a dynamic team, Clearford was able to execute the startup of all plants within the reduced timeline.

BOTTOM LINE

The expanding health challenges resulted in the shutdown of all non-essential services, including the opening of the more than 30 campgrounds where Clearford manages the water and wastewater infrastructure. The pandemic forced us to fit a dense two weeks of pre-planned work into 6 days. This made for long hours and raised issues in securing the supplies required to commission the treatment plants.

BACKGROUND

To address the scheduling for seasonal site start-up, Clearford's Director of Operations, District Supervisors, and Operators developed a standard pre-startup plan for each site. This plan includes all capital expenses (CAPEX) work that has to be approved by the site owners. In addition, it incorporates important site information such as standard annual maintenance regimes, additional manpower required, and preparation of compliance notifications to governing agencies.

Pandemic delays seasonal site startup

At the beginning of March 2020, a global pandemic was declared due to the spread of the CoVid-19 virus. The developing health crisis resulted in the shutdown of all non-essential services in Ontario, delaying the opening of the water and wastewater infrastructure for over 30 campgrounds managed by Clearford.



Obtaining start-up approval

When commissioning water treatment plants (WTP), notifications to the Ontario Ministry of Health (MOH) and the Ministry

of the Environment, Conservation and Parks (MECP) is required. However, the regulatory requirements and other related system information for wastewater treatment plants (WWTP) typically requires communication with only the MECP.

Prior to starting up a treatment system, sampling requirements outlined in the Certificate of Approval (CofA) or the Environmental Compliance Approval (ECA) must be followed and communicated to the regulatory bodies to obtain official start-up approval. Depending on the ECA and site location, most of the seasonal sites prepared for a start-up date of **April 1st** or **May 1st**.



PANDEMIC ADAPTATIONS

At the beginning of every operating season, one of the first steps in commissioning systems is the coordination of major maintenance and CAPEX items with sub-trades prior to start-up dates. This is always one of the toughest challenges in commissioning seasonal systems and the pandemic only made it more difficult. Clients were less willing to spend CAPEX dollars on systems when facing the prospect that they may not see any revenue from these sites due

to the potential sustained shutdown of the sites. Clearford continued to monitor the ever-changing pandemic crisis and remained in consistent communication with clients.

Without knowing when the restrictions would be lifted and operations could commence, our Operations team was on standby awaiting for the go-ahead to start-up the seasonal sites.

The Ontario government released a statement in the beginning of May approving the start-up of some seasonal sites, which gave us less than a week's notice to start up the treatment plants by May 15th.



CHALLENGES

Typically, two weeks to a month prior to the startup date of the seasonal sites, we begin the initial steps of running the water and wastewater treatment plants. However, the pandemic forced us to fit two weeks of work into 6 days. This made for long hours and raised issues in securing the supplies required to commission the WTPs and WWTPs.

Water Treatment Plants

For water treatment plants (WTP), obtaining chemical resources is required to achieve system process requirements. The pandemic resulted in a shortage of chemical supply and a delay in routine shipment. To overcome this challenge, Clearford has been purchasing smaller volumes of NSF approved chemicals to bridge the gap.

“One of the concerns caused by the pandemic was the availability of sodium hypochlorite as it was being supplied to other services first deemed higher on the essential services hierarchy.”

**- Dave Barnard,
Niagara District Supervisor**

Wastewater Treatment Plants

CoVid-19 has caused several challenges in the commissioning, operations, and maintenance of wastewater treatment plants (WWTP) including:

- Sudden surges in flow volumes that were not predictable based on past data,
- Delayed start-up causing peak flows to shift outside of the historical norms,
- An inadequate supply of wastewater to start the biological processes in the facilities.

SOLUTION

Prioritizing tasks and resources for optimized start-up procedures

Prioritizing all maintenance items in advance reduces treatment plant issues such as problems with the media filters and leaks in the distribution system. Completing these tasks prior to start-up also lessens the total number of staff required to operate any one site.

After the Province deemed water and wastewater operations as an essential service, Clearford management and the Health & Safety Specialist worked closely to ensure social distancing and the proper use of personal protective equipment (PPE) were being followed where necessary. The condensed start-up schedule led to staff shortages and limitations on the number of staff working together on site at once. To optimize start-up procedures, Clearford management was active throughout the COVID-19 period to develop and update new policies and procedures to allow field and office staff to continue work safely and effectively.

Adapting to unplanned circumstances

Residents of the seasonal sites commonly look forward to the summer months at their seasonal home. The best way to adapt to the ongoing pandemic restrictions and regulations was to take every opportunity possible to prepare sites. Although the seasonal sites startup dates were uncertain, our contingency planning provided a rapid response to re-open the sites and support the surrounding communities.

With careful planning, diligence, and a dynamic team, Clearford successfully executed the start-up of essential water infrastructure systems within the condensed timelines and constraints arising from the COVID 19 crisis.

CLEARFORD WATER SYSTEMS INC.

ABOUT

Clearford Water Systems Inc. is a provider of unified water management and sanitation systems with full solutions design, deployment, operations, and project finance services. With almost 200 systems under management, we are the largest operator of privately owned communal water and wastewater treatment systems in Ontario. For more information, visit www.clearford.com.

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