



Are you ready for

winter?

It is hard to believe we are rapidly approaching the winter season, but the snow and icy elements will be here before you know it. It is important to winterize water and wastewater treatment facilities to ensure there are no disturbances in operation.

Winterization accommodates the harsher elements and lower temperatures that accompany the season. These colder operating conditions within wastewater systems can have significant impact on plant operations and effluent quality. No worries, **Knapp Engineering** is here to help! We offer a team of highly qualified and experienced Service Technicians that are readily available to help ensure your facilities are prepared to combat even the harshest winter elements.

Scheduling winterization services, routine maintenance, calibrations, upgrades, repairs, and compliance services are essential in ensuring plant needs are met and maintained. In addition to upholding routine maintenance and service schedules, here are some tips that may help better prepare you and your facility for the impending winter season:

ADJUST BIOMASS: Every 10°F drop in temperature results in a significant change of bacterial metabolic rates, therefore, it is necessary to adjust biomass to make up for these slower metabolic rates.

INCREASE GREASE & SOLID REMOVAL: Remove grease and solids more frequently to accommodate increased flow precipitation which causes more grit and grease in aeration basins. If not addressed, this increase can negatively alter bacterial makeup.

CLEAR BRIDGES & WALKWAYS: De-ice and clear all bridges and walkways to ensure safer working conditions.

KEEP CHANNELS FREE OF SNOW & ICE BUILD UP: Snow and ice accumulation can quickly build up and cause blockages in channels. It is important to remove and keep all channels free of these elements to prevent obstructions.

TEST HEAT EXCHANGERS: If the plant has digesters that capture gas, make sure heat exchangers are working properly to eliminate any temperature drops that may result in bacterial changes.

DRAINING: Drain fixtures with standing water to prevent icing that may potentially cause damage from freezing.

HEATING: Ensure heaters are working throughout the facility.

