

WINDSOR

City of Windsor, Ontario Improves Water Quality in Great Lakes with Polyblend® Polymer Preparation System – for Over Two Decades

OVERVIEW

The City of Windsor in Ontario, Canada, owns and operates two wastewater treatment plants. Little River Pollution Control Plant has capacity to treat 16 million gallons per day (MGD), while the Lou Romano Water Reclamation Plant has capacity for 60 MGD. Since the latter part of the 20th century, the city has made major strides in improving water quality by reducing the sewage discharge into the international waters of the Detroit River. Most recently, the upgrade and expansion of the Lou Romano Water Reclamation Plant, including the increased capacity to treat combined storm and sanitary flows and new secondary biological aeration filtration, marked a major step forward toward the improvement of water quality in the Great Lakes.

Until the early 1990s, the Little River Pollution Control Plant was using a mannich wet polymer solution for their centrifuge and chemical feed polymer preparation. Concerns around the potentially carcinogenic elements of the mannich solution and the characteristic fishy-smelling foul odor prompted the City of Windsor to consider other polymer blending options. Different systems were run on a trial including the Polyblend® DP (Dry Polymer) demonstration unit. The odor problem was gone within a week and because it outperformed other competitive systems, Polyblend® DP was selected for installation.

The Polyblend® DP series dry polymer preparation system offers a unique two- stage method of initial high-shear mixing followed by low-shear mixing. The mechanical activation of the dry polymer ensures polymer optimization and lowers operating costs. An innovative stainless steel "hollow wing" mixing impeller in the age/mix tank reduces polymer consumption by providing proper energy at low speed through impeller size and recirculation to prevent agglomerations while minimizing polymer fracture. With minimal maintenance and a small footprint, the Polyblend® DP is fully automatic and easy-to-operate.

"Polyblend® has been performing exceptionally well for Windsor, Ontario, for over two decades. With basic maintenance, we've needed very few parts over the years, and when you see the equipment, it is in excellent condition!"

Tony Bietola, Plant Manager Lou Romano Water Reclamation Plant



Two Polyblend® DP2000 units were installed at the Little River Pollution Control Plant in 1992. In the following years, four additional Polyblend® DP2000 systems were installed at the Lou Romano Water Reclamation Plant, at the time called West Windsor Pollution Control Plant.

All six units in the City of Windsor, Ontario, wastewater treatment system are still in service after running for over 20 years, and some have been operating for 24 hours each day.

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