

City of Dixon, Illinois Uses Polyblend® Dry Polymer Preparation System as Part of a Creative, Cost-Neutral Biosolids Disposal Arrangement

The City of Dixon, Illinois, located 100 miles west of Chicago, went on-line with an upgraded 4.5 MGD wastewater treatment plant in February 2002. As part of the upgrade, the city selected and installed a Polyblend® DP 800 dry polymer preparation system to optimize the use of dry polymer in the wastewater sludge dewatering process. In an environment where utility operators are increasingly challenged to reduce biosolids disposal costs, the City of Dixon began exchanging their biosolids for landfill leachate. This creative biosolids disposal arrangement has been saving money for both the Dixon wastewater treatment plant and the Lee County landfill for over 12 years.

The Polyblend® produced polymer solution is combined with gravity-thickened sludge, fed to a belt press for dewatering, and the resultant biosolids are hauled to the local landfill. The landfill uses the biosolids as "daily cover," a layer of soil or other material that is applied on top of the landfill waste. Daily cover helps prevent the interaction between the solid landfill waste and the air, reducing odors and creating a firm base over which landfill vehicles can drive. In exchange, the Lee County landfill sends their leachate - the liquid that passes through the landfill, extracting components of the garbage and requiring treatment - to the Dixon wastewater facility for treatment and discharge. No costs or fees are cross-charged by the wastewater treatment facility or the landfill in this cost-neutral arrangement.

"The Polyblend® dry polymer preparation system provided by UGSI Chemical Feed has been very reliable and dependable for us. We installed the unit 12 years ago during our last upgrade and the unit has been in operation ever since."

*Daniel Mahan
Superintendent, Wastewater Treatment Department, City of
Dixon, Illinois*

The Polyblend® DP Series dry polymer preparation system has been shown to reduce polymer consumption by over 25% while improving polymer performance in terms of sludge dryness,

solids capture, water clarity, drainage and retention. The unique two-stage method of initial high-shear mixing followed by low-shear mixing has been proven to be the best choice for making down dry polymers. 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. Requiring minimal maintenance, the fully automatic, easy-to-operate Polyblend® dry polymer preparation system has proven to be an excellent choice for the City of Dixon for over a decade.



Polyblend® DP 800



Polyblend® DP 800
Installation at Dixon, IL