**The Kansas Nitrogen Removal Program**

The Kansas Department of Health and Environment manages the NPDES surface water discharge program, state ground water discharge and effluent spray irrigation permit programs. Based on communication with the Kanas Department of Health and Environment permitting and water quality planning staff there are no municipal or publicly owned (POTW) NPDES major dischargers, (over one million gallon per day average flow) that are using a supplemental carbon source for denitrification at this time.

The Kansas Department of Health and Environment has developed a surface water nutrient reduction strategy where all NPDES major permitted (> 1 million gallons per day flow) wastewater treatment facilities plan for a nitrogen removal effluent goal of 8 mg/l total nitrogen. The Kansas plan has 59 publically owned wastewater treatment plants that are covered under the initiative. The nutrient reduction strategy has an overall goal of reducing nutrients (nitrogen and phosphorus) by 30% discharged within the state. Because the strategy is based on a goal of 8 mg/l total nitrogen the plan is entirely voluntary with no specific enforceable limits included in the NPDES permits. If future nitrogen limits are included in NPDES discharge permits as enforceable limits, the limits will be mass based annual loads.

There are seven wastewater treatment facilities that serve meat packing plants in Kansas. The wastewater treatment facilities at the meat packing plants either discharge effluent to spray crop irrigation adjacent to the wastewater treatment plants or the wastewater is pretreated and discharged into a municipal wastewater treatment plant. According to the permitting staff there are no known facilities using methanol or any other supplemental carbon source for denitrification at this time.