

Prairie Lakes

Homewood, Illinois

A wetland biofilter was designed and constructed for this project to provide stormwater treatment for runoff resulting from up to a two-inch rainfall event for the 76 acres of the tributary area. John Eppich, P.E. and Applied Ecological Services, Inc. (AES) provided engineering and ecological services during both design and construction phases. The Prairie Lakes wetland biofilter was designed to have stormwater initially discharge into a 0.66 acre sedimentation basin to encourage settlement of larger sediment particles in an area from which the sediment could be easily removed during maintenance activities. The stormwater runoff is then routed through a 3.6 acre wetland basin for treatment prior to discharge into the seven-acre main lake.

Water quality data - including water temperature, turbidity, pH, conductivity, dissolved oxygen, suspended solids, nitrogen, zinc, cadmium, phosphorus, sodium, chloride, total petroleum hydrocarbons, fats, oils, and greases- was collected and analyzed to document project effectiveness. AES involved local junior high students in monitoring water quality and planting wetland materials. Seminars were also conducted for teachers on wetland management and operation.

