



PROJECT:

Minnesota Municipal Power Agency

Naturally Wallace Consulting

LOCATION

Faribault, Minnesota

PROJECT TYPE

Natural Wetland Design and Planting

WASTE TYPE

Cooling Water Blowdown

COMPLETION DATE

September 2007

PROJECT SIZE

6 Acres

NEED

The Minnesota Municipal Power Agency's (MMPA) Faribault Energy Park is an on-demand, natural gas energy production facility located in an agricultural region of south central Minnesota. The facility uses large quantities of water in its cooling tower and needed a reliable source of water that did not deplete the groundwater aquifer. MMPA wanted a system to combine their cooling water with associated



storm water runoff to reduce withdrawals from the Jordan Aquifer. The agency also wanted to create a natural park setting to provide an amenity in the community for visitors and to provide treatment for the cooling water. A constructed wetland was designed to serve this purpose. In addition, we provided the team needed to plant the system with a variety of wetland plants and create a thriving, diverse and functioning wetland system.

SOLUTION

Naturally Wallace not only met the client's needs by designing the constructed wetland, they also provided a team to organize and plant the six acre wetland park. The plantings occurred over a period of three weeks. Over 12,000 wetland plants varying from deep water submergents to shallow water emergents were planted in the wetland system. Monitoring reports, required by the US Army Corps of Engineers, are prepared annually as part of a five year maintenance contract to monitor plant survival in the created wetland.

BENEFIT

The wetland park system is beneficial to both the community and environment. The reuse of cooling tower blowdown in combination with stormwater collection will reduce draws on the Jordan Aquifer and limit the discharge of salty water into the adjacent agricultural drainage ditch. A thriving, diverse, functioning wetland park is integral to the stability of the shorelines. In addition, the wetland showcases natural fish and wildlife habitat, and walking trails that provide a valuable community amenity to the City of Faribault and compliment the surrounding rural landscape.



*Process design experts
in treatment wetlands*

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