



Project:

# Rahr Malting

## North American Wetland Engineering



### LOCATION

Shakopee, Minnesota

### PROJECT TYPE

Water Quality Improvement

### WASTE TYPE

Industrial

### COMPLETION DATE

1997

### DESIGN FLOW

1.3 MGD

### TREATMENT

Non point pollution reduction

### NEED

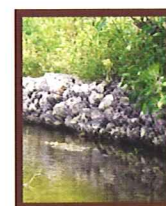
The Minnesota River is limited by a waste load allocation from receiving any more load from point source discharges. Rahr Malting has a food grade malting facility that could not economically expand without receiving an allocation of waste discharge to the river. There was no way available to Rahr that would allow them to expand.

### SOLUTION

North America Wetland Engineering (NAWE) developed a new pollutant nonpoint source trade program and proposed it to the Minnesota Pollution Control Agency in 1995. For every pound of organic nutrients (BOD5) that is discharged, two pounds of nonpoint source BOD5 was reduced. In 1997 the permit was issued and the first point nonpoint source trading program was born. Not only was a program developed and a permit issued, NAWE designed and implemented the NPS trades. NAWE developed formulas that were approved for trading nitrogen phosphorus, total suspended solids and BOD5. By calculating the BOD reductions to be credited, a ratio was developed that equated the equivalent BOD number for each pollutant. The program used was so comprehensive and thorough that the USEPA used it as a model for proposing a national trading program. The Minnesota Environmental Initiative award was given to Rahr for its efforts to improve the quality of the Minnesota River:

### BENEFIT

The Minnesota River benefited by a reduced NPS load by two times that allowed in Rahr's discharge. The permit land trading calculations developed by NAWE are so innovative and successful that it has been adopted at the national level by EPA.



 30% Post Consumer

Ecological engineering providing  
practical, innovative solutions.

### North American Wetland Engineering

4444 Centerville Road, Suite 140  
White Bear Lake, MN 55127

Ph 651-255-5050

Fax 651-255-5060

[www.nawe-pa.com](http://www.nawe-pa.com)