Project:

Christensen Farms

North American Wetland Engineering

LOCATION
Renville County, Minnesota

PROJECT TYPE
Agricultural

WASTE TYPE
Hog Manure

COMPLETION DATE
Fall of 2005

DESIGN FLOW
12,500 GPD

TREATMENT
Aerated Lagoon and Free-Water Surface Wetland

NEED

Christensen Farms owns and operates a number of hog farms in the Midwest. Waste from the barns is collected into an anaerobic lagoon and the supernatant is reused for barn washing. Four of the facilities were evaluated for the integration of a tertiary treatment system with the aim of reducing pollutant concentrations in the reuse stream.

SOLUTION

Supernatant from the anaerobic lagoon is routinely discharged to a pre-aeration cell that greatly reduces its strength. Afterwards, flow is introduced into a free-water surface wetland designed to polish the water and provide a natural habitat for water fowl. Treated water is pumped from the wetlands and reused for barn washwater.

BENEFIT

Tertiary treatment will greatly improve the quality of the re-use stream and is expected to substantially minimize odors introduced into the barns when washing out the manure channels. In addition, a natural habitat for waterfowl has been created, which is seen as a benefit to the community and Christensen Farms.

Ecological engineering providing practical, innovative solutions.

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