

# Midwest Environmental ADVOCATES

*pro bono publico*

## VIA ELECTRONIC MAIL

December 1, 2004

Attn: Susan Scobell Watson  
Wisconsin Department of Natural Resources  
Rhineland Service Center  
107 Sutliff Ave.  
Rhineland, WI 54501

**Re: Comments on Proposed Reissue of WPDES Permit for The Antigo Cheese Company for Discharge From a Facility to Groundwater and to Spring Brook in Langlade County, WPDES Permit No. WI-0032794-07-0**

Dear Ms. Watson:

Midwest Environmental Advocates, Inc. ("MEA") is writing to comment on the above-referenced proposed Wisconsin Pollutant Discharge Elimination System permit ("Proposed WPDES Permit"). MEA is a 501(c)(3) non-profit environmental law center that provides legal representation and technical assistance to communities working for clean air and water in the upper Great Lakes region.

## I. INTRODUCTION

We understand that the Proposed WPDES Permit is a reissue of a WPDES permit for The Antigo Cheese Company ("Antigo") to discharge, among other things, noncontact cooling water ("NCCW") from the facility to the Antigo Lake portion of Spring Brook, located in Langlade County. We further understand that Spring Brook (with the exception of the portion of Antigo Lake between Second Ave and CTH Y) is classified as an Exceptional Resource Water under Wis. Admin. Code § NR 102.11, a Class I Trout Stream under the Wisconsin Department of Natural Resources' ("WDNR") Wisconsin Trout Streams publication, and as a cold water community capable of supporting fish and aquatic life under Wis. Admin. Code § NR 102.04.

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Letter to Susan Watson, DNR  
Re: Comments On Proposed WPDES  
Permit for The Antigo Cheese Co.  
12/01/2004  
Page 1 of 5



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The discharge of NCCW into surface waters has the strong potential to increase a waterbody's temperature and, consequently, result in significant adverse changes to the aquatic environment. Temperature changes can cause sensitive cold water fish species to become more susceptible to toxins and disease, as well as foster the replacement of cold water species by warm water species. Further, because warm water is able to hold less dissolved oxygen than cold water, thermal pollution from NCCW discharge poses a serious threat to oxygen-sensitive species.

## II. COMMENTS

### A. The Proposed WPDES Permit Should Include a Temperature and Flow Limit for Noncontact Cooling Water that Prevents Temperature Increases or Fluctuations that Adversely Affect Spring Brook and its Cold Water Trout Fishery

#### 1. The WDNR Should Establish a Water Quality Based Effluent Limitation for Temperature, Rather than Reapplying a 120 Degree F Limit

Section 1.2.1 of the Proposed WPDES Permit establishes the monitoring requirements and effluent limitations for the discharge of NCCW from the Antigo facility. Section 1.2.1 establishes a maximum daily temperature of 120 degrees F for the NCCW. The Proposed WPDES permit and its supporting documents do not explain the basis for the temperature level, acknowledging only that the 120 degree F limit was carried over from the previous permit. WDNR guidance documents on effluent limits for discharges to surface waters suggest that the 120 degree F thermal limit was based on human protection from incidental contact, as opposed to being based on an environmental concern for the receiving waterbody or aquatic life therein. *See* WISCONSIN DEPARTMENT OF NATURAL RESOURCES, EFFLUENT LIMITS CALCULATION GUIDE FOR DISCHARGES TO WISCONSIN SURFACE WATERS, 73 (Nov. 1994). State law requires that WDNR specify levels of pollutant discharge for each permit it issues. Wis. Stat. § 283.31(5).

Wis. Admin. Code § NR 102.04 establishes standards aimed at preserving and enhancing the waters of the state. Because Spring Brook is identified as a cold water community and as a trout water, it is classified for fish and aquatic life under NR 102.04(3). The temperature of Wisconsin waters classified for fish and aquatic life shall not change to the extent that they “*may* adversely affect aquatic life.” NR 102.04(4)(b)1 (emphasis added). In addition, the “[n]atural daily and seasonal temperature fluctuations shall be maintained.” NR 102.04(4)(b)2. Further, NR 102.04(4)(b)3 requires that “[t]he maximum temperature rise at the edge of the mixing zone above the existing natural temperature shall not exceed 5 [degrees] F for streams and 3 [degrees] F for lakes.”

We understand, through correspondence from WDNR WPDES Permit Coordinator Susan Watson, that Antigo has reported an average NCCW temperature discharge of 94.6

degrees F since 1999. Spring Brook is considered a Class I Trout stream, and as such, an exceptional resource water under NR 102.11(1)(a). Exceptional resource waters may not be lowered in quality. NR 102.11(2).

NR 102.04 also establishes standards specific to cold water trout stream protection. *See* NR 102.04(4)(e). Both natural background temperatures and dissolved oxygen levels may not be altered to the extent that such alteration would adversely affect trout populations, including trout reproduction. NR 102.04(4)(e), (4)(e)1. More importantly, at no time shall the dissolved oxygen levels in trout streams be artificially lowered below 6.0 mg/L, or lowered below 7.0 mg/L during the spawning season. NR 102.04(4)(e)2.

The Proposed WPDES Permit allows for a 120 degree F discharge of NCCW from Antigo without the WDNR having demonstrated or provided an explanation that such an allowable temperature will neither adversely affect aquatic life nor increase the temperature of Spring Brook more than 5 degrees F. Although Antigo discharges the majority of NCCW into Antigo Lake, because the lake flows directly into Spring Brook the WDNR should analyze whether the NCCW discharges have the capacity to raise the temperature of Spring Brook. In addition, such discharges have the potential to alter both the daily and seasonal natural temperature fluctuations. Even if the WDNR has determined that a NCCW discharge of 120 degree F into Spring Brook will not increase the stream's natural temperature over 5 degrees F, it does not negate the potential that the flow of hot water into the stream may adversely affect aquatic life, especially that of trout populations.<sup>1</sup> The WDNR should also analyze whether such potential temperature raises and fluctuations have the capacity to lower dissolved oxygen levels below the regulatory minimum requirements established for trout streams.

**COMMENT:** The Proposed WPDES Permit and supporting documents should explain whether such a limit will (1) adversely impact the receiving water's aquatic life, (2) raise the stream's natural temperature above the regulatory limit, (3) alter the stream's daily and seasonal natural temperature fluctuations, and (4) lower the dissolved oxygen levels below 6.0 mg/L at any time or 7.0 mg/L during the trout spawning season. Additionally, the WDNR should analyze whether discharging NCCW at an average of 94.6 degrees F has the capacity to increase the temperature of Spring Brook and, as a result, lower the quality of the water by making it more difficult for cold water fish and other aquatic life to survive.

## **2. The WDNR Should Provide A Flow Rate Limitation For The Noncontact Cooling Water**

Section 1.2.1 of the Proposed WPDES Permit does not establish a daily flow rate effluent limit for NCCW. Antigo is required only to continuously monitor their NCCW flow rate

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<sup>1</sup> For streams capable of supporting fish and aquatic life, the plain language of the regulations suggests that any temperature change that merely has the potential to harm aquatic life is prohibited – there need not be proof that an increase in temperature has actually caused an adverse impact.

under Section 1.2.1. We understand that Antigo discharges, on average over 50,000 gallons per day – equivalent to roughly 20 million gallons per year. As discussed above, we also understand that the average discharge temperature of NCCW is 94.6 degrees F, with an upward limit set at 120 degrees F.

The rate at which NCCW enters a waterbody has a direct correlation to the extent to which a stream temperature may increase. The lack of flow rate effluent limit allows for an unlimited discharge of heated waters. Depending on the rate at which the 50,000 gallons per day of NCCW enters the surface water, substantial variations in surface water temperatures will likely result. Of particular concern is that unregulated discharges of hot NCCW water may result in (1) increases in temperature that adversely affect cold water aquatic life, (2) a failure to maintain daily and seasonal fluctuations in water temperatures, and (3) an increase in the natural temperature of the waterbody at the edge of the mixing stream exceeding 5 degrees F. *See* NR 102.04(4)(b)1-3. In short, how can the WDNR know whether temperature impacts will occur if the flow rate from Antigo is unlimited?

**COMMENT:** The Proposed WPDES Permit for Antigo should establish an effluent flow rate limit for the discharge of NCCW. The flow rate should be restricted to prevent an increase in temperature (based on the temperature water quality based effluent limit set by the WDNR ) in Spring Brook greater than 5 degrees F above its natural temperature or to such an extent that would prevent adverse impact to coldwater aquatic life (including preventing a lowering of the stream’s dissolved oxygen level below regulatory limits).

**B. The Proposed WPDES Permit Should Include a Description of the Receiving Water’s Classification; Including, But Not Limited to, the Uses the Waters Have Been Classified for, Any Applicable Water Quality Standards, and Whether Such Waters Have Been Listed on the State’s 303(d) List of Impaired Waters**

One of the underlying purposes of providing a period of public notice under Wis. Stat. § 283.39 is to allow the public the opportunity, the time, and the information to comment on proposed permits prior to approval by the WDNR. Wis. Stat. § 283.45(2)(e) requires that permits for facilities discharging in excess of 500,000 gallons per day provide a description of the waterbody’s use classification and applicable water quality and effluent standards within the permit’s fact sheet. The WDNR should require the same description for facilities that discharge under 500,000 gallons per day. Although the public may request a copy of the fact sheet, such information should also be included on the Proposed WPDES permit. Proposed WPDES permits, regardless of the discharge rate, should allow the public to easily identify the classification of waters potentially impacted by the permit, as a means to facilitate public participation in the protection of the state’s waters.

**COMMENT:** The Proposed WPDES Permit should include and clearly identify, at a minimum, the following information regarding affected receiving waters: (1) the water's water quality classification under NR 102.05(1)(b)1-5; (2) the water's "fish and other aquatic life" classification under NR 102.04(3)(a)-(e); (3) if applicable, the water's listing under the state's 303(d) list of impaired waters pursuant to 40 C.F.R. § 130.7(b)(5); and (4), if applicable, the water's antidegradation status under NR 102.10 or NR 102.11.

### **III. CONCLUSION**

Thank you for the opportunity to comment on the Proposed WPDES Permit for the Antigo Cheese Company. We look forward to the WDNR's response to our comments.

Sincerely,

#### **MIDWEST ENVIRONMENTAL ADVOCATES**



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