Reviewed by CBuck Date 1/2005

Region SCR **County** Dane **Report Date** 1/21/2005 **Classification** CWA

Water Body: Syftestad Creek

Discharger: no discharge

If stream is classified as Limited Forage Fish (LFF) or Limited Aquatic Life (LAL), check any of the following Use Attainability Analysis factors that are identified in the classification report:

_____ Naturally occurring pollutant concentrations prevent the attainment of use

_____ Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met

_____ Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place

_____ Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or operate such modification in a way that would result in the attainment of the use

_____ Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses

_____ Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact

Supporting Evidence in the report (include comments on how complete/thorough data is)

X Biological Data (fish/invert) HBI = 4.69 : 900d ; mottled sculpin low # tolerant species; WI 31.5

X Chemical Data (temp, D.O., etc.) consistently cold temps

_____ Physical Data (flow, depth, etc.)

_____ Habitat Description

X Site Description/Map

_____ Other:

Historical Reports in file:

1/2005 D. Marshall

Additional Comments/How to improve report:

- report supports CW classification

FISH AND AQUATIC LIFE DESIGNATED USE FORM
(Attach supporting data sheets)

WATERBODY NAME: Syftestad Creek WBIC# 0908200

REGION South Central BASIN Sugar-Pec COUNTY Dane

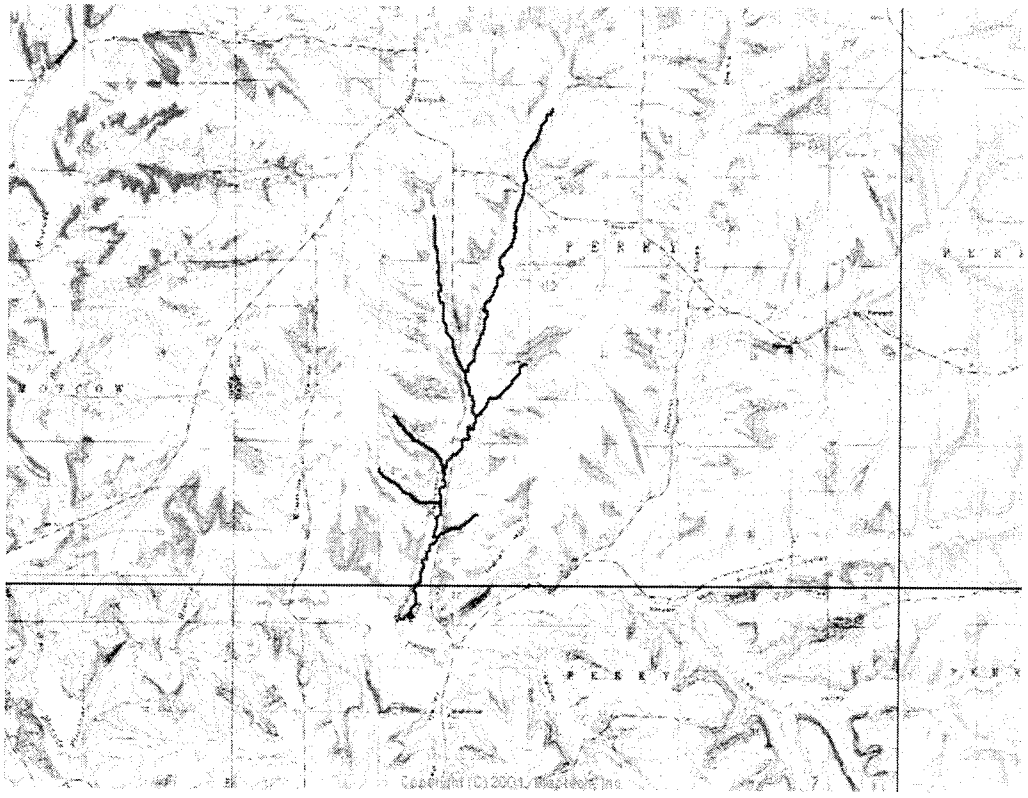
Segment Shown on Daleyville Quad. Map

Reference Site(s) _____, Attach class. form for reference site/condition.

SEGMENT DESCRIPTION for Segment ____of____ (headwater = segment 1)

From: Upstream of County Highway A and encompassing first order tributaries downstream 5mi., km., ft., M.	lat/long 42 55 8.64 89 47 39.79	tn, rng, ¼, ¼, section T. 5 N. - R. 6 E, nw, nw, 16
To: Confluence with Pleasant Valley Branch	lat/long 42 52 19.9 89 48 59.02	tn, rng, ¼, ¼, section T. 5 N. – R. 6 E, sw, sw, 29

Syftestad Creek and Tributaries: Coldwater A



DESIGNATED USE INFORMATION:

New Classification __X___, Standards Review _____, Ref. Site _____, Date field work conducted/completed _____

Current FAL Designated use WWFF (Default), Date _____ (attach)

Existing FAL Use Based on current data Coldwater Communities A, Date _____

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Recommended Attainable Designated use Coldwater Communities A

Seasonal Designated use(s)/Dates_____

Other Applicable Uses: ORW_____, ERW_____, GL_____, GLS_____, Drinking Water Supply _____, Recreation _____, Wild Life_____

Submitted By:	Date: 1-15-05
Reviewed By:	Date: 1/18/05
Approved Basin Leader:	Date: 1/19/05
WQS Sect. Chief, or Designee:	Date:

Below is a section from a Coldwater Habitat Evaluation Report along with a 2003 coldwater IBI result.

Syftestad Creek – Results

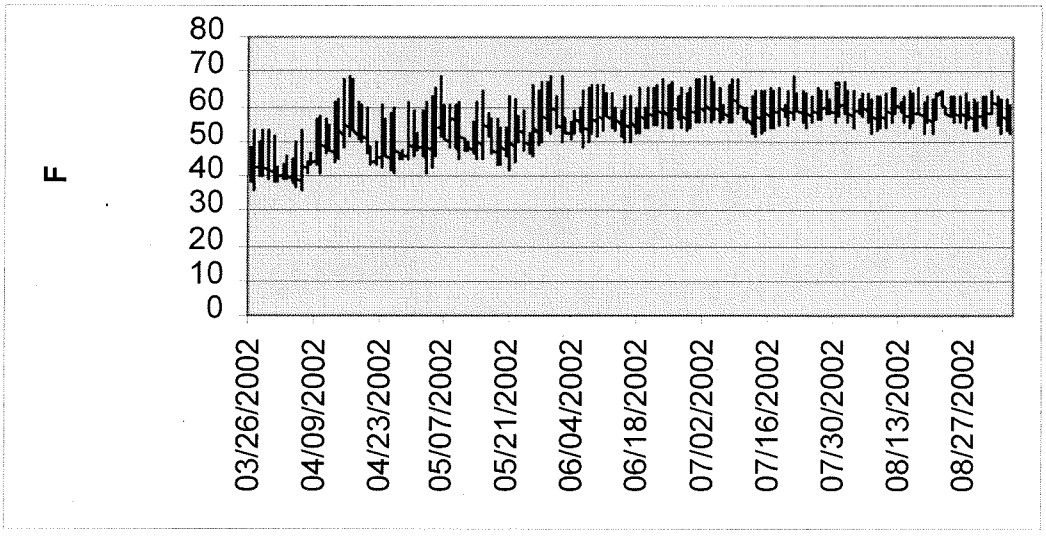
Onset temperature data: Syftestad Creek was sampled only in year-two of the project. The stream was not monitored with a YSI 600XLM, but a temperature recorder was installed near Hwy 78 from late March to mid September 2002. The minimum, maximum and mean values from June 15 through September 9, 2002 were 49.5, 68.5 and 58 degrees F respectively. Results from this survey clearly suggest trout stream habitat. Figure 13 displays the temperature trend.

Macroinvertebrate results: A single sample collected near Highway 78 (Station 3) contained a benthic community with an HBI score of 4.69 or "good" water quality. There were no stoneflies in the sample, but mayflies included *Baetis tricaudatus* and *Ephemerella inermis* and caddisflies included *Brachycentrus, Ceratopsyche slossonae, Cheumatopsyche,* and *Neophylax.*

Fish survey results: Four stations were electrofished in 2002 using a backpack shocker in the upper reaches (Stations 1 and 2) and towed stream shocker in the middle section of the stream above and below Hwy 78 (Stations 3 and 4). Mottled sculpin was the dominant species at all locations. Considered a trout good stream indicator, the significant sculpin numbers we found suggest trout management potential. At Stations 3 and 4, abundant mottled sculpin and low numbers of tolerant individuals resulted in a cold water IBI score of 50 at both sites. The score was based on a single intolerant species, very low numbers of tolerant individuals, and community dominated by stenothermal cool water individuals. Since only a single brown trout was collected, the top carnivore metric did not contribute points.

Figure 13: Syftestad Creek at STH 78

Summer min: 49.5 Summer max: 68.8 Summer mean: 59



Compared with a survey conducted in 1976 at Station 3, the fish community has shifted from a mixed forage fish community to a cold water community. Mottled sculpin numbers greatly increased while species diversity declined. Two redside dace individuals were found in 1976, but none were found at the four locations in 2002 and are likely extirpated from the stream.

The species shift in Syftestad Creek is similar to the trends we found in both German Valley Creek and Blue Mounds Branch. The recent temperature data from Syftestad, combined with historic and recent fish community data, suggest that spring-flow to the stream has probably increased and now favors stenothermal species. The cold water IBI score in 1976 was 20 (poor) compared to 50 (fair) in 2002. Table 13 compares fish community composition at Station 3 in 1976 and 2002. Table 14 lists the numbers of species found at the four sampling sites. The headwater section (Station 1) and tributary (Station 2) were very narrow and produced few individuals. An IBI score could not be determined at those two sites because of low fish numbers.

Table 13: Syftestad Creek fish community composition

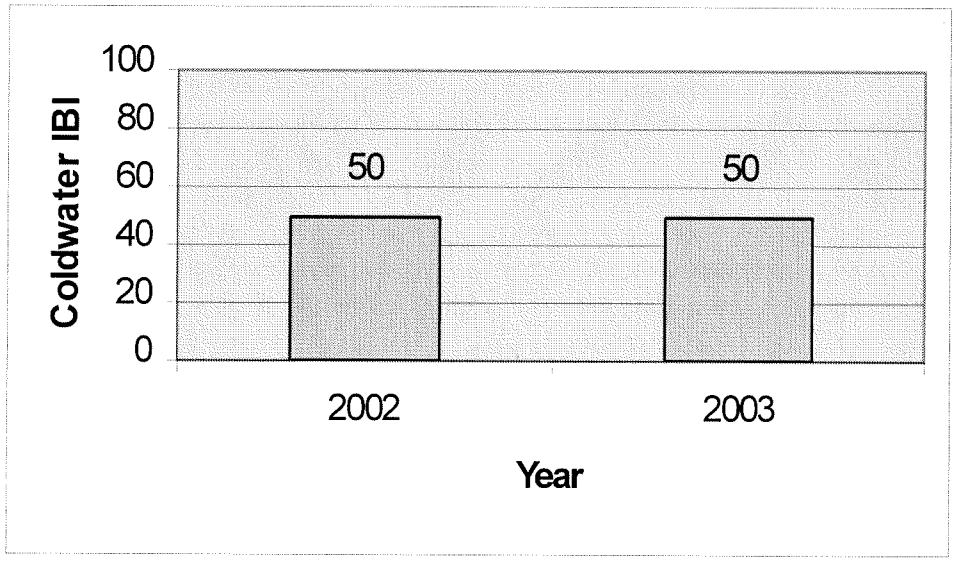
Species	Indicator	1976	2002
Redside dace	I, C, SC	X	
Brassy minnow	C	X	
Common shiner	W	X	
Fathead minnow	T	X	
Bluntnose minnow	T, W	X	
Central stoneroller	W	X	
Southern redbelly dace	W	X	
Creekchub	W, T	X	X
White sucker	W, T	X	X
Brook stickleback	C	X	X
Johnny darter	W	X	
Fantail darter	W	X	
Mottled sculpin	I, C	X	X

I = intolerant, T = tolerant, C = cool-cold stenothermal, W = eurythermal, SC = Special Concern.

Table 14: Syftestad Creek fish survey results from 2002

Species Station →	1	2	3	4
Brown trout				1
Creekchub			4	
White sucker			4	
Brook stickleback	3		9	2
Mottled sculpin	5	2	280	285
Distance shocked (feet)	500	400	1600	900
Cold IBI score			50	50

Syftestad Creek at Highway 78. Coldwater IBI Scores indicated "Fair" conditions (30-50=fair)



While salmonids are currently scarce in Syftestad Creek, experimental brook trout stocking is underway.

September 16, 2003 backpack shocking survey above Hwy 78.

White sucker	3
Mottled sculpin	104

Syftestad Creek at CTH Z - Hobo Temperature Data
June 1 - August 31, 2003