

STREAM CLASSIFICATION SURVEY ON WILLIAMS CREEK AND AN UNNAMED  
TRIBUTARY BELOW STAUFFER CHEESE,  
BLUE MOUNDS, WISCONSIN

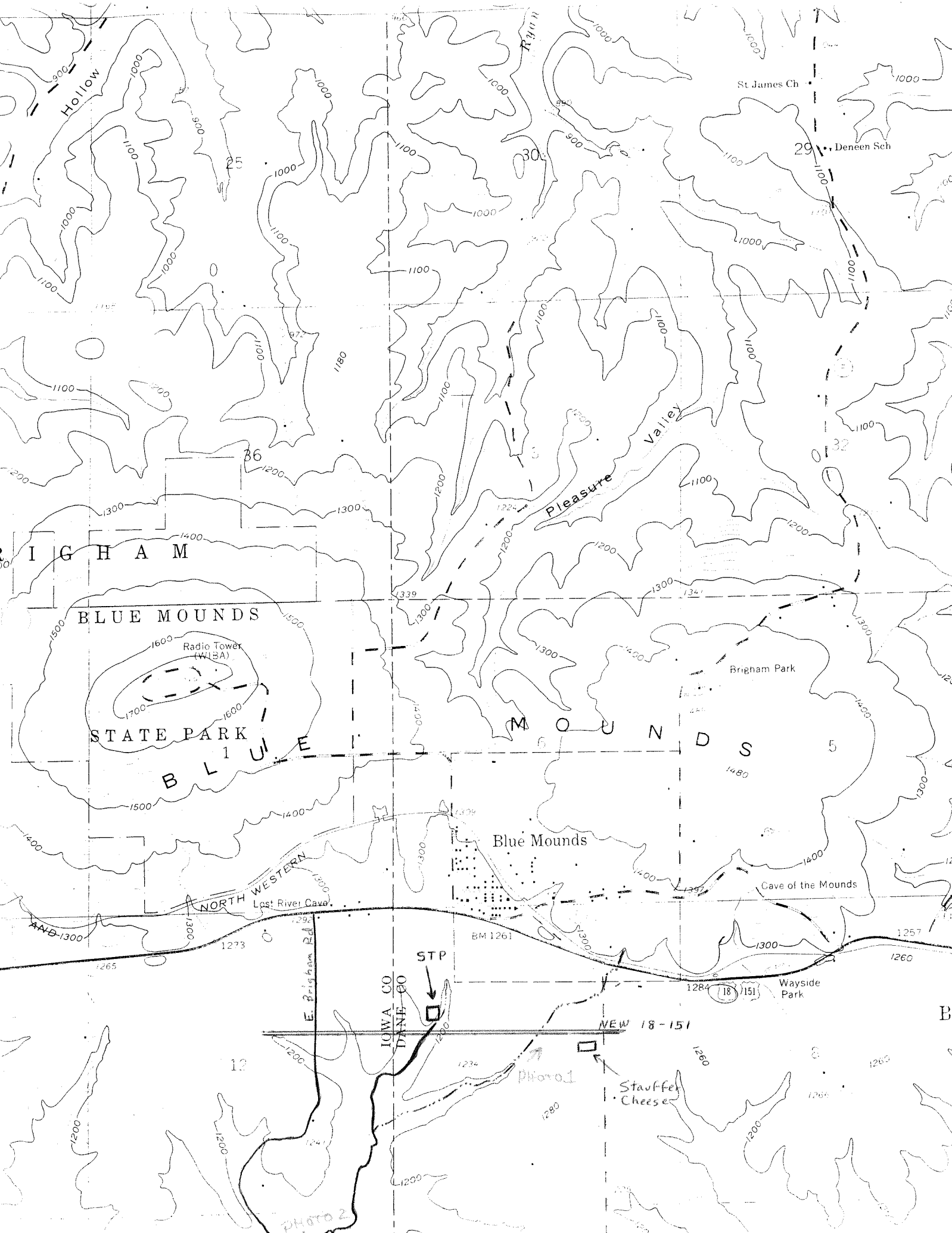
Department of Natural Resources - Madison Area  
November, 1985  
Prepared by Dave Marshall

The intermittent tributary which runs west of Stauffer Cheese to the confluence with Williams Creek was dry when inspected on October 8, October 31, and November 5, 1985. The intermittent nature of this drainage course cannot support permanent aquatic communities. Therefore, the classification of the tributary is marginal (MARG-E).

The current classification of Williams Creek is intermediate fish and aquatic life (INT-D) from the Blue Mounds Wastewater Treatment Plant downstream to Section 14, NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , T6E, R5E. Based on a reclassification survey, the current classification is correct. Fish samples collected above E. Brigham Road (Section 13) consisted of only three brook sticklebacks and three creek chubs; both species categorized as tolerant forage. The Biotic Index indicated good water quality, however, the stream substrate was covered with silt, sludge, and filamentous algae. The stream above E. Brigham Road had good gradient and numerous riffles. In many areas, groundwater recruitment was revealed by the presence of watercress. A benthic community consisting of mostly Gammarus pseudolimneus is supported by the good reaeration potential in the stream. More diverse aquatic communities are limited by cropland erosion, manure runoff and low flow conditions. The overall habitat was rated as poor.



PHOTO 1



St James Ch

29 Deneen Sch

BRIGHAM

BLUE MOUNDS

Radio Tower (WLSA)

STATE PARK

BLUE MOUNDS

MOUNDS

Brigham Park

Blue Mounds

Cave of the Mounds

NORTH WESTERN  
Lost River Cave

STP

BM 1261

18 151  
Wayside Park

NEW 18-151

Stauffel Cheese

Photo 1

Photo 2

Williams Creek - October 31, 1985  
E. Brigham Road  
Stauffer Cheese - Blue Mounds Stream Class

<u>Macroinvertebrates Collected</u>	<u>n</u>	<u>a</u>	<u>nxa</u>
Gammarus pseudolimneus	98	2	196
Baetis phoebos	1	-	-
Orthocladius	1	3	3

B.I. = 2.01 Good Water Quality

Fish Specimens Collected

Brook Sticklebacks	3
Creek Chubs	3



PHOTO 2

Stream Williams Reach Location E. Brigham Rd - 25 yds. upstream Reach Score/Rating 216/Poor  
 County Dane Date 10-31-85 Evaluator Marshall Classification INT-D

Rating Item	Category			
	Excellent	Good	Fair	Poor
Watershed Erosion	No evidence of significant erosion. Stable forest or grass land. Little potential for future erosion. 8	Some erosion evident. No significant "raw" areas. Good land mgmt. practices in area. Low potential for significant erosion. 10	Moderate erosion evident. Erosion from heavy storm events obvious. Some "raw" areas. Potential for significant erosion. 14	Heavy erosion evident. Probable erosion from any run off. 16
Watershed Nonpoint Source	No evidence of significant source. Little potential for future problem. 8	Some potential sources (roads, urban area, farm fields). 10	Moderate sources (small wetlands, tile fields, urban area, intense agriculture). 14	Obvious sources (major wetland drainage, high use urban or industrial area, feed lots, impoundment). 16
Bank Erosion, Failure	No evidence of significant erosion or bank failure. Little potential for future problem. 4	Infrequent, small areas, mostly healed over. Some potential in extreme floods. 8	Moderate frequency and size. Some "raw" spots. Erosion potential during high flow. 16	Many eroded areas. "Raw" areas frequent along straight sections and bends. 20
Bank Vegetative Protection	90% plant density. Diverse trees, shrubs, grass. Plants healthy with apparently good root system. 6	70-90% density. Fewer plant species. A few barren or thin areas. Vegetation appears generally healthy. 9	50-70% density. Dominated by grass, sparse trees and shrubs. Plant types and conditions suggest poorer soil binding. 15	<50% density. Many raw areas. Thin grass, few if any trees and shrubs. 18
Lower Bank Channel Capacity	Ample for present peak flow plus some increase. Peak flow contained. W/D ratio <7. 8	Adequate. Overbank flows rare. W/D ratio 8-15. 10	Barely contains present peaks. Occasional overbank flow. W/D ratio 15-25. 14	Inadequate, overbank flow common. W/D ratio >25. 16
Lower Bank Deposition	Little or no enlargement of channel or point bars. 6	Some new increase in bar formation, mostly from coarse gravel. 9	Moderate deposition of new gravel and coarse sand on old and some new bars. 15	Heavy deposits of fine material, increased bar development. 18
Bottom Scouring and Deposition	Less than 5% of the bottom affected by scouring and deposition. 4	5-30% affected. Scour at constrictions and where grades steepen. Some deposition in pools. 8	30-50% affected. Deposits and scour at obstructions, constrictions and bends. Some filling of pools. 16	More than 50% of the bottom changing nearly year long. Pools almost absent due to deposition. 20
Bottom Substrate/ Available Cover	Greater than 50% rubble, gravel or other stable habitat. 2	30-50% rubble, gravel or other stable habitat. Adequate habitat. 7	10-30% rubble, gravel or other stable habitat. Habitat availability less than desirable. 17	Less than 10% rubble gravel or other stable habitat. Lack of habitat is obvious. 22
Avg. Depth Riffles and Runs	Cold >1' 0 Warm >1.5' 0	6" to 1' 6 10" to 1.5' 6	3" to 6" 18 6" to 10" 18	<3" 24 <6" 24
Avg. Depth of Pools	Cold >4' 0 Warm >5' 0	3' to 4' 6 4' to 5' 6	2' to 3' 18 3' to 4' 18	<2' 24 <3' 24
Flow, at Rep. Low Flow	Cold >2 cfs 0 Warm >5 cfs 0	1-2 cfs 6 2-5 cfs 6	.5-1 cfs 18 1-2 cfs 18	<.5 cfs 24 <1 cfs 24
Pool/Riffle, Run/Bend Ratio (distance between riffles ÷ stream width)	5-7. Variety of habitat. Deep riffles and pools. 4	7-15. Adequate depth in pools and riffles. Bends provide habitat. 8	15-25. Occasional riffle or bend. Bottom contours provide some habitat. 16	>25. Essentially a straight stream. Generally all flat water or shallow riffle. Poor habitat. 20
Aesthetics	Wilderness characteristics, outstanding natural beauty. Usually wooded or un-pastured corridor. 8	High natural beauty. Trees, historic site. Some development may be visible. 10	Common setting, not offensive. Developed but uncluttered area. 14	Stream does not enhance aesthetics. Condition of stream is offensive. 16

Column Totals: \_\_\_\_\_ 7 \_\_\_\_\_ 137 \_\_\_\_\_ 72

Column Scores E \_\_\_\_\_ +G 7 +F 137 +P 72 = 216 = Score

<70 = Excellent, 71-129 = Good, 130-200 = Fair, >200 = Poor