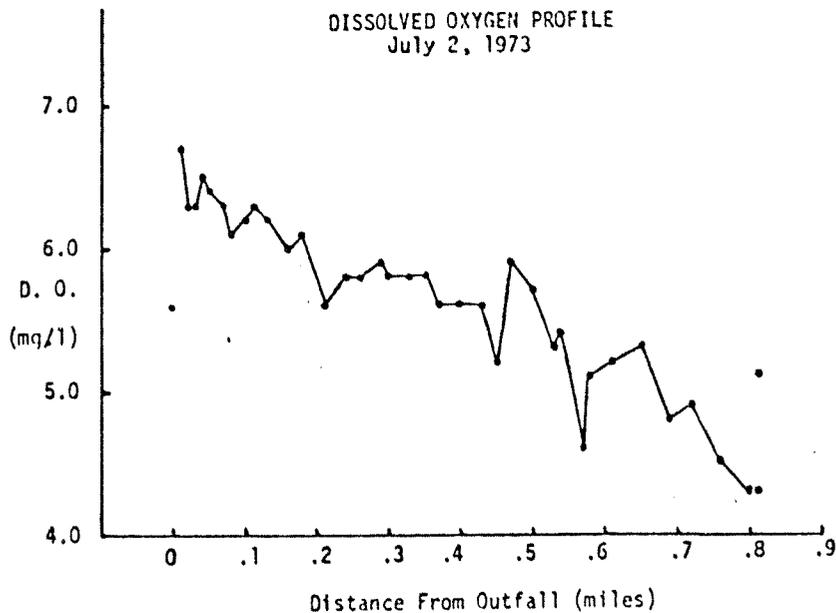


WEST BRANCH SUGAR RIVER AT MOUNT HOREB

July 2, 1973

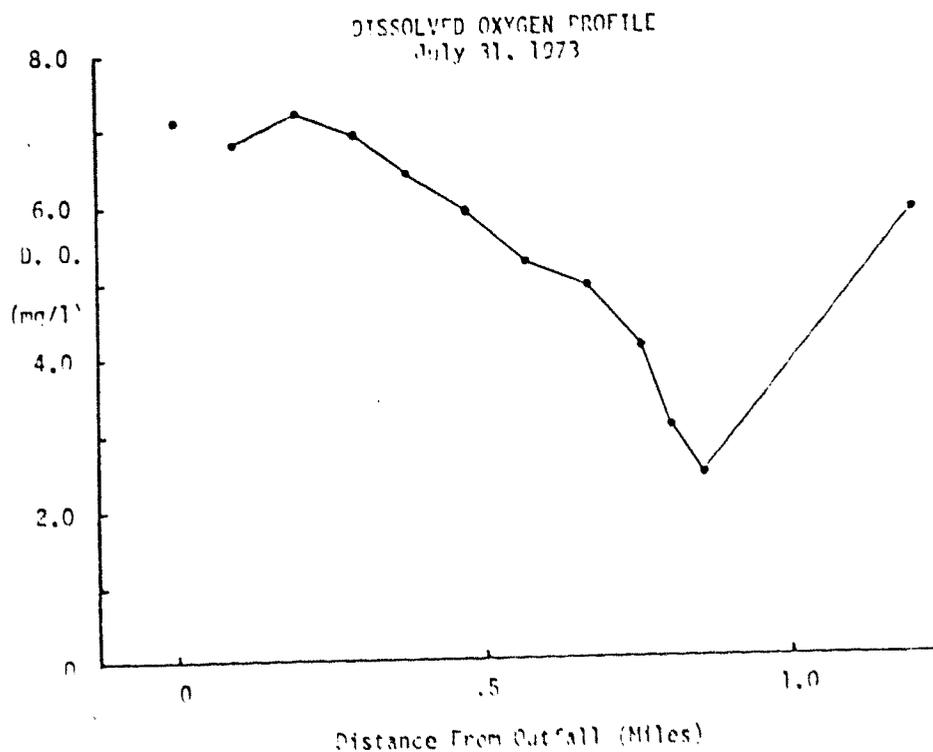
| Station Number | Distance From Outfall (miles) | Time | Temp. (°C) | D.O. (mg/l) | Station Number | Distance From Outfall (miles) | Time | Temp. (°C) | D.O. (mg/l) |
|----------------|-------------------------------|-------|------------|-------------|----------------|-------------------------------|-------|------------|-------------|
| 2 | 0 | 10:15 | 21.0 | 5.6 | 23 | .40 | | 21.5 | 5.6 |
| Spring | | 10:20 | 10.0 | 6.5 | 24 | .43 | 11:25 | 20.0 | 5.6 |
| 3 | (30 ft).006 | | 19.5 | 6.7 | 25 | .45 | | 20.0 | 5.2 |
| 4 | .02 | | 17.0 | 6.3 | 26 | .47 | 11:30 | 21.0 | 5.9 |
| 5 | .03 | | 17.5 | 6.3 | 27 | .50 | 11:35 | 21.0 | 5.7 |
| 6 | .04 | 10:30 | 18.0 | 6.5 | 28 | .53 | 11:40 | 21.5 | 5.3 |
| 7 | .05 | 10:35 | 18.0 | 6.4 | 29 | .54 | | 21.0 | 5.4 |
| 8 | .07 | | 18.0 | 6.3 | 30 | .57 | 11:45 | 21.0 | 4.6 |
| 9 | .08 | 10:40 | 18.0 | 6.1 | 31 | .58 | | 21.0 | 5.1 |
| 10 | .10 | | 18.5 | 6.2 | 32 | .61 | 11:50 | 21.0 | 5.2 |
| 11 | .11 | 10:45 | 18.0 | 6.3 | 33 | .65 | | 21.5 | 5.3 |
| 12 | .13 | | 19.0 | 6.2 | 34 | .69 | 11:55 | 21.0 | 4.8 |
| 13 | .16 | 10:50 | 19.0 | 6.0 | 35 | .72 | 12:00 | 21.0 | 4.9 |
| 14 | .18 | | 19.5 | 6.1 | 36 | .76 | 12:05 | 20.0 | 4.5 |
| 15 | .21 | 10:55 | 20.0 | 5.6 | 37 | .80 | 12:30 | 20.0 | 4.3 |
| 16 | .24 | 11:00 | 20.0 | 5.8 | 38 | .81 | 12:15 | 21.0 | 4.3 |
| 17 | .26 | | 20.5 | 5.8 | 38 | .81 | 13:15 | 22.5 | 5.1 |
| 18 | .29 | 11:05 | 21.0 | 5.9 | 38 | .81 | 10:45 | 18.0 | 6.1 |
| 19 | .30 | | 21.0 | 5.8 | Trib. | 1.1 | 10:50 | 15.0 | 8.1 |
| 20 | .33 | 11:10 | 21.5 | 5.8 | 39 | 2.7 | 10:55 | 17.0 | 7.3 |
| 21 | .35 | 11:15 | 22.0 | 5.8 | 40 | 3.3 | 11:00 | 16.5 | 7.1 |
| 22 | .37 | 11:20 | 21.5 | 5.6 | 41 | 4.1 | 11:05 | 17.0 | 7.3 |
| Trib. | .38 | | 14.0 | 6.3 | 42 | 5.3 | 11:10 | 18.0 | 7.2 |
| | | | | | 43 | 8.8 | 12:15 | 19.0 | 7.7 |



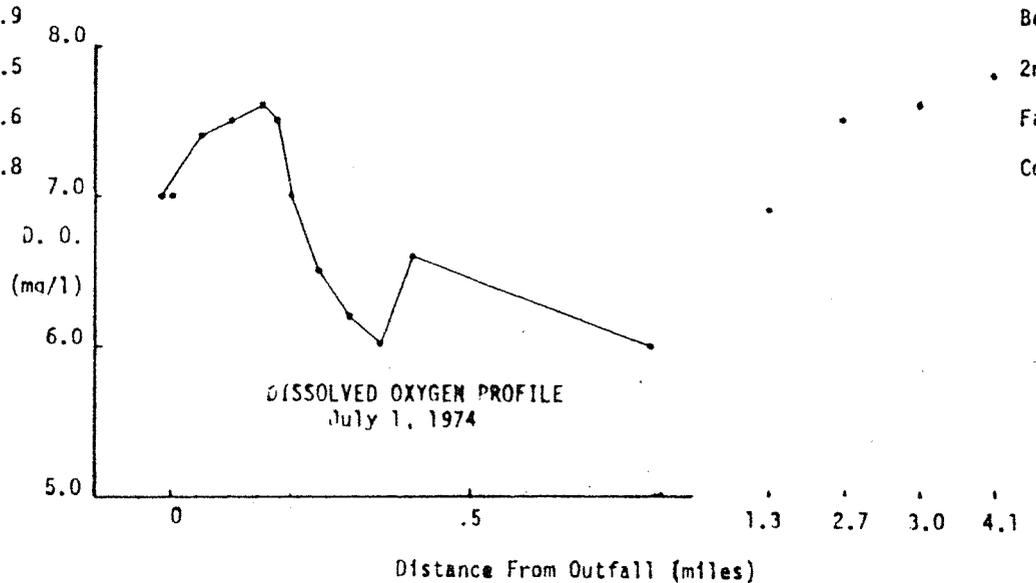
July 31, 1973

ST BRANCH SUGAR RIVER AT MOUNT HOREB

| Station Number | Distance From Outfall (miles) | Time | Temp. (°C) | D.O. (mg/l) | BOD ₅ (mg/l) | Total Org-N (mg/l) | NH ₃ -N (mg/l) | NO ₂ -N (mg/l) | NO ₃ -N (mg/l) | Flow (CFS) | Sampling Location |
|----------------|-------------------------------|-------|------------|-------------|-------------------------|--------------------|---------------------------|---------------------------|---------------------------|------------|----------------------|
| 2 | 0 | 09:57 | 22.5 | 7.1 | 31 | 7.0 | 10.2 | .03 | .03 | .68 | |
| 3 | .09 | 10:09 | 18.5 | 6.8 | | | | | | | |
| 4 | .19 | 10:23 | 18.5 | 7.2 | | | | | | | |
| 5 | .28 | 10:35 | 18.5 | 6.9 | | | | | | | |
| 6 | .37 | 10:46 | 18.5 | 6.4 | | | | | | | |
| 7 | .47 | 10:58 | 18.0 | 5.9 | 43 | | | | | | |
| 8 | .56 | 11:10 | 17.5 | 5.2 | | | | | | | |
| 9 | .66 | 11:25 | 17.5 | 4.9 | | | | | | | |
| 10 | .76 | 11:41 | 17.5 | 4.1 | | | | | | | |
| 11 | .81 | 11:53 | 17.5 | 3.0 | 18 | 2.7 | 7.5 | .59 | .90 | .79 | 1st Town Road Bridge |
| 12 | .86 | 12:07 | 17.5 | 2.4 | | | | | | | |
| 13 | 1.18 | 13:12 | 15.5 | 5.8 | 17 | 1.8 | 3.1 | .66 | 1.5 | | |



| Station Number | Distance From Outfall (miles) | Temp. (°C) | D.O. (mg/l) | BOD ₅ (mg/l) | Fl. BOD ₅ INH (mg/l) | Total Org-N (mg/l) | NH ₃ -N (mg/l) | NO ₂ -N (mg/l) | NO ₃ -N (mg/l) | Susp. Solids (mg/l) | Width (ft.) | Ave Depth (ft.) | Flow (CFS) | Sampling Location |
|----------------|-------------------------------|------------|-------------|-------------------------|---------------------------------|--------------------|---------------------------|---------------------------|---------------------------|---------------------|-------------|-----------------|------------|----------------------|
| 1 | -.01 | 22.0 | 7.0 | | | | | | | | | | | |
| 2 | 0 | | 7.0 | 14 | 14 | 3.9 | 6.0 | 2.88 | 2.7 | 60 | | | 1.14 | STP |
| 3 | .05 | 21.0 | 7.4 | | | | | | | | | | | |
| 4 | .10 | 21.0 | 7.5 | | | | | | | | 4 | .44 | | |
| 5 | .15 | 21.0 | 7.6 | | | | | | | | 4 | .44 | | |
| 6 | .17 | 21.5 | 7.5 | | 10 | 4.32 | 4.8 | 2.25 | 3.3 | 95 | | | 1.52 | Farm Bridge |
| 7 | .20 | 22.0 | 7.0 | | | | | | | | 4 | .33 | | |
| 8 | .25 | 23.0 | 6.5 | | | | | | | | 3.5 | .36 | | |
| 9 | .30 | 23.0 | 6.2 | | | | | | | | 5 | .36 | | |
| 10 | .35 | 22.0 | 6.0 | | | | | | | | 4 | .38 | | |
| Trib | .40 | 18.0 | 5.6 | | | | | | | | 1.5 | .17 | | |
| 11 | .41 | 21.0 | 6.6 | | | | | | | | | | | |
| 12 | .81 | 23.5 | 6.0 | | 9.7 | 3.0 | 2.58 | 2.1 | 3.7 | 75 | | | 1.24 | 1st Town Road Bridge |
| Trib. | 1.1 | 17.0 | 8.4 | | | | | | | | | | | |
| 13 | 1.3 | 19.5 | 6.9 | | | | | | | | | | | Below Tributary |
| 14 | 2.7 | 21.0 | 7.5 | | | | | | | | | | | 2nd Town Road Bridge |
| 15 | 3.0 | 20.0 | 7.6 | | | | | | | | | | | Farm Bridge |
| 16 | 4.1 | 20.0 | 7.8 | | | | | | | | | | | Co. JG Bridge |



WEST BRANCH SUGAR RIVER AT MOUNT HOREB

November 5, 1974

| Station Number | Distance From Outfall (miles) | Time | Temp. (°C) | D.O. (mg/l) | Suspended Solids (mg/l) | Total Org-N (mg/l) | NH ₃ -N (mg/l) | NO ₂ -N (mg/l) | NO ₃ -N (mg/l) | Sampling Location |
|----------------|-------------------------------|----------------|--------------|-------------|-------------------------|--------------------|---------------------------|---------------------------|---------------------------|----------------------------------|
| 2 | 0 | 11:00 | 14.5 | 8.0 | | | | | | |
| 3 | .05 | 12:25 | 13.0 | 8.8 | 70 | 4.5 | .80 | 1.35 | 10.5 | |
| 4 | .17 | 13:13 | 12.0 | 10.0 | 60 | 3.9 | .90 | 1.43 | 10.3 | Farm Culvert |
| 5 | .21 | 11:00 15:03 | 10.5 10.5 | 9.6 8.2 | 65 | 2.9 | .50 | .88 | 9.0 | 1st Town Road Bridge |
| 6 | 1.0 | 17:03 | 10.0 | 8.6 | 12 | 1.4 | .30 | .58 | 7.7 | Above trib below 1st Town Bridge |
| 7 | 1.2 | 11:00 | 9.0 | 11.2 | | | | | | Below trib |
| 8 | 2.7 | 11:00 | 8.8 | 10.6 | | | | | | 2nd Town Road Bridge |
| 9 | 4.1 | 11:00 | 8.0 | 10.1 | | | | | | CTH JG Bridge |

APPENDIX C
Biological Data Collected in 1963

Table A
Sugar River - D.B. 18
Biological Station Summary

| Sample Site | Date 1963 | River | Area Sampled | Source of Waste | Station Location | Bottom | Current | Organisms Per Sq. Ft. | | | | Remarks | Inter-pretation | | |
|-------------|-----------|-----------------------|---------------|---|---|---------------------|---------|-----------------------|-------------------|--------------------|-------------|---------|-----------------|-----------------------------------|------------|
| | | | | | | | | Intol. Sm. Org. | Tolerant Sm. Org. | Very Tol. Sm. Org. | | | | | |
| S-1 | 7-12 | Main Stem Sugar | Paoli | | 75 yds. downstream from Town Road Bridge | Gravel | Riffle | 5 | 111 | 2 | 70 | 0 | 0 | | Clean |
| S-2 | 7-12 | | Paoli | Pabst Farms Creamery, Paoli | 50 yds. upstream from Highway 69 Bridge | Gravel | Mod. | 0 | 0 | 2 | 25 | 2 | 9 | Poor sample site. | |
| S-2Q | 7-12 | | Paoli | Pabst Farms Creamery, Paoli | 50 yds. upstream from Highway 69 Bridge | Rock & Gravel | Mod. | 6 | - | 2 | - | - | - | | Clean |
| S-3 | 7-12 | | Essex | Pabst Farms Creamery, Paoli | Co. Hwy. "A" crossing 2 miles below Paoli | Gravel | Riffle | 3 | 18 | 4 | 43 | 0 | 0 | | Clean |
| S-4 | 7-12 | | Essex | New Central Cheese Co. | Tn. Rd. crossing below New Central | Gravel | Mod. | 4 | 45 | 3 | 77 | 2 | 69 | | Clean |
| S-5 | 7-12 | | Belleville | | Highway 69 Bridge, Belleville | Gravel | Riffle | 7 | 239 | 4 | 92 | 0 | 0 | | Clean |
| S-6 | 7-12 | | Belleville | Pet Milk Company | 20 yds. upstream from Sew. Treat. Plant | Gravel | Slow | 1 | 2 | 6 | 33 | 1 | 2 | Slime & floating wastes observed. | |
| S-7 | 7-12 | | Belleville | Pet Milk & Belleville Sew. Treat. Plant | 1st Town Road crossing below S.T.P. | Gravel | Riffle | 6 | 169 | 5 | 249 | 0 | 0 | | Clean |
| S-8 | 7-12 | | Dayton | Pet Milk & Belleville Sew. Treat. Plant | County Highway "W," Dayton | Gravel | Slow | 3 | 22 | 3 | 20 | 0 | 0 | | Clean |
| S-8Q | 7-12 | | Dayton | Pet Milk & Belleville Sew. Treat. Plant | County Highway "W," Dayton | Gravel | Slow | | | | Qualitative | | | | Clean |
| S-9 | 9-12 | | Albany | | Highway 59 above Albany | Rock & Gravel | Fast | 4 | 208 | 1 | 1 | 1 | 1 | | Clean |
| S-10 | 9-12 | | Albany | Albany Sew. Treat. Plant | Tn. Rd. Br., 1.3 mile below S.T.P. | Rock, Gravel & Clay | Fast | 5 | 249 | 3 | 61 | 2 | 16 | | Clean |
| S-11 | 9-27 | | Brodhead | | Above outfall, Goldenrod Creamery | Gravel | Mod. | 4 | 269 | 7 | 228 | 2 | 16 | | Clean |
| S-12 | 9-27 | | Brodhead | Goldenrod Creamery & Sew. Treat. Plant | Below outfall | Gravel | Mod. | 5 | 87 | 3 | 34 | 2 | 72 | | Clean |
| S-13 | 9-27 | | Brodhead | Goldenrod Creamery & Sew. Treat. Plant | Below S.T.P. outfall | Gravel, Sand & Silt | | 2 | 3 | 1 | 31 | 2 | 24 | | Clean |
| S-13Q | 9-27 | | Brodhead | Goldenrod Creamery & Sew. Treat. Plant | Below S.T.P. outfall | Rock | | | | | Qualitative | | | | Clean |
| S-14 | 9-27 | | Brodhead | Goldenrod Creamery & Brodhead S.T.P. | 3 miles below Brodhead Sew. Treat. Plant | Gravel & Sand | Riffle | 6 | 40 | 2 | 82 | 3 | 19 | | Clean |
| HM-1 | 4-10 | Badger Mill C. | Verona | | 50 yds. above County Highway "M" | Gravel & Clay | Riffle | 0 | 0 | 2 | 40 | 1 | 8 | | Unbalanced |
| HM-1Q | 4-10 | | Verona | | 50 yds. above County Highway "M" | Gravel & Clay | Riffle | | | | Qualitative | | | | Unbalanced |
| S-16 | 10-2 | | Verona | Dane County Home | County Highway "M," Verona | Gravel, Clay & Silt | Mod. | 1 | 15 | 3 | 135 | 3 | 23 | | Clean |
| HM-2 | 4-10 | | Verona | Carnes Corporation | 500' below Carnes Corporation | Gravel & Clay | Riffle | 0 | 0 | 3 | 144 | 2 | 452 | | Polluted |
| M-3 | 4-10 | | Verona | Carnes Corporation | Sew. Treat. Plant access road | Gravel | Riffle | 0 | 0 | 2 | 15 | 0 | 0 | | Unbalanced |
| M-17 | 10-2 | | Verona | Dane County Home & Carnes Corp. | 20' above Sew. Treat. Plant outfall | Rock & Gravel | Mod. | 2 | 29 | 3 | 238 | 2 | 236 | Clean water org. reduced. | |
| HM-4 | 4-10 | | Verona | Carnes Corporation & Verona S.T.P. | Hwy. 69, 1 mile S. of Verona | Gravel | Riffle | 3 | 14 | 4 | 323 | 3 | 84 | | Clean |
| S-18 | 10-2 | | Verona | Verona S.T.P. | Hwy. 69, 1 mile below Sew. Treat. Plant | Rock & Gravel | Riffle | 1 | 1 | 2 | 42 | 2 | 10 | | Unbalanced |
| S-18Q | 10-2 | | Verona | Verona S.T.P. | Hwy. 69, 3 miles below Sew. Treat. Plant | Rock & Gravel | Riffle | 6 | 176 | 4 | 1844 | 1 | 101 | Enriched | Clean |
| S-19 | 10-2 | West Branch, Sugar | Mt. Koresb | Mt. Koresb S.T.P. | Tn. Rd. Br. 2 miles below S.T.P. | Gravel & Sand | Mod. | 0 | 0 | 1 | 62 | 1 | 1128 | | Polluted |
| S-20 | 10-2 | | Mt. Koresb | Mt. Koresb S.T.P. | Tn. Rd. 4 miles below Sew. Treat. Plant | Rock & Gravel | Riffle | 3 | 38 | 2 | 160 | 2 | 1279 | Recovery zone. | |
| S-21 | 10-2 | | Mt. Vernon C. | Mt. Vernon | County Highway "Q" | Rock & Gravel | Riffle | 6 | 215 | 4 | 26 | 1 | 2 | | Clean |
| S-22 | 10-2 | | Mt. Vernon | Mt. Vernon | Co. Hwy. "T," 1/2 mile below Mt. Vernon | Rock & Gravel | Riffle | 4 | 942 | 4 | 135 | 0 | 0 | | Clean |
| S-23 | 9-12 | Allen Creek | Brooklyn | | Co. Trunk "T," mileage 18.2+ | Sand | Slow | 0 | 0 | 2 | 10 | 1 | 278 | | Unbalanced |
| S-24 | 9-12 | | Brooklyn | Brooklyn S.T.P. | 3 mi. below Brooklyn S.T.P., Sec. 17 | Rock & Silt | Slow | 2 | 4 | 6 | 67 | 2 | 62 | Poor site. | Clean |
| S-25 | 9-12 | Allen Creek Tributary | Evansville | | Water Street Bridge above S.T.P. | Rock & Gravel | Riffle | 1 | 5 | 3 | 124 | 1 | 134 | Good site. | Unbalanced |
| S-25 | 9-12 | | Evansville | Evansville S.T.P. | Water Street Bridge above S.T.P. | Rock & Gravel | Riffle | | | | Qualitative | | | Psychoda observed. | Unbalanced |
| S-26 | 9-12 | | Evansville | Evansville S.T.P. | Hwy. 213, 2 miles below Sew. Treat. Plant | Sand, Silt & Gravel | Riffle | 2 | 75 | 4 | 532 | 1 | 595 | | Clean |
| S-27 | 8-27 | Little Sugar | New Glarus | New Glarus S.T.P. | Tn. Rd. above S.T.P., mileage 17.8 | Rock & Gravel | Riffle | 1 | 10 | 3 | 213 | 1 | 1523 | | |
| S-28 | 8-27 | | New Glarus | New Glarus S.T.P. | Tn. Rd. below S.T.P., mileage 15.8 | Rock & Clay | Mod. | 1 | 24 | 1 | 61 | 2 | 974 | Poor site. | |
| S-33Q | 8-27 | | Monticello | Town Hall Dairy | .8 mile below Town Hall Dairy | Rock & Clay | Fast | 5 | - | 2 | - | 1 | - | | Clean |
| S-34 | 8-27 | | Monticello | | Main Street above S.T.P., mileage 1.0 | Rock | Riffle | 3 | 2064 | 4 | 4592 | 1 | 384 | Enriched | |
| S-35Q | 8-27 | | Monticello | Monticello S.T.P. | County Trunk Highway "E," mileage .6 | Silt | Mod. | 2 | - | 1 | - | 0 | - | Poor site, appeared clean. | |
| S-37 | 8-27 | Wittenslyer Br. | Monticello | | Above Wittenslyer-Burgy Cheese Co. | Silt & Clay | Mod. | 3 | - | 2 | - | 1 | - | No unusual growths. | Clean |
| S-38 | 8-27 | | Monticello | Wittenslyer-Burgy Cheese Co. | Highway 69, mileage 3.1 | Rock, Clay & Gravel | Riffle | 3 | 12 | 3 | 178 | 3 | 418 | | Clean |
| S-38Q | 8-27 | | Monticello | Wittenslyer-Burgy Cheese Co. | Highway 69, mileage 3.1 | | | | | | Qualitative | | | | Clean |
| S-40 | 9-27 | Jordan Creek | Juda | | Tn. Rd., 1/2 mi. below Juda Lagoons | Rock | Riffle | 2 | 34 | 2 | 266 | 0 | 0 | Recovery zone. | |
| S-42 | 9-27 | Marsh Creek | Orfordville | Orfordville S.T.P. | Hwy. 11 below Orfordville Sew. Treat. Plant | Gravel | Riffle | 5 | 217 | 3 | 108 | 0 | 0 | | Clean |

APPENDIX D
Biological Data Collected in 1968

| Sample No. | Date | Stream Mileage Point | River | Sample Area | Source of Waste | Station Location | Bottom | Current | Intolerant | | Saprophytic | | Remarks | | |
|------------|----------|----------------------|---------------------------|-------------|--|---|----------------------|-------------|------------|----------|-------------|----------|---------|------|---------------------------------------|
| | | | | | | | | | Spp. No. | Spp. No. | Spp. No. | Spp. No. | | | |
| 1A | 11/21/68 | 49.3 | Sugar River - Main Stem | Paoli | None Known | Tn. Rd. Bridge Above Pabst Farms | Rock-Gravel | Fast-Riffle | 3 | 12 | 2 | 96 | 1 | 10 | Some Algae on Rocks |
| 1B | 11/21/68 | 48.9 | | Paoli | Pabst Farms Creamery | Between Tn. Rd. Bridge and ST. Hwy. 69 Bridge | Rock-Gravel | Fast | 3 | 11 | 2 | 16 | 1 | 9 | |
| 1BB | 11/1/68 | 45.6 | | Basco | Pabst Farms Creamery | Co. Hwy. "A" Bridge | Gravel | Fast-Riffle | 4 | 40 | 4 | 23 | | | |
| 1BBB | 11/1/68 | 45.0 | | Basco | None Known | Tn. Rd. Bridge in Sec. 22 | Sand-Rock | Fast | 2 | 7 | 1 | 1 | | | Possible Impoundment Effect |
| 3A | 4/29/69 | 40.7 | | Belleville | None Known | Hwy. 69 Bridge | Gravel | Fast | 2 | 34 | 1 | 5 | 2 | 81 | |
| 3B-4A | 4/29/69 | 40.4 | | Belleville | Deltown Chem. Corp. | 20 Ft. Above Belleville STP Outfall | Rock-Gravel | Fast | 3 | 6 | 1 | 2 | | | |
| 4B | 4/29/69 | 40.2 | | Belleville | Belleville STP and Deltown Chem. Corp. | Tn. Rd. Bridge Below STP | Rock | Moderate | 3 | 8 | 1 | 5 | | | Qualitative |
| 5A | 11/1/68 | 36.2 | | Dayton | Belleville STP and Deltown Chem. Corp. | Hwy. 92 Bridge | Rock-Sand | Fast | 3 | 154 | 3 | 29 | | | |
| 5B | 11/26/68 | 22.4 | | Albany | Albany STP | Tn. Rd. Bridge Below STP | Gravel-Sand | Moderate | | | 1 | 2 | 3 | 11 | Organic Debris |
| 6A | 11/26/68 | 15.8 | | Brodhead | None Known | 30 Ft. Above Universal Foods Outfall | Rock-Gravel | Fast | 4 | 317 | 1 | 24 | | | Possible Impoundment Effect |
| 6B-7A | 11/26/68 | 15.7+ | | Brodhead | Universal Foods, Inc. | 10 Ft. Above STP Outfall | Gravel-Sand | Fast | 3 | 21 | 1 | 60 | | | Milk Waste Solids Floating Downstream |
| 7B | 11/26/68 | 15.7- | | Brodhead | Universal Foods and Brodhead STP | 100 Yds. Below STP Outfall | Gravel | Moderate | 1 | 1 | 1 | 128 | 1 | 1 | Slimes and Sewage Flock |
| 7BB | 11/26/68 | 17.7- | | Brodhead | Universal Foods and Brodhead STP | 500 Yds. Below STP Outfall | Gravel | Moderate | | | | | 31 | 4 | Slimes and Sewage Flock |
| 7BBB | 11/26/68 | 15.6 | | Brodhead | Universal Foods and Brodhead STP | 800 Yds. Below STP Outfall | Gravel-Sand | Fast | | | 1 | 19 | 2 | 3 | Qualitative |
| 7BBBB | 11/24/68 | 13.0 | | Brodhead | Universal Foods and Brodhead STP | Hwy. 81 Bridge | Sand | Moderate | 3 | 4 | 1 | 10 | | | |
| 9A | 11/21/68 | 2.1 | Badger Mill Creek | Verona | | Co. Hwy. "H" Bridge | Sand-Loam | Slow | | | 2 | 96 | 1 | 2656 | Poor Site |
| 9B-10A | 11/21/68 | 1.9 | | Verona | Carnes Corp. | Verona STP Access Road | Rock-Gravel | Fast-Riffle | 1 | 2 | | | | | |
| 10B | 11/21/68 | 0.7 | West Branch, Sugar River | Verona | STP and Carnes Corp. | Hwy. 69 Bridge | Rock-Gravel | Fast-Riffle | | | 5 | 222 | | | |
| 11B | 11/21/68 | 15.5 | | Mt. Moreb | Mt. Moreb STP | Village Dump Access Road | Gravel | Fast-Riffle | 2 | 3 | 3 | 667 | 1 | 547 | Septic Odor to Stream |
| 11BB | 11/21/68 | 14.0 | | Mt. Moreb | Mt. Moreb STP | Tn. Rd. Bridge in Sec. 25 | Gravel | Fast | | | 4 | 145 | 1 | 374 | |
| 12B | 11/26/68 | 18.2 | Allen Creek | Brooklyn | Brooklyn STP | Co. Hwy. "I" Bridge | Gravel-Clay Underlay | Fast-Riffle | | | 1 | 19 | 1 | 77 | |
| 13B | 11/26/68 | 9.3 | | Evansville | Evansville STP | Hwy. 213 Bridge | Gravel | Fast-Riffle | 2 | 87 | 3 | 48 | 1 | 5 | |
| 14A | 10/29/68 | 16.8 | Little Sugar River | New Glarus | None Known | 100 Ft. Above New Glarus STP | Rock | Fast-Riffle | 1 | 1 | 3 | 22 | 1 | 4 | |
| 14B | 10/29/68 | 15.8 | | New Glarus | New Glarus STP | Tn. Rd. Bridge in Sec. 24 | Rock-Clay | Fast | 1 | 17 | 3 | 50 | 1 | 146 | |
| 15B | 10/29/68 | 12.6 | W. Br. Little Sugar River | Monticello | Poplar Grove C.F. | Tn. Rd. Bridge in Sec. 13 | Silt-Loam | Moderate | | | 4 | 140 | 1 | 432 | |

APPENDIX E
Point Source Information from
the Dane County Water Quality Plan

Facilities Planning Status and Grants Received:

Project Description. Clean out and seal primary cell. Clean out secondary cell.

| | <u>Current Status</u> | <u>Grants Received</u> |
|------------------------------------|-----------------------|------------------------|
| Step 0 - Preapplication Conference | X | |
| Step 1 - Facilities Plan | X | |
| Step 2 - Plans and Specifications | | |
| Step 3 - Construction | | |
| Total Grants Received To Date | | \$53,900 |
| Estimated Total Cost | | |

Village of Mount Horeb

Treatment Type: rotating biological contactor
 Receiving Water: West Branch of Sugar River
 Low Flow Conditions-Q7,10: 0.13 cfs
 DNR Classification of Receiving Water: continuous-intermediate fish and aquatic life

Fishery: limited warm-water fishery dominated by forage species - downstream from Primrose Branch to CTH "PB" supports Class 2 trout fishery - other species found downstream include a variety of warm-water fish such as channel catfish, walleyes, carp, bullheads and panfish
 WPDES Permit #: 0020281-3
 Expiration Date: 4/30/83

Current Operating Conditions:

| <u>Parameters</u> | <u>Old Design</u> | <u>Effluent Limits</u> | <u>Annual Average</u> | | <u>Average</u> | <u># Months Limits Exceeded 1977</u> |
|------------------------------------|-------------------|------------------------|-----------------------|-------------------|-------------------|--------------------------------------|
| | | | <u>1976</u> | <u>1977</u> | <u>3 mo. 1978</u> | |
| Population | 2700 | | | 3112 ^a | | |
| Flow (mgd) | .400 | | - | - | (.357) | |
| BOD ₅ -Influent (mg/l) | | | 338 | 319 | (346) | |
| -Effluent (mg/l) | | 80 ^b (15) | 72 | 69 | (7) | 4/12 (12/12) |
| -Influent (#/d) | | | | | | |
| SS-Influent (mg/l) | | | 425 | 416 | (231) | |
| -Effluent (mg/l) | | 200 ^b (20) | 139 | 183 | (7) | 4/12 (12/12) |
| NH ₃ -N - summer (mg/l) | | (3) | | | (.1) | |
| - winter (mg/l) | | (6) | | | | |
| DO (mg/l) | | (min. 4) | | | (5.6) | |

Industrial Contributions: In 1976 AMPI discharged an average of 25,600 gpd of 100% process water with an average load of 31.6 lb/d of BOD₅ and 67.8 lb/d of SS. Ryser Brothers Cheese Factory did not report under NR101 in 1976 but the facilities plan shows a maximum water use of 6,000 gpd and a maximum BOD₅ loads of 143 lb/d in discharge.

Infiltration/Inflow Conditions: no data
 Operator Time: no data

a-Population of Village as of January 1, 1978, based on DOA estimate.
 b-Limits in effect until 7/1/78; limits in parentheses in effect thereafter.

Future Operating Conditions:

| Parameter | 1978 ^a | 1980 | 1985 | 1990 | 1995 | 2000 | New Design |
|------------------------------|-----------------------------------|------|------|------|------|------|------------|
| Population | 3112 ^b | 3166 | 3300 | 3435 | 3569 | 3704 | 5000 |
| Flow (mgd) | .357 | .412 | .425 | .439 | .452 | .465 | .595 |
| BOD ₅ -in (mg/l) | 346 | | | | | | 334 |
| BOD ₅ -in (kg/d) | 468 | | | | | | 751 |
| BOD ₅ -out (mg/l) | 7 | 15 | 15 | 15 | 15 | 15 | |
| BOD ₅ -out (kg/d) | 9 | 23.4 | 24.1 | 24.9 | 25.7 | 26.4 | |
| SS-in (mg/l) | 231 | | | | | | |
| SS-in (kg/d) | 312 | | | | | | |
| SS-out (mg/l) | 7 | 20 | 20 | 20 | 20 | 20 | |
| SS-out (kg/d) | 9 | 31.2 | 32.2 | 33.2 | 34.2 | 35.2 | |
| P-in (mg/l) | 14 ^c 11.8 ^d | 13 | 13 | 13 | 13 | 13 | |
| P-in (kg/d) | 15.3 ^d | 20.3 | 20.9 | 21.6 | 22.2 | 22.9 | |
| P-out (mg/l) | 15 ^c 10.4 ^d | | | | | | |
| P-out (kg/d) | 13.5 ^d | | | | | | |

Assumptions:

1. Flow: based on the facilities plan formula: (population @ 100 gpcd) + .089 mgd (AMPI) + .006 mgd (Ryser Bros.)
2. BOD₅ - in: from facilities plan
3. BOD₅ - out: 15 mg/l based on effluent limit
4. SS - out: 20 mg/l based on effluent limit
5. Phosphorus - in: 13 mg/l average of monitored concentrations

Analysis and Problem Assessment:

Receiving Water Quality Problems. The new facility is providing a much higher quality effluent with very low levels of BOD₅, SS and NH₃-N, which should minimize point source pollution in the receiving stream.

Plant Needs. Mount Horeb has just completed the construction of a new plant which has more than sufficient capacity to meet the projected year 2000 needs. Three months of monitoring in 1978 indicate that the plant is operating quite well and is consistently meeting the new permit limits.

Sewer Needs. No data.

Operator Time Needs. No data.

a-Based on 7/78-9/78 self-monitoring reports for new plant.

b-Population of Village as of January 1, 1978, based on DOA estimate.

c-Based on 1976 grab sample.

d-1978 compliance monitoring (.342 mgd = flow).

Facilities Planning Status and Grants Received:

Project Description. Construct new plant to provide advanced waste treatment to meet "intermediate aquatic life" criteria.

| | <u>Current Status</u> | <u>Grants Received</u> |
|------------------------------------|-----------------------|------------------------|
| Step 0 - Preapplication Conference | X | |
| Step 1 - Facilities Plan | X | \$14,018 |
| Step 2 - Plans and Specifications | X | \$37,981 |
| Step 3 - Construction | X | \$981,900 |
| Total Grants Received to Date | | \$1,033,899 |
| Estimated Total Cost | | \$1,219,350 |

Oakhill Correctional Institution

| | |
|---|---------------------------------------|
| Treatment Type: activated sludge | Fishery: limited warm-water fishery |
| Receiving Water: Murphy Creek | downstream composed of forage species |
| Low Flow Conditions-Q _{7,10} : no data | with seasonal influx of northern pike |
| DNR Classification of Receiving Water: | and panfish for spawning |
| noncontinuous-marginal uses | WPDES Permit #: 0030261 |
| | Expiration Date: 3/31/79 |

Current Operating Conditions:

| <u>Parameter</u> | <u>Design</u> | <u>Effluent Limits</u> | <u>Annual Average</u> | |
|-----------------------------------|---------------|------------------------|-----------------------|-------------------|
| | | | 1976 | 1977 ^a |
| Population | 338 | | | |
| Flow (mgd) | .034 | | .0233 | - |
| BOD ₅ -Influent (mg/l) | | | 220 | - |
| -Effluent (mg/l) | | 30 | 11 | - |
| SS-Influent (mg/l) | | | 7 | - |
| -Effluent (mg/l) | | 30 | 1 | - |

Future Operating Conditions: Connection to Oregon wastewater treatment plant anticipated.

Village of Oregon

| | |
|--|---|
| Treatment Type: activated sludge - trickling filter | Fishery: very limited fishery poten- tial - primarily forage species |
| Receiving Water: Oregon Branch of Badfish Creek | WPDES Permit #: 0020681-2 |
| Low Flow Conditions-Q _{7,10} : 0.01 cfs | Expiration Date: 11/30/81 |
| DNR Classification of Receiving Water: | |
| noncontinuous-marginal uses to MMSD ditch | |

^a-Data appears unreliable due to changes in management.

APPENDIX F
Bureau of Research
Fish Data

A fish shocking survey was conducted by the DNR Bureau of Research on the West Branch of the Sugar River below Mt. Horeb in June 1974. Approximately 100 yards were surveyed in T6N, R6E, Section 25, SE $\frac{1}{4}$, NW $\frac{1}{4}$, and the following fish were found:

| <u>Fish</u> | <u>Number</u> |
|---------------------|---------------|
| Central Stoneroller | 1 |
| Fathead Minnow | 5 |
| Creek Chub | 39 |
| White Sucker | 44 |

MT. HOREB - DANE COUNTY

July 9, 1975

The site of the new Mt. Horeb treatment facility will be approximately 1/2 stream mile below the first town road bridge on the west branch of the Sugar River. The west branch of the Sugar River will receive the discharge from this new facility. The stream basically flows through agricultural land with some areas being semi-wooded with bordering meadows. There is pasturing next to the stream in several areas with cattle occasionally wading in the stream.

The 7 Q 10 at the first town road bridge above the new plant site is .13 cfs. At this point the stream runs through a wooded area occasionally breaking into meadows. The stream bottom is basically hard with some gravel and rubble and filamentous algal growth. At the plant site, roughly 1/2 stream mile below the first town road bridge, the stream begins to meander and assumes a pool riffle nature. The new plant site is located in a meadow with seemingly good bank protection. The banks are well defined in this region and the stream appears to exhibit a perpetually wet environment. The stream bottom was varied but basically consisted of clay hard pan and gravel rubble.

At the second town road bridge, roughly 1.6 stream miles below the new plant site, the stream seems to have picked up noticeable flow and velocity. The bottom in this reach was basically all sand and the pool riffle ratio had increased. The stream side vegetation seemed to present a good buffer to the stream. However, the entire stream length to this point seems to be susceptible to rain water runoff as a rather high ridge borders the stream on its near west bank. Several forage fish were observed in this area.

County Trunk "JG" crosses the stream approximately .6 of a mile below the second town road bridge and 2.2 miles below the plant site. At this point there was a more noticeable increase in flow. Average stream widths and depths had nearly doubled, and pool riffle areas had increased. Bottom structure was varied and remained firm and the stream vegetation seemed to be more diverse at this point. Good bank protection was in evidence at this point and the stream meadow had increased in width.

RECOMMENDATIONS

At the point of discharge at the new plant site, the stream should be classified as continuous intermediate fish and aquatic life. This classification should hold for the entire approximate 2.2 stream mile length to County Trunk "JG". At County Trunk "JG" and for the entire remaining downstream length of the west branch of the Sugar River, the classification should be continuous fish and aquatic life.

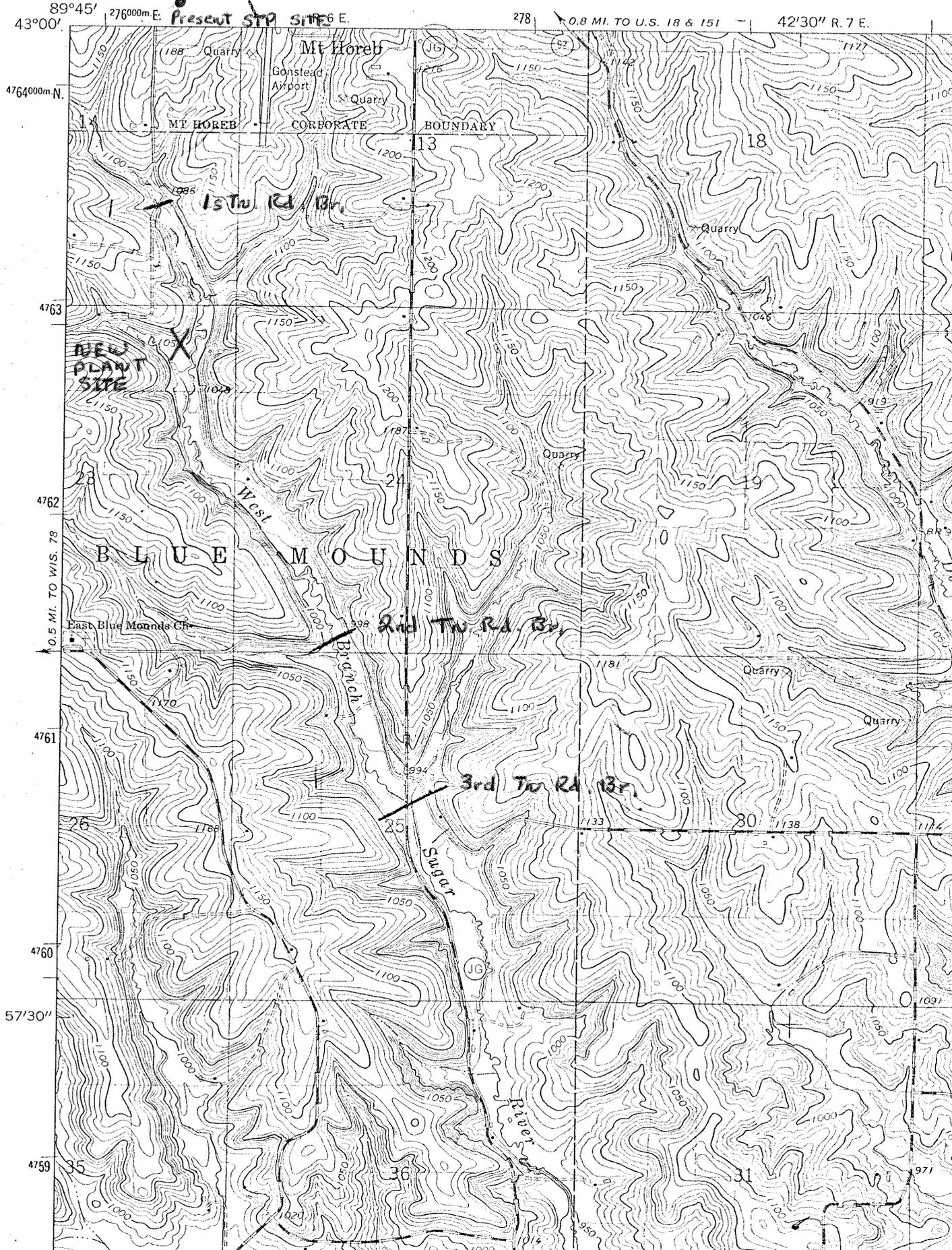
The above recommendations represent a concurrence of opinion of the stream classification team who are as follows: Bob Bate, District Engineer; Steve Jaeger and Ron Martin, Bureau of Water Quality; Cliff Brynildson, Area Fish Manager; and Tom Bainbridge, Stream Classification Coordinator.


Tom Bainbridge

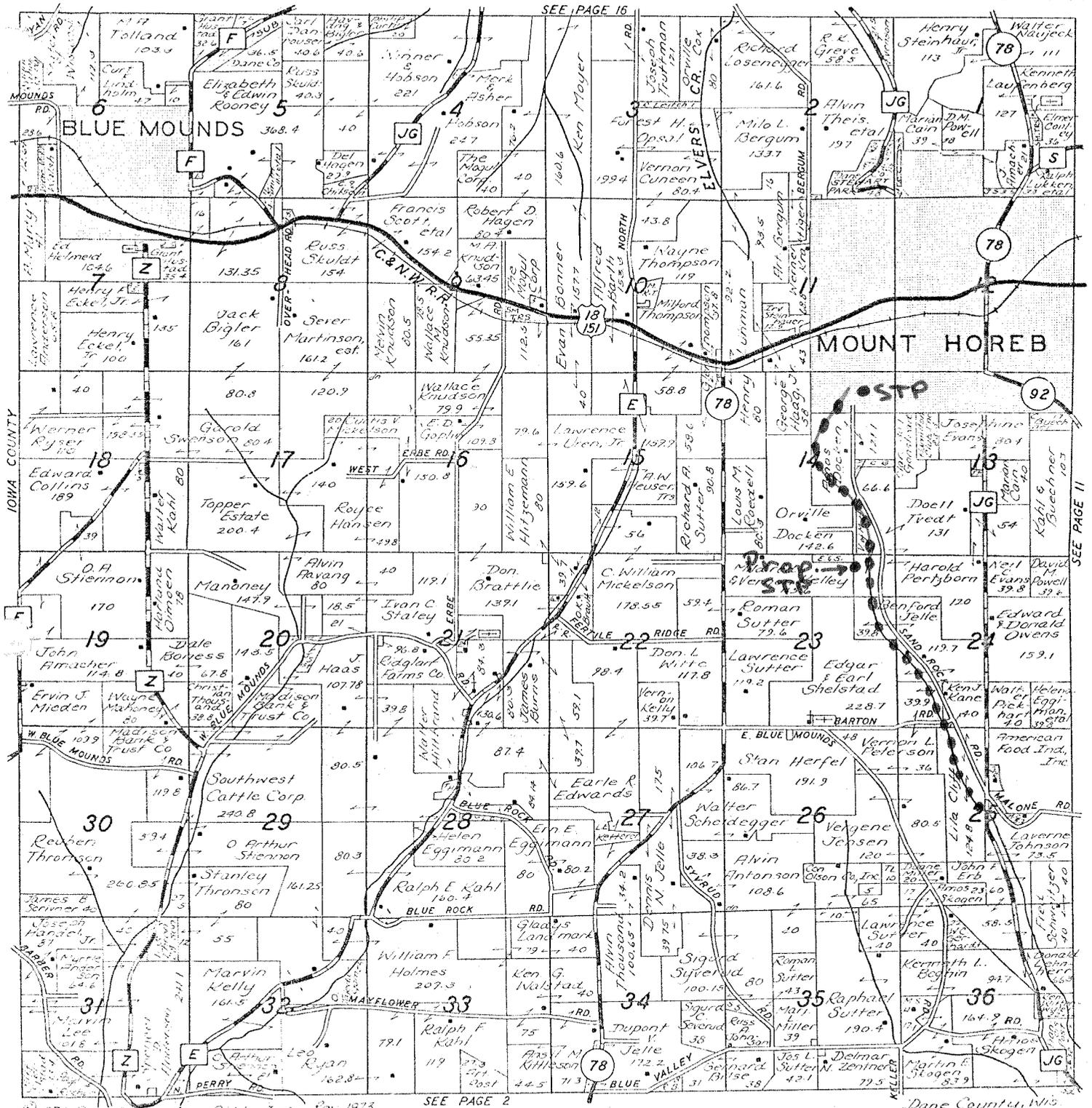
Stream Classification Coordinator

3070 III SE
(BLUE MOUNDS)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



West Branch SUGAR RIVER BLUE MOUNDS MT. HOREB T.6 N.-R.6 E.



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Dane County, Wis

BLUE MOUNDS TOWNSHIP OFFICERS

- | | | |
|------------------|----------------------------|---------------------|
| CHAIRMAN | ARTHUR BERGUM..... | MOUNT HOREB - RFD |
| SUPERVISORS..... | EDWARD COLLINS | BLUE MOUNDS - RFD |
| | LEO RYAN | BLUE MOUNDS - RFD |
| CLERK | HENRY ECKEL, JR..... | BLUE MOUNDS - RFD |
| TREASURER..... | C. WILLIAM MICKELSON | MOUNT HOREB - RFD 2 |