080
TRIB TO W. TWIN
WRM

January 15, 1987 3200

Linda Vogen

Tim Doelger Doelger

Maribel Discharge & Classification of an Unnamed Tributary to the West Twin River

On October 15, 1986 Jeff Haack and I surveyed this tributary for the purpose of determining its suitability as a discharge location for the Village of Maribel.

The survey was predicated on the possibility that the village's seepage cell discharge is entering groundwater in unsuitable quantities and that adding some additional treatment, sealing the lagoon, and discharging to surface water is a more environmentally sound alternative.

Water chemistries, flows and macroinvertebrate samples were collected at three locations indicated on the map and are (except macros) attached. Due to time constraints the macroinvertabrates will not be analyzed, but visual inspection at the time collection indicate a non-existent to poor population.

At the time of the survey flows and water quality were adequate to support a balanced macro community and in most of the stream suitable habitat is also present, but it was a very wet fall and it could be assumed that under normal or below normal precipitation conditions the stream would probably be dry at least to the area east of CTH R.

Based on macroinvertebrates and flow I am recommending that from the Maribel STP downstream to CTH R this stream be classified as Noncontinuous Marginal. Below CTH R there is a dramatic change in topography with upland agriculture giving way to swamp hardwood and cedar with numerous seeps and springs adding considerably to the flow. Because of the

completely different nature of the land, the stream, and its proximity to the West Twin River it should be classified as Continuous Fish and Aquatic below CTH R. Careful consideration should be given to the attached memo from Rick Stoll prior to discharging to surface water in the area. Although there is no concrete evidence one way or the other the possibility of a subsurface discharge does exist and this question should be resolved or the area avoided.

In addition there are plans to build a private campground just west of I-43. Extending a pipe to CTH R would effectively short circuit both of these potential problems.

TD:cks

Attach.

cc: Jeff Haack
Bob Behrens
Duane Schuettpelz

200 YARDS ABOVE
FACING NORTH

M-1 ABOVE
FACING WEST

M-2 200 YARDS BELOW
FACING WEST

HALF WAY BETWEEN
I43 AND THE STP
NOTE LACK OF CHANNEL

200 YARDS WEST OF I-43
NOTE OVERLAND FLOW

M-3 WEST SIDE OF CTH R

SEGMENT DATA SHEET

Treatment Plant: MARIBEL

Date: 10/15/86

Recorders Int.: ______

Segment # ______

Observation # ______

Stake &/or Sample # ______

Distance Downstream ABOVE (M-1) paces or feet

Time ______ pH ______

DO 12.0 (Unit #)

Temp 5.5 °C

Measurement Conditions

Sun - Shade
Riffle - Run - Pool
Before - With - After/Dye

% Overcast 50

% Shade 0

Est. Stream Width 1.5' Est. Ave. Stream Depth 3"

Bottom Type ______

	% Stream Found		
SLUDGE	0 %	Depth	
MUD	20 %	Depth	
MACROPHYTES	20 %		

Comments

Rained wet late summer/early fall

	Scarce	Common	Abundant
- Elodea	s	c	a
- Potomageton	s	c	a
- Sagittaria	s	c	a
- Myriophyllum	s	c	a
- Vallisineria	s	c	a
-	s	c	a
-	s	c	a

FILAMENTOUS ALGAE 0 % Stream

SLIMES 0 % Stream

LITTER & DETRITUS 5 % Depth ______

Fish Observed 0

Land marks (major) STP

Land Use Ag.

Other ______

LOW FLOW STREAM CROSS SECTION & DISCHARGE DATA

STP: _____ Date: 10/15/86

Location ABOVE M-1

_____ or Stake # _____

Tapedown (opt.) _____ Flow Meter # MM 2 Recorders Initials RD

Time 10:00 Stream Width 18" # Measurements _____

Distance from Bank (ft)	Depth (ft)	Velocity	Area (ft^2)	Discharge	Comments: (Vegetation-Sludge)
0	0	0			
3	.2	.5	.05	.025	
6	.3	2.3	.075	.172	
9	.25	1.6	.062	.1	
12	.15	.8	.037	.03	
15	0	0			
18					
				.327	CFS
T.					

SEGMENT DATA SHEET

Treatment Plant: MARIBEL

Date: 10/15

Recorders Int.: DD

Segment # _____

Observation # _____

Stake &/or Sample # _____

Distance Downstream 2004DS paces or feet M-2

Time 10:35 pH _____

DO 11.6 (Unit #)

Temp 6 °C

Measurement Conditions

Sun - Shade
Riffle - Run - Pool
Before - With - After/Dye

% Overcast _____

% Shade _____

Est. Stream Width _____ Est. Stream Depth (Ave.) _____

Bottom Type _____

	% Stream Found		Comments
SLUDGE	0 %	Depth _____	
MUD	10 %	Depth _____	Natural Channel Gravely bottom
MACROPHYTES	0 %		

	Scarce	Common	Abundant
- Elodea	s	c	a
- Potomageton	s	c	a
- Sagittaria	s	c	a
- Myriophyllum	s	c	a
- Vallisineria	s	c	a
-	s	c	a
-	s	c	a

FILAMENTOUS ALGAE 0 % Stream

SLIMES 0 % Stream

LITTER & DETRITUS 15 % Depth 7"

Fish Observed NONE

Land marks (major) ROCK PILE ON N. BANK

Land Use AG

Other _____

LOW FLOW STREAM CROSS SECTION & DISCHARGE DATA

STP: MARIBEL M-2 Date: 10/15/96

Location 200 YDS DOWN

or Stake # _____

Tapedown (opt.) _____ Flow Meter # _____ Recorders Initials _____

Time 10:30 Stream Width _____ # Measurements _____

Distance from Bank (ft)	Depth (ft)	Velocity	Area (ft^2)	Discharge	Comments: (Vegetation-Sludge)
0	.1	0			
.6"	.2	0			
+2"	.2	0			
1.5	.3	.3	.15	.045	
2	.35	.7	.175	.122	
2.5	.35	.6	.175	.105	
3	.4	.4	.2	.08	
3.5	.35	.1	.175	.017	
4.	.2	0			
4.5	BANK			.369 CFS	
T.					

SEGMENT DATA SHEET

Treatment Plant: MARIBEL

Segment # _____

Date: 10/15/86

Observation # _____

Recorders Int.: _____

Stake &/or Sample # _____

CTH R M-3

Distance Downstream 1.75 MILES paces or feet _____

Time 11:09 pH _____

Measurement Conditions

DO 12.2 (Unit #)

Sun - Shade

Temp 6 °C

Riffle - Run - Pool

Before - With - After/Dye

% Overcast _____

% Shade _____

Est. Stream Width _____ Est. Stream Depth (Ave) _____

Bottom Type ROCK

	% Stream Found		Comments
SLUDGE	0 %	Depth _____	PRETTY
MUD	5 %	Depth _____	
MACROPHYTES	0 %		

	Scarce	Common	Abundant
- Elodea	s	c	a
- Potomageton	s	c	a
- Sagittaria	s	c	a
- Myriophyllum	s	c	a
- Vallisineria	s	c	a
-	s	c	a
-	s	c	a

FILAMENTOUS ALGAE 5 % Stream

SLIMES 0 % Stream

LITTER & DETRITUS 5 % Depth _____

Fish Observed NONE

Land marks (major) CTH R

Land Use FALLOW/WOODS

Other _____

LOW FLOW STREAM CROSS SECTION & DISCHARGE DATA

STP: MARIBEL Date: 10/15/86

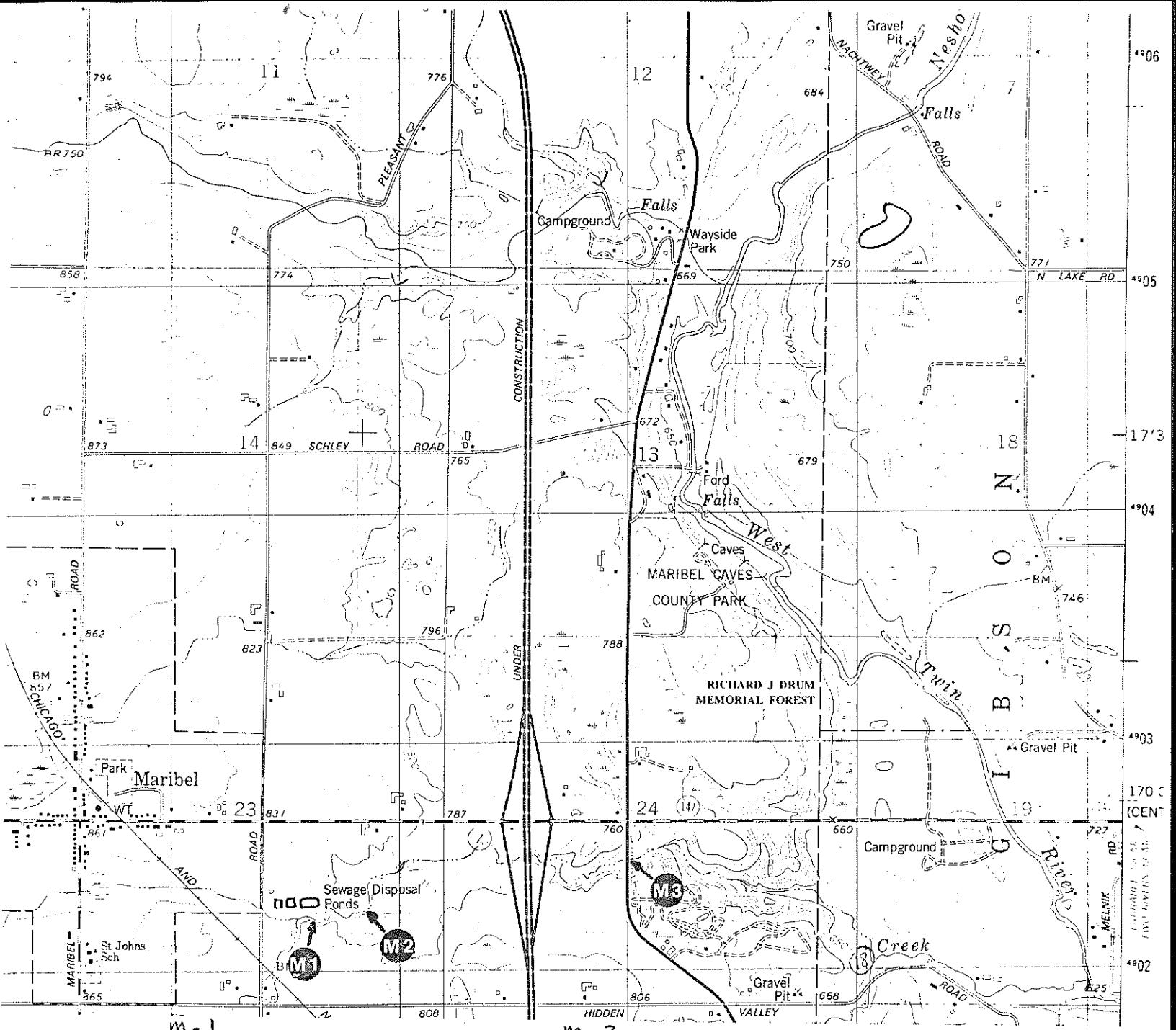
Location CTH R M-3

or Stake # _____

Tapedown (opt.) _____ Flow Meter # _____ Recorders Initials _____

Time _____ Stream Width _____ # Measurements _____

Distance from Bank (ft)	Depth (ft)	Velocity	Area (ft^2)	Discharge	Comments: (Vegetation-Sludge)
0	.0	0			
1	.3	0			
2	.3	.1	.3	.03	
3	.5	0	.5		
4	.55	.1	.55	.055	
5	.50	.2	.5	.1	
6	.3	.1	.3	.03	
7	.1	0			
8	.1	0		.215 CFS	
BANK					
T.					



m-1
MARIBEL ABOVE

WATER	TEMP	CENT	5.5
DO		MG/L	12
BOD	5 DAY	MG/L	1.5
LAB	PH	SU	8.0
RESIDUE	TOT NFLT	MG/L	<2
PHOS-TOT		MG/L	0.16
PHOS-DIS	ORTHO	MG/L	P 0.142
TOT KJEL	DL N	MG/L	1.0
NH3-N	DISS	MG/L	<0.02
NO2&NO3	N-DISS	MG/L	1.08
CHLORIDE	CL	MG/L	24

m-2
200 YDS BELOW

WATER	TEMP	CENT	6
DO		MG/L	11.6
BOD	5 DAY	MG/L	0.9
LAB	PH	SU	7.9
RESIDUE	TOT NFLT	MG/L	<2
PHOS-TOT		MG/L	0.16
PHOS-DIS	ORTHO	MG/L	P 0.149
TOT KJEL	DL N	MG/L	1.0
NH3-N	DISS	MG/L	<0.02
NO2&NO3	N-DISS	MG/L	1.01
CHLORIDE	CL	MG/L	24

m-3
AT CTH R

WATER	TEMP	CENT	6
DO		MG/L	12.2
BOD	5 DAY	MG/L	1.5
LAB	PH	SU	8.1
RESIDUE	TOT NFLT	MG/L	2
PHOS-TOT		MG/L	0.12
PHOS-DIS	ORTHO	MG/L	P 0.090
TOT KJEL	DL N	MG/L	1.0
NH3-N	DISS	MG/L	<0.02
NO2&NO3	N-DISS	MG/L	0.92
CHLORIDE	CL	MG/L	34