

US EPA ARCHIVE DOCUMENT

"Rite in the Rain"



ALL-WEATHER
LINE RULE
Spiral Notebook

Inchstripdex 4/29-7/2

No. 393
32 Sheets
4 5/8" x 7"

4/29

SD-13 - thin yellow

clay - plastic, stiff, etc.
very fine

Put soil sample in a jar
of water - plenty of deposits
of sediment.

Amphipod observed,
in jar with
edge of wetland
skunkweed, trucking,
muskat

SD-11 - Bond 3

millions of green
caterpillars - no larvae to
very soft bottom
Caterpillars to be
for physical character
isles, left bank

WANA Pond Dec 4/29/99

TEMP	WIND	2' Cond	D	Time
12.2	10	1000	1.0'	1122
			1.0	
			1.0	
12.0	10	1000	4.0'	1127
11.8	10	1000	6.0'	1132
11.6	10	1000	8.0'	1137

The Eckman net
well

took two deeper
used ruler to check seed
depth upon sampling.

HBSHA Shallow 1

right bank (looking
downstream) is sand, rock,
& mud bottom ~ 0.5-3'
deep - we did not
attempt a sample on
this date - we will
try on Friday. We
need to discuss Opich.

STA SD 3

4/23/99

TEMP	DO	PH	SP. cond	Depth
13.8	13.1	7.53	1002	1.2'
12.45	12.3	7.41	1015	4'
9.9	11.9	7.26	11124	80'

4/30/99 → 26 m wt
SD - 2 "south" 335° from rock
Visit "North Pond" - like
south one just N. of Berm

- fine blk sediment
water depth ~ 2-3'
Ceratophyllum (weeds)
uniform on bottom
will probably have to
use a core

- many turtle-like birds,
all cattails, Kingfisher -
14/13 at mid water 1.5'

Temp - 13.4
D.O. - 11.2
conductivity 8204
pH 7.5

not many blackbirds
phragmites very

last piece 1-5'
last one toward phrag
& power line

- fish present
shiners?

SD-2 North @

0940

"Chlorella?" Lemna
dominated - fine black
crustic bottom -
physical open surface
* plant

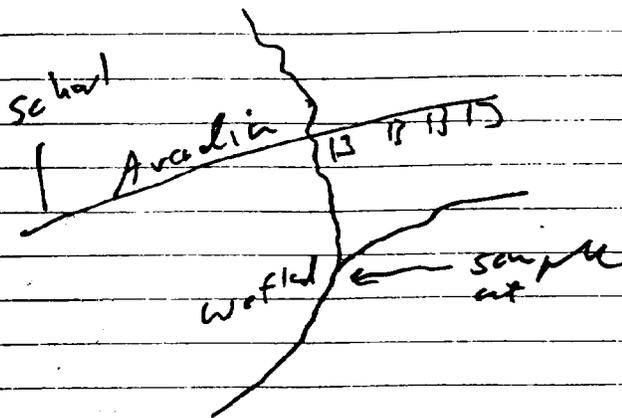
~ 10m off culvert
leading to SD-2 south
pond

turtles, blue heron
- no chironomids visible
- amphipods - possibly
associated with plant

Water Quality

Depth	Temp	Cond	DO	PH
1'	14.3	6935	14.96	8.3

Abarjona @ Aradine



black pine and
good water flow
leaf mottled

slightly propped
~ 6"

- glut of skunk
cabbage

3 pictures taken

Water Quality 8"-12"

Temp=12.7, DO 7.4 pH=7.2 Cond 7767

Stem 10215

Aberjona at West St.

Temp 13.25

COND 4766

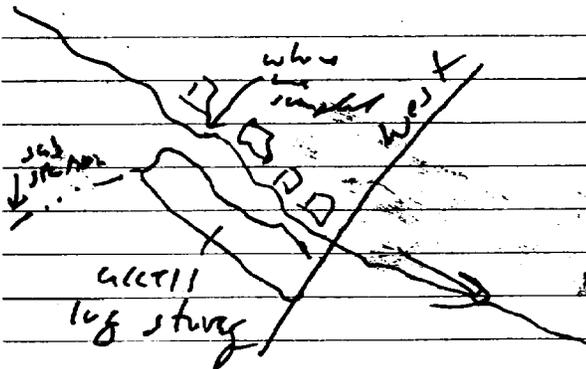
Sp Cond 6185

D.G. 9.51

pH 6.87

% DO = 93

3 pictures - test on Kevin with
stream ~ 10' wide ^{GPS}
soft bottom but some
sand, stunk cabbage
near houses



Halls Brook - SD - 4

Temp 14.3

DO - 12.32 mg/L

pH 7.19

Cond 7369

Sp. Cond 9270

4: 10' across

drives in open field...
+ then moves slightly over
a rocky bottom

we sampled just
upstream of rocky area
at edge of field

much plant material
with silt - mollusk -
frogs, amphipods
seems clear

Halls Brook Holding Area Pond
South end 01440

750 from Sill end Centered E-tow

Depth	Temp	Cond	DO	Sp. Cond	pH
1	14.7	9937	10.9	12148	7.11
4	12.15	10175	9.98	13579	6.87
8.5	10.6	32262	1.95	46652	6.70
9.8	10.0	39800	0.81	56371	6.87

11.00 m
into bottom

SD-12. amid
Phragmites

cupped + chlorine
open area next to lot +
parking lot at corner
of building
sampled with Ponar

fine silt within vegetation
matter, some fine sand

Temp. 17°C
Cond 9067
DO 13.48
Sp. Cond 11,187
pH 7.13

HBHA Pond S. E.

scud bottom

up to ~ 3-4'

apparent sunfish nests

fine gravel

material covering it

- sunfish waste

stems of Phrag

Then we took trip later

HBHA Pond -

occasional sunfish

nests

bottom remains firm

for some distance

- bottom support RAY

include lilies

almost like a

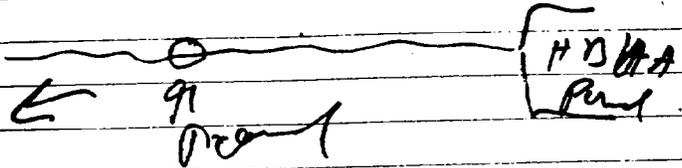
see grass - becomes

softer as we go

downstream

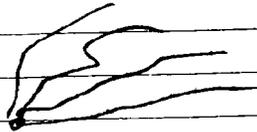
Pond south of
HBITA Pond
HBITA Pond 1
1' deep

build pic
45°



surrounded by Typha
- good location

bottom covered by
string-like RAV of
~ 8" long



Pond Central
West bank
across from 2nd
window south of
DLC at
access to rd
~ 10' offshore

middle sand
rest of shelf is
sand to rocky



fills
Bar

1 pic

1 pic

6/11/99

SD-4 @ 11:30

Water Quality:

Temp = 15.8

Specific conductance = 506

DO = 6.84

pH = 8.70

Turbidity = 1

complete surface
with, invertebrate,
sediments

could use ~ (4) grabs
for sediment samples

3 grabs for invertebrate
picked invertebrate =
chironomids mostly

SD-12 @ ~~1:15~~ 1:15 PM

Turbidity 2

Temp 16.6 °C

Sp c 499

Sc1 0.24

D.O. 9.35

@ 0.645'

pH 5.76

- sediment peaty muck

Water, sediment,

SD - 13 @ 3:15 PM

Turbidity = 2

Temp = 18.4 °C

SPC = 872

Salinity = -

DO = 7.9

e 0.7'

pH = 5.7

Turbid slow moving, partially
Forested

SD-03 not used

Turbidity -

Temp -

SpC -

Salinity -

Furb SD-03

S
BS
T
IT
BT
Dotten

Depth	Temp	Temp Spc	DO	pH
1.6	1.0	21.42	7.45	6.49
3.1	1.0	20.72		
3.3	1.0	20.46	7.20	6.64
5.04	1.0	19.73	6.31	6.55
7.20	1.0	15.03	2.47	6.42
9.18	1.0	12.11	1.27	6.30

GPS - SP-03 6/24/99

WPT - 1114

N - 42° 31.0135

W - 71° 07.9605

H.B.H.A. - Shallow SD - 6
Water Depth 1 ft.

Turb - 2

Temp - 21.4

SpC - .77 ms/cc

DO - 7.72

pH - 6.54

GPS - WPT 1116

North 42° 3.7511

West 71° 08.4734

NSHA - South Deep - 11.8 ft

SD-7

Depth	Turb	Spc	DO	PH	Temp
1.0'	4 10	.79	7.24 6.5	6.97	21.19
3.0'	5 10	.79	5.75	6.88	19.8
5.0'	10 10	1.41	2.13	6.56	18.7
7.0'	20 10	2.89	0.77	6.71	14.35
8.0'	10 10	3.10	0.71	6.83	12.83

GPS - 1115

North 42° 30.6925
West 71° 08.4254

SD-5 - 12.8 ft

Depth	Turb	Spc	DO	PH	Temp
1.0	10	0.78	6.4 6.0	7.07	21.12
3.0	10	0.781	5.4	6.86	20.06
5.0	10	6.53 1.53	1.82	6.71	17.34
7.0	10	2.91	0.83	6.51	12.49
9.0	10	10.00	0.72	6.92	12.02

GPS WPT 1117

N 42 30.8072
W 71 08.4876

7/2/99

Calibrate
YSI

cond ✓

pH ✓

D.O. ✓

6/21/99

0930 At location SDO2
W.R.

Temp at 1 ft 19.80C
pH 7.7
S. Cond ? 350
DO 5.5 mg/l @ 1'
bottom @ ~ 1.5'

heavy plant
growth *Ceratophyllum*,
Potamogeton?, algae

shallow depth ~ 2'
mucky bottom with lots
of shales

collected catfish (2 comp)
+ 2 composite of SAV

6/21/99

@ ~ 10:30

Station SD-01 South Branch
of Abasco R.
Temp 70°F

Weather: overcast, part sun,
1.0 m wind

PPE - waders, gloves

Water quality taken in
poly jar

Temp 16.58

Sp. 510 ?

DO 0.28 ?

DO 7.28

DO 0.701

pH 7.05

shallow near stream, very slow
moving - depth 0.5' - 3''

width 2-3' with burrowing
crews of exposed mud

Location: 42° 31' 44.5577"
71° 07' 24.0538"

6/15/79 @ ~~1400~~ 1400
SD-11

Center of pond #3

YSI (new)

Temp 20.81
Cond 642
D.O. 11.7
ORP 62.4
Sp Cond 700
D₂₀ 130.9
pH 6.95

HORIBA

pH 6.77
Turb = 12
Temp = 20.6
Salinity = 0.03‰

bottom ranges from sandy to
very mucky - major
depositional area,
Chironomids + oligochaetes
collected 2 composites
of catfish + 2 composites
of SAV

6/21/99

SD-10 @ ~ 1400

Temp 20.9

Cond 632

D.O. 8.63

ORP - 145.9

sp Cond - 684

D.O.% 89.4

pH 7.11

depth 0.5 - 6"
slow but steady flow

turbidity : 132

dense phragmites on
both banks
some exposed sedls

6/22/99

SD-9

Temp 23.89

Concl 687

DO 7.71

ORP 61.9

SPCOND 702.22

D.O. 88.2

pH 6.67

Acviba
turbidity 17
~~D.O.~~

6/22/99

SD-08 -

excavated early in
day for SEDS + WATER
w/ 11:00

Very shallow, covered with
a fine grass-like plant,
pond lilies -
scraped lilies + cattails

~~at 11:30~~ measured water
quality in 6" of water

YSI

Temp - 29.8

Concl - 773

D.O. - 12.5

ORP - 60.7

Sp C - 208

ole DO - 167.70

14 - 7.2

Hatche Turbidity - 12

6/23

HBHA Pond #7

Vertical profile ~ 10:00

	1'	3'	5'	7'	9'	11'	
Temp	22.19	21.28	18.28	13.97	12.04	11.70	
pH	7.19	6.82	6.66	6.87	7.01	7.13	
Sp Cond	^{YSI} 706	^{Hor} 706	7006.0	7050.0	2799.0	3177.0	3009.0
DO	8.12	5.26	6.65	4.2	.38	2.8	
ORP	71.9	85.1	75.5	-234.3	-275.2	-336.7	
CND	666.0	870	716	2204.0	2893.0	2428.0	
TURB	0	10	221	400	120	(120-250) sl. fine	
SAL	.3	NR					

*Note

bottom @ ~ 11.2' ysi dropped into bottom sediment and then pulled back up to 11ft.
Probably stirred up bottom.

7/2/99

SD-2

10:30

1.1

Temp 23.25

SpC 320

D.S. 6.78

PH 5.48

Turbidity 5.7

W. point

1151

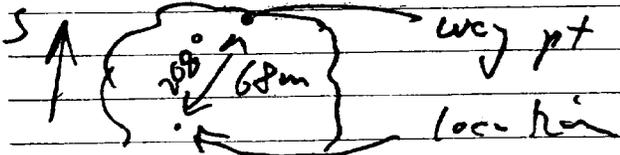
42 31.3426 N

7L 08.6546 W

- at culvert

NAD 27

68 m @ compass beam
208° toward weirs pt.



SD-5

@ 10:50

Surface - 1.7'

Temp 22.2

S.P.C. 748

D.O. 5.94

pH 6.13

• Depth 6.6'

Temp 18.7

S.P.C. 2944

D.O. 3.86

pH 6.03

Depth	6.6'	Temp	18.7
S.P.C.	2944	D.O.	3.86
pH	6.03		

Turbidity = 10

SD 6

Turbidity = 10
 @ 0.8'
 Temp 22.3
 Spc 725
 D.O. 7.05
 pH 6.49

Secchi = 1.5'

SD-7

Turbidity at surface
 //

	Depth				
	1.6'	4.4'	6.07'	8.21'	10.5'
Temp	22	21	15.85	13.3	12
spc	783	1426	2850	3488	3952
D.O.	7.25	2.86	0.76	0.39	0.3
pH	6.4	6.1	6.25	6.4	6.5

SD-7

11.5' bottom

Temp 11.67
 spc 2763
 D.O. 0.25

~~Temp~~
~~spc~~
~~D.O.~~

SD-7 @ 12:05

Temp	24.5	23	13.5	11.3
spc	470	465	575	1285
D.O.	7.3	5.85	3.26	2.21
pH	6.9	6.85	6.70	6.55

Turbidity = 4

definite
 petroleum
 smell
 & seen
 when I pulled
 anchor - at
 SD-5 - but
 not noticeable
 at SD-7

SD-8
 0.7
 ~ 12:00

Temp 22.6
 Sp. Cond. ~~5.5~~ 7.93
 D.O. 6.15.6
 pH 6.47
 Turbidity = 12

north profile

	SD-5	SD-6	SD-7	SD-8	SD-9
Depth	0.9	2.6	4.2	7.4	9
Temp	22.4	21.5	19.5	12.7	12.1
Sp. Cond.	7.20	7.55	7.200	6.53	7.300
Sol. Lin. S	0.37	0.57	0.8	3.4	5.9
D.O.	6.07	5.9	2.2	1.0	0.5
pH	6.62	6.55	6.13	6.2	6.41

JULY 2 1999

SD04

12:30
 Surface
 Turb. - 11
 Temp 22.75
 Sp Cond 483.00 sal .23
 DO 6.80
 pH 6.80

SD12

12:38

Surface
 Turbidity 10
 Temp 22.22
 Sp Cond 475 sal .23
 DO 8.97
 pH 6.81

SD10

12:55

Surface
 Turbidity 7
 Temp 23.85
 Sp. Cond. 813
 DO 4.60
 pH 6.69
 Sal 0.40

SD10 Coordinates:

WP 1154

42° 30.2839

122° 08.2272

SP 11 stream of current

13:00

Surface

Turb. 12

Temp 21.16

Sp Cond 816

DO 8.88

pH 6.80

Sal 0.4

SD13

13:15

Surface

Turb. 5

Temp 23.23

Sp Cond 637

DO 5.13

pH 6.94

sal .30

SD-1

13:40

Temp 23.9

Sp. Cond: ~~56~~ 564

Sal: 0.27

DO: 6.25

pH: 6.97

turb: 12

Water only a few inches deep
 Less water than last time
 WR taken by filling a cup and
 placing meter in cup

GPS Coordinates

SD01

42° 31 44.5577 N

71° 07 24.0538 W

SD02

WP 1151

42° 31.3426 N

71° 08.6546 W

SD03

42° 31.0135 N

71° 07.9605 W

SD04

42° 30 47.2700

71° 08 52.7270

SD05

42° 30 46.7109

71° 08 28.2919

SD06

42° 30.7511

71° 08.4734

SD07

42° 30.6925

SD08

42 30 31.5458

71 08 18.4043

SD09 (taken 25 yards from site
on western shore)

42° 30.4131

71 08.3002

SD10

42° 30.2839

71 08.2272

SD11

42 30 14.9026

71 08 07.0443

SD12

42 30.7507

71 08.9418

SD13

42 29 57.4632

71 08 03.4095