



## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

### MEMO

To: File  
From: Liz Victor *LV*  
Date: January 5, 2018  
Site Name/BRRTS: Kewaunee Marsh Arsenic Spill (02-31-000508)  
Re: Field Activities Report for October 3, 2017

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**Who:** Liz Victor, Dave Neste, Cheryl Bougie, DNR NER

**Purpose of Field Visit:** Cap Inspection and Site Visit

**Special Equipment:** DNR's Canon PowerShot SX130 IS, Garmin eTrex 20 Sof

**Scope of Work for Field Visit:**

- Read River Staff Gauge (west gauge) and get GPS Coordinates
- Look at/assess area of stressed vegetation/stunted growth
- Annual Cap Inspection

**Work Performed:** The team walked the cap to the east end to assess its condition and the area of stunted/stressed vegetation. The perimeter of the eastern most portion of the stressed vegetation area was walked using the GPS to establish its general boundary. The western portion was not walked because it was more irregular and interspersed with normal looking vegetation. Also took a reading from the west staff gauge and geolocated it using GPS.

**Comments:**

- There was a marked difference in quality of vegetation between the western and eastern portions of the cap. In the west, the vegetation was green, thick and tall for all species: phragmites, cattails, reed canary grass, and nettles. In the east, the vegetation was brown, shorter and thinner for all species (no nettles noted). We discussed the possibility that the cattails in the east were a different variety or a hybrid.
- There were large areas in the east on the cap where nothing was growing. It looked like sediment/soil/mud; the woodchips have decomposed.
- We observed abundant deer, bird and raccoon tracks and saw a leopard frog. The areas of standing water had duck weed.
- The vegetation on the berms around the cap appeared to be healthy. Berms, where observed, contained mostly reed canary grass.
- When standing on the cap near the north boundary berm, the cap appeared to be low – nearly the same elevation as north of the berm.
- The eastern area of stressed vegetation was wet, saturated ground with a few smaller spots of standing water with duckweed.
- The trees and vines on the fence were still green and had not started to change color.
- New Staff Gauge: algae on the staff gauge (installed May 2017) was noted as high as 5.56ft – indicating the river elevation has been as high as 5.56 ft (581.39 ft msl).

**Data Collected:** The collected data is attached.

**Attachments:**

- Field Notes, 10/03/2017
- Tracks Map
- Staff Gauge Photo with estimated river level shown
- Waypoints
- Photo Log for photos taken 10/03/17

(26)

## FIELD VISIT

10/1/17

10/3/17

E. Victor

D. Neste

S. Bougie

TASKS

1. Cap Inspection
2. Look at / assess area of distressed vegetation
3. Read staff gauge
4. GPS staff gauge

9:00 arrive at Gage.

WPT 312 44.47352

-87.51304

river gauge - right around

S - gauge is covered with algae - Cheryl took photo.

Up to this point REED GRASS

313 44.47532 Hick &amp; Tallia

87.51640

2 PHOTOS

POSSIBLE STRESSED Veg.

(27)

314

44.47512

87.51530

STRESSED CAT-TAILS - Round

2 Photos

PATCH

SHORTER CATTAILS

BROWN FLOWER THINER

STARTED GROWTH ON DIFFERENT VEGETATION

VEG. IS SPARSE, GROUND IS MUDRY  
~ 50' x 25'

315

44.47511

87.51504

THINNING CATTAILS TO AREA

OF STRESSED VEGETATION

SHORT GRASS, SPARSE CATTAILS

316

44.47531

87.51449

OPEN PATCH OF MUD ~ 15' x 40'

317 -

44.47522) on Beam

87.51427)

STANDING WATER w/ DUCK  
NEED ON INNER SIDE OF BEAM

(28)

STANDING WATER w/ PATCHES  
OF NO VEGETATION.

DUCK WEED = STANDING WATER

CAT TAILS & REED CANADIAN

GRASS IS SPARSE & SHORTER

VEG. ON BEAM IS MORE

DENSE.

CAT TAILS & VEG. ON HOT

SPOT TREATMENT AREA MORE

LUSH.

BEAM CONTAINS MOSTLY REED

CANADIAN GRASS

318 44.47523  
87.51482

- ~~to~~ made big loop -  
somewhere all of  
stressed veg close  
to this point.

Larger area represents  
shorter grass / cat tails -

some may be  
just chipped off

from natural process

(28)

In this loop - wet  
saturated ground w/  
a few smaller "spots"  
of ~~veg~~ standing  
H<sub>2</sub>O - (I S'dia) - duckweed

- Consider aerial photo  
again - it looks like  
the areas that we  
see in field correspond  
to area seen on  
7/16 aerial photo.

- This area has  
exposed soil (with  
sparse veg.).

- Many tracks.  
raccoon  
deer  
bird

heard sand hill cranes  
mallards.

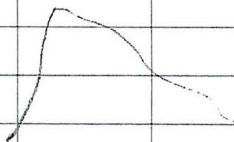
1 10/3/14

30

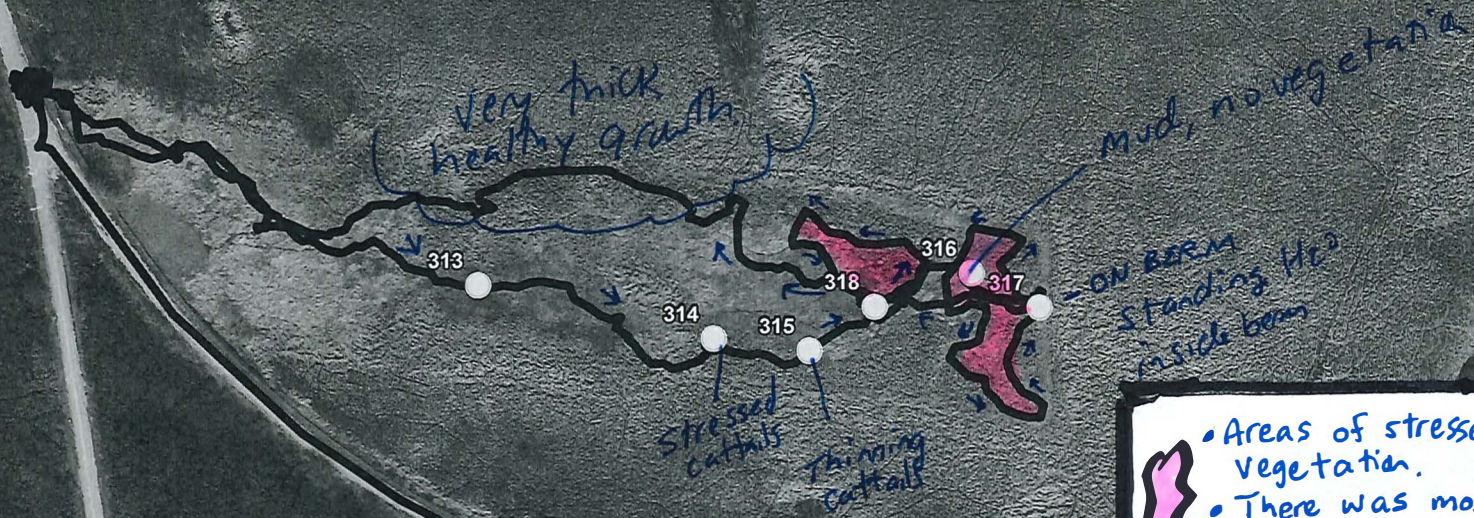
Rainy early summer.  
temps not above  
90's - mild summer.  
- Today - low 70's  
sunny - it has  
been a warm fall.  
Trees are still green.

Saw leopard frog

11:00 AM - out of Marsh  
Locked gate



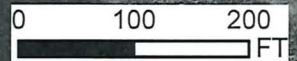
31



• Areas of stressed/thin/lacking vegetation.  
• There was more than what is shown on this map.  
• Decided to quit and instead use Aerial photo as guide

**Kewaunee Marsh**  
**Waypoint/Tracks Map 10/03/2017**  
**Map Date: 11/28/2017**




Prepared by: NER RR GIS Staff



FID	type	ident	Latitude	Longitude	y_proj	x_proj	
0	WAYPOINT	312	44.473519	-87.513039	447476.1393	717798.5039	- Staff base (westen/new)
1	WAYPOINT	313	44.475315	-87.516133	447668.1542	717546.359	
2	WAYPOINT	314	44.47517	-87.515355	447653.9285	717608.7252	- Stressed cattails
3	WAYPOINT	315	44.475134	-87.515038	447650.6962	717634.0587	- thinning cattails
4	WAYPOINT	316	44.475308	-87.51449	447671.3493	717677.055	- mud
5	WAYPOINT	317	44.475221	-87.514269	447662.2199	717694.9257	- berm - beg & end of circle
6	WAYPOINT	318	44.475235	-87.514817	447662.4496	717651.2944	- Stressed vegetation, beginning & end of circle around stressed veg

# Kewaunee Marsh Photos

10/3/17

	<table border="1"> <tr> <td>Photo #:</td> <td>001</td> </tr> <tr> <td>Date/Time of Photo:</td> <td>10/03/2017</td> </tr> <tr> <td>Photo Location:</td> <td>Kewaunee Marsh</td> </tr> <tr> <td>Photo By:</td> <td>Cheryl Bougie</td> </tr> <tr> <td>Photo Description:</td> <td>New (West) Staff Gauge looking North. Water level estimated to be ~5.25 ft (see field notes for details) WPT 312</td> </tr> </table>	Photo #:	001	Date/Time of Photo:	10/03/2017	Photo Location:	Kewaunee Marsh	Photo By:	Cheryl Bougie	Photo Description:	New (West) Staff Gauge looking North. Water level estimated to be ~5.25 ft (see field notes for details) WPT 312
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Photo By:	Cheryl Bougie										
Photo Description:	Crane track in stressed vegetation area WPT 316										

**Kewaunee Marsh Photos**  
**10/3/17**



Photo #:	004
Date/Time of Photo:	10/03/2017
Photo Location:	Kewaunee Marsh
Photo By:	Cheryl Bougie
Photo Description:	Raccoon tracks in stressed vegetation area WPT 316



Above Photo: Thick reed canary grass. Facing S WPT 313  
 Photo by: Cheryl Bougie

Photo #:	005
Date/Time of Photo:	10/03/2017



Kewaunee Marsh Photos  
10/3/17



Above Photo: Pond 8 View to ~north.  
by: Cheryl Bougie

Photo

Photo #: 006

Date/Time of Photo: 10/03/2017



Above Photo: Pond 8 View to ~north.  
by: Cheryl Bougie

Photo

Photo #: 007

Date/Time of Photo: 10/03/2017

Kewaunee Marsh Photos  
10/3/17

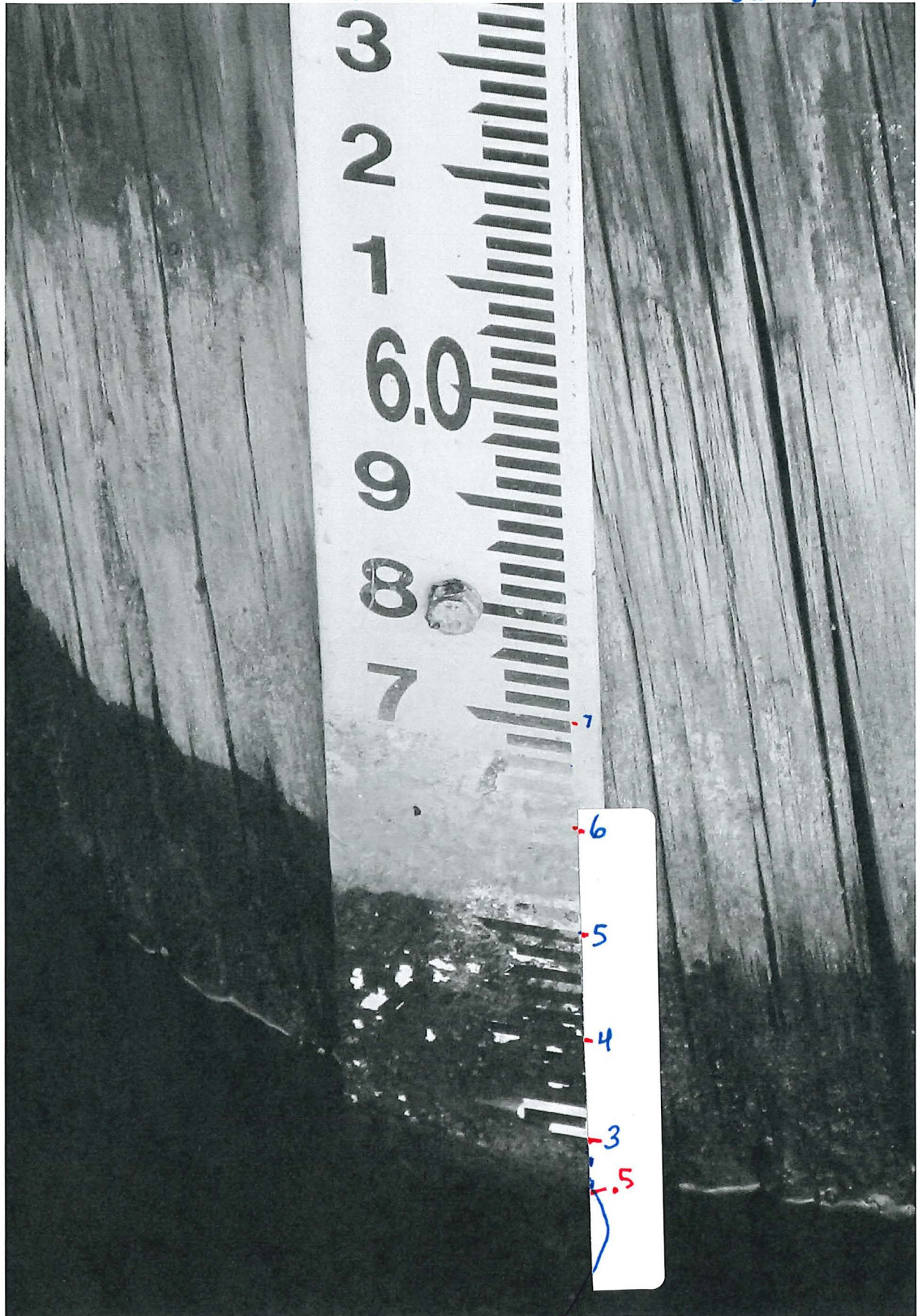


Above Photo: stressed/stunted Vegetation Zone	Photo #:	008
Facing SE WPT 316 Photo by: Cheryl Bougie	Date/Time of Photo:	10/03/2017



Above Photo: stressed/stunted Vegetation Zone Facing	Photo #:	009
SE WPT 316 Photo by: Cheryl Bougie	Date/Time of Photo:	10/03/2017

"WEST" STAFF GAUGE WPT 312 - 87.51304 44.47352



ESTIMATION OF STAFF GAUGE READING  
BY EAV PHOTO TAKEN 10/3/17

5.25'