

2016 UMRR WORKSHOP DAVENPORT, IOWA 27-29 SEPTEMBER 2016



MVP BRIEFING ON HREP'S

By Tom Novak

27 September 2016



**US Army Corps
of Engineers®**
St. Paul District



MVP HREP'S

Recently Completed

- Capoli Slough (#27)

Under Construction

- Harpers Slough

Planning/Design

- Conway Lake
- McGregor Lake

Problem Child

- North and Sturgeon Lake

Planning Queue

Repairs

- Pool 8 Phase III

Adaptive Management

- Peterson Lake

PER's



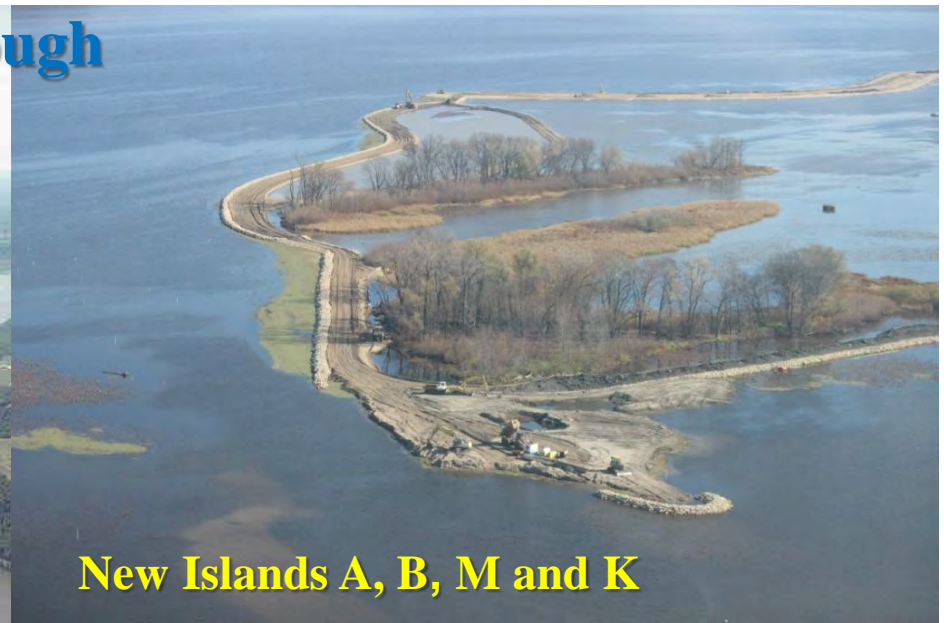
US Army Corps
of Engineers®
St. Paul District



HREP PROJECT – Capoli Slough

Capoli Slough HREP Pool 9

- Protect 10 islands
- Restore 11 new islands
- Additional habitat dredging
- Restore emergent wetlands
- Restore riffle pool complex



New Islands A, B, M and K



ST. PAUL DISTRICT (MVP)

CAPOLI ISLANDS– EARTH DAY TREE PLANTING

39 eighth grade students and 4 faculty from Lansing, IA Middle School

9 students and 1 faculty from DeSoto, WI High School

6 adult volunteers from Friends of Pool 9

4 staff from FWS and 5 from COE



Planted 500 red oak seedlings on highest elevation of island K (Lost Frenchman Island)

Also implemented a trial to determine effectiveness of fertilizer and deer repellent tablets on seedling growth and survival



ST. PAUL DISTRICT (MVP) CAPOLI SLOUGH – PROJECT DEDICATION

Al Kirchner
Village President

COL Dan Koprowski
St Paul COE

Natalie Baugher
Friends of Pool 9

Kerrie Jackelen
Staff Rep Kind

Chuck Gipp
Director IADNR



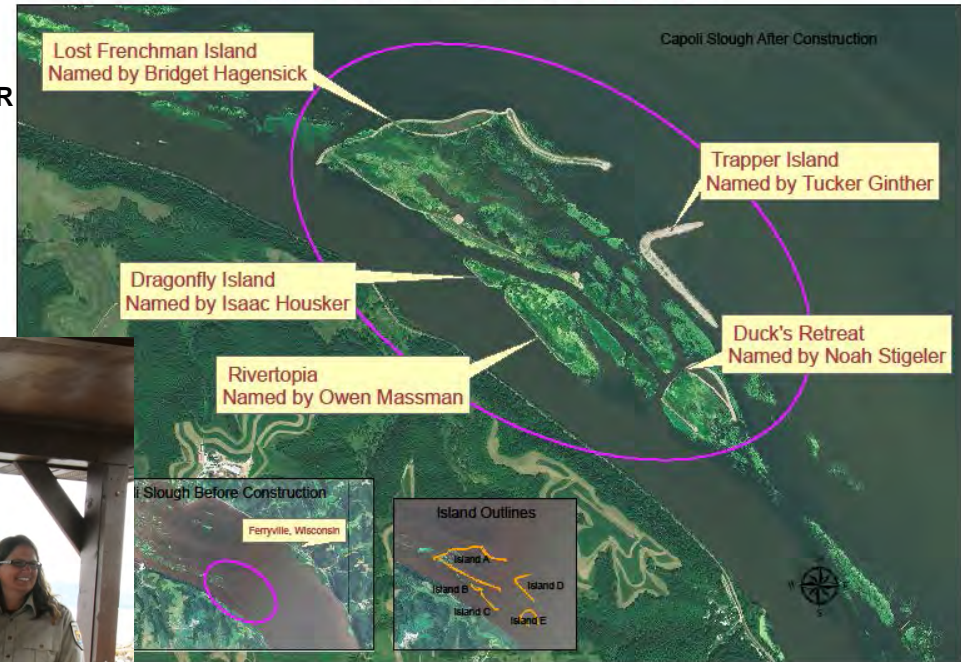
John Medinger
Staff Sen Baldwin

Pat Stevens
WiscDNR

Tom Melius
USFWS Regional Director



Capoli Slough Islands
Habitat Rehabilitation and Enhancement Project



*The 5th grade Island Naming
Contest Winners from
Caledonia Area Elementary
School and Seneca Area
School.*



**US Army Corps
of Engineers®**
St. Paul District



HREP PROJECT – Capoli Slough

Capoli Slough-Tree planting volunteers



US Army Corps
of Engineers®
St. Paul District



HREP PROJECT – Harpers Slough

Harpers Slough Pool 9

- Protect 46 acres of existing islands
- Construct 52 acres of new islands
- Provide deepwater habitat
- Incorporate emergent wetlands into island designs



SELECTED PLAN PROJECT FEATURES

Seven islands (new & protect existing)

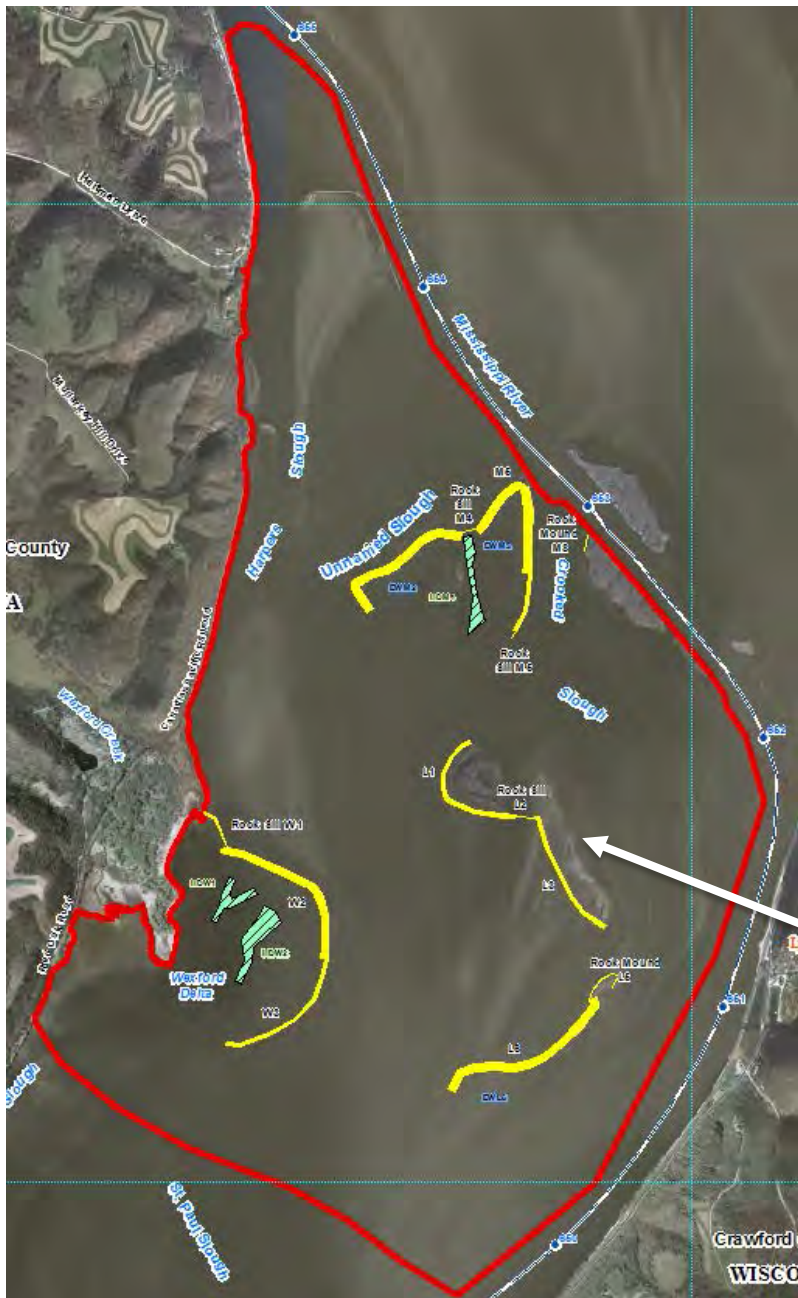
Five rock sills

Two rock mounds

Groins, vanes & rock berms

Habitat dredging

Three emergent wetlands



STATION	SECTION	WIDTH (FT)
0+00	1	20
0+10	2	20
0+20	3	20
0+30	4	20
0+40	5	20
0+50	6	20
0+60	7	20
0+70	8	20
0+80	9	20
0+90	10	20
1+00	11	20
1+10	12	20
1+20	13	20
1+30	14	20
1+40	15	20
1+50	16	20
1+60	17	20
1+70	18	20
1+80	19	20
1+90	20	20
2+00	21	20
2+10	22	20
2+20	23	20
2+30	24	20
2+40	25	20
2+50	26	20
2+60	27	20
2+70	28	20
2+80	29	20
2+90	30	20
3+00	31	20
3+10	32	20
3+20	33	20
3+30	34	20
3+40	35	20
3+50	36	20
3+60	37	20
3+70	38	20
3+80	39	20
3+90	40	20
4+00	41	20
4+10	42	20
4+20	43	20
4+30	44	20
4+40	45	20
4+50	46	20
4+60	47	20
4+70	48	20
4+80	49	20
4+90	50	20
5+00	51	20
5+10	52	20
5+20	53	20
5+30	54	20
5+40	55	20
5+50	56	20
5+60	57	20
5+70	58	20
5+80	59	20
5+90	60	20
6+00	61	20
6+10	62	20
6+20	63	20
6+30	64	20
6+40	65	20
6+50	66	20
6+60	67	20
6+70	68	20
6+80	69	20
6+90	70	20
7+00	71	20
7+10	72	20
7+20	73	20
7+30	74	20
7+40	75	20
7+50	76	20
7+60	77	20
7+70	78	20
7+80	79	20
7+90	80	20
8+00	81	20
8+10	82	20
8+20	83	20
8+30	84	20
8+40	85	20
8+50	86	20
8+60	87	20
8+70	88	20
8+80	89	20
8+90	90	20
9+00	91	20
9+10	92	20
9+20	93	20
9+30	94	20
9+40	95	20
9+50	96	20
9+60	97	20
9+70	98	20
9+80	99	20
9+90	100	20

NOTES:

- SEE TABLE 1, SHEET C-101 FOR FEATURE DIMENSIONS AND ELEVATIONS.
- PROVIDE GAUGE IN 10' SPACES FROM 100 FEET ON CENTER FROM STA. 1+00 TO STA. 1+20. PROVIDE ALTERNATE GAUGE BOTTOM WIDTHS IN 10 FOOT INCREMENTS FROM 10 FEET TO 30 FEET. GAUGE WIDTH PATTERN SHOULD PROGRESS UP STATION AS FOLLOWS: 10', 20', 30', 40', 50', 60', 70', 80', 90', 100', ETC. FOR A TOTAL OF THIRTY GAUGES. SEE TYPICAL GAUGE LAYOUT SHEET C-102.

PLAN VIEW

SCALE: 1" = 100'

MATCH LINE SEE C-108

CONSTRUCTION NOTES:

1. ALL DIMENSIONS ARE IN FEET AND INCHES.

2. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

3. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

4. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

5. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

6. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

7. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

8. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

9. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

10. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

11. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

12. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

13. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

14. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

15. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

16. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

17. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

18. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

19. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

20. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

21. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

22. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

23. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

24. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

25. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

26. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

27. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

28. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

29. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

30. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

31. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

32. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

33. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

34. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

35. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

36. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

37. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

38. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

39. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

40. ALL DIM

[illegible]

COORDINATE SYSTEM: HORIZONTAL CONTROL: ELEVATION DATUM: CRESTAL CONTROL: HORIZONTAL DATUM: IAD-1984, IONA SPICE MOUTH BONE
U.S. BUREAU OF REVENUE
U.S. BUREAU OF REVENUE

HARRY BLAIR BLAIR
MANAGER
MANAGER
ALLAN BLAIR, JR.

C-108



**US Army Corps
of Engineers** 
St. Paul District



650 ft



W 91° 06' 32"
N 43° 19' 04"

Photo Direction: 132° SE

7/31/2012
12:06:32 PM

[illegible]

HREP PROJECT – Conway Lake

Habitat Problems

Low dissolved oxygen

Excessive velocities

Loss of depth

Excessive sediment deposition

Decreased diversity & loss of unique floodplain forest habitat



HREP PROJECT – Conway Lake

Measures

- Overwintering
- Floodplain Forest Enhancement
- Understory Plantings



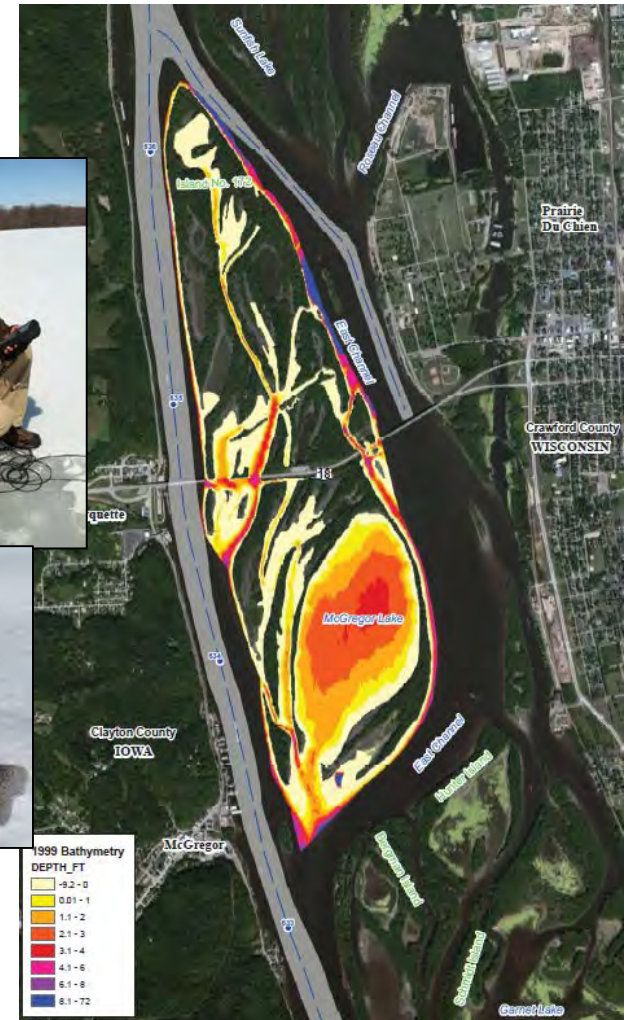
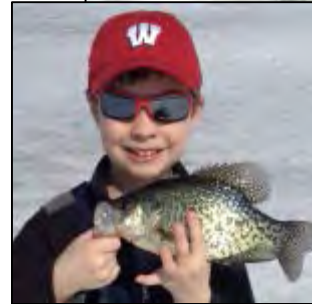
US Army Corps
of Engineers®
St. Paul District



HREP PROJECT – McGregor Lake

McGregor Lake Pool 10 Habitat Problems

- 1) Low dissolved oxygen
- 2) Poor water clarity
- 3) Shallow depth;
- 4) Limited vegetation;
- 5) Poor floodplain forest.
- 6) Erosion; Risk of bank failure and break through flows



US Army Corps
of Engineers®
St. Paul District








HREP PROJECT – McGregor Lake

McGregor Lake Pool 10 Potential Measures

- Dredging
- Small island construction
- Land creation and rock protection.
 - Prevent bank failure between McGregor and East Channel
- Increase height of land to promote floodplain forest.
- Other???



Desired Habitat	
	Emergent Plants
	Submersed Plants
	Dredge/Deeper Water
	Rock
	Land/Forest Improvement



US Army Corps
of Engineers®
St. Paul District



HREP PROJECT – North Sturgeon Pool 3

North Lake



Problems:

- Loss of emergent and floating leaf aquatic vegetation
- Loss of quality and acreage of submersed aquatic vegetation
- Loss of Island Habitat and floodplain forest
- Loss of protected wetland and aquatic area
- Degradation of habitat for migrating waterfowl
- Degradation/loss of secondary and tertiary channels

Goals:

- Reduce erosion, sediment and nutrient impacts
- Return of natural floodplain to enable more habitat diversity
- Emulate seasonal flood pulse and periodic low flow conditions
- Manage sediment transport, deposition and side channels



Sturgeon Lake

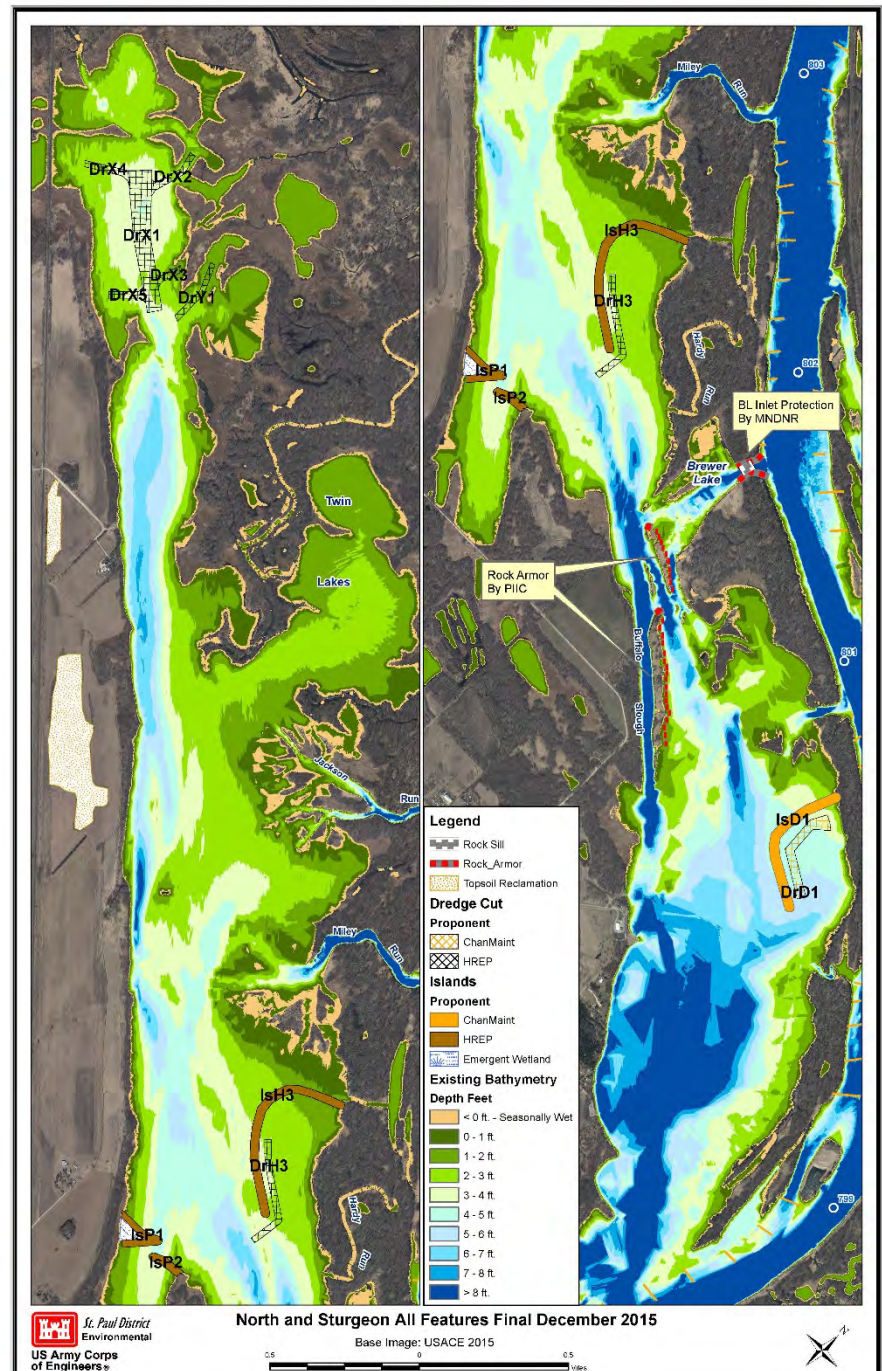
HREP PROJECT

TSP

- Create 4 new islands
- Overwintering habitat
- Minor Pool drawdown

Issues:

1. Land Ownership
2. PPA/work-arounds
3. Drawdown



HREP PROJECTS – Planning Queue

Lower Pool 10 Islands

Lake Winneshiek – Pool 9

Weaver Bottoms – Pool 5

Clear Lake – Pool 5

Bass Lake Ponds – Mn River



**US Army Corps
of Engineers®**
St. Paul District



HREP PROJECT – Pool 8 Phase III

Rock Sill C8



US Army Corps
of Engineers®
St. Paul District



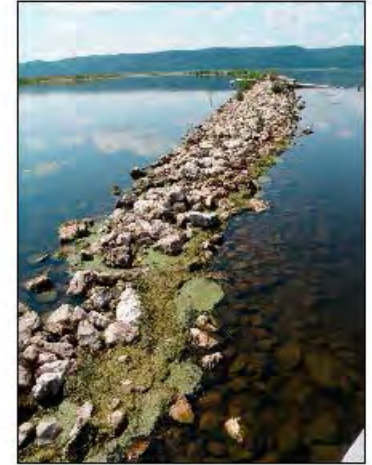
HREP PROJECT – Pool 8 Phase III

Partial settlement of rock sill C8



C8
ged.

Pool 8 Islands,
Phase III,
Island C8 Sill



Looking west from tip of east leg
of C8. 2013_08_22. 14:00 hrs

Looking west from point along C8
sill where sill became submerged.
2013_08_22. 14:00 hrs



Panoramic of exposed and submerged sections of Island C8 rock sill, Pool 8 Islands, Phase III.
2013_08_22. 14:00 hrs



Photo's by Jeff Janvrin



US Army Corps
of Engineers®
St. Paul District



HREP PROJECT – Rock Sill Repair



0 125 250 500 750 1,000 Feet



HREP PROJECT – Peterson Lake AM

- Modify partial closure to increase overwintering from 1 to 20 acres
- Modify second partial closure to reduce bedload



HREP PROJECTS - PER

27 project complete in 30 years only **14** PER's

PER completed

- Rice Lake, Peterson Lake, Indian Slough, Island 42, Finger Lakes, Small Scale Drawdown, Lake Onalaska, East Channel, Pool 8 Islands (Phase I), Blackhawk Park, Pool 9 Island, Cold Springs, Bussey Lake, Guttenberg Ponds.

FY 17 proposed

- Trempealeau Refuge, Polander Lake, Pool 8 Islands (Phase II), Ambrough Slough.

FY 18 and Beyond

- Bank Stabilization, Long Lake, Spring Lake Peninsula, Spring Lake Islands, Pool Slough, Long Meadow Lake, Capoli Slough, Lansing - Big Lake, Pool 8 Islands Phase (III).



US Army Corps
of Engineers®
St. Paul District



The End



US Army Corps
of Engineers®
St. Paul District

