PLEASANT CREEK
INSPECTION OF COMPLETE WORKS

PROJECT: Pleasant Creek Habitat Rehabilitation and Enhancement Project (HREP)

AUTHORITY: Upper Mississippi River Restoration (UMMR)

LOCATION: Pool 13, Mississippi River Miles (RM) 548.7-552.8, Jackson County, IA

DATE OF FIELD VISIT: August 16, 2016

WEATHER: Mild, sunny, mid 80's °F

ATTENDEES:

Name	Office	Title	Number
Kara Mitvalsky	USACE – Rock Island	Environmental Engineer	309-794-5623
Steve Gustafson	USACE – Rock Island	Env. Protection Specialist	309-794-5202
Jessica Steslow	USACE – Rock Island	Civil Engineer	309-794-5874
Benjamin Vandermyde	USACE – Rock Island	Lead Forester	309-794-4522
Tom Kirkeeng	USACE – Rock Island	EC-HQ	309-794-5433
Charlene Carmack	USACE – St. Paul/Rock Island	Biologist	309-794-5570
Kyle Slifka	USACE – Rock Island	Natural Resource Specialist	309-794-4523
Sharonne Baylor	U.S. Fish & Wildlife Service	Environmental Engineer	507-494-6207
Stephen Winter	U.S. Fish & Wildlife Service	Refuge Wildlife Biologist	507-494-6214
Russell Engelke	U.S. Fish & Wildlife Service	Assistant District Manager	815-273-2732 Ext 113
Mike Griffin	IA Department of Natural Resources	Wildlife Biologist	563-872-5700

PREVIOUS REPORTS:

Pleasant Creek HREP Post Construction Initial Performance Evaluation Report, USACE Rock Island, July 2012.

Pleasant Creek Operation & Maintenance Manual, USACE Rock Island, June 2006.

Definite Project Report with Integrated Environmental Assessment, Pleasant Creek Habitat Rehabilitation and Enhancement Project, USACE Rock Island, September 2000.

Pleasant Creek HREP Annual Inspection Report, USFWS, October 2007.

Pleasant Creek HREP Annual Inspection Report, USFWS, October 2008.

Pleasant Creek HREP Annual Inspection Report, USFWS, October 2009.

Pleasant Creek HREP Annual Inspection Report, USFWS, December 2014.

More information on this project is on the USACE Rock Island Webpage for public knowledge: http://www.mvr.usace.army.mil/Missions/Environmental-Protection-and-Restoration/Upper-Mississippi-River-Restoration/Habitat-Restoration/Rock-Island-District/Pleasant-Creek/

PROJECT GOALS & OBJECTIVES:

The project goals to enhancing wetland and aquatic habitat. As stated in the Pleasant Creek DPR, the following objectives have been identified to meet those goals:

1. Increase quality food and cover resources for migrating waterfowl, terrestrial birds, and mammals.
2. Increase the rate of success of emergent and moist soil vegetation

Project Goals and Objectives		
Goals	**Objectives**	**Project Features**
Enhance Wetland and Aquatic Habitat	Increase quality food/cover resources for migratory waterfowl, terrestrial birds, mammals Increase rate of success of emergent and moist soil vegetation	MSMU Systematic water control improvements Mast Tree planting

MONITORING PLAN AND EVALUATION CRITERIA:

The following table documents the HREP performance evaluation parameters as dictated by the 2006 Operation and Maintenance Manual. Each project feature has a corresponding monitoring parameter as to ascertain the performance of the measure. No monitoring has been conducted to date on the parameters listed below. No further analysis of monitoring metrics were conducted for the 2016 HREP inspection activities.

Goal	Objective	Enhancement Measure	Units	Monitoring Target Values		Monitoring Schedule
				Year 0 without project	Year 50 target with project	
Enhance Wetland and Aquatic Habitat	Increase potential for reliable food producing areas, potential for reliable resting areas for migratory birds, potential areas for fish spawning and nursing, and potential for overall vegetation diversity and abundance.	Construct Moist Soil Management Unit (MSMU)	Lineal feet of existing (riverside) levee raised to 594 feet	0	6,460	Annual inspections and high water periods.
			Lineal feet of constructed (landside) levee	0	5,034	Annual inspections and high water periods.
			Mast Tree Planting	0	1.7	
			Acres of MSMU	0	49	
		Install Stoplog Stricture	Number of stoplog structures	0	1	After draining activities, high water events and annually.
		Install Water Well	Number of pumps	0	1	After draining activities, high water events and annually.

A Site Vicinity Map and Site Plan are included in Attachment A.

SIGNIFICANT EVENTS SINCE LAST INSPECTION:

Initial PER completed in July 2012.

US Fish and Wildlife Service (USFWS) 2013 Annual Inspection.

USACE purchased electric pump for FWS to use instead of well.

PROJECT SPONSOR UPDATES:

The most recent sponsor inspection report (conducted August 2013), indicated the levees in were in good condition and stoplogs structures were operational. Beaver activity and vegetation control were ongoing issues.

Water supply for the Moist Soil Management Unit (MSMU) was obtained with the use of a portable electric pump.

The Iowa DNR is the non-Federal project partner.

ONGOING MONITORING AND/OR REPORTS:

USFWS performs periodic inspections and reports of the project area.

The U.S. Army Corps of Engineers, Rock Island District Foresters (CEMVR-OD-DM) monitors this location as site 'p13t03-1'.

The Illinois Natural History Survey and US FWS conduct periodic bird counts on the UMR, which have included Pool 13.

OBSERVATIONS:

Moist Soil Management Unit (MSMU):

The moist soil management unit is generally drained in the summer months, allowing vegetation to be grown as a food source during the fall migration. The MSMU is mowed as needed to manage willow trees and other woody species. The US FWS plans to disk the field in the next year to better promote food growth. Pictures of the MSMU are included in Attachment B as Photo's 1 and 2.

Various wetland plants were observed in and around the MSMU, including swamp milkweed (Photo 3), an important pollinator used by the monarch butterfly as well as other pollinator species. Also observed were marsh-mallow, cardinal flower, and smart weed.

Numerous egrets were noted during the site visit. They were generally resting and feeding in the area around the MSMU (Photo 4). A rookery is located nearby, although it is past roosting season. The USFWS Upper Mississippi River National Fish and Wildlife Refuge conducted an aerial waterfowl survey in the fall of 2015 for Pool 13, which included the Pleasant Creek HREP (not just the MSMU). Species observed were tundra swan, Canada goose, mallard, northern pintail, gadwall, American wigeon, northern shoveler, green winged teal, ring-necked duck, bald eagle and American coot. These species (and others) were observed in previous surveys conducted from 1997 to 2014. A summary of the 2015 data is included on Attachment C, as well as summaries of the 1997 to 2014 data.

Perimeter Levee:

Spillways protect the berm surrounding the wetland allowing a protected surface for overtopping water. The articulated concrete mat spillway remains in good condition (Photos 5 and 6). Buttonbush on the west side of the spillway appear to be somewhat stressed, although still alive (Photo 7).

The perimeter levee continues to be well maintained, with limited woody debris noted along the levee and no rutting or low spots observed (Photo 8).

MSMU Levee

The MSMU levee continues to be well maintained with limited woody debris noted and no rutting or low spots observed.

MSMU Shoreline Stabilization:

Riprap was observed along the exterior of the levee. Heavy vegetation and elevated river levels hindered the inspection of this feature, although from the areas observable, no concerns were noted. While herbaceous vegetation was noted, no woody vegetation was observed growing in the riprap. (Photos 9, 10, 11).

Stoplog Structure:

The stoplog structure is in good condition. Minor erosion of road gravel was observed on the top and sides, however, this does not impact the operation of the structure. .The wooden stoplogs and overall structure is intact. Since the location is remote, no vandalism has been noted. There were also no signs of beaver dams near or around the structure. (Photos 12 and 13).

Water Well

Based on bacteria contamination concerns, the well constructed for this project is not being utilized as a water source for MSMU water level management (Photo 14). Refer to the 2012 Performance Evaluation Report for more details. Current practice to manage HREP water elevations is to utilize a portable electric pump and draw water from an adjacent water body (Western Lake).

Pump:

A portable electric pump is installed in this location to add water to the moist soil management unit during the fall waterfowl migration. As the area is filled, different waterfowl and shorebirds visit to area to consume plants, seeds and invertebrates which provides an energy source while they travel to their winter grounds. The temporary pump pit occasionally requires clearing by the US FWS, however, no erosion was noted at the intake or outfall positions for the temporary pump (Photo 15). Filling capacity and rates are adequate for Refuge needs. When not in use, the pump is stored in the Refuge maintenance building.

The pump ties into the electricity that was brought into the project. The electrical utility box was observed to be in good conditions, and no concerns were noted with power supply (Photo 16).

Mast Tree Plantings:

Mast-producing trees were planted in a 1.7-acre near Station 40+80. 2003 plantings consisted of 120 pin oak and 80 burr oak Root Production Method (RPM) trees at a density of approximately 60-70 trees per acre. The trees were 5/8 inch caliper or more and 4 to 6 feet in height.

In addition to the original trees planted in 2003, two supplemental plantings have occurred. In 2010, CEMVR- OD-MN performed a supplemental planting of 13 swamp white oak and 15 bur oak. In 2011, crop tree release was performed around desirable trees in the planting location. (Photos 17, 18).

A second crop tree release, with the additional of herbicide treatment is scheduled for the winter of 2016/2017 as a partnership effort between the CEMVR-OD-MN and the US Fish and Wildlife Service.

The plot consists generally of silver maple and cottonwood trees reaching 35 feet tall. The planted oak ranges for 6 to 20 feet in height. The largest diameter at breast height for the oak trees 6 inches. The naturally occurring tree grown, density, and development is desirable and beneficial to the developing oak in combination with thinning efforts.

The Pleasant Creek area hosts one of the furthest known north stand of bottomland pecan trees. Numerous seeds are harvested from this area to regenerate bottomland hardwoods throughout the Upper Mississippi River System.

SUMMARY:

With utilization of Bonnie Lake as a water supply source, the bacteria contamination issue in the water well is circumvented. As of 2016, all site features are in working order, and the HREP appears to be meeting the goals and objectives.

RECOMMENDATIONS:

- Reduce vegetation around electrical panel and wellhead.
- Reduce vegetation on MSMU shoreline stabilization area to ascertain riprap status.

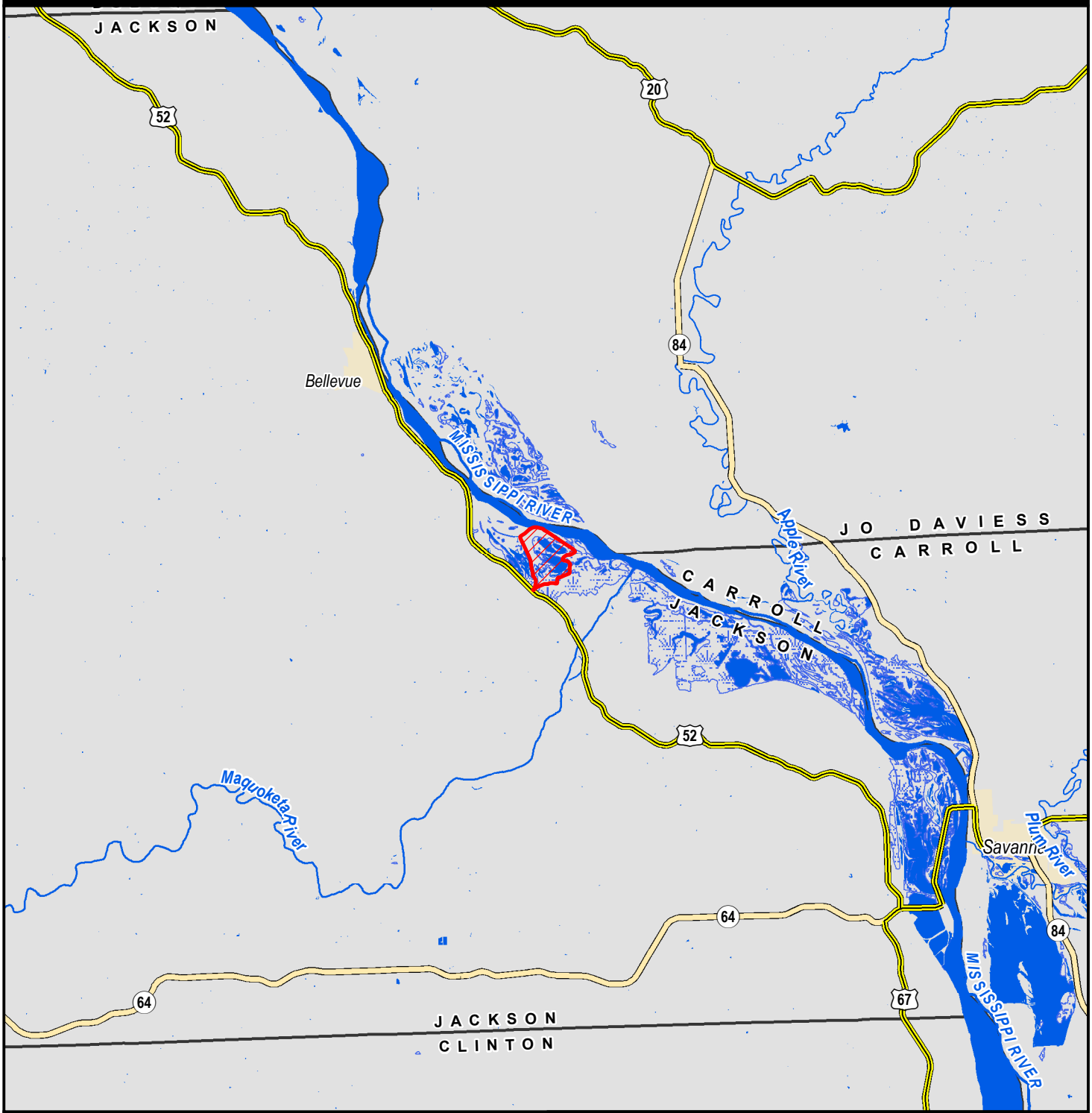
LESSONS LEARNED:

Considerations for excessive bacterial growth in water wells should be considered for future projects.

ATTACHMENT A

Site Vicinity Map and Site Plan

2016 Pleasant Creek Site Visit

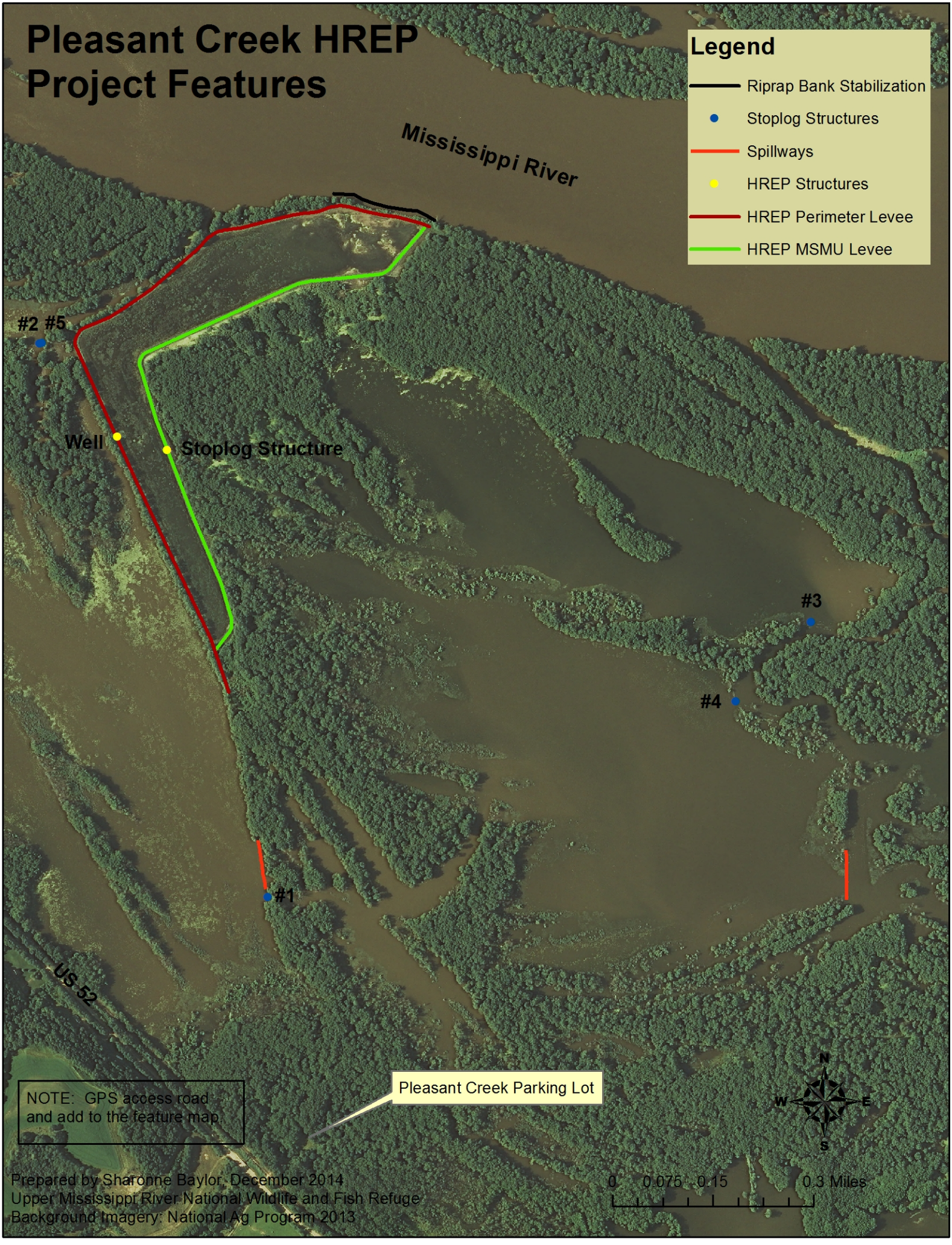


Pleasant Creek Project Boundary
Interstates
US Highways
State Highways
Cities
Counties

0 1.75 3.5 7 Miles

N

US Army Corps of Engineers
Rock Island District


Pleasant Creek HREP
Project Features
Legend
Riprap Bank Stabilization
Stoplog Structures
Spillways
HREP Structures
HREP Perimeter Levee
HREP MSMU Levee
Mississippi River
#2 #5
Well
Stoplog Structure
#3
#4
#1
US 52
NOTE: GPS access road and add to the feature map
Pleasant Creek Parking Lot
N
W
E
S
Prepared by Sharonne Baylor, December 2014
Upper Mississippi River National Wildlife and Fish Refuge
Background Imagery: National Ag Program 2013
0 0.075 0.15 0.3 Miles

ATTACHMENT B

Site Visit Photos

Photo 1: Moist Soil Management Unit looking NE near STA 60+00.

Photo 2: Moist Soil Management Unit looking south near STA 100+00.

Photo 3. Swamp Milkweed in MSMU.

Photo 4. Egrets.

Photo 5. Spillway

Photo 6. Spillway

Photo 7. Buttonbush

Photo 8. Perimeter Levee looking north.

Photo 9. Shoreline protection looking north, near STA 90+00.

Photo 10. Shoreline protection, near STA 80+00.

Photo 11. Navigation marker, shore line protection..

Photo 12. Stoplog structure.

Photo 13. Stoplog structure, looking southwest.

Photo 14. Water Well.

Photo 15. Bonnie Lake water intake ramp for portable pump.

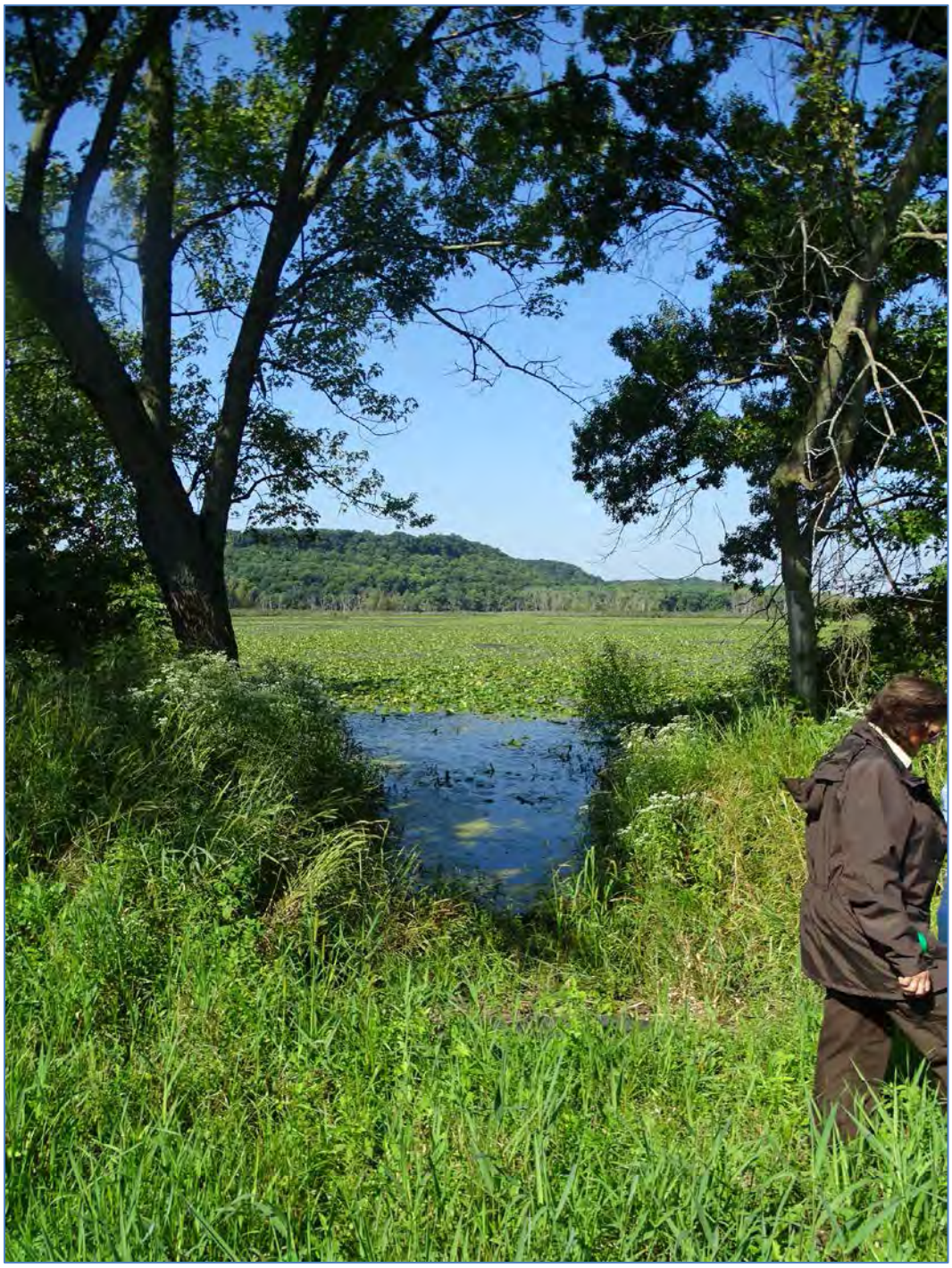


Photo 16. Portable Pump Power Supply.

Photo 17. Tree planting.

Photo 18. Mast tree plot.

Photo 19. Field visit participants.

ATTACHMENT C

Aerial Bird Survey Data Summaries

Aerial Waterfowl Survey Data Sheet for **Pool 13**

Date: November 16, 2015 | Pilot: Mike Cruce | Observer(s): Aaron Yetter

Weather: 7:20 AM, Overcast & Drizzle, 45 degrees F, SSE @ 12 MPH | Comments:

	Pool 13 – Lost Mound		**Pool 13 – Pleasant Creek**				**Pool 13 – Green Island**			**Pool 13 – Upper Spring Lake**				**Pool 13 – Lower Spring Lake**					**Pool 13 – Elk River**			**Pool 13 - Lower Pool 13**				
	13A	total	**13B**	**13E**	**13F**	total	**13C**	**13D**	total	**13G**	**13J**	**13K**	total	**13H**	**13I**	**13L**	**13M**	total	**13N**	**13Q**	total	**13O**	**13P**	**13R**	**13S**	total
t. swan		0		10	2	12			0				10					745			0					0
C. geese	1000	1000	900	1000	300	2200	1700	400	2100				350					4250	2300	115	2415					0
s. geese		0				0			0												0					0
g. white-fronted goose		0				0	100		100									100			0					0
mallard	160	160	800	1000	3300	5100	600	4010	4610									4700	2000	200	2200		100	5		105
black duck		0				0	20	25	45									100			0					0
pintail		0	10	100		110	500	500	1000									470	300		300					0
gadwall	210	210	1200	4500	3000	8700	1500		1500				680					13220	100		100					0
wigeon		0		100	200	300			0									200			0					0
shoveler		0	100	200	200	500			0									705			0					0
bwt		0				0			0												0					0
gwt	1520	1520	500	2500	2200	5200			0									1175	300	200	500					0
wood duck		0				0			0												0					0
redhead		0				0			0												0					0
canvas		0				0			0									6000			0	5000		9500		14500
ringneck		0		300		300		25	25				200					1175			0	5000				5000
scaup		0				0			0									1175			0	15000	35	10100		25135
goldeneye		0				0			0												0	500	300			800
bufflehead		0				0			0												0	1000	500	400		1900
merganser		0				0			0									50			0					0
ruddy		0				0			0									470			0	600	100	500		1200
gbh		0				0			0												0					0
g. egret		0				0			0												0					0
b. eagle		0	8	10	25	43			0				1					5			0	1	1	2	1	5
coot		0		100		100	1000	3000	4000				100					2475			0	5000		900	200	6100
w. pelican		0				0			0									10	20	5	25	10				10
cormorant		0				0			0												0					0

Pleasant Creek Comparison of Peak Count Dates/Peak #'s/WUDs by Species - Pre-CCP (1997-2006) vs. Post-CCP (2007-2014)

Pre-CCP

Species	1997			1998			1999			2000			2001			2002			2003		
	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs
Tundra Swan							Oct. 12	5	**37**	Nov. 21	75	**337**				Nov. 12	10	**95**	Nov. 13	50	**300**
Canada Goose	Nov. 4	2,325	**47,361**	Nov. 23	1,340	**56,294**	Nov. 15	1,540	**55,738**	Oct. 10	1,410	**49,083**	Nov. 13	1,245	**44,250**	Nov. 12	1,185	**29,995**	Nov. 19	2,415	**70,777**
Snow Goose													Nov. 13	15	**191**						
Mallard	Oct. 27	4,955	**142,627**	Nov. 23	22,740	**536,287**	Oct. 18	5,660	**225,116**	Nov. 8	6,020	**123,750**	Dec. 10	3,790	**115,223**	Nov. 18	2,090	**38,140**	Nov. 19	6,615	**117,419**
American Black Duck							Nov. 15	165	**2,484**				Nov. 13	15	**191**				Nov. 13	80	**480**
Northern Pintail	Oct. 27	855	**23,164**	Oct. 26	190	**5,829**	Nov. 1	120	**2,553**	Nov. 8	305	**7,884**	Nov. 5	75	**1,656**	Oct. 31	75	**1,292**	Nov. 13	230	**3,607**
Gadwall	Oct. 27	315	**8,184**	Oct. 19	700	**20,938**	Nov. 15	1,320	**21,316**	Nov. 8	710	**14,614**	Dec. 10	90	**3,399**	Nov. 18	205	**2,785**	Nov. 13	260	**4,995**
American Wigeon	Oct. 27	1,665	**46,929**	Oct. 19	670	**20,691**	Nov. 15	1,520	**31,692**	Oct. 30	1,245	**24,396**	Oct. 15	105	**2,364**	Oct. 23	215	**2,242**	Oct. 27	125	**2,411**
Northern Shoveler	Oct. 27	170	**3,712**	Dec. 7	85	**1,829**	Nov. 1	50	**1,302**	Nov. 8	165	**1,581**	Nov. 13	15	**157**	Oct. 31	25	**362**	Oct. 27	40	**372**
Blue-winged Teal	Oct. 27	175	**4,630**	Oct. 26	390	**17,104**	Oct. 18	290	**3,752**	Sept. 25	345	**6,117**	Oct. 1	235	**6,971**	Oct. 7	75	**1,425**	Sept. 23	120	**4,757**
Green-winged Teal	Oct. 27	230	**5,807**	Oct. 19	915	**18,269**	Oct. 3	205	**7,235**	Oct. 17	1,015	**21,661**	Oct. 15	180	**3,586**	Oct. 23	25	**550**	Nov. 13	70	**1,305**
Wood Duck	Sept. 25	145	**8,960**	Sept. 28	450	**18,981**	Oct. 12	235	**4,670**	Nov. 8	310	**5,602**	Sept. 24	125	**4,137**	Oct. 7	80	**1,207**	Oct. 20	120	**3,655**
Redhead	Oct. 27	10	**200**	Nov. 23	15	**149**	Nov. 1	60	**840**							Nov. 18	35	**245**			
Canvasback	Oct. 27	150	**3,682**	Nov. 17	5	**27**	Nov. 1	50	**700**							Nov. 18	20	**140**			
Ring-necked Duck				Nov. 17	210	**1,504**										Nov. 18	20	**140**			
Lesser Scaup	Nov. 4	100	**1,050**	Nov. 23	60	**1,312**	Nov. 1	20	**280**				Nov. 13	75	**944**	Oct. 31	100	**1,020**			
Common Goldeneye													Dec. 3	20	**110**	Nov. 18	30	**210**	Dec. 12	10	**40**
Bufflehead	Nov. 4	5	**52**	Nov. 12	50	**585**	Nov. 22	25	**287**				Dec. 3	5	**26**						
Common Merganser	Nov. 4	5	**52**	Nov. 17	100	**550**															
Ruddy Duck	Nov. 4	5	**52**													Oct. 31	25	**237**			
American Coot	Oct. 27	5,245	**126,634**	Nov. 12	1,500	**39,914**	Nov. 1	3,575	**89,836**	Oct. 30	1,000	**10,825**	Oct. 15	205	**3,299**	Oct. 31	50	**517**	Oct. 20	40	**420**

***** Mississippi River water levels were extremely high throughout most of the Fall.**

^^^ Limited amount of surveys conducted during the 2013 survey season (6 on Pools 4-7, 6 on Pools 8-11, and 7 on Pools 12-14). Government Shutdown in October and weather were main factors that affected the ability to complete surveys.

''' Limited amount of surveys conducted during the 2014 survey season (6 surveys on Pools 4-6, 5 surveys on Pool 7, 7 surveys on Pools 8-11, and 6 surveys on Pool 13). Last Survey on Pools 4-11 was completed on November 18th. Cold weather occurred early and the majority of the survey areas were frozen by mid-November. In 2014, there were fewer areas surveyed in Pools 4-5A (surveys were concentrated on Large Closed Areas). Pools 12 and 14 were not surveyed in 2014.

Pleasant Creek Comparison of Peak Count Dates/Peak #'s/WUDs by Species - Pre-CCP (1997-2006) vs. Post-CCP (2007-2014)

	Pre-CCP									Post-CCP*																				
	2004			2005			2006			2007			2008			2009			2010***			2011			2012			2013^^^			2014'''		
Species	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs	Peak Count Date	Peak Count #	WUDs
Tundra Swan							Nov. 7	5	**53**													Dec. 5	5	**35**	Oct. 15, Nov. 14	10	**298**	Oct. 29	10	**65**	Oct. 27	5	**30**
Canada Goose	Oct. 25	715	**15,432**	Nov. 8	1,085	**29,210**	Nov. 7	1,355	**57,760**	Nov. 27	645	**12,778**	Nov. 10	750	**15,450**	Oct. 19	1,485	**39,873**	Dec. 1	1,075	**32,685**	Oct. 21	950	**32,225**	Oct. 11	850	**30,758**	Oct. 29	1,100	**29,395**	Oct. 27	1,130	**17,110**
Snow Goose																																
Mallard	Nov. 9	1,335	**39,105**	Nov. 1	8,420	**83,678**	Nov. 7	4,885	**116,700**	Nov. 21	2,300	**45,725**	Nov. 10	4,900	**43,700**	Nov. 9	1,320	**34,390**	Nov. 2	1,000	**17,400**	Nov. 10	4,100	**99,055**	Nov. 27	1,510	**53,820**	Oct. 29	1,350	**33,690**	Oct. 27	1,150	**22,100**
American Black Duck	Nov. 22	10	**169**	Nov. 8, 22	5	**108**		5	**150**																Nov. 1	50	**525**				Oct. 27	30	**240**
Northern Pintail	Oct. 25	5	**36**				Nov. 7	20	**310**	Nov. 27	1,000	**7,300**	Nov. 10	600	**9,690**	Oct. 19	300	**4,675**	Nov. 2	3,300	**58,100**	Nov. 4	1,100	**35,795**	Oct. 15	2,000	**43,175**	Oct. 25	325	**3,163**	Oct. 22	550	**3,850**
Gadwall	Oct. 25	335	**8,702**	Nov. 8	325	**5,808**	Nov. 7	1,495	**28,988**	Nov. 13	1,450	**17,325**	Nov. 10	2,600	**42,750**	Nov. 2	1,310	**47,885**	Nov. 2	4,700	**57,675**	Nov. 10	5,000	**105,350**	Nov. 1	3,700	**72,050**	Oct. 29	700	**11,950**	Nov. 10	4,755	**77,995**
American Wigeon	Oct. 18	520	**11,630**	Oct. 18	400	**4,993**	Nov. 7	375	**6,460**				Nov. 18	100	**1,025**	Oct. 19	150	**3,250**	Nov. 2	400	**7,350**	Oct. 10, Nov. 4, 10	200	**6,050**	Oct. 11, Nov. 5	100	**1,975**				Nov. 10	350	**4,390**
Northern Shoveler	Oct. 25	20	**150**				Oct. 2	15	**190**							Oct. 19	550	**6,000**	Oct. 25	200	**1,500**	Nov. 10	400	**12,575**	Oct. 15	700	**16,500**	Oct. 29	300	**6,650**	Nov. 10	535	**9,545**
Blue-winged Teal	Oct. 12	90	**1,425**	Oct. 18	75	**900**	Oct. 10	100	**1,750**																			Oct. 16	375	**3,188**			
Green-winged Teal	Oct. 12	240	**6,000**	Oct. 18	55	**578**	Nov. 7	145	**3,258**				Nov. 10	2,000	**18,515**	Oct. 19	900	**15,650**	Nov. 15	2,400	**56,700**	Nov. 4	3,100	**67,110**	Oct. 15	2,800	**71,950**	Oct. 29	5,500	**97,700**	Oct. 27	1,000	**11,700**
Wood Duck	Oct. 12	130	**3,064**	Nov. 8	20	**345**	Oct. 10	255	**5,075**													Oct. 10	300	**3,150**				Oct. 29	200	**2,950**	Oct. 15	200	**2,200**
Redhead																																
Canvasback																						Nov. 28	100	**600**								
Ring-necked Duck										Nov. 13	500	**5,750**				Nov. 23	600	**14,300**	Nov. 15	2,800	**39,550**	Nov. 28	510	**8,710**							Oct. 15	10	**110**
Lesser Scaup																															Oct. 22	20	**120**
Common Goldeneye	Nov. 22	15	**149**																													
Bufflehead																															Oct. 15	10	**110**
Common Merganser																						Nov. 23	100	**970**								
Ruddy Duck																			Oct. 25	50	**375**											
American Coot				Nov. 22	90	**1,928**	Oct. 19	1,220	**32,495**	Oct. 22	100	**1,000**	Oct. 13	100	**4,000**	Nov. 9	650	**15,775**	Nov. 8	1,700	**21,550**	Nov. 10	1,900	**23,450**	Oct. 11, Nov. 1	100	**1,800**				Oct. 15	510	**6,660**

***** Mississippi River water levels were extremely high throughout most of the Fall.**

^^^ Limited amount of surveys conducted during the 2013 survey season (6 on Pools 4-7, 6 on Pools 8-11, and 7 on Pools 12-14). Government Shutdown in October and weather were main factors that affected the ability to complete surveys.

''' Limited amount of surveys conducted during the 2014 survey season (6 surveys on Pools 4-6, 5 surveys on Pool 7, 7 surveys on Pools 8-11, and 6 surveys on Pool 13). Last Survey on Pools 4-11 was completed on November 18th. Cold weather occurred early and the majority of the survey areas were frozen by mid-November. In 2014, there were fewer areas surveyed in Pools 4-5A (surveys were concentrated on Large Closed Areas). Pools 12 and 14 were not surveyed in 2014.

Pleasant Creek Comparison of WUDs by Species - Pre-CCP (1997-2006) vs. Post-CCP (2007-2014)

	Pre-CCP										Post-CCP*							
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010***	2011	2012	2013^^^	2014'''
Species	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs	WUDs
Tundra Swan			37	337		95	300			53					35	298	65	30
Canada Goose	47,361	56,294	55,738	49,083	44,250	29,995	70,777	15,432	29,210	57,760	12,778	15,450	39,873	32,685	32,225	30,758	29,395	17,110
Snow Goose					191													
Mallard	142,627	536,287	225,116	123,750	115,223	38,140	117,419	39,105	83,678	116,700	45,725	43,700	34,390	17,400	99,055	53,820	33,690	22,100
American Black Duck			2,484		191		480	169	108	150						525		240
Northern Pintail	23,164	5,829	2,553	7,884	1,656	1,292	3,607	36		310	7,300	9,690	4,675	58,100	35,795	43,175	3,163	3,850
Gadwall	8,184	20,938	21,316	14,614	3,399	2,785	4,995	8,702	5,808	28,988	17,325	42,750	47,885	57,675	105,350	72,050	11,950	77,995
American Wigeon	46,929	20,691	31,692	24,396	2,364	2,242	2,411	11,630	4,993	6,460		1,025	3,250	7,350	6,050	1,975		4,390
Northern Shoveler	3,712	1,829	1,302	1,581	157	362	372	150		190			6,000	1,500	12,575	16,500	6,650	9,545
Blue-winged Teal	4,630	17,104	3,752	6,117	6,971	1,425	4,757	1,425	900	1,750							3,188	
Green-winged Teal	5,807	18,269	7,235	21,661	3,586	550	1,305	6,000	578	3,258		18,515	15,650	56,700	67,110	71,950	97,700	11,700
Wood Duck	8,960	18,981	4,670	5,602	4,137	1,207	3,655	3,064	345	5,075					3,150		2,950	2,200
Redhead	200	149	840			245												
Canvasback	3,682	27	700			140									600			
Ring-necked Duck		1,504				140					5,750		14,300	39,550	8,710			110
Lesser Scaup	1,050	1,312	280		944	1,020												120
Common Goldeneye					110	210	40	149										
Bufflehead	52	585	287		26													110
Common Merganser	52	550													970			
Ruddy Duck	52					237								375				
American Coot	126,634	39,914	89,836	10,825	3,299	517	420		1,928	32,495	1,000	4,000	15,775	21,550	23,450	1,800		6,660

***** Mississippi River water levels were extremely high throughout most of the Fall.**

^^^ Limited amount of surveys conducted during the 2013 survey season (6 on Pools 4-7, 6 on Pools 8-11, and 7 on Pools 12-14). Government Shutdown in October and weather were main factors that affected the ability to complete surveys.

''' Limited amount of surveys conducted during the 2014 survey season (6 surveys on Pools 4-6, 5 surveys on Pool 7, 7 surveys on Pools 8-11, and 6 surveys on Pool 13). Last Survey on Pools 4-11 was completed on November 18th. Cold weather occurred early and the majority of the survey areas were frozen by mid-November. In 2014, there were fewer areas surveyed in Pools 4-5A (surveys were concentrated on Large Closed Areas). Pools 12 and 14 were not surveyed in 2014.

Pleasant Creek Comparison of Peak Count #'s by Species - Pre-CCP (1997-2006) vs. Post-CCP (2007-2014)

	Pre-CCP										Post-CCP*							
Species	1997 Peak Count #	1998 Peak Count #	1999 Peak Count #	2000 Peak Count #	2001 Peak Count #	2002 Peak Count #	2003 Peak Count #	2004 Peak Count #	2005 Peak Count #	2006 Peak Count #	2007 Peak Count #	2008 Peak Count #	2009 Peak Count #	2010*** Peak Count #	2011 Peak Count #	2012 Peak Count #	2013^^^ Peak Count #	2014''' Peak Count #
Tundra Swan			5	75		10	50			5					5	10	10	5
Canada Goose	2,325	1,340	1,540	1,410	1,245	1,185	2,415	715	1,085	1,355	645	750	1,485	1,075	950	850	1,100	1,130
Snow Goose					15													
Mallard	4,955	22,740	5,660	6,020	3,790	2,090	6,615	1,335	8,420	4,885	2,300	4,900	1,320	1,000	4,100	1,510	1,350	1,150
American Black Duck			165		15		80	10	5	5						50		30
Northern Pintail	855	190	120	305	75	75	230	5		20	1,000	600	300	3,300	1,100	2,000	325	550
Gadwall	315	700	1,320	710	90	205	260	335	325	1,495	1,450	2,600	1,310	4,700	5,000	3,700	700	4,755
American Wigeon	1,665	670	1,520	1,245	105	215	125	520	400	375		100	150	400	200	100		350
Northern Shoveler	170	85	50	165	15	25	40	20		15			550	200	400	700	300	535
Blue-winged Teal	175	390	290	345	235	75	120	90	75	100							375	
Green-winged Teal	230	915	205	1,015	180	25	70	240	55	145		2,000	900	2,400	3,100	2,800	5,500	1,000
Wood Duck	145	450	235	310	125	80	120	130	20	255					300		200	200
Redhead	10	15	60			35												
Canvasback	150	5	50			20									100			
Ring-necked Duck		210				20					500		600	2,800	510			10
Lesser Scaup	100	60	20		75	100												20
Common Goldeneye					20	30	10	15										
Bufflehead	5	50	25		5													10
Common Merganser	5	100													100			
Ruddy Duck	5					25								50				
American Coot	5,245	1,500	3,575	1,000	205	50	40		90	1,220	100	100	650	1,700	1,900	100		510

***** Mississippi River water levels were extremely high throughout most of the Fall.**

^^^ Limited amount of surveys conducted during the 2013 survey season (6 on Pools 4-7, 6 on Pools 8-11, and 7 on Pools 12-14). Government Shutdown in October and weather were main factors that affected the ability to complete surveys.

''' Limited amount of surveys conducted during the 2014 survey season (6 surveys on Pools 4-6, 5 surveys on Pool 7, 7 surveys on Pools 8-11, and 6 surveys on Pool 13). Last Survey on Pools 4-11 was completed on November 18th. Cold weather occurred early and the majority of the survey areas were frozen by mid-November. In 2014, there were fewer areas surveyed in Pools 4-5A (surveys were concentrated on Large Closed Areas). Pools 12 and 14 were not surveyed in 2014.

Pleasant Creek Comparison of Peak Count Dates by Species - Pre-CCP (1997-2006) vs. Post-CCP (2007-2014)

	Pre-CCP										Post-CCP*							
Species	1997 Peak Count Date	1998 Peak Count Date	1999 Peak Count Date	2000 Peak Count Date	2001 Peak Count Date	2002 Peak Count Date	2003 Peak Count Date	2004 Peak Count Date	2005 Peak Count Date	2006 Peak Count Date	2007 Peak Count Date	2008 Peak Count Date	2009 Peak Count Date	2010*** Peak Count Date	2011 Peak Count Date	2012 Peak Count Date	2013^^^ Peak Count Date	2014''' Peak Count Date
Tundra Swan			Oct. 12	Nov. 21		Nov. 12	Nov. 13			Nov. 7					Dec. 5	Oct. 15, Nov. 14	Oct. 29	Oct. 27
Canada Goose	Nov. 4	Nov. 23	Nov. 15	Oct. 10	Nov. 13	Nov. 12	Nov. 19	Oct. 25	Nov. 8	Nov. 7	Nov. 27	Nov. 10	Oct. 19	Dec. 1	Oct. 21	Oct. 11	Oct. 29	Oct. 27
Snow Goose					Nov. 13													
Mallard	Oct. 27	Nov. 23	Oct. 18	Nov. 8	Dec. 10	Nov. 18	Nov. 19	Nov. 9	Nov. 1	Nov. 7	Nov. 21	Nov. 10	Nov. 9	Nov. 2	Nov. 10	Nov. 27	Oct. 29	Oct. 27
American Black Duck			Nov. 15		Nov. 13		Nov. 13	Nov. 22	Nov. 8, 22							Nov. 1		Oct. 27
Northern Pintail	Oct. 27	Oct. 26	Nov. 1	Nov. 8	Nov. 5	Oct. 31	Nov. 13	Oct. 25		Nov. 7	Nov. 27	Nov. 10	Oct. 19	Nov. 2	Nov. 4	Oct. 15	Oct. 25	Oct. 22
Gadwall	Oct. 27	Oct. 19	Nov. 15	Nov. 8	Dec. 10	Nov. 18	Nov. 13	Oct. 25	Nov. 8	Nov. 7	Nov. 13	Nov. 10	Nov. 2	Nov. 2	Nov. 10	Nov. 1	Oct. 29	Nov. 10
American Wigeon	Oct. 27	Oct. 19	Nov. 15	Oct. 30	Oct. 15	Oct. 23	Oct. 27	Oct. 18	Oct. 18	Nov. 7		Nov. 18	Oct. 19	Nov. 2	Oct. 10, Nov. 4, 10	Oct. 11, Nov. 5		Nov. 10
Northern Shoveler	Oct. 27	Dec. 7	Nov. 1	Nov. 8	Nov. 13	Oct. 31	Oct. 27	Oct. 25		Oct. 2			Oct. 19	Oct. 25	Nov. 10	Oct. 15	Oct. 29	Nov. 10
Blue-winged Teal	Oct. 27	Oct. 26	Oct. 18	Sept. 25	Oct. 1	Oct. 7	Sept. 23	Oct. 12	Oct. 18	Oct. 10							Oct. 16	
Green-winged Teal	Oct. 27	Oct. 19	Oct. 3	Oct. 17	Oct. 15	Oct. 23	Nov. 13	Oct. 12	Oct. 18	Nov. 7		Nov. 10	Oct. 19	Nov. 15	Nov. 4	Oct. 15	Oct. 29	Oct. 27
Wood Duck	Sept. 25	Sept. 28	Oct. 12	Nov. 8	Sept. 24	Oct. 7	Oct. 20	Oct. 12	Nov. 8	Oct. 10					Oct. 10		Oct. 29	Oct. 15
Redhead	Oct. 27	Nov. 23	Nov. 1			Nov. 18												
Canvasback	Oct. 27	Nov. 17	Nov. 1			Nov. 18									Nov. 28			
Ring-necked Duck		Nov. 17				Nov. 18					Nov. 13		Nov. 23	Nov. 15	Nov. 28			Oct. 15
Lesser Scaup	Nov. 4	Nov. 23	Nov. 1		Nov. 13	Oct. 31												Oct. 22
Common Goldeneye					Dec. 3	Nov. 18	Dec. 12	Nov. 22										
Bufflehead	Nov. 4	Nov. 12	Nov. 22		Dec. 3													Oct. 15
Common Merganser	Nov. 4	Nov. 17													Nov. 23			
Ruddy Duck	Nov. 4					Oct. 31								Oct. 25				
American Coot	Oct. 27	Nov. 12	Nov. 1	Oct. 30	Oct. 15	Oct. 31	Oct. 20		Nov. 22	Oct. 19	Oct. 22	Oct. 13	Nov. 9	Nov. 8	Nov. 10	Oct. 11, Nov. 1		Oct. 15

***** Mississippi River water levels were extremely high throughout most of the Fall.**

^^^ Limited amount of surveys conducted during the 2013 survey season (6 on Pools 4-7, 6 on Pools 8-11, and 7 on Pools 12-14). Government Shutdown in October and weather were main factors that affected the ability to complete surveys.

''' Limited amount of surveys conducted during the 2014 survey season (6 surveys on Pools 4-6, 5 surveys on Pool 7, 7 surveys on Pools 8-11, and 6 surveys on Pool 13). Last Survey on Pools 4-11 was completed on November 18th. Cold weather occurred early and the majority of the survey areas were frozen by mid-November. In 2014, there were fewer areas surveyed in Pools 4-5A (surveys were concentrated on Large Closed Areas). Pools 12 and 14 were not surveyed in 2014.