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HENNEPIN MARSH HABITAT RESTORATION PROJECT PRE- CONSTRUCTION BIRD MONITORING SUMMARY

The purpose of this summary is to present the bird monitoring data for pre-construction monitoring of the Hennepin Marsh Restoration project. This document will outline the methods used to complete the monitoring and provide a summary of the data collected to date.

Methods

Three sampling sites were established along the Hennepin Marsh shoreline (Figure 1) with two in the North (#1 and #2) and one in the South (#3) portion of the project. To determine the species present and utilization of habitats within the project area prior to project construction, a point count sampling method was used. During a point count, a trained biologist records all the birds seen or heard from a point count station for a set period of time. A series of point counts completed in consistent order can then be compared to the results of the same point counts in other seasons or years. In order to gain a robust understanding of the migratory birds using the shoreline along Hennepin Marsh, bird sampling was scheduled to occur twice in the spring and twice in the fall. ECT staff performed sampling visits on 5/1, 5/21, 10/2, and 10/21 for the 2020 bird monitoring effort.

At each of the defined sampling locations (Locations 1-3), ECT staff collected three 15-minute point counts, one at a time. Samples were taken in sequence: 1a, 2a, 3a, 1b, ... and 3c. Sampling began at sunrise (approximately 6:30 and 6:15 for the spring sampling visits and at 7:33 and 7:55 for the fall sampling visits) and concluded before noon. The data forms take count of the number of birds seen or heard within a 30-meter radius of the sampling locations, as well as counts for birds that fly through (FT), fly over (FO), and are outside the 30-meter radius. The distinction between fly through and fly over refers to whether the bird flies within the tree line or above. If the bird lands within the survey point, it is then considered “in.”

The methodology used at Hennepin Marsh is adapted from generally accepted methods as described by the U.S. Forest Service. Conditions such as temperature, wind speed, and cloud cover, were recorded during each sample point to inform results.

Results - Pre-Construction

Bird counts were transcribed into an excel sheet and are provided as an attachment. The number of species recorded for each sampling visit are shown in Table 1, along with total species counts aggregated for spring, fall, and annual.

Table 1. Number of Species per Sampling Event, Conducted at Hennepin Marsh in 2020 for Pre-Construction Monitoring.

Sampling Event	Number of Species
Spring 1 (5/1)	32
Spring 2 (5/21)	38
Spring Total:	46
Fall 1 (10/2)	26
Fall 2 (10/21)	20
Fall Total:	31
Annual Total:	54

For spring sampling, the most frequently encountered bird species was the red-wing blackbird (*Agelaius phoeniceus*). Also frequently encountered were the Canada goose (*Branta canadensis*), ring-billed gull (*Larus delawarensis*), and barn swallow (*Hirundo rustica*). During the fall sampling, the most frequently encountered bird species was the common starling (*Sturnus vulgaris*). Mute swan (*Cygnus olor*), ring-billed gull, double-crested cormorant (*Phalacrocorax auritus*), and red-winged blackbird were also commonly encountered.

General observation notes across all sampling dates show that the boat and vehicle traffic near Location 3 generally caused increased ambient noise. This would explain the lower point counts at this location compared to Locations 1 and 2.

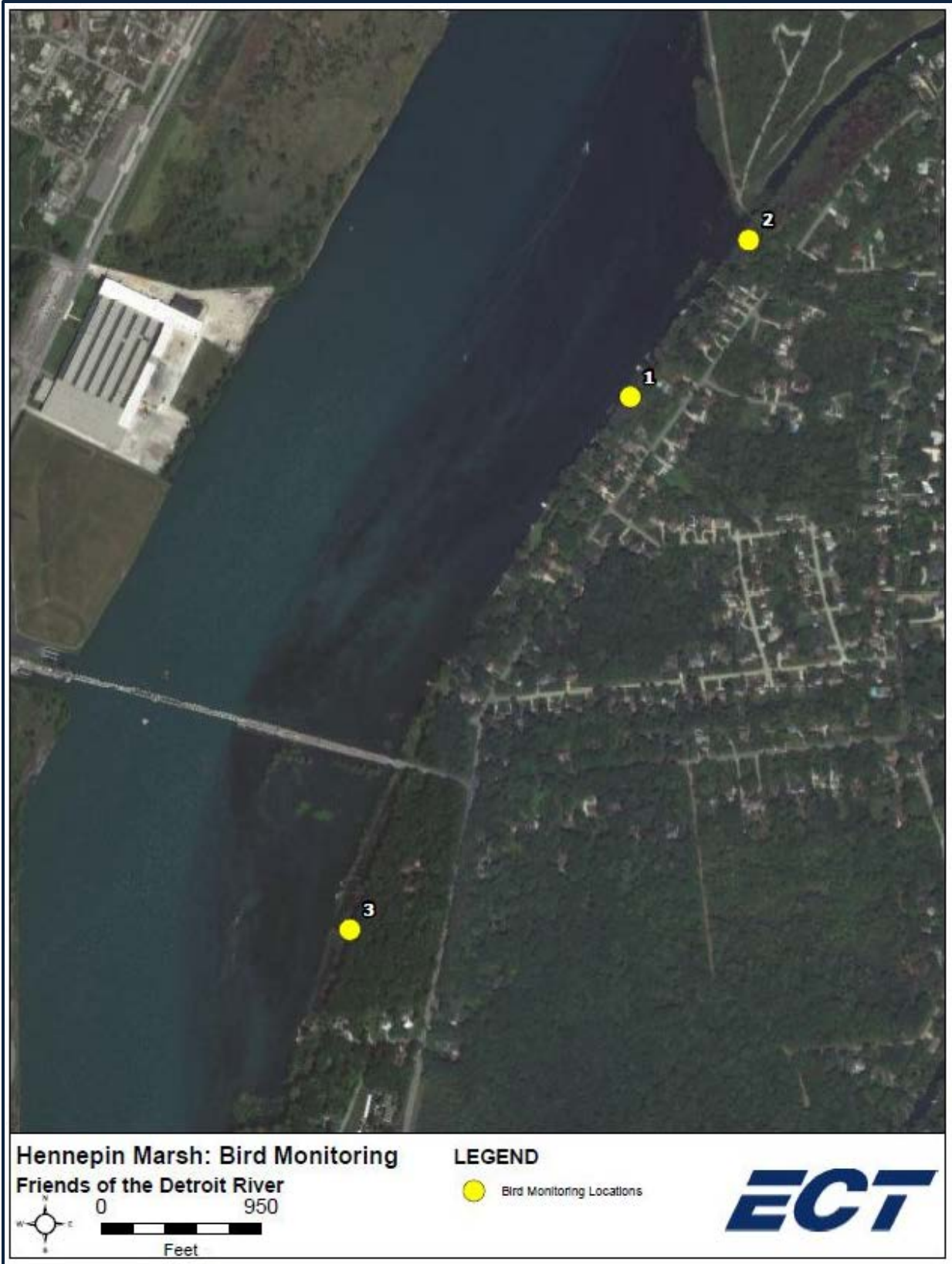


Figure 1. Site Map of Hennepin Marsh Bird Monitoring Locations



Figure 2. Location 1 During Pre-Construction Monitoring at the Hennepin Marsh Habitat Restoration Project. 10/2/2020



Figure 3. Location 2 During Pre-construction Monitoring at Hennepin Marsh. 10/2/2020



Figure 4. Location 3 During Pre-construction Monitoring at Hennepin Marsh. 10/2/2020

Date:	5/1/2020				
Point Count Code:	1a				
Weather:	44, overcast, 4 mph				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	6:35				
TIME END	6:50				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+	2		
double-crested cormorant	<i>Phalacrocorax auritus</i>				1
Canada goose	<i>Branta canadensis</i>		2	1	1
European starling	<i>Sturnus vulgaris</i>	1	1		
ring-billed gull	<i>Larus delawarensis</i>		1	2	
barn swallow	<i>Hirundo rustica</i>			1	
tufted titmouse	<i>Baeolophus bicolor</i>				1
common grackle	<i>Quiscalus quiscula</i>	1			
wood duck	<i>Aix sponsa</i>		2		
woodpecker, unk.	<i>Picidae</i>				1
northern cardinal	<i>Cardinalis cardinalis</i>	1			
common merganser	<i>Mergus merganser</i>	3			
ADDITIONAL NOTES:	mink				

Date:	5/1/2020				
Point Count Code:	2a				
Weather:	44, overcast, 9mph				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	7:00				
TIME END	7:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	7			
Canada goose	<i>Branta canadensis</i>	1	2		
song sparrow	<i>Melospiza melodia</i>	1	1		
common loon	<i>Gavia immer</i>	1			
ring-billed gull	<i>Larus delawarensis</i>			3	1
American robin	<i>Turdus migratorius</i>	3			2
yellow-rumped warbler	<i>Setophaga coronata</i>	1			
wood duck	<i>Aix sponsa</i>	1			
great blue heron	<i>Ardea herodias</i>		1		
northern cardinal	<i>Cardinalis cardinalis</i>	1			1
mute swan	<i>Cygnus olor</i>				1
blue jay	<i>Cyanocitta cristata</i>	1			
swallow, unk.	<i>Hirundinidae spp.</i>				1
ADDITIONAL NOTES:					

Date: 5/1/2020					
Point Count Code: 3a					
Weather: 43, partly cloudy, 7mph					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	7:30				
TIME END	7:45				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
common merganser	<i>Mergus merganser</i>	1			
mallard	<i>Anas platyrhynchos</i>			1	
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
American robin	<i>Turdus migratorius</i>	1			
ring-billed gull	<i>Larus delawarensis</i>				7
Canada goose	<i>Branta canadensis</i>	3			
red-tailed hawk	<i>Buteo jamaicensis</i>	1			
blue jay	<i>Cyanocitta cristata</i>	1			
ADDITIONAL NOTES:					

Date: 5/1/2020					
Point Count Code: 1b					
Weather: 43, partly cloudy, 8mph					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	8:01				
TIME END	8:16				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
Canada goose	<i>Branta canadensis</i>	8			
red-winged blackbird	<i>Agelaius phoeniceus</i>	3			
tufted titmouse	<i>Baeolophus bicolor</i>	1			
ring-billed gull	<i>Larus delawarensis</i>				4
barn swallow	<i>Hirundo rustica</i>	4			3
mallard	<i>Anas platyrhynchos</i>	1			
northern cardinal	<i>Cardinalis cardinalis</i>				1
common tern	<i>Sterna hirundo</i>			1	
ADDITIONAL NOTES: beaver x2; more boat traffic/ambient noise/wave action than 1a; bufflehead duck outside, over river					

Date: 5/1/2020					
Point Count Code: 2b					
Weather: partly cloudy, 44, 8 mph					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	8:30				
TIME END	8:45				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE

northern cardinal	<i>Cardinalis cardinalis</i>	1			
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
American robin	<i>Turdus migratorius</i>	2	3		
great blue heron	<i>Ardea herodias</i>		2		
ring-billed gull	<i>Larus delawarensis</i>		1	3	
house wren	<i>Troglodytes aedon</i>	1			
yellow-rumped warbler	<i>Setophaga coronata</i>	2			
Osprey	<i>Pandion haliaetus</i>		1		
duck, unk.	<i>Anatidae spp.</i>		3		
double-crested cormorant	<i>Phalacrocorax auritus</i>		1		
wood duck	<i>Aix sponsa</i>		5		
blue jay	<i>Cyanocitta cristata</i>		1		
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
ADDITIONAL NOTES: mink; cormorant out in river					

Date: 5/1/2020					
Point Count Code: 3b					
Weather: 45, partly cloudy, 8 mph					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	9:00				
TIME END	9:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
ring-billed gull	<i>Larus delawarensis</i>	1		1	1
swallow, unk.	<i>Hirundinidae spp.</i>	1			
Canada goose	<i>Branta canadensis</i>	2	2		
American robin	<i>Turdus migratorius</i>	3	1		
northern flicker	<i>Colaptes auratus</i>	1			
mallard	<i>Anas platyrhynchos</i>	1			
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
ADDITIONAL NOTES: more boat traffic/ambient noise than 3a					

Date: 5/1/2020					
Point Count Code: 1c					
Weather: 46, partly cloudy, 9mph					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	9:33				
TIME END	9:48				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
Canada goose	<i>Branta canadensis</i>	10+			
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
tree swallow	<i>Tachycineta bicolor</i>				2
mallard	<i>Anas platyrhynchos</i>	1	2		
downy woodpecker	<i>Picoides pubescens</i>	1			
duck, unk.	<i>Anatidae spp.</i>			2	
tufted titmouse	<i>Baeolophus bicolor</i>	1			1
wood duck	<i>Aix sponsa</i>		1		

ring-billed gull	<i>Larus delawarensis</i>		3	6	
barn swallow	<i>Hirundo rustica</i>	1	1		
common tern	<i>Sterna hirundo</i>		1		
American robin	<i>Turdus migratorius</i>	1			
great blue heron	<i>Ardea herodias</i>			1	
blue jay	<i>Cyanocitta cristata</i>	1			
European starling	<i>Sturnus vulgaris</i>		1		
ADDITIONAL NOTES:					

Date:	5/1/2020				
Point Count Code:	2c				
Weather:	low/no clouds				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	10:10				
TIME END	10:25				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
house wren	<i>Troglodytes aedon</i>	1			
red-winged blackbird	<i>Agelaius phoeniceus</i>	7			
mute swan	<i>Cygnus olor</i>				1
ring-billed gull	<i>Larus delawarensis</i>			2	
American robin	<i>Turdus migratorius</i>	2			
northern cardinal	<i>Cardinalis cardinalis</i>			1	
woodpecker, unk.	<i>Picidae</i>	1			
mallard	<i>Anas platyrhynchos</i>			1	
vireo, unk.	<i>Vireonidae</i>	1			
common grackle	<i>Quiscalus quiscula</i>	1			
blue-gray gnatcatcher	<i>Poliophtila caerulea</i>	1			
ADDITIONAL NOTES: several mallards flushed out as we approached					

Date:	5/1/2020				
Point Count Code:	3c				
Weather:	clear sky, 46, 8mph				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	10:45				
TIME END	11:00				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	7			
Canada goose	<i>Branta canadensis</i>		1		3
American robin	<i>Turdus migratorius</i>	1			
northern cardinal	<i>Cardinalis cardinalis</i>	1			
common merganser	<i>Mergus merganser</i>	2			
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
mallard	<i>Anas platyrhynchos</i>		1		
ADDITIONAL NOTES: a lot more boat traffic/noise than before					

Date: 5/21/2020					
Point Count Code: 1a					
Weather: 55, partly cloudy					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	6:22				
TIME END	6:37				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
blue jay	<i>Cyanocitta cristata</i>	2			
ring-billed gull	<i>Larus delawarensis</i>		1	3	
northern cardinal	<i>Cardinalis cardinalis</i>				1
downy woodpecker	<i>Picoides pubescens</i>	3			1
common grackle	<i>Quiscalus quiscula</i>				1
barn swallow	<i>Hirundo rustica</i>	2	2	1	
American robin	<i>Turdus migratorius</i>	1			
house wren	<i>Troglodytes aedon</i>				1
belted kingfisher	<i>Megaceryle alcyon</i>	1			
duck, unk.	<i>Anatidae spp.</i>				2
tree swallow	<i>Tachycineta bicolor</i>	1			
wood duck	<i>Aix sponsa</i>	2			
mallard	<i>Anas platyrhynchos</i>	1			
great blue heron	<i>Ardea herodias</i>		1		
tufted titmouse	<i>Baeolophus bicolor</i>	2			
ADDITIONAL NOTES: Unable to access dock - shifted plot 25 ft to east					

Date: 5/21/2020					
Point Count Code: 2a					
Weather: 56, partly cloudy					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	6:50				
TIME END	7:05				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
wood thrush	<i>Hylocichla mustelina</i>	1			1
red-winged blackbird	<i>Agelaius phoeniceus</i>	10			
northern cardinal	<i>Cardinalis cardinalis</i>	1			1
white-breasted nuthatch	<i>Sitta carolinensis</i>	1			
woodpecker, unk.	<i>Picidae</i>	1			
ring-billed gull	<i>Larus delawarensis</i>			3	
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	1			
black-capped chickadee	<i>Poecile atricapillus</i>	2			
house wren	<i>Troglodytes aedon</i>				1
great blue heron	<i>Ardea herodias</i>		2	1	
yellow warbler	<i>Setophaga petechia</i>				1
mallard	<i>Anas platyrhynchos</i>	1			
swallow, unk.	<i>Hirundinidae sp.</i>				1
ADDITIONAL NOTES:					

Date: 5/21/2020					
Point Count Code: 3a					
Weather: 56, clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	7:25				
TIME END	7:40				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
tufted titmouse	<i>Baeolophus bicolor</i>	1			
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
American robin	<i>Turdus migratorius</i>				1
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
great blue heron	<i>Ardea herodias</i>			2	
house wren	<i>Troglodytes aedon</i>				1
northern cardinal	<i>Cardinalis cardinalis</i>				1
barn swallow	<i>Hirundo rustica</i>		1		
black-capped chickadee	<i>Poecile atricapillus</i>				1
ADDITIONAL NOTES:					

Date: 5/21/2020					
Point Count Code: 1b					
Weather: 56, clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	8:00				
TIME END	8:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
downy woodpecker	<i>Picoides pubescens</i>	2			
northern flicker	<i>Colaptes auratus</i>	1			
barn swallow	<i>Hirundo rustica</i>	5			
tufted titmouse	<i>Baeolophus bicolor</i>	1			
red-winged blackbird	<i>Agelaius phoeniceus</i>	7			
northern cardinal	<i>Cardinalis cardinalis</i>				1
common loon	<i>Gavia immer</i>	1			
belted kingfisher	<i>Megaceryle alcyon</i>		1		
white-breasted nuthatch	<i>Sitta carolinensis</i>	1			
blue jay	<i>Cyanocitta cristata</i>	2			
double-crested cormorant	<i>Phalacrocorax auritus</i>		1		
wood duck	<i>Aix sponsa</i>	2			
ADDITIONAL NOTES: Loon was juvenile					

Date: 5/21/2020					
Point Count Code: 2b					
Weather: 58, clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	8:25				
TIME END	8:40				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE

northern cardinal	<i>Cardinalis cardinalis</i>	2			
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
blue jay	<i>Cyanocitta cristata</i>			2	
black-capped chickadee	<i>Poecile atricapillus</i>	1			2
American robin	<i>Turdus migratorius</i>	2	1		
ring-billed gull	<i>Larus delawarensis</i>			2	
mourning dove	<i>Zenaida macroura</i>	1			
common grackle	<i>Quiscalus quiscula</i>	2			
Baltimore oriole	<i>Icterus galbula</i>	1			
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>				1
yellow warbler	<i>Setophaga petechia</i>	1			
downy woodpecker	<i>Picoides pubescens</i>	1			
common yellowthroat	<i>Geothlypis trichas</i>	1			
ADDITIONAL NOTES:					

Date:	5/21/2020				
Point Count Code:	3b				
Weather:	60, clear				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	9:00				
TIME END	9:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	6			
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
American robin	<i>Turdus migratorius</i>				1
blue jay	<i>Cyanocitta cristata</i>			1	1
northern cardinal	<i>Cardinalis cardinalis</i>				2
American goldfinch	<i>Spinus tristis</i>	1			
ring-billed gull	<i>Larus delawarensis</i>			2	
turkey vulture	<i>Cathartes aura</i>			1	
Red-tailed hawk	<i>Buteo jamaicensis</i>			1	
ADDITIONAL NOTES:	Trees are taller at location 2, fewer snags than 1 and 2; beaver or muskrat in river				

Date:	5/21/2020				
Point Count Code:	1c				
Weather:	63, clear				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	9:45				
TIME END	10:00				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
hermit thrush	<i>Catharus guttatus</i>	1			
barn swallow	<i>Hirundo rustica</i>	10+			
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			
downy woodpecker	<i>Picoides pubescens</i>	1			
warbling vireo	<i>Vireo gilvus</i>	1			
mourning dove	<i>Zenaida macroura</i>	1			
American goldfinch	<i>Spinus tristis</i>				1

American robin	<i>Turdus migratorius</i>	1	2		
double-crested cormorant	<i>Phalacrocorax auritus</i>				1
duck, unk.	<i>Anatidae</i> sp.			2	
sparrow, unk. (brown, nonc	<i>Passeridae</i>	1			
ADDITIONAL NOTES: Mute swans outside plot					

Date: 5/21/2020					
Point Count Code: 2c					
Weather: 64, clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	10:25				
TIME END	10:40				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
ring-billed gull	<i>Larus delawarensis</i>			2	
red-winged blackbird	<i>Agelaius phoeniceus</i>	10+			
wood thrush	<i>Hylocichla mustelina</i>	1			
duck, unk.	<i>Anatidae</i> sp.			3	
swallow, unk.	<i>Hirundinidae</i> sp.				1
Baltimore oriole	<i>Icterus galbula</i>	1			
northern cardinal	<i>Cardinalis cardinalis</i>	1			
Canada goose	<i>Branta canadensis</i>			1	3
house wren	<i>Troglodytes aedon</i>				1
American robin	<i>Turdus migratorius</i>	1	1		
warbling vireo	<i>Vireo gilvus</i>	1			
blue jay	<i>Cyanocitta cristata</i>	1			
ADDITIONAL NOTES:					

Date: 5/21/2020					
Point Count Code: 3c					
Weather: 66, partly cloudy					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	11:00				
TIME END	11:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
red-winged blackbird	<i>Agelaius phoeniceus</i>	10			
northern cardinal	<i>Cardinalis cardinalis</i>				1
red-bellied woodpecker	<i>Melanerpes carolinus</i>	1			1
American robin	<i>Turdus migratorius</i>				1
mute swan	<i>Cygnus olor</i>		2		
house wren	<i>Troglodytes aedon</i>				1
belted kingfisher	<i>Megasceryle alcyon</i>		1		
black-capped chickadee	<i>Poecile atricapillus</i>				1
ADDITIONAL NOTES: beaver/muskrat, turtle nearby in river					

Date:	10/2/2020				
Point Count Code:	1a				
Weather:	41; 7 mph; clear				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	7:33				
TIME END	7:48				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
ring-billed gull	<i>Larus delawarensis</i>			10+	
great blue heron	<i>Ardea herodias</i>				1
house sparrow	<i>Passer domesticus</i>		1		4
swallow, unk.	<i>Hirundinidae</i> sp.			5	
common starling	<i>Sturnus vulgaris</i>	2	5	9	3
American black duck	<i>Anas rubripes</i>	1			1
downy woodpecker	<i>Picoides pubescens</i>				1
blue jay	<i>Cyanocitta cristata</i>				1
American robin	<i>Turdus migratorius</i>	1			
ADDITIONAL NOTES:	water levels have lowered; no phragmites management occurred over summer; muskrat				

Date:	10/2/2020				
Point Count Code:	2a				
Weather:	42; 7 mph; clear				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	8:00				
TIME END	8:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
wood duck	<i>Aix sponsa</i>				1
Cedar waxwing	<i>Bombycilla cedrorum</i>	1			
ring-billed gull	<i>Larus delawarensis</i>			10+	
common starling	<i>Sturnus vulgaris</i>	5	10	1	
American robin	<i>Turdus migratorius</i>	2			
red-winged blackbird	<i>Agelaius phoeniceus</i>	3			1
downy woodpecker	<i>Picoides pubescens</i>	1			
northern flicker	<i>Colaptes auratus</i>	1			
European herring gull	<i>Larus argentatus</i>			1	
White-breasted nuthatch	<i>Sitta carolinensis</i>	1			
mallard	<i>Anas platyrhynchos</i>			6	
Yellow-rumped warbler	<i>Setophaga coronata</i>	2			
blue jay	<i>Cyanocitta cristata</i>	1			1
ADDITIONAL NOTES:	surrounding noise - train, sirens. Cormorant after time end FO				

Date: 10/2/2020					
Point Count Code: 3a					
Weather: 42; 7 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	8:30				
TIME END	8:45				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
blue jay	<i>Cyanocitta cristata</i>				1
ring-billed gull	<i>Larus delawarensis</i>			1	3
mute swan	<i>Cygnus olor</i>		6		1
wood duck	<i>Aix sponsa</i>	1	2		2
Canada goose	<i>Branta canadensis</i>			3	
ADDITIONAL NOTES: a lot of ambient noise - traffic. Muskrat					

Date: 10/2/2020					
Point Count Code: 1b					
Weather: 42; 8 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	9:05				
TIME END	9:20				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mute swan	<i>Cygnus olor</i>				10+
ring-billed gull	<i>Larus delawarensis</i>			4	
blue jay	<i>Cyanocitta cristata</i>				1
common starling	<i>Sturnus vulgaris</i>				4
American goldfinch	<i>Spinus tristis</i>				1
Canada goose	<i>Branta canadensis</i>				5
great blue heron	<i>Ardea herodias</i>	1			
double-crested cormorant	<i>Phalacrocorax auritus</i>				4
ADDITIONAL NOTES: Swans (~16) observed where proposed shoal is located. Phragmites may be obscuring additional birds. Small birds likely sheltering from cold wind					

Date: 10/2/2020					
Point Count Code: 2b					
Weather: 42; 8 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	9:30				
TIME END	9:45				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE

Yellow-rumped warbler	<i>Setophaga coronata</i>	3			
black-capped chickadee	<i>Poecile atricapillus</i>	2			
Northern waterthrush	<i>Parkesia noveboracensis</i>	2			
American black duck	<i>Anas rubripes</i>				3
double-crested cormorant	<i>Phalacrocorax auritus</i>			1	
ADDITIONAL NOTES: Wind has picked up					

Date: 10/2/2020					
Point Count Code: 3b					
Weather: 44; 8 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	10:00				
TIME END	10:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mute swan	<i>Cygnus olor</i>			5	
double-crested cormorant	<i>Phalacrocorax auritus</i>	1			
ADDITIONAL NOTES: background noise - bridge/traffic/construction. Cold wind					

Date: 10/2/2020					
Point Count Code: 1c					
Weather: 47; 9 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	10:32				
TIME END	10:47				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
great blue heron	<i>Ardea herodias</i>				1
mute swan	<i>Cygnus olor</i>				10+
ring-billed gull	<i>Larus delawarensis</i>				3
house sparrow	<i>Passer domesticus</i>				2
double-crested cormorant	<i>Phalacrocorax auritus</i>	1			
common starling	<i>Sturnus vulgaris</i>				10+
blue jay	<i>Cyanocitta cristata</i>			2	1
duck, unk.	<i>Anatidae</i> sp.			3	

red-tailed hawk	<i>Buteo jamaicensis</i>				1
ADDITIONAL NOTES: swans (~20) are in proposed shoal location					

Date: 10/2/2020					
Point Count Code: 2c					
Weather: 49; 10 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	11:00				
TIME END	11:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
American black duck	<i>Anas rubripes</i>				1
mute swan	<i>Cygnus olor</i>	7			
blue jay	<i>Cyanocitta cristata</i>			10+	
Yellow-rumped warbler	<i>Setophaga coronata</i>	3			
bald eagle	<i>Haliaeetus leucocephalus</i>			1	
ring-billed gull	<i>Larus delawarensis</i>			1	
ADDITIONAL NOTES:					

Date: 10/2/2020					
Point Count Code: 3c					
Weather: 50; 11 mph; clear					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	11:33				
TIME END	11:48				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
songbird (unable to ID)					1
ring-billed gull	<i>Larus delawarensis</i>			1	
ADDITIONAL NOTES: surrounding noise: train, traffic					

Date:	10/21/2020				
Point Count Code:	1a				
Weather:	61; 12 mph; overcast				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	8:00				
TIME END	8:15				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
house sparrow	<i>Passer domesticus</i>				10+
double-crested cormorant	<i>Phalacrocorax auritus</i>			3	
ring-billed gull	<i>Larus delawarensis</i>			10+	
mallard	<i>Anas platyrhynchos</i>				3
common starling	<i>Sturnus vulgaris</i>	10			3
blue jay	<i>Cyanocitta cristata</i>	1			1
mute swan	<i>Cygnus olor</i>				5
song sparrow	<i>Melospiza melodia</i>	1			
red-winged blackbird	<i>Agelaius phoeniceus</i>	2			
ADDITIONAL NOTES:	gusty wind/hard to hear birds				

Date:	10/21/2020				
Point Count Code:	2a				
Weather:	59; 13 mph; overcast				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	8:25				
TIME END	8:40				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
great blue heron	<i>Ardea herodias</i>	1			
wood duck	<i>Aix sponsa</i>	2			
American robin	<i>Turdus migratorius</i>	1			4
mallard	<i>Anas platyrhynchos</i>	1			
mute swan	<i>Cygnus olor</i>				3
ring-billed gull	<i>Larus delawarensis</i>				7
downy woodpecker	<i>Picoides pubescens</i>	1			
red-tailed hawk	<i>Buteo jamaicensis</i>				1
red-winged blackbird	<i>Agelaius phoeniceus</i>				2
common starling	<i>Sturnus vulgaris</i>			10	1
blue jay	<i>Cyanocitta cristata</i>	1			
double-crested cormorant	<i>Phalacrocorax auritus</i>				1
ADDITIONAL NOTES:	gusty wind				

Date:	10/21/2020				
Point Count Code:	3a				
Weather:	59; 13 mph; overcast				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	8:55				
TIME END	9:10				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mallard	<i>Anas platyrhynchos</i>	1			
great blue heron	<i>Ardea herodias</i>				1
mute swan	<i>Cygnus olor</i>				8
belted kingfisher	<i>Megaceryle alcyon</i>	1			
ring-billed gull	<i>Larus delawarensis</i>			1	
double-crested cormorant	<i>Phalacrocorax auritus</i>			3	10+
red-winged blackbird	<i>Agelaius phoeniceus</i>	2	5		
downy woodpecker	<i>Picoides pubescens</i>	1			
blue jay	<i>Cyanocitta cristata</i>				2
wood duck	<i>Aix sponsa</i>	4			
ADDITIONAL NOTES:	gusty wind; vehicle and construction noise				

Date:	10/21/2020				
Point Count Code:	1b				
Weather:	59; 13 mph; mostly cloudy				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	9:27				
TIME END	9:42				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mute swan	<i>Cygnus olor</i>	8			
blue jay	<i>Cyanocitta cristata</i>				3
ring-billed gull	<i>Larus delawarensis</i>			7	
mallard	<i>Anas platyrhynchos</i>	2			
double-crested cormorant	<i>Phalacrocorax auritus</i>				2
red-winged blackbird	<i>Agelaius phoeniceus</i>	5			2
common starling	<i>Sturnus vulgaris</i>	5			
house sparrow	<i>Passer domesticus</i>				1
common grackle	<i>Quiscalus quiscula</i>	1			1
swallow, unk.	<i>Hirundinidae sp.</i>	2			
ADDITIONAL NOTES:	still gusty wind				

Date:	10/21/2020				
Point Count Code:	2b				
Weather:	56; 13 mph; overcast				
Primary Observer's Name:	Lauren Edson and Elizabeth McLaughlin				
TIME START	9:53				
TIME END	10:08				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE

Brown-headed cowbird	<i>Molothrus ater</i>	2			
song sparrow	<i>Melospiza melodia</i>	2			
blue jay	<i>Cyanocitta cristata</i>	1			3
white-breasted nuthatch	<i>Sitta carolinensis</i>		1	1	1
ring-billed gull	<i>Larus delawarensis</i>				3
turkey vulture	<i>Cathartes aura</i>			1	
American robin	<i>Turdus migratorius</i>				1
downy woodpecker	<i>Picoides pubescens</i>	1			
mallard	<i>Anas platyrhynchos</i>		2		
ADDITIONAL NOTES: gusty wind; cold front coming in					

Date: 10/21/2020					
Point Count Code: 3b					
Weather: 56; 14 mph; overcast					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	10:20				
TIME END	10:35				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mallard	<i>Anas platyrhynchos</i>	3			
wood duck	<i>Aix sponsa</i>	2			
double-crested cormorant	<i>Phalacrocorax auritus</i>	1	1		10+
mute swan	<i>Cygnus olor</i>	5			10
blue jay	<i>Cyanocitta cristata</i>				3
turkey vulture	<i>Cathartes aura</i>		2		
belted kingfisher	<i>Megaceryle alcyon</i>		1		
ring-billed gull	<i>Larus delawarensis</i>			2	
ADDITIONAL NOTES: gusty wind; vehicle and construction noise, train					

Date: 10/21/2020					
Point Count Code: 1c					
Weather: 56; 14 mph; overcast					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	10:53				
TIME END	11:08				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mute swan	<i>Cygnus olor</i>				8
downy woodpecker	<i>Picoides pubescens</i>				1
ring-billed gull	<i>Larus delawarensis</i>			5	
mallard	<i>Anas platyrhynchos</i>	2			1
red-winged blackbird	<i>Agelaius phoeniceus</i>	3		2	
turkey vulture	<i>Cathartes aura</i>			1	1

ADDITIONAL NOTES: very gusty, cold wind					

Date: 10/21/2020					
Point Count Code: 2c					
Weather: 56; 14 mph; overcast					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	11:18				
TIME END	11:33				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
turkey vulture	<i>Cathartes aura</i>		1		
double-crested cormorant	<i>Phalacrocorax auritus</i>				1
red-tailed hawk	<i>Buteo jamaicensis</i>		1		
ring-billed gull	<i>Larus delawarensis</i>			5	
common starling	<i>Sturnus vulgaris</i>			4	
ADDITIONAL NOTES: gusty cold wind; boat traffic					

Date: 10/21/2020					
Point Count Code: 3c					
Weather: 56; 14 mph; overcast					
Primary Observer's Name: Lauren Edson and Elizabeth McLaughlin					
TIME START	11:44				
TIME END	11:59				
COMMON NAME	SCIENTIFIC NAME	NUMBER OF BIRDS	FT	FO	OUTSIDE
mute swan	<i>Cygnus olor</i>				10+
double-crested cormorant	<i>Phalacrocorax auritus</i>		1		10+
ring-billed gull	<i>Larus delawarensis</i>			2	3
mallard	<i>Anas platyrhynchos</i>	3			
blue jay	<i>Cyanocitta cristata</i>	1			
ADDITIONAL NOTES: cormorant and swans were at new shoal location; construction and vehicle traffic noise; gusty wind					